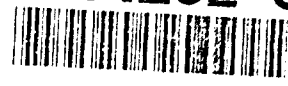


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**VOLUME 45, PART 2**

**Stuart G. Hibben, Editor**



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**Volume 45, Part 2**

This companion issue to Volume 45, Part 1, contains author and subject indexes for the volume. In the author index, principal and joint personal and corporate authors are listed along with the title, date, pagination, and language of the document and the accession number. The subject index is composed of four basic elements:

- 1) terms taken from a controlled vocabulary based on the Thesaurus of Engineering and Scientific Terms (LEX-EJC)
- 2) free terms added as needed
- 3) geographic names, generally entered under countries
- 4) cross references suggesting additional appropriate terms.

The terms are listed in a single alphabetical arrangement, along with title (original, translated, abridged, expanded, or supplied), principal author, date, pagination, and language of pertinent documents, and their accession numbers.

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- 1983 Arco ice stress sensor program at Tarsiat Island. Final report**  
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Effect of density on the trajectory of ice pieces around a ship's hull [1990, p.661-673, eng] 45-3616  
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Modelling the behaviour of oil spills in ice-infested waters [1990, p.303-329, eng] 45-1157
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Two-dimensional mathematical model of ground freezing-thawing under complex boundary conditions [1989, p.73-79, rus] 45-2011
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Experimental study of microwave transmission in snowpack [1990, p.915-921, eng] 45-369
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Snow roads and runways [1990, 100p., eng] 45-1971
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Late Pliocene-Pleistocene paleoclimate in the Jane Basin region: ODP Site 697 [1990, p.803-809, eng] 45-3529
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- Microorganisms as indicators of hydrological phenomena in seas and oceans [1958, p.397-413, rus] 45-3431
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Complex territorial plan for environmental protection of West Siberian oil-bearing regions [1989, p.128-135, rus] 45-109
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Evaporator analysis for application to water-source and ice-maker heat pumps [1989, 213p., eng] 45-307
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Connection between avalanche development and characteristics of the surface of snow accumulations [1990, p.71-76, rus] 45-1106
- Ackerman, T.P.**  
Comparison of radiation budgets in the Fram Strait summer marginal ice zone [1991, p.218-235, eng] 45-2106
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Sediment enrichment of coastal ice covers [1990, p.86-96, eng] 45-3567
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Algal and foram incorporation into new sea ice [1987, p.1736, eng] 45-3410  
Antarctic sea ice: a habitat for the foraminifer *Neogloboquadrina pachyderma* [1991, p.182-189, eng] 45-3837  
Ice scavenging and nucleation: two mechanisms for incorporation of algae into newly-forming sea ice [1982, p.54-55, eng] 45-3409  
O-18 concentrations in sea ice of the Weddell Sea, Antarctica [1990, p.315-323, eng] 45-1542  
Potential response of antarctic sea ice to climatic change induced by atmospheric CO2 increases [1981, 17p. + 3p. refs., eng] 45-1930
- Adachi, T.**  
Constitutive model for frozen sand [1990, p.208-212, eng] 45-851
- Adam, M.**  
Collection efficiency of aerosol particles by circular disks modelling snowflakes, snowout and washout coefficient [1990, p.S209-S212, eng] 45-2216
- Adams, J.R.**  
Integrity monitoring criteria and methods for ice scour problems [1990, p.419-444, eng] 45-1963
- Adams, P.F.**  
Design and behavior of composite ice-resisting walls [1988, p.457-479, eng] 45-1816
- Addy, H.E., Jr.**  
Numerical simulation of the flow in the diffuser of the NASA Lewis Icing Research Tunnel [1990, 9p., eng] 45-607
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Study of the content of technogenic gamma-emitting radionuclides in antarctic snow samples [1990, p.45-48, eng] 45-826
- Admiral, P.**  
Calibration of a snow accumulation based on actual cases in Japan and France [1988, p.129-133, eng] 45-1326  
Influence of Joule effect and of climatic conditions on liquid water content of snow accreted on conductors [1988, p.367-371, eng] 45-1373  
Mapping of the risk of wet snow sticking on power lines over a period of 35 years [1988, p.24-29, eng] 45-1304  
Regional climato-economic study of 20 wet snow episodes over the period 1951-1987, with projection for the period 1988-2000 [1988, p.39-43, eng] 45-1307  
Space-time model of a major wet snow episode (Perpignan—30th-31st January 1986) [1988, p.14-18, eng] 45-1302  
Theoretical study and experimental verification of the torsion of cables subjected to moment densities [1988, p.324-329, eng] 45-1364  
Thermodynamic simulation of wet snow accretion under wind-tunnel conditions [1988, p.180-185, eng] 45-1335  
Wet snow on overhead lines: state-of-art [1988, p.7-13, eng] 45-1301
- Adrian, D.D.**  
Longitudinal dispersion in overland flow of wastewater [1990, p.1-8, eng] 45-3742
- Adzhumerov, N.R.**  
Space and time variability in the specific mass balance of a glacier (methods and preliminary results) [1990, p.94-105, rus] 45-1110
- Aeschlimann, R.**  
Glacial waters, solid transport and decantation in hydroelectrical systems [1989, p.247-256, fre] 45-2286
- Aftonogov, L.P.**  
Approximate analytical expressions for the relation between the saturation of water vapor and temperature [1987, p.129-133, rus] 45-2300
- Agafonova, O.N.**  
Investigation of heat and mass transport during freezing in peat soils [1990, p.88-97, eng] 45-3051
- Ageta, Y.**  
Glacier fluctuations and climates in the Himalayas [1989, p.576-586, jpn] 45-624  
Oxygen isotope profiles of deposited snow in different depositional environments of the antarctic ice sheet [1991, p.39-46, jpn] 45-3394
- Agrawal, K.M.**  
Graphical method simplifies diesel cloud point determinations [1990, p.98-101, eng] 45-3101
- Ahlms, K.**  
Interpretation of sea ice using NOAA-AVHRR data [1990, 46p., eng] 45-3850
- Ahn, S.K.**  
Efficient method for the numerical solution of Stefan problems [1988, p.192-196, eng] 45-1337
- Aho, E.**  
Synthetic automotive lubricants for superior low-temperature operation [1989, p.421-437, eng] 45-1252
- Alba, S.**  
Numerical study on freezing heat transfer in water-saturated porous media [1990, p.17-32, eng] 45-1926
- Albalatov, N.A.**  
Ice rafting of sedimentary material in the Azov Sea [1991, p.179-187, eng] 45-2440  
Recent sedimentation processes on World Ocean shelves [1990, 207p., rus] 45-2874
- Aiki, K.**  
Observations of snow accretion on electric transmission lines [1986, p.151-169, eng] 45-3710
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Effective control of the frost resistance of concrete [1990, p.24-25, rus] 45-22
- Aitcia, P.C.**  
Condensed silica fume in concrete [1987, 221p., eng] 45-323  
Long-term compressive strength of silica-fume concrete [1990, p.164-170, eng] 45-2773
- Aitken, G.W.**  
Status of AirLand Battlefield Environment (ALBE) winter tactical decision aids [1990, 14p., eng] 45-1978
- Aitov, A.I.**  
Problems of ice friction and strength characteristics control [1990, p.468-477, eng] 45-151  
Study of indenter friction against an ice sheet [1990, p.71-74, eng] 45-3265
- Aitla, E.**  
Behaviour of metal supported catalysts in subzero conditions [1989, p.165-169, eng] 45-1230
- Aivazian, G.M.**  
Anomalous radar backscattering from ice particles in a cloud in the 0.3-0.8 mm ice-transparency "window" [1989, p.51-56, eng] 45-856
- Aizla, V.B.**  
Evaluation of the Davydov Glacier reaction to man-made destruction of its terminus [1989, p.202-206, rus] 45-1061  
Mass balance and ice flow velocity of the Davydov Glacier according to 1984-1985 studies [1989, p.197-202, rus] 45-1060
- Ajvazian, H.M.**  
Abnormal radar backscattering of submillimeter waves from cloud ice particles [1991, p.919-944, eng] 45-3886  
Extinction, scattering, and absorption of anomalous radar-reflected emission in a cloud and atmosphere [1991, p.945-978, eng] 45-3887
- Akademiya nauk SSSR. Mezhdunarodnyy geofizicheskiy komitet**  
Glaciers-Ocean-Atmosphere Interactions; International Symposium, Leningrad, September 24-29, 1990. Abstracts [1990, 131p., eng] 45-3003
- Akagawa, S.**  
Unique foundation design approaches for permafrost regions relating to their geographical features [1990, p.13-19, jpn] 45-694

- Akasaka, J.**  
Seismic observation with local telemetry network around Syowa Station, East Antarctica (2) [1990, p.90-99, eng] 45-1530
- Akbarov, A.A.**  
Variations in water reserves of some glaciers of Central Asia for the last 50 years [1990, p.84-94, rus] 45-1109
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Influence of Hudson Bay runoff and ice-melt on the salinity of the inner Newfoundland Shelf [1990, p.241-256, eng] 45-457
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Forecasting the frost resistance of concrete based on local materials [1988, 83p., rus] 45-2306
- Akitaya, E.**  
International classification for seasonal snow on the ground [1990, 23p., eng] 45-1174
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Estimated solutions of the one-dimensional Stefan problem [1990, p.710-716, eng] 45-3057
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Determining the creep properties of saline frozen soils from experiments with uniaxial compression [1990, p.83-90, rus] 45-2894  
Method of determining the equivalent cohesion of saline frozen soils [1990, p.107-115, rus] 45-2898  
Physical-chemical approach to the classification of frozen soils according to salinity [1990, p.70-73, rus] 45-2892
- Al-Khalil, K.M.**  
Thermal analysis of engine inlet anti-icing systems [1990, p.628-634, eng] 45-1015
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Microwave snow sounding for trafficability analysis [1989, p.145-150, eng] 45-1227
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Snowmobile suspension system design under university-industry collaboration [1989, p.183-191, eng] 45-1232
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Ecological aspects of lake regulation in northern Finland. Part 1. General results [1989, 56p., fin] 45-3844  
Ecological aspects of lake regulation in northern Finland. Part 5. Regulation practices and ecological effects [1989, 49p., fin] 45-3847
- Alaskan oil spill bioremediation project**  
Alaskan oil spill bioremediation project [1989, 16p., eng] 45-80
- Alaska's high-rank coals**  
Alaska's high-rank coals [1990, 36p., eng] 45-931
- Albert, D.G.**  
Seismic studies on the grid eastern half of the Ross Ice Shelf: RIGGS III and RIGGS IV [1990, p.87-108, eng] 45-1611
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Method for predicting freezing in forced flow [1990, p.9-14, eng] 45-1163
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Wind profiler and RASS measurements in the vicinity of lake-effect snowbands: some preliminary findings [1991, p.69-72, eng] 45-1591
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Development of the cryolithozone of Transbaikalia [1990, 105p., rus] 45-2425
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Effect of hydrometeors on the characteristics of radar images of sea ice [1987, p.255-264, eng] 45-863  
Investigations of Okhotsk Sea ice cover with the aid of an airborne scanning UHF radiometer [1989, p.78-87, rus] 45-1493  
Microwave-emitting properties of various types of underlying surface at below-zero temperatures [1991, p.7-9, eng] 45-2477
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Creep and strength of ice cover subjected to loads and dies [1989, p.174-187, rus] 45-1504  
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- Aleksandrova, E.A.**  
Evaluation of agroclimatic and geothermophysical characteristics of developing northern meadows in the Chukotkiy Peninsula [1990, p.78-87, rus] 45-3038
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- Alekseev, V.P.**  
Research into icings and icing processes in the USSR: major results and prospects [1989, p.233-251, eng] 45-473
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Studies of nales and naled processes in the USSR (principal results and prospects) [1989, p.3-15, rus] 45-1028  
Study of nales—a top priority in geographical studies [1989, p.29-34, rus] 45-642
- Third All-Union Conference on the problems of naled formation** [1989, p.223-227, rus] 45-1067
- Alekseeva, N.G.**  
Avacha fumarolic trace elements: distribution in snow and surface waters [1990, p.325-336, eng] 45-1704
- Alexander, V.**  
Algal populations in arctic sea ice: an investigation of heterotrophy [1972, p.454-458, eng] 45-3124  
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International Ice Patrol Side-Looking Airborne Radar (SLAR) experiment 1988 [1989, p.2193-2196, eng] 45-288
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Breaking of sea ice by ocean waves [1975, 12p. + appends., eng] 45-938  
Experimental study of wave-ice interaction and floe flexure in the pack ice of the Labrador current [1984, n.p., eng] 45-941
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Soil wedge polygons in northern Quebec: description and paleoclimatic significance [1990, p.353-367, eng] 45-2414
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Studies of the arctic ice cover and upper ocean with a coupled ice-ocean model [1991, p.4631-4650, eng] 45-2676
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Permafrost regime in the Mackenzie Delta-Beaufort Sea region, N.W.T. and its paleoclimatic implications [1988, 154p., eng] 45-179
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- American Association for the Advancement of Science**  
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Education and continuing development for the civil engineer; setting the agenda for the 90's and beyond [1990, 1101p., eng] 45-2375
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Automatic computer controlled weather actuated camera system for the investigation of snow accretion on overhead lines [1988, p.282-286, eng] 45-1355
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International conference on mountain ecology in Tsakhkadzor [1989, p.184, rus] 45-1056  
Methods of mapping snowmelt and glacier runoff in mountainous countries [1989, p.49-55, rus] 45-1034
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Saab Direct Ignition System and its cold start performance [1989, p.345-353, eng] 45-1247
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Lake Hoare, Antarctica: sedimentation through a thick perennial ice cover [1991, p.363-379, eng] 45-3457
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Foraminifera and pteropods beneath the arctic sea ice: raw distributions [1989, p.223-234, eng] 45-3117
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On the origin of the properties of the Arctic Ocean halocline north of Ellesmere Island: results from the Canadian Ice Island [1990, p.485-498, eng] 45-524
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Soil formation in mining areas along the arctic coast of northeastern USSR (1987, p.99-103, rus) 45-740
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Structure and productivity of high-altitude plant communities of the southern Urals (1991, p.326-331, eng) 45-3862
- Andrews, J.T.**  
Influence of short-term climate fluctuations on permafrost terrain (1982, 33p., eng) 45-1531
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Relationships between weather and road safety: past and future research directions (1990, p.123-137, eng) 45-2753
- Andriienko, N.M.**  
Low-temperature destabilization of oil emulsion systems in water treatment technology (1989, p.95-98, eng) 45-666
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Fishes of the northern seas of the U.S.S.R. (1964, 617p., eng) 45-3354
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Electrohydraulic and electrochemical phenomena in the process of an icebreaker's hull contact with ice (1990, p.531-541, eng) 45-3604
- Angiel, M.**  
Thermic and humidity relations of chosen Spitsbergen soils during spring ablation of the snow cover (1990, p.25-37, eng) 45-2430
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Environmental impacts of exploiting mineral resources and effects of tourism in Antarctica (1990, p.237-258, eng) 45-2815
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Geochronological processes in the Lake Fryxell Basin (Victoria Land, Antarctica) (1989, p.129-148, eng) 45-2612
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Using mathematical models to investigate the interrelationship between climate and permafrost (1990, p.13-20, rus) 45-1630
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Combined geocryological and hydrogeological investigations. Collected scientific articles (1989, 163p., rus) 45-2623  
Hydrochemical investigations for determining subaqueous discharging of suprapermafrost ground water (1989, p.108-114, rus) 45-2635  
Natural conditions in the formation of anthropogenic cryopegs in the Yakutsk region (1987, p.55-65, rus) 45-575  
Variations in the salinity of seasonally and perennially frozen soils (1990, p.40-46, rus) 45-1199
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Froude number paradoxes in modeling of snowdrift (1990, p.889-891, eng) 45-2095
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- Anticipated dates for the appearance of ice on rivers in Siberia and in the northeastern European territory of the USSR in 1990**  
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- Antipina, D.K.**  
Phosphorus in frozen meadow-chernozem soils in the Amga River valley (1988, p.35-38, rus) 45-640
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Study of the content of technogenic gamma-emitting radionuclides in antarctic snow samples (1990, p.45-48, eng) 45-826
- Antonov-Druzhinin, V.P.**  
Ecological monitoring of oil-gas construction in the cryolithozone (1990, p.21-23, rus) 45-383  
Gas pipelining in permafrost zone: experimental study of geocryological, engineering-geological and ecological problems (1990, p.392-404, eng) 45-146  
Improving safety and control methods for the stability of main gas pipelines in the cryolithozone (1990, 72p., rus) 45-1706
- Antonov, S.I.**  
Development of valleys of small rivers in the central part of the Moscow marginal ice zone during the Quaternary period (in the example of the middle Protva River) (1989, p.62-67, rus) 45-710
- Anzaki, Y.**  
Estimation of road wear using spike ravelling test (1990, p.291-316, eng) 45-3501  
Investigative study on use of modified asphalts in Japan (1990, p.419-437, eng) 45-3526  
Present status and subject of roller compacted concrete pavement in Japan (1990, p.157-175, eng) 45-3512
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Way of preventing structures from damage due to ice pressure (1990, p.858-863, eng) 45-3635
- Aoki, K.**  
Storage of refrigerated liquefied gases in rock caverns: characteristics of rock under very low temperatures (1990, p.319-325, eng) 45-2295
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Comparison of zooplankton abundance under sea ice between NIPR net and Norpac net samplings, in lagoon Saroma Ko, Hokkaido (1987, p.123-137, eng) 45-3345  
Study on the polar ocean and the Sea of Okhotsk (1989, p.600-612, jpn) 45-625
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On the ski-snow sliding mechanism (1990, p.57-59, eng) 45-3266
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Calculating transfer processes in models of ice cover evolution (1990, p.130-141, rus) 45-1644  
Mathematical modelling of the ice cover evolution in the arctic seas during the melt period (1990, p.97-110, eng) 45-3568  
Specific aspects of modelling the evolution of ice cover on arctic seas during the melting period (1990, p.62-70, rus) 45-1637  
Studies of the ice dynamics in the Arctic Basin over long-term periods (1990, p.111-123, eng) 45-3569  
Variability of thickness of ice and snow in arctic seas and its parameterization (1989, p.66-72, eng) 45-660
- Archevova, I.B.**  
Ecological bases for controlling the productivity of agrophycocenes in the eastern European tundra (1991, 152p., rus) 45-3391
- Arcone, S.A.**  
Radar detection of ice wedges in Alaska (1982, 15p., eng) 45-3021  
Surface radar investigations of an icing mound on the Sagavanirktok River, Alaska (1990, p.353-363, eng) 45-2744  
Winter short-pulse radar studies on the Tanana River, Alaska (1990, p.244-250, eng) 45-1421
- Arctic environmental facilities: test capabilities**  
Arctic environmental facilities: test capabilities (1990, 17p., eng) 45-823
- Arctic Hydrology. Present and Future Tasks. Longyearbyen, Svalbard, Sep. 14-17, 1990**  
Hydrology of Svalbard—hydrological problems in cold climate. Proceedings (1990, 224p., eng) 45-3776
- Arctic investigations**  
Arctic investigations (1990, n.p., eng) 45-71
- Are transportation engineers prepared for winter**  
Are transportation engineers prepared for winter (1990, p.1040-1046, eng) 45-2576
- Argus, S.D.**  
Labrador ice margin experiment LIMEX'89; an overview (1989, p.1517-1519, eng) 45-272
- Arkinen, A.I.**  
Can the Northern Sea Route have international significance (1990, p.187-199, eng) 45-3676  
Comparative economic efficiency of icebreakers of different models and capacities: methodology of evaluation (1990, p.542-553, eng) 45-3605  
In North American arctic ice. Stages in development of the northwestern sea route (1989, 206p., rus) 45-1722  
Management of the Northern Sea Route: stages and problems of development (1991, p.140-149, eng) 45-3330  
Methodological approach in evaluating the national economic effectiveness of extending navigation in the arctic (1989, 70p., rus) 45-1714  
National economic basis for developing ice navigating transport ships (1989, p.9-19, rus) 45-3835  
Problems of military security in the Arctic (1990, 92p., rus) 45-1715
- Technological possibility of safe convoy of non-ice class ships along the Northern Sea Route (1990, p.259-267, eng) 45-2736
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400 years isotope record of the Antarctic Peninsula climate (1990, p.2369-2372, eng) 45-1990
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Methods for stochastic modelling of temperature fields in the cryolithozone (1989, p.31-43, rus) 45-2006
- Arita, M.**  
Two or three looks at the properties of freezing indexes (1986, p.40-50, jpn) 45-928
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Report on the first MOS-1 data received at Syowa Station, Antarctica (1991, p.22-30, eng) 45-3062
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Chrono-stratigraphic scale of the Pleistocene glacial epoch in northern Western Siberia (1989, p.20-30, rus) 45-1135  
Hydrogeology and engineering geology of Siberia (1990, 132p., rus) 45-2864  
Paleogeography and chronostratigraphy of the Pleistocene in northern Siberia (a review of the latest data) (1989, p.201-214, rus) 45-791
- Arkhipov, S.M.**  
Hydrothermal regime of the ice-divide area of Austfonna, Nordaustlandet (1990, p.133-141, rus) 45-1752  
Studies of structure, composition and temperature regime of sheet glaciers of Svalbard and Severnaya Zemlya: methods and outcomes (1990, p.19-28, eng) 45-195
- Armando, E.**  
Reports on the Glaciological Survey of 1988 (1989, p.155-204, ita) 45-2087
- Armbruster, J.T.**  
Low flows and hydrologic droughts (1990, p.121-130, eng) 45-2148
- Armstrong, R.**  
International classification for seasonal snow on the ground (1990, 23p., eng) 45-1174
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Glaciology (1990, p.58-59, eng) 45-2242  
Mode of formation of "ablation hollows" controlled by dirt content of snow (1987, p.135-139, eng) 45-6  
Snow avalanches (1990, p.147-176, eng) 45-408
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Northern Sea Route operations in the 1986-7 season (1991, p.150-157, eng) 45-3331
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Comparative digital analysis of Seasat-SAR and Landsat-TM data for Iceland (1991, p.527-544, eng) 45-2223
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Characterization of polymer networks by measurements of the freezing point depression (1990, p.806-813, eng) 45-2312
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Bio-optical model of antarctic sea ice (1991, p.10,581-10,592, eng) 45-3308
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Time-delayed reflections in L-band synthetic aperture radar imagery of icebergs (1991, p.284-291, eng) 45-3191
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Calculating heat flux from the water to the atmosphere in the arctic basin (1989, p.122-127, rus) 45-1661
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Precipitation chemistry (1988, p.99-101, eng) 45-1
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Light conditions and photosynthetic productivity of ice algal assemblages in Lake Saroma, Hokkaido (1989, p.274-278, eng) 45-3313  
Photosynthetic nature of ice algae and their contribution to the primary production in lagoon Saroma Ko, Hokkaido, Japan (1989, p.1-8, eng) 45-3343
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Creep and strength of ice cover subjected to loads and dies (1989, p.174-187, rus) 45-1504
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Dynamics, flexural response, and damage of ships in ice (1990, p.133-144, eng) 45-2727
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Effects of immobilization conditions on the nitrification treatability of entrapped cell reactors using the PVA freezing method (1991, p.1117-1124, eng) 45-1675
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Influence of snow density on conductivity of snowfall measured by AC method (1990, p.19-26, eng) 45-904
- Asso, S.**  
Treatment of cracks in paved road surfaces (1988, p.155-158, jpn) 45-2511
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Effect of time and temperature on R-value of rigid polyurethane foam insulation manufactured with alternative blowing agents (1991, p.241-267, eng) 45-2582
- Ashton, G.D.**  
Evolution of ice cover roughness (1991, p.294-305, eng) 45-2341  
Prediction of reservoir freezeover (1990, p.124-135, eng) 45-3570
- Ashton, W.S.**  
Culverts (1990, p.557-577, eng) 45-421

- Ashworth, E.N.**  
Freezing stress response in woody tissues observed using low-temperature scanning electron microscopy and freeze substitution techniques [1991, p.871-881, eng] 45-3275
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Evaluation of South Dakota Deicer No.2 and calcium magnesium acetate by shear testing [1989, p.1-8, eng] 45-808
- Askne, J.**  
Azimuth dependence in SAR-imaging of open water leads in ice infested areas [1989, p.1532-1534, eng] 45-276
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Rehabilitation and demolition after the closure of the zinc and lead mine "Black Angel" at Maarmorilik, Greenland [1990, p.744-759, eng] 45-176
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Transfer of hydrogen from NADPH to NAD<sup>+</sup> in frozen aqueous solution [1990, p.2187-2188, eng] 45-987
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Updating hydrological model forecasts [1990, p.149-175, eng] 45-3804
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Animation of the normal ice cycle of the Laurentian Great Lakes of North America [1991, p.331-335, eng] 45-1917
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- Association Nationale pour l'Etude de la Neige et des Avalanches**  
Analysis of avalanches [1990, p.22-24, fre] 45-1130
- Astapenkov, A.A.**  
Using avalanche protection walls of lightweight construction for protecting sections of the Mezhdurechenok-Abakan Line from avalanches [1990, p.41-46, rus] 45-3009
- Using electric heating devices to protect railroad switches from snowdrifts [1990, p.31-36, rus] 45-3007
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Influence on ice conditions of variations in winter discharge from power plants [1990, p.554-574, eng] 45-3606
- Atkins, R.T.**  
Thermistor-based system for thermal conductivity measurement [1991, p.223-236, eng] 45-2660
- Thermistor-based thermal conductivity measurement system [1990, 11p., eng] 45-190
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Effect of surface ice on solar pond performance [1990, p.207-214, eng] 45-1018
- Atlas, R.M.**  
Diversity of bacterial populations in the Beaufort Sea [1977, p.596-599, eng] 45-3095
- Atre, S.**  
Geophysical studies at and around Upstream C camp, Siple Coast, 1988-1989 [1990, p.75-77, eng] 45-1160
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Breonie, Aurine and Pusteresi alpine glaciers through the 7 September 1985 Landsat TM image [1989, p.3-19, ita] 45-359
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Influence of shape on iceberg wave-induced velocity statistics [1990, p.263-269, eng] 45-716
- Au, M.C.**  
Low temperature fracture mechanics of viscoelastic pavement structures [1990, p.183-212, eng] 45-3497
- Auburn, F.**  
Convention on the Regulation of Antarctic Mineral Resource Activities [1990, p.259-271, eng] 45-2816
- Auerbach, N.A.**  
Snowpack and the subnival environment for different aspects of an open meadow in Jackson Hole, Wyoming, U.S.A. [1991, p.41-44, eng] 45-2471
- Augustin, L.**  
Setting up a deep ice core drilling facility and preliminary tests: Terre Adelie-Antarctica [1989, p.66-69, eng] 45-1458
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- Augustinus, P.C.**  
Rock slope development in McMurdo Oasis, Antarctica, and implications for interpretations of glacial history [1990, p.55-62, eng] 45-1188
- Aunans, T.**  
Osmotic responses to hypoosmotic stress in the amphipod *Gammarus wilkitzkii*, *Onisimus glacialis* and *Parathemisto libellula* from arctic waters [1987, p.189-193, eng] 45-3286
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Millimeter-wave radar scattering from snow: 2. Comparison of theory with experimental observations [1991, p.343-351, eng] 45-3045
- Australia. Antarctic Division**  
1989-90 Australian Antarctic Research Program. Initial summary research activity [1990, 152p., eng] 45-1810
- 1990-91 Australian Antarctic Research Program. Antarctic Treaty exchange information: Supplement A to particulars for Australian National Antarctic Research Expeditions [1990, 262p., eng] 45-1920
- Austrheim, H.**  
Geology around the Norwegian antarctic station 'Troll', Jutulssessen, Dronning Maud land [1990, 39p., eng] 45-3881
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Protecting mountainous sections of the Frunze-Osh highway from snowdrifts [1990, p.60-63, rus] 45-3012
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Glacio-climatology of Antarctica [1990, 198p., rus] 45-3532
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Using spreadsheet software in water-balance modeling [1991, p.527-536, eng] 45-3817
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Causes of the aseismicity of Antarctica [1990, p.1369-1374, rus] 45-1859
- Awara, M.**  
Three-dimensional topographic and gravity anomaly maps in the vicinity of Mizuho Plateau, East Antarctica [1991, p.56-69, jpn] 45-3396
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Stability of floating and submerged blocks [1990, p.737-752, eng] 45-2257
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Approximate analysis of the temperature distribution in composting material in a cold environment [1991, p.87-92, eng] 45-3153
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- Low-temperature effects on the design and performance of composting of explosives-contaminated soils [1991, 29p., eng] 45-2917
- Proceedings. Vol.4 [1991, 287p., eng] 45-3140
- Quantifying the effect of spatial variability in insulation moisture content profiles using a nondestructive technique [1991, p.101-105, eng] 45-3155
- Azuma, D.**  
Precipitation extremes at the Central Sierra Snow Laboratory, California [1990, p.141-144, eng] 45-2132
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Numerical estimation of 10,000 years later equilibrium ice sheet profile in the Shirase Glacier drainage basin, East Antarctica [1991, p.12-29, eng] 45-3392
- Report of the glaciological field party in the Sør Rondane Mountains region, 1989-1990 summer season (JARE-31) [1990, p.225-234, jpn] 45-982
- Azumane, S.**  
Precipitating snow clouds during winter monsoon seasons influenced by topography of the Shakotan Peninsula, Hokkaido Island, Japan (SHAROP) [1987, p.109-128, eng] 45-905
- Azumaya, T.**  
Interannual variability of cold water at the bottom of the continental shelf of the southeastern Bering Sea [1990, p.230-235, jpn] 45-869
- Baba, H.**  
Investigative report on the observation characteristics of radar rain and snow gauges [1988, p.53-58, jpn] 45-2506
- Babinková, G.**  
Seasonal description of the quality and quantity of snowmelt in a mountainous region using an integrated model [1990, p.383-393, eng] 45-2994
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Discrete element simulations of river ice transport [1990, p.564-574, eng] 45-3607
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Artificial improvement of soils in pipeline construction [1990, 152p., rus] 45-29
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Reflection of fractures in the foundation of recent relief in the West Siberian Plain, from the position of the Earth's thermal field [1990, p.66-70, rus] 45-2819
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Advanced instrumentation for aircraft icing research [1990, 100p., eng] 45-597
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Design of urban sedimentation basins in Anchorage [1990, p.761-789, eng] 45-427
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Computer simulation of ice control with thermal-bubble plumes—line source configuration [1990, p.509-513, eng] 45-902
- Bader, C.M.**  
Portable ARGOS data link [1989, p.1272-1275, eng] 45-443
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Heavy snowfall within a mesoscale convergence zone [1990, p.41-52, eng] 45-1519
- Back-Madsen, C.**  
Building foundation in saline permafrost [1990, p.117-125, eng] 45-126
- Bagitaka, M.**  
Formation of ice cover on impounding reservoirs and its influence on unsteady flow conditions [1990, p.99-111, eng] 45-3669
- Baglio, J.V., Jr.**  
Operational mapping of snow cover in the United States and Canada using airborne and satellite data [1989, p.1257-1259, eng] 45-271
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Large-scale features of ice cover formation in the Weddell gyre region [1990, p.134-151, rus] 45-1564
- Weddell gyre: temperature maximum stratum [1989, p.8331-8334, eng] 45-471
- Balk, J.J.**  
Arctic hurricane over the Bering Sea [1991, p.321-324, eng] 45-1944
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Scheduling fall seedings for cold-climate revegetation [1990, 6p., eng] 45-1664
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Determination of copper, nickel and cadmium in antarctic seawater and snow [1989, p.713-721, eng] 45-2298
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Electrohydraulic and electrochemical phenomena in the process of an icebreaker's hull contact with ice [1990, p.531-541, eng] 45-3604
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Snow depth required to mask the underlying surface [1991, p.387-392, eng] 45-3018
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Research study of highway snowdrifting in Canada [1991, p.719-728, eng] 45-2381
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Examination of dislocations in ice. Final report [1991, 8p., eng] 45-2141
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Nitrogen and phosphorus dynamics and the fate of agricultural runoff [1989, p.92-131, eng] 45-834
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Permafrost and terrain research and monitoring: Norman Wells pipeline—Volume 1: environmental and engineering considerations [1989, 132p., eng] 45-32
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Study of the frozen water-poly(vinyl alcohol) system by H-2 and C-13 NMR spectroscopy [1990, p.651-655, eng] 45-958
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Influence of lead iodide aerosol dispersy on its ice-forming activity [1991, p.9-14, eng] 45-2441
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Degradation of glaciers of the northern Tien Shan during the Holocene [1989, p.91-97, rus] 45-1041
- Balakrishnan, N.**  
Use of polarization to characterize precipitation and discriminate large hail [1990, p.1525-1540, eng] 45-1382
- Baldasso, P.**  
Evaluation of two transport aircraft and several ground test vehicle friction measurements obtained for various runway surface types and conditions. A summary of test results from Joint FAA/NASA Runway Friction Program [1990, 297p., eng] 45-558
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Regional climato-economic study of 20 wet snow episodes over the period 1951-1987, with projection for the period 1988-2000 [1988, p.39-43, eng] 45-1307
- Bales, R.C.**  
Ionic tracer movement through a Wyoming snowpack [1990, p.2749-2758, eng] 45-1176
- Recent developments in snow-chemistry research in the western United States [1990, p.99-107, eng] 45-2190
- Balick, L.K.**  
One-dimensional temperature modeling techniques: review and recommendations [1990, 17p., eng] 45-1698
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Use of the Schmidt test hammer to detect enhanced boulder weathering under late-lying snowpatches [1990, p.471-474, eng] 45-2259
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Use of mobile radiosonde systems to observe the environments of Lake Ontario winter storms [1991, p.1142-1145, eng] 45-1600
- Bandyopadhyay, S.**  
Mining in the Arctic [1989, 244p., eng] 45-325
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Petroleum geology and geochemistry of the Arctic National Wildlife Refuge 1002 area [1990, 26p. + appends., eng] 45-3684
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Relationship between the melting rate of fresh ice in sea water and the temperature and rate of the circumfluent current [1989, p.106-113, rus] 45-1660

- Nun, A.**  
as release from comets (1991, p.411-413, eng) 45-2941
- rating and melting of small icy satellites by the decay of Al-26 (1990, p.281-286, eng) 45-1001**
- anova, I.U.P.**  
eogene and neogene of northeastern USSR (1989, 181p., rus) 45-3834
- anovskii, E.L.**  
andscape changes due to geological-prospecting operations on the western shore of the Iamal Peninsula (1990, p.4-8, rus) 45-1195
- atta, G.A.**  
etermination of ice sublimation and sputtering yields by reflectance measurements (1991, p.307-313, eng) 45-2484
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asonal Sea Ice Monitoring Site (SIMS) (1991, p.8-9, eng) 45-1911
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ethod of assisting cold-starts, improving fuel economy and reducing emissions of engines at cold temperatures (1989, p.1-14, eng) 45-1210
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ffect of macro- and mesoscale circulation factors on the intensity of hail processes in the Caucasus region (1990, p.101-108, rus) 45-2241
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ormation of ice on roads beneath bridges (1990, p.1180-1184, eng) 45-1653
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atest Cretaceous to Cenozoic climate and oceanographic developments in the Weddell Sea, Antarctica: an ocean-drilling perspective (1990, p.937-960, eng) 45-3531
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Avalanche hazard regions in Kazakhstan [1990, 170p., rus] 45-2205
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Design of a modified Caterpillar Challenger tractor for antarctic service [1990, 13p. + figs., eng] 45-1976  
Effect of fines in sand on friction on ice [1990, 16p. + figs., eng] 45-1970  
Initial impressions of a candidate mobile over-snow transport system [1990, 13p. + appends., eng] 45-1969  
Performance of an omnidirectional wheel on snow and ice [1991, p.34-41, eng] 45-2227
- Personnel and cargo transport in Antarctica; analysis of current U.S. transport system [1991, 63p., eng] 45-3109  
U.S. Army wheeled versus tracked vehicle mobility performance test program—report 2: mobility in shallow snow [1991, 48p. + appends., eng] 45-3446  
Wheels and tracks in snow; second validation study of the CRREL shallow snow mobility model [1990, 39p., eng] 45-2094  
Wheels and tracks in snow: validation study of the CRREL shallow snow mobility model [1990, 72p., eng] 45-1510  
Workshop on Traction Mechanics on Deformable Terrain, South Lake Tahoe, CA, Oct. 9-11, 1989 [1990, 37p., eng] 45-1968
- Blake, W., Jr.**  
Application of C-14 AMS dating to the chronology of Holocene glacier fluctuations in the High Arctic, with special reference to Leffert Glacier, Ellesmere Island, Canada [1989, p.370-378, eng] 45-1844
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Polarimetric scattering measurements on artificially grown sea ice [1989, p.1942-1944, eng] 45-284
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Application of ice/structure interaction concepts to a real time ice risk assessment computer model [1991, p.650-665, eng] 45-2375  
Equations for local ice energy dissipations during ship ramming [1990, p.101-115, eng] 45-494  
Thirteenth Canadian Geotechnical Colloquium: ice design criteria for wide arctic structures [1990, p.701-725, eng] 45-1868
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Comments on atmospheric feedbacks [1990, p.41-53, eng] 45-3821
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Character and distribution of sea-ice and iceberg scours [1990, p.57-101, eng] 45-1946  
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Project criteria and future development of the telecommunications system for the National Program of Antarctic Research [1990, p.213-224, eng] 45-135
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On the thermal regime of an arctic valley glacier: a study of White Glacier, Axel Heiberg Island, N.W.T., Canada [1987, p.200-211, eng] 45-16
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Geological history of the polar oceans: Arctic versus Antarctic [1990, 823p., eng] 45-1265
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Antarctic ice cover dynamic activity zones in the Vostok Station region [1990, p.79-89, rus] 45-2490  
Numerical experiments on the reconstruction of the paleoclimatic, based on results of the thermometry of a deep borehole at Vostok Station, Antarctica [1989, p.116-121, rus] 45-1045
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Calculating heat flux from the water to the atmosphere in the arctic basin [1989, p.122-127, rus] 45-1661
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Glass transition of the amorphous phase in frozen aqueous systems [1991, p.239-247, eng] 45-2937
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Total ozone trends deduced from Nimbus 7 TOMS data [1991, p.1015-1018, eng] 45-3758
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Collection of intact cores from a rocky desert and a glacial till soil [1990, p.938-940, eng] 45-225
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Radioactivity profiles of the Chernobyl fallout on Tyrolean glaciers [1989, p.5-8, ger] 45-392  
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Dinitrogen fixation (acetylene reduction) in primary succession near Mount Robson, British Columbia, Canada [1990, p.255-263, eng] 45-888
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USNS *Bartlett* cruise to the Greenland Sea in September 1989. Data report [1990, 122p., eng] 45-451
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Using natural cold in automated underground cold storage areas [1990, p.98-100, rus] 45-2715
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Periglacial soils of the western contiguous United States: distribution and taxonomy [1991, p.206-212, eng] 45-3485  
Review of pedogenic zonation in well-drained soils of the southern circumpolar region [1990, p.47-66, eng] 45-1855  
Soil development rates in the Transantarctic Mountains [1990, p.59-77, eng] 45-715
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HYDROTEL, a hydrological model designed to make use of remotely sensed and GIS data [1990, p.177-185, eng] 45-3805
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Trends '90: a compendium of data on global change [1990, 257p. + appends., eng] 45-1089
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Seasonal description of the quality and quantity of snowmelt in a mountainous region using an integrated model [1990, p.383-393, eng] 45-2994
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Model of transition processes in the tundra-taiga system [1991, p.508-511, rus] 45-2936
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Electrical parameters of surface layers of shelf and continental glaciers in the UHF range [1989, p.23-31, rus] 45-1485  
Electro-physical and physical-mechanical properties of ice [1989, 256p., rus] 45-1483  
Electromagnetic emission from dynamic processes in ice [1990, p.1357-1360, rus] 45-1858
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Biological seasons in the plankton of different seas [1941, p.404-407, eng] 45-3371
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Glacial drainage systems along the Antarctic Peninsula and Palmer Archipelago [1990, p.116-117, eng] 45-1411
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Study of the cold wave phenomenon in Quebec as a natural catastrophe [1990, p.138-157, fre] 45-2754
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Channels of glacial meltwater runoff and the possibility of paleogeographic reconstructions [1990, p.58-64, rus] 45-705  
Main features of the geomorphological structure of Bunge Oasis (East Antarctica) [1990, p.79-90, rus] 45-2572
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Development of valleys of small rivers in the central part of the Moscow marginal ice zone during the Quaternary period (in the example of the middle Protva River) [1989, p.62-67, rus] 45-710
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Fatigue endurance program for classification of built-up roofing [1991, p.26-32, eng] 45-2454
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Biophysical surface energy budget analysis of soil temperature in the boreal forests of interior Alaska [1991, p.767-781, eng] 45-3293
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Salt oscillator in the glacial Atlantic? 1. The concept [1990, p.469-477, eng] 45-952

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Retrieval of total precipitable water over high latitude regions using radiometric measurements near 90 and 183 GHz [1991, p.179-184, eng] 45-1598
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Salt oscillator in the glacial Atlantic? 1. The concept [1990, p.469-477, eng] 45-952
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Solar lows over the Gulf of Alaska in conditions of reverse shear [1991, p.551-572, eng] 45-3272
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Spontic algal community of the ice edge zone and its significance to the Davis Strait ecosystem [1984, p.234-243, eng] 45-3070
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Snow accretion in Catalonia: a climatological study [1988, p.277-281, eng] 45-1354
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Thermal radiation of ice cover on fresh-water bodies [1990, 100p., rus] 45-635
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Overview of icing research at ONERA [1988, p.186-191, eng] 45-1336
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Twenty-sixth Soviet Antarctic Expedition. Studies of the 1980-81 season [1988, 140p., rus] 45-2018
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Geomorphic patterns produced by the last Canadian ice sheet: matching the scales of remote sensing with the frequency of natural variation [1989, p.97-100, eng] 45-230
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Modern pollen spectrum from Dye 3, south Greenland ice sheet [1990, p.340-342, eng] 45-1544
- Physico-chemical and pollen composition of the Canadian arctic ice cap [1990, p.3/15-3/21, fre] 45-1794
- Seasonal and annual variation of pollen content in the snow of a Canadian high arctic ice cap [1990, p.313-322, eng] 45-2413
- Bourke, R.H.**  
USNS *Bartlett* cruise to the Greenland Sea in September 1989. Data report [1990, 122p., eng] 45-451
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Assessing the quality of thermally drilled deep antarctic ice cores for trace elements analysis [1989, p.182-197, eng] 45-1472
- Occurrence of zinc in antarctic ancient ice and recent snow [1990, p.248-259, eng] 45-1847
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Theoretical prediction of devitrification tendency: determination of critical warming rates without using finite expansions [1990, p.359-377, eng] 45-2962
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Calibration transfer standards for fenestration systems [1991, p.251-260, eng] 45-2662
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Arctic research in the United States, Vol.4 [1990, 106p., eng] 45-1398
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Catalog of smoke/obscurant characterization instruments [1984, 184p., eng] 45-3476
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- Boyd, W.L.**  
Thermophilic bacteria among arctic, subarctic, and alpine habitats [1990, p.401-411, eng] 45-1419
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Laboratory comparison of field techniques for measurement of the liquid water fraction of snow [1990, 8p., eng] 45-560
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Problem of the thermal physics of snow-firn sequences [1990, p.35-39, rus] 45-1733
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Estimated runoff from man-made snow [1990, p.519-526, eng] 45-3698
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Holocene paleoclimatology of the Queen Elizabeth Islands, Canadian High Arctic [1990, p.365-384, eng] 45-2074
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- Role of atmospheric precipitation in the formation of the chemical content of surface water in the Lower Anadyr lowlands [1990, p.73-77, rus] 45-3866
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2M3 isothermal cloud chamber for the study of artificial ice nuclei (1990, p.494-502, eng) 45-1081
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Simplified analysis for cold storage in porous capsules with solidification (1991, p.108-116, eng) 45-3467  
Water thermal storage with solidification (1991, p.79-90, eng) 45-2762
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Chemical composition of ice, snow and rain at the Great Wall Station in summer 1985 (1989, p.107-112, chi) 45-685  
Synoptic processes impacting the Great Wall Station from January through March, 1985 (1989, p.22-28, chi) 45-683
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Effects of temperature and strain rate on uniaxial compressive strength of natural fresh water ice (1990, p.141-146, chi) 45-454
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Water content during abscisic acid induced freezing in bromegrass cells (1990, p.460-464, eng) 45-3276
- Chen, W.B.**  
Method of thermodynamic numerical sea ice forecast in the Bohai Sea (1990, p.143-152, eng) 45-3572
- Chen, X.B.**  
New model of frost heave prediction for clayey soils (1991, p.213-214, eng) 45-3426
- Chen, Y.C.**  
Two-dimensional surface drift model for river ice (1991, p.355-362, eng) 45-2347
- Chen, Y.K.**  
Global ice forces and ship response to ice: analysis of ice ramming forces (1990, 106p. + appends., eng) 45-1672
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Causation and characteristics of regular transverse cracks of asphalt highways in northern China (1990, p.126-135, eng) 45-127
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Effect of load on frost heaving of subsoil (1990, p.41-47, chi) 45-460
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Predictability of seasonal ice cover variations in the southern ocean (1990, p.82-86, rus) 45-3083
- Chepurnoi, M.N.**  
Characteristics of air coolers with varying spaced finning during hoarfrost formation (1989, p.29-32, rus) 45-802
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Contact supercooling of water layers and bottom ice formations in the sea (1989, p.124-134, rus) 45-1499  
Laboratory studies of oriented growth of ice crystals in moving water streams (1989, p.144-153, rus) 45-1501  
Relationship between the melting rate of fresh ice in sea water and the temperature and rate of the circumfluent current (1989, p.106-113, rus) 45-1660  
Seasonal variability of physical-mechanical characteristics of sea ice (1991, p.53-57, eng) 45-3013
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Ice tests on an "Enthusiast" class harbor tug with anti-ice protection of the rudder-propeller system (1989, p.26-28, rus) 45-1139
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Use of mobile radiosonde systems to observe the environments of Lake Ontario winter storms (1991, p.J142-J145, eng) 45-1600
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Microbial transformation of polychlorinated biphenyls in polar marine regions (1990, p.4-7, eng) 45-3052
- Cherniak, V.P.**  
Temperature field in a system of excavations during ice formation (1990, p.47-51, rus) 45-801
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Ecological soil petrography and mineralogy (1990, p.13-34, rus) 45-2906
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Vertical distribution of snow accumulations on variously oriented slopes in the Malaya Almatinka River basin (1990, p.3-14, rus) 45-1099
- Chernogozova, G.M.**  
Flatlands with snow and ice (1989, p.324-331, eng) 45-2750  
Humid temperate flatlands (1989, p.332-337, eng) 45-2751
- Chernovitsov, P.I.U.**  
Causes of glaciation (1990, p.169-174, rus) 45-1757
- Chernov, I.P.**  
Elastic properties of a tungsten monocarbide-based metal-loceramic at low temperatures (1990, p.93-95, eng) 45-993
- Chernova, L.P.**  
Annotated list of Soviet literature on glaciology for 1987 (1990, p.193-230, rus) 45-1762  
Cartographic analysis of the interrelations in glacier systems (1989, p.24-29, rus) 45-1030
- Chernyakh, G.N.**  
Study of VLF electromagnetic fields in the arctic auroral zone (1986, p.32-35, rus) 45-741
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Using a Kalman filter for calculating ice drift parameters (1989, p.99-105, rus) 45-1659
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Influence of cold climate on the service properties of elastomers, polymers and composites used in mechanical engineering (1990, p.603-613, eng) 45-163
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Electrical and acoustic properties of saline frozen soils (1990, p.128-136, rus) 45-2902
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Low-temperature effects on the microstructure of cement paste exposed to seawater (1990, p.340-347, eng) 45-358
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Changes in the flexural strength of ice under radiation decay (1990, p.341-354, eng) 45-2531  
Deterioration of freshwater ice due to radiation decay (1990, p.685-697, eng) 45-2253
- Chi, Y.**  
Microphysical structure of snow clouds and the growth process of snow particles in winter in Xinjiang (1990, p.221-230, eng) 45-611
- Childs, P.W.**  
Attic testing at the Roof Research Center—initial results (1991, p.391-400, eng) 45-2462

- Chilton, D.S.**  
Modeling of floating ice sheets [1991, p.628-637, eng] 45-2373
- Chin, S.N.**  
Small scale field indentation tests on first year sea ice [1990, p.878-889, eng] 45-3637
- Chinese Committee on Antarctic Research**  
Proceedings of the International Symposium on Antarctic Research [1989, 540p., eng] 45-1003
- Chinese Scientific and Technological Conference on Antarctic Glaciology, 1st, Lanzhou, Aug. 5-9, 1986**  
Collection of antarctic scientific explorations, No.5. Studies on glaciology [1988, 278p., chi] 45-34
- China, T.J.H.**  
Glaciers of New Zealand [1989, p.21-48, eng] 45-819
- Chirkova, A.A.**  
Glaciological data bank: development, operation, and prospects for future development [1990, p.75-79, rus] 45-1739
- Chistotinov, L.V.**  
Methods and results of forecasting the temperature of the active layer of rocks during general development of territory in the northeastern European part of the country [1989, p.20-31, rus] 45-2005
- Chiu, L.S.**  
Decorrelation distance of snow in the Colorado River basin [1989, p.1247-1250, eng] 45-269
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Ecological soil petrography and mineralogy [1990, p.13-34, rus] 45-2906
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Estimating subsurface melting of an ice layer [1989, p.138-143, rus] 45-1050  
Thermodynamic properties of ice, water, and a mixture of the two at high pressures [1990, p.378-385, eng] 45-3254
- Cho, K.**  
Study on sea ice monitoring using MOS-1/MSR [1989, p.991-994, eng] 45-253
- Chokji, T.**  
Airborne trace metals in snow on the Japan Sea side of Japan [1990, p.2593-2600, eng] 45-954  
Release of heavy metals from snowpacks on the Japan Sea side of Japan [1990, p.141-153, eng] 45-596
- Chong, G.J.**  
Improved preventive maintenance: sealing cracks in flexible pavements in cold regions [1988, p.12-19, eng] 45-525
- Chotia, E.**  
Contribution of SPOT imagery to the study of the nature, texture and structure of ice in Adélie Coast [1991, p.827-834, fre] 45-3096
- Chotia, P.**  
Contribution of SPOT imagery to the study of the nature, texture and structure of ice in Adélie Coast [1991, p.827-834, fre] 45-3096
- Choudhury, B.J.**  
Passive microwave remote sensing contribution to hydrological variables [1991, p.63-84, eng] 45-1797
- Chow, L.C.**  
Void formation in unidirectional solidification [1990, p.239-255, eng] 45-1422
- Chowdhury, T.**  
Spreading of oil spilled under ice [1990, p.1468-1483, eng] 45-1289
- Christensen, F.T.**  
Ice concentrations affecting navigation to Scoresby Sund in East Greenland [1990, p.245-256, eng] 45-138  
Ice concentrations on the north east Greenland shelf [1990, p.272-281, eng] 45-140  
Summer sea ice simulation in the East Greenland area [1990, p.337-351, eng] 45-3588
- Christensen, T.**  
Arctic and sub-arctic soil emissions: possible implications for global climate change [1991, p.205-210, eng] 45-3415
- Christian, J.E.**  
HFT guard plate for exterior envelope surface measurements [1991, p.29-51, eng] 45-2651
- Christon, M.**  
2-D microscopic simulation of heat and mass transport in dry snow [1990, p.87-105, eng] 45-2168  
3-D transient heat and mass transport in microscopic ice lattices [1990, p.25-33, eng] 45-3868
- Christophersen, J.B.**  
Rehabilitation and demolition after the closure of the zinc and lead mine "Black Angel" at Maarmorilik, Greenland [1990, p.744-759, eng] 45-176
- Chu, M.L.**  
Adhesive peel strength of artificial ice [1988, p.167-169, eng] 45-1332  
Combined finite element-experimental technique for determination of impact ice tensile properties [1988, p.254-258, eng] 45-1349
- Chua, R.**  
Soluble and insoluble impurities in snow samples from Ross Island, Antarctica [1990, p.89-91, eng] 45-1393
- Chubatin, O.A.**  
Plan for environmentally protected areas: a component part of the comprehensive environmental protection plan (for example, the Tyumen and Tomsk regions) [1989, p.148-158, rus] 45-110
- Chubukova, A.L.**  
Methods for stochastic modelling of temperature fields in the cryolithozone [1989, p.31-43, rus] 45-2006  
Optimizing the observation of rock temperatures in the process of surveying cryogenic-hydrogeological operations [1989, p.47-57, rus] 45-2008
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Evaluation of the Davydov Glacier reaction to man-made destruction of its terminus [1989, p.202-206, rus] 45-1061
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Development of models of the survival of winter grain crops in a zone with stable snow cover [1990, p.113-118, rus] 45-2272
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Study of ancient glacial deposits; a practical guide [1990, 93p., rus] 45-3836
- Chung, K.K.**  
On the growth of marine icicles [1990, p.393-408, eng] 45-1681
- Chupryna, V.I.**  
Model studies of the "atmosphere-snow-sea ice" system in an annual cycle [1990, p.51-57, rus] 45-1736
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Thermoelectric flow of thin intervening layers of unfrozen water in bundles of quartz fibers [1990, p.294-297, eng] 45-1271
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Geography of surface runoff: some lessons for research [1990, p.299-325, eng] 45-1481
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Integration of rehabilitation, maintenance and upgrading in Saskatchewan's Pavement Management Information System [1990, p.301-319, eng] 45-3518
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Sea ice observations from the Winter Weddell Gyre Study '89 [1991, 161p., eng] 45-2903
- Chzhan, R.V.**  
Use of thermosiphons in meliorative development of central Yakutia [1987, p.117-126, rus] 45-581
- Ciaffone, R.E.**  
Meteorological, oceanographic and sea ice analyses and forecasts to military units operating in the Arctic region [1989, p.223-243, eng] 45-540
- Claffey, K.J.**  
Preliminary results of direct tension tests on first-year sea ice samples [1991, p.569-578, eng] 45-2367
- Clagett, G.P.**  
Evaluation of precipitation measurements in the Arctic [1990, p.617-639, eng] 45-422  
Let's involve schoolkids in data collection efforts [1990, p.137-140, eng] 45-2131  
Measurement and evaluation of snowpacks [1990, p.39-93, eng] 45-406
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Implications of climate change for water resources in the Great Lakes basin [1990, p.179-186, eng] 45-3297
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Critical assessment of low temperature properties of multi-grade SAE 10W-30 engine oils [1990, p.502-507, eng] 45-1525
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Glacial and volcanic geomorphology of the Chimborazo—Carihuairazo Massif, Ecuadorian Andes [1990, p.91-116, eng] 45-2789  
Late Cenozoic glacial history of the Ross Embayment, Antarctica [1990, p.253-272, eng] 45-1443  
Quaternary glaciations in the Southern Hemisphere: an overview [1990, p.299-304, eng] 45-1444  
Quaternary glaciations in the southern ocean and Antarctic Peninsula area [1990, p.229-252, eng] 45-1442
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Transport of snow by wind in mountains: field and laboratory measurements, preliminary modeling [1990, p.1/65-1/83, fre] 45-1784
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Geomorphic patterns produced by the last Canadian ice sheet: matching the scales of remote sensing with the frequency of natural variation [1989, p.97-100, eng] 45-230
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Arctic Ocean ice cover: geologic history and climatic significance [1990, p.53-62, eng] 45-1690  
Late Mesozoic and Cenozoic paleoceanography of the northern polar oceans [1990, p.427-458, eng] 45-1692
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Modeling acoustic propagation beneath ice using the finite element technique [1991, p.327-329, eng] 45-3043
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Behavior of laboratory-made spray ice in triaxial compression testing [1990, p.192-204, eng] 45-1910  
On small scale ice scour modelling [1990, p.193-235, eng] 45-1952
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Role of ice properties in wave-ice interaction during LIMEX '87 [1989, p.2350-2354, eng] 45-292
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Svalbard contribution to global studies of arctic hydrology and sediment transfer [1990, p.75-83, eng] 45-3784
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Reconstructed ice-flow patterns and ice limits using drift pebble lithology, outer Nachvak Fiord, northern Labrador: discussion and reply [1990, p.1002-1011, eng] 45-1685
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Development of a cryogenic dew/frost point hygrometer [1991, p.322-326, eng] 45-1594
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Modeling the reflectance spectrum of Callisto at 0.25 to 4.1 millimicrons [1991, p.305-317, eng] 45-2939
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Patterns of energy storage in *Pseudoboeckella poppei* (Crustacea, Copepoda) from two contrasting lakes on Signy Island, Antarctica [1989, p.183-191, eng] 45-2616
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Oil and gas resources in the offshore Soviet arctic [1991, p.108-122, eng] 45-3328
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Arctic Ocean: its role in the global climate engine [1991, p.55-60, eng] 45-3857
- Clausen, H.B.**  
Decline of Pb-210 fallout on Greenland in the last century [1990, p.100-102, eng] 45-1905  
Performance of the UCPH shallow and hand augers [1989, p.14-20, eng] 45-1449
- Clausen, M.**  
Local advection processes in the surface layer of the marginal ice zone [1991, p.1-27, eng] 45-2163
- Clavaguera-Mora, M.T.**  
Snow accretion in Catalonia: a climatological study [1988, p.277-281, eng] 45-1354
- Cleland, A.C.**  
Geometric factor for prediction of freezing or thawing times of elliptical two-dimensional objects [1989, p.651-657, eng] 45-3107
- Cleland, D.J.**  
Geometric factor for prediction of freezing or thawing times of elliptical two-dimensional objects [1989, p.651-657, eng] 45-3107
- Clement, P.**  
Heterotrophic activity and bacterial productivity in assemblages of microbes from sea ice in the high Arctic [1990, p.351-357, eng] 45-3361
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Ice-on-coil diurnal ice storage cooling system for a barracks-office/dining hall facility at Yuma Proving Ground, AZ [1990, 49p., eng] 45-1551
- Clifford, S.M.**  
Concentric crater fill on Mars: an aeolian alternative to ice-rich mass wasting [1989, p.397-407, eng] 45-395
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Hydrologic and biologic consequences of an avalanche striking an ice-covered lake [1990, p.51-60, eng] 45-2121
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Coal geology, coal quality, and coal resources in Permian rocks of the Beacon Supergroup, Transantarctic Mountains, Antarctica [1990, p.133-162, eng] 45-2809
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Geomorphic controls of groundwater hydrology [1990, p.341-356, eng] 45-2594  
Permafrost and thermokarst: geomorphic effects of subsurface water on landforms of cold regions [1990, p.211-218, eng] 45-2593
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Minnesota Road Research Project—an overview [1991, p.463-471, eng] 45-2358
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Mechanics of creep brittle materials, 1 [1989, 309p., eng] 45-514  
Micromechanics based model for the creep of ice including the effects of general microcracking [1989, p.213-229, eng] 45-519
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Fatigue characterization of Alaska paving materials (final report) [1988, 126p., eng] 45-311
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Mountain glaciers—an overview with emphasis on Alaska [1990, p.177-258, eng] 45-409
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International classification for seasonal snow on the ground [1990, 23p., eng] 45-1174  
Layered character of snow covers [1991, p.81-96, eng] 45-2828  
Recent progress in snow and ice research [1991, p.218-226, eng] 45-3451  
Remote sensing of snow covers using the gamma-ray technique [1991, 19p., eng] 45-3259  
Vapor-pressure dependence on temperature in models of snow metamorphism [1990, p.351-352, eng] 45-1547
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Model study of the wave-driven impact of bergy bits with a semi-submersible platform [1990, p.313-322, eng] 45-998
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Ice tank tests on circular and sidewall air cushion icebreaker bows [1991, p.149-156, eng] 45-3163
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Anelastic straining in polycrystalline ice [1991, p.504-518, eng] 45-2362

- Reversed direct-stress testing of ice: equipment and example results [1990, p.295-302, eng] 45-1619
- Reversed direct-stress testing of ice: initial experimental results and analysis [1990, p.303-321, eng] 45-1620
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Profiling top of buried pipe of the trans Alaska pipeline using the TSI pipe locator [1988, p.279-286, eng] 45-1181
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Highway deicing salts and the mobilization of selected heavy metals from stream sediments [1990, 126p., eng] 45-3353
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Wind power in Antarctica: case histories of the North Wind HR3 wind turbine [1991, p.765-771, eng] 45-2386
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Measurement within the snow cover [1990, p.16-18, fre] 45-1128
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Physical factors influencing winter precipitation chemistry [1991, p.782-788, eng] 45-3819
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Fast-flowing outlet glaciers on Svalbard ice caps [1990, p.778-781, eng] 45-617
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Canadian Beaufort Sea physical shore-zone analysis. Final report [1985, 105p. + appends., eng] 45-2538
- Collins, C.M.**  
Surface radar investigations of an icing mound on the Sagavarnitok River, Alaska [1990, p.353-363, eng] 45-2744
- Collins, R.L.**  
Best flying season [1991, p.51-55, eng] 45-1900
- Colloque Dynamique des risques naturels et glaciologie, Grenoble, France, Dec. 5-7, 1990**  
Colloquium on the Dynamics of Natural Hazards and Glaciology, Grenoble, France, Dec. 5-7, 1990 [1990, Var. p., fre] 45-1776
- Colony, R.**  
Development of seawater batteries as a long-term arctic power source [1990, p.1122-1129, eng] 45-3659
- Measurement of the thermal regimes in perennial sea ice [1989, p.1282-1286, eng] 45-445
- Colorado climate: temperature, precipitation, frost and growth data from selected stations**  
Colorado climate: temperature, precipitation, frost and growth data from selected stations [1989, 290p., eng] 45-488
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Evolution of topography on comets II. Icy craters and trenches [1990, p.205-215, eng] 45-847
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Evidence for episodic Late Holocene subsidence in estuarine deposits near Anchorage, Alaska: basis for determining recurrence intervals of major earthquakes [1990, 67p., eng] 45-3086
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Analysis of subsour stresses and probability of ice scour-induced damage for buried submarine pipelines. Summary report [1990, 30p., eng] 45-1555
- Analysis of subsour stresses and probability of ice scour-induced damage for buried submarine pipelines, Vol. 1A and 1B. Database of key ice scour parameters, main report and appendices [1990, 106p. + 324p., eng] 45-1556
- Analysis of subsour stresses and probability of ice scour-induced damage for buried submarine pipelines, Vol. 2. Deterministic model of ice-soil-pipe interaction [1990, 204p., eng] 45-1557
- Case study analysis of the probability of ice scour-induced damage for submarine pipelines [1990, p.145-164, eng] 45-1949
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- Comini, G.**  
Conservative algorithm for multidimensional conduction phase change [1990, p.697-709, eng] 45-2175
- Comiso, J.C.**  
Concurrent remote sensing of arctic sea ice from submarine and aircraft [1989, 20p., eng] 45-563
- Satellite microwave sea-ice observations and oceanic processes on the antarctic continental shelf [1990, p.135-136, eng] 45-1415
- Top/bottom multisensor remote sensing of arctic sea ice [1991, p.2693-2709, eng] 45-2042
- Top/bottom multisensor remote sensing of arctic sea ice [1989, 56p., eng] 45-564
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CI-36 profile in Greenland ice from AD 1265 to 1865 [1989, p.585-591, eng] 45-1846
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Investigation of mineralization in the South Shetland Islands, Gerlache Strait, and Anvers Island, northern Antarctic Peninsula [1990, p.69-94, eng] 45-2805
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Morphology of a multi-year ice ridge in the High Arctic [1989, p.1123-1128, eng] 45-901
- Conover, R.J.**  
Comparative life histories in the genera *Calanus* and *Neocalanus* in high latitudes of the Northern Hemisphere [1988, p.127-142, eng] 45-3262
- Contreras, M.**  
Abiotic dynamics of Lake Kitezh, Antarctica [1991, p.9-32, spa] 45-3552
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Observations relating to wet snow stability [1989, Appendix C, 12p., eng] 45-815
- Prediction of snow avalanches in maritime climates [1989, 139p. + appends., eng] 45-814
- Cooley, K.R.**  
Effects of CO<sub>2</sub>-induced climatic changes on snowpack and streamflow [1990, p.511-522, eng] 45-2992
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Time-dependent effects on ridge initiation in sea ice leads [1989, p.1298-1303, eng] 45-448
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Slope correction by relocation for satellite radar altimetry [1989, p.2730-2733, eng] 45-300
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Acidic snowmelt event in a New Jersey stream: evidence of effects on an indigenous trout population [1990, p.227-237, eng] 45-3304
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Solute rejection in freezing soils [1991, p.99-108, eng] 45-2090
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Project criteria and future development of the telecommunications system for the National Program of Antarctic Research [1990, p.213-224, eng] 45-135
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Threshold pavement thickness to survive spring thaw [1990, p.41-51, eng] 45-3690
- Cornwell, J.C.**  
Nitrogen, phosphorus, and organic carbon cycling in an arctic lake [1985, p.797-808, eng] 45-3244
- Corwell, K.**  
Heat transfer under frosting conditions to plain and thick-finned tubes [1991, p.1-17, eng] 45-2566
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Chemical and glaciological studies [1990, p.87-89, eng] 45-2835
- Corte, A.M.**  
Chemical and isotopic characteristics of ice from an ice-wedge in Seymour Island (Isla Voom, Marambio), Antarctic Peninsula region (I) [1990, p.181-190, eng] 45-1531
- Cortez, E.R.**  
Antifreeze admixtures for cold weather concreting [1991, p.38-41, eng] 45-1983
- New admixtures for cold weather concreting [1991, p.200-209, eng] 45-2334
- Roller-compacted concrete pavement construction at Fort Drum, New York [1990, p.8-17, eng] 45-2088
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Winter sewer construction in Campbell Lake [1991, p.126-135, eng] 45-2328
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Formation and failure of natural dams [1987, 39p., eng] 45-530
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Bacterioplankton in the marginal ice zone of the Weddell Sea: biomass, production and metabolic activities during austral autumn [1990, p.1145-1167, eng] 45-882
- Comparison of the irradiance response of photosynthesis and nitrogen uptake by sea ice microalgae [1991, p.201-210, eng] 45-2669
- Fluorescence induction and photosynthetic responses of arctic ice algae to sample treatment and salinity [1986, p.421-429, eng] 45-3319
- Impact of ice algae on inorganic nutrients in seawater and sea ice in Barrow Strait, NWT, Canada, during spring [1990, p.1402-1415, eng] 45-435
- Nitrogen utilization in ice algal communities of Barrow Strait, Northwest Territories, Canada [1990, p.275-283, eng] 45-2033
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Storm and cloud dynamics [1989, 883p., eng] 45-2427
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Effect of abiotic factors on the overwintering success in the meadow vole *Microtus pennsylvanicus*: winter redefined [1991, p.45-52, eng] 45-2472
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Using parameter estimation to analyze building envelope thermal performance [1991, p.161-191, eng] 45-2658
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Numerical analysis of frost shields [1991, p.178-190, eng] 45-2332
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Upper limit for sea ice albedo feedback contribution to global warming [1991, p.9169-9174, eng] 45-3412
- Cowan, A.M.**  
Concurrent remote sensing of arctic sea ice from submarine and aircraft [1989, 20p., eng] 45-563
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- MIZEX 83 data summary [1983, 154p., eng] 45-942
- Cowan, E.A.**  
Suspended sediment transport and deposition of cyclically interlaminated sediment in a temperate glacial fjord, Alaska, U.S.A. [1990, p.75-89, eng] 45-2782
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First large balloon launch from Antarctica [1988, 108p., eng] 45-644
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Global ice forces and ship response to ice [1990, 36p. + appends., eng] 45-1673
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Enhancements to the Shaft Modeling Tool Kit [1990, 42p., eng] 45-2646
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Investigation of mineralization in the South Shetland Islands, Gerlache Strait, and Anvers Island, northern Antarctic Peninsula [1990, p.69-94, eng] 45-2805
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Security co-operation in the Arctic: a Canadian response to Murmansk [1989, 28p., eng] 45-675
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Safe winter driving—grip as for winter, driving properties as for summer [1989, p.61-66, eng] 45-1215
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Data report on the Weddell Ice Dynamics Experiment [1990, n.p., eng] 45-944
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Radar sounder (final report Aug. 1987-Sep. 1988) [1988, 139p., eng] 45-316
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Concurrent remote sensing of arctic sea ice from submarine and aircraft [1989, 20p., eng] 45-563
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- Top/bottom multisensor remote sensing of arctic sea ice [1989, 56p., eng] 45-564
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Traces of frost activity and ice segregation in Pleistocene loess deposits and till of northern Italy: deep seasonal freezing or permafrost [1990, p.39-48, eng] 45-2076
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ASCE technical council on cold regions monograph series [1990, p.1047-1052, eng] 45-2577
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Wave energy and floe collisions in marginal ice zones [1990, p.33-45, eng] 45-2720
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Behavior of a glacier-derived suspended sediment plume in a small arctic inlet [1991, p.111-123, eng] 45-2021
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Comparative field study of the operational characteristics of calcium magnesium acetate and rock salt [1989, p.18-26, eng] 45-810
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Satellite radar altimetry of ice sheets and ice shelves (1989, p.43-50, eng) 45-1863
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Summertime formation of depth hoar in central Greenland (1990, p.2393-2396, eng) 45-1991
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Yearly dynamics of the front zone of the Hansa Glacier (1987-1988) (1990, p.109-130, pol) 45-2581
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R-strategist in antarctic pack ice (1991, p.305-309, eng) 45-3456
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USACRREL underwater frazil ice detector (1991, p.758-764, eng) 45-2385  
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Search and rescue target detection experiment, Canso Bank, 1988 (1989, Var. p., eng) 45-550
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Integral analysis of the initiation of river ice cover cracking (1990, p.511-530, eng) 45-3603  
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Alaska's mineral industry, 1989 (1989, 100p., eng) 45-491
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Radar depth sounding near Upstream B camp—December 1988 (1990, p.85-86, eng) 45-1391  
Radar reflections from water injected into an antarctic glacier (1990, p.723-726, eng) 45-721

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Report of the glaciological field party in the Sør Rondane Mountains region, 1989-1990 summer season (JARE-31) [1990, p.225-234, jpn] 45-982
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Thermofusion flow of thin intervening layers of unfrozen water in bundles of quartz fibers [1990, p.294-297, eng] 45-1271
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Deicing techniques and equipment. April 1983-April 1990. (A bibliography from the NTIS Database) [1990, 90p., eng] 45-83
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Integration of rehabilitation, maintenance and upgrading in Saskatchewan's Pavement Management Information System [1990, p.301-319, eng] 45-3518
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Surface radar investigations of an icing mound on the Sagavanirktok River, Alaska [1990, p.353-363, eng] 45-2744  
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Radio-echo sounding survey across the Allan Hills Icefield [1990, p.50-52, eng] 45-1084  
Recent change in ice thickness in Windless Bight, Ross Ice Shelf, Antarctica? [1990, p.350-351, eng] 45-1546
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Ste. Anne Test Road revisited twenty years later [1990, p.215-233, eng] 45-3498
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Climatic conditions in the northern European basin for the last 400 years (according to observations and reconstructions) [1989, p.67-75, rus] 45-1625
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Low-velocity rigid sphere vertical impact on a floating ice sheet [1990, p.301-312, eng] 45-3684
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Danube ice floods during the last millenary [1989, p.151-158, hun] 45-3102
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Snow cover on small forest and field watersheds in the taiga zone of the European USSR [1990, p.101-105, eng] 45-2080  
Water-regulating role of taiga forests [1990, 222p., rus] 45-1574
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Analysis of oil-oxidizing and heterotrophic microflora on the coast of Eastern Murman [1985, p.139-143, eng] 45-3290
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Design criteria for arctic offshore production structures. Computer programs [1984, n.p., eng] 45-2847
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Development of field technology and methods for forecasting snowfall and snow accumulation [1989, 187p., jpn] 45-531
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Geothermal conditions of the Neryungrinskiy coal deposit [1987, p.134-138, rus] 45-583
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Recent secular variations in the extent of Northern Hemisphere snow cover [1990, p.1557-1560, eng] 45-2043
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Ice management procedure for the exploitation of deepwater oil fields in subarctic areas [1990, p.257-269, eng] 45-139
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Beta radiation from snow [1990, p.25, eng] 45-919  
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Performance of instruments and the success of monitoring programs in the offshore environment [1990, p.395-417, eng] 45-1962
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Lancaster Sound region: a coastal atlas for environmental protection [1990, Var. p., eng] 45-2103
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Transient temperature solution for bore-hole model testing [1987, p.140-148, eng] 45-7  
Upper limit for sea ice albedo feedback contribution to global warming [1991, p.9169-9174, eng] 45-3412
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Algal and foram incorporation into new sea ice [1987, p.1736, eng] 45-3410
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In-House Laboratory Independent Research Program—FY88 [1990, 18p., eng] 45-1399  
Initial impressions of a candidate mobile over-snow transport system [1990, 13p. + appends., eng] 45-1969

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Past and present permafrost distribution in the Turmtantal, Wallis, Swiss Alps (1990, p.302-316, eng) 45-892
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Water and ice resources of the Issyk Kul-Chu region, their current and future state (1991, p.390-396, eng) 45-3237
- Dikikh, L.L.**  
Water and ice resources of the Issyk Kul-Chu region, their current and future state (1991, p.390-396, eng) 45-3237
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Glacial dispersal trains (1990, p.109-122, eng) 45-2548
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Freezing point of load-bearing moist soil and its determination (1990, 493-497, eng) 45-593
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Manganese and iron encrustation on green algae living in acid mine drainage (1989, p.765-773, eng) 45-1893
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Long-term temperature monitoring program, 1987: Scotia-Fundy, Gulf of St. Lawrence, and Newfoundland (1988, 491p., eng) 45-1275
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Retrieval of total precipitable water over high latitude regions using radiometric measurements near 90 and 183 GHz (1991, p.179-184, eng) 45-1598
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Activation energy for creep of spray ice (1991, p.42-49, eng) 45-2419  
Model for attenuating creep of frozen sand (1991, p.145-161, eng) 45-3421
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Thermal ice core drill 4000 (1989, p.59-65, eng) 45-1457
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Relationships among depth to frozen soil, soil wetness, and vegetation type and biomass in tundra near Bethel, Alaska, U.S.A. (1990, p.275-282, eng) 45-890  
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Permafrost and ground ice in the Kungur cave (1990, p.18-24, rus) 45-2698
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Physical oceanographic observations in the Cardigan Bay region of Prince Edward Island, 1982-1987 (1988, 37p., eng) 45-1283
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Comparison of active and passive microwave signatures of arctic sea ice (1990, p.29-36, eng) 45-3754  
K-u band airborne radar altimeter observations of marginal sea ice during the 1984 Marginal Ice Zone Experiment (1991, p.4555-4572, eng) 45-2672  
LIMEX'87 ice surface characteristics and their effect upon C-band SAR signatures (1989, p.390-393, eng) 45-238  
Multi-frequency imaging radar polarimetry of sea ice (1990, p.365-376, eng) 45-2745  
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Ice detector measurements of atmospheric icing on a cable (1990, p.51-64, eng) 45-2186  
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Beta radiation from snow (1990, p.25, eng) 45-919
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Saline frozen soils and their distribution over USSR territory (1990, p.3-9, rus) 45-2883
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Studying the thermal regime of natural complexes of tundra zones in Western Siberia (1989, p.6-20, rus) 45-2004
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Prairie wetlands: characteristics, importance to waterfowl, and status (1989, p.811-828, eng) 45-1402
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Inhibition of recrystallization of ice by insect thermal hysteresis proteins: a possible cryoprotective role (1986, p.256-262, eng) 45-2966
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Presence of Trident III on the antarctic continent (1986, p.223-237, fre) 45-1989

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Snow/cloud discrimination with multispectral satellite measurements (1990, p.994-1004, eng) 45-1273
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Effect of the surface roughness on the ice load characteristics during icing with low airspeeds (1988, p.232-235, eng) 45-1345  
Simulation of some rime characteristics by using an aggregate model (1988, p.243-247, eng) 45-1347
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VIII International PIARC Winter Service Congress at Tromsø (1990, p.200-204, ger) 45-555
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Microclimate of small karst forms in the foothills of the Crimean mountains (1990, p.45-46, rus) 45-2704
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Underground mining of frozen placer deposits in USSR (1989, p.241-244, eng) 45-352
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Possibility of developing a general purpose automated system for avalanche hazard forecasting and an avalanche information bank (1990, p.80-86, rus) 45-1740
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Full scale iceberg impact: a pilot experiment in Antarctica (1990, p.890-901, eng) 45-3638
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Determining the thermal admittance of a wall from in situ measurements of heat flux and surface temperature at the same location (1991, p.123-142, eng) 45-2656
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Glass transitions in polymeric roofing membranes—determination by dynamic mechanical analysis (1991, p.495-501, eng) 45-2465  
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Date of snowmelt at Barrow, Alaska, U.S.A. (1991, p.115-119, eng) 45-2475
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Ice jam analysis at Idaho Falls, Snake River, Idaho (1990, 18p., eng) 45-2035
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Proceedings of the 47th annual Eastern Snow Conference, Bangor, ME, June 7-8, 1990 (1990, 250p., eng) 45-2181
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Light-weight hot water drill for large depth: experiences with drilling on Jakobshavn Glacier, Greenland (1989, p.123-136, eng) 45-1465  
Short-term variations in the speed of ice stream B, Antarctica (1990, p.81-82, eng) 45-1257
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Airborne trace metals in snow on the Japan Sea side of Japan (1990, p.2593-2600, eng) 45-954  
Release of heavy metals from snowpacks on the Japan Sea side of Japan (1990, p.141-153, eng) 45-596
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Antarctic ozone depletion and potential effects on the global ozone budget (1989, p.237-251, eng) 45-2982
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Molecular theory of heterogeneous nucleation of crystals on small substrates. Probability of heterogeneous nucleation: comparison with experiment (1991, p.570-574, eng) 45-2565
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Methods of long-range forecasting of the beginning of intensive ice drift on the Yenisey River (1989, p.82-87, rus) 45-2276
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Seasonal variation of some constituents of antarctic tropospheric air (1990, p.2365-2368, eng) 45-1514
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De-icing of microwave dishes and power lines by electromagnetic impulse (1988, p.386-389, eng) 45-1377
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Computer model of atmospheric ice accretion on transmission lines (1991, 24p., eng) 45-2641
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Characteristics of the hydrogeological construction and hydrochemical zonality of the Udachnaya kimberlite plug (1989, p.146-155, rus) 45-2640
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Estimated runoff from man-made snow (1990, p.519-526, eng) 45-3698
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Radioactivity profiles of the Chernobyl fallout on Tyrolean glaciers (1989, p.5-8, ger) 45-392  
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Modelling the behaviour of oil spills in ice-infested waters (1990, p.303-329, eng) 45-1151
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Application of the theory of dispersion forces to the surface melting of ice (1991, p.1713-1716, eng) 45-2589
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Structure of the planets (1987, 210p. (Pertinent p.100-105, 151-156), eng) 45-2922
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Multiyear floe and hummock field survey in the east Beaufort Sea (1982, 15p. + appenda., eng) 45-2851
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Strip mine reclamation and Alaska's big game wildlife (1991, p.41-44, eng) 45-2450
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Portable ARGOS data link (1989, p.1272-1275, eng) 45-443
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Projected ecosystem consequences arising from the discharge of mine-tailing to the sea (1975, p.11/99-II/107, eng) 45-3225
- Elms-Evans, J.C.**  
High latitude limnology (1989, 323p., eng) 45-2602  
Patterns of energy storage in *Pseudoboeckella poppei* (Crustacea, Copepoda) from two contrasting lakes on Signy Island, Antarctica (1989, p.183-191, eng) 45-2616  
Some aspects of iron cycling in maritime antarctic lakes (1989, p.149-164, eng) 45-2613
- Elms, K.**  
Canadian Ice Island: environmental studies of the polar margin north of Canada's arctic islands (1991, p.60-67, eng) 45-3858
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Calibration transfer standards for fenestration systems (1991, p.251-260, eng) 45-2662
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Cl-36 profile in Greenland ice from AD 1265 to 1865 (1989, p.585-591, eng) 45-1846
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Rheology of solid methane and nitrogen: applications to Triton (1990, p.1753-1756, eng) 45-2044
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Electro-expulsive ice removal application to vertical launch system hatch and to personnel access hatch (1989, p.307-325, eng) 45-544
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Ice and thermal conditions of small flatland reservoirs (1990, p.101-104, rus) 45-1744
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Determination of mean annual temperature of permafrost soil (1989, p.89-93, eng) 45-652
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Design and construction of a research site for passive mine drainage treatment in Idaho Springs, Colorado (1989, p.761-764, eng) 45-1892

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Experimental measurements of the effects of frost formation on heat exchanger performance (1990, p.1-7, eng) 45-3865  
On the extensive use of heat flux transducers for evaluating residential building component performance—calibration and deployment (1991, p.143-158, eng) 45-2657  
Use of combined reflective and normal heat flux transducers in determining convective heat transfer coefficients and room thermal radiative balance (1991, p.97-110, eng) 45-2654
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Asphalt pavement rutting experience in Canada (1990, p.373-383, eng) 45-3504  
Asphalt technology for hot in-place surface recycling (1990, p.77-104, eng) 45-3509  
Rapid monitoring of flexible pavement deflections, moduli and roughness (1990, p.261-277, eng) 45-3516
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Silane coupling agents to reduce moisture susceptibility of asphalt concrete (1990, p.115-145, eng) 45-3495
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Fram Strait satellite image-derived ice motions (1991, p.4751-4768, eng) 45-2684
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Traction control for commercial vehicles (1989, p.355-363, eng) 45-1248
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Effect of Cenozoic ice sheet fluctuations in Antarctica on the stratigraphic signature of the Neogene (1991, p.6753-6778, eng) 45-2501
- Emmett, W.W.**  
Detection of coarse sediment movement using radio transmitters (1990, p.5-9, eng) 45-2099
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On-site experimental verification of the air bubble method (1990, p.287-292, jpn) 45-755  
Study on freezing in harbors (1990, p.299-304, jpn) 45-757
- Endo, Y.**  
Air temperature and snow depth on Yala Glacier of Langtang Valley, Nepal Himalayas (1990, p.55-60, eng) 45-198
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Recent advancement of automatic weather station in Antarctica: recent advancement of unmanned observation of weather, snow and ice, Part 2 (1990, p.179-183, jpn) 45-781
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Date of snowmelt at Barrow, Alaska, U.S.A. (1991, p.115-119, eng) 45-2475
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River valleys in the area of the main watershed in Asia (1990, p.90-96, rus) 45-2823
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Integrating radar-rainfall data into the hydrologic modeling process (1990, p.69-73, eng) 45-1430
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Borehole drilling to the bed of ice stream B, Antarctica (1990, p.83-84, eng) 45-1258
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Radiobrightness of freezing terrain (1989, p.2748-2751, eng) 45-302  
High Arctic thrust block moraines (1991, p.93-97, eng) 45-2174
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Holocene soligenous fans on a high arctic fault block, northern Ellesmere Island (82 deg N), N.W.T., Canada (1991, p.80-98, eng) 45-2473
- Engler, M.**  
Dumont d'Urville aerodrome, Terre Adélie, Antarctica (1990, p.191-213, eng) 45-501
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Physical modelling of icebreaking ships in fine-grain model ice (1990, p.15-42, eng) 45-3563
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Apparent friction coefficient between steel and ice under high contact pressure (1990, p.902-911, eng) 45-3639
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Freezing earth pressure in open system (1990, p.57-64, jpn) 45-691  
Mechanical properties of frozen clays mixed with sandy soils (1989, p.31-36, jpn) 45-692
- Enomoto, H.**  
Fluctuations of sea ice extent in the Antarctic (1991, p.58-73, eng) 45-3064  
Fluctuations of snow accumulation in the antarctic and sea level pressure in the Southern Hemisphere in the last 100 years (1991, p.67-87, eng) 45-2444
- Epifanov, A.A.**  
Ecological aspects of developing oil and gas resources in non-Soviet arctic regions (1990, p.150-160, rus) 45-3411
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Applying the principle of temperature-time analogy to the problems of ice and snow deterioration (1990, p.9-12, rus) 45-1729  
Penetrometer—a new instrument for determining physical-mechanical properties of snow (1990, p.188-192, rus) 45-1761
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Major calving event of Jakobshavn Isbrae, West Greenland, on 9 August 1982 (1987, p.169-172, eng) 45-11
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Snow conditions in Sweden during the seasons 1950/51-1979/80 (1990, 75p., swe) 45-3883
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Formation of a specific subaqueous talik in a coastal zone of the Kara Sea (Mutnyy Strait) (1989, p.74-78, rus) 45-2631
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Changing climate (1990, p.220-238, fin) 45-2422
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General geocryology (1990, 558p., rus) 45-1473  
Geocryology of the USSR. Mountainous regions of southern USSR (1989, 358p., rus) 45-430
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Water circulation in the Barents Sea (1989, p.110-117, rus) 45-1657
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Snowmelt runoff modeling using GIS parameter estimation in a western Adirondack watershed (1990, p.65-72, eng) 45-2187
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Vertical distributions of a planktonic harpacticoid and a calanoid (Copepoda) in a meromictic antarctic lake (1989, p.207-214, eng) 45-2617
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Ice core drilling at a high accumulation area of Law Dome, Antarctica, 1987 (1989, p.86-96, eng) 45-1461  
Scientific plan for deep ice drilling on Law Dome (1990, 41p., eng) 45-3533
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Break-up in Hudson Bay: its sensitivity to air temperatures and implications for climate warming (1991, p.21-34, eng) 45-3547
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Spatial interrelationships between terrain, snow distribution and vegetation patterns at an arctic foothills site in Alaska (1989, p.270-278, eng) 45-1981
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Millimeter wave radiative transfer studies for precipitation measurements (1989, p.1910-1913, eng) 45-282
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Seasonal variations in chlorophyll and nutrients in a Canadian arctic estuary (1982, p.294-301, eng) 45-3127
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Arctic ozone crater in 1989 (1990, p.1113-1121, eng) 45-1428  
Model simulation of chemical depletion of arctic ozone during the winter of 1989 (1991, p.10,923-10,930, eng) 45-3376
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Hydrologic and thermal properties of the active layer in the Alaskan Arctic (1991, p.95-110, eng) 45-3417  
Steppe vegetation on south-facing slopes of pingos, central arctic coastal plain, Alaska, U.S.A. (1991, p.170-188, eng) 45-3482
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Appraisal of a multisurface plasticity model for soils (1991, p.75-82, eng) 45-3151  
Deformation of a floating drilling platform made of built-up ice (1991, p.1-8, eng) 45-3141  
Nonlinear analysis of stress distribution in an ice floe (1991, p.55-62, eng) 45-3148  
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Anthropogenic changes in geochemical composition of the arctic oil- and gas-bearing regions in the northeastern European territory of the USSR and Yamal Peninsula (1989, p.15-21, rus) 45-101  
Geographical aspects of the problems in background monitoring of natural environments in regions of the Far North of the USSR (1990, p.46-58, rus) 45-1965
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Major features of ice conditions in the Bellingshausen Sea (1990, p.325-330, eng) 45-729
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Underground mining of frozen placer deposits in USSR (1989, p.241-244, eng) 45-352
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Evaluation of South Dakota Deicer No.2 and calcium magnesium acetate by shear testing (1989, p.1-8, eng) 45-808
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Exploration activity heats up in the Alaskan offshore (1990, p.34-35, eng) 45-2555
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Paleoenvironmental significance of foraminiferal biofacies in the glaciomarine Yakataga Formation, Middleton Island, Gulf of Alaska (1989, p.194-209, eng) 45-1183
- Eyles, N.**  
Paleoenvironmental significance of foraminiferal biofacies in the glaciomarine Yakataga Formation, Middleton Island, Gulf of Alaska (1989, p.194-209, eng) 45-1183
- Ezhov, I.U.A.**  
Modelling the accumulation of winter cold in rocks (1990, p.79-87, rus) 45-2711  
Snow caves (1990, p.35-37, rus) 45-2701
- Fennes, T.**  
Albedo measurements from snow—image processing of LANDSAT-5 TM data (1990, p.195-201, eng) 45-3795  
Observing snow melting in southern Norway from satellite passive microwave (1990, p.187-194, eng) 45-3794
- Feghart, A.**  
Mathematical modeling and analysis of heat pipe start-up from the frozen state (1990, p.586-594, eng) 45-1262
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Borehole drilling to the bed of ice stream B, Antarctica (1990, p.83-84, eng) 45-1258
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Constructing large ice structures (1990, p.104-106, rus) 45-1745  
New approach to solving thermophysical problems of paleo-glaciology (1989, p.133-138, rus) 45-1049
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Unlocking the ice house: Oligocene-Miocene oxygen isotopes, eustasy, and margin erosion (1991, p.6829-6848, eng) 45-2503
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Heat pipe application for naval vessel surface deicing (1989, p.339-366, eng) 45-546
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Association of an ice-nucleating pseudomonad with cultures of the marine dinoflagellate, *Heterocapsa nitzschii* (1985, p.257-265, eng) 45-3385
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Effect of volume phase changes, mass transport, sunlight penetration, and denatification on the thermal regime of icy regoliths (1990, p.193-204, eng) 45-1906  
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Effect of the arctic sea ice in January on the Asia-Western Pacific circulation in June [1990, p.113-119, eng] 45-1170
- Fangel, H.**  
Arctic and antarctic mining while utilizing glacial ice for support of lateral walls [1990, p.720-726, eng] 45-173
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Microcomputer simulation of phase change heat transfer [1990, p.43-65, eng] 45-1432  
Phase change heat transfer analysis with applications to frost shielding [1990, p.9-13, eng] 45-3739  
Phase-change numerical heat transfer analysis with applications to frost shielding [1991, p.29-36, eng] 45-2915
- Farmer, D.M.**  
Acoustical radiation from thermally stressed sea ice [1991, p.2215-2231, eng] 45-3380
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KRMS GEOSAT-LIMEX '87 data products [1988, 42p., eng] 45-561  
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- Farnworth, B.**  
New cold weather clothing system for armed forces application [1989, p.207-215, eng] 45-538
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Laboratory study of shock waves in frozen soil [1991, p.54-70, eng] 45-2322
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Trends '90: a compendium of data on global change [1990, 257p. + appends., eng] 45-1089
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Effect of corona discharge on ice accretion [1988, p.310-313, eng] 45-1361  
Freezing rain and fog events in southern Ontario: properties and effects on EHV transmission systems [1988, p.70-75, eng] 45-1314  
Ice accumulation on DC power transmission line insulators [1988, p.301-304, eng] 45-1359  
Properties and effect of freezing rain and winter fog on outline insulators [1990, p.33-46, eng] 45-1765
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Evidence for a frozen bed, Byrd Glacier, Antarctica [1991, p.11,649-11,655, eng] 45-3462
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Physical and chemical characteristics of freshwater wetland soils [1989, p.41-72, eng] 45-1876
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Isotopic studies of calcite, pyrite, and wood from glacial deposits in the Beardmore Glacier area, Transantarctic Mountains [1990, p.67-68, eng] 45-1155
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Role of ice in the ecology of marine mammals of the Bering Sea [1974, p.383-399, eng] 45-3119
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Ice-type classifications from airborne pulse-limited radar altimeter return waveform characteristics [1989, p.1949-1952, eng] 45-286
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Changes in timing and magnitude of high and low flows, 1958-1988, Eagle Creek, Oregon [1990, p.150-153, eng] 45-2134
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Characteristics of the use and improvement in the quality of water in sublacustrine taliks [1989, p.96-107, rus] 45-2634
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Experiment in cryogenic-landscape mapping of southern Yakutia [1987, p.49-55, rus] 45-574
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Pollution of the environment by fluorine in the Far North [1989, p.95-100, rus] 45-739
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Microbiological approach to paleoreconstruction of major events in the Quaternary period in the cryolithozone of the northern Pacific Ocean region [1991, p.112-116, rus] 45-3441
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Concerning the near-surface circulation in the subarctic frontal zone (on the basis of satellite data) [1986, p.6-12, eng] 45-861
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Interaction of a gold chloride complex with the surface of dispersed ice [1989, p.110-117, rus] 45-1832
- Fedorova, V.I.**  
Interaction of a gold chloride complex with the surface of dispersed ice [1989, p.110-117, rus] 45-1832
- Fedotov, V.I.**  
Seasonal variability of physical-mechanical characteristics of sea ice [1991, p.53-57, eng] 45-3013
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Mechanism of self-regulation and attenuation in a glacier catastrophe in the Zailiyskiy Alatau Mountains [1990, p.156-164, rus] 45-1755
- Feldman, G.M.**  
Algorithm for an accelerated search for a periodically stabilized regime in the solution of a Stefan problem without initial conditions [1990, p.103-110, rus] 45-1206  
Fluctuating movement of the permafrost boundary [1989, p.50-52, eng] 45-2597
- Feldman, R.F.**  
Condensed silica fume in concrete [1987, 221p., eng] 45-323
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Cable rime accretion measurements on a Laurentian mountain [1990, p.1022-1032, eng] 45-2443  
Freezing rain in Quebec: field observations compared to model estimations [1988, p.119-123, eng] 45-1324  
Icing rate measurements made for different cable configurations on an icing test line at Mt. Valin [1988, p.125-128, eng] 45-1325
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Low-temperature performance of elastomeric bearings [1990, p.113-132, eng] 45-1522
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2M3 isothermal cloud chamber for the study of artificial ice nuclei [1990, p.494-502, eng] 45-1081
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Origin and sedimentation of Maine lakes with emphasis on lake-outlet deltas [1989, p.97-108, eng] 45-2060
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Geochemical processes in the Lake Fryxell Basin (Victoria Land, Antarctica) [1989, p.129-148, eng] 45-2612
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Antarctic glacier velocities from Landsat images [1990, p.106-107, eng] 45-1397
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Lake Ontario Winter Storms Experiment (LOWS) and the Lake-Effect Snow Observation Network (LESON) report for the 1989-1990 snow season [1990, p.219-224, eng] 45-2201
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Simulation of flood waves from outburst of glacier-dammed lake [1991, p.42-53, eng] 45-1655
- Ferrari, A.**  
Observations on falling motion of natural ice crystals [1989, p.137-146, ita] 45-991
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Analysis of subscour stresses and probability of ice scour-induced damage for buried submarine pipelines, Vol.1A and 1B. Database of key ice scour parameters, main report and appendices [1990, 106p. + 324p., eng] 45-1536  
Analysis of subscour stresses and probability of ice scour-induced damage for buried submarine pipelines, Vol.3. Probabilistic modelling [1990, 45p. + appends., eng] 45-1558
- Ferri, T.**  
Study of humic components of soils and sediments from Antarctica [1990, p.89-93, eng] 45-3199
- Ferrizna, O.J., Jr.**  
Bibliography of Quaternary geology, Copper River basin and adjacent areas, south-central Alaska [1991, 20p., eng] 45-2692
- Ferrick, M.G.**  
Air temperature variation over snow-covered terrain [1990, p.1-12, eng] 45-2182  
Conceptual model for vertical frazil distribution in turbulent flows [1991, p.336-347, eng] 45-2345  
On the motion of river ice near a breaking front [1990, p.201-213, eng] 45-3677  
Proceedings of the 47th annual Eastern Snow Conference, Bangor, ME, June 7-8, 1990 [1990, 250p., eng] 45-2181
- Ferrigno, J.G.**  
Antarctic glacier velocities from Landsat images [1990, p.106-107, eng] 45-1397  
Satellite image atlas of glaciers of the world [1989, 48p., eng] 45-817  
Velocities of antarctic outlet glaciers determined from sequential Landsat images [1990, p.105-106, eng] 45-1396
- Fett, R.W.**  
Forecasters handbook for the arctic [1989, 364p., eng] 45-3092
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Comparison of Geosat altimeter and synthetic aperture radar measurements over east Greenland pack ice [1991, p.569-583, eng] 45-2224  
Hough transform technique for extracting lead features from sea ice imagery [1989, p.1123-1128, eng] 45-258
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Comparison of different structures for a monthly water yield model in seasonally snow-covered mountainous watersheds of Iran [1990, p.535-546, eng] 45-2993
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- Fichefet, T.**  
Climate studies with a coupled atmosphere-upper-ocean-ice-sheet model [1989, p.249-261, eng] 45-793
- Fikke, S.M.**  
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Deterioration of polyvinylchloride-based materials in cold weather conditions [1990, 119p., rus] 45-1669
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Morphodynamics of tidal inlet systems in Maine [1989, p.67-96, eng] 45-2059
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Use of the Schmidt test hammer to detect enhanced boulder weathering under late-lying snowpatches [1990, p.471-474, eng] 45-2259
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Search and rescue target detection experiment, Canso Bank, 1988 [1989, Var. p., eng] 45-550
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Creation and restoration of riparian wetlands in the agricultural Midwest [1990, p.327-350, eng] 45-1410
- Finnish building construction technology developed for cold climates**  
Finnish building construction technology developed for cold climates [1991, 219p., eng] 45-3453
- Finnish cold climate construction technology. Part 2. Municipal, soil, and hydraulic engineering**  
Finnish cold climate construction technology. Part 2. Municipal, soil, and hydraulic engineering [1990, 112p. + appends., fin] 45-3874
- Finstad, K.J.**  
Comprehensive deterministic model for transmission line icing applied to laboratory and field observations [1988, p.227-231, eng] 45-1344  
Meteorological and cloud physical observations of atmospheric icing events on Gaustatoppen [1988, p.61-64, eng] 45-1312  
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Spectral albedo and emissivity of CO<sub>2</sub> in Martian polar caps: model results [1990, p.14,717-14,741, eng] 45-1842
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Acoustic and seismic signals from snow avalanches [1990, p.67-71, rus] 45-321
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Influence of humidity and temperature upon the rate of soil metabolism in the area of Hornsund (Spitsbergen) [1990, p.17-24, eng] 45-2429
- Fisher, D.A.**  
Physico-chemical and pollen composition of the Canadian arctic ice cap [1990, p.3/15-3/21, fre] 45-1794
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Incident of clear air precipitation [1989, p.155-159, eng] 45-472
- Fisher, M.**  
Probing icy surfaces with the dangling-OH-mode absorption: large ice clusters and microporous amorphous ice [1991, p.1378-1384, eng] 45-3820
- Flak, D.J.**  
Laboratory comparison of field techniques for measurement of the liquid water fraction of snow [1990, 8p., eng] 45-560
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Ice-based oceanographic sea-ice and meteorological data obtained over the N.E. Newfoundland Shelf, 1988-1989 [1989, 165p., eng] 45-1288
- FitzGerald, D.M.**  
Morphodynamics of tidal inlet systems in Maine [1989, p.67-96, eng] 45-2059  
Origin and sedimentation of Maine lakes with emphasis on lake-outlet deltas [1989, p.97-108, eng] 45-2060
- Fitzpatrick, J.J.**  
Saline minerals in the Lewis Cliff ice tongue, Buckley Island Quadrangle, Antarctica [1990, p.57-69, eng] 45-1687  
Summertime formation of depth hoar in central Greenland [1990, p.2393-2396, eng] 45-1991

- Fitzsimons, S.J.**  
Ice-marginal depositional processes in a polar maritime environment, Vestfold Hills, Antarctica (1990, p.279-286, eng) 45-1538
- Flanders, S.N.**  
In-situ heat flux measurements in buildings; applications and interpretations of results (1991, 260p., eng) 45-2648  
North American standard practices for heat flux and temperature measurement in building systems (1986, p.101-120, eng) 45-2098  
Prediction of errors for in-situ measurement of thermal resistance (1991, p.193-219, eng) 45-2659
- Flato, G.M.**  
On the numerical simulation of the sea ice ridging process (1991, p.4809-4820, eng) 45-2689
- Fland, P.**  
Phenomenological description of the progression of a freezing front in a slab—application to a new heat storage material (1991, p.11-17, eng) 45-1907
- Fleming, G.H.**  
Development of a large-scale coupled sea-ice model for interannual simulations of ice cover in the Arctic (1989, 224p., eng) 45-1133  
Numerical study of interannual ocean forcing on arctic ice (1991, p.4589-4603, eng) 45-2673
- Flesche, H.**  
Automatic estimation of ice kinematics using remote sensing data (1989, p.1133-1136, eng) 45-260
- Fleyfel, F.**  
Comparative SO<sub>2</sub> infrared spectra: type I and II clathrate hydrate films, large gas-phase clusters, and anhydrous crystalline films (1990, p.7032-7037, eng) 45-843
- Flocchini, G.**  
Analysis of ice overload on single and bundled conductors (1988, p.99-103, eng) 45-1320
- Flowers, P.A.**  
Density of antifreeze-water mixtures (1990, p.1068-1069, eng) 45-2075
- Floyd, M.D.**  
Piezoelectric ice sensor for aviation applications (1990, p.13-24, eng) 45-1924
- Fteller, P.**  
Hail resistance of plastic components of the building shell (1990, p.88-95, eng) 45-2556
- Fogarasi, S.**  
Variation of the stable isotopes of water with altitude in the Saint Elias Mountains of Canada (1991, p.7483-7494, eng) 45-2800
- Fokla, V.A.**  
Method of estimating the strength and rheological properties of saline frozen soils (1990, p.90-98, rus) 45-2895
- Foldvik, A.**  
Observations of ice shelf water at the southern Weddell Sea shelf break (1990, p.125-130, eng) 45-2837
- Foley, J.Y.**  
History of the mineral industry in Alaska and, all that glitters is not gold (1989, p.9-13, eng) 45-327
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Laboratory and field tests of a wire mesh frazil collector (1990, 10p., eng) 45-1511
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Ice tests on an "Enthusiast" class harbor tug with anti-ice protection of the rudder-propeller system (1989, p.26-28, rus) 45-1139
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Avalanche diagnosis as a physics problem (1990, p.86-92, rus) 45-1741
- Fomareva, O.A.**  
Experience in using the method of long-range forecasting of the spring runoff for estimating its possible variations in connection with climatic changes (1991, p.126-132, eng) 45-2438
- Foot, G.B.**  
Precipitation production in a large Montana hailstorm: air-flow and particle growth trajectories (1990, p.1619-1646, eng) 45-1383
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Dufek intrusion of Antarctica (1990, p.15-32, eng) 45-2802
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Experiences with a coupled global model (1989, p.275-288, eng) 45-794
- Forest, T.W.**  
Comparison between different construction methods of ice islands (1991, p.9-15, eng) 45-3142
- Forget, C.**  
Laboratoire de Glaciologie et de Géophysique de l'Environnement (1990, p.13-15, fre) 45-1127
- Forham, T.**  
Ramming icebreaking performance of the USCG polar class icebreakers (1990, p.283-294, eng) 45-2738
- Forman, S.L.**  
Svalbard radiocarbon date list 1 (1990, 48p., eng) 45-1180
- Thermoluminescence properties of fiord sediments from Engelsbukta, western Spitsbergen, Svalbard: a new tool for deciphering depositional environment? (1990, p.377-384, eng) 45-3292
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Simulation of flood waves from outburst of glacier-dammed lake (1991, p.42-53, eng) 45-1655
- Foroughi, A.R.**  
Methods of ice design for offshore structures (1990, p.405-427, eng) 45-147  
Sources of uncertainties in methods of ice design for offshore structures (1990, p.923-930, eng) 45-3641
- Forjas, J.**  
Ice formation and ice growth in the River Oulujoki (1990, p.183-195, eng) 45-3575
- Forström, L.**  
Comment and reply on "Drumlins, subglacial meltwater floods, and ocean responses" (1990, p.804-805, eng) 45-618
- Forsyth, M.**  
Recent insights on the role of cryoprotective agents in vitrification (1990, p.345-358, eng) 45-2961
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HYDROTEL, a hydrological model designed to make use of remotely sensed and GIS data (1990, p.177-185, eng) 45-3805  
Monitoring snow cover with synthetic aperture radar (1989, p.1251-1255, fre) 45-270
- Foster, L.B.**  
Experiments on the growth of spongy ice near a stagnant point (1990, p.143-150, eng) 45-55
- Fotiev, S.M.**  
Geocryological subdivision map of the Baykal-Amur region (1987, p.25-38, rus) 45-572
- Foulds, D.**  
Optimum operation of hydro-electric plants during the ice regime of rivers: a Canadian experience (1991, 81p., eng) 45-3542
- Fowler, B.K.**  
Deglaciation of the upper Androscoggin River valley and northeastern White Mountains, Maine and New Hampshire (1989, p.71-88, eng) 45-2066
- Fowler, C.W.**  
Fram Strait satellite image-derived ice motions (1991, p.4751-4768, eng) 45-2684
- Fox, C.**  
Strain in shore fast ice due to incoming ocean waves and swell (1991, p.4531-4547, eng) 45-2670  
Wave structure in the seas off an ice edge (1990, p.21-32, eng) 45-2719
- Fox, C.A.**  
Development of soil structure in some turbid cryosols in the Canadian low Arctic (1991, p.11-29, eng) 45-2664
- Fox, D.G.**  
Snow in mountain watersheds: connections to climate and ecosystem health (1990, p.122-129, eng) 45-2129
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Effects of pH and freeze-thaw on photosynthetic oxygen evolution of photosystem II particles incorporated into phosphatidylglycerol bilayers (1990, p.615-620, eng) 45-969
- Frakes, L.A.**  
Manganese nodule provinces of the southern ocean (1990, p.217-221, eng) 45-2813
- Francis, J.A.**  
Comparison of radiation budgets in the Fram Strait summer marginal ice zone (1991, p.218-235, eng) 45-2106
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Analysis of the segmentation in the profile of alpine talus slopes (1990, p.53-60, eng) 45-2234
- Frankenstein, G.**  
Prediction of the horizontal progressions of arctic ice by remote methods (1990, p.1113-1121, eng) 45-3658
- Frankenstein, G.E.**  
Ice conditions on inland waterways (1990, p.61-65, eng) 45-2647  
Twenty years of ice symposia (1990, p.43-65, eng) 45-3564
- Frankenstein, S.**  
Prediction of the horizontal progressions of arctic ice by remote methods (1990, p.1113-1121, eng) 45-3658
- Fransson, E.**  
Sea ice properties studied from the icebreaker *Tor* during BEPERS-88 (1990, 86p., eng) 45-94
- Fraser, R.S.**  
Deep optically thin cirrus clouds in the polar regions. Part 1: infrared extinction characteristics (1990, p.1313-1329, eng) 45-2986
- Frash, G.B.**  
Rock blasting in seasonally freezing ground. Reference manual (1990, 110p., rus) 45-1703
- Frazier, J.W.**  
Learning from watching snowmelt (1990, p.35-40, eng) 45-2119
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Ultraviolet radiation environment of the Antarctic Peninsula: the roles of ozone and cloud cover (1991, p.478-493, eng) 45-2841
- Frederickson, P.A.**  
CEAREX/Haakon Mosby meteorology atlas (1990, 57p., eng) 45-3853
- Frederking, R.**  
Drop impact tests on freshwater ice: spherical head (1990, p.776-787, eng) 45-3628  
Field tests of ice indentation at medium scale—Hobson's Choice Ice Island, 1989 (1990, p.931-944, eng) 45-3642  
National Research Council Canada ice measurements at Tarsuit, 1983 (1984, 22p. + appends., eng) 45-2863
- Frederking, R.M.W.**  
Model tests of the grounding resistance of fresh and consolidated ice rubble (1990, p.73-82, eng) 45-1768  
Nonlinear analysis of stress distribution in an ice floe (1991, p.55-62, eng) 45-3148
- Freeman, R.J., Jr.**  
Configuration and substrate design considerations for constructed wetlands wastewater treatment (1989, p.363-377, eng) 45-1882
- French, H.M.**  
Observations on buried glacier ice and massive segregated ice, western arctic coast, Canada (1990, p.31-43, eng) 45-2332
- Frich, P.**  
Paleoclimatic implications of an early Holocene glacier advance on Disko Island, West Greenland (1990, p.297-311, eng) 45-2412
- Fridzon, M.B.**  
Resolving power and accuracy of the telemetry channel of the radio echo sounding system "Meteorit-2—MARZ" (1990, p.42-48, rus) 45-3443
- Friedel, G.**  
Scanis battery heater for heavy trucks (1989, p.113-118, eng) 45-1222
- Friedman, R.**  
Electro-expulsive ice removal application to vertical launch system hatch and to personnel access hatch (1989, p.307-325, eng) 45-544
- Frohlich, C.**  
Orbital forcing of low-frequency glacioeustasy (1991, p.6797-6803, eng) 45-3473
- Frolov, A.N.**  
Classification of the thermal regime of hydraulic-fill structures in the winter period of operation (1990, p.36-40, eng) 45-669  
Pattern of disperse channel flows forming in sluiced disposal areas in winter periods (1990, p.709-718, eng) 45-3621
- Frolov, I.**  
1987 expedition of the icebreaker *Sibir* to the North Pole (1991, p.33-44, eng) 45-3325
- Frolov, I.E.**  
Ice pattern recognition on space photos including drift (1990, p.386-391, eng) 45-2911  
Modelling of fall-winter ice phenomena (1990, p.53-61, rus) 45-1636  
Role of heat transfer sources in the Barents Sea in changes to cyclone tracks (1990, p.116-124, rus) 45-1642  
Some problems in research and applied modelling of ice cover (1990, p.5-10, rus) 45-1631
- Frost, H.J.**  
Wing cracks and brittle compressive fracture (1990, p.1955-1962, eng) 45-1168
- Fry, J.L.**  
Calculational aspects of the assessment of dielectric response function and energy loss in materials: applications to ice and polyacetylene (1990, p.25-39, eng) 45-2948
- Fu, R.**  
Preliminary study on acoustical characteristics of ice core from BHQ on the Law Dome, Antarctica (1988, p.132-140, chi) 45-42
- Fuchigami, L.H.**  
Water content during abscisic acid induced freezing in bromegrass cells (1990, p.460-464, eng) 45-3276
- Fuchs, W.**  
Computer assisted aircraft icing forecast (1988, p.390-393, eng) 45-1378
- Fudali, R.F.**  
Gravity measurements across and between the meteorite-bearing icefields west-southwest of the Allan Hills (1990, p.48-50, eng) 45-1083
- Fujita, Y.**  
Development of the JARE deep ice coring system (1990, p.303-345, jpn) 45-2595  
Electrical conductivity and pH in snow and ice samples from various glacier areas (1990, p.119-129, eng) 45-977  
Outline of the Japanese Arctic Glaciological Expedition in 1989 (JAGE 1989) (1990, p.103-106, eng) 45-203  
Polar ice core and palaeo-environment (1989, p.535-561, jpn) 45-622  
SEM observations of microparticles in antarctic ice cores (1990, p.31-53, eng) 45-197
- Fujita, K.**  
Countermeasures to both the wet snow accretion and the galloping damages on the transmission lines (1988, p.376-380, eng) 45-1375
- Fujita, N.**  
Report on improving the accuracy of observations of flow in winter (1988, p.489-494, jpn) 45-2519

- Fujita, S.**  
Dirt bands in the bare ice area around the Sør Rondane Mountains in Queen Maud Land, Antarctica [1991, p.47-55, jpn] 45-3395  
Numerical estimation of 10,000 years later equilibrium ice sheet profile in the Shirase Glacier drainage basin, East Antarctica [1991, p.12-29, eng] 45-3392
- Fujita, T.**  
Frost forecasting from local weather reports [1990, p.95-100, jpn] 45-746
- Fujiwara, M.**  
Research on low temperature properties of asphalts [1989, p.131-138, jpn] 45-872
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Road conditions and accidents in winter [1990, p.442-453, eng] 45-324
- Fukuchi, H.**  
Prediction of depolarisation distributions on earth-space paths [1990, p.325-330, eng] 45-2763
- Fukuchi, M.**  
Comparison of zooplankton abundance under sea ice between NIPR net and Norpac net samplings, in lagoon Saroma Ko, Hokkaido [1987, p.123-137, eng] 45-3345  
Diatoms in water column and sea ice in Lützow-Holm Bay, Antarctica, and their preservation in the underlying sediments [1990, p.15-39, eng] 45-3360  
Photosynthetic nature of ice algae and their contribution to the primary production in lagoon Saroma Ko, Hokkaido, Japan [1989, p.1-8, eng] 45-3343  
Phytoplankton bloom under sea ice recorded with a moored system in lagoon Saroma Ko, Hokkaido, Japan [1989, p.9-15, eng] 45-3344  
Variability in sterol flux in the ice-covered lagoon Saroma Ko, Hokkaido, Japan [1990, p.8-15, eng] 45-3342
- Fukuda, M.**  
Chemical and isotopic characteristics of ice from an ice-vedge in Seymour Island (Isla Vcom, Marambio), Antarctic Peninsula region (I) [1990, p.181-190, eng] 45-1531
- Fukuda, T.**  
Comparative study on performances of asphalt pavements in cold area [1990, p.3-16, eng] 45-3506  
Evaluation of the performance of asphalt pavement in consideration of reliability [1990, p.323-337, eng] 45-3519
- Fukuda, Y.**  
Application of GPS relative positioning for height determination above sea level in the antarctic marginal ice zone [1990, p.149-162, eng] 45-2305
- Fukuzako, S.**  
Free convection heat transfer along a horizontal ice cylinder immersed in seawater [1990, p.57-64, jpn] 45-697  
Free convection heat transfer around a horizontal ice cylinder formed through melting in saline water [1990, p.35-41, eng] 45-3869  
Freezing characteristics of layered air-water flow in a horizontal circular tube [1989, p.47-55, jpn] 45-701  
Melting heat transfer from a horizontal ice cylinder immersed in a quiescent saline water [1990, p.15-23, eng] 45-1164  
Numerical study on freezing heat transfer in water-saturated porous media [1990, p.17-32, eng] 45-1926  
Recent advances in study of water freezing and ice melting problems [1990, p.1-32, jpn] 45-696
- Fukushima, Y.**  
Numerical simulation of powder-snow avalanches [1990, p.229-237, eng] 45-66
- Fukuzawa, Y.**  
Measuring blowing snow by visibility meters [1988, p.189-192, jpn] 45-2514  
Safe vehicle speed on winter roads in blowing snow [1990, p.171-178, jpn] 45-780
- Fukuzono, T.**  
Prediction of failure time of a slope by reciprocal of mean velocity; study on prediction of slope failure (3) [1990, p.45-81, jpn] 45-2302
- Fulber, K.**  
Collection efficiency of aerosol particles by circular disks modelling snowflakes, snowout and washout coefficient [1990, p.S209-S212, eng] 45-2216
- Fuller, G.A.**  
Snowmelt stages on LANDSAT images [1990, p.375-377, eng] 45-3815
- Fulton, R.**  
Microphysical and radiative characteristics of convective clouds during COHMEX [1991, p.98-116, eng] 45-3016
- Fulton, R.J.**  
Quaternary geology of Canada and Greenland [1989, 839p. + suppl., eng] 45-610
- Furuki, M.**  
Note on the natural remanent magnetizations of dirt-ice layers collected from the bare ice field in East Antarctica [1990, p.131-138, eng] 45-978
- Funder, S.**  
Paleoclimatic implications of an early Holocene glacier advance on Disko Island, West Greenland [1990, p.297-311, eng] 45-2412
- Furukawa, I.**  
Snow load on slopes [1986, p.419-431, eng] 45-3725
- Furukawa, S.**  
Studies on the settling force of snow on the legs of iron transmission towers [1986, p.384-403, eng] 45-3723
- Furukawa, S.**  
Snow load and the damage it causes to structures [1986, p.327-349, eng] 45-3721
- Furukawa, S.**  
Snow load on slopes [1986, p.419-431, eng] 45-3725
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Evolution of Quaternary glaciers and environmental change in the West Kunlun Mountains, Western China [1990, p.61-72, eng] 45-199
- Fütterer, D.K.**  
Sediment patterns in the southern Weddell Sea: Filchner Shelf and Filchner Depression [1990, p.381-401, eng] 45-1270
- Gabelais, R.D.**  
Technology of pipeline construction on the Yamburg gas condensate field [1990, p.492-502, eng] 45-153
- Gaboury, S.H.**  
Polarimetric radar measurements of artificial sea ice [1989, p.1938-1941, eng] 45-283
- Gabrielli, R.**  
Space-time model of a major wet snow episode (Perpignan—30th-31st January 1986) [1988, p.14-18, eng] 45-1302
- Gadd, P.E.**  
Arctic slope protection methods [1991, p.1687-1701, eng] 45-3256  
Recent performance of linked concrete mat armor under wave and ice impact [1991, p.2768-2781, eng] 45-3257
- Gaddy, G.D.**  
Application of thermal analysis to the characterization of EPDM roofing membrane materials after exposure in service [1991, p.502-507, eng] 45-2466
- Gadzhev, I.M.**  
Current soil research problems in Siberia and the Far East [1990, p.34-42, rus] 45-2907  
Problems of soil science in Siberia; collected scientific papers [1990, 183p., rus] 45-2904  
Soil cover of Siberia: formation characteristics, agricultural and ecological aspects of utilization [1990, p.143-151, rus] 45-2909
- Gaffney, E.S.**  
Interpretation of the stress histories from shock impact tests on snow using embedded stress gauges [1990, p.117-120, eng] 45-400
- Gagnon, J.J.**  
Laboratory investigation of trash rack heating to prevent freezeup by frazil ice [1990, p.584-595, eng] 45-3609
- Gagnon, R.E.**  
Energy dissipation through melting in large scale indentation experiments on multi-year sea ice [1991, p.157-161, eng] 45-3164
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Characteristics of foundation work on permafrost [1990, p.95-104, rus] 45-1205  
Effect of saline solutions on frozen soils and mortars [1990, p.62-70, rus] 45-2891  
Some results of investigations into the effect of saline soil cements on frozen rocks and construction materials [1989, p.114-123, rus] 45-2636
- Galahkova, T.A.**  
Kinematics and dynamics of heavy snowfall bands over European territory [1989, p.3-12, rus] 45-1848
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Comparison of parametric and non-parametric methods for runoff forecasting [1990, p.79-94, eng] 45-2988
- Gallagher, J.B.**  
Meromixis in an antarctic fjord: a precursor to meromictic lakes on an isostatically rising coastline [1989, p.235-254, eng] 45-2618
- Galloway, J.P.**  
Development of an Alaskan radiocarbon data base as a subset of the International Radiocarbon Data Base (IRDB) [1989, p.83-87, eng] 45-3751
- Gamaunov, N.I.**  
Investigation of heat and mass transport during freezing in peat soils [1990, p.88-97, eng] 45-3051
- Gammelsrød, T.**  
Observations of ice shelf water at the southern Weddell Sea shelf break [1990, p.125-130, eng] 45-2837
- Gandolfi, C.**  
Two packages for meteorological data processing and runoff simulation for personal computers [1987, p.192-198, eng] 45-2437
- Ganguly, P.**  
Estimating snow transport from wind speed records: estimates versus measurements at Prudhoe Bay, Alaska [1990, p.61-72, eng] 45-2122
- Gannik, N.I.**  
Study of the frost resistance of concrete with the plasticizer TOP-2 [1990, p.28-30, rus] 45-31
- Geo, D.Y.**  
Thermal stresses induced by water solidification in a cylindrical tube [1990, p.1079-1082, eng] 45-1390
- Geo, X.**  
Achievements of recent Australian studies in ice mechanics [1988, p.234-241, chi] 45-50  
Development of ice crystal anisotropy in shear and comparisons of flow properties in shear and compression [1989, p.32-40, eng] 45-1006
- Ice crystal orientation fabrics and related glaciological parameters from neighbouring antarctic core sites [1989, p.41-52, eng] 45-1007
- Garbini, J.L.**  
On the extensive use of heat flux transducers for evaluating residential building component performance—calibration and deployment [1991, p.143-158, eng] 45-2657  
Use of combined reflective and normal heat flux transducers in determining convective heat transfer coefficients and room thermal radiative balance [1991, p.97-110, eng] 45-2654
- García-Ruiz, J.M.**  
Geomorphic processes above timberline in the Spanish Pyrenees [1990, p.201-214, eng] 45-1808
- Gardiner, D.P.**  
Method of assisting cold-starts, improving fuel economy and reducing emissions of engines at cold temperatures [1989, p.1-14, eng] 45-1210
- Gardner, J.S.**  
Ablation of avalanche and undisturbed snow, Himalaya Mountains, Pakistan [1990, p.2757-2767, eng] 45-2113  
Estimate of snow avalanche debris transport, Kaghan Valley, Himalaya, Pakistan [1990, p.317-321, eng] 45-893  
Surge of Bualtar Glacier, Karakoram Range, Pakistan: a possible landslide trigger [1990, p.159-162, eng] 45-57
- Gardner, T.J.**  
Geochemical processes in the Lake Fryxell Basin (Victoria Land, Antarctica) [1989, p.129-148, eng] 45-2612
- Garfield, D.**  
Laboratory investigation of trash rack heating to prevent freezeup by frazil ice [1990, p.584-595, eng] 45-3609
- Garratt, J.R.**  
Scaling and numerical model evaluation of snow-cover effects on the generation and modification of daytime mesoscale circulations [1991, p.1024-1042, eng] 45-3274
- Garrison, D.L.**  
Antarctic sea ice biota [1991, p.17-33, eng] 45-2621
- Gasparrini, F.**  
Preliminary study of an advanced automatic station for marine data acquisition in Antarctica [1989, p.1646-1651, eng] 45-722
- Gataullin, V.N.**  
Presence of glacial deposits in the central basin of the Barents Sea [1990, p.1463-1467, rus] 45-1860
- Getto, L.W.**  
Bank and channel changes near Dikes, Tanana River, Alaska [1983, p.212-222, eng] 45-2957  
Bank recession and channel changes near dikes on the Tanana River, Alaska [1983, p.4.2-4.21, eng] 45-2492  
Interpretation of passive and active microwave imagery over snow-covered lakes and rivers near Fairbanks, Alaska [1990, p.259-278, eng] 45-3808  
Interpretation of synthetic aperture radar imagery of snow-covered river ice [1990, 13p., eng] 45-3766  
Monitoring river ice with Landsat images [1990, p.1-16, eng] 45-484  
River and lake ice conditions as determined from AIRSAR imagery [1990, p.37-42, eng] 45-3755
- Geu, C.**  
Inward solidification of a superheated liquid in a cooled horizontal tube [1982, p.39-46, eng] 45-2933
- Gendichet, A.**  
Saharan dust deposition over Mont Blanc (French Alps) during the last 30 years [1991, p.61-75, eng] 45-3020
- Gentler, C.**  
Functional specifications for second-generation ice navigation system. Final report [1990, 100p. + append., eng] 45-930
- Gervish, M.**  
Ice nucleation by alcohols arranged in monolayers at the surface of water drops [1990, p.973-975, eng] 45-917
- Gavrilov, G.G.**  
Snow density as a representative criterion for mountain snow cover observation points [1990, p.42-45, rus] 45-1103
- Gavril'ev, R.I.**  
Geothermal conditions of the Neryunginskii coal deposit [1987, p.134-138, rus] 45-583  
Thermophysical characteristics of clay mortar and cement reinforcement rings for well casings in gas wells in a permafrost zone [1990, p.72-76, rus] 45-1202
- Gavrilov, V.P.**  
Applying r-f methods to oceanographic and glacial studies [1989, p.7-22, rus] 45-1484  
Deformation and breakup of ice by the water stream from an icebreaker propeller [1989, p.206-213, rus] 45-1506  
Electro-physical and physical-mechanical properties of ice [1989, 256p., rus] 45-1483  
Ice deformation by a ship-raising pontoon [1989, p.238-243, rus] 45-1509  
Seasonal variability of physical-mechanical characteristics of sea ice [1991, p.33-57, eng] 45-3013
- Gavrilova, M.K.**  
Analysis of variations in natural and climatic conditions in Yakutia for the beginning of the next century [1987, p.146-159, rus] 45-586  
Hydro-thermobalanced and microclimatic investigations in the Syagannakhkiy meadow-improving plot in the Abyysk region of arctic Yakutia [1990, p.36-43, rus] 45-3033



- ay, M.**  
Three-dimensional measurement of the wind velocity vector [1990, p.1/43-1/49, fre] 45-1782
- ayet, J.F.**  
Atmospheric icing: a review [1988, p.1-6, eng] 45-1300  
Effect of the surface roughness on the ice load characteristics during icing with low airspeeds [1988, p.232-235, eng] 45-1345
- New calibration methods of PMS FSSP and 1D-C probes for cloud droplet measurements [1988, p.268-271, eng] 45-1352
- aza, B.**  
Automated snow depth and snowpack temperature measurements [1990, p.73-78, eng] 45-2123
- ebler, S.H.**  
Durability of dry-mix shotcrete [1989, p.47-50, eng] 45-2110  
Durability of dry-mix shotcrete containing regulated-set cement [1989, p.56-58, eng] 45-2112
- ehrels, J.**  
Hydrologic processes in a southern Ontario wetland [1990, p.221-234, eng] 45-2942
- ehrkke, F.**  
Improvements in snow sensor installation techniques [1990, p.154-155, eng] 45-2135  
Status of the California Cooperative Snow Surveys Program [1990, p.9-14, eng] 45-2116
- el'ina, A.N.**  
Comparison of two methods of calculating soil freezing depth [1989, p.78-83, eng] 45-665  
Dynamic-stochastic models of rainfall and snowmelt runoff formation [1991, p.153-169, eng] 45-2990
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Ferromanganese rock varnish in North Norway: a subglacial origin [1990, p.265-275, eng] 45-432
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Considerations in the design and operation of hydro power intakes [1990, p.517-556, eng] 45-420
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Oil contamination of antarctic ice [1990, 23p., spa] 45-1000
- geology and geochemistry of area: Transantarctic Mountains and Ross Island, Antarctica**  
Geology and geochemistry of area: Transantarctic Mountains and Ross Island, Antarctica [1989, 321p., chi] 45-208
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Chaos in continuous-mode icebreaking [1991, p.131-144, eng] 45-3420
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Geotechnical appendices Tarsiut Gulf 1982-83 [1984, n.p., eng] 45-2861
- geraci, J.R.**  
Role of marine mammals in the arctic ecosystems: research objectives, needs and direction [1975, II/137-II/145, eng] 45-3228
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Hydrology of floating ice [1990, p.103-134, eng] 45-216  
Working group on river ice jams. Field studies and research needs [1990, 121p., eng] 45-97
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Maximum variation of air/snow interface temperature [1990, p.411-422, eng] 45-3768
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Evolution and differentiation of Earth's natural environment; collected works [1990, 311p., rus] 45-2839
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Changes in the air temperature field above the Fedchenko and Abramov glaciers [1990, p.120-130, rus] 45-1114
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Radioisotope analysis in antarctic coastal samples: methods and procedures [1990, p.143-147, eng] 45-3201
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Snowmobile suspension system design under university-industry collaboration [1989, p.183-191, eng] 45-1232
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Late Pliocene-Pleistocene paleoclimate in the Jane Basin region: ODP Site 697 [1990, p.803-809, eng] 45-3529
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Snow cover in mountain systems of the Earth (the practice of classification) [1989, p.30-38, rus] 45-1031  
Time and space distribution of initial gamma-field levels in Western Tien Shan [1990, p.61-71, rus] 45-1105
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Ecological bases for controlling the productivity of agrophytocenoses in the eastern European tundra [1991, 152p., rus] 45-3391
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Size effects in the fracture of quasi-brittle materials [1991, p.595-604, eng] 45-2369
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Model test of CCN-cloud albedo climate forcing [1990, p.607-610, eng] 45-1173
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Determination of some heavy metals in antarctic snow and coastal sea water [1990, p.27-30, eng] 45-3196
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Freshwater wetlands and wildlife [1989, 1265p., eng] 45-1400
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Evapotranspiration from a small Alaskan arctic watershed [1990, p.253-272, eng] 45-2526  
Hydrologic and thermal properties of the active layer in the Alaskan Arctic [1991, p.95-110, eng] 45-3417
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Predicting roof snow loads on gabled structures [1990, p.2763-2779, eng] 45-956  
Similitude considerations for roof snow loads [1990, p.59-71, eng] 45-1767
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Analysis of subscour stresses and probability of ice scour-induced damage for buried submarine pipelines, Vol.1A and 1B. Database of key ice scour parameters, main report and appendices [1990, 106p. + 324p., eng] 45-1556
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Sub-mud line protection and containment systems [1990, p.375-391, eng] 45-145
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Scour shape and sub-scour disturbance studies from the Canadian Beaufort Sea [1990, p.127-144, eng] 45-1948
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Rafting in glacial marine environments [1990, p.105-120, eng] 45-2784
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Deterioration and rehabilitation of berth faces in tidal zones at the Port of Saint John [1988, p.199-225, eng] 45-1813  
Steel fiber reinforced concrete jackets for repairing concrete piles [1988, p.227-252, eng] 45-1814
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Microbiological approach to paleoreconstruction of major events in the Quaternary period in the cryolithozone of the northern Pacific Ocean region [1991, p.112-116, rus] 45-3441
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Saab Direct Ignition System and its cold start performance [1989, p.345-353, eng] 45-1247
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Integrated ice surveillance system for support of offshore oil and gas exploration [1989, p.2229-2231, eng] 45-290
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Concerning the near-surface circulation in the subarctic frontal zone (on the basis of satellite data) [1986, p.6-12, eng] 45-861
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Electrochauge: a self-flushing hot-water drilling apparatus for glaciers with debris [1987, p.236-238, eng] 45-19  
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Operations optimization [1989, p.417-429, eng] 45-1884
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Sea-ice kinematics as determined by remotely-sensed ice drift: seasonal space and time scales [1989, p.1113-1121, eng] 45-900
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Hydrology of Svalbard—hydrological problems in cold climate. Proceedings [1990, 224p., eng] 45-3776  
On the relationship between snow distribution and snow melt [1990, p.111-119, eng] 45-3787
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Frost and salt resistance of concrete [1990, p.9-11, rus] 45-24
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Medium scale landforms of glacial erosion in South Greenland: process and form [1990, p.211-215, eng] 45-2024
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Geography of the distribution of avalanches on the earth [1989, p.68-73, rus] 45-1037
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Interaction of ice sheets with the ocean in the continental margin zone [1990, p.127-146, eng] 45-3524  
International symposium on Ice and Climate [1989, p.236-246, rus] 45-1070
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Climate change, hydrology, and water resources [1989, p.329-344, eng] 45-960
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Daimler-Benz winter test center "Rovaniemi"—a prerequisite for experimental development of electronic wheel slip control systems for commercial vehicles [1989, p.287-299, eng] 45-1241

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Thermal regime and cryogenic structure of coarse clastic deposits in northern Tien Shan (1990, p.54-58, rus) 45-2706
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Molecular theory of heterogeneous nucleation of crystals on small substrates. Probability of heterogeneous nucleation: comparison with experiment (1991, p.570-574, eng) 45-2565
- Molecular theory of heterogeneous nucleation of ice crystals on small substrates. Structure and energy of an ice nucleus on coherent substrates (1991, p.564-570, eng) 45-2564
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Weddell gyre: temperature maximum stratum (1989, p.8331-8334, eng) 45-471  
Winter sea-ice cover and ocean processes (1990, p.140-142, eng) 45-1416
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U.S. Army wheeled versus tracked vehicle mobility performance test program—report 2: mobility in shallow snow (1991, 48p. + appends., eng) 45-3446

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Wheels and tracks in snow; second validation study of the CRREL shallow snow mobility model (1990, 39p., eng) 45-2094  
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Volcanic ash from the 1362 A.D. Oraefajokull eruption (Iceland) in the Greenland Ice Sheet (1991, p.1241-1244, eng) 45-3762
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104-meter oxygen-isotope record at J-9, Ross Ice Shelf, Antarctica (1990, p.95-96, eng) 45-1395
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Proceedings of the International Symposium on Antarctic Research (1989, 540p., eng) 45-1003
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Geomorphic characteristics of periglacier in the source area of Yellow River in Qinghai-Xizang Plateau, China (1990, p.147-153, chi) 45-455
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Chrysochromulina (Haptophyceae) bloom under the ice in the Tvärminne archipelago, southern coast of Finland (1974, p.89-104, eng) 45-3229
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Helicopter-borne 8-channel FFT scatterometer (1989, p.1832-1835, eng) 45-281  
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(Proceedings) (1987, 350p., eng) 45-1818
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Equation of state and metallization of ice under very high pressure (1990, p.8107-8111, eng) 45-992
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1987-1988 City of Ottawa, Ontario, Canada deicer field trials (1989, p.27-38, eng) 45-811
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Structural characteristics of snow firm at the surface part on Law Dome ice cap, Antarctica (1989, p.53-63, eng) 45-1008  
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Temperature regime and thermal property at the active layer of Law Dome, Antarctica (1988, p.84-92, chi) 45-39
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Effect of sea salts in the major anion distribution in an ice core of the Fildes Peninsula ice field: a preliminary study result (1990, p.17-23, kor) 45-3202
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Handbook of climate of the USSR. Humidity of air, atmospheric precipitations, snow cover (1989, 288p., eng) 45-310
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Handbook on climate of the USSR (1989, 268p., eng) 45-309
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Relationships among depth to frozen soil, soil wetness, and vegetation type and biomass in tundra near Bethel, Alaska, U.S.A. [1990, p.275-282, eng] 45-890
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PS 5 sewage lagoon embankment stabilization [1991, p.116-125, eng] 45-2327
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Canadian Beaufort Sea physical shore-zone analysis. Final report [1985, 105p. + appends., eng] 45-2538
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IHS transform for the integration of radar imagery with other remotely sensed data [1990, p.1631-1641, eng] 45-2946
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Vertical fine structure of particulate matter and nutrients in sea ice of the high Arctic [1990, p.1348-1355, eng] 45-434
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Prototype physically-based model for the prediction of the spatial distribution of snowcover [1990, p.109-119, eng] 45-2191  
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Short-term variations in the speed of ice stream B, Antarctica [1990, p.81-82, eng] 45-1257
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Nitrogen utilization in ice algal communities of Barrow Strait, Northwest Territories, Canada [1990, p.275-283, eng] 45-2033  
Primary production and nutrient assimilation by natural phytoplankton of the eastern Canadian Arctic [1982, p.335-345, eng] 45-3246  
Vertical fine structure of particulate matter and nutrients in sea ice of the high Arctic [1990, p.1348-1355, eng] 45-434
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Observations on buried glacier ice and massive segregated ice, western arctic coast, Canada [1990, p.31-43, eng] 45-2232
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Icebreaker manoeuvrability [1990, p.145-154, eng] 45-2728
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Improvements in snow sensor installation techniques [1990, p.154-155, eng] 45-2135  
Status of the California Cooperative Snow Surveys Program [1990, p.9-14, eng] 45-2116
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Styles of subglacial glaciectonic deformation within the context of the Anglian ice-sheet [1990, p.227-241, eng] 45-431
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On the phytoplankton of the south-west Atlantic and the Bellingshausen Sea, 1929-31 [1934, p.1-268, eng] 45-3128  
Phytoplankton periodicity in antarctic surface waters [1942, p.261-356, eng] 45-3122
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Winter observations of the atmosphere over antarctic sea ice [1990, p.16,551-16,560, eng] 45-717
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Northstar 89 flight deck deicer and hot air wand evaluation on the U.S.S. America (CV66) [1989, p.397-407, eng] 45-547
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Dynamical properties of the antarctic circumpolar vortex inferred from aircraft observations [1989, p.117-134, eng] 45-2978
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HYDROTEL, a hydrological model designed to make use of remotely sensed and GIS data [1990, p.177-185, eng] 45-3805  
Temporal and spatial variability of streamflow [1990, p.81-96, eng] 45-2146
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Method to reduce traffic noise by making use of a snow surface [1990, p.533-538, eng] 45-1912
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Himalayan glaciers as a sustainable water resource [1989, p.106-112, eng] 45-1674
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Snowmelt runoff forecasting system for the Rumoi River [1988, p.395-398, jpn] 45-2518
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Ice-type classifications from airborne pulse-limited radar altimeter return waveform characteristics [1989, p.1949-1952, eng] 45-286
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December to remember [1990, p.329-332, eng] 45-2049
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Waves in frazil and pancake ice and their detection in Seasat synthetic aperture radar imagery (1991, p.8835-8852, eng) 45-3019
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Estimation of sea ice type and concentration by linear unmixing of Geosat altimeter waveforms (1990, p.18,015-18,025, eng) 45-1607  
Global approach to image texture analysis (1990, 264p., eng) 45-1134
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Numerical estimation of 10,000 years later equilibrium ice sheet profile in the Shirase Glacier drainage basin, East Antarctica (1991, p.12-29, eng) 45-3392
- Houjo, S.**  
Arctic environmental drifting buoy (AEDB) report of field operations and results: August 1987-April 1988 (1990, 128p., eng) 45-565
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Icebergs in the Norwegian Continental Shelf in 1880-1881 (1991, p.131-136, eng) 45-3160
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High performance inexpensive polarimetric radar for *in-situ* measurements (1989, p.1820-1822, eng) 45-279
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Late Cenozoic geologic controls on placer-gold distribution in the Nome nearshore area (1989, p.26-45, eng) 45-193
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On the numerical simulation of the sea ice ridging process (1991, p.4809-4820, eng) 45-2689  
On the shear strength of geophysical scale ice rubble (1991, p.201-212, eng) 45-3425  
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Recent and glacial snowline in the southern Carpathian Mountains (1988, p.167-176, ger) 45-1096
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Snow research and electric power generation (1986, p.1-11, eng) 45-3702
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Transport equations during ice segregation in a dispersed medium (1991, p.297-298, eng) 45-3210
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Alaska Beaufort Sea immersion test of welds of high-strength steels for icebreakers (1990, p.178-187, eng) 45-132  
Local corrosion of welds of Y.P.:440N/sq mm class high-strength steels produced by TMCP for icebreakers (1990, p.188-196, eng) 45-133
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Studless tires use in Japan (1989, p.209-215, eng) 45-1234
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Evaluation of state-of-the-art drilling platform ice accretion models (1988, p.208-213, eng) 45-1340  
Evaluation of state-of-the-art drilling platform icing models (1989, 80p., eng) 45-654  
Numerical modelling of mixed snow and sea spray icing (1990, p.945-960, eng) 45-3643
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Multi-national, interdisciplinary arctic experiments: planning, logistics and operations coordination (1990, p.65-78, eng) 45-2722
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Northeast snowstorms (1991, p.86-87, eng) 45-1901
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Impact of NADP/NTN sampling protocols on winter storm estimates of wet deposition in central Pennsylvania (1990, 33p., eng) 45-206
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Algal populations in arctic sea ice: an investigation of heterotrophy (1972, p.454-458, eng) 45-3124  
Improved chamber for *in situ* measurement of primary productivity by sea ice algae (1982, p.522-524, eng) 45-3245  
Primary productivity of the benthic microalgae in the Chukchi Sea near Barrow, Alaska (1974, p.1779-1786, eng) 45-3247  
Techniques for sampling sea-ice algae (1990, p.19-23, eng) 45-2540
- Horner, R.A.**  
Arctic sea-ice biota (1989, p.123-146, eng) 45-3115
- Horrignoe, G.**  
Field investigation of ice in the Barents Sea (1991, p.143-148, eng) 45-3162
- Hoseth, K.A.**  
Field investigation of ice in the Barents Sea (1991, p.143-148, eng) 45-3162
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Effect of freeze thaw action on wear-resistant asphalt pavements (1988, p.159-164, jpn) 45-2512  
Selection of asphalt surface course mixture for pavements in cold areas: considerations from freezing and thawing tests (1988, p.24-31, jpn) 45-911
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Estimates of primary production by ice algae and phytoplankton in the coastal ice-covered area near Syowa Station, Antarctica (1991, p.30-38, eng) 45-3393  
Phytoplankton bloom under sea ice recorded with a moored system in lagoon Saroma Ko, Hokkaido, Japan (1989, p.9-15, eng) 45-3344
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Cold weather construction materials part 2: field validation of laboratory tests on regulated-set cement for cold weather concreting (1982, 27p., eng) 45-3475
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Measurement of ice forces on small vessels—phase 3: detailed physical calibration. Final report (1990, 31p. + appends., eng) 45-1648
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Design and construction of a research site for passive mine drainage treatment in Idaho Springs, Colorado (1989, p.761-764, eng) 45-1892  
Determining feasibility of using forest products or on-site materials in the treatment of acid mine drainage in Colorado (1989, p.774-779, eng) 45-1894
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Jet streaks and their relationship to heavy precipitation in Colorado Front Range winter storms (1991, p.97-100, eng) 45-1936

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Microbial communities in southern Victoria Land streams (Antarctica) I. Photosynthesis [1989, p.27-38, eng] 45-2605  
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Dielectric studies of the transition of ice Ih to ice XI [1991, p.757-768, eng] 45-2483
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Trophic relationships of the sea ice meiofauna in Frobisher Bay, arctic Canada [1990, p.283-292, eng] 45-3358
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Mathematical modelling of icebreaking pattern based on the elastic wave theory [1990, p.811-820, eng] 45-3631
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Icing on overhead transmission lines in cold mountainous district of Southwest China and its protection [1988, p.354-357, eng] 45-1370
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Glacier meltwater runoff on the south slope of the Bogeda Mt. —taking the Heigou as an example [1990, p.71-82, chi] 45-464
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Weddell gyre: temperature maximum stratum [1989, p.8331-8334, eng] 45-471  
Winter sea-ice cover and ocean processes [1990, p.140-142, eng] 45-1416
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Multiyear floe and hummock field survey in the east Beaufort Sea [1982, 15p. + appends., eng] 45-2851
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Investigations of a winter mountain storm in Utah. Part 3: single-Doppler radar measurements of turbulence [1991, p.1306-1318, eng] 45-3373
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Evidence for a frozen bed, Byrd Glacier, Antarctica [1991, p.11.649-11.655, eng] 45-3462
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Effects of nutrient limitation and stream discharge on the epilithic microbial community in an oligotrophic arctic stream [1989, p.19-26, eng] 45-2604
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Paleoclimatic implications of an early Holocene glacier advance on Disko Island, West Greenland [1990, p.297-311, eng] 45-2412
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Borehole drilling to the bed of ice stream B, Antarctica [1990, p.83-84, eng] 45-1258  
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Cone penetrometer tests in permafrost—the Fox Tunnel, Alaska [1989, p.75-82, eng] 45-334
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Mobility of rock avalanches [1990, p.11-20, eng] 45-2301
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Geophysics in the study of permafrost [1990, p.355-384, eng] 45-668
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Finnish River Ice Research Project—the numerical river ice model in use [1990, p.215-230, eng] 45-3678
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Weddell-Scotia confluence in midwinter [1990, p.18.177-18.190, eng] 45-1608
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Service temperature of steel in cold climates [1990, p.229-239, eng] 45-2734
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Similarity solutions for a Voellmy model of snow avalanches with finite mass [1990, p.99-127, eng] 45-1024
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Ecological aspects of lake regulation in northern Finland. Part 5. Regulation practices and ecological effects [1989, 49p., fin] 45-3847
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3-D model for the antarctic ice sheet: a sensitivity study on the glacial-interglacial contrast [1990, p.79-92, eng] 45-1798  
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Response of the antarctic ice sheet to future greenhouse warming [1990, p.93-102, eng] 45-1799
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Structure and properties of rocks in the Udokan cryolithozone [1990, 124p., rus] 45-2034
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Snowsheds on the Baykal-Amur mainline [1991, p.4-6, rus] 45-2950
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Specific characteristics of the structure of primary geochemical aureoles of kimberlites in the cryolithozone [1989, p.142-153, rus] 45-1835
- IAHR Symposium on Ice, 10th, Espoo, Finland, Aug. 20-23, 1990**  
Proceedings [1990, 3 vols., eng] 45-3562
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Five-year plan for U.S. scientific research in the arctic [1989, 39p., rus] 45-1713
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Borehole hydraulic mining of frozen rock in Yakutia [1987, p.113-117, rus] 45-580  
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Variations in glaciation of the Kungey Alatau mountain ridge under possible climatic variations [1990, p.113-120, rus] 45-1113
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Drilling with ethanol-based antifreeze in Antarctica [1989, p.110-113, eng] 45-1463
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Cylindrical flexural-gravity waves in an ice-covered sea [1990, p.114-120, rus] 45-1122  
Transform equations of long flexural-gravity waves in an ice-covered sea [1990, p.107-113, rus] 45-1121
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Methods of calculating moisture migration in seasonal freezing and thawing of soils [1989, p.36-44, eng] 45-651
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Electromagnetic emission from dynamic processes in ice [1990, p.1357-1360, rus] 45-1858
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Thermal drilling in a permafrost zone [1989, p.24-29, rus] 45-708
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Optimization of the microclimate of bog ecosystems [1988, p.22-29, eng] 45-763
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Surface energy balance and surface temperature in cold regions [1990, p.101-110, eng] 45-124
- Ice and fog: detection and warning systems. December 1985-May 1990. (A bibliography from the NTIS database)**  
Ice and fog: detection and warning systems. December 1985-May 1990. (A bibliography from the NTIS database) [1990, 95p., eng] 45-205
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Ice appendices Tarsiat Gulf 1982-83 [1984, Var. p., eng] 45-2862
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Ice forces on Hans Island. Proposal for 1983 [1983, n.p., eng] 45-2850
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Ice thickness data, winter 1987-1988 [1990, 70p., eng] 45-552
- Ice thickness data, winter 1988-1989**  
Ice thickness data, winter 1988-1989 [1991, 74p., eng] 45-2693
- Icebreakers and icebreaking. January 1978-December 1989. (A Bibliography from Oceanic Abstracts)**  
Icebreakers and icebreaking. January 1978-December 1989. (A Bibliography from Oceanic Abstracts) [1990, 104p., eng] 45-82
- Ichikawa, N.**  
Seismic observation with local telemetry network around Syowa Station, East Antarctica (2) [1990, p.90-99, eng] 45-1530
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Experimental study of the mechanism of skiing turns. 2. Measurement of edging angles [1990, p.1203-1208, eng] 45-2410
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Comparison of drop size distributions from two droplet sizing systems [1990, 15p., eng] 45-604
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Seasonal variations in bearing capacity of asphalt pavements [1990, p.281-298, eng] 45-3517
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Thermomechanics of the East Antarctic Ice Sheet [1990, p.44-51, rus] 45-1735
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Problems of ice friction and strength characteristics control [1990, p.468-477, eng] 45-151  
Study of adhesion and friction of fluoroplast coating in contact with ice [1989, p.83-87, eng] 45-664  
Study of indenter friction against an ice sheet [1990, p.71-74, eng] 45-3265
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Air temperature and snow depth on Yala Glacier of Langtang Valley, Nepal Himalayas [1990, p.55-60, eng] 45-198  
Snow surveys on the north facing slope of Langtang Valley, Nepal Himalayas [1990, p.29-30, eng] 45-196
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Utilization of ground penetrating radar to conduct sediment surveys of frozen reservoirs [1988, p.1055-1061, eng] 45-3099
- Ikeeda, M.**  
Mesoscale ocean feature study using synthetic aperture radar imagery in the Labrador Ice Margin Experiment: 1989 [1991, p.10.593-10.602, eng] 45-3309  
Numerical modeling of ocean circulation and ice cover over the continental shelf [1991, p.97-117, eng] 45-1807  
Wind-induced mesoscale features in a coupled ice-ocean system [1991, p.4623-4629, eng] 45-2675



- Ihoda, N.**  
Numerical estimation of 10,000 years later equilibrium ice sheet profile in the Shirase Glacier drainage basin, East Antarctica (1991, p.12-29, eng) 45-3392
- Iken, A.**  
Light-weight hot water drill for large depth: experiences with drilling on Jakobshavn Glacier, Greenland (1989, p.123-136, eng) 45-1465
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Indoor test of ice and snow tires on iced drum—development of tester and characteristics of coated ice for test (1989, p.47-52, eng) 45-1213
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Dynamic interaction of ice floes with flexible vertical supports in the sea (1989, p.223-237, rus) 45-1500  
New approach to dynamic ice-flexible structure interaction (1990, p.73-80, eng) 45-3667
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Complex glaciological mapping in the studies of geographical regularities of glacial-nival systems (1989, p.17-24, rus) 45-1029
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Activity of microorganisms oxidizing hydrocarbons assayed in natural waters (1989, p.658-662, rus) 45-3138
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Analysis and modeling of melt-water refreezing in dry snow (1990, p.238-246, eng) 45-67
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Types of morphogenesis in the Trans-Ural stratified plains and the reconstruction of paleoclimates of the Pleistocene (1989, p.162-167, rus) 45-3870
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Experience with a chemically-doped fine-grained model ice (1990, p.639-651, eng) 45-3614  
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Review of important literature on ice accretion (1986, p.491-496, eng) 45-3732  
Study on ice accretion (1986, p.68-87, eng) 45-3707
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Study on simplification of winter concreting using the new type of antifreeze admixtures (1986, p.27-36, jpn) 45-925
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Exogenous processes in the southern Lake Baykal area (1990, p.111-114, rus) 45-2871
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Easy method for estimating the strength of rocks at low temperature (1981, p.477-487, jpn) 45-117  
Effect of low temperature on polymeric binding agent for rock mass (1982, p.343-350, jpn) 45-116  
Mechanical characteristics of rocks at low temperatures (1980, p.1221-1227, jpn) 45-118  
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Strength characteristics of rocks after having been at low temperature (1982, p.335-342, jpn) 45-115  
Thermal properties of rocks at low temperatures (1980, p.1228-1233, jpn) 45-119
- Ismail, M.E.**  
Arctic leads (1991, 31p., eng) 45-3110
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Paleoclimatic implications of an early Holocene glacier advance on Disko Island, West Greenland (1990, p.297-311, eng) 45-2412
- Ingram, R.G.**  
Nitrogenous nutrition of sea-ice microalgae (1989, p.377-383, eng) 45-3285  
Physical control of phytoplankton production under sea ice (Manitounuk Sound, Hudson Bay) (1981, p.1385-1392, eng) 45-3126  
Responses of sea-ice microalgae to climatic and fortnightly tidal energy inputs (Manitounuk Sound, Hudson Bay) (1985, p.999-1006, eng) 45-3243  
Variation of upper layer dynamics during breakup of the seasonal ice cover in Hudson Bay (1991, p.12,711-12,724, eng) 45-3558
- Isono, M.**  
Field surveys on terrestrial biology in the vicinity of Syowa Station, East Antarctica, 1986-1987 (JARE-27) (1990, p.156-174, jpn) 45-981
- Isono, T.**  
Alaska Beaufort Sea immersion test of welds of high-strength steels for icebreakers (1990, p.178-187, eng) 45-132  
Local corrosion of welds of Y.P.440N/sq mm class high-strength steels produced by TMCP for icebreakers (1990, p.188-196, eng) 45-133
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Instrumentation and equipment, Tarsuit Gulf 1982-83 (1984, 202p., eng) 45-2857
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Cold regions engineering (1991, 790p., eng) 45-2316
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Fourth International Conference on Atmospheric Icing of Structures (1988, 414p., eng) 45-1299
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Constructed wetlands for wastewater treatment: municipal, industrial, and agricultural (1989, 831p., eng) 45-1873
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Polartech '90 (1990, 759p., eng) 45-121
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Ice Technology for Polar Operations: proceedings of the 2nd international conference (1990, 426p., eng) 45-2717
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Preprints (1991, 517p., eng) 45-1913
- International Conference on Offshore Mechanics and Arctic Engineering, 10th, Stavanger, Norway, June 23-28, 1991**  
Proceedings. Vol.4 (1991, 287p., eng) 45-3140
- International Conference on Performance of Concrete in Marine Environment, 2nd, St. Andrews-by-the-Sea, N.B., Canada, Aug. 21-26, 1988**  
Concrete in marine environment (1988, 739p., eng) 45-1811
- International Geoscience and Remote Sensing Symposium, Vancouver, Canada, July 10-14, 1989**  
IGARSS '89 quantitative remote sensing: an economic tool for the nineties; Proceedings (1989, 3001p. (5 vols.), eng) 45-227
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Forestry equipment—terrain interaction (1989, 291p., eng) 45-1700
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Building a worldwide roofing community (1991, 536p., eng) 45-2452
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Proceedings. Vol.2 (1988, 105p., eng) 45-759
- International Symposium on Winter Storms, 1st, New Orleans, LA, Jan. 14-18, 1991**  
Preprint volume (1991, 436p., eng) 45-1933
- International Workshop on Ice Drilling Technology, 3rd, Grenoble, France, Oct. 10-14, 1988**  
Ice core drilling (1989, 205p., eng) 45-1446
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On adhesive layer of thin concrete block overlay (1990, p.97-112, eng) 45-3494
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Morphogenetic classification of forms of relief on a World Ocean shelf (1990, p.24-50, rus) 45-2875  
Structure and development of western Novaya Zemlya bays in relation to the problem of Late Valdai glaciation (1990, p.94-103, rus) 45-2877
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Experimental study of adfreeze heaving of augered caisson footings (1991, p.152-163, eng) 45-2330
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Investigative report on improving the accuracy of radar rain and snow gages (1990, p.107-112, jpn) 45-747  
Investigative report on the observation characteristics of radar rain and snow gages (1988, p.53-58, jpn) 45-2506
- Irwin, R.**  
Primary production and nutrient assimilation by natural phytoplankton of the eastern Canadian Arctic (1982, p.335-345, eng) 45-3246
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Primary production of ice algae on a seasonally-ice-covered, continental shelf (1990, p.247-254, eng) 45-3356
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Ice clearance using air-lifted propeller streams (1990, p.627-638, eng) 45-3613
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Ice-forming activity of the atmospheric aerosol (1989, p.812-814, eng) 45-482
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Characteristics of calculating ice-pressure resistant hydraulic structures with cyclically varying ice loads (1987, p.102-107, rus) 45-1570
- Problems of ice force evaluation on offshore structures (1990, p.984-994, eng) 45-3646
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Cartographic analysis of the interrelations in glacier systems (1989, p.24-29, rus) 45-1030
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Determination of mean annual temperature of permafrost soil (1989, p.89-93, eng) 45-652
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Stratigraphy and correlation of Quaternary deposits in Asia and the Pacific Ocean region (1991, 208p., rus) 45-3436
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Geometrical relationships of ice formations and their distribution functions (1989, p.109-116, rus) 45-1628
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Two-dimensional time-dependent model of a convective cloud with detailed accounting for the microstructure of water and ice phases (1989, p.41-55, rus) 45-490
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Natural air conditioning in the Kungur Ice Cave (1990, p.104-105, rus) 45-2716
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Passive microwave radiometry over Antarctica (1990, p.1969-1973, eng) 45-916
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Winter fecal coliform concentrations in stream sediments (1989, n.p., eng) 45-1654
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Volcanoes of North America: United States and Canada (1990, 354p., eng) 45-2827
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Chemical compositions of aerosol particles and snowfalls in Alta, northern Norway (1989, p.169-178, eng) 45-829
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- Precipitating snow clouds during winter monsoon seasons influenced by topography of the Shakotan Peninsula, Hokkaido Island, Japan (SHAROP) (1987, p.109-128, eng) 45-905

- Relation between the center nucleus of snow crystals and aerosol particles in Arctic Canada [1990, p.415-435, eng] 45-784
- Kikuchi, T.**  
Recent advancement of automatic weather station in Antarctica: recent advancement of unmanned observation of weather, snow and ice, Part 2 [1990, p.179-183, jpn] 45-781
- Kil'matov, T.R.**  
Subarctic frontal zone in the central northern part of the Pacific Ocean in autumn [1989, p.62-64, rus] 45-738
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Numerical method for phase-change problems [1990, p.2721-2734, eng] 45-1871
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Wind tunnel simulation of antarctic snowdrifting [1989, 15p., eng] 45-816
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Construction report on Sejong Station [1990, p.51-67, kor] 45-3203
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On the relation between polar continentality and climate: studies with a nonlinear seasonal energy balance model [1990, p.18,653-18,668, eng] 45-883
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Mathematical model of periodically stabilizing variations of a phase front in an experimental sample [1989, p.96-99, rus] 45-1831
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Activation of ice-forming aerosols, generated by the burning of pyrotechnical compounds [1989, p.41-46, rus] 45-25  
Efficiency of ice-forming aerosol generators [1989, p.46-59, rus] 45-26  
Influence of iodine vapor on ice-forming activity of aerosols of various substances [1990, p.500-502, eng] 45-1927
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Special report on the Antarctic Minerals Convention [1990, p.273-310, eng] 45-2817
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One-dimensional temperature modeling techniques: review and recommendations [1990, 17p., eng] 45-1698
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Mechanics of aeolian transport of snow and sand [1990, p.855-866, eng] 45-2097
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Soil and rock temperatures in discontinuous permafrost: Gornegrat and Unterrothorn, Wallis, Swiss Alps [1990, p.177-188, eng] 45-1297
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On the formation of underwater ice and the growth and energy budget of the sea ice in Atka Bay, Antarctica [1991, 88p., ger] 45-3521
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On the extensive use of heat flux transducers for evaluating residential building component performance—calibration and deployment [1991, p.143-158, eng] 45-2657  
Use of combined reflective and normal heat flux transducers in determining convective heat transfer coefficients and room thermal radiative balance [1991, p.97-110, eng] 45-2654
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Tundra lakes and streams as gas conduits to the atmosphere: implications for tundra carbon budgets [1991, p.298-301, eng] 45-1474
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Measurement of ice/propeller interaction parameters—MV Robert LeMeur. Supplemental report [1986, 156p. + append., eng] 45-189  
Measurement of ice/propeller interaction parameters—MV Robert LeMeur. Supplemental report: summary [1986, 22p., eng] 45-187
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Ultrasonic techniques for aircraft ice accretion measurement [1990, p.43-53, eng] 45-600
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RIGGS III: seismic short-refraction studies using an analytical curve-fitting technique [1990, p.109-126, eng] 45-1612
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Temporal changes in zooplankton composition in a hypersaline, antarctic lake subject to periodic seawater incursions [1991, p.93-99, eng] 45-2944
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Kinetics of changes in configuration of cooled ice bodies immersed in water [1989, p.219-222, rus] 45-1066
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Drilling exploratory wells with pneumatic drills [1990, 263p., rus] 45-634
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Sedimentary basins and petroleum resource potential of the Arctic Ocean region [1990, p.503-538, eng] 45-1693
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Infrared spectra of T2O ice [1990, p.6113-6114, eng] 45-1088
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Observation of ice accretion on power transmission lines [1988, p.84-88, eng] 45-1317
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Free convection heat transfer along a horizontal ice cylinder immersed in seawater [1990, p.57-64, jpn] 45-697  
Free convection heat transfer around a horizontal ice cylinder formed through melting in saline water [1990, p.35-41, eng] 45-3869  
Melting heat transfer from a horizontal ice cylinder immersed in a quiescent saline water [1990, p.15-23, eng] 45-1164
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Modelling the Kootenay watershed with satellite data [1990, p.123-134, eng] 45-3803  
Proceedings [1990, 386p., eng] 45-3797  
Use of satellite data for water resources modelling—a Canadian example [1991, p.21-29, eng] 45-2796
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Postglacial evolution of drainage in the middle and upper St. John River basin, Maine and New Brunswick [1989, p.135-142, eng] 45-2070
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Studies on sleet jump [1986, p.196-210, eng] 45-3713
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Snowpack and the distribution of a major vegetation ecotone in the Sierra Nevada of California [1991, p.141-149, eng] 45-2226
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Prevention of snow drifting with the help of road levelling and design; experimental structure in main road 21, Jeahkka [1990, 36p., fin] 45-3842  
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Improving the underground development of thawed and frozen placers [1989, 162p., rus] 45-3000
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FE-modelling of ice failure load during ship bow indentation into multi-year ice [1991, 40p. + append., eng] 45-2691
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Equations for local ice energy dissipations during ship ramming [1990, p.101-115, eng] 45-494
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Freezing-point of mixtures of H<sub>2</sub>O-16 and H<sub>2</sub>O-18 [1991, p.583-588, eng] 45-3305
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Report on improving the accuracy of observations of flow in winter [1988, p.489-494, jpn] 45-2519
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Endogenic model of permanent variations in the climate of the Earth [1990, p.111-124, rus] 45-996
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Mass balance measurements on Norwegian glaciers in 1988 and 1989 [1991, 78p., nor] 45-3856
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Creation and restoration of riparian wetlands in the agricultural Midwest [1990, p.327-350, eng] 45-1410
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Salt oscillator in the glacial Atlantic? 1. The concept [1990, p.469-477, eng] 45-952
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Local database of avalanche stations [1990, p.76-81, rus] 45-1107
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Method of radar fresh-water ice measurements from a moving vehicle [1990, p.1144-1154, eng] 45-3661
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Survey of mycorrhizal plants on Truelove Lowland, Devon Island, N.W.T., Canada [1990, p.1848-1856, eng] 45-3106
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Gas release from comets [1991, p.411-413, eng] 45-2941
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Boulder fields of Mt. Fufuljället, west-central Sweden [1990, p.63-78, eng] 45-1189  
On the use of glacial striae for reconstruction of paleo-ice sheet flow patterns [1990, p.217-236, eng] 45-2025
- Kleman, V.**  
Relationships among depth to frozen soil, soil wetness, and vegetation type and biomass in tundra near Bethel, Alaska, U.S.A. [1990, p.275-282, eng] 45-890
- Klement'ev, O.L.**  
Holocene climatology-stratigraphy of the ice domes in Severnaya Zemlya [1991, p.100-112, rus] 45-3440
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Saab Direct Ignition System and its cold start performance [1989, p.345-353, eng] 45-1247
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Characteristics of the hydrogeological construction and hydrochemical zonality of the Udachnaya kimberlite plug [1989, p.146-155, rus] 45-2640  
Evaluating the thermal effect of surface water on permafrost in arctic regions [1989, p.66-73, rus] 45-2630  
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Natural conditions in developed regions of Siberia [1987, 172p., rus] 45-568
- Kling, G.W.**  
Tundra lakes and streams as gas conduits to the atmosphere: implications for tundra carbon budgets [1991, p.298-301, eng] 45-1474
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Nitrogen cycling in arctic lakes and ponds [1989, p.165-172, eng] 45-2614
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Non-meteorological flood disasters in Chile [1989, p.243-258, eng] 45-2770
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Experimental construction of ice moorings in Antarctica using the spray-cone freezing method [1990, p.106-110, rus] 45-1746  
Results of isotope hydrochemical testing of Beaver and Radok Lakes [1990, p.90-95, rus] 45-2573
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Automatic estimation of ice kinematics using remote sensing data [1989, p.1133-1136, eng] 45-260
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Pressure-induced phase transitions in clathrate hydrates [1991, p.623-627, eng] 45-1903
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Polar cod *Boreogadus saida* (Leresn.) and its importance for certain life processes in the Arctic [1937, p.175-188, rus] 45-3430
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Comments on "Physics of supercooling of thin water skins covering gyrating hailstones" [1991, p.217-220, eng] 45-1805  
Inhibition of recrystallization of ice by insect thermal hysteresis proteins: a possible cryoprotective role [1986, p.256-262, eng] 45-2966
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Operations optimization [1989, p.417-429, eng] 45-1884  
Performance expectations and loading rates for constructed wetlands [1989, p.319-351, eng] 45-1881
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Serviceability of communications channels along power transmission lines during ice-frost formations on wires [1988, p.36-42, eng] 45-2568
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Time-dependent effects on ridge initiation in sea ice leads [1989, p.1298-1303, eng] 45-448
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Low temperature brittle fracture behavior of steel in mixed modes I and II [1991, p.111-128, eng] 45-2294
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Spray and ice measurement instrumentation for ships [1991, p.748-757, eng] 45-2384
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Performance of an earthquake motion simulator for a small geotechnical centrifuge [1991, p.361-368, eng] 45-3772
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Dynamical explanation for the asymmetry in zonally averaged column abundances of ozone between northern and southern springs [1991, p.547-556, eng] 45-3487
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Proceedings of the Second Airborne Synthetic Aperture Radar (AIRSAR) Workshop, June 7 and 8, 1990 [1990, 57p. + append., eng] 45-3752
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Surface sediment diatom distribution and Holocene paleo-temperature variations in the Greenland, Iceland and Norwegian Sea [1990, p.557-580, eng] 45-953
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Influence of the freezing process on vapour transport during sublimation in vacuum-freezing-drying [1991, p.2395-2408, eng] 45-3864
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Deep hot water drill system with potential for bottom sampling [1989, p.137-139, eng] 45-1466  
Design and logistic requirements for ice coring and sample return from remote high altitude locations [1989, p.24-27, eng] 45-1451  
Design of a drill to work in a fluid filled hole [1989, p.28-31, eng] 45-1452  
Ice drilling instrumentation [1989, p.38-50, eng] 45-1454  
New directions in drilling and related activities [1989, p.21-23, eng] 45-1450  
Shallow and deep ice coring devices developed by the Polar Ice Coring Office (PICO) [1990, p.555-564, eng] 45-158
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Building a worldwide roofing community [1991, 536p., eng] 45-2452
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Retrospective, current and future view of the United States civil operational environmental satellite program [1991, p.336-343, eng] 45-1918
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Earth dams on permafrost [1989, 152p., rus] 45-1117
- Kogteva, E.A.**  
Two-dimensional time-dependent model of a convective cloud with detailed accounting for the microstructure of water and ice phases [1989, p.41-55, rus] 45-490

- Kohler, C.R.**  
Attenuation and multipath effects on ground vehicle signatures for 94 GHz sensors [1990, 21p., eng] 45-359
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German intermediate ice core drilling since 1981: technique and experience [1989, p.3-5, eng] 45-1447
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Quantifying freeze/thaw-induced variability of soil strength [1990, p.501-506, eng] 45-988
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Effects of MTBE on gasoline engine cold weather operation [1989, p.413-420, eng] 45-1251
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Coping strategies and mood during cold weather training [1989, 14p., eng] 45-382
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Windsor Coal Company wetland: an overview [1989, p.788-792, eng] 45-1896
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Temperature field in a system of excavations during ice formation [1990, p.47-51, rus] 45-801
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Modelling of ice drift in the arctic basin [1990, p.32-38, rus] 45-1634
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River frazil ice: a simplified theoretical model [1990, p.252-260, eng] 45-3581
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Dynamics of arctic ice in seasonal energy balance model of the climate with regional resolution [1990, p.22-27, eng] 45-3269
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Theoretical basis for the width of planned snow-retention afforestation roads [1990, p.93-94, rus] 45-2247
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Research into icings and icing processes in the USSR: major results and prospects [1989, p.233-251, eng] 45-473  
Studies of naleds and naled processes in the USSR (principal results and prospects) [1989, p.3-15, rus] 45-1028
- Komarov, A.A.**  
Characteristics of snow transport and the protection of roads from snowdrifts in regions of the Far North [1990, p.36-40, rus] 45-3008
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Mathematical modelling of the interaction between permafrost and a deposit of natural gas hydrates [1990, p.73-84, rus] 45-322
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Engineering geology of the USSR: shelves of the USSR [1990, 239p., rus] 45-1534
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Calculating the interdependent effect of water reserves and depth of soil freezing in long range forecasting of spring runoff of lowland rivers [1989, p.21-29, rus] 45-2275  
Method of long range forecasting of the time distribution of spring water inflow into the Tsimliansk reservoir [1989, p.3-10, rus] 45-2274
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Sea ice observations from the Winter Weddell Gyre Study-'89 [1991, 161p., eng] 45-2903
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Observations of snow loads on drainage ditches at the gratings [1986, p.40-48, jpn] 45-927
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Ice sublimation below artificial crusts: results from comet simulation experiments [1991, p.515-524, eng] 45-2794  
Mass and energy transport in sublimating cometary ice cracks [1991, p.73-84, eng] 45-2287  
Model of the thermal conductivity of porous water ice at low gas pressures [1991, p.507-513, eng] 45-2793
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Withstand voltage characteristics of insulator string covered with snow or ice [1991, p.1243-1250, eng] 45-3468
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Dependence of phase composition of water in freezing and frozen soils on external pressure [1989, p.17-23, eng] 45-650  
Method of construction in a pre-frozen limited soil mass [1990, p.114-118, eng] 45-2215
- Kondakova, O.A.**  
Dependence of phase composition of water in freezing and frozen soils on external pressure [1989, p.17-23, eng] 45-650
- Kondepudi, S.N.**  
Performance of triangular spine fins under frosting conditions [1988, p.1-7, eng] 45-3215
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Vertical distribution of snow accumulations on variously oriented slopes in the Malaya Almatinka River basin [1990, p.3-14, rus] 45-1099
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Changes in global climate; a study of the effect of radiation and other factors during the present century [1985, 280p., eng] 45-1710  
Microwave-emitting properties of various types of underlying surface at below-zero temperatures [1991, p.7-9, eng] 45-2477
- Kondrat'ev, S.D.**  
Method of estimating the strength and rheological properties of saline frozen soils [1990, p.90-98, rus] 45-2895
- Kondrat'ev, V.G.**  
Frost protection on the Baykal-Amur mainline [1991, p.6-7, rus] 45-2951
- Kondrat'uk, S.I.**  
Large-scale atmospheric processes and medium-range forecasting of weather in the Arctic [1989, 253p., rus] 45-1573
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Remote sensing of sea ice [1990, p.208-211, eng] 45-1132
- Kong, Y.M.**  
Foundation engineering and a new technique for thermal insulation of wall in Daxiaoxinganling permafrost region, China [1990, p.111-116, eng] 45-125
- Konishchev, V.N.**  
Ecological problems in geocryology (geocryocology) [1990, p.145-151, rus] 45-1967
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Inventor of the ice generator [1990, p.8-10, rus] 45-706
- Konovalov, V.G.**  
Methods of calculation and remote-sensing measurements for the spatial distribution of glacier annual mass balances [1987, p.212-217, eng] 45-17
- Konovalov, V.V.**  
Equipment for underwater surveys of hydraulic structures using acoustics [1989, p.13-20, rus] 45-81
- Konrad, J.M.**  
Ice formation in saline soils [1989, 3 vols., eng] 45-2037  
New concept of frost-heave characteristics of soils, by Otto J. Svee—comments [1990, p.217-222, eng] 45-503  
Problems with the segregation potential theory by W. van Gassen and D.C. Segó—comments [1990, p.215-216, eng] 45-502  
Sampling of saturated and unsaturated sands by freezing [1990, p.88-96, eng] 45-354  
Solute partitioning in freezing soils [1990, p.726-736, eng] 45-1869
- Konstantinov, A.V.**  
Mechanical properties of sea ice and adfreeze strength of sea ice and subsea soil [1990, p.417-426, eng] 45-3595
- Konstantinov, I.P.**  
Geocryological studies of northern Western Siberia. Collected scientific papers [1990, 117p., rus] 45-1194  
Variations in geocryological conditions of gas pipeline routes in Yakutia [1987, p.126-134, rus] 45-582
- Konstantinova, N.R.**  
Effect of gelatin on the kinetics of hydrolysis of P-nitrophenyl acetate in frozen aqueous solutions [1991, p.978-983, eng] 45-3775
- Kool, S.A.**  
Ozone and aerosol distributions measured by airborne lidar during the 1988 Arctic Boundary Layer Experiment [1991, p.J242-J243, eng] 45-1601
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Effects of hail on residential roofing products [1991, p.206-215, eng] 45-2455
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Low temperature pumpability studies in a heavy-duty diesel engine, part II [1989, p.439-453, eng] 45-1253
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Advanced treatment technologies [1990, p.109-208, eng] 45-3543
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Ecological role of bacteria in detritus and aggregates in the southwest Pacific Ocean [1989, p.682-692, rus] 45-3450
- Korbanov, S.V.**  
Wear and tightness of moving seals [1990, p.614-623, eng] 45-164
- Körber, C.**  
Influence of the freezing process on vapour transport during sublimation in vacuum-freezing-drying [1991, p.2395-2408, eng] 45-3864
- Korepanov, A.A.**  
Snow cover and freezing and thawing of soil in pine forests of the Kama River region [1989, p.54-58, eng] 45-858
- Korhonen, C.J.**  
Antifreeze admixtures for cold regions concreting: a literature review [1990, 14p., eng] 45-974  
Antifreeze admixtures for cold weather concreting [1991, p.38-41, eng] 45-1983  
New admixtures for cold weather concreting [1991, p.200-209, eng] 45-2334
- Koriseva, J.**  
Ice pressure measurements using PVDF-sensors [1990, p.526-538, eng] 45-156
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Modified Nadreau yield function [1990, p.89-92, eng] 45-1770
- Kornilov, N.A.**  
SAE cargo operations using icebergs [1990, p.40-44, rus] 45-3080  
Use of different types of vessels in Soviet antarctic expeditions and their supply of hydrometeorological information [1990, p.36-40, rus] 45-3079
- Korolev, A.A.**  
Frost protection on the Baykal-Amur mainline [1991, p.6-7, rus] 45-2951
- Korolev, S.I.U.**  
Indications of an ancient glaciation in the lower course of the Lena River [1987, p.99-113, rus] 45-579
- Koronelli, T.V.**  
Arctic pigmented *Mycobacterium* species and their role in oxidation of oil hydrocarbons [1981, p.167-170, rus] 45-3136  
Lipid composition of *Mycobacterium mucosum* oxidizing hydrocarbons isolated from arctic waters [1977, p.1070-1073, rus] 45-3137
- Korotkevich, E.S.**  
Soviet-French cooperation on the isotopic research of ice cores from Dome B-Vostok-Komsomolskaya-Mirny Traverse, East Antarctica [1990, p.287-289, eng] 45-724
- Korotkevich, Y.S.**  
CO<sub>2</sub>-climate relationship as deduced from the Vostok ice core: a re-examination based on new measurements and on a re-evaluation of the air dating [1991, p.83-90, eng] 45-2586  
Deuterium excess in recent antarctic snow [1991, p.5113-5122, eng] 45-2283
- Korotkov, A.I.**  
Dynamics of ice conditions in the coastal zone of Antarctica [1990, p.261-270, eng] 45-3132  
Dynamics of ice conditions in the coastal zone of Antarctica [1990, p.126-133, rus] 45-1751  
Mechanism of frazil ice formation in the Antarctic [1990, p.105-116, rus] 45-1562  
Regularities of spatial-temporal variability of antarctic stationary polynyas [1990, p.25-32, rus] 45-3077  
Safety measures for operations on antarctic fast ice [1990, p.44-51, rus] 45-3081  
Variability of natural conditions in Alasheyev Bight [1990, p.117-133, rus] 45-1563
- Korotkov, I.M.**  
Holocene climatology-stratigraphy of the ice domes in Severnaya Zemlya [1991, p.100-112, rus] 45-3440
- Korotkov, S.V.**  
Water circulation in the Barents Sea [1989, p.110-117, rus] 45-1657
- Korppoo, S.**  
Lori ice cleaner [1990, p.341-342, eng] 45-3688
- Korsen, O.M.**  
Drainage pattern in a subpolar glacier: Bröggerbreen, Svalbard [1990, p.121-131, eng] 45-3788
- Korunes, R.**  
Long-term iceberg collision-risk assessment methods for fixed offshore structures [1989, p.203-214, eng] 45-2591
- Korsunov, V.M.**  
Taiga soils in the northwestern part of the Yenisey mountain ridge [1990, p.152-163, rus] 45-2910
- Korzhev, K.N.**  
Estimation of ice worn action on hydraulic structures [1990, p.995-998, eng] 45-3647  
Passage of ice through hydroelectric structures [1990, 182p., rus] 45-28
- Korzhekova, L.I.**  
Content and dynamics of the nutrients and organic matter in snow and ice cover of the arctic basin [1985, p.90-93, rus] 45-3214
- Korzna, A.V.**  
Geographical aspects of the problems in background monitoring of natural environments in regions of the Far North of the USSR [1990, p.46-58, rus] 45-1965
- Kosachev, V.P.**  
Sequence of leads in cooling gas stations in polar compressor stations [1990, p.29-31, rus] 45-733
- Koseki, T.**  
Alaska Beaufort Sea immersion test of welds of high-strength steels for icebreakers [1990, p.178-187, eng] 45-132  
Local corrosion of welds of Y.P.-440N/sq mm class high-strength steels produced by TMCP for icebreakers [1990, p.188-196, eng] 45-133
- Kosloff, P.**  
Observations of ship performance and the structure of fast ice channels in the northern Baltic Sea [1991, 35p., eng] 45-3448
- Koslowski, G.**  
Accumulated days of the areal ice volume of the winter—a new standard for grading the winter ice intensity at the Baltic coast of Schleswig-Holstein and its relation to the character of meteorological winter [1989, p.61-80, ger] 45-616
- Kossov, O.A.**  
Five-year plan for U.S. scientific research in the arctic [1989, 39p., rus] 45-1713  
Problems of military security in the Arctic [1990, 92p., rus] 45-1715  
Technological possibility of safe convoy of non-ice class ships along the Northern Sea Route [1990, p.259-267, eng] 45-2736
- Kostrev, V.P.**  
Rocks—accumulators of cold [1990, p.11-15, rus] 45-2696

- Koster, E.A.**  
Morphological development of dunes in a subarctic environment, central Kobuk Valley, northwestern Alaska [1990, p.93-109, eng] 45-1191
- Kostiukovich, V.V.**  
Development of the Lena River basin in the Late Cenozoic (based on analysis of the migration conditions of crust material in the cryolithozone) [1989, p.153-161, rus] 45-1836
- Kotliakov, V.M.**  
Annotated list of Soviet literature on glaciology for 1987 [1990, p.193-230, rus] 45-1762  
Climate change and glacier fluctuation during the last 1,000 years in the southern mountains of the USSR [1991, p.1-12, eng] 45-2434  
Climatic changes in the last glacial-interglacial cycle according to ice core data [1989, p.5-16, rus] 45-5  
Discussion of pressing arctic problems (results of the conference of arctic countries) [1989, p.122-125, rus] 45-3  
Effect of the continental snow cover in the Southern Hemisphere on the distribution of moisture among oceans [1989, p.242-246, eng] 45-2598  
Elsevier's dictionary of glaciology in four languages; English (with definitions), Russian (with definitions), French and German [1990, 336p., eng] 45-2091  
Great periglacial runoff system in northern Eurasia and its significance in interregional correlations [1989, p.5-13, rus] 45-787  
Holocene climatology-stratigraphy of the ice domes in Severnaya Zemlya [1991, p.100-112, rus] 45-3440  
Interaction of sea ice, snow, and glaciers with the atmosphere and ocean (Part 1) [1990, 74p., eng] 45-1261  
Interaction of sea ice, snow and glaciers with the atmosphere and ocean (part 3) [1990, p.155-248, eng] 45-2409  
Meeting of the office of the International Commission on Snow and Ice in Davos [1989, p.246-249, rus] 45-1071  
Reconstruction of the Holocene climate from the results of ice core studies on the Vavilov Dome, Severnaya Zemlya [1989, p.103-108, rus] 45-1043
- Kotlov, S.B.**  
Research station investigation of the temperature of water masses and the surface of bottom sediments of Lake Krugloye (Central Gydan) [1989, p.102-110, rus] 45-2015  
Studying the thermal regime of natural complexes of tundra zones in Western Siberia [1989, p.6-20, rus] 45-2004
- Kotlova, E.V.**  
Research station investigation of the temperature of water masses and the surface of bottom sediments of Lake Krugloye (Central Gydan) [1989, p.102-110, rus] 45-2015
- Kotori, M.**  
Abundance and vertical distribution of the chaetognath *Parasagitta elegans* (Verrill) under the sea ice in Saroma Ko, a lagoon on Hokkaido, Japan [1987, p.138-144, eng] 45-3346
- Kotov, A.N.**  
Facies changes and permafrost conditions during the formation of Upper Quaternary deposits of the Mayn River valley (Chukotka) [1989, p.117-131, rus] 45-2498  
Formation of the alassy complex of deposits in the Mayn River basin (Chukotskiy Peninsula) [1990, p.59-64, rus] 45-3035  
Mineral composition of Late Pleistocene cryolithogenic deposits of the Mayn River valley [1989, p.152-156, rus] 45-2500
- Kotzuba, V.I.**  
Sequence of leads in cooling gas stations in polar compressor stations [1990, p.29-31, rus] 45-733
- Kottmeier, C.**  
Winter observations of the atmosphere over antarctic sea ice [1990, p.16,551-16,560, eng] 45-717
- Kottmeier, S.T.**  
Bacterioplankton in the marginal ice zone of the Weddell Sea: biomass, production and metabolic activities during austral autumn [1990, p.1145-1167, eng] 45-882
- Kouvoopoulos, Y.S.**  
Regional climate change impacts: 1. Impacts on water resources [1991, p.247-258, eng] 45-3444
- Kovaca, A.**  
Impulse radar bathymetric profiling in weed-infested fresh water [1991, 19p., eng] 45-2955  
Sea-ice thickness measurement using a small airborne electromagnetic sounding system [1990, p.1327-1337, eng] 45-837
- Koval'chuk, A.I.**  
Problems in geometeorology and the accumulation of winter cold. Collected scientific papers [1990, 119p., rus] 45-2695
- Kovalenko, V.D.**  
Endogenic model of permanent variations in the climate of the Earth [1990, p.111-124, rus] 45-996
- Kovaler, R.V.**  
Soil cover of Siberia: formation characteristics, agricultural and ecological aspects of utilization [1990, p.143-151, rus] 45-2909
- Kovaler, S.N.**  
Modeling the runoff of small rivers [1991, p.708-714, eng] 45-3545
- Kovaleva, S.R.**  
Ecological aspects of erosion processes in western Siberia [1990, p.95-100, rus] 45-2908
- Kovalevskii, S.I.**  
Accumulation of ice on slopes of pumped storage plant basins [1990, p.442-448, eng] 45-3597
- Kovalick, W.M.**  
Satellite-derived reflectance of snow-covered surfaces in northern Minnesota [1990, p.87-96, eng] 45-1726
- Kovrigo, P.A.**  
Optimization of the microclimate of bog geosystems [1988, p.22-29, eng] 45-763
- Kowski, P.**  
Isotope data from ice-cored moraines suggest a higher ice sheet surface in central Queen Maud Land (Antarctica) during cold stages [1990, p.301-306, eng] 45-726  
Oxygen-18 thermometer from snow of northern Queen Maud Land/Antarctica [1990, p.307-311, eng] 45-727
- Koza, S.M.**  
Liquid chromatographic method for determination of explosives residues in soil: collaborative study [1990, p.541-552, eng] 45-859
- Kozachenko, V.A.**  
Sequence of leads in cooling gas stations in polar compressor stations [1990, p.29-31, rus] 45-733
- Kozarski, S.**  
Ice-lobe contact sedimentary scarps in marginal zones of the major Vistulian ice-sheet positions, West-Central Poland [1989, p.69-81, eng] 45-2001
- Kozhevnikov, I.U.P.**  
Geography of the vegetation of Chukotskiy Peninsula [1989, 175p., rus] 45-30
- Kozhevnikova, T.E.**  
Ice conditions in pools of the dam of the Kolyma hydroelectric station during initial operation [1990, p.104-107, eng] 45-855
- Kozitskii, I.E.**  
Scheme of calculating single-layer overthrust of ice onto a shore slope [1990, p.297-299, eng] 45-2164
- Kozlov, I.U.V.**  
Descent of a catastrophic avalanche on the western part of the Baykal Amur Railroad area [1990, p.52-59, rus] 45-3011  
Effect of braking structures on the velocity and range of avalanches on a horizontal surface [1990, p.46-52, rus] 45-3010
- Kozlovskii, A.M.**  
Duration of the cycle of the Atlantic ice massif existence and typification of the processes causing its isolation [1990, p.331-339, eng] 45-730  
SAE cargo operations using icebergs [1990, p.40-44, rus] 45-3080  
Use of different types of vessels in Soviet antarctic expeditions and their supply of hydrometeorological information [1990, p.36-40, rus] 45-3079
- Kra, R.**  
Development of an Alaskan radiocarbon data base as a subset of the International Radiocarbon Data Base (IRDB) [1989, p.83-87, eng] 45-3751
- Krabill, W.B.**  
Concurrent remote sensing of arctic sea ice from submarine and aircraft [1989, 20p., eng] 45-363  
Top/bottom multisensor remote sensing of arctic sea ice [1991, p.2693-2709, eng] 45-2042  
Top/bottom multisensor remote sensing of arctic sea ice [1989, 56p., eng] 45-564
- Kraeger-Rovey, C.**  
Case study of bank erosion on the Kinak River, Alaska [1983, p.223-230, eng] 45-2958
- Kraemer, T.G.**  
Ice crystal patterns in artificial gels of extracellular matrix macromolecules after quick-freezing and freeze-substitution [1989, p.170-179, eng] 45-2968
- Kraimer, K.**  
Ice-rich, redeposited diamictic blocks and associated structures in Quaternary outwash sediments of the Inn Valley near Innsbruck, Austria [1990, p.249-254, eng] 45-2027
- Krakowski, E.M.**  
Knowledge based system for the interpretation of SAR images of sea ice [1989, p.844-847, eng] 45-252
- Krapu, G.L.**  
Prairie wetlands: characteristics, importance to waterfowl, and status [1989, p.811-828, eng] 45-1402
- Krasekha, E.N.**  
Taiga soils in the northwestern part of the Yenisey mountain ridge [1990, p.152-163, rus] 45-2910
- Krasinski, M.J.**  
Observation of the boundary layer on the top of ice growing from melt [1990, p.625-632, eng] 45-614
- Krasovshkina, E.R.**  
Technique of long range regional forecasting of dangerous phenomena (in the example of avalanches and mudflows in the Central Caucasus) [1990, p.46-52, rus] 45-677
- Krasovskaya, T.M.**  
Anthropogenic changes in geochemical composition of the arctic oil- and gas-bearing regions in the northeastern European territory of the USSR and Yamal Peninsula [1989, p.15-21, rus] 45-101
- Geographical aspects of the problems in background monitoring of natural environments in regions of the Far North of the USSR [1990, p.46-58, rus] 45-1965
- Krasovskii, A.G.**  
Electrical and acoustic properties of saline frozen soils [1990, p.128-136, rus] 45-2902
- Krass, M.S.**  
Problem of the thermal physics of snow-firn sequences [1990, p.35-39, rus] 45-1733  
Radiative thermophysics of snow and ice [1990, 260p., rus] 45-1532
- Kratz, T.K.**  
Relationship of landscape position and groundwater input in northern Wisconsin kettle-hole peatlands [1989, p.1141-1151, eng] 45-1405
- Kravtsov, I.U.V.**  
Engineering and geological monitoring of geotechnical systems of gas fields in the Tyumen North: standards, methods, and technological security [1989, p.32-36, rus] 45-103
- Kravtsova, V.I.**  
Mapping snow cover in the mountains of Afghanistan by means of space photography [1989, p.44-49, rus] 45-1033  
Snow cover mapping of Afghanistan's mountains with space imagery [1990, p.295-302, eng] 45-1526  
Terskol workshop on geoinformation systems of mountain territories [1989, p.228-232, rus] 45-1068
- Kreichman, M.M.**  
Studying ice cover creep under loads distributed along a strip [1987, p.81-89, rus] 45-1567
- Kremer, J.N.**  
Bio-optical model of antarctic sea ice [1991, p.10,581-10,592, eng] 45-3308
- Krenke, A.N.**  
Third scientific assembly of the International Association of Hydrological Sciences in Baltimore [1989, p.232-236, rus] 45-1069
- Kress, V.**  
Frost lenses? Sure. But in concrete? [1990, p.51-53, eng] 45-2048
- Krichevsky, M.**  
Diversity of bacterial populations in the Beaufort Sea [1977, p.596-599, eng] 45-3095
- Krimmel, R.M.**  
Preliminary forecast of the advance of Hubbard Glacier and its influence on Russell Fiord, Alaska [1991, 34p., eng] 45-3833
- Krishfield, R.**  
Arctic environmental drifting buoy (AEDB) report of field operations and results: August 1987-April 1988 [1990, 128p., eng] 45-565
- Kriss, A.E.**  
Ecological-geographical aspects of the distribution of heterotrophic bacteria in the Atlantic Ocean [1970, p.362-371, rus] 45-3181  
Geographical regularities in the distribution of a microbial population (heterotrophic organisms) in the world ocean [1960, p.34-41, eng] 45-3370  
Microbiological investigations in the Central Arctic in 1956 [1957, p.199-202, rus] 45-3350  
Microorganisms as indicators of hydrological phenomena in seas and oceans [1958, p.397-413, rus] 45-3431  
Microorganisms of the eastern part of the Arctic Ocean [1945, p.268-276, rus] 45-3139
- Kritsuk, L.N.**  
Geocryological and geological engineering problems in the development of the Yamal Peninsula [1990, 53p., rus] 45-1719  
Isotope study of natural water and ice of western Siberia [1989, p.48-64, eng] 45-649
- Krivoshchekov, V.S.**  
Evaluation of agroclimatic and geothermophysical characteristics of developing northern meadows in the Chukotskiy Peninsula [1990, p.78-87, rus] 45-3038  
Problems of geocryological investigations in meliorative and agricultural development of land in the Chukotka autonomous district [1990, p.51-58, rus] 45-3034
- Krivoshchina, V.K.**  
Structure and dynamics of the Pacific ice massif [1990, p.165-174, rus] 45-1565
- Kroeger, P.G.**  
Fundamentals of phase change: freezing, melting, and sublimation [1990, 81p., eng] 45-1161
- Krokholer, V.F.**  
Impulse induction sounding in the study of the geocryological conditions of the Apsat coal deposits [1989, p.126-135, rus] 45-2638
- Krómer, I.**  
Probability based design approach to climatic loadings in Hungary. [1988, p.30-33, eng] 45-1305
- Kronse, H.R.**  
Snowfall and oxygen-isotope variations off the north coast of Ellesmere Island, N.W.T., Canada [1987, p.195-199, eng] 45-15  
Variation of the stable isotopes of water with altitude in the Saint Elias Mountains of Canada [1991, p.7483-7494, eng] 45-2800
- Kraeger, F.J.**  
Economic potential of the Dufek Complex [1990, p.33-52, eng] 45-2803



- Krtger, J.**  
Till genesis and hydrogeological properties [1990, p.81-94, eng] 45-658
- Krutova, V.I.**  
Pleistocene glaciations of the Cherskiy mountain system and their effects on the development of the river network [1989, p.102-112, rus] 45-2497
- Kraztk, J.**  
Basic methods and results of ice investigation for electric overhead lines design and exploitation in Czechoslovakia [1988, p.94-98, eng] 45-1319
- Krylov, A.D.**  
Double-diffusive underwater ice formation [1989, p.92-94, rus] 45-736
- Krylov, G.V.**  
System analysis of gas transportation mainlines in western Siberia [1989, 300p., rus] 45-639
- Krymskiĭ, M.M.**  
Allowing for mechanical strength of ice deposits during calculation of overhead line wires [1989, p.29-39, eng] 45-2558
- Kryzhanovskii, I.I.**  
Forecasting the frost resistance of concrete based on local materials [1988, 83p., rus] 45-2306
- Krzewinski, T.G.**  
Use of rigid insulation below grade for roadways and parking areas [1991, p.428-437, eng] 45-2354
- Kubik, P.W.**  
CI-36 profile in Greenland ice from AD 1265 to 1865 [1989, p.585-591, eng] 45-1846
- Kubo, H.**  
Snow and ice detection by a dielectric pavement freezing-detector (DPF) [1990, p.319-337, eng] 45-3502  
Survey of measures against pavement rutting in cold regions [1990, p.341-369, eng] 45-3503
- Kuchera, A.V.**  
Ventilated passages for cooling frozen bearing ground [1990, p.32-33, rus] 45-1605
- Kuchina, V.A.**  
Large-scale atmospheric processes and medium-range forecasting of weather in the Arctic [1989, 253p., rus] 45-1573
- Kuchment, L.S.**  
Dynamic-stochastic models of rainfall and snowmelt runoff formation [1991, p.153-169, eng] 45-2990
- Kudlak, E.D.**  
Underground mining of frozen placer deposits in USSR [1989, p.241-244, eng] 45-352
- Kudoiarov, L.I.**  
Effect of changes in the geocryological conditions in the basin of reservoirs on functioning of northern hydroelectric stations [1990, p.55-60, eng] 45-854
- Kudria, P.P.**  
Improving borehole and blasthole drilling in frozen conglomerate [1990, p.58-61, rus] 45-2246
- Kudriashov, B.B.**  
Drilling exploratory wells with pneumatic drills [1990, 263p., rus] 45-634  
Drilling in the permafrost [1990, 318p., eng] 45-1854  
High-temperature penetrometer for boring ice and rocks by melting [1990, p.66-73, rus] 45-2488  
Soviet experience of deep drilling in Antarctic [1989, p.113-122, eng] 45-338
- Kuga, Y.**  
Millimeter-wave radar scattering from snow: 1. Radiative transfer model [1991, p.329-341, eng] 45-3044  
Millimeter-wave radar scattering from snow: 2. Comparison of theory with experimental observations [1991, p.343-351, eng] 45-3045
- Kuhle, M.**  
Ice marginal ramps and alluvial fans in semiarid mountains: convergence and difference [1990, p.55-68, eng] 45-1576
- Kuittinen, R.**  
Interpretation of sea ice using NOAA-AVHRR data [1990, 46p., eng] 45-3850
- Kuivinen, K.C.**  
Electromechanical ice core drilling systems: a discussion [1989, p.54-56, eng] 45-1456
- Kujala, P.**  
Observations of ship performance and the structure of fast ice channels in the northern Baltic Sea [1991, 35p., eng] 45-3448  
Results from in situ four point bending tests with Baltic Sea ice [1990, p.261-278, eng] 45-3582
- Kujawa, R.**  
Glacial flow indicators in air photographs [1990, p.71-86, eng] 45-2546  
Glacial indicator tracing [1990, p.252p., eng] 45-2541
- Kukolev, S.V.**  
Using the direct current transfer bridge R 3043 in geothermal measurement [1990, p.100-106, rus] 45-3041
- Kulagina, V.A.**  
Wear and tightness of moving seals [1990, p.614-623, eng] 45-164
- Kul'chitskiĭ, V.A.**  
Effect of frost heave deformations on airport pavement [1990, p.12-13, eng] 45-1014
- Kuleshov, I.U.V.**  
Forecasting long-term deformation of frozen saline soils by using time analogy methods [1990, p.73-83, rus] 45-2893
- Kuleshova, V.I.U.**  
Effect of salinity on the hydrophysical and thermophysical properties of soils [1990, p.24-33, rus] 45-2886
- Kullman, L.**  
Dynamics of altitudinal tree-limits in Sweden: a review [1990, p.103-116, eng] 45-308
- Kumagai, S.**  
Countermeasures against frost heave on national highways [1988, p.171-176, jpn] 45-2513  
Effect of freeze thaw action on wear-resistant asphalt pavements [1988, p.159-164, jpn] 45-2512  
Experiments to improve frost heaving test methods [1987, p.1-10, jpn] 45-923  
Selection of asphalt surface course mixture for pavements in cold areas: considerations from freezing and thawing tests [1988, p.24-31, jpn] 45-911
- Kumai, M.**  
Elemental composition, morphology and concentration of particles in firm and ice cores from DYE-3, Greenland [1990, p.1-18, eng] 45-194
- Kumar, M.K.**  
Effect of time and temperature on R-value of rigid polyurethane foam insulation manufactured with alternative blowing agents [1991, p.241-267, eng] 45-2582
- Kummerow, J.**  
Ammonium uptake by field-grown *Eriophorum vaginatum* roots under laboratory and simulated field conditions [1990, p.50-55, eng] 45-3767
- Kunakhovich, M.G.**  
Formation of the annual mass balance of a conic summit glacier [1989, p.163-169, rus] 45-1053
- Kunitaki, V.V.**  
Cryolithology of the lower course of the Lena River [1989, 162p., rus] 45-2424  
Indications of an ancient glaciation in the lower course of the Lena River [1987, p.99-113, rus] 45-579
- Kunkel, K.E.**  
Meeting the climate information needs of agribusinesses and others in the Midwest [1991, p.265-267, eng] 45-1916
- Kunst, P.A.J.C.**  
Surface cracking in asphalt layers [1990, 199p., eng] 45-3108
- Kuz, M.E.**  
Snowpack and the distribution of a major vegetation ecotone in the Sierra Nevada of California [1991, p.141-149, eng] 45-2226
- Kuo, E.Y.T.**  
Low-frequency acoustic wave-scattering phenomena under ice cover [1990, p.361-372, eng] 45-366
- Kuo, K.S.**  
Textural characteristics of cloud- and ice-covered surfaces in polar regions [1989, p.2773-2776, eng] 45-303
- Kurachev, V.M.**  
Soil cover of Siberia: formation characteristics, agricultural and ecological aspects of utilization [1990, p.143-151, rus] 45-2909
- Kurashige, K.**  
Practical methods of snow accretion forecast [1986, p.181-195, eng] 45-3712
- Kurbanov, E.M.**  
Determining loads from adhered ice on a support column system when measuring the water level [1987, p.76-80, rus] 45-1566
- Kurbatov, N.I.**  
Technology of pipeline construction on the Yamburg gas condensate field [1990, p.492-502, eng] 45-153
- Kurczynski, Z.**  
Yearly dynamics of the front zone of the Hansa Glacier (1987-1988) [1990, p.109-130, pol] 45-2581
- Kurdiyev, V.A.**  
Probabilistic concept of safe speeds for arctic shipping [1990, p.295-306, eng] 45-2739
- Kururst, P.J.**  
Engineering geology of nearshore areas off Richards Island, N.W.T.: a comparison of stable and actively eroding coastlines [1991, p.179-188, eng] 45-3270
- Kurita, I.**  
Tests on snowbreaks, windbreaks and obstacles to visibility: wind tunnel experiments on the Kaigan parking shelter at Toyotomi on National Highway 40 [1990, p.221-226, jpn] 45-752
- Kurita, M.**  
Precooling concrete using frozen sand [1990, p.60-65, eng] 45-2108  
Properties of concrete mixed with sand frozen by liquid nitrogen [1990, p.79-87, jpn] 45-874
- Kuriland, S.K.**  
Frost resistance of elastomers [1989, 176p., rus] 45-2204
- Kuroda, M.**  
Mechanical properties of snow avalanche [1986, p.432-438, eng] 45-3726
- Kuroiwa, D.**  
Studies on snow and ice: to improve power generation [1986, 524p., eng] 45-3701
- Kurtti, K.**  
Design of a modified Caterpillar Challenger tractor for antarctic service [1990, 13p. + figs., eng] 45-1976
- Kuskovskii, V.S.**  
Hydrogeological conditions for the development of backwater in the coastal zone of the Katun reservoir [1990, p.26-33, rus] 45-2866  
Hydrogeology and engineering geology of coastal zones of large reservoirs in Siberia [1990, p.5-10, rus] 45-2865  
Hydrogeology and engineering geology of Siberia [1990, 132p., rus] 45-2864
- Kusler, J.A.**  
Wetland creation and restoration: the status of the science [1990, 594p., eng] 45-1406
- Kutz, R.**  
Concurrent remote sensing of arctic sea ice from submarine and aircraft [1989, 20p., eng] 45-563
- Kutzbach, J.E.**  
Modified Köppen classification applied to model simulations of glacial and interglacial climates [1990, p.193-215, eng] 45-361
- Kuwahara, T.**  
Properties of concrete mixed with sand frozen by liquid nitrogen [1990, p.79-87, jpn] 45-874
- Kuzakov, V.O.**  
Effect of electrical treatment of the active layer on the mineralization of ground water [1989, p.123-126, rus] 45-2637
- Kuz'michenok, V.A.**  
Technology and capabilities of airborne topographic mapping of glacier fluctuations (in the example of the glaciation of the Akshyryk Range) [1989, p.80-87, rus] 45-1039
- Kuz'min, G.P.**  
Borehole hydraulic mining of frozen rock in Yakutia [1987, p.113-117, rus] 45-580  
Hydrochemical method of controlling the crystallization of water in closed voids [1990, p.92-95, rus] 45-1204
- Kuz'min, M.P.**  
Using natural cold in automated underground cold storage areas [1990, p.98-100, rus] 45-2715
- Kuz'min, V.A.**  
Manifestation of the nonlinearity of temperature-salinity-density ratio near the Pacific subarctic front [1989, p.58-61, rus] 45-737  
Method of distinguishing the Pacific subarctic front using the relation between temperature, salinity, and density [1988, p.60-62, rus] 45-876
- Kuznetsov, G.I.**  
Design and construction of ash dumps [1990, 249p., rus] 45-2574  
Frozen type filled ash dump [1990, p.77-83, rus] 45-2248
- Kuznetsov, N.M.**  
Effective areas of radiation of pressure ridges in fast ice in the 9.4 GHz frequency range at small grazing angles [1989, p.106-108, rus] 45-1497
- Kuznetsov, S.N.**  
Natural conditions in the formation of anthropogenic cryopegs in the Yakutsk region [1987, p.55-65, rus] 45-575
- Kuznetsova, L.P.**  
Experience in using the method of long-range forecasting of the spring runoff for estimating its possible variations in connection with climatic changes [1991, p.126-132, eng] 45-2438
- Kuznetsova, T.P.**  
Formation conditions of the ice-mineral complex of Ice Mountain [1989, 172p., rus] 45-1116
- Kvachev, V.I.**  
Some regularities in the occurrence of snow cover in the Amudaria River basin [1990, p.92-96, rus] 45-1742
- Kvenvolden, K.A.**  
Gas hydrates of the Arctic Ocean region [1990, p.539-549, eng] 45-1694
- Kvitrad, A.**  
Environmental conditions in the Southern Barents Sea [1991, p.125-130, eng] 45-3159  
Icebergs in the Norwegian Continental Shelf in 1880-1881 [1991, p.131-136, eng] 45-3160
- Kvon, I.A.D.**  
Using avalanche protection walls of lightweight construction for protecting sections of the Mezhdurechensk-Abakan Line from avalanches [1990, p.41-46, rus] 45-3009  
Using electric heating devices to protect railroad switches from snowdrifts [1990, p.31-36, rus] 45-3007
- Kvon, V.I.**  
Modeling of the ice growth and melting in a lake [1990, p.279-288, eng] 45-3583
- Kwok, K.C.S.**  
Wind tunnel simulation of antarctic snowdrifting [1989, 15p., eng] 45-816
- Kwok, R.**  
Automated ice motion tracking at the Alaska SAR facility [1989, p.608-611, eng] 45-241  
Ice classification algorithm development and verification for the Alaska SAR facility using aircraft imagery [1989, p.751-754, eng] 45-244  
Overview of the geophysical sea ice products generated at the Alaska SAR facility [1990, p.333-344, eng] 45-2742

- Kychkin, N.I.**  
Determination of roof bolting parameters for the space near the face in developing placer deposits with filling [1990, p.569-572, eng] 45-2932
- Kyle, P.R.**  
Geothermal resources of Antarctica [1990, p.117-123, eng] 45-2807
- Kyshtymov, A.I.**  
Pleistocene glaciations of the Cherskiy mountain system and their effects on the development of the river network [1989, p.102-112, rus] 45-2497
- Kytö, M.**  
Engine lubrication in cold start-up [1989, p.251-256, eng] 45-1238
- LaBaugh, J.W.**  
Chemical characteristics of water in northern prairie wetlands [1989, p.56-90, eng] 45-833
- Laboratornye issledovaniya razrusheniya l'da i ledoporodnykh monolitov rassolami**  
Laboratory investigations of the deterioration of ice and frozen rock monoliths by brines [1989, p.83-95, rus] 45-1830
- Lachenbruch, A.H.**  
Geothermal observations in the arctic region [1990, p.133-151, eng] 45-1691
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Environmental influences on mine detection [1990, 6p., eng] 45-933  
Portable thermal reference for winter field studies [1990, p.48-54, eng] 45-3769
- Lacroix, J.**  
Study of the cold wave phenomenon in Quebec as a natural catastrophe [1990, p.138-157, fre] 45-2754
- Ladanyi, B.**  
Cone penetrometer and pressuremeter tests in permafrost: the Fox Tunnel, Alaska [1989, 123p. + appends., eng] 45-2052  
Cone penetrometer tests in permafrost—the Fox Tunnel, Alaska [1989, p.75-82, eng] 45-334  
Pressuremeter stress relaxation testing in a permafrost tunnel [1991, p.213-224, eng] 45-3830  
Soil-pipe interaction during frost heaving around a buried chilled pipeline [1991, p.11-21, eng] 45-2318  
Thermal strain behaviour of clays cooled to cryogenic temperatures [1991, p.22-31, eng] 45-2319
- Ladon, D.**  
Heat transfer in a right-angled thermosyphon [1991, p.261-265, eng] 45-3178
- LaFarge-England, C.**  
Holocene soligenous fens on a high arctic fault block, northern Ellesmere Island (82 deg N), N.W.T., Canada [1991, p.80-98, eng] 45-2473
- Lafaille, J.**  
Dielectric measurements of snow liquid water content [1988, p.287-290, eng] 45-1356  
International classification for seasonal snow on the ground [1990, 23p., eng] 45-1174
- LaFleur, R.S.**  
Basis for ice formation design [1990, p.393-401, eng] 45-3195
- Laforte, J.L.**  
Comparison of three slide impact methods for measuring the size of water droplets [1988, p.263-267, eng] 45-1351  
Facility to evaluate performance of aircraft ground de/anti-icing fluids subjected to freezing rain [1990, p.161-171, eng] 45-498
- Laforte, M.A.**  
Thermal stresses development in pavements during winter-time [1990, p.149-179, eng] 45-3496
- Lafraimboise, J.**  
Mathematical model for predicting icebreaker performance [1990, p.177-192, eng] 45-2731
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Modeling acoustic propagation beneath ice using the finite element technique [1991, p.327-329, eng] 45-3043
- Lagoe, M.B.**  
Paleoenvironmental significance of foraminiferal biofacies in the glaciomarine Yakataga Formation, Middleton Island, Gulf of Alaska [1989, p.194-209, eng] 45-1183
- Lahav, M.**  
Ice nucleation by alcohols arranged in monolayers at the surface of water drops [1990, p.973-975, eng] 45-917
- Lahdenperä, P.**  
Finnish construction techniques in the cold climate. Part 8. Construction site technology [1990, 83p. + appends., fin] 45-3878
- Lai, A.**  
Anti-icing chitin coating system development [1990, 16p., eng] 45-821
- Laiho, J.**  
Studies on atmospheric icing in Finland [1988, p.338-343, eng] 45-1367
- Lahkhtama, V.I.**  
Investigations of space-time variations in meteorological visibility [1987, p.108-120, rus] 45-2599
- Laird, C.M.**  
Record of solar proton events in a firn core from Windless Bight [1990, p.92-94, eng] 45-1394
- Lait, L.R.**  
Comparison of the Southern Hemisphere springs of 1988 and 1987 [1989, p.71-89, eng] 45-2976
- Lake, R.A.**  
Physical environment [1990, p.20-58, eng] 45-2405
- Lakshman, G.**  
Wetlands sewage treatment system for the community of Teslin [1991, p.95-107, eng] 45-2325
- Lal, A.M.W.**  
Mathematical model for ice processes in river networks [1990, p.726-734, eng] 45-3623  
Mathematical model for river ice processes [1991, p.851-867, eng] 45-3382
- Lal, D.**  
On determining ice accumulation rates in the past 40,000 years using *in situ* cosmogenic C-14 [1990, p.1303-1306, eng] 45-994
- Lal, J.B.**  
Satellite mapping of alpine pastures in the Himalayas [1991, p.435-443, eng] 45-2222
- Lalumiere, L.A.**  
Radar monitoring of ice on the upper Niagara River [1991, p.406-415, eng] 45-2352
- Lamke, R.D.**  
Water resources data for Alaska, water year 1989 [1990, 224p., eng] 45-1148
- Lamparski, H.**  
Geological prospecting of rocks for deep-freezing shafts [1988, p.307-308, ger] 45-1475
- Lamson, C.**  
Challenge of arctic shipping: science, environmental assessment, and human values [1990, 282p., eng] 45-2404
- Landis, E.R.**  
Coal geology, coal quality, and coal resources in Permian rocks of the Beacon Supergroup, Transantarctic Mountains, Antarctica [1990, p.133-162, eng] 45-2809
- Landolt, J.C.**  
Cellular slime molds in soils of Alaskan tundra, U.S.A. [1991, p.104-107, eng] 45-2474
- Landsberger, S.**  
Trace metal and rare earth content of black precipitation events [1990, p.363-369, eng] 45-1899
- Landva, J.**  
Thermal strain behaviour of clays cooled to cryogenic temperatures [1991, p.22-31, eng] 45-2319
- Lang, H.**  
Sloping land with snow and ice [1989, p.146-162, eng] 45-2749
- Lang, M.A.**  
Antarctic sea ice: a habitat for the foraminifer *Neoglobobulimina pachyderma* [1991, p.182-189, eng] 45-3837  
Influence of environmental conditions on acoustical properties of sea ice [1990, p.1903-1912, eng] 45-838  
O-18 concentrations in sea ice of the Weddell Sea, Antarctica [1990, p.315-323, eng] 45-1542  
Properties of sea ice in the Weddell Sea, Antarctica [1990, p.289-299, eng] 45-3584  
Sea ice characteristics and the role of sediment inclusions in deep-sea deposition: Arctic-antarctic comparisons [1990, p.187-211, eng] 45-1268  
Sea ice thickness distribution in the northwestern Weddell Sea [1991, p.4821-4837, eng] 45-2690  
Spatial variability of sea-ice properties in the northwestern Weddell Sea [1991, p.10,603-10,615, eng] 45-3310
- Langhorne, P.J.**  
Acoustic emission generated by moving loads on sea ice: preliminary results [1990, p.337-342, eng] 45-1623
- Langille, P.**  
Long-term temperature monitoring program, 1988: Scotia-Fundy and Gulf of St. Lawrence [1989, 233p., eng] 45-1279  
Long-term temperature monitoring program, 1989: Scotia-Fundy and the Gulf of St. Lawrence [1990, 175p., eng] 45-1278
- Langseth, M.G.**  
Geothermal observations in the arctic region [1990, p.133-151, eng] 45-1691
- Langway, C.C., Jr.**  
Elemental composition, morphology and concentration of particles in firn and ice cores from DYE-3, Greenland [1990, p.1-18, eng] 45-194
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Use of wetlands to remove nickel and copper from mine drainage [1989, p.780-787, eng] 45-1895
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Characteristics of heavy and very heavy precipitation during the winter in Moscow and the Moscow district [1989, p.122-132, rus] 45-1849
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Exodynamic processes in the basins of the left tributaries of the Angara River [1990, p.106-111, rus] 45-2870
- LaPerriere, J.D.**  
Benthic algal biomass and productivity in high subarctic streams, Alaska [1989, p.63-75, eng] 45-2608
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Mapping of the risk of wet snow sticking on power lines over a period of 35 years [1988, p.24-29, eng] 45-1304  
Regional climato-economic study of 20 wet snow episodes over the period 1951-1987, with projection for the period 1988-2000 [1988, p.39-43, eng] 45-1307
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Thermodynamic simulation of wet snow accretion under wind-tunnel conditions [1988, p.180-185, eng] 45-1335
- Laplante, P.**  
Long-term compressive strength of silica-fume concrete [1990, p.164-170, eng] 45-2773
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Estimation of standard error of impedance-estimated frost resistance [1989, p.67-74, eng] 45-3251
- Laptev, M.N.**  
25th anniversary of the Laboratory on Avalanches and Mudflows of the Department of Geography of Moscow State University [1989, p.131-132, rus] 45-1048
- Large, W.G.**  
Mean annual cycle in global ocean wind stress [1990, p.1742-1760, eng] 45-1259
- Larins, T.B.**  
Conditions for the occurrence of a melting ice layer in glaciers [1990, p.40-44, rus] 45-1734  
Impact of climate on the temperature distribution of ice in the ice divide of the Austfonna (Nordaustlandet) [1989, p.185-190, rus] 45-1057
- Larionov, A.A.**  
Questions on the construction, design, and calculation of block ventilated conditions on permafrost [1990, p.47-58, rus] 45-1200
- Larouche, P.**  
Spring surface circulation patterns detected using remote sensing of drifting ice floes in Hudson Bay, Canada [1989, p.780-782, eng] 45-251
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Use of rigid insulation below grade for roadways and parking areas [1991, p.428-437, eng] 45-2354
- Larsen, R.**  
Impact of oceanic sources of biogenic sulphur on sulphate aerosol concentrations at Mawson, Antarctica [1991, p.221-223, eng] 45-2264
- Larsen, T.**  
Problems in management oriented studies of birds and mammals in European high Arctic [1975, p.II/109-II/117, eng] 45-3226
- Larson, R.E.**  
Vehicle emission characteristics under cold ambient conditions [1989, p.151-159, eng] 45-1228
- Lasch, W.**  
Simulation studies help predict oil impact in Alaska offshore areas [1990, p.41-44, eng] 45-3546
- Lashov, E.S.**  
Using a Kalman filter for calculating ice drift parameters [1989, p.99-103, rus] 45-1659
- Laskov, V.**  
Engineering analysis of ice/propeller interaction data [1986, 322p. + appends., eng] 45-188  
Engineering analysis of ice/propeller interaction data. Summary report [1986, 55p., eng] 45-186  
Measurement of ice/propeller interaction parameters—MV Robert LeMeur. Supplemental report [1986, 156p. + appends., eng] 45-189  
Measurement of ice/propeller interaction parameters—MV Robert LeMeur. Supplemental report: summary [1986, 22p., eng] 45-187  
Ship propulsion/ice interaction study; Robert LeMeur versus Jarvsarv comparison [1988, 123p., eng] 45-3454
- Lasygla, A.V.**  
Impulse induction sounding in the study of the geocryological conditions of the Apsat coal deposits [1989, p.126-135, rus] 45-2638
- Lethovick, V.J.**  
New hydrologic instrumentation in the U.S. Geological Survey [1991, p.739-747, eng] 45-2383
- Lee, M.**  
Model ice ridge forces on a downward breaking cone [1991, p.163-170, eng] 45-3165
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Bending and compression properties of young sea ice [1989, p.1292-1297, eng] 45-447  
Time-dependent effects on ridge initiation in sea ice leads [1989, p.1298-1303, eng] 45-448
- London, L.S.**  
Bacteriological tests from the constructed wetland of the Big Five Tunnel, Idaho Springs, Colorado [1989, p.550-557, eng] 45-1888  
Use of wetlands for treatment of environmental problems in mining: non-coal-mining applications [1989, p.221-231, eng] 45-1879
- Luder, D.**  
Gas release from comets [1991, p.411-413, eng] 45-2941
- Laukkanen, K.**  
Finnish cold climate construction. Part 3. Traffic and arteries [1990, 58p. + appends., fin] 45-3875
- Laumann, T.**  
Mass balance measurements on Norwegian glaciers in 1988 and 1989 [1991, 78p., nor] 45-3856
- Laurikko, J.K.**  
Automotive exhaust emissions at low ambient temperature [1989, p.35-46, eng] 45-1212

- Lauriol, B.**  
Cryoplanation terraces, northern Yukon [1990, p.347-351, eng] 45-1424  
Karst drainage in a permafrost setting: the case of Akpatok Island, Northwest Territories, Canada [1990, p.129-144, eng] 45-1294  
Residual snow patch mapping in arctic Canada using LANDSAT TM images [1989, p.562-565, eng] 45-240
- Lauritzen, E.K.**  
Satellite transmission of vibration records of blasting operations in Greenland [1990, p.225-234, eng] 45-136
- Lauritzen, S.E.**  
Groundwater in cold climates: interaction between glacier and karst aquifers [1990, p.139-146, eng] 45-3790
- Laursen, G.A.**  
Cellular slime molds in soils of Alaskan tundra, U.S.A. [1991, p.104-107, eng] 45-2474
- Lavigne, P.**  
Experimental study of adfreeze heaving of augered caisson footings [1991, p.152-163, eng] 45-2330
- Lavrushin, I.U.A.**  
Structure and material composition of deposits of the glacial paleoshelf in the Bol'shezemel'skaya tundra [1989, p.3-51, rus] 45-2445
- Lawford, R.G.**  
Climate change and water supply and demand in western Canada [1990, p.193-200, eng] 45-3298  
Climatic variability and the hydrological cycle in the Canadian North: knowns and unknowns [1988, p.143-162, eng] 45-520  
Opportunities for remote sensing initiatives within a Canadian GEWEX program [1990, p.365-372, eng] 45-3814
- Laxon, S.**  
Comparison of Geosat altimeter and synthetic aperture radar measurements over east Greenland pack ice [1991, p.569-583, eng] 45-2224  
Seasonal and inter-annual variations in antarctic sea ice extent as mapped by radar altimetry [1990, p.1553-1556, eng] 45-1979
- Laybourn, D.R.**  
Thermal energy storage with encapsulated ice [1988, p.1971-1988, eng] 45-2563
- Lazarev, G.E.**  
Reconstruction of the bedrock of Antarctica after deglaciation [1989, p.127-131, rus] 45-1047
- Le Treut, H.**  
Ice-core record: climate sensitivity and future greenhouse warming [1990, p.139-145, eng] 45-377
- Lea, P.D.**  
Pleistocene periglacial eolian deposits in southwestern Alaska: sedimentary facies and depositional processes [1990, p.582-591, eng] 45-1412
- Leaf, C.F.**  
Estimated runoff from man-made snow [1990, p.519-526, eng] 45-3698
- Leathers, D.**  
December to remember [1990, p.329-332, eng] 45-2049
- Leaveley, G.H.**  
Application of remotely sensed data in a distributed-parameter watershed model [1990, p.47-68, eng] 45-3799
- Lebedenko, I.U.P.**  
Chemogenic heaving of frozen rocks upon their interaction with aqueous solutions [1989, p.57-66, eng] 45-860  
Cryogenic migration of ions and bound moisture in ice-saturated disperse rocks [1989, p.1-9, eng] 45-645
- Lebedev, G.A.**  
Seasonal variability of physical-mechanical characteristics of sea ice [1991, p.53-57, eng] 45-3013
- Lebedev, I.U.M.**  
Development of ice periphyton of the Amur River under different light conditions [1988, p.1546-1551, rus] 45-3369
- Lebedeva, I.M.**  
Interrelation of solar radiation resources and reflectivity of glaciers as a factor in the stability of glacier systems [1990, p.64-75, rus] 45-1738
- Lebedeva, M.N.**  
Microorganisms as indicators of hydrological phenomena in seas and oceans [1958, p.397-413, rus] 45-3431  
Quantitative distribution of heterotrophic microorganisms in the Indian Ocean and adjacent antarctic seas [1958, p.557-560, rus] 45-3355
- Lebedeva, T.N.**  
Chemical composition of suprapermfrost ground water in the active layer in Yakut ASSR [1989, p.22-33, rus] 45-2626
- Leberl, P.W.**  
Radargrammetric image processing [1990, 595p. (pertinent p.499-525), eng] 45-2601
- Lecas, T.**  
Flat crystal trajectories around three dimensional obstacle and two dimensional airfoil [1988, p.197-201, eng] 45-1338
- Lecoste, R.**  
HYDROTEL, a hydrological model designed to make use of remotely sensed and GIS data [1990, p.177-185, eng] 45-3805  
Preliminary investigations on monitoring the snow water equivalent using synthetic aperture radar [1990, p.73-86, eng] 45-2188
- Utilization of SAR data in the monitoring of snowpacks and wetlands [1990, p.233-258, eng] 45-3807
- Ledley, T.S.**  
Climatic response to meridional sea-ice transport [1991, p.147-163, eng] 45-2105
- LeDrew, E.F.**  
Mapping surface albedo in the east slope of the Colorado Front Range, U.S.A., with Landsat Thematic Mapper [1991, p.213-223, eng] 45-3486  
Multivariate analysis of texture statistics for SAR sea ice discrimination [1989, p.759-762, eng] 45-246  
SAR sea ice discrimination using texture statistics: a multivariate approach [1991, p.385-395, eng] 45-2947  
Utilization of local texture transforms for adaptive filtering of SAR sea ice imagery [1989, p.777-779, eng] 45-250
- Lee, B.Y.**  
Monthly meteorological data at King Sejong Station (June-Dec. 1990) [1990, p.75, eng] 45-3204
- Lee, D.-I.**  
Chemical compositions of aerosol particles and snowfalls in Alta, northern Norway [1989, p.169-178, eng] 45-829
- Lee, H.-C.**  
Design criteria for oceanographic survey ships operated in the Marginal Ice Zone (MIZ) [1989, p.69-98, eng] 45-533
- Lee, K.W.**  
Evaluation of effects of deicing additives on properties of asphalt mixtures [1989, p.41-53, eng] 45-1153
- Lee, R.L., Jr.**  
Green icebergs and remote sensing [1990, p.1862-1874, eng] 45-1171
- Lee, R.W.**  
Effect of grain size on the tensile strength of ice at two strain-rates [1985, 114p., eng] 45-492
- Lee, S.L.**  
Enthalpy formulation for phase change problems with a large thermal diffusivity jump across the interface [1991, p.1491-1502, eng] 45-3023
- Lefebvre, E.**  
Telemetering and remote control circuits for a 4000 m thermal drill [1989, p.72-85, eng] 45-1460
- Legendre, L.**  
Chlorophyll and photosynthetic efficiency of size-fractionated sea-ice microalgae (Hudson Bay, Canadian Arctic) [1987, p.199-203, eng] 45-3134  
Light and nutrient limitation of sea-ice microalgae (Hudson Bay, Canadian Arctic) [1990, p.220-232, eng] 45-3348  
Nitrogenous nutrition of sea-ice microalgae [1989, p.377-383, eng] 45-3285  
Photosynthetic and pigment responses of sea-ice microalgae to changes in light intensity and quality [1986, p.211-226, eng] 45-3242  
Physical control of phytoplankton production under sea ice (Manitounuk Sound, Hudson Bay) [1981, p.1385-1392, eng] 45-3126  
Physico-chemical and biological oceanography of Hudson Bay [1986, p.265-291, eng] 45-3129  
Response of a community of ice diatoms to a salinity gradient (Hudson Bay) [1983, p.191-202, fre] 45-3432  
Responses of sea-ice microalgae to climatic and fortnightly tidal energy inputs (Manitounuk Sound, Hudson Bay) [1985, p.999-1006, eng] 45-3243
- Legen'kov, A.P.**  
Push and tidal deformation of drifting ice [1988, 104p., rus] 45-1861
- Leggett, D.C.**  
Comparison of headspace gas chromatography with EPA SW-846 Method 8240 for determination of volatile organic compounds in soil [1991, 7p., eng] 45-2826  
Complex formation between dimethyl methylphosphonate and hexafluoroisopropanol [1990, 3p., eng] 45-191  
Environmental influences on mine detection [1990, 6p., eng] 45-933  
Simultaneous interaction with ice and agent persistence estimation for cold regions [1988, p.237-247, eng] 45-3741  
Solvent-water partitioning and extraction of phosphonates [1990, p.889-895, eng] 45-3740
- Legrand, M.**  
Ice-core record of oceanic emissions of dimethylsulphide during the last climate cycle [1991, p.144-146, eng] 45-2019
- Lehmann, E.W.**  
Evolution of diesel fuel cold flow—the next frontier [1989, p.223-237, eng] 45-1236
- Lehmann, H.**  
Morphogenesis of the brown alga *Desmarestia antarctica* cultivated under seasonally fluctuating antarctic daylengths [1991, p.65-78, eng] 45-3553
- Lehre, A.K.**  
Gully development [1990, p.139-155, eng] 45-2592
- Lehtonen, J.**  
Improvement of icing on main road 21 at Haukijoki, Muotkataska, Lammaskoski, and Pitkäranta; construction and monitoring in 1986-1988 [1990, 60p., fin] 45-3873
- Lehtonen, P.**  
Studies on atmospheric icing in Finland [1988, p.338-343, eng] 45-1367
- Leibman, M.O.**  
Geocryological subdivision map of the Baykal-Amur region [1987, p.25-38, rus] 45-572
- Leidersdorf, C.B.**  
Arctic slope protection methods [1991, p.1687-1701, eng] 45-3256  
Recent performance of linked concrete mat armor under wave and ice impact [1991, p.2768-2781, eng] 45-3257
- Leier, T.E.**  
Data acquisition system requirements for cold weather testing [1989, p.139-143, eng] 45-1226  
Heater/defroster testing in the real world [1989, p.405-411, eng] 45-1250
- Leighton, H.G.**  
Scene identification and its effect on cloud radiative forcing in the Arctic [1991, p.9175-9188, eng] 45-3469
- Leiserowitz, L.**  
Ice nucleation by alcohols arranged in monolayers at the surface of water drops [1990, p.973-975, eng] 45-917
- LeMasurier, W.E.**  
Volcanoes of the antarctic plate and southern oceans [1990, 487p., eng] 45-2926
- Lemieux, G.H.**  
Aerial anemography applied to the mapping of nocturnal circulation of cold air in a blueberry field [1990, p.1/34-1/42, fre] 45-1781  
Implementation of anemographic methods in the region of Lioran, France [1990, p.1/27-1/33, fre] 45-1780  
Winter problems associated with the existence of active eolian dunes in the blueberry fields of Quebec [1990, p.1/2-1/11, fre] 45-1177
- Lemmens, M.**  
Influence of hydroxyl-bearing minerals on the isotopic composition of ice from the basal zone of an ice sheet [1990, p.244-246, eng] 45-528
- Lemon, E.C.G.**  
Some aspects of iron cycling in maritime antarctic lakes [1989, p.149-164, eng] 45-2613
- Lenart, W.**  
Structural and measurement problems of arctic atmospheric water balance [1990, p.37-45, eng] 45-3780
- Lennox, W.C.**  
Estimation of the thickness of undeformed first year ice using radar backscatter [1989, p.2366-2369, eng] 45-295
- Lensa, M.**  
FINNARP 89 sea ice field report [1990, 26p., eng] 45-3111  
Fractality of sea ice cover [1990, p.300-313, eng] 45-3585  
Shear flow of sea ice in the marginal ice zone with collision rheology [1990, p.57-74, eng] 45-1679
- Leonardi, E.**  
Numerical study of three-dimensional natural convection during freezing of water [1990, p.899-914, eng] 45-2176
- Leonov, P.V.**  
Frost protection on the Baykal-Amur mainline [1991, p.6-7, rus] 45-2951
- Leont'ev, E.B.**  
Operations at Bellingshausen Station in 1986 of the regional center for hydrometeorological information distribution to ships [1990, p.32-36, rus] 45-3078
- Lepage, S.**  
Variation of upper layer dynamics during breakup of the seasonal ice cover in Hudson Bay [1991, p.12,711-12,724, eng] 45-3558
- Lepinskikh, G.V.**  
Strength of frozen saline soils in the Yamal Peninsula [1990, p.115-120, rus] 45-2899
- Leporski, O.R.**  
Role of freezing in comminution of primary minerals of podzolic soils [1991, p.107-111, eng] 45-3816
- Leppäjärvä, R.**  
Hydrological yearbook 1984-1986 [1990, 235p., eng] 45-2845
- Leppäranta, M.**  
Dynamic coupling of sea ice and water for an ice field with free boundaries [1990, p.482-495, eng] 45-78  
Experiments on numerical sea ice forecasting in the Bohai Sea [1990, p.173-186, eng] 45-3675  
Helicopterborne remote sensing of antarctic sea ice using a laser profiler, synchronized video and 70 mm camera during FINNARP-89 [1990, p.313-325, eng] 45-3685  
Observations of ship performance and the structure of fast ice channels in the northern Baltic Sea [1991, 35p., eng] 45-3448  
Occurrence and size of ice ridges in the Baltic Sea [1990, p.314-323, eng] 45-3586  
Shear flow of sea ice in the marginal ice zone with collision rheology [1990, p.57-74, eng] 45-1679
- Lepré, L.**  
Organic compounds in antarctic matrices: sea water, particulate, pack and sediments [1990, p.63-70, eng] 45-3198
- Leppäri, C.**  
Early Tertiary paleostress history and tectonic development of the Forlandsundet Basin, Svalbard, Norway [1990, 16p., eng] 45-3882

- Lerner, S.I.**  
Method of computer mapping the exposure and slope of an area [1990, p.81-84, rus] 45-1108
- Lestrangan, R.**  
Visco-elasticity and the compressive failure of polycrystalline ice [1991, p.494-503, eng] 45-2361
- Letavernier, Y.**  
Dumont d'Urville aerodrome, Terre Adélie, Antarctica [1990, p.191-213, eng] 45-501
- Letreguilly, A.**  
Greenland ice sheet and greenhouse warming [1991, p.399-412, eng] 45-3291
- Leychenko, O.V.**  
Maximum advance of the Scandinavian ice sheet onto the shelf of the Barents Sea in Valday time [1991, p.70-73, eng] 45-2478
- Levanok, A.M.**  
Vertical fine structure of temperature profile in the subarctic front zone (Megapolygon) [1991, p.468-474, rus] 45-2935
- Lever, J.H.**  
Determination of the fluid-elastic stability threshold in the presence of turbulence: a theoretical study [1989, p.407-419, eng] 45-968  
Effectiveness of deicing chemicals in reducing ice adhesion to nonskid surfaces [1989, p.297-307, eng] 45-543  
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Influence of shape on iceberg wave-induced velocity statistics [1990, p.263-269, eng] 45-716  
Measuring the effectiveness of deicing fluids for reducing ice adhesion to rough surfaces [1991, p.221-227, eng] 45-3173  
Model study of the wave-driven impact of bergy bits with a semi-submersible platform [1990, p.313-322, eng] 45-998  
Two-dimensional numerical modelling of large motions of floating bodies in waves [1989, p.257-277, eng] 45-967
- Levine, D.A.**  
Creation and restoration of riparian wetlands in the agricultural Midwest [1990, p.327-350, eng] 45-1410  
Regional analysis of fringe wetlands in the Midwest: creation and restoration [1990, p.299-325, eng] 45-1409
- Levine, E.R.**  
Morphology of a multi-year ice ridge in the High Arctic [1989, p.1123-1128, eng] 45-901
- Levit, B.I.U.**  
Methodological approach in evaluating the national economic effectiveness of extending navigation in the arctic [1989, 70p., rus] 45-1714
- Lewis, C.F.M.**  
Character and distribution of sea-ice and iceberg scours [1990, p.57-101, eng] 45-1946
- Lewis H. Tutthill International Symposium on Concrete and Concrete Construction, Seattle, Nov. 9-13, 1987**  
[Proceedings] [1987, 350p., eng] 45-1818
- Lewis, J.E.**  
Occurrence and size of ice ridges in the Baltic Sea [1990, p.314-323, eng] 45-3586
- Lewis, J.K.**  
Sea-ice kinematics as determined by remotely-sensed ice drift: seasal space and time scales [1989, p.1113-1121, eng] 45-900
- Lewis, J.S.**  
Rheological properties of ammonia-water liquids and crystal-liquid slurries: planetological applications [1991, p.93-112, eng] 45-2288
- Lewis, M.R.**  
Small volume, short-incubation-time method for measurement of photosynthesis as a function of incident irradiance [1983, p.99-102, eng] 45-3248
- Lewis, S.B.**  
Cold: an operational hazard [1989, p.217-221, eng] 45-539
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Collection of intact cores from a rocky desert and a glacial till soil [1990, p.938-940, eng] 45-225
- Lewkowicz, A.G.**  
Hydrology of a perennial snowbank in the continuous permafrost zone, Melville Island, Canada [1990, p.13-21, eng] 45-1186  
Retrospective thaw slumps [1990, p.273-276, eng] 45-631  
Surface energy balance of a perennial snowbank, Melville Island, Northwest Territories, Canada [1990, p.290-301, eng] 45-891
- Lewtas, K.**  
Evolution of diesel fuel cold flow—the next frontier [1989, p.223-237, eng] 45-1236
- Leyendekkers, J.V.**  
Volume and entropy changes of water in electrolyte solutions below 0 deg C [1990, p.2231-2236, eng] 45-2260
- Li, D.Q.**  
Some aspects of mining in high mountain area above snow line in China [1989, p.217-225, eng] 45-349
- Li, F.C.**  
Analysis of ice island dynamics [1990, p.241-256, eng] 45-2735
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- Li, G.**  
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Repeated compression-annealing experiments for the ice from Antarctica [1988, p.141-152, chj] 45-43
- Li, H.**  
Chemical analysis of precipitation at the Great Wall Station during April through November 1985 [1989, p.126-129, chj] 45-686
- Li, H.S.**  
Experimental study of ice expanding pressure [1991, p.187-190, eng] 45-3168
- Li, H.Z.**  
Chemical composition of ice, snow and rain at the Great Wall Station in summer 1985 [1989, p.107-112, chj] 45-685
- Li, J.**  
Physical characteristics of the snow and ice cover of Law Dome, East Antarctica [1989, p.8-22, eng] 45-1004  
Repeated compression-annealing experiments for the ice from Antarctica [1988, p.141-152, chj] 45-43  
Study of the structure of ice core from BHQ borehole on Law Dome, Antarctica [1988, p.119-131, chj] 45-41
- Li, J.-C.**  
Inelastic incoherent neutron scattering study of ice II, IX, V, and VI—in the range from 2 to 140 meV [1991, p.6770-6775, eng] 45-2775
- Li, N.J.**  
Glacier meltwater runoff on the south slope of the Bogeda Mt.—taking the Heigou as an example [1990, p.71-82, chj] 45-464  
Researches of glacier lake outburst floods of the Yarkant River in Xinjiang [1990, p.1014-1024, eng] 45-2178
- Li, S.J.**  
Evolution of Quaternary glaciers and environmental change in the West Kunlun Mountains, Western China [1990, p.61-72, eng] 45-199  
Last glaciation and maximum glaciation in Qinghai-Xizang Plateau: a controversy to M. Kuhle ice sheet hypothesis [1990, p.1-16, chj] 45-458
- Li, Y.**  
Characteristics of seasonal frost heaving mounds at the head of Urumqi River, Tianshan [1990, p.55-62, chj] 45-462
- Li, Z.J.**  
Experimental creep behaviors of the sea ice in a harbour of Liaodong Gulf [1991, p.83-86, eng] 45-3152
- Li, Z.Q.**  
Scene identification and its effect on cloud radiative forcing in the Arctic [1991, p.9175-9188, eng] 45-3469
- Liakatas, A.**  
Analysis and prognosis of low temperatures adverse to plants using Markov chains [1990, p.381-384, eng] 45-3049
- Lialin, G.N.**  
Identification of geothermal anomalies by snow-cover temperature survey [1989, p.53-66, eng] 45-1077
- Liang, H.S.**  
Integrated computer model to estimate moisture and temperature effects beneath pavements [1990, p.259-269, eng] 45-3750
- Liang, Z.T.**  
Causation and characteristics of regular transverse cracks of asphalt highways in northern China [1990, p.126-135, eng] 45-127
- Liapin, V.E.**  
Regulation of the temperature regime of lower pools of high-head hydro developments [1990, p.329-335, eng] 45-2165
- Liberman, I.A.**  
Cost estimation in construction; for northern regions. Handbook [1990, 224p., rus] 45-1866
- Lichtenfels, F.**  
Ultrasonic techniques for aircraft ice accretion measurement [1990, p.43-53, eng] 45-600
- Lied, K.**  
International classification for seasonal snow on the ground [1990, 23p., eng] 45-1174
- Leser, K.**  
Vernal atmospheric mixing in the Antarctic [1991, p.494-507, eng] 45-2842
- Lighthart, L.P.**  
Cross-polarized radar reflections from wet snow and ice droplets at weather radar wavelengths [1990, p.1843-1847, eng] 45-1016  
Effective permittivity of and scattering from wet snow and ice droplets at weather radar wavelengths [1990, p.1317-1325, eng] 45-655  
Modelling of particle distribution in the melting layer [1990, p.389-395, eng] 45-1427
- Likhachev, A.V.**  
Formalization of ice data for computer processing [1990, p.54-59, rus] 45-2436
- Liljeblom, M.**  
Lithology and transport distance of glacioluvial material [1990, p.151-164, eng] 45-2550
- Lin, C.A.**  
Role of the oceans in climatic variability and climatic change [1990, p.352-369, eng] 45-1425  
Strongly temperature dependent microphysical processes and winter storms [1991, p.231-234, eng] 45-1937
- Lin, D.N.C.**  
Coagulation of particles in saturn's rings: measurements of the cohesive force of water frost [1991, p.113-121, eng] 45-2289
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Time, temperature, and relative humidity in deicing of highways using sodium chloride or magnesium chloride with a metal corrosion inhibitor [1989, p.9-17, eng] 45-809
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Thermal stresses induced by water solidification in a cylindrical tube [1990, p.1079-1082, eng] 45-1390
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Morphodynamics of tidal inlet systems in Maine [1989, p.67-96, eng] 45-2059
- Lind, R.J.**  
Comparison of radiation budgets in the Fram Strait summer marginal ice zone [1991, p.218-235, eng] 45-2106
- Lindow, S.E.**  
Use of genetically altered bacteria to achieve plant frost control [1990, p.85-110, eng] 45-1980
- Lindström, C.A.**  
Numerical simulation of ship manoeuvring motion in level ice [1990, p.198-208, eng] 45-134
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Design of sub-arctic type winter tyres [1989, p.53-60, eng] 45-1214
- Lindström, M.J.**  
Freezing point depression of dilute aqueous sodium chloride solutions [1991, p.172-176, eng] 45-3403
- Lindwall, O.**  
Field testing in cold climate—a decade of experience [1989, p.133-138, eng] 45-1225
- Lindzen, R.S.**  
Some coolness concerning global warming [1990, p.288-299, eng] 45-1986
- Lingle, C.S.**  
Flow band model of the Ross Ice Shelf, Antarctica: response to CO<sub>2</sub>-induced climatic warming [1991, p.6849-6871, eng] 45-2504
- Lina, H.F.**  
Influence of the atmosphere [1990, p.11-53, eng] 45-2144
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Ice concentrations affecting navigation to Scoresby Sund in East Greenland [1990, p.245-256, eng] 45-138  
Ice concentrations on the north east Greenland shelf [1990, p.272-281, eng] 45-140  
Long term ice forecasting potential in East Greenland waters [1990, p.300-309, eng] 45-142
- Lisa, C.P.**  
Conceptual model for vertical frazil distribution in turbulent flows [1991, p.336-347, eng] 45-2345
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Infrared transmission through cirrus clouds: a radiative model for target detection [1990, p.1886-1896, eng] 45-3366
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Correction of air-content measurements in polar ice for the effect of cut bubbles at the surface of the sample [1990, p.299-303, eng] 45-1540  
Results of ice core investigations on the slope of the antarctic ice sheet [1989, p.108-116, rus] 45-1044
- List, L.**  
Comments on "Physics of supercooling of thin water skins covering gyrating hailstones" [1991, p.217-220, eng] 45-1805
- List, R.**  
Physics of supercooling of thin water skins covering gyrating hailstones [1990, p.1919-1925, eng] 45-1804
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Ice prediction systems prove their worth in winter cost savings [1990, p.19-20, eng] 45-852
- Liston, G.E.**  
Snow hydrology of a headwater arctic basin. 1. Physical measurements and process studies [1991, p.1099-1109, eng] 45-3550
- Liston, N.C.**  
In search of library excellence in cold regions research [1990, p.1066-1069, eng] 45-2580
- Litchfield, D.K.**  
Constructed wetlands for wastewater treatment at Amoco Oil Company's Mandan, North Dakota refinery [1989, p.233-237, eng] 45-1880
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Projected ecosystem consequences arising from the discharge of mine-tailing to the sea [1975, p.11/99-II/107, eng] 45-3225
- Litvin, A.**  
Durability of dry-mix shotcrete [1989, p.47-50, eng] 45-2110
- Litvin, N.N.**  
Results of testing the method of forecasting the amount of winter precipitation using data from meteorological satellites and radar [1989, p.132-138, rus] 45-1850

- Litvin, V.M.**  
Evaluating the intensity of exogenous geological processes in areas affected by the Bratsk reservoir (1990, p.99-106, rus) 45-2869
- Litvinenko, V.S.**  
Drilling of ice and rock by means of melting (1989, p.127-131, eng) 45-340  
High-temperature penetrometer for boring ice and rocks by melting (1990, p.66-73, rus) 45-2488  
Investigation of ice and rock drilling by melting (1989, p.160-163, eng) 45-1469
- Liu, A.K.**  
Observation of wave refraction at an ice edge by synthetic aperture radar (1991, p.4803-4808, eng) 45-2688  
Wave evolution in the marginal ice zone: model predictions and comparisons with on-site and remote data (1989, p.1520-1523, eng) 45-273  
Wave propagation in the marginal ice zone: model predictions and comparisons with buoy and synthetic aperture radar data (1991, p.4605-4621, eng) 45-2674
- Liu, C.**  
Measurement of ice thickness on the Nelson Island ice sheet (1989, p.28-32, eng) 45-1005  
Stratigraphic studies of the snow and the process of the ice formation on Nelson Ice Cap, Antarctica (1990, p.13-21, chij) 45-2169
- Liu, F.P.**  
Examination of dislocations in ice. Final report (1991, 8p., eng) 45-2141
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Antarctic periglacial environment and the formation mechanism of "sorted circles" in the Fildes Peninsula (1989, p.82-90, eng) 45-1011  
Coastal phenomena around Fildes Peninsula of King George Island, South Shetland Islands, Antarctica (1990, p.18-26, chij) 45-2270
- Liu, G.J.**  
Atlas of river ice in China (1990, 141p., eng) 45-1264
- Liu, G.L.**  
Some aspects of mining in high mountain area above snow line in China (1989, p.217-225, eng) 45-349
- Liu, L.Z.**  
Some aspects of mining in high mountain area above snow line in China (1989, p.217-225, eng) 45-349
- Liu, Q.Z.**  
Method of thermodynamic numerical sea ice forecast in the Bohai Sea (1990, p.143-152, eng) 45-3572
- Liu, X.S.**  
Method of thermodynamic numerical sea ice forecast in the Bohai Sea (1990, p.143-152, eng) 45-3572
- Liu, Y.**  
Analysis of trace elements in BHQ ice core of Law Dome, Antarctica (1988, p.164-172, chij) 45-45
- Liu, Z.C.**  
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Freezing point of load-bearing moist soil and its determination (1990, 493-497, eng) 45-593
- Liu, Z.X.**  
Data base of glacier inventory (1990, p.167-174, chij) 45-457  
Preliminary studies on the temperature in the surface layer of Guozha Glacier and Chongce Ice Cap in the West Kunlun Mountains, China (1990, p.87-91, eng) 45-201
- Liljebom, B.P.**  
Erosion processes in the tundra zone of the European USSR (1990, p.106-111, rus) 45-803
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Characteristics of calculating ice-pressure resistant hydraulic structures with cyclically varying ice loads (1987, p.102-107, rus) 45-1570
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Evaluating the thermal effect of surface water on permafrost in arctic regions (1989, p.66-73, rus) 45-2630  
Origin and development of some lakes in the Anadyr Plain (1987, p.89-99, rus) 45-578
- Linhkonen, S.**  
FE-modelling of ice failure load during ship bow indentation into multi-year ice (1991, 40p. + append., eng) 45-2691
- Lively, R.R.**  
Current meter, meteorological, and sea level observations for Browns Bank, Nova Scotia, Apr. 1984 to May 1985 (1989, 304p., eng) 45-1282
- Livingstone, C.E.**  
Combined active/passive microwave classification of sea ice (1989, p.376-380, eng) 45-235  
LIMEX'89: active/passive microwave signatures of Newfoundland pack ice (1989, p.1524-1527, eng) 45-274  
Mesoscale ocean feature study using synthetic aperture radar imagery in the Labrador Ice Margin Experiment: 1989 (1991, p.10,593-10,602, eng) 45-3309  
Springtime C-band SAR backscatter signatures of Labrador Sea marginal ice: measurements versus modeling predictions (1991, p.29-41, eng) 45-1725
- Livshits, V.N.**  
Methodological approach in evaluating the national economic effectiveness of extending navigation in the arctic (1989, 70p., rus) 45-1714
- Lizotte, M.P.**  
Comparison of the irradiance response of photosynthesis and nitrogen uptake by sea ice microalgae (1991, p.201-210, eng) 45-2669  
Photosynthesis-irradiance relationships in microalgae associated with antarctic pack ice: evidence for in situ activity (1991, p.175-184, eng) 45-3015  
Rates of photoadaptation in sea ice diatoms from McMurdo Sound, Antarctica (1991, p.367-373, eng) 45-3347
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Snow accretion in Catalonia: a climatological study (1988, p.277-281, eng) 45-1354
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Formation of temperature anomalies and the development of atmospheric ice in the Ural caves in carbonate deposits (1990, p.25-28, rus) 45-2699
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Geocryological forecasting during construction of a roadbed (1990, p.7-9, rus) 45-1604
- Lobyshev, V.I.**  
Fractionating of O-18 in the snow-ice cover of the central Arctic Basin (1985, p.237-241, rus) 45-3241
- Locat, J.**  
Dynamics of granular motion (1990, p.2/42-2/48, fre) 45-1790
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Experiments on the growth of spongy ice near a stagnant point (1990, p.143-150, eng) 45-55  
Growth and decay of ice (1990, 434p., eng) 45-3069  
Heat transfer in a right-angled thermosyphon (1991, p.261-265, eng) 45-3178  
Numerical study of the right angled thermosyphon (1991, p.113-117, eng) 45-3157  
Spongy saline ice formation in the vicinity of a stagnation point (1990, p.999-1009, eng) 45-3648
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Major element chemistry, delta 2H, delta 18O and Sr-87/Sr-86 in a snow profile across central Scandinavia (1990, p.2601-2608, eng) 45-955
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Electrohydraulic and electrochemical phenomena in the process of an icebreaker's hull contact with ice (1990, p.531-541, eng) 45-3604
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Selective transport phenomena at the air-water interface in coastal antarctic surface water: time variability (1990, p.95-102, eng) 45-3200
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Converting digital passive microwave radiances to kelvin units of brightness temperatures (1990, 16p., eng) 45-932
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Synthetic automotive lubricants for superior low-temperature operation (1989, p.421-437, eng) 45-1252
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Effects of climate change on discharges and snow cover in Finland (1991, p.109-121, eng) 45-2989
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Statewide cooperative snow survey for Maine (1990, p.225-230, eng) 45-2202
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Stability and variability of the maximum water equivalent of snow cover in the altitudinal-landscape zones of the southern slope of the Great Caucasus (1989, p.38-44, rus) 45-1032
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Characteristics of air coolers with varying spaced finning during hoarfrost formation (1989, p.29-32, rus) 45-802
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Types of formation regimes of suprapermfrost ground water (1989, p.5-12, rus) 45-2624
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Stochastic simulation of climate change impacts on ice road operations, MacKenzie River, Northwest Territories (1990, p.259-264, eng) 45-3300
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Investigations of a winter mountain storm in Utah. Part 3: single-Doppler radar measurements of turbulence (1991, p.1306-1318, eng) 45-3373  
Long range forecasting of ice conditions on non-arctic seas in the USSR, winter 1990/91  
Long range forecasting of ice conditions on non-arctic seas in the USSR, winter 1990/91 (1990, 9p., rus) 45-2309
- Lönne, O.J.**  
Diver-operated electric suction sampler for sympagic (= under-ice) (1988, p.135-136, eng) 45-3340  
Marine biological studies in the Weddell Sea and north of Dronning Maud Land (1990, p.131-138, eng) 45-2838  
Size, age and diet of polar cod, *Boreogadus saida* (Lepechin 1773), in ice covered waters (1989, p.187-191, eng) 45-3317
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Meeting the climate information needs of agribusinesses and others in the Midwest (1991, p.265-267, eng) 45-1916
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Laboratory investigations of mixing processes under simulated ice cover (1990, p.324-336, eng) 45-3587
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Wetlands sewage treatment system for the community of Teslin (1991, p.95-107, eng) 45-2325
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400 years isotope record of the Antarctic Peninsula climate (1990, p.2369-2372, eng) 45-1990  
Climatic changes in the last glacial-interglacial cycle according to ice core data (1989, p.5-16, rus) 45-5  
Ice-core record: climate sensitivity and future greenhouse warming (1990, p.139-145, eng) 45-377  
Microparticle concentration measurement and its climatic implications in an ice core from coast area, Antarctica (1990, p.1102-1109, eng) 45-1144  
Soviet-French cooperation on the isotopic research of ice cores from Dome B-Vostok-Komsomolakaya-Mirny Traverse, East Antarctica (1990, p.287-289, eng) 45-724
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Influence of hydroxyl-bearing minerals on the isotopic composition of ice from the basal zone of an ice sheet (1990, p.244-246, eng) 45-528
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Effect of salinity on the hydrophysical and thermophysical properties of soils (1990, p.24-33, rus) 45-2886
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Hudson Bay and Ungava Bay ice-melt cycles for the period 1963-1983 (1989, 48p., eng) 45-1280
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Identification and volume estimation of icebergs by remote sensing in the Barents Sea (1989, p.2355-2358, eng) 45-293  
Rift drift in floe flow; icebergs wakes in Arctic sea ice (1990, p.81-86, eng) 45-523
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Engineering and geological monitoring of geotechnical systems of gas fields in the Tyumen North: standards, methods, and technological security (1989, p.32-36, rus) 45-103  
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Geological-geomorphological aspects of the cryomorphogenesis of subarctic lowlands (1990, p.128-135, rus) 45-2825
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Sea ice fauna of Frobisher Bay, arctic Canada (1985, p.23-30, eng) 45-3059
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Transition of freezing precipitation types in Canadian atlantic coastal storms (1988, p.52-56, eng) 45-1310
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Late Wisconsin glacial geology of the eastern portion of Mount Desert Island (1989, p.103-118, eng) 45-2068  
Late Wisconsin iceberg-calving rates and ice-sheet mass balance reconstructed from paleo-sea levels, Mount Desert Island, Maine (1991, p.155-158, eng) 45-2180
- Lowry, D.J.**  
Restoration and creation of palustrine wetlands associated with riverine systems of the glaciated northeast (1990, p.267-280, eng) 45-1407
- Lowry, R.T.**  
Helicopter radar report. Final draft, Sept. 1990 (1990, 44p., eng) 45-588  
Helicopter radar simulations from fine resolution airborne SAR imagery (1989, p.2209-2212, eng) 45-289
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Facies changes and permafrost conditions during the formation of Upper Quaternary deposits of the Mayn River valley (Chukotka) (1989, p.117-131, rus) 45-2498
- Lozinakii, V.I.**  
Study of the frozen water-poly(vinyl alcohol) system by H-2 and C-13 NMR spectroscopy (1990, p.651-655, eng) 45-958
- Lozowski, E.P.**  
Atmospheric icing: a review (1988, p.1-6, eng) 45-1300  
Atmospheric icing of ships and an overview of the research on atmospheric icing modelling applicable to ship icing modelling (1988, p.202-207, eng) 45-1339  
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- La, L.L.**  
Evaluation of South Dakota Deicer No.2 and calcium magnesium acetate by shear testing (1989, p.1-8, eng) 45-808
- La, M.C.**  
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- On the use of brine and high-density immiscible liquids for spray ice removal (1990, p.575-581, eng) 45-160
- La, Q.J.**  
Mechanism of habit change for atmospheric ice crystal growth (1989, 153p., eng) 45-479
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Summer sea ice simulation in the East Greenland area (1990, p.337-351, eng) 45-3588
- La, X.L.**  
Traffic and transport on ice cover in Nenjiang River (1990, p.835-844, eng) 45-3633
- La, X.N.**  
Effects of temperature and strain rate on uniaxial compressive strength of natural fresh water ice (1990, p.141-146, chi) 45-454
- Labia, D.**  
Ultraviolet radiation environment of the Antarctic Peninsula (1989, 134p., eng) 45-2830
- Ultraviolet radiation environment of the Antarctic Peninsula: the roles of ozone and cloud cover (1991, p.478-493, eng) 45-2841
- Lacis, R.M.**  
Passive microwave radiometry over Antarctica (1990, p.1969-1973, eng) 45-916
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Antarctic glacier velocities from Landsat images (1990, p.106-107, eng) 45-1397
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 Curing of concrete (1987, p.145-159, eng) 45-1820
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Living ice (1984, p.68-77, rus) 45-3429
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Anti-icing chitin coating system development (1990, 16p., eng) 45-821
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Use of artificial cattail marshes to treat sewage in northern Ontario, Canada (1989, p.636-642, eng) 45-1890
- Miller, G.S.**  
Currents and water temperatures observed in Green Bay, Lake Michigan. Part I: Winter 1988-1989. Part II: Summer 1989 (1990, 90p., eng) 45-1417
- Miller, H.**  
Evaluation of hot water drills (1989, p.116-122, eng) 45-1464
- Miller, K.A.**  
Ecological studies of seaweeds in McMurdo Sound, Antarctica (1991, p.35-48, eng) 45-2622
- Miller, K.G.**  
Unlocking the ice house: Oligocene-Miocene oxygen isotopes, eustasy, and margin erosion (1991, p.6829-6848, eng) 45-2503
- Miller, L.J.**  
Precipitation production in a large Montana hailstorm: air flow and particle growth trajectories (1990, p.1619-1646, eng) 45-1383
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Tundra lakes and streams as gas conduits to the atmosphere: implications for tundra carbon budgets (1991, p.298-301, eng) 45-1474
- Variability of macroinvertebrate community composition in an arctic and subarctic stream (1989, p.111-127, eng) 45-2611
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Digital terrain models as a tool for glacier studies (1990, p.273-278, eng) 45-1537
- Mass balance of the Taku Glacier, Alaska from 1946 to 1986 (1990, p.121-130, eng) 45-1773
- Miller, M.O.**  
How to achieve cold weather underway replenishment capability (1989, p.193-206, eng) 45-537
- Miller, W.**  
Evaporation and snowmelt estimates from satellite data (1990, p.298-303, eng) 45-2668
- Mills, M.R.**  
Ice loading on offshore structures: the influence of ice strength (1989, p.152-167, eng) 45-515
- Mimikou, M.A.**  
Regional climate change impacts: I. Impacts on water resources (1991, p.247-258, eng) 45-3444
- Mina, T.I.**  
Development of data capture/analysis system for the use in cold start investigation (1989, p.15-33, eng) 45-1211
- Minaev, A.N.**  
Effect of the degree of salinity on the formation of the cryogenic structure of frozen soils (1990, p.55-62, rus) 45-2890
- Problem of the effect of the cryogenic structure of saline frozen soils on their strength (1990, p.124-128, rus) 45-2901
- Miser, W.M.**  
1987-1988 City of Ottawa, Ontario, Canada deicer field trials (1989, p.27-38, eng) 45-811
- Misgaliev, F.M.**  
General distribution of snow cover in northern Kamchatka (1990, p.25-35, rus) 45-1101
- Mishas, R.S.**  
Water and sediment yields into the Sutlej River from the High Himalaya (1991, p.87-100, eng) 45-3885
- Mistaleff, J.M.**  
Field experiences versus standards and designs (1991, p.351-355, eng) 45-2459
- Mistick, P.V.**  
Feasibility of using lasers and infrared heaters as UNREP icing countermeasures. Final report June-Dec. 1989 (1989, 267p., eng) 45-92
- Global ice forces and ship response to ice (1990, 36p. + appends., eng) 45-1673
- Global ice forces and ship response to ice: a second season (1990, 46p. + appends., eng) 45-1671
- Ramming icebreaking performance of the USCG polar class icebreakers (1990, p.283-294, eng) 45-2738
- Ship-ice impact load model correlated with full-scale impact data (1989, p.123-138, eng) 45-536
- Misobe, N.**  
Investigative report on improving the accuracy of radar rain and snow gauges (1990, p.107-112, jpn) 45-747
- Minster, J.F.**  
Intensity of satellite radar-altimeter return power over continental ice: a potential measurement of katabatic wind intensity (1990, p.133-142, eng) 45-54
- Mirandov, V.I.**  
Equipment for underwater surveys of hydraulic structures using acoustics (1989, p.13-20, rus) 45-81
- Mirenburg, I.U.S.**  
Improved methods of testing piles in frozen soils (1991, p.155-161, eng) 45-2398
- Method of construction in a prefrozen limited soil mass (1990, p.114-118, eng) 45-2215
- Method of estimating the strength and rheological properties of saline frozen soils (1990, p.90-98, rus) 45-2895
- Mirocheenko, G.V.**  
Heavy snowfalls in the territories of the Ukraine and Moldavia (1989, p.110-118, rus) 45-828
- Mironov, N.G.**  
Testing of construction design (1990, p.40-41, rus) 45-734
- Mirzoev, D.A.**  
Ice feature influence on wide constructions and islands (1990, p.515-525, eng) 45-155
- Misrocchi, M.**  
Observations on falling motion of natural ice crystals (1989, p.137-146, ita) 45-991
- Mishustin, I.E.**  
Distribution of heterotrophic microorganisms in the Greenland Sea (1963, p.914-921, rus) 45-3240
- Ultramicroscopic forms in the Barents Sea littoral mud (1973, p.138-140, rus) 45-3232
- Mitchell-James, B.**  
Dark survival of autotrophic, planktonic marine diatoms (1974, p.195-202, eng) 45-3433
- Mitia, S.V.**  
Borehole gas sampler operation control and methods of gas sampling in ice sheets (1990, p.73-79, rus) 45-2489
- Selection of CO<sub>2</sub> samples for the determination of the absolute age of ice sequences using the radio carbon method (1989, p.122-126, rus) 45-1046
- Mitra, S.K.**  
Laboratory study on the scavenging of SO<sub>2</sub> by snow crystals (1990, p.2307-2312, eng) 45-845
- Mitskevich, I.N.**  
Distribution of heterotrophic microorganisms in the Greenland Sea (1963, p.914-921, rus) 45-3240
- Microorganisms as indicators of hydrological phenomena in seas and oceans (1958, p.397-413, rus) 45-3431
- Mitten, P.T.**  
Assessment of probabilistic climatic loadings on existing 230 kV steel transmission lines (1988, p.19-23, eng) 45-1303
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Aerosol production processes from marine waters sampled in Antarctica and multielemental characterization of the particulated matter involved (1989, p.639-676, eng) 45-2296
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Effect of liquid water on thunderstorm charging (1991, p.11,007-11,017, eng) 45-7378
- Miyamoto, H.**  
Snow storage dam project (1990, p.37-42, jpn) 45-695
- Miyamoto, Y.**  
Study on environmental protection of salt lakes in cold regions; hydrology and water quality of Lake Saroma (1988, p.65-70, jpn) 45-2507
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Comparison of headspace gas chromatography with EPA SW-846 Method 8240 for determination of volatile organic compounds in soil (1991, 7p., eng) 45-2826
- Nonevaporative preconcentration technique for volatile and semivolatile solutes in certain polar solvents (1991, p.1341-1343, eng) 45-3447
- Salting-out solvent extraction method for determining low levels of nitroaromatics and nitramines in water (1990, 26p., eng) 45-663
- Miyaschi, S.**  
New system for controlled snow sliding on a roof (1990, p.81-90, jpn) 45-111
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Review of avalanche classifications (1986, p.448-454, eng) 45-3728
- Miyazaki, T.**  
Statistical approach for predicting accuracies of soil properties measured by single, double and dual gamma beams (1991, p.127-137, eng) 45-2271
- Mizankov, I.U.N.**  
Initial period of operation of the channel dam of the Kureika hydroelectric station (1990, p.378-383, eng) 45-2293
- Mizuno, H.**  
Parameterization of the accretion process between different precipitation elements (1990, p.395-398, eng) 45-2533
- Mizuno, Y.**  
Study on asphalt mats for cold regions (1990, p.263-268, jpn) 45-754
- Study on floating ice booms (1990, p.305-310, jpn) 45-758

- Mizuno, Y. (cont.)**  
Study on ice control at fishing harbor by air-bubble method [1990, p.697-708, eng] 45-3620
- Mizushima, K.**  
Three dimensional expression of the influences of meteorological parameters on wet snow accretion model and some discussion on them [1988, p.175-179, eng] 45-1334
- Mizushima, T.**  
Countermeasures against frost heave on national highways [1988, p.171-176, jpn] 45-2513  
Experiments to improve frost heaving test methods [1987, p.1-10, jpn] 45-923  
Frasas breaking point test: automatic testing and an examination of asphalt quality [1990, p.10-17, jpn] 45-1666  
Survey of measures against pavement rutting in cold regions [1990, p.341-369, eng] 45-3503
- Mizutani, Y.**  
Frost forecasting from local weather reports [1990, p.95-100, jpn] 45-746
- Mlakar, P.F.**  
Predicting concrete service life in cases of deterioration due to freezing and thawing. Final report [1991, 28p. + appends., eng] 45-2694
- Mohley, K.**  
PS 5 sewage lagoon embankment stabilization [1991, p.116-125, eng] 45-2327
- Mogawer, W.S.**  
Evaluation of effects of deicing additives on properties of asphalt mixtures [1989, p.41-53, eng] 45-1153
- Mogilevich, A.P.**  
Effect of braking structures on the velocity and range of avalanches on a horizontal surface [1990, p.46-52, rus] 45-3010
- Mohammed, A.A.**  
Copepods in arctic sea ice [1986, p.303-310, eng] 45-3322  
Sea ice fauna of Frobisher Bay, arctic Canada [1985, p.23-30, eng] 45-3059
- Mohandsoordin, N.**  
Bacteriological tests from the constructed wetland of the Big Five Tunnel, Idaho Springs, Colorado [1989, p.550-557, eng] 45-1888
- Moiseeva, G.P.**  
Complex glaciological mapping in the studies of geographical regularities of glacial-nival systems [1989, p.17-24, rus] 45-1029
- Molnia, B.F.**  
Polar research [1990, p.59-60, eng] 45-2243
- Molodtsov, B.S.**  
Requirements for protection of DC ice melting units on overhead lines [1989, p.40-44, eng] 45-2567
- Monismith, C.L.**  
Analysis of modified bitumen roofing materials using the stiffness modulus [1991, p.401-417, eng] 45-2463
- Monoosov, L.M.**  
Ice investigations for the proof of tidal power plant designs [1990, p.136-142, eng] 45-3571
- Montagna, P.A.**  
Arctic sea ice faunal assemblage: first approach to description and source of the underice meiofauna [1982, p.1-8, eng] 45-3135
- Monteath, C.**  
Wild ice: Antarctic journeys [1990, 222p., eng] 45-1149
- Montecino, V.**  
Abiotic dynamics of Lake Kitezh, Antarctica [1991, p.9-32, spa] 45-3552
- Moody, S.V.**  
Investigation of mineralization in the South Shetland Islands, Gerlache Strait, and Anvers Island, northern Antarctic Peninsula [1990, p.69-94, eng] 45-2805
- Moody, W.J.**  
Model material for river ice breakup studies [1990, p.575-585, eng] 45-3608
- Moore, H.D.**  
Ice-marginal thrusting of drift and bedrock: thermal regime, subglacial aquifers, and glacial surges [1990, p.849-862, eng] 45-381
- Moore, J.**  
Application of the dielectric profiling technique to ice core studies [1991, p.81-92, eng] 45-3066
- Moore, J.C.**  
Geophysical aspects of ice core drilling in Antarctica [1988, 168p. + appends., eng] 45-1518
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Alaska's mineral industry, 1989 [1989, 100p., eng] 45-491
- Moore, J.M.**  
Koyanishnuuyaw: the hypothesis of a perennially dichotomous Triton [1990, p.1757-1760, eng] 45-2045
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Infrared and mass spectral studies of proton irradiated H<sub>2</sub>O + CO<sub>2</sub> ice: evidence for carbonic acid [1991, p.255-262, eng] 45-2467  
Proton irradiation of SiHr-Fe(CO)<sub>5</sub>-H<sub>2</sub>O ices: production of refractory silicates and implications for the solar nebula [1989, p.563-569, eng] 45-397
- Moore, R.E.**  
Bottom characteristics of the antarctic ice sheet from radar [1989, p.2727-2729, eng] 45-299
- Coherent radar contour mapping of ice stream thickness [1989, p.2734-2737, eng] 45-301
- Design, development, field observations, and preliminary results of the coherent antarctic radar depth sounder (CARDS) of the University of Kansas, U.S.A. [1990, p.247-254, eng] 45-68
- Matched-filter technique for removing hyperbolic effects due to point scatterers: simulation and application on antarctic radar data [1989, p.2722-2725, eng] 45-298
- Radar depth sounding near Upstream B camp—December 1988 [1990, p.85-86, eng] 45-1391
- Moore, R.M.**  
Heat transfer from Atlantic waters to sea ice in the Arctic Ocean: evidence from dissolved argon [1990, p.2149-2152, eng] 45-1993
- Moore, S.C.**  
Measurements of strain in sea ice during FRAM 3 [1989, 7p. + appends., eng] 45-950
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Comparison of dynamic and static chambers for methane emission measurements from subarctic fens [1991, p.102-109, eng] 45-2792
- Morabito, P.**  
In-situ method for thermal conductivity and diffusivity measurements [1991, p.237-249, eng] 45-2661
- Moraczewski, I.R.**  
Numerical analysis of plant communities of tundra at the Vársolbukta, Bellsund, Spitsbergen [1990, p.47-68, eng] 45-3557
- Moran, M.L.**  
Waveform analysis of electromagnetic scattering for a three dimensional tunnel [1990, 4p., eng] 45-3771
- Morehead, M.D.**  
Internal waves and velocity fine structure in the Arctic Ocean [1991, p.12,725-12,738, eng] 45-3559
- Moreton, D.L.E.**  
Manganese nodule provinces of the southern ocean [1990, p.217-221, eng] 45-2813
- Morev, V.A.**  
Drilling with ethanol-based antifreeze in Antarctica [1989, p.110-113, eng] 45-1463  
Experience in drilling boreholes filled with an ethanol-based antifreeze fluid in Antarctica [1990, p.181-184, rus] 45-1759
- Morgan, D.R.**  
Deterioration and rehabilitation of berth faces in tidal zones at the Port of Saint John [1988, p.199-225, eng] 45-1813  
Freeze-thaw durability of shotcrete [1989, p.86-93, eng] 45-2082
- Morgan, G.**  
Cloud condensation nuclei as a source of ice-forming nuclei in clouds [1991, p.123-133, eng] 45-3024
- Morgenstern, N.R.**  
Behaviour of broken ice as a geomaterial [1991, p.451-457, eng] 45-3539
- Mori, H.**  
Present status and subject of roller compacted concrete pavement in Japan [1990, p.157-175, eng] 45-3512
- Morin, P.J.**  
Behavior of laboratory made spray ice in triaxial compression testing [1990, p.192-204, eng] 45-1910
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Computer-controlled yo-yo CTD system for the Arctic [1989, p.1263-1266, eng] 45-442
- Moritz, M.**  
In-House Laboratory Independent Research Program—FY88 [1990, 18p., eng] 45-1399
- Moritz, R.E.**  
Arctic system science: ocean-atmosphere-ice interactions [1990, 132p. + appends., eng] 45-2645  
Commentary on sea ice feedback [1991, p.151-163, eng] 45-3823
- Mortwaki, K.**  
Diatoms in water column and sea ice in Lützw-Holm Bay, Antarctica, and their preservation in the underlying sediments [1990, p.15-39, eng] 45-3360  
Former ice sheet based on the newly observed glacial landforms and erratics in the central Sør Rondane Mountains, East Antarctica [1990, p.41-54, eng] 45-1528  
Ground temperature regimes and their relation to periglacial processes in the Sør Rondane Mountains, East Antarctica [1990, p.55-66, eng] 45-1529
- Moriyoshi, A.**  
Research on low temperature properties of asphalts [1989, p.131-138, jpn] 45-872
- Morland, L.W.**  
Comparison of Laplace transform and finite difference solutions for an evolving permafrost region [1990, p.631-648, eng] 45-3268
- Morozov, V.F.U.**  
Possibilities of serotopographic monitoring of surging glaciers (in the example of Medvezhiy Glacier, Western Pamirs) [1990, p.149-156, rus] 45-1754
- Morozova, L.V.**  
Forecasting the frost resistance of concrete based on local materials [1988, 83p., rus] 45-2306
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Study of the frost resistance of concrete with the plasticizer TOP-2 [1990, p.28-30, rus] 45-31
- Morrall, J.**  
Cross-section elements to accommodate passing lanes and vehicle storage during avalanche control for the Trans-Canada Highway in Rogers Pass [1991, p.191-200, eng] 45-3535
- Morris, E.M.**  
International classification for seasonal snow on the ground [1990, 23p., eng] 45-1174  
Theoretical determination of the characteristic equation of snow in the pendular regime [1990, p.179-187, eng] 45-60  
Turbulent transfer over snow and ice [1989, p.205-223, eng] 45-1809
- Morrison, T.B.**  
Impact probabilities between large ice features and offshore structures in the Canadian Beaufort Sea [1991, p.199-206, eng] 45-3170
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Estimation of the recharge area contributing water to a pumped well in a glacial-drift, river-valley aquifer [1989, 50p., eng] 45-86
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Role of ice properties in wave-ice interaction during LIMEX '1987 [1989, p.2350-2354, eng] 45-292
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Climatic change and variability: the effects of an altered water regime on Great Lakes coastal wetlands [1990, p.217-224, eng] 45-3299
- Mosenka, I.U.M.**  
Development of the cryolithozone of Transbaikal [1990, 105p., rus] 45-2425
- Mosher, B.W.**  
Elemental tracers of volcanic emissions in antarctic aerosol and snow samples [1990, p.217-218, eng] 45-1435
- Moster, A.R.**  
Preliminary measurements of CO<sub>2</sub> in melting snow [1991, p.1225-1228, eng] 45-3760
- Moskalenko, I.G.**  
Features of turbulent exchange in the periglacial layer of air [1990, p.57-64, rus] 45-1737
- Moskalenko, N.G.**  
Conducting ecological experiments for stationary engineering and geocryological studies of gas-deposit areas in Western Siberia [1989, p.3-15, rus] 45-100  
Experiment in composing a geobotanical map of the Noril'sk city region [1972, p.54-63 + map, rus] 45-1716  
Zoning chart for environmental protection of geocryological zones in Western Siberia [1989, p.36-43, rus] 45-104
- Moskvicheva, V.N.**  
Engineering and economic aspects of using a freon vapor-driven turbine for conversion of the thermal energy of arctic sea water into electricity [1987, p.72-77, eng] 45-866
- Moskvia, I.U.P.**  
Runoff from hummocky marshes of western Siberia [1989, p.73-78, eng] 45-661  
Water and energy regime of palsa bogs in West Siberia [1988, p.18-21, eng] 45-762
- Motoyama, H.**  
Air temperature and snow depth on Yala Glacier of Langtang Valley, Nepal Himalayas [1990, p.55-60, eng] 45-198  
Report of the glaciological field party in the Sør Rondane Mountains region, 1989-1990 summer season (JARE-31) [1990, p.225-234, jpn] 45-982  
Simulation of seasonal snowcover based on air temperature and precipitation [1990, p.1104-1110, eng] 45-1651  
Snow surveys on the north facing slope of Langtang Valley, Nepal Himalayas [1990, p.29-30, eng] 45-196
- Mouginis-Marr, F.J.**  
Recent water release in the Tharsis region of Mars [1990, p.362-373, eng] 45-896
- Mossavi, M.**  
Comparison of different structures for a monthly water yield model in seasonally snow-covered mountainous watersheds of Iran [1990, p.535-546, eng] 45-2993
- Moutte, F.**  
CLER expert system for snowdrifts [1990, p.1/104-1/113, fre] 45-1787
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Electrical and acoustic properties of saline frozen soils [1990, p.128-136, rus] 45-2902
- Mudie, P.J.**  
Canadian Ice Island: environmental studies of the polar margin north of Canada's arctic islands [1991, p.60-67, eng] 45-3858  
Ocean drilling program proposal for arctic ocean drilling [1988, 20p. + appends., eng] 45-2600
- Mueller, G.M.**  
Clustering of ice nucleation protein correlates with ice nucleation activity [1990, p.416-422, eng] 45-820
- Muench, R.D.**  
AMERIEZ 1988: Mid-winter physical oceanographic observations in the Scotia Sea [1990, p.148-150, eng] 45-1423  
Weddell-Scotia confluence in midwinter [1990, p.18-177, 18, 190, eng] 45-1608
- Muggeridge, D.B.**  
Double torsion test applied to fine grained freshwater columnar ice, and sea ice [1989, p.188-200, eng] 45-517

- Mühl, D.V.**  
Thermal characteristics of the permafrost within an active rock glacier (Murtèl/Corvatsch, Grisons, Swiss Alps) (1990, p.151-158, eng) 45-36
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Ice pressure measurements using PVDF-sensors (1990, p.526-538, eng) 45-156  
Preliminary results from ice indentation tests using flexible and rigid indentors (1990, p.261-275, eng) 45-3681
- Muhs, D.R.**  
Saline minerals in the Lewis Cliff ice tongue, Buckley Island Quadrangle, Antarctica (1990, p.57-69, eng) 45-1687
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Fluctuations in Gebler's Glacier over 150 years (1990, p.89-93, rus) 45-672
- Mukhina, L.I.**  
Principles and methods of geosystem monitoring (1989, 168p., rus) 45-429
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Hydrologic processes in a southern Ontario wetland (1990, p.221-234, eng) 45-2942
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Ambient concentrations, scavenging ratios, and source regions of acid related compounds and trace metals during winter in northern Michigan (1990, p.2981-2989, eng) 45-1771
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Evaluation of an impact test for measuring ice adhesion strength (1991, p.215-220, eng) 45-3172  
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Prediction of reservoir freezeover (1990, p.124-135, eng) 45-3570
- Mullenbach, P.**  
Influence of a snow fence on young reforestation (1990, 9p., fre) 45-1723
- Müller, D.**  
Waves induced by calving of Unteraargletscher (1990, p.372-384, eng) 45-3591
- Mulvaney, R.**  
Cooperative climatological-glaciological program in the Antarctic Peninsula (1990, p.69-70, eng) 45-1156
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Graphical method simplifies diesel cloud point determinations (1990, p.98-101, eng) 45-3101
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Origin of silt-enriched alpine surface mantles in Indian Basin, Wyoming (1990, p.1670-1677, eng) 45-3863
- Munter, J.A.**  
Ground water (1990, p.317-348, eng) 45-412  
Results of an aquifer test for a proposed water supply at Anchor Point, Alaska (1991, 13p., eng) 45-2843
- Murakami, T.**  
Damage to expressway pavement in Hokkaido and solutions required (1990, p.53-73, eng) 45-3508
- Murakami, M.**  
Precipitating snow clouds during winter monsoon seasons influenced by topography of the Shakotan Peninsula, Hokkaido Island, Japan (SHAROP) (1987, p.109-128, eng) 45-905
- Muraoka, M.**  
Estimation of sublimation rate from ice disk on heating plate at low pressures (1990, p.2038-2040, eng) 45-2022
- Murav'ev, I.A.D.**  
Mass balance and thermal regime of a crater glacier at Ushkovskii Volcano (1990, p.411-424, eng) 45-1705  
Production of phreatic explosions in the interaction of lava and ice (1990, p.89-98, eng) 45-1076
- Muravskaya, R.V.**  
Method of computer mapping the exposure and slope of an area (1990, p.81-84, rus) 45-1108
- Murooka, M.**  
Design and analysis of ice load on power lines in mountainous regions (1988, p.65-69, eng) 45-1313
- Murphy, B.B.**  
Seasonal variation of some constituents of antarctic tropospheric air (1990, p.2365-2368, eng) 45-1514  
Vernal atmospheric mixing in the Antarctic (1991, p.494-507, eng) 45-2842
- Murphy, M.**  
Field experiences versus standards and designs (1991, p.351-355, eng) 45-2459
- Murray, A.**  
Analysis of subscour stresses and probability of ice scour-induced damage for buried submarine pipelines, Vol.3. Probabilistic modelling (1990, 45p. + appenda., eng) 45-1558
- Murray, B.C.**  
High-resolution topography and albedo of the south polar layered deposits on Mars (1990, p.14,511-14,529, eng) 45-1839  
Ice sublimation and rheology: implications for the Martian polar layered deposits (1990, p.352-361, eng) 45-895
- Murray, R.**  
IHS transform for the integration of radar imagery with other remotely sensed data (1990, p.1631-1641, eng) 45-2946
- Murray, T.**  
Modelling rates of sedimentation from icebergs (1990, p.121-137, eng) 45-2785
- Murrell, S.A.F.**  
Design of a high-pressure low-temperature triaxial deformation cell for ice (1991, p.177-188, eng) 45-3423  
Examination of the semi-brittle uniaxial and triaxial deformation behaviour of polycrystalline ice using acoustic emission measurement techniques (1990, p.91-102, eng) 45-2724  
Strain rate control during deformation of ice: an assessment of the performance of a new servo-controlled triaxial testing system (1991, p.189-200, eng) 45-3424
- Murthy, T.K.S.**  
Ice Technology for Polar Operations: proceedings of the 2nd international conference (1990, 426p., eng) 45-2717
- Murzabekova, U.N.**  
Anomalies in dates of formation and deterioration of the stable snow cover in Kazakhstan (1990, p.95-99, rus) 45-1583  
Climatic factors in the stability of snow cover in Kazakhstan territory (1990, p.88-95, rus) 45-1582
- Musgrove, A.R.**  
ISTORE—a model to simulate and optimise the operation of ice-storage air-conditioning systems (1990, p.199-208, eng) 45-3055
- Musienko, V.A.**  
Thermal drilling in a permafrost zone (1989, p.24-29, rus) 45-708
- Musselman, R.C.**  
Preliminary measurements of CO<sub>2</sub> in melting snow (1991, p.1225-1228, eng) 45-3760  
Snow in mountain watersheds: connections to climate and ecosystem health (1990, p.122-129, eng) 45-2129
- Musson-Genon, L.**  
Very short range forecast of wet snow by means of the METEOTEL system. Experiment of winter 85-86 (1988, p.57-60, eng) 45-1311
- Myers, C.E.**  
Engineering, technology, and logistics in the Arctic (1990, p.163-170, eng) 45-130
- Myers, R.A.**  
Evidence for stability enhancement of sea ice in the Greenland and Labrador Seas (1991, p.4783-4789, eng) 45-2686  
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Role of the oceans in climatic variability and climatic change (1990, p.352-369, eng) 45-1425  
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Development of valleys of small rivers in the central part of the Moscow marginal ice zone during the Quaternary period (in the example of the middle Protva River) (1989, p.62-67, rus) 45-710
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Efficiency of ducts for cold protection and preservation (1988, p.71-76, jpn) 45-2508
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Crack nucleation due to elastic anisotropy in porous ice [1990, p.249-265, eng] 45-1617
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Sedimentary basins and petroleum resource potential of the Arctic Ocean region [1990, p.503-538, eng] 45-1693
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Radar sounder (final report Aug. 1987-Sep. 1988) [1988, 139p., eng] 45-3116
- National Research Council. Board on Atmospheric Sciences and Climate**  
Ozone depletion, greenhouse gases, and climate change [1989, 122p., eng] 45-1712
- NATO Advanced Research Workshop on Dynamics, Transport and Photochemistry in the Middle Atmosphere of the Southern Hemisphere, San Francisco, CA, U.S.A., Apr. 15-17, 1989**  
Dynamics, transport and photochemistry in the middle atmosphere of the Southern Hemisphere. Proceedings [1989, 257p., eng] 45-2971
- Naumov, M.S.**  
Frost protection on the Baykal-Amur mainline [1991, p.6-7, rus] 45-2951
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Wild ice: Antarctic journeys [1990, 222p., eng] 45-1149
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Phosphatase enzyme activity at subzero temperatures in arctic tundra soils [1990, p.883-884, eng] 45-1019
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Wang's equation for ice forces from a pressure ridge [1991, p.666-672, eng] 45-2376
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Physical and biological oceanographic interaction in the spring bloom at the Bering Sea marginal ice edge zone [1990, p.22,229-22,241, eng] 45-1413
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Finnish construction techniques in the cold climate. Part 8. Construction site technology [1990, 83p. + appendix, fin] 45-3878
- NIPR Symposium on Polar Meteorology and Glaciology, 12th, Tokyo, July 18-19, 1989**  
Proceedings of the NIPR Symposium on Polar Meteorology and Glaciology, No.4 [1991, 143p., eng] 45-3060

- Nishimura, K.**  
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Operations report Tarsiut Gulf 1982-83 (1984, n.p., eng) 45-2855
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Lake Ontario Winter Storms Experiment (LOWS) and the Lake-Effect Snow Observation Network (LESON) report for the 1989-1990 snow season (1990, p.219-224, eng) 45-2201
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Diagnostic-feasibility study of seven metropolitan area lakes. Part 2: Lake Riley. Final report (1983, 47p., eng) 45-84
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Environment One: a master plan study for a new scientific research station at the geographic South Pole (1991, p.250-271, eng) 45-2338
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Possibilities of aerotopographic monitoring of surging glaciers (in the example of Medvezhiy Glacier, Western Pamirs) (1990, p.149-156, rus) 45-1754
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Annual report of the Norwegian Polar Research Institute (1989, 61p., eng) 45-210
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International Ice Patrol Side-Looking Airborne Radar (SLAR) experiment 1988 (1989, p.2193-2196, eng) 45-288
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Complex glaciological mapping in the studies of geographical regularities of glacial-nival systems (1989, p.17-24, rus) 45-1029

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Late Weichselian glaciation and Holocene shore displacement on Prins Oscars Land, Nordaustlandet, Svalbard [1990, p.301-317, eng] 45-2031
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Mass balance measurements on Norwegian glaciers in 1988 and 1989 [1991, 78p., nor] 45-3856
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Community structure of benthic invertebrates in interior Alaskan (USA) streams and rivers [1989, p.97-110, eng] 45-2610
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Zero-curtain effect: heat and mass transfer across an isothermal region in freezing soil [1990, p.1509-1516, eng] 45-222
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Outer Continental Shelf Environmental Assessment Program; Final reports of principal investigators, Vol.72 [1990, 634p., eng] 45-2155
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Aircraft observations of the mean and turbulent structure of the atmospheric boundary layer during spring in the central Arctic [1991, p.4663-4673, eng] 45-2678  
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Quaternary alluvial fans in the Karakoram Mountains [1990, p.27-53, eng] 45-1575
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Elemental tracers of volcanic emissions in antarctic aerosol and snow samples [1990, p.217-218, eng] 45-1435  
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Cold tolerance of plants used for cold-regions revegetation [1990, 15p., eng] 45-1433  
Scheduling fall seedings for cold-climate revegetation [1990, 6p., eng] 45-1664
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Botanical results from the voyage of the *Ermak* to the Arctic Ocean, summer 1901. IV. Microflora of the Barents Sea and its ice. 1. Historical review of the microflora in the Barents Sea and adjacent seas [1904, p.71-80, rus] 45-3351
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Seasonal description of the quality and quantity of snowmelt in a mountainous region using an integrated model [1990, p.383-393, eng] 45-2994
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Density, structural lifetime, and entropy of H-bond cages promoted by monohydric alcohols in normal and supercooled water [1991, p.6816-6826, eng] 45-2776
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Lake Ontario Winter Storms Experiment (LOWS) and the Lake-Effect Snow Observation Network (LESON) report for the 1989-1990 snow season [1990, p.219-224, eng] 45-2201
- Palma-Vittorelli, M.B.**  
Density, structural lifetime, and entropy of H-bond cages promoted by monohydric alcohols in normal and supercooled water [1991, p.6816-6826, eng] 45-2776
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Analysis of subscour stresses and probability of ice scour-induced damage for buried submarine pipelines, Vol.2. Deterministic model of ice-soil-pipe interaction [1990, 204p., eng] 45-1557  
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Wetlands microbiology: form, function, processes [1989, p.89-105, eng] 45-1878
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Comparison of the irradiance response of photosynthesis and nitrogen uptake by sea ice microalgae [1991, p.201-210, eng] 45-2669  
Physiology of sea ice diatoms. I. Response of three polar diatoms to a simulated summer-winter transition [1982, p.489-498, eng] 45-3320  
Physiology of sea ice diatoms. II. Dark survival of three polar diatoms [1983, p.157-160, eng] 45-3384
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Design of asphalt concrete mixtures in cold climates using soft asphalts [1990, p.19-49, eng] 45-3507
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Formation of relief, correlated deposits and placers in northeastern USSR. Collected scientific works [1989, 156p., rus] 45-2493
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Improving borehole and blasthole drilling in frozen conglomerate [1990, p.58-61, rus] 45-2246
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User manual and listing of TAKU: a three-dimensional, time-dependent flow model for glaciers [1989, 85p., eng] 45-557
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Effective control of the frost resistance of concrete [1990, p.24-25, rus] 45-22
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Physical-chemical approach to the classification of frozen soils according to salinity [1990, p.70-73, rus] 45-2892
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Solute rejection in freezing soils [1991, p.99-108, eng] 45-2090
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Hailstorm over Telangana [1990, p.433-438, eng] 45-3050
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Dielectric measurements of snow liquid water content [1988, p.287-290, eng] 45-1356
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Snow avalanche hazards and mitigation in the United States [1990, 84p., eng] 45-1182
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Foundation engineering and a new technique for thermal insulation of wall in Daxiaoxingnanling permafrost region, China [1990, p.111-116, eng] 45-125  
Harm of the ice pressure and its prevention measures [1990, p.727-733, eng] 45-174
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Proceedings of the 47th annual Eastern Snow Conference, Bangor, ME, June 7-8, 1990 [1990, 250p., eng] 45-2181  
Prototype physically-based model for the prediction of the spatial distribution of snowcover [1990, p.109-119, eng] 45-2191
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Microbial transformation of polychlorinated biphenyls in polar marine regions [1990, p.4-7, eng] 45-3052
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Initial period of operation of the channel dam of the Kureika hydroelectric station [1990, p.578-583, eng] 45-2293
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Hydrometeorological conditions and characteristics of ship icing in antarctic waters [1990, p.17-20, rus] 45-3075
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Classification of the thermal regime of hydraulic-fill structures in the winter period of operation [1990, p.36-40, eng] 45-669  
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Cold temperature properties of polymer-modified asphalt mixtures [1990, p.71-94, eng] 45-3493
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USNS *Barlett* cruise to the Greenland Sea in September 1989. Data report [1990, 122p., eng] 45-451
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Plutonium and Pb-210 activities in two cores from Prince William Sound [1990, 10p., eng] 45-3831
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Perturbation solution for spherical and cylindrical solidification by combined convective and radiative cooling [1990, p.142-148, eng] 45-221
- Parea, J.C.**  
Ice Technology for Polar Operations: proceedings of the 2nd international conference [1990, 426p., eng] 45-2717
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Observational and modeling studies of the katabatic winds at Terra Nova Bay [1990, p.221-223, eng] 45-1437  
Review of precipitation-related aspects of west antarctic meteorology [1991, p.1-22, eng] 45-3278  
Strong katabatic wind event at Terra Nova Bay [1990, p.223-225, eng] 45-1438
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Numerical study of the right angled thermosyphon [1991, p.113-117, eng] 45-3157
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Environmental impacts of exploiting mineral resources and effects of tourism in Antarctica [1990, p.237-258, eng] 45-2815
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Numerical simulation of powder-snow avalanches [1990, p.229-237, eng] 45-66
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Low temperature decontamination with DS2: studies with chemical agent simulants [1991, 23p., eng] 45-3260
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Meteorology source book [1988, 304p., eng] 45-527
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Interannual variability of the spatial distribution of sea ice in the north polar region [1991, p.4791-4801, eng] 45-2687
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Development of a comprehensive numerical river ice model [1990, p.739-760, eng] 45-426  
Heat exchange at the ice/water interface on flowing water [1991, p.348-354, eng] 45-2346
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Interpretation of sea ice using NOAA-AVHRR data [1990, 46p., eng] 45-3850
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Glass transitions in polymeric roofing membranes—determination by dynamic mechanical analysis [1991, p.495-501, eng] 45-2465
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Synthetic products as basic components of low-pour motor oils [1990, p.189-192, eng] 45-1385
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Double torsion test applied to fine grained freshwater columnar ice, and sea ice [1989, p.188-200, eng] 45-517  
Indentation and penetration of edge-loaded freshwater ice sheets by pairs of indenters at various separations [1990, p.1031-1043, eng] 45-3631  
Small scale field indentation tests on first year sea ice [1990, p.878-889, eng] 45-3637  
Tensile strength of cracked ice by E.M. Schulson, S.G. Hoxie, W.A. Nixon [1991, p.221-222, eng] 45-3428
- Partanen, J.I.**  
Freezing point depression of dilute aqueous sodium chloride solutions [1991, p.172-176, eng] 45-3403  
Freezing point depressions of dilute potassium chloride solutions [1990, p.317-320, eng] 45-3374
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Assessment of the capability of the satellite radar altimeter for measuring ice sheet topographic change [1991, p.585-609, eng] 45-2225  
Satellite radar altimetry of ice sheets and ice shelves [1989, p.43-50, eng] 45-1863
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Origin and age of the "icy complex" in the north of West Siberia [1989, p.297-304, eng] 45-476
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Endogenic model of permanent variations in the climate of the Earth [1990, p.111-124, rus] 45-996



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Electrical parameters of surface layers of shelf and continental glaciers in the UHF range [1989, p.23-31, rus] 45-1485  
Electro-physical characteristics of hummocks [1989, p.32-35, rus] 45-1486  
Simple method of measuring the thickness of ice in fresh-water reservoirs [1989, p.92-98, rus] 45-1495  
Specific attenuation in the UHF range of sea ice in various regions [1989, p.36-45, rus] 45-1487
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Study of textural and tonal information for classifying sea ice from SAR imagery [1989, p.747-750, eng] 45-243
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Flow band model of the Ross Ice Shelf, Antarctica: response to CO<sub>2</sub>-induced climatic warming [1991, p.6849-6871, eng] 45-2504
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Assessing the quality of thermally drilled deep antarctic ice cores for trace elements analysis [1989, p.182-197, eng] 45-1472  
Occurrence of zinc in antarctic ancient ice and recent snow [1990, p.248-259, eng] 45-1847
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Analysis of Norman Wells core samples. Final report [1987, 60p. + appends., eng] 45-384  
Detailed study of the physical and thermal properties of Norman Wells-Zama Pipeline core specimens. Final report [1988, 59p. + appends., eng] 45-387  
Final report: analysis of thermal data and core specimens, Norman Wells Pipeline, part 2: physical and thermal properties, 1989 [1989, 23p. + appends., eng] 45-385
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Airborne organic compounds in the Canadian Arctic and development of a collection method for organochlorines in air [1989, 266p., eng] 45-511  
Polycyclic aromatic and organochlorine compounds in the atmosphere of northern Ellesmere Island, Canada [1991, p.10,867-10,877, eng] 45-3375
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Glaciers of the Austrian Alps 1986/87 [1988, p.177-192, ger] 45-1097
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Unsteady free convective flow in an enclosure containing water near its density maximum [1990, p.83-91, eng] 45-3098
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Case study of atmospheric boundary layer mean structure for flow parallel to the ice edge: aircraft observations from CEAREX [1991, p.4691-4708, eng] 45-2680
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Treatment of wastewater in polar environments—status and future trends in Scandinavia [1990, p.99-106, eng] 45-3028
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Current problems in Quaternary geology of the Barents Sea [1990, p.76-93, rus] 45-2876  
Maximum advance of the Scandinavian ice sheet onto the shelf of the Barents Sea in Valday time [1991, p.70-73, eng] 45-2478  
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Geocryological and geological engineering problems in the development of the Yamal Peninsula [1990, 53p., rus] 45-1719
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Conducting ecological experiments for stationary engineering and geocryological studies of gas-deposit areas in Western Siberia [1989, p.3-15, rus] 45-100  
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Modern equipment for study and control of thermal characteristics of natural resource regions in the North [1989, p.52-58, rus] 45-105  
Research station investigation of the temperature of water masses and the surface of bottom sediments of Lake Kru-gloye (Central Gydan) [1989, p.102-110, rus] 45-2015  
Role of heat balance studies in geocryological forecasting [1987, p.18-25, rus] 45-571  
Studying the thermal regime of natural complexes of tundra zones in Western Siberia [1989, p.6-20, rus] 45-2004
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Vertical fine structure of temperature profile in the subarctic front zone (Megapolygon) [1991, p.468-474, rus] 45-2935
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General ecology and paleogeography of the polar oceans [1990, 223p., rus] 45-2881
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Two-dimensional numerical modelling of large motions of floating bodies in waves [1989, p.257-277, eng] 45-967
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Frost action in clay soils. I. A temperature-step and equilibrium differential scanning calorimeter technique for unfrozen water content determinations below 0 C [1990, p.535-546, eng] 45-1141  
Frost action in clay soils. II. Ice and water location and suction of unfrozen water in clays below 0 C [1990, p.547-561, eng] 45-1142
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Brine-induced advection of dissolved aromatic hydrocarbons to arctic bottom waters [1991, p.940-951, eng] 45-3818
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User manual and listing of TAKU: a three-dimensional, time-dependent flow model for glaciers [1989, 85p., eng] 45-557
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Ecological studies of seaweeds in McMurdo Sound, Antarctica [1991, p.35-48, eng] 45-2622
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Winter maintenance [1990, p.337-379, eng] 45-3470
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Sea ice drift and deformation in the western Arctic [1989, p.1276-1281, eng] 45-444
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Ice investigations for the proof of tidal power plant designs [1990, p.136-142, eng] 45-3571
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Cooperative climatological-glaciological program in the Antarctic Peninsula [1990, p.69-70, eng] 45-1156
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Mathematical model for predicting icebreaker performance [1990, p.177-192, eng] 45-2731
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Icebreaker manoeuvrability [1990, p.145-154, eng] 45-2728
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Water cycle and climate [1990, p.570-579, fre] 45-964
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Review of techniques used by Canada and other northern countries for measurement and computation of streamflow under ice conditions [1990, p.317-340, eng] 45-2530
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ICE-3G: a new global model of late Pleistocene deglaciation based upon geophysical predictions of post-glacial relative sea level change [1991, p.4497-4523, eng] 45-2229  
Model of late Pleistocene ice sheet growth with realistic geography and simplified cryodynamics and geodynamics [1990, p.103-110, eng] 45-1800  
Simulations of continental ice sheet growth over the last glacial-interglacial cycle: experiments with a one-level seasonal energy balance model including realistic geography [1991, p.9189-9215, eng] 45-3413
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Annual balance of North Cascade, Washington glaciers predicted from climatic records [1990, p.201-212, eng] 45-2199  
Mass balance of the Taku Glacier, Alaska from 1946 to 1986 [1990, p.121-130, eng] 45-1773
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Non-meteorological flood disasters in Chile [1989, p.243-258, eng] 45-2770
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Model test of CCN-cloud albedo climate forcing [1990, p.607-610, eng] 45-1173
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Space and time variability of snow water equivalent in Finland [1990, 260p., fin] 45-3872
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Snow fence operational and material testing [1991, p.708-718, eng] 45-2380  
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Arctic marine ecosystems and oil pollution [1975, p.II/87-II/98, eng] 45-3224  
Salinity tolerance and osmoregulation of the arctic marine amphipods *Onisimus littoralis* (Kroyer) and *Anonyx nugax* (Phipps) [1990, p.275-281, eng] 45-3357
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Neogene paleoclimate development of the antarctic Weddell Sea region: organic geochemistry [1990, p.881-897, eng] 45-3530
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Frost lenses? Sure. But in concrete? [1990, p.51-53, eng] 45-2048
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Surficial talus fabric and particle gliding over snow on Lassen Peak, California [1990, p.142-153, eng] 45-775  
Talus rock glacier in the Venezuelan Andes [1988, p.149-159, eng] 45-1095
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Influence of ice segregation and solutes on soil structural stability [1990, p.571-581, eng] 45-1445
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Root-zone system: Mannersdorf—new results [1989, p.606-621, eng] 45-1889
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Acoustic and seismic signals from snow avalanches [1990, p.67-71, rus] 45-321
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Real permittivity of snow at 1 MHz and 0 C [1991, p.215-219, eng] 45-3427
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Preliminary study of an advanced automatic station for marine data acquisition in Antarctica [1989, p.1646-1651, eng] 45-722
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Absorption coefficients of ice from 250 to 400 nm [1991, p.1233-1235, eng] 45-3761  
Anatomy of a freezing lead [1990, p.18,221-18,232, eng] 45-1021  
Evolution of sea ice optical properties during fall freeze-up [1990, p.520-531, eng] 45-850  
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Microwave and physical properties of sea ice in the winter marginal ice zone [1991, p.4573-4587, eng] 45-2084  
Solar heating of a stratified ocean in the presence of a static ice cover [1990, p.18,233-18,245, eng] 45-1020
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Boundary element analysis for the flow around a submerged ice floe [1990, p.69-72, eng] 45-365
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Deep ice core drilling equipment depth measurement and drilling process [1989, p.70-71, eng] 45-1459  
Electrochaude: a self-flushing hot-water drilling apparatus for glaciers with debris [1987, p.236-238, eng] 45-19  
Electrochaude: recent development in borehole drilling [1989, p.164-168, eng] 45-1470  
Setting up a deep ice core drilling facility and preliminary tests: Terre Adelie-Antarctica [1989, p.66-69, eng] 45-1458
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Design, construction, and application of heat flux transducers to the study of insulations during the 1950s [1991, p.3-12, eng] 45-2649
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Winter problems associated with the existence of active eolian dunes in the blueberry fields of Quebec [1990, p.1/2-1/11, fre] 45-1777
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Forecasters handbook for the arctic [1989, 364p., eng] 45-3092
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Variations in glaciation of the Kungey Alatau mountain ridge under possible climatic variations [1990, p.113-120, rus] 45-1113
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Investigations of space-time variations in meteorological visibility [1987, p.108-120, rus] 45-2299
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Effect of the surface roughness on the ice load characteristics during icing with low airspeeds [1988, p.232-235, eng] 45-1345  
Experimental study of the air inclusions into ice formed on fixed cylinders [1988, p.162-166, eng] 45-1331  
Simulation of some rime characteristics by using an aggregate model [1988, p.243-247, eng] 45-1347
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Space and time variability in the specific mass balance of a glacier (methods and preliminary results) [1990, p.94-105, rus] 45-1110
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Present and planned marine ecological activities in Greenland [1975, p.II/1-II/12, eng] 45-3220
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Spatial interrelationships between terrain, snow distribution and vegetation patterns at an arctic foothills site in Alaska [1989, p.270-278, eng] 45-1981

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Least-squares polynomial technique for discriminating between drops and graupel in 2D image records [1991, p.151-155, eng] 45-1597
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Mesoscale ocean feature study using synthetic aperture radar imagery in the Labrador Ice Margin Experiment: 1989 [1991, p.10,593-10,602, eng] 45-3309  
Remote monitoring of thermal structure and growth of shore-fast ice off the Labrador coast [1991, p.123-130, eng] 45-3419
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Observations of sea ice drift off Newfoundland using satellite imagery and ice beacons [1989, p.2359-2362, eng] 45-294  
Sea ice fluctuations in the western Labrador Sea (1963-1988) [1990, 130p., eng] 45-1287
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Glaciers of Irian Jaya, Indonesia [1989, p.1-20, eng] 45-818
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Deuterium excess in recent antarctic snow [1991, p.5113-5122, eng] 45-2283  
Microparticle concentration measurement and its climatic implications in an ice core from coast area, Antarctica [1990, p.1102-1109, eng] 45-1144
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Ice physics [1990, p.3-8, rus] 45-1728
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Kinematics and dynamics of heavy snowfall bands over European territory [1989, p.3-12, rus] 45-1848
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Modelling of fall-winter ice phenomena [1990, p.53-61, rus] 45-1636
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Results of ice core investigations on the slope of the antarctic ice sheet [1989, p.108-116, rus] 45-1044  
Soviet-French cooperation on the isotopic research of ice cores from Dome B-Vostok-Komsomolskaya-Mirny Traverse, East Antarctica [1990, p.287-289, eng] 45-724
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Optimizing the observation of rock temperatures in the process of surveying cryogenic-hydrogeological operations [1989, p.47-57, rus] 45-2008
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Evaluating the suitability of traditional methods for determining the phase composition of saline frozen soils [1990, p.38-45, rus] 45-2888
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Development of a comprehensive numerical river ice model [1990, p.739-760, eng] 45-426  
Working group on river ice jams. Field studies and research needs [1990, 121p., eng] 45-97
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Hydrometric investigations in Svalbard 1989-1990 [1990, p.133-138, eng] 45-3789
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Heavy minerals in glacial material [1990, p.165-185, eng] 45-2531
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Permafrost [1991, p.277-298, eng] 45-3093  
Permafrost and thermokarst: geomorphic effects of subsurface water on landforms of cold regions [1990, p.211-218, eng] 45-2593
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Analysis and modeling of melt-water refreezing in dry snow [1990, p.238-246, eng] 45-67
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Microcomputer simulation of phase change heat transfer [1990, p.43-65, eng] 45-1432  
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Efficiency analysis of a steam heat distribution system [1991, p.199-213, eng] 45-3746  
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Phase change heat transfer analysis with applications to frost shielding [1990, p.9-13, eng] 45-3739  
Phase-change numerical heat transfer analysis with applications to frost shielding [1991, p.29-36, eng] 45-2915
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Fallout in snow [1990, p.21, eng] 45-918
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Climates of Canada [1990, 176p., eng] 45-554
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Longitudinal and seasonal water chemistry variations in a northern Appalachian stream [1990, p.489-498, eng] 45-3697
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Studies of the arctic ice cover and upper ocean with a coupled ice-ocean model [1991, p.4631-4650, eng] 45-2676
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Analysis of the principal components of antarctic precipitations [1989, p.701-712, eng] 45-2297  
Characterization of snow in the area surrounding Terra Nova Bay (Antarctica) [1990, p.55-61, eng] 45-3197
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Radar sounding of the surface of the Earth from space [1990, 200p., rus] 45-986
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Holocene climates of the Vestfold Hills, Antarctica, and Macquarie Island [1984, p.173-182, eng] 45-2983
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Scaling and numerical model evaluation of snow-cover effects on the generation and modification of daytime mesoscale circulations [1991, p.1024-1042, eng] 45-3274
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Spatial and temporal influence of soil frost on infiltration and erosion of sagebrush rangelands [1990, p.991-997, eng] 45-3696
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Estimating soil surface temperature from meteorological data [1991, p.187-195, eng] 45-2928
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CO<sub>2</sub>-climate relationship as deduced from the Vostok ice core: a re-examination based on new measurements and on a re-evaluation of the air dating [1991, p.83-90, eng] 45-2586
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Telemetry and remote control circuits for a 4000 m thermal drill [1989, p.72-85, eng] 45-1460  
Using the radioactive reference horizon from Chernobyl to measure snow accumulation in the Northern Hemisphere [1990, p.3/22-3/27, fre] 45-1795
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Dynamic model of floating ice masses colliding with rigid structures [1990, p.539-554, eng] 45-137
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Two packages for meteorological data processing and runoff simulation for personal computers [1987, p.192-198, eng] 45-2437
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Experimental frequency spectra of internal waves in an ice-covered high-latitude basin [1989, p.577-580, eng] 45-91
- Pisarevskaja, L.G.**  
Fine thermohaline structure of water near antarctic icebergs [1990, p.87-92, rus] 45-3084  
Three-dimensional structure of iceberg tracks [1989, p.140-144, rus] 45-1662
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Water level and ice melting observations on Beaver Lake [1990, p.55-64, rus] 45-2570
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Quantitative analysis of the probability of intracellular ice formation during freezing of isolated protoplasts [1989, p.44-63, eng] 45-2965
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Abiotic dynamics of Lake Kitezh, Antarctica [1991, p.9-32, spa] 45-3552
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Snowmelt modeling in a balsam fir forest: comparison between an energy balance model and other simplified models [1991, p.1-10, eng] 45-2189
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Sensitivity experiment for the removal of arctic sea ice with the French spectral general circulation model [1990, p.1-17, eng] 45-1520
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Primary production and nutrient assimilation by natural phytoplankton of the eastern Canadian Arctic [1982, p.335-345, eng] 45-3246
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Failures of overhead transmission lines due to polluted ice accretions on insulator strings [1988, p.305-309, eng] 45-1360
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Plastic highway bridges [1991, p.64-65, eng] 45-3477
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Arctic environmental drifting buoy (AEDB) report of field operations and results: August 1987-April 1988 [1990, 128p., eng] 45-565
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Dangerous wind velocities and glaze icing in mountainous regions [1990, 222p., rus] 45-983
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Time of ice cover growth to a set thickness on the Kuybyshev and Gor'kiy reservoirs as a function of temperature anomalies in Atlantic waters [1989, p.87-93, rus] 45-2277
- Podstrelchuk, A.N.**  
Vertical distribution of snow accumulations on variously oriented slopes in the Malaya Almatinka River basin [1990, p.3-14, rus] 45-1099
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On the state of galloping conductor technology [1988, p.319-323, eng] 45-1363
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Heat transfer measurements from a NACA 0012 airfoil in flight and in the NASA Lewis Icing Research Tunnel [1990, 184p., eng] 45-603
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Protecting the environment in a region with a developing iron and steel industry [1987, p.159-165, rus] 45-587
- Poljak, L.V.**  
Presence of glacial deposits in the central basin of the Barents Sea [1990, p.1463-1467, rus] 45-1860
- Poljakov, A.S.**  
Investigation of manoeuvring qualities of ships in ice conditions [1990, p.788-799, eng] 45-3629
- Poljakov, S.P.**  
Experimental construction of ice moorings in Antarctica using the spray-cone freezing method [1990, p.106-110, rus] 45-1746
- Poljakov, V.A.**  
Isotope study of natural water and ice of western Siberia [1989, p.48-64, eng] 45-649
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Ice cover effects in models of sea level fluctuations and water circulation [1990, p.90-104, rus] 45-1640
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Working group on river ice jams. Field studies and research needs [1990, 121p., eng] 45-97
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Scientific workshop on glaciology at the Institute of Geography of the USSR Academy of Sciences (January-June 1989) [1989, p.250, rus] 45-1073
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PCB and PCT contamination in Winter Quarters Bay, Antarctica (1990, p.523-529, eng) 45-1645
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Ice load measurements on board MS *Kemira*, winter 1989 (1989, 66p., eng) 45-93  
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Lipid composition of *Mycobacterium mucosum* oxidizing hydrocarbons isolated from arctic waters (1977, p.1070-1073, rus) 45-3137
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Integrated ice surveillance system for support of offshore oil and gas exploration (1989, p.2229-2231, eng) 45-290
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Ice floes and glacier-dammed lakes of Altai during the Pleistocene (1990, p.43-52, rus) 45-704
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Users manual for the NASA Lewis ice accretion prediction code (LEWICE) (1990, 231p., eng) 45-598
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- Russia. Gosstandartveyi komitet standartov  
State standards index of the USSR, 1990 (1990, 4 vols., rus) 45-1602
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Field surveys on terrestrial biology in the vicinity of Syowa Station, East Antarctica, 1986-1987 (JARE-27) (1990, p.156-174, jpn) 45-981
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- Setoh, H. (cont.)**  
Primary productivity in the fast ice area near Syowa Station, Antarctica, during spring and summer 1983/84 [1988, p.287-292, eng] 45-3313
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Oxygen isotope profiles of deposited snow in different depositional environments of the antarctic ice sheet [1991, p.39-46, jpn] 45-3394
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Role of Antarctica in the climate of the Southern Hemisphere as revealed by modeling studies: a brief review [1986, p.39-50, eng] 45-915
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- Sawada, Y.**  
Present status and subject of roller compacted concrete pavement in Japan [1990, p.157-175, eng] 45-3512
- Saxton, K.E.**  
Surface waters of North America: influence of land and vegetation on streamflow [1990, p.55-80, eng] 45-2145
- Sayed, M.**  
Model tests of the grounding resistance of fresh and consolidated ice rubble [1990, p.73-82, eng] 45-1768  
National Research Council Canada ice measurements at Tarsuit, 1983 [1984, 22p. + appendix, eng] 45-2863  
Strain gradient influence on brittle failure of ice [1990, p.179-191, eng] 45-1909
- Saylor, F.H.**  
Cold weather construction materials part 2: field validation of laboratory tests on regulated-set cement for cold weather concreting [1982, 27p., eng] 45-3475
- Saylor, J.H.**  
Currents and water temperatures observed in Green Bay, Lake Michigan. Part I: Winter 1988-1989. Part II: Summer 1989 [1990, 90p., eng] 45-1417
- Sazhina, A.F.**  
Ecological role of bacteria in detritus and aggregates in the southwest Pacific Ocean [1989, p.682-692, rus] 45-3450
- Sbragadello, G.**  
Radioculicid analysis in antarctic coastal samples: methods and procedures [1990, p.143-147, eng] 45-3201
- Scambos, T.A.**  
Satellite-image-derived velocity field of an antarctic ice stream [1991, p.242-246, eng] 45-2267
- Scamloe, J.M.**  
Controlling concrete during hot and cold weather [1987, p.241-259, eng] 45-1822
- Scavuzzo, R.J.**  
Adhesive peel strength of artificial ice [1988, p.167-169, eng] 45-1332  
Combined finite element-experimental technique for determination of impact ice tensile properties [1988, p.254-258, eng] 45-1349  
Finite element studies of the electro impulse de-icing systems [1990, p.757-763, eng] 45-1676
- Schaesfer, D.A.**  
Episodic acidification of Adirondack lakes during snowmelt [1990, p.1639-1647, eng] 45-224
- Schafer, F.J.**  
Antarctic glacier velocities from Landsat images [1990, p.106-107, eng] 45-1397
- Schatz, D.D.**  
Constructed wetlands for wastewater treatment at Amoco Oil Company's Mandan, North Dakota refinery [1989, p.233-237, eng] 45-1880
- Schatz, O.**  
Cold start improvements with a heat store [1991, 9p., eng] 45-3829
- Schell, D.**  
Biological interactions [1980, p.336-341, eng] 45-3046
- Schenk, F.M.**  
Dark-ray and dark-floor craters on Ganymede, and the provenance of large impactors in the Jovian system [1991, p.318-346, eng] 45-2940  
Fluid volcanism on Miranda and Ariel: flow morphology and composition [1991, p.1887-1906, eng] 45-2166
- Scherer, R.P.**  
Microfossil assemblages in "deforming till" from Upstream B, West Antarctica: implications for ice-stream flow models [1990, p.54-55, eng] 45-1085
- Schiavata, E.**  
Aerosol production processes from marine waters sampled in Antarctica and multi-elemental characterization of the particulated matter involved [1989, p.639-676, eng] 45-2296
- Schick, M.**  
Application of the theory of dispersion forces to the surface melting of ice [1991, p.1713-1716, eng] 45-2589
- Schickel, K.P.**  
Satellite images of icing clouds [1988, p.49-51, eng] 45-1309
- Schilling, D.H.**  
Flow band model of the Ross Ice Shelf, Antarctica: response to CO<sub>2</sub>-induced climatic warming [1991, p.6849-6871, eng] 45-2504
- Schirikowski, M.**  
Measurements of concentration, chemical composition and size distribution of background aerosol at high alpine stations [1990, p.S321-S324, eng] 45-2220
- Schlegel, M.G.**  
Arctic stream scour: a case history [1990, p.791-803, eng] 45-428
- Schlesinger, M.E.**  
Revised projection of future greenhouse warming [1991, p.219-221, eng] 45-2263
- Schlosser, P.**  
O-18 concentrations in sea ice of the Weddell Sea, Antarctica [1990, p.315-323, eng] 45-1542  
Sea ice characteristics and the role of sediment inclusions in deep-sea deposition: Arctic-antarctic comparisons [1990, p.187-211, eng] 45-1268
- Schmidlin, T.W.**  
Critique of the climatic record of "Water Equivalent of Snow on the Ground" in the United States [1990, p.1136-1141, eng] 45-1652  
Impacts of heavy snowfall during December 1989 in the Lake Erie snowbelt [1990, p.135-142, eng] 45-2193
- Schmidt, H.**  
Observation and inversion of seismo-acoustic waves in a complex arctic ice environment [1991, p.1668-1685, eng] 45-2666
- Schmidt, R.A.**  
Bending of a conifer branch at subfreezing temperatures: implications for snow interception [1990, p.1250-1253, eng] 45-389  
Snow fencing near pit reservoirs to improve water supplies [1990, p.156-159, eng] 45-2136
- Schmidt, R.A.M.**  
Permafrost and thermokarst; geomorphic effects of subsurface water on landforms of cold regions [1990, p.211-218, eng] 45-2593
- Schmucke, H.K.**  
R-strategist in antarctic pack ice [1991, p.305-309, eng] 45-3456
- Schnack-Schiel, S.B.**  
Polar zooplankton [1990, p.527-598, eng] 45-690
- Schneider, H.**  
Freed from a glacier after 25 years—glacial and meteorological aspects [1990, p.183-188, ger] 45-3763
- Schneider, H.R.**  
Dynamical explanation for the asymmetry in zonally averaged column abundances of ozone between northern and southern springs [1991, p.547-556, eng] 45-3487
- Schneider, J.**  
Satellite transmission of vibration records of blasting operations in Greenland [1990, p.225-234, eng] 45-136
- Schneider, J.I.**  
1990 annual report on Alaska's mineral resources [1990, 67p., eng] 45-2038
- Schneider, S.H.**  
Global warming—are we entering the greenhouse century [1989, 317p. (Pertinent p.162-165 and p.300-302), eng] 45-395
- Schnell, R.C.**  
Association of an ice-nucleating pseudomonad with cultures of the marine dinoflagellate, *Heterocapsa niei* [1985, p.257-265, eng] 45-3385  
Ice nuclei produced by laboratory cultured marine phytoplankton [1975, p.500-502, eng] 45-3125
- Schuttler, D.**  
Depositional sequence modeling of late Quaternary geologic history, west-central Maine coast [1989, p.29-46, eng] 45-2057
- Schoeberl, M.R.**  
Comparison of the Southern Hemisphere springs of 1988 and 1987 [1989, p.71-89, eng] 45-2976
- Schofield, M.**  
East Greenland ice extent 1982-86 and the occurrence of ice edge mesoscale features [1987, 7p + appendix, eng] 45-940
- Schohl, G.A.**  
Two-dimensional spreading and thickening of aufeis [1990, p.169-178, eng] 45-59
- Schokking, F.**  
On estimating the thickness of the Saalian ice sheet from a vertical profile of preconsolidation loads of a lacustrine glacial clay [1990, p.305-312, eng] 45-357  
Sub-glacial sediment deformation model from geotechnical and structural properties of an overconsolidated lacustrine glacial clay [1990, p.291-304, eng] 45-356
- Schöbawald, H.K.**  
Mineral resource exploration in Greenland [1990, p.645-653, eng] 45-167
- Schoor, A.E.**  
Alaska place names [1991, 191p., eng] 45-3860
- Schrader, G.C.**  
Improved chamber for in situ measurement of primary productivity by sea ice algae [1982, p.522-524, eng] 45-3245
- Schrader, H.**  
Surface sediment diatom distribution and Holocene paleotemperature variations in the Greenland, Iceland and Norwegian Sea [1990, p.557-580, eng] 45-953
- Schramm, H.**  
Traction control for commercial vehicles [1989, p.355-363, eng] 45-1248
- Schulson, E.M.**  
Brittle compressive failure of freshwater columnar ice under biaxial loading [1991, p.207-214, eng] 45-3171  
Brittle compressive fracture of ice [1990, p.1963-1976, eng] 45-1169  
Ductile-brittle transition in ice & size effect [1991, p.554-568, eng] 45-2366  
On the ductile to brittle transition in ice under compression: physical processes [1990, p.103-114, eng] 45-2725  
Wing cracks and brittle compressive fracture [1990, p.1955-1962, eng] 45-1168
- Schultz-Hock, R.**  
Denitrification in artificial wetlands [1989, p.484-492, eng] 45-1886
- Schultz, L.**  
Radio-echo sounding survey across the Allan Hills Icefield [1990, p.50-52, eng] 45-1004
- Schultz, L.A.**  
Feasibility of using lasers and infrared heaters as UNREP icing countermeasures. Final report June-Dec. 1989 [1989, 267p., eng] 45-929  
Model tests of a naval combatant in broken ice fields [1990, p.155-165, eng] 45-2729  
Practical limits of cold region environmental characteristics for the new design of conventional U.S. Navy surface ships [1989, p.99-111, eng] 45-534  
Preliminary results of model tests of the DD-963 in broken ice fields [1989, p.113-121, eng] 45-535
- Schultz, P.**  
Automated guidance for forecasting conditions conducive to aircraft icing [1991, p.492-496, eng] 45-1919
- Schumacher, P.W.**  
Evaluation of a field kit for detection of TNT in water and soils [1990, 14p., eng] 45-192
- Schupack, M.**  
Durability of prestressed concrete tanks [1989, p.51-55, 58, eng] 45-2111
- Schuster, R.L.**  
Formation and failure of natural dams [1987, 39p., eng] 45-530
- Schutz, R.E.**  
Climate measurements by the EOS Geoscience Laser Ranging System [1991, p.17-22, eng] 45-1512
- Schwander, J.**  
Electromechanical drilling in dry holes to medium depths [1989, p.32-37, eng] 45-1453
- Schweiger, A.J.**  
Comparison of sea ice parameters retrieved from passive microwave (SSM/I), LANDSAT MSS and AVHRR imagery [1989, p.769-772, eng] 45-248

- Sensitivity of passive microwave sea ice concentration algorithms to the selection of locally and seasonally adjusted tie points [1989, p.773-776, eng] 45-249
- Schweizer, S.E.  
Ice removal using low-pressure flashing flow [1989, p.327-338, eng] 45-545
- Science Applications International Corporation Polar Oceans Associates  
Studies of sea ice thickness and characteristics from an arctic submarine cruise. Phase 3. Final report Oct. 1, 1988-Sep. 30, 1989 [1989, 105p., eng] 45-562
- Scientists solve mystery of duck deaths  
Scientists solve mystery of duck deaths [1991, p.S11, eng] 45-3734
- Scotfield, J.P.  
Evidence for a frozen bed, Byrd Glacier, Antarctica [1991, p.11,649-11,655, eng] 45-3462
- Scott, D.  
Ice power [1989, p.154, eng] 45-1554  
Roll-along de-icer [1990, p.86, eng] 45-621
- Scott, W.J.  
Geophysics in the study of permafrost [1990, p.355-384, eng] 45-668
- Scott, W.S.  
Environmental effects of snow dumping: a literature review [1980, p.219-240, eng] 45-184
- Scourse, J.D.  
Glacimarine environments: processes and sediments [1990, 423p., eng] 45-2778  
On the description and modelling of glacimarine sediments and sedimentation [1990, p.1-13, eng] 45-2779
- Seabrook, P.  
Investigations of distress in precast concrete piles at Rodney Terminal, Saint John, New Brunswick [1988, p.277-320, eng] 45-1815
- Sear, C.B.  
Concurrent remote sensing of arctic sea ice from submarine and aircraft [1989, 20p., eng] 45-563
- Sechrist, F.S.  
Forecasters handbook for the arctic [1989, 364p., eng] 45-3092
- Sedov, S.N.  
Autonomous taiga soil formation on the southwest coast of the Sea of Okhotsk [1990, p.24-35, eng] 45-1709  
Role of freezing in comminution of primary minerals of podzolic soils [1991, p.107-111, eng] 45-3816
- Sedov, V.T.  
Heat transfer when drilling in permafrost [1990, 126p., rus] 45-1533
- Seegbrecht, G.W.  
Durability of dry-mix shotcrete [1989, p.47-50, eng] 45-2110
- Segal, M.  
Observational evaluation of the snow breeze [1991, p.412-424, eng] 45-3271  
Scaling and numerical model evaluation of snow-cover effects on the generation and modification of daytime mesoscale circulations [1991, p.1024-1042, eng] 45-3274
- Segawa, A.  
Groundwater flow simulation considering snowmelt [1987, p.25-43, jpn] 45-924
- Sego, D.C.  
Behaviour of broken ice as a geomaterial [1991, p.451-457, eng] 45-3539
- Seibold, F.  
Polar ice-breaker caught in active shear ridge [1990, p.269-281, eng] 45-2737
- Seidov, D.G.  
Synergetics of ocean processes [1989, 287p., rus] 45-2407
- Seisova, I.B.  
Past and present changes of mudflow intensity in the Central Caucasus [1991, p.13-17, eng] 45-2435
- Seitz, W.R.  
In-situ detection of contaminant plumes in ground water [1990, 12p., eng] 45-935
- Seki, S.  
Railway electrification and snow [1986, p.12-24, eng] 45-3703
- Sekiguchi, S.  
Alaska Beaufort Sea immersion test of welds of high-strength steels for icebreakers [1990, p.178-187, eng] 45-132
- Selby, M.J.  
Rock slope development in McMurdo Oasis, Antarctica, and implications for interpretations of glacial history [1990, p.55-62, eng] 45-1188
- Selkirk, D.R.  
Holocene climates of the Vestfold Hills, Antarctica, and Macquarie Island [1984, p.173-182, eng] 45-2983
- Selkirk, P.M.  
Holocene climates of the Vestfold Hills, Antarctica, and Macquarie Island [1984, p.173-182, eng] 45-2983
- Selmana, P.V.  
Geophysics in the study of permafrost [1990, p.355-384, eng] 45-668  
Radar detection of ice wedges in Alaska [1982, 15p., eng] 45-3021  
Radon measurements as indicators of permafrost distribution [1990, p.331-336, eng] 45-1622
- Sel'tser, F.A.  
Large-scale atmospheric processes and medium-range forecasting of weather in the Arctic [1989, 253p., rus] 45-1573
- Selvadurai, A.P.S.  
Low temperature fracture mechanics of viscoelastic pavement structures [1990, p.183-212, eng] 45-3497
- Semenenko, M.N.  
Activity of microorganisms oxidizing hydrocarbons assayed in natural waters [1989, p.658-662, rus] 45-3138
- Semenov, I.U.N.  
Equipment for underwater surveys of hydraulic structures using acoustics [1989, p.13-20, rus] 45-81
- Semenov, V.I.U.  
Heat exchange of a bank of tubes in the transverse flow of liquid complicated by the formation of the solid phase of the heat carrier [1990, p.567-571, eng] 45-1683
- Semtser, A.J., Jr.  
Numerical study of interannual ocean forcing on arctic ice [1991, p.4589-4603, eng] 45-2673
- Sea, D.  
Influence of shape on iceberg wave-induced velocity statistics [1990, p.263-269, eng] 45-716  
Two-dimensional numerical modelling of large motions of floating bodies in waves [1989, p.257-277, eng] 45-967
- Seibetta, E.  
Control of plastic shrinkage cracking in cold weather [1991, p.49-53, eng] 45-1984
- Seigoka, M.  
Experimental study of microwave transmission in snowpack [1990, p.915-921, eng] 45-369
- Seigupta, M.  
Design engineering problems of surface coal mines in arctic Alaska [1990, p.735-743, eng] 45-175  
Slope stability in arctic surface mines [1990, p.154-159, eng] 45-1524
- Seigupta, S.K.  
Textural characteristics of cloud- and ice-covered surfaces in polar regions [1989, p.2773-2776, eng] 45-303
- Seichikina, M.G.  
Microelements in Siberian soils [1986, p.115-131, rus] 45-608
- Sein, B.V.  
Features of the modern structure of the arctic continental border of Eurasia [1988, p.5-10, rus] 45-679  
Tectonics of the Barents-Kara platform [1988, p.10-18, rus] 45-680
- Seppälä, M.  
Deeply dissected tundra polygons on a glacio-fluvial outwash plain, northern Ungava Peninsula, Quebec [1991, p.111-117, eng] 45-2997
- Sequeira, R.  
Note on the consumption of acid through cation exchange with clay minerals in atmospheric precipitation [1991, p.487-490, eng] 45-3554
- Serandrei Barbero, R.  
Statistical analysis of historical data at the Giulie Alps glacier terminus and their correlation with climatic data [1989, p.139-149, ita] 45-1987
- Serduk, D.A.  
Forming pit reservoirs in permafrost by contour blasting [1991, p.34-36, rus] 45-2954
- Serdukov, V.I.  
Twenty-sixth Soviet Antarctic Expedition. Studies of the 1980-81 season [1988, 140p., rus] 45-2018
- Serebrianyi, L.R.  
Climate change and glacier fluctuation during the last 1,000 years in the southern mountains of the USSR [1991, p.1-12, eng] 45-2434  
Study of glacier fluctuations in Tien Shan as a trend in glaciological predictions [1989, p.87-91, rus] 45-1040
- Seredin, M.M.  
Requirements for protection of DC ice melting units on overhead lines [1989, p.40-44, eng] 45-2567
- Seregin, N.V.  
Mathematical modelling of the interaction between permafrost and a deposit of natural gas hydrates [1990, p.73-84, rus] 45-322  
Typification of engineering effects in permafrost regions using numerical criteria [1989, p.65-69, rus] 45-107
- Sergeev, B.M.  
Effect of gelatin on the kinetics of hydrolysis of P-nitrophenyl acetate in frozen aqueous solutions [1991, p.978-983, eng] 45-3775
- Sergeev, B.P.  
Geocryological problems in the economic development of shallow-water areas of the arctic coast [1987, p.3-8, rus] 45-569  
Properties of snow cover in northeastern Western Siberia [1990, p.18-28, rus] 45-1197
- Sergeev, E.M.  
Development of chairs of engineering geology, hydrogeology, and cryopedology in the geology department [1989, p.47-59, eng] 45-880
- Sergeev, G.B.  
Effect of gelatin on the kinetics of hydrolysis of P-nitrophenyl acetate in frozen aqueous solutions [1991, p.978-983, eng] 45-3775
- Serreze, M.C.  
June cloud cover over the Arctic Ocean [1990, p.2397-2400, eng] 45-1992  
Radiation and cloud observations on a high arctic plateau ice cap [1987, p.162-168, eng] 45-10  
Sea ice concentrations in the Canada Basin during 1988: comparisons with other years and evidence of multiple forcing mechanisms [1990, p.22,253-22,267, eng] 45-1414  
Topoclimatic studies of a high arctic plateau ice cap [1987, p.149-158, eng] 45-8
- Severaki, E.V.  
Thermal regime and cryogenic structure of coarse clastic deposits in northern Tien Shan [1990, p.54-58, rus] 45-2706
- Severaki, I.V.  
Avalanche hazard regions in Kazakhstan [1990, 170p., rus] 45-2205
- Sevrak, B.  
Hydrologic bibliography of Switzerland for 1989 [1989, p.145-164, ger] 45-2766
- Seyfried, M.S.  
Searching for chaotic dynamics in snowmelt runoff [1991, p.1005-1010, eng] 45-3549  
Spatial and temporal influence of soil frost on infiltration and erosion of sagebrush rangelands [1990, p.991-997, eng] 45-3696
- Sgibnev, V.V.  
Principles for correlating Quaternary events in southern USSR [1991, p.96-100, rus] 45-3439
- Shabtaie, S.  
Force, mass, and energy budgets of the Cray Ice Rise Complex, Antarctica [1987, p.218-230, eng] 45-18
- Shafer, B.  
Proceedings of the 58th annual meeting, Sacramento, CA, April 17-19, 1990 [1990, 170p. + appends., eng] 45-2114
- Shafiq, S.D.  
Steel gallery supports for construction in the north [1990, p.12-14, rus] 45-800
- Shaglia, A.L.  
Concrete structures with nonmetallic reinforcements [1990, 143p. (Pertinent p.88-96), rus] 45-984
- Shahboudaghi, F.  
Impact of cold weather on building construction scheduling [1991, p.230-239, eng] 45-2336
- Shakhov, S.M.  
Pollution of the environment by fluorine in the Far North [1989, p.95-100, rus] 45-739
- Shakov, N.A.  
Initial period of operation of the channel dam of the Kureika hydroelectric station [1990, p.578-583, eng] 45-2293
- Shalaev, I.U.A.  
Use of thermosiphons in meliorative development of central Yakutia [1987, p.117-126, rus] 45-581
- Shalginova, I.T.  
Frozen type filled ash dump [1990, p.77-83, rus] 45-2248
- Shamuratdinov, V.N.  
Time and space distribution of initial gamma-field levels in Western Tien Shan [1990, p.61-71, rus] 45-1105
- Shao, W.Z.  
Preliminary studies on the temperature in the surface layer of Guozha Glacier and Chongce Ice Cap in the West Kunlun Mountains, China [1990, p.87-91, eng] 45-201
- Shapiro, M.A.  
Polar lows over the Gulf of Alaska in conditions of reverse shear [1991, p.551-572, eng] 45-3772
- Shapley, C.G.  
Tire force generation on ice [1989, p.199-207, eng] 45-1233
- Shariff, M.B.  
Chaos in continuous-mode icebreaking [1991, p.131-144, eng] 45-3420
- Sharitz, R.R.  
Freshwater wetlands and wildlife [1989, 1265p., eng] 45-1400
- Sharma, A.K.  
Retrieval of total precipitable water over high latitude regions using radiometric measurements near 90 and 183 GHz [1991, p.179-184, eng] 45-1598
- Sharma, P.D.  
Water and sediment yields into the Sutlej River from the High Himalaya [1991, p.87-100, eng] 45-3885
- Sharma, R.K.  
High speed numerical technique to solve coupled moving boundary value heat problems [1990, p.1-8, eng] 45-1080
- Sharpe, D.R.  
Moraine formation in northwestern Ontario: product of sub-glacial fluvial and glaciolacustrine sedimentation [1990, p.1478-1486, eng] 45-2482
- Shatalina, I.N.  
Accumulation of ice on slopes of pumped storage plant basins [1990, p.442-448, eng] 45-3597
- Shata, M.M.  
Experiment in cryogenic-landscape mapping of southern Yakutia [1987, p.49-55, rus] 45-574

- Shavlov, A.V.**  
Anomalies in the viscosity of amorphous ice [1989, p.1206-1207, eng] 45-1026
- Shaw, J.**  
Comment and reply on "Drumlins, subglacial meltwater floods, and ocean responses" [1990, p.804-805, eng] 45-618  
Subglacially formed dunes with bimodal and graded gravel in the Trenton drumlin field, Ontario [1991, p.21-34, eng] 45-3825
- Shaw, V.L.**  
Evaluation of ice conditions in the Northumberland Strait using C and X band SAR imagery [1989, p.1142-1146, eng] 45-262
- Shaw, W.J.**  
Case study of atmospheric boundary layer mean structure for flow parallel to the ice edge: aircraft observations from CEAREX [1991, p.4691-4708, eng] 45-2680
- Shcherbakov, F.A.**  
Current problems in Quaternary geology of the Barents Sea [1990, p.76-93, rus] 45-2876
- Shcherbakov, I.U.A.**  
Ice pattern recognition on space photos including drift [1990, p.386-391, eng] 45-2911
- Shcherbakov, S.M.**  
Improving safety and control methods for the stability of main gas pipelines in the cryolithozone [1990, 72p., rus] 45-1706
- Shchitaskii, V.A.**  
Territorial plans for the environmental protection of gas- and oil-production areas in Western Siberia and the Far North, and aspects of the authors views on their fulfillment [1989, p.107-112, rus] 45-108
- Shchukin, G.G.**  
Radiometeorological studies in marine conditions [1990, 206p., rus] 45-1090
- Shea, J.R.**  
Salinity tolerance and osmoregulation of the arctic marine amphipods *Onisimus litoralis* (Kroyer) and *Anonyx nugax* (Phipps) [1990, p.275-281, eng] 45-3357
- Sheikina, I.V.**  
Features of thermophysical properties of saline frozen soils [1990, p.20-24, rus] 45-2885
- Sheinkman, A.N.**  
Study of the frost resistance of concrete with the plasticizer TOP-2 [1990, p.28-30, rus] 45-31
- Shell, R.R.**  
Morphology of a multi-year ice ridge in the High Arctic [1989, p.1123-1128, eng] 45-901
- Shea, H.**  
Algal and foram incorporation into new sea ice [1987, p.1736, eng] 45-3410
- Shea, H.T.**  
Discrete element simulations of river ice transport [1990, p.564-574, eng] 45-3607  
Dynamic transport of river ice [1990, p.659-671, eng] 45-2251  
Dynamic transport of river ice [1990, p.659-671, eng] 45-2251  
Mathematical model for ice processes in river networks [1990, p.726-734, eng] 45-3623  
Mathematical model for river ice processes [1991, p.851-867, eng] 45-3382  
River ice research in China [1991, p.282-293, eng] 45-2340  
Sediment enrichment of coastal ice covers [1990, p.86-96, eng] 45-3567  
Two-dimensional surface drift model for river ice [1991, p.355-362, eng] 45-2347
- Shen, L.T.**  
Effects of temperature and strain rate on uniaxial compressive strength of natural fresh water ice [1990, p.141-146, chi] 45-454
- Shen, M.**  
Soil-pipe interaction during frost heaving around a buried chilled pipeline [1991, p.11-21, eng] 45-2318
- Shen, W.**  
Experimental study of ice expanding pressure [1991, p.187-190, eng] 45-3168
- Shender, N.I.**  
Algorithm for an accelerated search for a periodically stabilized regime in the solution of a Stefan problem without initial conditions [1990, p.105-110, rus] 45-1206
- Sheng, W.K.**  
Freezing point of loess in Lanzhou, China [1990, p.105-115, chi] 45-452
- Shentzis, I.D.**  
Long range forecasting of runoff from the Murgab and Tedzhen Rivers during the growing season [1990, p.129-144, rus] 45-997  
Operational evaluation of snow reserves in the forecasting of runoff from mountain rivers based on mathematical models [1990, p.96-100, rus] 45-1743
- Shentzis, I.D.**  
Mathematical models for long-term prediction of mountainous river runoff: methods, information and results [1990, p.487-500, eng] 45-2991
- Sheppard, B.E.**  
Field test results on a precipitation occurrence and identification sensor [1991, p.348-351, eng] 45-1596
- Sheppard, R.P.**  
Cryogenic properties of soils and rocks: 2. The influence of water types on the uniaxial mechanical behaviour of clays [1991, p.211-225, eng] 45-3402
- Sheremet'ev, A.N.**  
Measuring the velocity of electromagnetic wave propagation in a glacier on Dome B in Antarctica [1989, p.59-64, rus] 45-1490  
Radar measurements of the thickness and movement velocity of ice cover in the area of Dome B [1989, p.65-71, rus] 45-1491
- Sherif, S.A.**  
Semi-empirical transient method for modeling frost formation on a flat plate [1990, p.15-23, eng] 45-3867
- Sherstink, B.F.**  
Thermal drilling in a permafrost zone [1989, p.24-29, rus] 45-708
- Sherstov, V.A.**  
Improving the underground development of thawed and frozen placers [1989, 162p., rus] 45-3000
- Shesterkin, V.P.**  
Transformation of the chemical composition of soil and ground waters in freezing swamps of the Slavyanka settlement [1989, p.149-154, rus] 45-2447
- Shesternev, D.M.**  
Structure and properties of rocks in the Udokan cryolithozone [1990, 124p., rus] 45-2034
- Shevchenko, I.A.**  
Laying pile foundations in northern regions [1991, p.20-22, rus] 45-2952
- Sherchuk, S.S.**  
Results of experiments on the interaction between a snow layer and retaining structures [1990, p.26-31, rus] 45-3006
- Shervtsov, I.U.V.**  
Designing electrical grounding for permafrost with inclined interface layers [1989, p.83-84, rus] 45-1167
- Shi, J.**  
Simulation of sub-pixel terrain effects on radar backscattering of snow [1989, p.1009-1011, eng] 45-254
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Model test of ice forces [1990, p.117-123, chi] 45-453
- Shi, Y.F.**  
Last glaciation and maximum glaciation in Qinghai-Xizang Plateau: a controversy to M. Kuhle ice sheet hypothesis [1990, p.1-16, chi] 45-458
- Shi, Y.X.**  
Effects of temperature and strain rate on uniaxial compressive strength of natural fresh water ice [1990, p.141-146, chi] 45-454
- Shian, S.Y.**  
Surface waters of North America; influence of land and vegetation on streamflow [1990, p.55-80, eng] 45-2145
- Shibata, T.**  
Fraass breaking point test: automatic testing and an examination of asphalt quality [1990, p.10-17, jpn] 45-1666
- Shibaya, K.**  
Application of GPS relative positioning for height determination above sea level in the antarctic marginal ice zone [1990, p.149-162, eng] 45-2305  
Status report for the development of the antarctic penetrator: No.1. 1989-year program [1991, p.92-117, jpn] 45-3397
- Shidel, T.**  
Creeping of snow deposited on the slope [1986, p.404-418, eng] 45-3724  
Settling force of deposited snow [1986, p.350-383, eng] 45-3722
- Shields, D.**  
Activation energy for creep of spray ice [1991, p.42-49, eng] 45-2419
- Shields, D.H.**  
Model for attenuating creep of frozen sand [1991, p.145-161, eng] 45-3421
- Shiels, W.E.**  
Studies of primary production in the eastern Bering Sea [1972, p.199-216, eng] 45-3233
- Shigenoba, J.**  
Strength characteristics of rocks after having been at low temperature [1982, p.335-342, jpn] 45-115
- Shih, L.Y.**  
Mathematical modelling of icebreaking pattern based on the elastic wave theory [1990, p.811-820, eng] 45-3631  
Modelling of ship penetration into a mush ice field [1991, p.293-300, eng] 45-2987
- Shiklomanov, I.A.**  
Drainage effect on the environment [1988, p.66-71, eng] 45-767
- Shilin, A.G.**  
Effect of halogens on the ice-forming activity of aerosols [1989, p.59-64, rus] 45-27  
Efficiency of ice-forming aerosol generators [1989, p.46-59, rus] 45-26  
Influence of iodine vapor on ice-forming activity of aerosols of various substances [1990, p.500-502, eng] 45-1927
- Shilnikov, V.**  
Sea ice observations from the Winter Weddell Gyre Study-'89 [1991, 161p., eng] 45-2903
- Shilts, W.W.**  
Geochemical-mineralogical profiles through fresh and weathered till [1990, p.187-216, eng] 45-2552
- Shimada, K.**  
Studies on the settling force of snow on the legs of iron transmission towers [1986, p.384-403, eng] 45-3723
- Shimada, Y.**  
Construction of data-base on observation of natural wet snow accretion and some considerations on it [1988, p.79-83, eng] 45-1316
- Shimizu, K.**  
Indoor test of ice and snow tires on iced drum—development of tester and characteristics of coated ice for test [1989, p.47-52, eng] 45-1213
- Shin, R.T.**  
Remote sensing of sea ice [1990, p.208-211, eng] 45-1132
- Shinoda, N.**  
Impact force of an avalanche [1986, p.455-462, eng] 45-3729
- Shiomi, Y.**  
Equation of state and metallization of ice under very high pressure [1990, p.8107-8111, eng] 45-992
- Shiotani, M.**  
Snowstorm [1986, p.56-67, eng] 45-3706
- Shiptov, E.V.**  
Tectonics of the Barents-Kara platform [1988, p.10-18, rus] 45-680
- Shiple, S.T.**  
Climate measurements by the EOS Geoscience Laser Ranging System [1991, p.17-22, eng] 45-1512
- Shipp, R.C.**  
Depositional sequence modeling of late Quaternary geologic history, west-central Maine coast [1989, p.29-46, eng] 45-2057  
Geomorphology and late Quaternary evolution of the Saco Bay region [1989, p.47-65, eng] 45-2058  
Submerged shoreline on the inner continental shelf of the western Gulf of Maine [1989, p.11-28, eng] 45-2056
- Shipping in ice**  
Shipping in ice [1990, p.41-43, eng] 45-914
- Shirate, S.**  
Statistical study on sea ice in the Okhotsk Sea observed by GMS for 10 years [1989, p.43-58, eng] 45-718
- Shirokov, V.M.**  
Ice and thermal conditions of small flatland reservoirs [1990, p.101-104, rus] 45-1744
- Shirooka, R.**  
Morphological structure of snowburst in the winter monsoon surges [1990, p.677-686, eng] 45-2532
- Shishov, V.N.**  
Ecological monitoring of oil-gas construction in the cryolithozone [1990, p.21-23, rus] 45-383  
Improving safety and control methods for the stability of main gas pipelines in the cryolithozone [1990, 72p., rus] 45-1706
- Shkarin, I.U.P.**  
Results of measurements and calculations of high-frequency parameters of a 220 kV power transmission line passing over permafrost [1986, p.28-34, eng] 45-2557
- Shkhhinek, K.N.**  
Determining loads from adhered ice on a support column system when measuring the water level [1987, p.76-80, rus] 45-1566  
Determining the bending moments acting on a system of vertical circular cylinders from the ice floe side [1988, p.140-146, rus] 45-1517
- Shkodkin, A.V.**  
Activation of ice-forming aerosols, generated by the burning of pyrotechnical compounds [1989, p.41-46, rus] 45-25  
Effect of halogens on the ice-forming activity of aerosols [1989, p.59-64, rus] 45-27  
Efficiency of ice-forming aerosol generators [1989, p.46-59, rus] 45-26  
Influence of iodine vapor on ice-forming activity of aerosols of various substances [1990, p.500-502, eng] 45-1927
- Shkol'nikov, V.M.**  
Synthetic products as basic components of low-pour motor oils [1990, p.189-192, eng] 45-1385
- Shkurko, A.M.**  
Borehole gas sampler operation control and methods of gas sampling in ice sheets [1990, p.73-79, rus] 45-2489  
Selection of CO<sub>2</sub> samples for the determination of the absolute age of ice sequences using the radio carbon method [1989, p.122-126, rus] 45-1046
- Shmarova, I.N.**  
Zoning of Kazakhstan territory according to dates of river freezeup [1989, p.93-102, rus] 45-2278
- Shmatkova, A.A.**  
Creep and strength of ice cover subjected to loads and dies [1989, p.174-187, rus] 45-1504  
Transient creep of an ice sheet lying on a hydraulic base under a concentrated load [1991, p.793-799, eng] 45-3774
- Shoba, S.A.**  
Autonomous taiga soil formation on the southwest coast of the Sea of Okhotsk [1990, p.24-35, eng] 45-1709  
Role of freezing in comminution of primary minerals of podzolic soils [1991, p.107-111, eng] 45-3816

- Shoda, K.**  
Study on the effects of the settling force of snow on electric poles, stays and transmission towers [1986, p.289-326, eng] 45-3720
- Shoda, M.**  
Sleet jump of overhead transmission wires due to falling of accreted snow and ice [1986, p.211-225, eng] 45-3714  
Studies on snow accretion [1986, p.102-150, eng] 45-3709
- Shoemaker, E.M.**  
Ice topography over subglacial lakes [1990, p.323-329, eng] 45-1621  
Subglacial boundary-layer regelation mechanism [1990, p.263-268, eng] 45-1535
- Shoji, H.**  
Core processing, analysis and transportation procedures at Site J, Greenland (JAGE-89) [1991, p.129-141, jpn] 45-3398  
Ice core analysis [1990, p.99-112, jpn] 45-113
- Shokr, M.E.**  
Evaluation of second-order texture parameters for sea ice classification from radar images [1991, p.10,625-10,640, eng] 45-3312  
Texture measures for sea-ice classification from radar images [1989, p.763-768, eng] 45-247
- Shoop, S.A.**  
Microscopic observations of snow deformation [1990, p.27-38, eng] 45-2184  
Wheels and tracks in snow: validation study of the CRREL shallow snow mobility model [1990, 72p., eng] 45-1510
- Shope, W.G.**  
New hydrologic instrumentation in the U.S. Geological Survey [1991, p.739-747, eng] 45-2383
- Short, S.K.**  
Steppe vegetation on south-facing slopes of pingos, central arctic coastal plain, Alaska, U.S.A. [1991, p.170-188, eng] 45-3482
- Shoshina, V.M.**  
Heavy snowfalls in the territories of the Ukraine and Moldavia [1989, p.110-118, rus] 45-828
- Shuchman, R.A.**  
Digital technique to estimate polynya characteristics from synthetic aperture radar sea-ice data [1987, p.243-245, eng] 45-21  
Discrimination of sea ice types using SAR backscatter statistics [1989, p.381-385, eng] 45-236  
Microwave and physical properties of sea ice in the winter marginal ice zone [1991, p.4573-4587, eng] 45-2084
- Shul'kin, V.M.**  
Chemical composition of snow cover as an indicator of gas and dust emissions [1981, p.101-109, rus] 45-207
- Shul'zhenko, I.U.P.**  
Studies into aging of the roofing coatings on the basis of chlorosulfopolyethylene and forecasting of their durability [1991, p.327-334, eng] 45-2458
- Shumilov, I.U.V.**  
Results of and problems in the development of thermokarst lakes in the Arctic [1990, p.20-26, rus] 45-3032
- Shumskii, P.A.**  
Thermomechanics of the East Antarctic Ice Sheet [1990, p.44-51, rus] 45-1735
- Shushlebin, A.I.**  
Ice deformation by a ship-raising pontoon [1989, p.238-243, rus] 45-1509
- Shatov, V.A.**  
Experimental investigations and calculations of snow cover formation and melting in field catchment [1990, p.327-337, eng] 45-3686  
Methods of evaluating the hydrological role of snow management [1990, p.15-23, eng] 45-1387
- Shavlov, I.U.V.**  
Exploitation of mineral resources in the north [1989, p.27-32, eng] 45-329
- Shyam Sunder, S.**  
Crack nucleation due to elastic anisotropy in porous ice [1990, p.249-265, eng] 45-1617  
Effect of grain size variation on damage in polycrystalline ice [1991, p.542-553, eng] 45-2365  
On the constitutive modeling of transient creep in polycrystalline ice [1990, p.267-294, eng] 45-1618
- Shyong, W.**  
Surging glacial flows [1990, p.195-223, eng] 45-1772
- Siegel, B.L.**  
Experimental measurements of the effects of frost formation on heat exchanger performance [1990, p.1-7, eng] 45-3865
- Siemek, J.**  
Modelling temperature distribution in water-bearing formations, especially by freezing [1988, p.310-313, ger] 45-1477
- Stevens, J.**  
Radio-echo sounding survey across the Allan Hills Icefield [1990, p.50-52, eng] 45-1084
- Sigaev, A.I.**  
Improving the underground development of thawed and frozen placers [1989, 162p., rus] 45-3000
- Sigg, A.**  
CO<sub>2</sub> measurements from polar ice cores: more data from different sites [1991, p.91-96, eng] 45-2587  
Evidence for a 50% increase in H<sub>2</sub>O<sub>2</sub> over the past 200 years from a Greenland ice core [1991, p.557-559, eng] 45-3525  
New methods in ice core processing [1989, p.151-157, eng] 45-1468
- Signorini, S.**  
Simulation studies help predict oil impact in Alaska offshore areas [1990, p.41-44, eng] 45-3546
- Signorov, I.U.A.**  
Numerical modeling of recurrent thermal perturbations of permafrost—prevention of collapse of oil wells drilled in permafrost [1989, p.74-82, eng] 45-2585
- Silant'eva, T.P.**  
Improving the method of calculating the breakup of ice cover on rivers and reservoirs [1989, p.113-120, rus] 45-2281
- Silvennoinea, K.**  
Frost resistance of clay bricks; test method proposal [1990, 14p., eng] 45-3854
- Silver, C.S.**  
One earth, one future: our changing global environment [1990, 196p., eng] 45-1711
- Silver, M.**  
Biology and chemistry of generation, prevention and abatement of acid mine drainage [1989, p.753-760, eng] 45-1891
- Simatos, D.**  
Glass transition of the amorphous phase in frozen aqueous systems [1991, p.239-247, eng] 45-2937
- Simmonds, J.**  
1987-1988 City of Ottawa, Ontario, Canada deicer field trials [1989, p.27-38, eng] 45-811
- Simmons, A.J.**  
Calculation of geopotential and the pressure gradient in the ECMWF atmospheric model: influence on the simulation of the polar atmosphere and on temperature analyses [1991, p.29-38, eng] 45-3478
- Simões, J.C.**  
Comments on "6000-year climate records in an ice core from the Høghetta ice dome in northern Spitsbergen" [1990, p.353-356, eng] 45-1549
- Sims, J.F.M.**  
Overview of coal mining in Alaska [1989, p.3-8, eng] 45-326
- Singh, K.P.**  
Influence of the atmosphere [1990, p.11-53, eng] 45-2144
- Sinha, A.K.**  
Slope stability in arctic surface mines [1990, p.154-159, eng] 45-1524
- Sinha, N.K.**  
Crystallography of impacted ice [1990, p.652-660, eng] 45-3615  
Deformation of a floating drilling platform made of built-up ice [1991, p.1-8, eng] 45-3141  
Deformation of natural ice island ice under constant strain rate uniaxial compression [1990, p.238-251, eng] 45-3580  
Energy dissipation through melting in large scale indentation experiments on multi-year sea ice [1991, p.157-161, eng] 45-3164  
Ice and steel—a comparison of creep and failure [1989, p.201-212, eng] 45-518  
Ice cover strength decay using borehole indenter [1990, p.735-744, eng] 45-3624  
*In situ* multi-year sea ice strength using NRCC borehole indenter [1991, p.229-236, eng] 45-3174  
Microstructure and mechanical behaviour of ice [1991, p.519-530, eng] 45-2363  
Proceedings. Vol.4 [1991, 287p., eng] 45-3140
- Sin'kevich, S.A.**  
Characteristics of snow accumulation on the Austfonna (Spitsbergen) [1989, p.190-194, rus] 45-1058  
Hydrothermal regime of the ice-divide area of Austfonna, Nordaustlandet [1990, p.133-141, rus] 45-1752  
Peculiarities of snow accumulation on Austfonna (Svalbard) [1989, p.279-285, eng] 45-475
- Sinitsin, S.**  
Verification of sea-ice velocity measurements obtained from an acoustic doppler current profiler [1989, p.1304-1307, eng] 45-449
- Sitton, P.O.**  
Geohydrology and ground-water geochemistry at a sub-arctic landfill, Fairbanks, Alaska [1990, 25p., eng] 45-2914
- Sittonen, M.**  
Decreasing of wearing effect of studded tires on road pavements [1989, p.217-221, eng] 45-1235
- Sizova, E.A.**  
Creating a computer radar map of Antarctica [1989, p.126-134, rus] 45-2758
- Sjohlad, S.G.**  
Continuum damage modelling of polycrystalline ice [1990, p.449-463, eng] 45-3598
- Skachkov, I.U.B.**  
Role of heat balance studies in geocryological forecasting [1987, p.18-25, rus] 45-371
- Skaggs, R.H.**  
Snow depth required to mask the underlying surface [1991, p.387-392, eng] 45-3018
- Skaret, G.**  
Growth and survival of seedlings of various *Picea* species under northern climatic conditions [1990, p.69-81, eng] 45-3207
- Skarlato, O.A.**  
Comparative characteristics of some ecosystems of the upper regions of the shelf in tropical, temperate and arctic waters [1973, p.219-234, eng] 45-3389
- Skelton, P.L.I.**  
Approximate predictions of ice accretion along conductors of finite torsional stiffness and control of rotation using counterweights [1990, p.965-980, eng] 45-3400  
Simple icing-clock model for the ice-accretion kinetics on an overhead transmission line [1988, p.224-226, eng] 45-1343  
Theoretical model for rime ice accretion on a single conductor and twin conductor bundles using free streamline theory [1988, p.214-218, eng] 45-1341  
Theoretical model of ice accretion on an overhead line conductor causing twisting of the conductor [1988, p.219-223, eng] 45-1342
- Skinner, J.F.**  
Ice under pressure [1990, p.789-790, eng] 45-989
- Sklash, M.G.**  
Environmental isotope studies of storm and snowmelt runoff generation [1990, p.401-435, eng] 45-1182
- Skorodumov, L.N.**  
Recurrent infiltration ice on the northern shore of the Sea of Okhotsk [1989, p.132-136, rus] 45-2499
- Skowronski, J.**  
Jet streak circulations and the Valentine's Day ice storm of 1990 in central Illinois [1991, p.88-89, eng] 45-1934
- Skretteberg, R.**  
Discharge measurements structures under arctic conditions: design and construction considerations [1990, p.699-708, eng] 45-171
- Skrjabin, P.N.**  
Distribution of surface radiation balance in northeastern Western Siberia [1990, p.28-33, rus] 45-1198  
Role of heat balance studies in geocryological forecasting [1987, p.18-25, rus] 45-371
- Skudrzyk, F.J.**  
Mining in the Arctic [1989, 244p., eng] 45-325
- Sladen, J.A.**  
Geotechnical monitoring for an arctic offshore pipeline [1990, p.385-394, eng] 45-1961
- Slaughter, C.W.**  
Aufeis formation and prevention [1990, p.433-458, eng] 45-416  
Climatic characteristics of the taiga in interior Alaska [1986, p.9-21, eng] 45-1589
- Slavin-Borovskii, V.B.**  
Methods and results of forecasting the temperature of the active layer of rocks during general development of territory in the northeastern European part of the country [1989, p.20-31, rus] 45-2005
- Slaymaker, O.**  
Climate change and erosion processes in mountain regions of western Canada [1990, p.171-182, eng] 45-620
- Slepak, M.E.**  
Single pile and pile group in permafrost [1991, p.44-53, eng] 45-2321
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Canada-USSR Arctic Science Exchange Programme: an historical perspective of arctic cooperation [1991, p.235-257, eng] 45-3336
- Sloan, C.E.**  
Permafrost and thermokarst; geomorphic effects of subsurface water on landforms of cold regions [1990, p.211-218, eng] 45-2593
- Slocumb, T.**  
Radar sounder (final report Aug. 1987-Sep. 1988) [1988, 139p., eng] 45-316
- Slota, J.R.**  
Status of AirLand Battlefield Environment (ALBE) winter tactical decision aids [1990, 14p., eng] 45-1978
- Slupetzky, H.**  
Cathedral Massif Glacier map 1:5000 [1988, p.125-136, ger] 45-1093  
Velocity measurements at the Obersulzbachkees (Venediger Group) in 1985/86 and 1986/87 [1988, p.199-202, eng] 45-1098
- Smadi, M.**  
Properties of asphalt-oil shale ash bituminous mixtures under normal and freeze-thaw conditions [1989, p.54-62, eng] 45-1154
- Smagolov, T.**  
Effect of erosion and deflation on the structure of soil cover in semi-arid and arid Kazakhstan [1990, 91p., rus] 45-2244
- Smart, J.R.**  
Reviewing meteorological data on the DARE-II workstation [1991, p.157-163, eng] 45-1913
- Smayda, T.J.**  
Dark survival of autotrophic, planktonic marine diatoms [1974, p.195-202, eng] 45-3433

- Smiraglia, C.**  
Determination of surface velocity on the Val Pisella eastern rock glacier (upper Valtellina, central Alps) (1989, p.41-44, ita) 45-360  
Reports on the Glaciological Survey of 1988 (1989, p.155-204, ita) 45-2087
- Smirnov, I.P.**  
Frozen types of landscape structures in northwest Komsomols Island (Severnaya Zemlya) (1989, p.388-393, rus) 45-493
- Smirnov, V.I.**  
Analytical investigation of stationary and self-oscillation regimes of hail formation (1989, p.37-43, eng) 45-879  
Persistent accumulations of ice in the ocean (1989, p.271-278, eng) 45-474
- Smirnov, V.N.**  
Deformation and breakup of ice by the water stream from an icebreaker propeller (1989, p.206-213, rus) 45-1506  
History of the development of the relief of northern Chukotka (1989, p.73-88, rus) 45-2495  
Ice deformation by a ship-raising pontoon (1989, p.238-243, rus) 45-1509
- Smirnova, E.I.**  
Ultramicroscopic forms in the Barents Sea littoral mud (1973, p.138-140, rus) 45-3232
- Smith, A.M.**  
New geophysical results and preliminary interpretation of crustal structure between the Antarctic Peninsula and Ellsworth Land (1991, p.475-479, eng) 45-2949
- Smith, C.**  
Long-term temperature monitoring program, 1987: Scotia-Fundy, Gulf of St. Lawrence, and Newfoundland (1988, 491p., eng) 45-1275
- Smith, C.A.S.**  
Development of soil structure in some turbic cryosols in the Canadian low Arctic (1991, p.11-29, eng) 45-2664
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New admixtures for cold weather concreting (1991, p.200-209, eng) 45-2334
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Interaction of an ocean eddy with an ice edge ocean jet in a marginal ice zone (1991, p.4675-4689, eng) 45-2679
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Improved chamber for in situ measurement of primary productivity by sea ice algae (1982, p.522-524, eng) 45-3245
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Late Wisconsinian deglaciation of coastal Maine (1989, p.13-32, eng) 45-2063
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One-dimensional temperature modeling techniques: review and recommendations (1990, 17p., eng) 45-1698
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Potential effects of global climate change on the United States (1990, p.79-123, eng) 45-3296
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Small volume, short-incubation-time method for measurement of photosynthesis as a function of incident irradiance (1983, p.99-102, eng) 45-3248
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Advanced instrumentation for aircraft icing research (1990, 100p., eng) 45-597
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Thermal analysis of forced-air and thermosiphon cooling systems for the Inuvik airport expansion (1991, p.399-409, eng) 45-3538
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Extraction of ridge feature characteristics from SAR images of sea ice (1989, p.1129-1132, eng) 45-259
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Analysis of Norman Wells core samples. Final report (1987, 60p. + appends., eng) 45-384  
Development of thermokarst lakes during the Holocene at sites near Mayo, Yukon Territory (1990, p.161-176, eng) 45-1296
- Smith, N.D.**  
Effects of glacial surging on sedimentation in a modern ice-contact lake, Alaska (1990, p.1393-1403, eng) 45-894
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Use of central vehicle wash facilities in cold weather (1990, 22p., eng) 45-1973
- Smith, R.**  
Northstar 89 flight deck deicer and hot air wand evaluation on the U.S.S. America (CV66) (1989, p.397-407, eng) 45-547
- Smith, R.E.**  
Hudson Bay and Ungava Bay ice-melt cycles for the period 1963-1983 (1989, 48p., eng) 45-1280
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Heterotrophic activity and bacterial productivity in assemblages of microbes from sea ice in the high Arctic (1990, p.351-357, eng) 45-3361  
Nitrogen utilization in ice algal communities of Barrow Strait, Northwest Territories, Canada (1990, p.275-283, eng) 45-2033
- Vertical fine structure of particulate matter and nutrients in sea ice of the high Arctic (1990, p.1348-1355, eng) 45-434
- Smith, R.L., Jr.**  
Field deicing comparison of calcium magnesium acetate and salt during 1987-1988 in Wisconsin (1989, p.39-48, eng) 45-812
- Smith, S.D.**  
Remote monitoring of thermal structure and growth of shorefast ice off the Labrador coast (1991, p.123-130, eng) 45-3419
- Smith, S.L.**  
Polar zooplankton (1990, p.527-598, eng) 45-690
- Smith, T.G.**  
Interrelationships of Arctic Ocean mammals in the sea ice habitat (1975, p.11/129-11/136, eng) 45-3227  
Role of marine mammals in the arctic ecosystems: research objectives, needs and direction (1975, 11/137-11/145, eng) 45-3228
- Smith, T.R.**  
Brittle compressive failure of freshwater columnar ice under biaxial loading (1991, p.207-214, eng) 45-3171  
Wing cracks and brittle compressive fracture (1990, p.1955-1962, eng) 45-1168
- Smith, W.O., Jr.**  
Bacterioplankton in the marginal ice zone of the Weddell Sea: biomass, production and metabolic activities during austral autumn (1990, p.1145-1167, eng) 45-882  
Effects of environmental variation on sinking rates of marine phytoplankton (1989, p.262-270, eng) 45-3318  
Phytoplankton biomass and photosynthetic response during the winter-spring transition in the Fram Strait (1991, p.4549-4554, eng) 45-2671  
Polar oceanography. Part B: chemistry, biology, and geology (1990, p.407-760, eng) 45-687  
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Elsevier's dictionary of glaciology in four languages: English (with definitions), Russian (with definitions), French and German (1990, 336p., eng) 45-2091
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Proceedings. Vol.4 (1991, 287p., eng) 45-3140  
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- Stepanova, I.V.  
Forecasting midyear temperatures of coarsely dispersed soils in the territory of Chukotskiy Peninsula [1990, p.112-115, rus] 45-3042
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Morphogenesis of the brown alga *Desmarestia antarctica* cultivated under seasonally fluctuating antarctic daylengths [1991, p.65-78, eng] 45-3553
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Frozen and alive [1990, p.92-97, eng] 45-1017
- Storey, K.B.  
Frozen and alive [1990, p.92-97, eng] 45-1017
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Investigation of heat and mass transport during freezing in heat soils [1990, p.88-97, eng] 45-3051
- Støttrup-Andersen, U.  
ISO-Working Group No. 6, "Atmospheric icing of structures" [1988, p.344-346, eng] 45-1368
- Stout, J.R.  
Variability of macroinvertebrate community composition in an arctic and subarctic stream [1989, p.111-127, eng] 45-2611
- Strain, J.  
Boundary integral approach to unstable solidification [1989, p.342-389, eng] 45-973
- Strakhov, M.V.  
Laboratory studies of oriented growth of ice crystals in moving water streams [1989, p.144-153, rus] 45-1501  
Study on space-oriented crystal structures of arctic sea ice [1989, p.154-166, rus] 45-1502
- Strand, G.W.  
High-performance concrete in all-weather deck pours [1991, p.210-229, eng] 45-2335
- Strasel, E.S.  
Design criteria for oceanographic survey ships operated in the Marginal Ice Zone (MIZ) [1989, p.69-98, eng] 45-533
- Strauss, B.  
Very short range forecast of wet snow by means of the METEOTEL system. Experiment of winter 85-86 [1988, p.57-60, eng] 45-1311
- Stravers, J.A.  
Land-sea correlations and evolution of the Cambridge Fjord marine basin during the last deglaciation of northern Baffin Island [1991, p.72-90, eng] 45-2315
- Strazzulla, G.  
Determination of ice sublimation and sputtering yields by reflectance measurements [1991, p.307-313, eng] 45-2484
- Strelkova, M.S.  
Classification and diagnostics of soils in the subarctic Kola Peninsula [1989, p.4-18, rus] 45-1118
- Streten, N.A.  
Australian studies in antarctic weather and climate [1989, p.411-417, eng] 45-1012
- Stricker, G.D.  
Coal geology, coal quality, and coal resources in Permian rocks of the Beacon Supergroup, Transantarctic Mountains, Antarctica [1990, p.133-162, eng] 45-2809
- Stringer, W.  
Baltic Sea ice ridges studied by field measurements, synthetic aperture radar, airphotos and laser profilometer [1990, p.1130-1143, eng] 45-3660
- Strizhalo, V.A.  
Strength of cryogenic engineering alloys under electromagnetic loads [1990, 154p., rus] 45-1856
- Stroeven, A.P.  
Comparison of the mass balances and flows of Rabots Glacier and Storglaciären, Kebnekaise, northern Sweden [1990, p.113-118, eng] 45-1192
- Strong, J.P.  
Parallel algorithm for determining motion vectors in ice floe images by matching edge features [1988, p.343-347, eng] 45-606
- Strutt, I.  
Automatic computer controlled weather actuated camera system for the investigation of snow accretion on overhead lines [1988, p.282-286, eng] 45-1355
- Stuart, K.  
Evaluation of effects of deicing additives on properties of asphalt mixtures [1989, p.41-53, eng] 45-1153
- Stackenrath, R.  
Postglacial evolution of drainage in the middle and upper St. John River basin, Maine and New Brunswick [1989, p.135-142, eng] 45-2070
- Study of ice accretion in water  
Study of ice accretion in water [1986, p.497-500, eng] 45-3733
- Study on roads for the 21st century in snowy and cold regions  
Study on roads for the 21st century in snowy and cold regions [1990, p.5-24, jpn] 45-743
- Stuiver, M.  
104-meter oxygen-isotope record at J-9, Ross Ice Shelf, Antarctica [1990, p.95-96, eng] 45-1395  
Late Quaternary history of the southwestern Ross Sea: evidence from debris bands on the McMurdo Ice Shelf, Antarctica [1990, p.25-56, eng] 45-1686
- Sture, S.  
Performance of an earthquake motion simulator for a small geotechnical centrifuge [1991, p.361-368, eng] 45-3772
- Sturges, D.L.  
Icing affects fall discharge characteristics of a rangeland stream [1990, p.164-167, eng] 45-2138  
Snow fencing to increase streamflow on rangelands [1990, p.145-154, eng] 45-1179
- Sturm, H.J.  
Concrete pavement rehabilitation and overlay: Ontario's experience [1990, p.205-230, eng] 45-3514
- Sturm, M.  
Natural convection in the subarctic snow cover [1991, p.11,657-11,671, eng] 45-3463  
Role of thermal convection in heat and mass transport in the subarctic snow cover [1989, 209p., eng] 45-505
- Styron, B.K.  
Thermal drilling in a permafrost zone [1989, p.24-29, rus] 45-708
- Su, F.H.  
Icing on overhead transmission lines in cold mountainous district of Southwest China and its protection [1988, p.354-357, eng] 45-1370
- Su, S.  
Way of preventing structures from damage due to ice pressure [1990, p.858-863, eng] 45-3635
- Subbotin, R.S.  
Thermal regime of karst caves and tunnels in the Central Volga region [1990, p.38-41, rus] 45-2702
- Suchkov, V.E.  
Some characteristics of avalanche hazard periods and bench avalanches in the northern Kuriles [1990, p.381-393, rus] 45-1125
- Sucsy, P.S.  
User manual and listing of TAKU: a three-dimensional, time-dependent flow model for glaciers [1989, 85p., eng] 45-557
- Sudakova, N.G.  
Paleogeographical regularities of glacial lithogenesis [1990, 158p., rus] 45-1865
- Suetova, I.A.  
Reconstruction of the bedrock of Antarctica after deglaciation [1989, p.127-131, rus] 45-1047
- Sugarenko, G.G.  
Determination of roof bolting parameters for the space near the face in developing placer deposits with filling [1990, p.569-572, eng] 45-2932
- Sugawara, M.  
Study of frost melting on a heat pump heat exchanger [1990, p.570-583, eng] 45-2774
- Sugawara, N.  
Leakage current depending on the insulator shapes and their ice accreted conditions [1988, p.291-295, eng] 45-1357
- Sugawara, T.  
Snow Sapporo 21st Century Project [1990, p.1-20, eng] 45-3527

- Sugden, D.E.**  
Influence of hydroxyl-bearing minerals on the isotopic composition of ice from the basal zone of an ice sheet [1990, p.244-246, eng] 45-528  
Late Cenozoic glacial history of the Ross Embayment, Antarctica [1990, p.253-272, eng] 45-1443
- Sugimoto, Y.**  
Study on asphalt mats for cold regions [1990, p.263-268, jpn] 45-754
- Sui, J.X.**  
Experimental creep behaviors of the sea ice in a harbour of Liaodong Gulf [1991, p.83-86, eng] 45-3152
- Sui, J.Y.**  
Calculation of water level in a river reach with frazil ice jam [1990, p.756-765, eng] 45-3626
- Suito, K.**  
Equation of state and metalization of ice under very high pressure [1990, p.8107-8111, eng] 45-992
- Suiz, T.**  
Very short pulse C-band radar for crevasse detection [1991, p.103-107, eng] 45-3068
- Sukhanov, L.A.**  
Acoustic and seismic signals from snow avalanches [1990, p.67-71, rus] 45-321
- Sukhorukov, K.K.**  
Physical conditions of the melting of ice cover in the shallow arctic shelf [1989, p.214-222, rus] 45-1507
- Sukhorukova, S.S.**  
Quaternary glaciation in the Yenisey region in Siberia: general composition of moraines and paleogeographic reconstruction [1991, p.80-84, rus] 45-3437
- Sulaiman, F.**  
Numerical study of an underground heat tube [1989, 171p., eng] 45-508
- Sullivan, C.W.**  
*Bacterioplankton in the marginal ice zone of the Weddell Sea: biomass, production and metabolic activities during austral autumn* [1990, p.1145-1167, eng] 45-882  
Bio-optical model of antarctic sea ice [1991, p.10,581-10,592, eng] 45-3308  
Comparison of the irradiance response of photosynthesis and nitrogen uptake by sea ice microalgae [1991, p.201-210, eng] 45-2669  
Photosynthesis-irradiance relationships in microalgae associated with antarctic pack ice: evidence for in situ activity [1991, p.175-184, eng] 45-3015  
Physiology of sea ice diatoms. I. Response of three polar diatoms to a simulated summer-winter transition [1982, p.489-498, eng] 45-3320  
Physiology of sea ice diatoms. II. Dark survival of three polar diatoms [1983, p.157-160, eng] 45-3384  
Rates of photoadaptation in sea ice diatoms from McMurdo Sound, Antarctica [1991, p.367-373, eng] 45-3347
- Sultanaev, S.A.**  
Record snowfall in Issyk-Kul' in October 1982 [1990, p.35-41, rus] 45-1102
- Sultanov, E.S.**  
Microclimatic characteristics of karst caves in Pamir-Alai [1990, p.61-63, rus] 45-2708
- Sun, Z.C.**  
Calculation of water level in a river reach with frazil ice jam [1990, p.756-765, eng] 45-3626  
River ice research in China [1991, p.282-293, eng] 45-2340
- Suriñach, S.**  
Snow accretion in Catalonia: a climatological study [1988, p.277-281, eng] 45-1354
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Glaciological data bank: development, operation, and prospects for future development [1990, p.75-79, rus] 45-1739
- Susaki, E.**  
Frost forecast from local weather reports [1990, p.95-100, jpn] 45-746
- Sutherland, L.I.**  
Discrimination of sea ice types using SAR backscatter statistics [1989, p.381-385, eng] 45-236  
Microwave and physical properties of sea ice in the winter marginal ice zone [1991, p.4573-4587, eng] 45-2084  
SAR and passive microwave observations of the Odden during MIZEX'87 [1989, p.1539-1544, eng] 45-278
- Sutton, R.L.**  
Critical cooling rates to avoid ice crystallization in solutions of cryoprotective agents [1991, p.101-105, eng] 45-2261
- Suzuki, T.**  
Field tests on frost heaving damage of small sized U-trough [1990, p.163-171, jpn] 45-1663
- Sveinngesen, N.**  
Calibration of Nordic equipment for measurement of thermal conductivity [1988, 10p., nor] 45-3855
- Svensson, H.**  
Relict periglacial structures. Occurrences, age and development in different matrices on a coastal plain of southwestern Sweden [1990, p.79-91, eng] 45-1190
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CVS-cycle and average city trip emissions in temperatures below the FTP-range [1989, p.161-163, eng] 45-1229
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Space photos for the evaluation of engineering-geological conditions of Lower Irtysh lake-bog flatlands [1987, p.517-528, eng] 45-865
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Alaska's mineral industry, 1989 [1989, 100p., eng] 45-491
- Swamidas, A.S.J.**  
Two and three dimensional response of nonlinear soil under gravity structures [1991, p.253-260, eng] 45-3177
- Swanson, B.T.**  
Distinction between living and dead plant tissue: viability tests in cold hardness research [1990, p.194-211, eng] 45-2964
- Swanson, J.E.**  
Tazlina River meander loop—a case history [1983, p.231-239, eng] 45-2959
- Sweeney, J.F.**  
Arctic Ocean region [1990, 644p. + 11 maps and charts in a separate case, eng] 45-1688
- Swerpel, S.**  
Selected problems of the thermohaline structure and dynamics of the water masses in Norwegian and Greenland Seas [1990, p.3-16, eng] 45-2428
- Swift, C.T.**  
Microwave remote sensing in ice engineering [1990, p.66-78, eng] 45-3565
- Swift, R.N.**  
Concurrent remote sensing of arctic sea ice from submarine and aircraft [1989, 20p., eng] 45-563  
Top/bottom multisensor remote sensing of arctic sea ice [1991, p.2693-2709, eng] 45-2042  
Top/bottom multisensor remote sensing of arctic sea ice [1989, 56p., eng] 45-564
- Sy, A.**  
Warming in the Arctic [1991, p.385, eng] 45-2262
- Sydykov, Dzsh.**  
Geomorphology and paleogeography of the Malyy Naryn River basin [1989, 167p., rus] 45-735
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Determination of ice displacements from sequential SAR imagery [1989, p.1152-1155, eng] 45-264  
Estimation of the thickness of undeformed first year ice using radar backscatter [1989, p.2366-2369, eng] 45-295
- Sykes, P.**  
Antarctic iceberg size distribution: icebergs produced by the Wordie Ice Shelf [1989, 18p. + figs., eng] 45-948  
Comparative study of the oceanic temperature, salinity and sound-speed fields near ice faces [1989, 16p. + appends., eng] 45-947
- Sykes, R.B., Jr.**  
Lake Ontario Winter Storms Experiment (LOWS) and the Lake-Effect Snow Observation Network (LESON) report for the 1989-1990 snow season [1990, p.219-224, eng] 45-2201
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Effect of time and temperature on R-value of rigid polyurethane foam insulation manufactured with alternative blowing agents [1991, p.241-267, eng] 45-2582
- Symposium on the Tropospheric Chemistry of the Antarctic Region, Boulder, CO, June 3-6, 1991**  
Pre-conference abstracts [1991, 66p., eng] 45-2918
- Sysoev, I.U.M.**  
Design and construction of ash dumps [1990, 249p., rus] 45-2374  
Frozen type filled ash dump [1990, p.77-83, rus] 45-2248
- Syvitaki, J.P.M.**  
Land-sea correlations and evolution of the Cambridge Fiord marine basin during the last deglaciation of northern Baffin Island [1991, p.72-90, eng] 45-2315
- Szendzielorz, H.**  
Technical problems in deep-freeze planning and the deep-freezing process [1988, p.308-310, ger] 45-1476
- Szepeasy, G.**  
Hydraulic and morphological criteria of ice jamming at channel constrictions [1990, p.680-689, eng] 45-3618
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Comparison between different construction methods of ice islands [1991, p.9-15, eng] 45-3142  
Measurement of the average convective heat transfer coefficient and the drag coefficient for icing shaped cylinders [1988, p.147-151, eng] 45-1329
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Future industrial development in the Arctic and growing global environmental concern [1989, p.33-41, eng] 45-330
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Drifting snow [1990, p.95-145, eng] 45-407  
Estimating snow transport from wind speed records: estimates versus measurements at Prudhoe Bay, Alaska [1990, p.61-72, eng] 45-2122  
Measurement and evaluation of winter precipitation [1990, p.9-38, eng] 45-405  
Snow transport as a function of wind speed and height [1991, p.729-738, eng] 45-2382
- Tachiwaki, T.**  
Estimation of sublimation rate from ice disk on heating plate at low pressures [1990, p.2038-2040, eng] 45-2022
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Three dimensional expression of the influences of meteorological parameters on wet snow accretion model and some discussion on them [1988, p.175-179, eng] 45-1334
- Tada, H.**  
Present status and subject of roller compacted concrete pavement in Japan [1990, p.157-175, eng] 45-3512
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Design and analysis of ice load on power lines in mountainous regions [1988, p.65-69, eng] 45-1313
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Papal Front of 3 May 1987: a remarkable example of frontogenesis near the Alps [1991, p.125-150, eng] 45-3479
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Void formation in unidirectional solidification [1990, p.239-255, eng] 45-1422
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Free convection heat transfer along a horizontal ice cylinder immersed in seawater [1990, p.57-64, jpn] 45-697  
Free convection heat transfer around a horizontal ice cylinder formed through melting in saline water [1990, p.35-41, eng] 45-3869  
Melting heat transfer from a horizontal ice cylinder immersed in a quiescent saline water [1990, p.15-23, eng] 45-1164
- Taguchi, Y.**  
Experimental study on local ice pressures acting on structures [1990, p.1044-1055, eng] 45-3652
- Tahata, O.**  
Performance tests on tires for snow removal trucks [1990, p.203-208, jpn] 45-749
- Taillandier, J.M.**  
Implementation of anemographic methods in the region of Lioran, France [1990, p.1/27-1/33, fre] 45-1780  
Testing of windbreak models under natural blowing snow conditions in Quebec [1990, p.1/12-1/18, fre] 45-1778
- Takabe, N.**  
Tests on snowbreaks, windbreaks and obstacles to visibility: wind tunnel experiments on the Kaigen parking shelter at Toyotomi on National Highway 40 [1990, p.221-226, jpn] 45-752
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Antifrost system of windshield [1989, p.171-178, eng] 45-1231
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Simplification of cold weather concreting with new antifreezing admixtures (Part 4) [1989, p.14-21, jpn] 45-906  
Simplification of winter concreting with a new type of antifreeze admixture (Part 3) [1988, p.1-17, jpn] 45-910
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Approximate thermodynamics of the liquid-like layer on an ice sphere based on an interpretation of the wetting parameter [1990, p.446-455, eng] 45-795
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Observation of ice accretion on power transmission lines [1988, p.84-88, eng] 45-1317
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Borehole drilling for sewage disposal and rise of the hole's bottom at Asuka Station, East Antarctica [1990, p.145-155, jpn] 45-980
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Properties of snow deposited on mountains [1986, p.439-447, eng] 45-3727  
Various methods to prevent cornice formations [1986, p.261-269, eng] 45-3718
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Freezing characteristics of layered air-water flow in a horizontal circular tube [1989, p.47-55, jpn] 45-701
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Full year surface meteorological data at northwestern Tibetan Plateau using an automatic observation system [1990, p.73-85, eng] 45-200
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Investigative report on the observation characteristics of radar rain and snow gages [1988, p.53-58, jpn] 45-2506  
Snow deposition on the arms of an electric pole: model test [1986, p.240-251, eng] 45-3716  
Studies on accumulation of snow on different materials [1986, p.226-239, eng] 45-3715
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SEM observations of microparticles in antarctic ice cores [1990, p.31-53, eng] 45-197
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Phase transitions of water in brick during cooling 2: effects of cooling rate, presence of ice nucleation substances, and duration of time on phase transition behaviors [1987, p.1116-1119, eng] 45-778
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Development and testing of ice thickness gages: progress report [1990, p.293-298, jpn] 45-756
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Study on using snowmelt to develop farmland: tank model method [1990, p.153-156, jpn] 45-753
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Withstand voltage characteristics of insulator string covered with snow or ice [1991, p.1243-1250, eng] 45-3468



- Takayanagi, Y.**  
Statistical study of factors causing rutting of expressway pavements in cold areas in Japan (1990, p.387-416, eng) 43-3505
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Evaluation of existing hypotheses used in the mathematical description of ice segregation in freezing soils (1990, 14p., eng) 45-3770  
Quasi-steady problems in freezing soils: II. Experiment on the steady growth of an ice layer (1990, p.225-247, eng) 45-1616  
Study on sea ice monitoring using MOS-1/MSR (1989, p.991-994, eng) 45-253
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Heater/defroster testing in the real world (1989, p.405-411, eng) 45-1250
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Study on phase changes of heterogeneous composite materials: examination by comparing calculation models (1989, p.161-166, jpn) 45-699
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Snow and ice detection by a dielectric pavement freezing-detector (DPF) (1990, p.319-337, eng) 45-3502
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Development of a vehicle-mounted blowing snow monitor (1987, p.13-17, jpn) 45-922  
Measuring blowing snow by visibility meters (1988, p.189-192, jpn) 45-2514  
Measuring the efficiency of snow fences by vehicle-mounted blowing-snow counters (1988, p.193-196, jpn) 45-2515  
Prevention of snow accretion on traffic signs (1986, p.37-39, jpn) 45-926  
Safe vehicle speed on winter roads in blowing snow (1990, p.171-178, jpn) 45-780  
Snow collection mechanism and capacity of snow fence (1989, p.10-15, eng) 45-909
- Takeuchi, S.**  
Borehole drilling for sewage disposal and rise of the hole's bottom at Asuka Station, East Antarctica (1990, p.145-155, jpn) 45-980
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Development and testing of ice thickness gages: progress report (1990, p.293-298, jpn) 45-756  
Study on environmental protection of salt lakes in cold regions; hydrology and water quality of Lake Saroma (1988, p.65-70, jpn) 45-2507
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Comparative study on performances of asphalt pavements in cold area (1990, p.3-16, eng) 45-3506  
Evaluation of the performance of asphalt pavement in consideration of reliability (1990, p.323-337, eng) 45-3519
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Note on water exchange under fast ice in Lützow-Holm Bay, Antarctica (1991, p.74-80, eng) 45-3065
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Principles for correlating Quaternary events in southern USSR (1991, p.96-100, rus) 45-3439
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Results from ground-based radiometry of snow (1989, p.1231-1234, eng) 45-265
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Freezing rain and fog events in southern Ontario: properties and effects on EHV transmission systems (1988, p.70-75, eng) 45-1314
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On the freezing process with supercooling: measurements of the cooling rate affecting the freezing temperature of super-cooled water (1989, p.31-38, jpn) 45-700
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New system for controlled snow sliding on a roof (1990, p.81-90, jpn) 45-111
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Observation of the plankton in drift ice (1951, p.134-138, jpn) 45-3316
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Observations of snow loads on drainage ditches at the gratings (1986, p.40-48, jpn) 45-927
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Ecological aspects of erosion processes in western Siberia (1990, p.95-100, rus) 45-2908
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Effects of temperature on metabolic rates of different life stages of *Calanus glacialis* in the Barents Sea (1988, p.457-461, eng) 45-3289
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Current meter, CTD and meteorological observations on the northern Grand Banks for Apr.-Oct. 1986 (1988, 94p., eng) 45-1276  
Ice-based oceanographic sea-ice and meteorological data obtained over the N.E. Newfoundland Shelf, 1988-1989 (1989, 165p., eng) 45-1288  
Two-dimensional thermodynamic model for sea ice advance and retreat in the Newfoundland marginal ice zone (1991, p.4723-4737, eng) 45-2682
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Preliminary investigations on monitoring the snow water equivalent using synthetic aperture radar (1990, p.73-86, eng) 45-2188
- Tang, S.W.**  
Finite element prediction of temperature gradients in walls of cylindrical concrete storage structures (1991, p.12-19, eng) 45-2663
- Taniguchi, A.**  
Phytoplankton communities in the Bering Sea and adjacent seas. II. Spring and summer communities in seasonally ice-covered areas (1978, p.27-35, eng) 45-3284
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Chemical compositions of aerosol particles and snowfalls in Alta, northern Norway (1989, p.169-178, eng) 45-829  
Precipitating snow clouds during winter monsoon seasons influenced by topography of the Shakotan Peninsula, Hokkaido Island, Japan (SHAROP) (1987, p.109-128, eng) 45-905  
Relation between the center nucleus of snow crystals and aerosol particles in Arctic Canada (1990, p.415-435, eng) 45-784
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Abundance and vertical distribution of the chaetognath *Parasagitta elegans* (Verrill) under the sea ice in Saroma Ko, a lagoon on Hokkaido, Japan (1987, p.138-144, eng) 45-3346  
Comparison of zooplankton abundance under sea ice between NIPR net and Norpac net samplings, in lagoon Saroma Ko, Hokkaido (1987, p.123-137, eng) 45-3345  
Photosynthetic nature of ice algae and their contribution to the primary production in lagoon Saroma Ko, Hokkaido, Japan (1989, p.1-8, eng) 45-3343  
Phytoplankton bloom under sea ice recorded with a moored system in lagoon Saroma Ko, Hokkaido, Japan (1989, p.9-15, eng) 45-3344  
Variability in sterol flux in the ice-covered lagoon Saroma Ko, Hokkaido, Japan (1990, p.8-15, eng) 45-3342
- Tanimura, Y.**  
Diatoms in water column and sea ice in Lützow-Holm Bay, Antarctica, and their preservation in the underlying sediments (1990, p.15-39, eng) 45-3360
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Water content during abscisic acid induced freezing in bromegrass cells (1990, p.460-464, eng) 45-3276
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Automated snow depth and snowpack temperature measurements (1990, p.73-78, eng) 45-2123
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Laboratory test for measurement of adhesion strength of spray ice to coated flat plates (1990, 44p., eng) 45-976
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Algorithm to estimate the heating budget from vertical hydrometeor profiles (1990, p.1232-1244, eng) 45-2985
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Unsteady heat and mass transfer with phase changes in an insulation slab: frosting effects (1991, p.1593-1603, eng) 45-3364
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Alimentation of rock glaciers of Tien Shan (1989, p.175-183, rus) 45-1055  
Landslides of cryogenic origin in the Tien Shan highlands (1989, p.54-59, rus) 45-703
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Questions on interpreting data from infrared-ice reconnaissance (1989, p.88-91, rus) 45-1494
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Installation of deeply laid molded-in-place and combination piles in permafrost soils in Noril'sk (1991, p.252-256, eng) 45-3560
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ASCE technical council on cold regions monograph series (1990, p.1047-1052, eng) 45-2577
- Tarasov, A.V.**  
Characteristics of snow accumulation on the Austfonna (Spitsbergen) (1989, p.190-194, rus) 45-1058  
Peculiarities of snow accumulation on Austfonna (Svalbard) (1989, p.279-285, eng) 45-475
- Tatnellux, J.C.**  
Model surface treatment for testing in ice (1990, p.766-775, eng) 45-3627  
Report of Working Group on Ice Modelling Materials (1990, p.81-98, eng) 45-3668
- Tavazo, F.**  
Analysis of ice overload on single and bundled conductors (1988, p.99-103, eng) 45-1320
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Mechanized ice augers (1990, p.38-39, rus) 45-742
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Third freeze cycle of the Canada-France ground freezing experiment. Final report (1988, 76p., eng) 45-390
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White phosphorus linked as cause of waterfowl deaths at Alaskan firing range (1991, p.5, eng) 45-3455
- U.S. Army Corps of Engineers, Alaska District**  
Draft supplemental environmental impact statement: Kodiak Harbor, Alaska (1990, 86p. + appends., eng) 45-1147  
Final supplemental environmental impact statement: Kodiak Harbor, Alaska (1991, 86p. + appends., eng) 45-2051
- U.S. Coast Guard**  
Report of the International Ice Patrol in the North Atlantic (1988, 118p., eng) 45-1864
- U.S. Department of the Interior, Minerals Management Service, Alaska Outer Continental Shelf Region**  
Beaufort Sea Planning Area Oil and Gas Lease Sale 124. Draft environmental impact statement (1990, 2 vols., eng) 45-2162  
Chukchi Sea Oil and Gas Lease Sale 126. Draft environmental impact statement (1990, 2 vols., eng) 45-2159  
Chukchi Sea Oil and Gas Lease Sale 126. Final environmental impact statement (1991, 2 vols., eng) 45-2173  
Navarin Basin Oil and Gas Lease Sale 107. Final environmental impact statement (1991, Var. p., eng) 45-2172  
OCS Mining Program: Norton Sound Lease Sale. Final environmental impact statement (1991, Var. p., eng) 45-2160  
OCS Mining Program: Norton Sound Lease Sale. Second draft environmental impact statement (1990, Var. p., eng) 45-2161
- U.S. Interagency Arctic Research Policy Commission**  
Arctic research of the United States, Vol.5 (1991, 99p., eng) 45-3544
- U.S. Interagency Arctic Research Policy Committee**  
Arctic research in the United States, Vol.4 (1990, 106p., eng) 45-1398
- [U.S. National Science Foundation]**  
Gazetteer of the Antarctic. Fourth edition (1989, 145p., eng) 45-2934
- U.S. Naval Technical Intelligence Center, Foreign Languages Services Division**  
Russian-English arctic environment glossary (1991, 154p., eng) 45-3085
- U.S. Navy Ships Environmental Analysis Center**  
Environmental effects information database report (1989, Var. p., eng) 45-2539
- U.S. Navy Symposium on Arctic/Cold Weather Operations of Surface Ships, Nov. 29-Dec. 1, 1989. Volume 1**  
Arctic/cold weather operations symposium, 1989; proceedings, volume 1 (1989, 488p., eng) 45-532
- U.S. Ocean Assessments Division, Strategic Assessment Branch**  
Bering, Chukchi, and Beaufort Seas coastal and ocean zones. Strategic assessment data atlas (1988, 128 leaves, eng) 45-807
- Uccellini, L.W.**  
Diagnosing coupled jet streak circulations for a Northern Plains snow band from the operational nested-grid model (1991, p.90-96, eng) 45-1935
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Treatment of cracks in paved road surfaces (1988, p.155-158, jpn) 45-2511
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Analysis of the principal components of antarctic precipitations (1989, p.701-712, eng) 45-2297  
Characterization of snow in the area surrounding Terra Nova Bay (Antarctica) (1990, p.55-61, eng) 45-3197

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Apparent friction coefficient between steel and ice under high contact pressure (1990, p.902-911, eng) 45-3639
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Study on the polar ocean and the Sea of Okhotsk (1989, p.600-612, jpn) 45-625
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Diurnal variation of precipitation in Langtang Valley, Nepal Himalayas (1990, p.93-101, eng) 45-202
- Ueno, M.**  
Treatment of cracks in paved road surfaces (1988, p.155-158, jpn) 45-2511
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Results of isotope hydrochemical testing of Beaver and Radok Lakes (1990, p.90-95, rus) 45-2573
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Building foundation in saline permafrost (1990, p.117-123, eng) 45-126
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Millimeter-wave radar scattering from snow: 1. Radiative transfer model (1991, p.329-341, eng) 45-3044  
Millimeter-wave radar scattering from snow: 2. Comparison of theory with experimental observations (1991, p.343-351, eng) 45-3045  
Millimeter-wave radar scattering from terrain: data handbook (1990, 133p., eng) 45-313
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Absolute calibration of the CCRS C-band SAR during BEPER-88 (1989, p.1528-1531, eng) 45-275  
Azimuth dependence in SAR-imaging of open water leads in ice infested areas (1989, p.1532-1534, eng) 45-276
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Elastic properties of a tungsten monocarbide-based metal-loceramic at low temperatures (1990, p.93-95, eng) 45-993
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Sedimentary basins and petroleum resource potential of the Arctic Ocean region (1990, p.503-538, eng) 45-1693
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Evaluation system of airport concrete pavements (1990, p.233-258, eng) 45-3515
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Study on simplification of winter concreting using the new type anti-freeze admixtures (Part 2) (1987, p.14-38, jpn) 45-921
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Antarctic ice sheet measurements using airborne radio echo sounder (1989, p.297-306, jpn) 45-376  
Radio scattering characteristics of the Roi Baudouin ice shelf, East Antarctica (1990, p.345-351, eng) 45-2743  
Subglacial water layer and grounding line derived from back-scattering coefficients of radio echo sounding in the Shirase Glacier and Roi Baudouin Ice Shelf, East Antarctica (1991, p.93-102, eng) 45-3067
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Development of the Lena River basin in the Late Cenozoic (based on analysis of the migration conditions of crust material in the cryolithozone) (1989, p.153-161, rus) 45-1836
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Reconstruction of the bedrock of Antarctica after deglaciation (1989, p.127-131, rus) 45-1047
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Lipid composition of *Mycobacterium mucosum* oxidizing hydrocarbons isolated from arctic waters (1977, p.1070-1073, rus) 45-3137
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Tests on improving the efficiency of snow removal equipment on snow removal trucks (1990, p.215-220, jpn) 45-751
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Note on water exchange under fast ice in Lützow-Holm Bay, Antarctica (1991, p.74-80, eng) 45-3065
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Ecology and modeling post-fire larch fall and regeneration on permafrost (1990, p.14-21, rus) 45-2420
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Increase of heat reflecting properties of monolithic concrete with antifreeze admixtures (1990, p.33-34, rus) 45-23
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Formation mechanisms of twelve-branched snow crystals (1990, p.549-555, eng) 45-2411  
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Testing of windbreak models under natural blowing snow conditions in Quebec (1990, p.1/12-1/18, fre) 45-1778
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Wave evolution in the marginal ice zone: model predictions and comparisons with on-site and remote data (1989, p.1520-1523, eng) 45-273  
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Isotope variations in the temperate glaciers of the Eurasian Arctic (1990, p.45-55, eng) 45-373  
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Stratification of ice cores from Spitsbergen used for glacioclimatic reconstructions (1989, p.97-103, rus) 45-1042
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Effect of Cenozoic ice sheet fluctuations in Antarctica on the stratigraphic signature of the Neogene (1991, p.6753-6778, eng) 45-2501
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Arctic research of the United States, Vol.5 (1991, 99p., eng) 45-3544
- van Aken, H.M.**  
Arctic front in the Greenland Sea during February 1989: hydrographic and biological and observations (1991, p.4739-4750, eng) 45-2683
- Van Cauwenberghie, R.**  
Development of a freezing rain sensor for automated surface observing systems (1991, p.338-343, eng) 45-1595
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Fire in taiga communities of interior Alaska (1986, p.74-86, eng) 45-1590
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Software set-up for data processing of depolarization due to rain and ice crystals in the Olympus Project. Research report (1989, 92p., eng) 45-85
- van de Wal, R.S.W.**  
Comparison of the mass balances and flows of Rabots Glacier and Storöglaciären, Kebnekaise, northern Sweden (1990, p.113-118, eng) 45-1192
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Traces of frost activity and ice segregation in Pleistocene loess deposits and till of northern Italy: deep seasonal freezing or permafrost (1990, p.39-48, eng) 45-2076
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Results of isotope hydrochemical testing of Beaver and Radok Lakes (1990, p.90-95, rus) 45-2573
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Ice condition features in antarctic waters in summer 1986-1987 (1990, p.64-71, rus) 45-2571
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Ambient concentrations, scavenging ratios, and source regions of acid related compounds and trace metals during winter in northern Michigan (1990, p.2981-2989, eng) 45-1771
- Vandenberghie, J.**  
Evidence of episodic permafrost conditions during the Weichselian Middle Pleistocene in the Hengelo Basin (the Netherlands) (1990, p.207-218, eng) 45-355
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Advanced treatment technologies (1990, p.109-208, eng) 45-3543
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Distribution of surface radiation balance in northeastern Western Siberia (1990, p.28-33, rus) 45-1198  
Role of heat balance studies in geocryological forecasting (1987, p.18-25, rus) 45-571

- Vanner, L.C.**  
Geochemical processes in the Lake Fryxell Basin (Victoria Land, Antarctica) [1989, p.129-148, eng] 45-2612
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Heat pipes for ground heating and cooling [1988, p.125-138, eng] 45-3216
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Drainage pattern in a subpolar glacier: Bröggerbreen, Svalbard [1990, p.121-131, eng] 45-3788
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Rapid disintegration of the Wordie Ice Shelf in response to atmospheric warming [1991, p.328-330, eng] 45-2266
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Taiga soils in the northwestern part of the Yenisey mountain ridge [1990, p.152-163, rus] 45-2910
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Effects of climate change on discharges and snow cover in Finland [1991, p.109-121, eng] 45-2989
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Deployment strategy for satellite tracked drifters to support iceberg drift forecasting [1990, p.395-411, eng] 45-2747  
Modelling the behaviour of oil spills in ice-infested waters [1990, p.303-329, eng] 45-1151  
Optimum deployment of satellite-tracked drifters to support iceberg drift forecasting [1990, p.117-131, eng] 45-495
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Oil contamination of antarctic ice [1990, 23p., spa] 45-1000
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Backscattering from frost on icy satellites in the outer solar system [1990, p.162-164, eng] 45-378  
Scattering properties of natural snow and frost: comparison with icy satellite photometry [1990, p.418-428, eng] 45-1923
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Operational mapping of snow cover in the United States and Canada using airborne and satellite data [1989, p.1257-1259, eng] 45-271
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Long-term temperature monitoring program, 1987: Scotia-Fundy, Gulf of St. Lawrence, and Newfoundland [1988, 491p., eng] 45-1275  
Long-term temperature monitoring program, 1988: Scotia-Fundy and Gulf of St. Lawrence [1989, 233p., eng] 45-1279  
Long-term temperature monitoring program, 1989: Scotia-Fundy and the Gulf of St. Lawrence [1990, 175p., eng] 45-1278
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Aerial anemography applied to the mapping of nocturnal circulation of cold air in a blueberry field [1990, p.1/34-1/42, fre] 45-1781  
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Winter problems associated with the existence of active eolian dunes in the blueberry fields of Quebec [1990, p.1/2-1/11, fre] 45-1777
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Cryogenic precipitation of calcium carbonate: myth or reality [1990, p.55-65, fre] 45-971
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CLASS—a Canadian land surface scheme for GCMS. 1. Soil model [1991, p.111-133, eng] 45-3548
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Extraction of ridge feature characteristics from SAR images of sea ice [1989, p.1129-1132, eng] 45-259  
Object-based feature-tracking algorithms for SAR images of the marginal ice zone [1989, p.1121-1124, eng] 45-257
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Theoretical analysis of the process of ice destruction using a rotating working organ with a freely suspended shearing element—1 [1989, p.403-408, eng] 45-2927
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Using avalanche protection walls of lightweight construction for protecting sections of the Mezhdurechensk-Abakan Line from avalanches [1990, p.41-46, rus] 45-3009  
Using electric heating devices to protect railroad switches from snowdrifts [1990, p.31-36, rus] 45-3007
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Scattering properties of natural snow and frost: comparison with icy satellite photometry [1990, p.418-428, eng] 45-1923
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Rheological fundamentals of soil mechanics [1986, 564p., eng] 45-612  
Saline frozen soils as a foundation for structures; collected scientific papers [1990, 143p., rus] 45-2882  
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Fire in taiga communities of interior Alaska [1986, p.74-86, eng] 45-1590
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Calculating and forecasting glacier mass balance with minimal information [1990, p.109-113, rus] 45-1112
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Climate, tree-ring, and glacial fluctuations in the Rio Frías Valley, Rio Negro, Argentina [1990, p.215-232, eng] 45-886
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HYDROTEL, a hydrological model designed to make use of remotely sensed and GIS data [1990, p.177-185, eng] 45-3805
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Microbial communities in southern Victoria Land streams (Antarctica) I. Photosynthesis [1989, p.27-38, eng] 45-2605  
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Dynamic forces induced by buckling failure of moving ice [1990, p.49-60, eng] 45-2721
- Vinogradov, O.N.**  
Recent glaciation of antarctic islands [1990, p.249-260, eng] 45-3131  
Recent glaciation of antarctic islands [1990, p.117-126, rus] 45-1750
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Phase change heat transfer analysis with applications to frost shielding [1990, p.9-13, eng] 45-3739  
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Ozone trend in the Northern Hemisphere: a numerical study [1991, p.10,931-10,940, eng] 45-3377
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Natural air conditioning in the Kungur Ice Cave [1990, p.104-105, rus] 45-2716
- Viskanta, R.**  
Deicing of solids using radiant heating [1990, p.311-317, eng] 45-667  
Inward solidification of a superheated liquid in a cooled horizontal tube [1982, p.39-46, eng] 45-2933
- Vitale, V.**  
Aerosol characterization and snow chemistry at Terra Nova Bay [1990, p.61-72, eng] 45-2787
- Vitt, D.H.**  
Holocene soligenous fens on a high arctic fault block, northern Ellesmere Island (82 deg N), N.W.T., Canada [1991, p.80-98, eng] 45-2473
- Vivarelli, F.**  
Aerosol characterization and snow chemistry at Terra Nova Bay [1990, p.61-72, eng] 45-2787
- Vivatrat, V.**  
Development of analysis tools for high and low velocity ice indentation problems [1987, 119p., eng] 45-87
- Vivekanandan, J.**  
Millimeter wave radiative transfer studies for precipitation measurements [1989, p.1910-1913, eng] 45-282
- Voelker, R.P.**  
Arctic Marine Transportation Program, 1979 to 1986. Executive summary [1990, 91p. + appends., eng] 45-813  
Design features and operation capability of the new US antarctic research vessel [1990, p.167-176, eng] 45-2730  
Polar ice-breaker caught in active shear ridge [1990, p.269-281, eng] 45-2737  
Ramming icebreaking performance of the USCG polar class icebreakers [1990, p.283-294, eng] 45-2738
- Vogler, W.A.**  
Evaluation of two transport aircraft and several ground test vehicle friction measurements obtained for various runway surface types and conditions. A summary of test results from Joint FAA/NASA Runway Friction Program [1990, 297p., eng] 45-558
- Voitkovskii, K.F.**  
Current trends in the development of the glacier system of Elbrus Mountain [1989, p.73-80, rus] 45-1038
- Voitakhovskaya, I.V.**  
Zoning chart for environmental protection of geocryological zones in Western Siberia [1989, p.36-43, rus] 45-104
- Vold, D.**  
Environmental policy and waste management at the Italian antarctic station, Terra Nova Bay [1990, p.664-682, eng] 45-169
- Volker Stevia Dredging and Services Canada Ltd**  
Application of Voker Stevin's experience to arctic offshore pipeline installation [1990, p.365-373, eng] 45-1959
- Volkert, H.**  
Papal Front of 3 May 1987: a remarkable example of frontogenesis near the Alps [1991, p.125-150, eng] 45-3479

- Volkov, A.M.**  
Spaceborne information and measuring means for remote sensing of the earth from space [1990, p.5-20, rus] 45-2207
- Volkov, V.E.**  
Estimating subsurface melting of an ice layer [1989, p.138-143, rus] 45-1050
- Volkova, M.V.**  
Changes in the air temperature field above the Fedchenko and Abramov glaciers [1990, p.120-130, rus] 45-1114
- Volkova, V.S.**  
Palynology and glacial theory [1989, p.40-48, rus] 45-1136
- Volkovitsaer, V.I.**  
Soil cover of Siberia: formation characteristics, agricultural and ecological aspects of utilization [1990, p.143-151, rus] 45-2909
- Voloshina, A.P.**  
Glaciers and climate: some new aspects of investigating the problems [1989, p.251-260, rus] 45-1074
- Volf'yan, G.V.**  
Determining the specific active area of scattering of a probed surface according to data from the Kosmos-1500 satellite side-look radar [1989, p.104-113, rus] 45-2756
- Vorberger, P.L.**  
AVHRR imagery reveals antarctic ice dynamics [1990, p.741-742, eng] 45-2238  
Continued analysis of field data of the Siple Coast, West Antarctica [1990, p.72-73, eng] 45-1158  
Studies of ice sheet hydrology using SAR [1989, p.2719-2721, eng] 45-297
- Vorob'ev, E.V.**  
Strength of cryogenic engineering alloys under electromagnetic loads [1990, 154p., rus] 45-1856
- Vorob'evskii, B.E.**  
Short-term tests to determine long-term equivalent cohesion of frozen soils using the ball-die method [1990, p.121-123, rus] 45-2900
- Vose, R.S.**  
Detection of climatic change in the western North American Arctic using a synoptic climatological approach [1990, p.1153-1167, eng] 45-2535
- Vovau, M.L.**  
Ice accumulation on DC power transmission line insulators [1988, p.301-304, eng] 45-1359
- Vsesoiuznaia konferentsiia "Ekologiya neftegazovogo kompleksa", 1-ia, Nadya, SSSR, 3-6 oktiabria, 1988**  
Ecological impact of oil and gas industry. Proceedings of the First All-Union Conference, Oct. 3-6, 1988, Nadya, USSR; Issue No.1, Pt. 2 [1989, 235p., rus] 45-99
- Vaeolozhskii, V.A.**  
Development of chairs of engineering geology, hydrogeology, and cryopedology in the geology department [1989, p.47-59, eng] 45-880
- Vtaria, B.I.**  
Glaciological and geocryological investigations on Novolazarevskaya Station [1990, p.93-104, rus] 45-1561
- Vuckovic, Z.**  
Failures of overhead transmission lines due to polluted ice accretions on insulator strings [1988, p.305-309, eng] 45-1360
- Vulmanis, V.N.**  
Strength and deformability of plastic pipe in cold climate [1989, p.132-135, eng] 45-2584
- Wacherman, C.C.**  
Discrimination of sea ice types using SAR backscatter statistics [1989, p.381-385, eng] 45-236  
Modified beta density function as a model for synthetic aperture radar clutter statistics [1991, p.277-283, eng] 45-3190
- Waddington, E.D.**  
Boudinage: a source of stratigraphic disturbance in glacial ice in central Greenland [1990, p.269-272, eng] 45-1536  
Potential for basal melting under Summit, Greenland [1990, p.163-168, eng] 45-58
- Waddington, J.M.**  
Effects of beaver dams on subarctic wetland hydrology [1990, p.223-230, eng] 45-1420
- Wadhams, P.**  
Concurrent remote sensing of arctic sea ice from submarine and aircraft [1989, 20p., eng] 45-563  
East Greenland ice extent 1982-86 and the occurrence of ice edge mesoscale features [1987, 7p + append., eng] 45-940  
Experimental study of wave-ice interaction and floe flexure in the pack ice of the Labrador current [1984, n.p., eng] 45-941  
Ice Technology for Polar Operations: proceedings of the 2nd international conference [1990, 426p., eng] 45-2717  
Ice thickness distribution in the Arctic Ocean [1990, p.3-20, eng] 45-2718  
Measurements of strain in sea ice during FRAM 3 [1989, 7p. + append., eng] 45-950  
MIZEX 83 data summary [1983, 154p., eng] 45-942  
O-18 concentrations in sea ice of the Weddell Sea, Antarctica [1990, p.315-323, eng] 45-1542  
Resource potential of antarctic icebergs [1990, p.203-215, eng] 45-2812  
SPRI participation in the Winter Weddell Gyre Study 1989 [1991, p.29-38, eng] 45-1615
- Top/bottom multisensor remote sensing of arctic sea ice [1991, p.2693-2709, eng] 45-2042  
Top/bottom multisensor remote sensing of arctic sea ice [1989, 56p., eng] 45-564  
Waves in frazil and pancake ice and their detection in Seasat synthetic aperture radar imagery [1991, p.8835-8852, eng] 45-3019
- Wagner, C.R.**  
Use of aeration to prevent ice buildup at gaging station controls [1990, p.155-158, eng] 45-2195
- Wait, J.R.**  
Diffraction of VLF radio waves by polar ice caps [1991, p.1030-1032, eng] 45-3700
- Wakabayashi, H.**  
Study on sea ice monitoring using MOS-1/MSR [1989, p.991-994, eng] 45-253
- Wakabama, G.**  
Countermeasures to both the wet snow accretion and the galloping damages on the transmission lines [1988, p.376-380, eng] 45-1375
- Wake, A.**  
Two-dimensional surface drift model for river ice [1991, p.355-362, eng] 45-2347
- Wake, G.C.**  
Geometric factor for prediction of freezing or thawing times of elliptical two-dimensional objects [1989, p.651-657, eng] 45-3107
- Wakefield, G.H.**  
Radiobrightness of freezing terrain [1989, p.2748-2751, eng] 45-302
- Waldvogel, A.**  
Physical factors influencing winter precipitation chemistry [1991, p.782-788, eng] 45-3819
- Walford, M.E.R.**  
Optical measurements of water lenses in ice [1987, p.159-161, eng] 45-9  
Radio and electrical measurements on glacial streams [1987, p.239-242, eng] 45-20
- Walfridsson, E.A.**  
Autumn freeze testing of one-year reciprocal families of *Pinus sylvestris* (L.) [1990, p.501-511, eng] 45-3206
- Walker, A.E.**  
Analysis of MOS-1 microwave scanning radiometer data for Canadian prairie snow cover [1990, p.319-329, eng] 45-3811  
Arctic ozone crater in 1989 [1990, p.1113-1121, eng] 45-1428  
Determination of snow water equivalent on the Canadian prairies using near real-time passive microwave data [1990, p.297-316, eng] 45-3809
- Walker, D.A.**  
History and pattern of disturbance in Alaskan arctic terrestrial ecosystems: a hierarchical approach to analyzing landscape change [1991, p.244-276, eng] 45-3187  
Spatial interrelationships between terrain, snow distribution and vegetation patterns at an arctic foothills site in Alaska [1989, p.270-278, eng] 45-1981  
Steppe vegetation on south-facing slopes of pingos, central arctic coastal plain, Alaska, U.S.A. [1991, p.170-188, eng] 45-3482
- Walker, G.G.**  
Transient electromagnetics for permafrost [1988, 308p., eng] 45-510
- Walker, J.F.**  
Accuracy of selected techniques for estimating ice-affected streamflow [1991, p.697-712, eng] 45-2969
- Walker, M.D.**  
History and pattern of disturbance in Alaskan arctic terrestrial ecosystems: a hierarchical approach to analyzing landscape change [1991, p.244-276, eng] 45-3187  
Steppe vegetation on south-facing slopes of pingos, central arctic coastal plain, Alaska, U.S.A. [1991, p.170-188, eng] 45-3482
- Walker, R.M.**  
Neon measurements of individual Greenland sediment particles: proof of an extraterrestrial origin and comparison with EDX and morphological analyses [1990, p.77-93, eng] 45-1145
- Wall, G.**  
Climate change: implications for water and ecological resources [1990, 342p., eng] 45-3294
- Walls, M.D.**  
Polycyclic aromatic and organochlorine compounds in the atmosphere of northern Ellesmere Island, Canada [1991, p.10,867-10,877, eng] 45-3375
- Walles, D.G.**  
Photoheterotrophy and dark heterotrophy in ice-covered Lake St. Clair [1990, p.339-345, eng] 45-1388
- Walsh, E.J.**  
Ice-type classifications from airborne pulse-limited radar altimeter return waveform characteristics [1989, p.1949-1952, eng] 45-286
- Walsh, J.E.**  
Arctic as a bellwether [1991, p.19-20, eng] 45-3488  
Arctic contribution to upper-ocean variability in the North Atlantic [1990, p.1462-1473, eng] 45-2212  
Long-range prediction of regional sea ice anomalies in the Arctic [1991, p.271-288, eng] 45-3236
- Walsh, M.E.**  
Liquid chromatographic separation of 2,4,6-trinitrotoluene and its principal reduction products [1990, p.313-315, eng] 45-1431  
Low temperature decontamination with DS2: studies with chemical agent simulants [1991, 23p., eng] 45-3260
- Walsh, M.R.**  
Fence characterization for intrusion detection systems [1990, 23p., eng] 45-98  
Spray and ice measurement instrumentation for ships [1991, p.748-757, eng] 45-2384
- Walter, B.**  
Aircraft observations of the mean and turbulent structure of the atmospheric boundary layer during spring in the central Arctic [1991, p.4663-4673, eng] 45-2678
- Walters, D.G.**  
Comparison of latex-modified portland cement mortars [1990, p.371-377, eng] 45-2073
- Walum, R.S.**  
Gravel-pad foundations to control groundwater movements in frost-susceptible soil—a case study [1990, p.175-186, eng] 45-3793
- Wan, C.H.**  
Two problems of 509 coal mine in north-west China [1989, p.237-239, eng] 45-351
- Wan, Q.Y.**  
Two problems of 509 coal mine in north-west China [1989, p.237-239, eng] 45-351
- Wang, A.S.**  
New experimental and theoretical studies of ice crystals growth [1988, p.259-262, eng] 45-1350
- Wang, A.T.**  
Design ice gouge depth computation through computer simulations [1990, p.237-247, eng] 45-1953  
Ice island simulator [1991, p.29-37, eng] 45-3145  
Numerical simulations for rare ice gouge depths [1990, p.19-32, eng] 45-1764
- Wang, B.C.**  
Caustion and characteristics of regular transverse cracks of asphalt highways in northern China [1990, p.126-135, eng] 45-127
- Wang, B.L.**  
Permafrost and groundwater conditions, Huola River Basin, northeast China [1990, p.45-52, eng] 45-2233
- Wang, D.**  
Microphysical structure of snow clouds and the growth process of snow particles in winter in Xinjiang [1990, p.221-230, eng] 45-611
- Wang, J.F.**  
Calculating formula of time-dependent temperature regime of frozen soil [1990, p.128-133, eng] 45-485
- Wang, J.R.**  
Retrieval of total precipitable water over high latitude regions using radiometric measurements near 90 and 183 GHz [1991, p.179-184, eng] 45-1598
- Wang, L.W.**  
Data base of glacier inventory [1990, p.167-174, chj] 45-457
- Wang, L.Y.**  
Application of Maattanen model on multilegged structures [1990, p.1071-1083, eng] 45-3654  
Contribution of damping in the Maattanen model [1990, p.1097-1104, eng] 45-3656  
Design optimization of jacket platforms for ice infested waters [1990, p.1056-1070, eng] 45-3653
- Wang, Q.**  
Polarimetric scattering measurements on artificially grown sea ice [1989, p.1942-1944, eng] 45-284
- Wang, R.S.**  
Method of thermodynamic numerical sea ice forecast in the Bohai Sea [1990, p.143-152, eng] 45-3572
- Wang, S.**  
Microphysical structure of snow clouds and the growth process of snow particles in winter in Xinjiang [1990, p.221-230, eng] 45-611
- Wang, S.L.**  
Mathematical modelling of icebreaking pattern based on the elastic wave theory [1990, p.811-820, eng] 45-3631  
Thaw slumping in Fenghuo Mountain area along Qinghai-Xizang Highway [1990, p.63-70, chj] 45-463
- Wang, S.R.**  
Application of composite construction for dissipating water energy to small hydraulic engineering in seasonally frost regions [1990, p.83-86, chj] 45-465
- Wang, W.**  
Preliminary study on acoustical characteristics of ice core from BHQ on the Law Dome, Antarctica [1988, p.132-140, chj] 45-42  
Repeated compression-annealing experiments for the ice from Antarctica [1988, p.141-152, chj] 45-43
- Wang, W.P.**  
Wind tunnel modeling of time-dependent drift topography [1991, p.685-697, eng] 45-2378
- Wang, W.T.**  
Data base of glacier inventory [1990, p.167-174, chj] 45-457
- Wang, W.X.**  
Researches of glacier lake outburst floods of the Yarkant River in Xinjiang [1990, p.1014-1024, eng] 45-2178

- Wang, X.**  
Endothermic model of percolation zone of a glacier and finding the analysis solution in moving coordinate [1990, p.223-226, eng] 45-486  
Stratigraphic studies of the snow and the process of the ice formation on Nelson Ice Cap, Antarctica [1990, p.13-21, chj] 45-2169
- Wang, Y.**  
2M3 isothermal cloud chamber for the study of artificial ice nuclei [1990, p.494-502, eng] 45-1081
- Wang, Y.Q.**  
Freezing point of loess in Lanzhou, China [1990, p.105-115, chj] 45-452  
New model of frost heave prediction for clayey soils [1991, p.213-214, eng] 45-3426
- Wang, Z.P.**  
Temporal changes in zooplankton composition in a hypersaline, antarctic lake subject to periodic seawater incursions [1991, p.93-99, eng] 45-2944
- Wang, Z.T.**  
Data base of glacier inventory [1990, p.167-174, chj] 45-457
- Wankiewicz, A.**  
Microwave satellite forecasting of snowmelt runoff [1989, p.1235-1238, eng] 45-266  
Microwave satellite spring runoff correlations [1990, p.331-344, eng] 45-3812  
Proceedings [1990, 386p., eng] 45-3797
- Warburton, J.**  
Alpine proglacial fluvial sediment budget [1990, p.261-272, eng] 45-2029  
Use of magnetic susceptibility anisotropy in the study of the matrix fabric of frost-disturbed soils [1990, p.507-510, eng] 45-2214
- Wardle, D.I.**  
Measurements of arctic total ozone during the polar winter [1990, p.383-392, eng] 45-1680
- Wards, R.D.**  
1981/1982 ice rubble model tests. Final report [1983, 363p. + appends., eng] 45-2860
- Wareing, D.P.**  
Lidar observations of the horizontal orientation of ice crystals in cirrus clouds [1990, p.211-216, eng] 45-1384
- Wareing, J.B.**  
Automatic computer controlled weather actuated camera system for the investigation of snow accretion on overhead lines [1988, p.282-286, eng] 45-1355
- Warkentin, A.A.**  
Qualitative evaluation of data networks for streamflow simulation in Manitoba [1990, p.215-223, eng] 45-3806
- Warn-Varans, A.**  
Predictions and studies with a one-dimensional ice-ocean model [1990, p.1545-1562, eng] 45-1386  
Studies of the arctic ice cover and upper ocean with a coupled ice-ocean model [1991, p.4631-4650, eng] 45-2676
- Warrnell, D.**  
Oceanographic and meteorological observations from the Hibernia region of Newfoundland Grand Banks [1988, 270p., eng] 45-1277
- Warpakowski, A.**  
Arctic front in the Greenland Sea during February 1989: hydrographic and biological observations [1991, p.4739-4750, eng] 45-2683
- Warren, C.R.**  
Medium scale landforms of glacial erosion in South Greenland: process and form [1990, p.211-215, eng] 45-2024
- Warren, G.J.**  
Clustering of ice nucleation protein correlates with ice nucleation activity [1990, p.416-422, eng] 45-820
- Warren, S.G.**  
Mode of formation of "ablation hollows" controlled by dirt content of snow [1987, p.135-139, eng] 45-6  
Spectral albedo and emissivity of CO<sub>2</sub> in Martian polar caps: model results [1990, p.14,717-14,741, eng] 45-1842
- Wash, C.H.**  
Snow/cloud discrimination with multispectral satellite measurements [1990, p.994-1004, eng] 45-1273
- Washington, W.M.**  
Climate sensitivity due to increased CO<sub>2</sub>: experiments with a coupled atmosphere and ocean general circulation model [1989, p.1-38, eng] 45-380
- Washuta, A.S.**  
Thermal analysis of forced-air and thermosiphon cooling systems for the Inuvik airport expansion [1991, p.399-409, eng] 45-3538
- Waszkiewicz, M.**  
Measurement of the average convective heat transfer coefficient and the drag coefficient for icing shaped cylinders [1988, p.147-151, eng] 45-1329
- Watanabe, H.**  
Antifreeze admixture developed in Japan [1991, p.26-30, eng] 45-1982  
Expansion and shrinkage behavior of concrete subjected to freezing and thawing [1989, p.16-29, jpn] 45-907  
Simplification of cold weather concreting with new antifreezing admixtures (Part 4) [1989, p.14-21, jpn] 45-906  
Simplification of winter concreting with a new type of antifreeze admixture (Part 3) [1988, p.1-17, jpn] 45-910
- Study on simplification of winter concreting using the new type antifreeze admixtures (Part 2) [1987, p.14-38, jpn] 45-921  
Study on simplification of winter concreting using the new type of antifreeze admixtures [1986, p.27-36, jpn] 45-925
- Watanabe, K.**  
Abundance and vertical distribution of the chaetognath *Parasagitta elegans* (Verrill) under the sea ice in Saroma Ko, a lagoon on Hokkaido, Japan [1987, p.138-144, eng] 45-3346  
Comparison of zooplankton abundance under sea ice between NIPR net and Norpac net samplings, in lagoon Saroma Ko, Hokkaido [1987, p.123-137, eng] 45-3345  
Diatoms in water column and sea ice in Littow-Holm Bay, Antarctica, and their preservation in the underlying sediments [1990, p.15-39, eng] 45-3360  
Estimates of primary production by ice algae and phytoplankton in the coastal ice-covered area near Syowa Station, Antarctica [1991, p.30-38, eng] 45-3393  
Experimental study for improvement of cement-asphalt compound materials for slab track to make them fit for cold climate use [1989, p.205-214, jpn] 45-873  
Groundwater flow simulation considering snowmelt [1987, p.25-43, jpn] 45-924  
Light conditions and photosynthetic productivity of ice algal assemblages in Lake Saroma, Hokkaido [1989, p.274-278, eng] 45-3313  
Photosynthetic nature of ice algae and their contribution to the primary production in lagoon Saroma Ko, Hokkaido, Japan [1989, p.1-8, eng] 45-3343  
Phytoplankton bloom under sea ice recorded with a moored system in lagoon Saroma Ko, Hokkaido, Japan [1989, p.9-15, eng] 45-3344  
Primary productivity in the fast ice area near Syowa Station, Antarctica, during spring and summer 1983/84 [1988, p.287-292, eng] 45-3315  
Sub-ice microalgal strands in the antarctic coastal fast ice near Syowa Station [1988, p.221-229, eng] 45-3314  
Variability in sterol flux in the ice-covered lagoon Saroma Ko, Hokkaido, Japan [1990, p.8-15, eng] 45-3342
- Watanabe, M.**  
Alkylbenzyltrimethylammonium salts as inhibitors for the ice nucleating activity of *Erwinia ananas* [1988, p.201-206, eng] 45-3048  
Snow drainage ditches as winter (severe winter) countermeasures in Shimokawa [1988, p.217-222, jpn] 45-2517
- Watanabe, O.**  
Electrical conductivity and pH in snow and ice samples from various glacier areas [1990, p.119-129, eng] 45-977  
Outline of the Japanese Arctic Glaciological Expedition in 1989 (JAGE 1989) [1990, p.103-106, eng] 45-203
- Watanabe, R.**  
SEM observations of microparticles in antarctic ice cores [1990, p.31-53, eng] 45-197
- Watanuki, K.**  
Vertical distribution of organic constituents in an antarctic lake: Lake Fryxell [1989, p.291-303, eng] 45-2620
- Watson, G.G.**  
Technical aspects of ice navigation and port construction in Soviet arctic [1991, p.158-176, eng] 45-3332
- Watson, J.T.**  
Hydraulic design considerations and control structures for constructed wetlands for wastewater treatment [1989, p.379-391, eng] 45-1883  
Performance expectations and loading rates for constructed wetlands [1989, p.319-351, eng] 45-1881
- Watt, W.D.**  
Convenient apparatus for *in situ* primary production studies [1965, p.298-300, eng] 45-3218
- Way through the ice**  
Way through the ice [1990, p.37-38,40, eng] 45-913
- Weaver, J.S.**  
Spray ice islands for exploration in the Canadian Beaufort Sea [1991, p.17-22, eng] 45-3143
- Weber, L.J.**  
Crack opening and propagation in S2 freshwater ice [1991, p.245-252, eng] 45-3176  
Effect of loading rate on the bending strength of alluvium reinforced ice [1991, p.71-84, eng] 45-2323  
Effect of soil type on the bending strength of alluvium reinforced ice [1990, p.486-499, eng] 45-3601  
Flexural strength of sand-reinforced ice [1991, p.14-27, eng] 45-2417
- Weber, R.L.**  
Remote sensor observations during WISP90: the use of microwave radiometers, RASS, and ceilometers for detection of aircraft icing conditions [1990, 77p., eng] 45-1867
- Weddle, T.K.**  
Stratified waterlain glacial sediments and the "New Sharon soil," New Sharon, Maine [1989, p.53-69, eng] 45-2065
- Wedel, J.H.**  
Regional hydrology [1990, p.207-226, eng] 45-220
- Weemes, I.**  
Development and use of an electrical resistivity cone for groundwater contamination studies [1990, 42p., eng] 45-2310
- Weertman, B.R.**  
Initiation of strain measurements on Dyer Plateau, Antarctic Peninsula [1990, p.71, eng] 45-1137
- Wefer, G.**  
Effects of ice coverage and ice-rafted material on sedimentation in the Fram Strait [1991, p.409-411, eng] 45-2282
- Wegmüller, U.**  
Effect of freezing and thawing on the microwave signatures of bare soil [1990, p.123-135, eng] 45-1727
- Wei, W.**  
Drifting snow hazard and its control in the Tian Shan Mountains [1989, p.53-58, eng] 45-402
- Wei, Y.**  
Fracture resistance to cracking in ice: initiation and growth [1991, p.579-594, eng] 45-2368
- Weickmann, L.**  
Papal Front of 3 May 1987: a remarkable example of frontogenesis near the Alps [1991, p.125-150, eng] 45-3479
- Weldick, A.**  
Glaciers and the hydropower planning for Greenland [1990, p.654-663, eng] 45-168  
Recession of the Inland ice margin during the Holocene climatic optimum in the Jakobshavn Isfjord area of West Greenland [1990, p.389-399, eng] 45-714  
World's northernmost surging glacier [1988, p.111-123, eng] 45-1092
- Weidner, G.A.**  
Antarctic automatic weather station data for the calendar year 1989 [1990, 354p., eng] 45-939  
Antarctic automatic weather stations: austral summer 1988-1989 [1990, p.242-243, eng] 45-1440
- Wein, R.W.**  
Climate change moisture stresses on northern coniferous forests [1990, p.285-289, eng] 45-3301
- Weinbeck, R.S.**  
Use of mobile radiosonde systems to observe the environments of Lake Ontario winter storms [1991, p.J142-J145, eng] 45-1600
- Weintraub, R.**  
MIZEX 83 data summary [1983, 154p., eng] 45-942
- Weiser, C.J.**  
Water content during abscisic acid induced freezing in bromegrass cells [1990, p.460-464, eng] 45-3276
- Wekezer, J.W.**  
Modeling of floating ice sheets [1991, p.628-637, eng] 45-2373
- Welch, H.**  
Comparisons between lakes and seas during the arctic winter [1991, p.11-23, eng] 45-2468
- Welch, H.E.**  
Brown snow: a long-range transport event in the Canadian Arctic [1991, p.280-286, eng] 45-3026  
Marine metabolism at Resolute Bay, Northwest Territories [1975, p.II/69-II/75, eng] 45-3121
- Welch, R.M.**  
Textural characteristics of cloud- and ice-covered surfaces in polar regions [1989, p.2773-2776, eng] 45-303
- Weller, G.**  
Antarctica [1990, p.3-30, eng] 45-178
- Wells, D.**  
Warming in the Arctic [1991, p.385, eng] 45-2262
- Wells, D.G.**  
Trafficability study for the Soviet nuclear icebreaker *Rossia* voyage to the North Pole, July 31 to August 15, 1990 [1991, 60p. + appends., eng] 45-3091
- Wells, S.A.**  
Effect of winter heat loss on treatment plant efficiency [1990, p.34-39, eng] 45-306
- Welsch, W.**  
Digital terrain models as a tool for glacier studies [1990, p.273-278, eng] 45-1537
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Comparative study on performances of asphalt pavements in cold area [1990, p.3-16, eng] 45-3506
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Inter-relations between the arctic sea ice and the general circulation of the atmosphere [1987, p.173-176, eng] 45-12  
Katabatic winds in Adélie Land, East Antarctica [1990, p.226-228, eng] 45-1439  
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Helicopter radar simulations from fine resolution airborne SAR imagery [1989, p.2209-2212, eng] 45-289
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Future of mineral resource development in Antarctica [1990, p.92-100, eng] 45-123
- Western Snow Conference**  
Proceedings of the 58th annual meeting, Sacramento, CA, April 17-19, 1990 [1990, 170p. + appends., eng] 45-2114

- Westwater, E.R.**  
Remote sensor observations during WISF90: the use of microwave radiometers, RASS, and ceilometers for detection of aircraft icing conditions (1990, 77p., eng) 45-1867
- Wetlaufer, J.S.**  
Heat flux at the ice-ocean interface (1991, p.7215-7236, eng) 45-2560  
Measurement of the thermal regimes in perennial sea ice (1989, p.1282-1286, eng) 45-445
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Nitrogen, phosphorus, and organic carbon cycling in an arctic lake (1985, p.797-808, eng) 45-3244
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Pressure-induced phase transitions in clathrate hydrates (1991, p.623-627, eng) 45-1903
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Ferromanganese rock varnish in North Norway: a subglacial origin (1990, p.265-275, eng) 45-432
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Lake Hoare, Antarctica: sedimentation through a thick perennial ice cover (1991, p.363-379, eng) 45-3457
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Flowing artesian wells in permafrost regions (1990, p.721-737, eng) 45-425
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Evaluation of South Dakota Deicer No.2 and calcium magnesium acetate by shear testing (1989, p.1-8, eng) 45-808
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Glacial dynamics (glaciology) (1991, p.131-143, eng) 45-3283
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Application of the Global Positioning System in Antarctica (1990, p.6-19, eng) 45-529  
Flow laws for glacier ice: comparison of numerical predictions and field measurements (1990, p.324-339, eng) 45-1543  
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Workshop on antarctic meteorite stranding surfaces (1990, 103p., eng) 45-2426
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Steel fiber reinforced concrete jackets for repairing concrete piles (1988, p.227-252, eng) 45-1814
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Analysis of the hydrogen bond in ice (1990, p.8029-8035, eng) 45-972
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Deuterium excess in recent antarctic snow (1991, p.5113-5122, eng) 45-2283
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Threshold pavement thickness to survive spring thaw (1990, p.41-51, eng) 45-3690
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Dielectric studies of the transition of ice Ih to ice XI (1991, p.757-768, eng) 45-2485
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Natural variability of the climate system and detection of the greenhouse effect (1990, p.324-327, eng) 45-2239
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Compressive strength behavior of fine-grained frozen soils (1990, p.472-483, eng) 45-632  
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Observations relating to wet snow stability (1989, Appendix C, 12p., eng) 45-815
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Predicting sediment concentrations for small subarctic creeks in the Hoscanna Creek Basin (1989, p.145-156, eng) 45-342
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Searching for chaotic dynamics in snowmelt runoff (1991, p.1005-1010, eng) 45-3549
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Bacteriological tests from the constructed wetland of the Big Five Tunnel, Idaho Springs, Colorado (1989, p.550-557, eng) 45-1888  
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Creation and restoration of riparian wetlands in the agricultural Midwest (1990, p.327-350, eng) 45-1410  
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Iceberg data report (1989, 79p., eng) 45-949  
Measurements of strain in sea ice during FRAM 3 (1989, 7p. + append., eng) 45-950
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Antarctic glacier velocities from Landsat images (1990, p.106-107, eng) 45-1397  
Satellite image atlas of glaciers of the world (1989, 48p., eng) 45-817  
Velocities of antarctic outlet glaciers determined from sequential Landsat images (1990, p.105-106, eng) 45-1396
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Concentric crater fill on Mars: an aeolian alternative to ice-rich mass wasting (1989, p.397-407, eng) 45-395
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Wind profiler and RASS measurements in the vicinity of lake-effect snowbands: some preliminary findings (1991, p.69-72, eng) 45-1591
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Iterative solution of a nonlinear system arising in phase-change problems (1990, p.1087-1101, eng) 45-3056
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Apparent coherent energy loss of ice-reflected, high-frequency LFM pulses (1989, p.1240-1245, eng) 45-438
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Morphology, sedimentological characteristics and origin of a fossil rock glacier on Muckish Mountain, northwest Ireland (1990, p.237-247, eng) 45-2026
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Contamination of the global environment as observed in the Arctic (1990, p.149-157, eng) 45-374
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Hydrologic studies of wetlands in the northern prairie (1989, p.16-54, eng) 45-832  
Hydrology of lakes and wetlands (1990, p.159-187, eng) 45-2150
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Diamond core drilling through continental ice and permafrost (1989, p.107-111, eng) 45-337
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Clustering of ice nucleation protein correlates with ice nucleation activity (1990, p.416-422, eng) 45-820
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Mass balance measurements on Norwegian glaciers in 1988 and 1989 (1991, 78p., nor) 45-3856
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Signals of atmospheric pollution in polar snow and ice (1990, p.189-205, eng) 45-467
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Salt oscillator in the glacial Atlantic? 1. The concept (1990, p.469-477, eng) 45-952
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Sea ice characteristics and the role of sediment inclusions in deep-sea deposition: Arctic-antarctic comparisons (1990, p.187-211, eng) 45-1268
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Behaviour of broken ice as a geomaterial (1991, p.451-457, eng) 45-3539
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Climate, hydrology and vegetation patterns, Hot Weather Creek, Arctic Canada (1990, p.273-286, eng) 45-2527  
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Hydrology of lakes and wetlands (1990, p.159-187, eng) 45-2150  
Permafrost hydrology (1990, p.63-76, eng) 45-214  
Response of soil moisture change to hydrological processes in a continuous permafrost environment (1990, p.235-252, eng) 45-2525  
Stochastic simulation of climate change impacts on ice road operations, MacKenzie River, Northwest Territories (1990, p.259-264, eng) 45-3308



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Volcanoes of North America: United States and Canada [1990, 354p., eng] 45-2827
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Role of irreversible thermodynamics and rheology in the regelation-flow phenomenon [1990, p.133-145, eng] 45-496
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Vernal atmospheric mixing in the Antarctic [1991, p.494-507, eng] 45-2842
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Fluid mixing during melting [1991, p.1393-1404, eng] 45-3030  
Solidification of an alloy cooled from above: Part 1. Equilibrium growth [1990, p.323-342, eng] 45-970  
Solidification of an alloy cooled from above: Part 2. Non-equilibrium interfacial kinetics [1990, p.331-348, eng] 45-1087
- Woodworth-Lynas, C.M.T.**  
Iceberg scours in the geological record: examples from glacial Lake Agassiz [1990, p.217-233, eng] 45-2786  
Observed deformation structures beneath relict iceberg scours [1990, p.103-125, eng] 45-1947
- Wookey, C.W.**  
Ice core drilling at a high accumulation area of Law Dome, Antarctica, 1987 [1989, p.86-96, eng] 45-1461
- Workshop on Applications of Remote Sensing in Hydrology, Saskatoon, Saskatchewan, Feb. 13-14, 1990**  
Proceedings [1990, 386p., eng] 45-3797
- Workshop on Ice Scouring and the Design of Offshore Pipelines, Calgary, Alberta, Canada, Apr. 18-19, 1990**  
Proceedings [1990, 499p., eng] 45-1945
- Workshop on Paving in Cold Areas, 4th, Sapporo, Japan, Sep. 4-6, 1990**  
Proceedings [1990, 2 vols., eng] 45-3490
- Worster, M.G.**  
Solidification of an alloy cooled from above: Part 1. Equilibrium growth [1990, p.323-342, eng] 45-970  
Solidification of an alloy cooled from above: Part 2. Non-equilibrium interfacial kinetics [1990, p.331-348, eng] 45-1087
- Wortley, C.A.**  
Classification system of winter conditions of small-craft harbor design for the Great Lakes [1990, p.821-834, eng] 45-3632  
Designing for control of ice conditions in marinas [1991, p.386-395, eng] 45-2350  
Ice conditions on inland waterways [1990, p.61-65, eng] 45-2647  
Ice engineering for rivers and lakes bibliography [1990, 158p., eng] 45-2311
- Wortman, R.T.**  
1948 flood on the Columbia River: an analysis of its cause and its importance in operational planning [1990, p.160-163, eng] 45-2137
- Wright, B.D.**  
Operating review of Molikpaq and Kulluk activities in the Beaufort Sea [1990, p.351-374, eng] 45-144
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Low-frequency ice radar studies on ice streams B and C, West Antarctica [1990, p.79-81, eng] 45-1256
- Wright, E.A.**  
Thermistor-based system for thermal conductivity measurement [1991, p.223-236, eng] 45-2660  
Thermistor-based thermal conductivity measurement system [1990, 11p., eng] 45-190
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Unlocking the ice house: Oligocene-Miocene oxygen isotopes, eustasy, and margin erosion [1991, p.6829-6848, eng] 45-2503
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Experiments on numerical sea ice forecasting in the Bohai Sea [1990, p.173-186, eng] 45-3675
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Effect of grain size variation on damage in polycrystalline ice [1991, p.542-553, eng] 45-2365  
On the constitutive modeling of transient creep in polycrystalline ice [1990, p.267-294, eng] 45-1618
- Wu, S.**  
Effect of Cenozoic ice sheet fluctuations in Antarctica on the stratigraphic signature of the Neogene [1991, p.6753-6778, eng] 45-2501
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Altitude calculation of climatic snowlines and their changing rules in China [1991, p.56-60, eng] 45-2483
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Creep of circular ice plates: analysis and experiment [1991, p.47-53, eng] 45-3147
- Wunikes, M.**  
Shallow and deep ice coring devices developed by the Polar Ice Coring Office (PICO) [1990, p.555-564, eng] 45-158
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Future technology for debonding snow and ice from pavements [1991, p.438-447, eng] 45-2355
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Environmental effects of snow dumping: a literature review [1980, p.219-240, eng] 45-184
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Comparison of different structures for a monthly water yield model in seasonally snow-covered mountainous watersheds of Iran [1990, p.535-546, eng] 45-2993
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Combined finite element-experimental technique for determination of impact ice tensile properties [1988, p.254-258, eng] 45-1349
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Analysis of damage and energy flow in the crushed layer during rapid ice loading [1990, p.231-246, eng] 45-3679
- Xiao, L.**  
Analysis of trace elements in BHQ ice core of Law Dome, Antarctica [1988, p.164-172, ch] 45-45
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Acoustical radiation from thermally stressed sea ice [1991, p.2215-2231, eng] 45-3380  
Antarctic periglacial environment and the formation mechanism of "sorted circles" in the Fildes Peninsula [1989, p.82-90, eng] 45-1011  
Depositional characteristics of the moraine formed by the continental ice sheet in the area near Casey Station, Antarctica [1988, p.179-192, ch] 45-47  
Preliminary research on weathering process in Casey Station region, Antarctic [1988, p.193-213, ch] 45-48
- Xie, Z.**  
Analysis of trace elements in BHQ ice core of Law Dome, Antarctica [1988, p.164-172, ch] 45-45  
Ice crystallographic studies on Law Dome, Antarctica [1988, p.93-118, ch] 45-40  
Physical characteristics of the snow and ice cover of Law Dome, East Antarctica [1989, p.8-22, eng] 45-1004  
Repeated compression-annealing experiments for the ice from Antarctica [1988, p.141-152, ch] 45-43  
Snow stratigraphy and ice formation on Law Dome, Antarctica [1988, p.1-21, ch] 45-35  
Study of the structure of ice core from BHQ borehole on Law Dome, Antarctica [1988, p.119-131, ch] 45-41
- Xin, W.**  
Bottom characteristics of the antarctic ice sheet from radar [1989, p.2727-2729, eng] 45-299  
Coherent radar contour mapping of ice stream thickness [1989, p.2734-2737, eng] 45-301  
Design, development, field observations, and preliminary results of the coherent antarctic radar depth sounder (CARDS) of the University of Kansas, U.S.A. [1990, p.247-254, eng] 45-68  
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Radar reflections from water injected into an antarctic glacier [1990, p.723-726, eng] 45-721
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Traffic and transport on ice cover in Nenjiang River [1990, p.835-844, eng] 45-3633
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Application of Maantanen model on multilegged structures [1990, p.1071-1083, eng] 45-3654  
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Changing regularities of soil water characteristic curves in the whole range from multimolecular layer to saturation [1990, p.48-54, ch] 45-461
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Evaluation of two transport aircraft and several ground test vehicle friction measurements obtained for various runway surface types and conditions. A summary of test results from Joint FAA/NASA Runway Friction Program [1990, 297p., eng] 45-559  
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- Yagi, K.**  
Braking and starting performance with winter tires (2nd report) [1989, p.11-16, jpn] 45-908  
Study on snow melting methods for roads in Hokkaido [1990, p.87-92, jpn] 45-744
- Yagi, N.**  
Ersy method for estimating the strength of rocks at low temperature [1981, p.477-487, jpn] 45-117  
Mechanical characteristics of rocks at low temperatures [1980, p.1221-1227, jpn] 45-118  
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Strength characteristics of rocks after having been at low temperature [1982, p.335-342, jpn] 45-115  
Thermal properties of rocks at low temperatures [1980, p.1228-1233, jpn] 45-119
- Yamada, M.**  
Free convection heat transfer around a horizontal ice cylinder formed through melting in saline water [1990, p.35-41, eng] 45-3869  
Melting heat transfer from a horizontal ice cylinder immersed in a quiescent saline water [1990, p.15-23, eng] 45-1164  
Testing of softening point and brittle point of asphalt mixtures for the evaluation of their rheological properties [1990, p.237-253, eng] 45-3499
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Diurnal variation of precipitation in Langtang Valley, Nepal Himalayas [1990, p.93-101, eng] 45-202  
Electrical conductivity and pH in snow and ice samples from various glacier areas [1990, p.119-129, eng] 45-977  
Field tests on frost heaving damage of small sized U-trough [1990, p.163-171, jpn] 45-1663
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Heavy snowfall and avalanche disasters [1989, p.639-655, jpn] 45-628
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Measurements of flow velocity under the ice cover [1990, p.1155-1170, eng] 45-3662
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Modeling of surface roughness effects on glaze ice accretion [1991, p.54-60, eng] 45-3235  
Modeling of surface roughness effects on glaze ice accretion [1990, p.35-42, eng] 45-599
- Yamaguchi, T.**  
Variability in sterol flux in the ice-covered lagoon Saroma Ko, Hokkaido, Japan [1990, p.8-15, eng] 45-3342
- Yamaguchi, Y.**  
Detection of objects buried in wet snowpack by an FM-CW radar [1991, p.201-208, eng] 45-3188  
Experimental study of microwave transmission in snowpack [1990, p.915-921, eng] 45-369  
Light conditions and photosynthetic productivity of ice algal assemblages in Lake Saroma, Hokkaido [1989, p.274-278, eng] 45-3313  
Photosynthetic nature of ice algae and their contribution to the primary production in lagoon Saroma Ko, Hokkaido, Japan [1989, p.1-8, eng] 45-3343  
Phytoplankton bloom under sea ice recorded with a moored system in lagoon Saroma Ko, Hokkaido, Japan [1989, p.9-15, eng] 45-3344
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Clast-fabric strength in periglacial slope deposits as a function of clast size and shape [1989, p.187-197, eng] 45-830
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Performance tests on tires for snow removal trucks [1990, p.203-208, jpn] 45-749  
Snowmelt runoff forecasting system for the Rumoi River [1988, p.395-398, jpn] 45-2518  
Tests on surface components of snow removal drains: tests on snow removal drain covers [1990, p.209-214, jpn] 45-750
- Yamamoto, T.**  
Report on the first MOS-1 data received at Syowa Station, Antarctica [1991, p.22-30, eng] 45-3062  
Surface mass balance and its variability in the Mizuho Plateau, 1987-1988, Antarctic [1990, p.1-10, ch] 45-2268
- Yamaoka, M.**  
Countermeasures to both the wet snow accretion and the galloping damages on the transmission lines [1988, p.376-380, eng] 45-1375
- Yamasaki, N.**  
Transfer of hydrogen from NADPH to NAD+ in frozen aqueous solution [1990, p.2187-2188, eng] 45-957
- Yamashita, H.**  
Experimental study of formation and melting of ice about horizontal tubes [1990, p.57-63, eng] 45-1165
- Yamazaki, Y.**  
Role of Antarctica in the climate of the Southern Hemisphere as revealed by modeling studies: a brief review [1986, p.39-50, eng] 45-915
- Yanagimachi, O.**  
Thermal conditions of the lower limit of *Pinus pumila* zone and of the upper and lower limits of *Betula ermanii* zone in Hokkaido, Japan [1989, p.1-18, jpn] 45-629
- Yanai, K.**  
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Temperature regime of oil and gas pipelines laid jointly in frozen ground [1988, p.91-96, eng] 45-1426
- Yano, K.**  
Studies of icing and ice-snow accretion in Mt. Zao [1988, p.109-113, eng] 45-1322
- Yano, T.**  
On the size distribution of rimed snowflakes [1986, p.25-35, eng] 45-3704
- Yao, T.D.**  
Microparticle concentration measurement and its climatic implications in an ice core from coast area, Antarctica [1990, p.1102-1109, eng] 45-1144
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Spreading of oil spilled under ice [1990, p.1468-1483, eng] 45-1289
- Yasunari, T.**  
Teleconnection between the Eurasian snow cover and the ENSO—a cryosphere/atmosphere/ocean interaction [1989, p.613-622, jpn] 45-626
- Yatake, C.P.**  
Episodic acidification of Adirondack lakes during snowmelt [1990, p.1639-1647, eng] 45-224

- Ye, Z.**  
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 Determination of mean annual temperature of permafrost soil. Khristalev, L.N., et al, 1989, p.89-93, eng 45-652
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 Improving the forecasting of snow water content in a glacier basin. Gruzinov, A.V., 1990, p.45-49, rus 45-1104  
 Critical assessment of low temperature properties of multi-grade SAE 10W-30 engine oils. Deysarkar, A.K., et al, 1990, p.502-507, eng 45-1525  
 Boudinage: a source of stratigraphic disturbance in glacial ice in central Greenland. Cunningham, J., et al, 1990, p.269-272, eng 45-1536  
 Air-content measurement correction for polar ice sampling. Martinerie, P., et al, 1990, p.299-303, eng 45-1540  
 Investigating the interrelationship between climate and permafrost. Anisimov, O.A., et al, 1990, p.13-20, rus 45-1630  
 Critique of the climatic record of snow water equivalent. Schmidlin, T.W., 1990, p.1136-1141, eng 45-1652  
 Preliminary results of solid precipitation measurement tests. Günther, T., 1990, p.224-226, eng 45-1682  
 Comparative digital analysis of Seasat-SAR and Landsat-TM data for Iceland. Rast, M., et al, 1991, p.527-544, eng 45-2223  
 Satellite radar altimeter capability for ice sheet surface change measurement. Partington, K.C., et al, 1991, p.585-609, eng 45-2225  
 Accuracy of soil property measurement by gamma beams. Miyazaki, T., et al, 1991, p.127-137, eng 45-2271  
 Deducing precipitation chemistry changes from snow cores. Metcalf, R.C., et al, 1990, p.299-316, eng 45-2529  
 Comments on "Laboratory and wind tunnel evaluations of the Rosemount icing detector". Hill, G.E., 1991, p.305-306, eng 45-2929  
 Accuracy of selected techniques for estimating ice-affected streamflow. Walker, J.F., 1991, p.697-712, eng 45-2969  
 Survey of standards for determination of vapour pressure over ice and water surfaces. Gibbins, C.J., 1990, p.859-885, eng 45-3104  
 Long-range prediction of regional sea ice anomalies in the Arctic. Chapman, W.L., et al, 1991, p.271-288, eng 45-3236  
 Estimation of standard error of impedance-estimated frost resistance. Repo, T., et al, 1989, p.67-74, eng 45-3251  
 Freezing point depressions of dilute potassium chloride solutions. Partanen, J.I., 1990, p.317-320, eng 45-3374  
 Freezing point depression of dilute aqueous sodium chloride solutions. Partanen, J.I., et al, 1991, p.172-176, eng 45-3403  
 Telemetry channel of the radio echo sounding system "Meteorit-2-MARZ". Gorbatova, E.S., et al, 1990, p.42-48, rus 45-3443
- Acidity**  
*See also:* Chemical properties
- Acoustic measurement**  
 Ice acoustics from BHQ on Law Dome. Zhang, J., et al, 1988, p.132-140, chi 45-42  
 Statistical descriptions of keel-related features in the under-ice draft distribution. Key, J., et al, 1989, p.2346-2349, eng 45-291  
 Arctic acoustics and experiments in the Marginal Ice Zone. Meredith, R.W., et al, 1989, 75p., eng 45-312  
 Sea ice velocity measurements by upward-looking Doppler current profilers. Belliveau, D.J., et al, 1990, p.596-602, eng 45-353  
 Environmental signatures in arctic ambient noise. Gough, E.C., Jr., 1989, p.1225-1230, eng 45-437  
 Apparent coherent energy loss of ice-reflected, high-frequency LFM pulses. Posey, J.W., et al, 1989, p.1240-1245, eng 45-438  
 Eastern Arctic ambient noise. Pritchard, R.S., 1989, p.1246-1251, eng 45-439  
 Noise Package: an autonomous ambient noise measurement system. Spychalski, S.E., et al, 1989, p.1255-1257, eng 45-440  
 Compact acoustic recorder. Stein, R., 1989, p.1258-1262, eng 45-441  
 Sea-ice velocity measurement verification of an acoustic current profiler. Melrose, S.K., et al, 1989, p.1304-1307, eng 45-449
- Measurements of under-ice broadband coherence. Meredith, R.W., 1990, p.1003-1010, eng 45-656  
 Sea-ice thickness measurement using an electromagnetic sounding system. Kovacs, A., et al, 1990, p.1327-1337, eng 45-837  
 Acoustic emission generated by moving loads on sea ice: preliminary results. Langhorne, P.J., et al, 1990, p.337-342, eng 45-1623  
 Scour shape and sub-scour disturbance studies from the Canadian Beaufort Sea. Gilbert, G.R., 1990, p.127-144, rus 45-1948  
 Automated snow depth and snowpack temperature measurements. Tanner, B.D., et al, 1990, p.73-78, eng 45-2123  
 Directionality of ice cracking events. Zakarauskas, P., et al, 1991, p.722-734, eng 45-2402  
 Observation and inversion of seismo-acoustic waves in a complex arctic ice environment. Milner, B.E., et al, 1991, p.1668-1685, eng 45-2666  
 Examination of ice deformation by acoustic emission measurement. Rist, M.A., et al, 1990, p.91-102, eng 45-2724  
 Influence of sea ice on ocean ambient sound. Sagen, H., et al, 1990, p.415-426, eng 45-2748  
 Acoustical radiation from thermally stressed sea ice. Xie, Y., et al, 1991, p.2215-2231, eng 45-3380
- Acoustic waves**  
*See also:* Sound waves
- Acoustics**  
 Arctic acoustics and experiments in the Marginal Ice Zone. Meredith, R.W., et al, 1989, 75p., eng 45-312  
 Noise immunity of towed receiving devices in marine seismic prospecting. Buravtsev, V.I.U., et al, 1988, p.34-42, rus 45-681  
 Electrical and acoustic properties of saline frozen soils. Zykov, I.U.D., et al, 1990, p.128-136, rus 45-2902  
*See also:* Ice acoustics; Noise (sound); Snow acoustics; Sound transmission; Underwater acoustics
- Active layer**  
 Thermal data and core specimen analysis, Norman Wells Pipeline. Riseborough, D.W., 1989, 30p. + append., eng 45-386  
 Role of heat exchange in the formation of the temperature conditions of permafrost rocks. Bryksin, V.N., 1989, p.10-14, eng 45-646  
 Relationship of biomass to depth to frozen soil in Alaskan tundra. Gross, M.F., et al, 1990, p.275-282, eng 45-890  
 Variations in the salinity of seasonally and perennially frozen soils. Anisimova, N.P., 1990, p.40-46, rus 45-1199  
 Hydrothermal regime of the ice-divide area of Austfonna, Nordaustlandet. Zagorodnov, V.S., et al, 1990, p.133-141, rus 45-1752  
 Heat-moisture-salt regime of frozen ground during fall watering. Ivanov, V.A., et al, 1989, p.24-36, rus 45-1826  
 Isotopic-oxygen composition of structure-forming ice of the active layer. Mikhalev, D.V., 1989, p.162-169, rus 45-1837  
 Cost-effectiveness of geotextiles; review of performance in Alaskan roads. Reckard, M., 1991, 50p., eng 45-2000  
 Forecasting the temperature of the active layer of rocks. Slavin-Borovskii, V.B., et al, 1989, p.20-31, rus 45-2005  
 Process study of sorted patterns in arctic soils. Final report. Hallet, B., 1991, 20p., eng 45-2140  
 Response of soil moisture change to hydrological processes in a continuous permafrost environment. Woo, M.K., et al, 1990, p.235-252, eng 45-2525  
 Combined geocryological and hydrogeological investigations. Collected scientific articles. Anisimova, N.P., ed, 1989, 163p., rus 45-2623  
 Chemical composition of suprapermafrost ground water in the active layer. Lebedeva, T.N., 1989, p.22-33, rus 45-2626  
 Gas-hydrogeochemical variations in the active layer in northeast USSR. Glotov, V.E., 1989, p.33-46, rus 45-2627  
 Effect of electrical treatment of the active layer on ground water. Kuzakov, V.O., 1989, p.123-126, rus 45-2637

**Active layer (cont.)**

- Cryogenic heating in conjunction with seasonal and long-term freezing of rocks. Nevechera, V.L., et al., 1989, p.44-49, eng. **45-3253**
- Hydrologic and thermal properties of the active layer in the Alaskan Arctic. Hinzman, L.D., et al., 1991, p.95-110, eng. **45-3417**
- Thermal response of the active layer to climatic warming in a permafrost environment. Kane, D.L., et al., 1991, p.111-122, eng. **45-3418**
- Additives**  
See *falsoy*: Cement admixtures; Concrete admixtures; Fuel additives
- Adhesion**  
See *falsoy*: Ice adhesion; Ice crystal adhesion
- Admixtures**  
Ice and minerals on Callisto: a reassessment of the reflectance spectra. Roush, T.L., et al., 1990, p.355-382, eng. **45-849**
- Evaluation of effects of deicing additives on properties of asphalt mixtures. Mogawer, W.S., et al., 1989, p.41-53, eng. **45-1153**
- Synthetic products as basic components of low-pour motor oils. Tsvetkov, O.N., et al., 1990, p.189-192, eng. **45-1385**
- Graphical method simplifies diesel cloud point determinations. Khan, H.U., et al., 1990, p.98-101, eng. **45-3101**
- See *falsoy*: Cement admixtures; Concrete admixtures
- Absorption**  
Interaction of a gold chloride complex with the surface of dispersed ice. Fedoseeva, V.I., et al., 1989, p.110-117, rus. **45-1832**
- Frozen-liquid PMR spectra and interactions of water with spherical carbon adsorbents. Turon, V.V., et al., 1990, p.102-105, eng. **45-2285**
- Advection**  
Local advection processes in the surface layer of the marginal ice zone. Claussen, M., 1991, p.1-27, eng. **45-2163**
- On the relationship between snow distribution and snow melt. Gjessing, Y., 1990, p.111-119, eng. **45-3787**
- Adventive plants**  
See *falsoy*: Introduced plants
- Aeolian soils**  
See *falsoy*: Eolian soils
- Aeration**  
Use of aeration to prevent ice buildup at gaging station controls. Wagner, C.R., 1990, p.155-158, eng. **45-2195**
- Aerial surveys**  
Study on sea ice monitoring using MOS-1/MSR. Cho, K., et al., 1989, p.991-994, eng. **45-253**
- Ice kinematic measurements from aerial photography. Brown, T.G., et al., 1989, p.1148-1151, eng. **45-263**
- Absolute calibration of the CCRS C-band SAR during BEPERS-88. Ulander, L., 1989, p.1528-1531, eng. **45-275**
- International Ice Patrol Side-Looking Airborne Radar (SLAR) experiment 1988. Osmer, S.R., et al., 1989, p.2193-2196, eng. **45-288**
- Application of the Global Positioning System in Antarctica. Whillans, I.M., et al., 1990, p.6-19, eng. **45-529**
- Time and space distribution of initial gamma-field levels in Tien Shan. Getker, M.I., et al., 1990, p.61-71, rus. **45-1105**
- Winter short-pulse radar studies on the Tanana River, Alaska. Delaney, A.J., et al., 1990, p.244-250, eng. **45-1421**
- Radiometry of precipitable water over high latitude regions. Wang, J.R., et al., 1991, p.179-184, eng. **45-1598**
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- Aircraft observations of the arctic atmospheric boundary layer. Walter, B., et al., 1991, p.4663-4673, eng. **45-2678**
- Aircraft observations of atmospheric flow parallel to the ice edge. Shaw, W.J., et al., 1991, p.4691-4708, eng. **45-2680**
- Texture analysis of radiometric signatures of new sea ice forming in arctic leads. Eppler, D.T., et al., 1991, p.233-241, eng. **45-3189**
- Remote sensing of snow covers using the gamma-ray technique. Offenbacher, E.L., et al., 1991, 19p., eng. **45-3259**
- Observational evaluation of the snow breeze. Segal, M., et al., 1991, p.412-424, eng. **45-3271**
- Ice particle concentrations and precipitation development in small polar maritime cumulusiform clouds. Rangno, A.L., et al., 1991, p.207-241, eng. **45-3480**
- Airborne remote sensing of river ice slush transport. Dobrowolski, A., et al., 1990, p.1105-1112, eng. **45-3657**
- See *falsoy*: Infrared reconnaissance; Spaceborne photography
- Aerodynamic test facilities**  
See *falsoy*: Wind tunnels

**Aerosols**

- Activation of ice-forming aerosols. Kim, N.S., et al., 1989, p.41-46, rus. **45-25**
- Efficiency of ice-forming aerosol generators. Kim, N.S., et al., 1989, p.46-59, rus. **45-26**
- Effect of halogens on the ice-forming activity of aerosols. Shilin, A.G., et al., 1989, p.59-64, rus. **45-27**
- Ice-forming activity of the atmospheric aerosol. Khorguani, V.G., 1989, p.812-814, eng. **45-482**
- Effect of aerosols on radiation transfer in the Arctic. Ivanov, V.A., et al., 1989, p.47-54, rus. **45-609**
- Snow crystal nuclei and aerosol particles. Kikuchi, K., et al., 1990, p.415-435, eng. **45-784**
- Chemical compositions of aerosol particles and snowfalls in Alta, northern Norway. Lee, D.-I., et al., 1989, p.169-178, eng. **45-829**
- Reaction of sea ice to aerosol pollution of the atmosphere. Savchenko, V.G., et al., 1989, p.85-90, eng. **45-878**
- Airborne trace metals in snow on the Japan Sea side of Japan. Ecker, F.J., et al., 1990, p.2593-2600, eng. **45-954**
- Exploratory study of ice nucleation by soot aerosols. DeMott, P.J., 1990, p.1072-1079, eng. **45-1274**
- Soluble and insoluble impurities in snow samples from Ross Island, Antarctica. Palais, J.M., et al., 1990, p.89-91, eng. **45-1393**
- Tracers of volcanic emissions in aerosol and snow samples. Palais, J.M., et al., 1990, p.217-218, eng. **45-1435**
- Model for aerosol components over the Antarctic Peninsula. Dick, A.L., 1990, p.179-196, eng. **45-1441**
- Climate measurements by the EOS Geoscience Laser Ranging System. Spinhirne, J.D., et al., 1991, p.17-22, eng. **45-1512**
- Seasonal variation of some constituents of antarctic tropospheric air. Hogan, A.W., et al., 1990, p.2365-2368, eng. **45-1514**
- Ozone and aerosol distributions measured by airborne lidar during the 1988 Arctic Boundary Layer Experiment. Browell, E.V., et al., 1991, p.J242-J243, eng. **45-1601**
- Avacha fumarolic trace elements: distribution in snow and surface waters. Alekseev, V.A., et al., 1990, p.325-336, eng. **45-1704**
- Changes in global climate. Kondrat'ev, K.I.A., 1985, 280p., eng. **45-1710**
- Influence of iodine vapor on ice-forming activity of aerosols of various substances. Kim, N.S., et al., 1990, p.500-502, eng. **45-1927**
- Aerosol collection efficiency indicated by disks modelling snowflakes. Sparmacher, H., et al., 1990, p.S209-S212, eng. **45-2216**
- Mechanisms of heterogeneous ice nucleation onto mixed ice nuclei in the atmosphere. Smorodin, V.E., 1990, p.S249-S253, eng. **45-2217**
- Surface kinetic limitation of ice crystal growth in the stratosphere. Mackenzie, A.R., 1990, p.S259-S262, eng. **45-2218**
- Scavenging of soot particles by ice crystals. Oraltay, R.G., et al., 1990, p.S263-S266, eng. **45-2219**
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- Influence of lead iodide aerosol dispersity on its ice-forming activity. Baklanov, A.M., et al., 1991, p.9-14, eng. **45-2441**
- Aerosol characterization and snow chemistry at Terra Nova Bay. Santachiara, G., et al., 1990, p.61-72, eng. **45-2781**
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- Pre-conference abstracts. 1991, 66p., eng. **45-2918**
- Springtime visibility in the Arctic. Meyer, F.G., et al., 1991, p.342-357, eng. **45-3017**
- Saharan dust deposition over Mont Blanc (French Alps) during the last 30 years. De Angelis, M., et al., 1991, p.61-75, eng. **45-3020**
- Cloud condensation nuclei as a source of ice-forming nuclei in clouds. Rosinski, J., et al., 1991, p.123-133, eng. **45-3024**
- Chemical components of arctic tropospheric aerosols. Barrie, L.A., et al., 1990, p.211-226, eng. **45-3047**
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- Polycyclic aromatic and organochlorine compounds in the atmosphere of northern Ellesmere Island, Canada. Patton, G.W., et al., 1991, p.10,867-10,877, eng. **45-3375**
- Catalog of smoke/obscurant characterization instruments. O'Brien, H.W., ed., 1984, 184p., eng. **45-3476**
- Physical factors influencing winter precipitation chemistry. Collett, J.S., Jr., et al., 1991, p.782-788, eng. **45-3819**
- See *falsoy*: Particles; Smoke generators
- Afforestation**  
See *falsoy*: Forestry; Revegetation
- Afghanistan**  
Snow cover mapping of Afghanistan's mountains with space imagery. Kravtsova, V.I., 1990, p.295-302, eng. **45-1526**

**Age determination**

- Climate, tree-ring, and glacial fluctuations in the Rio Frias Valley, Rio Negro, Argentina. Villalba, R., et al., 1990, p.215-232, eng. **45-886**
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- On the use of glacial striae for reconstruction of paleo-ice sheet flow patterns. Klemm, J., 1990, p.217-236, eng. **45-2025**
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- See *falsoy*: Geochronology; Ice dating; Permafrost dating; Radioactive age determination; Soil dating
- Aggregates**  
Ecological role of bacteria in detritus and aggregates in the Pacific Ocean. Sazhin, A.F., et al., 1989, p.682-692, rus. **45-3450**
- See *falsoy*: Concrete aggregates; Soil aggregates
- Agriculture**  
Modeling winter grain crop survival in a zone with stable snow cover. Bogomolova, N.A., et al., 1990, p.113-118, rus. **45-2272**
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- Air bubbles**  
See *falsoy*: Bubbles
- Air bubbling systems**  
See *falsoy*: Bubbling
- Air circulation**  
See *falsoy*: Atmospheric circulation
- Air conditioning**  
Ice balls for air conditioners. Gilmore, V.E., 1990, p.45-46, eng. **45-364**
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- Experimental measurements of the effects of frost formation on heat exchanger performance. Emery, A.F., et al., 1990, p.1-7, eng. **45-3865**
- Finnish cold climate building technology and community development, part 9. Nyman, M., ed., 1990, 70p., fin. **45-3879**
- See *falsoy*: Cooling systems
- Air cushion vehicles**  
Papers on air cushion technology: icebreaking, cold weather operations, vehicles. Hinchey, M.J., ed., 1989, 96p., eng. **45-2100**
- Numerical simulation of over water hovercraft motion of a two-dimensional hovercraft. Hinchey, M.J., 1989, p.25-38, eng. **45-2101**
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- Air entrainment**  
Shotcrete durability: an evaluation. Glassgold, I.L., 1989, p.78-85, eng. **45-2081**
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Airfoil performance degradation due to ice accretion. Potapczuk, M.G., et al., 1990, p.679-691, eng. **45-372**
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- Satellite observations of katabatic winds. Marie Byrd Land to Ross Ice Shelf. Bromwich, D.H., 1990, p.218-221, eng. **45-1436**

- Katabatic winds at Terra Nova Bay. Parish, T.R., et al, (1990, p.221-223, eng) **45-1437**
- Strong katabatic wind event at Terra Nova Bay. Bromwich, D.H., et al, (1990, p.223-225, eng) **45-1438**
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- Observational evaluation of the snow breeze. Segal, M., et al, (1991, p.412-424, eng) **45-3271**
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- Air ice interface**  
See *also*: Ice air interface
- Air ice water interaction**  
Glaciers-ocean-atmosphere interactions. (1990, 131p., eng) **45-3003**
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- Air inflated structures**  
See *also*: Inflatable structures
- Air masses**  
Seasonal variation of some constituents of antarctic tropospheric air. Hogan, A.W., et al, (1990, p.2365-2368, eng) **45-1514**
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- Physical factors influencing winter precipitation chemistry. Collett, J.S., Jr., et al, (1991, p.782-788, eng) **45-3819**
- Air pollution**  
Trace elements in BHQ ice core from Law Dome. Zhang, Y., et al, (1988, p.164-172, chi) **45-45**
- Contamination of the global environment as observed in the Arctic. Pacyna, J.M., et al, (1990, p.149-157, eng) **45-374**
- Signals of atmospheric pollution in polar snow and ice. Wolff, E.W., (1990, p.189-205, eng) **45-467**
- Plume downwash and dispersion at an arctic industrial site. Guenther, A.B., (1989, 178p., eng) **45-477**
- Organochlorine air pollutants in the Canadian Arctic. Patton, G.W., (1989, 266p., eng) **45-511**
- Measurement of sulfur dioxide reaction rates in wintertime orographic clouds. Snider, J.R., (1989, 365p., eng) **45-512**
- Ice, snow and rain chemistry at the Great Wall Station in summer 1985. Li, H.Z., et al, (1989, p.107-112, chi) **45-685**
- Precipitation chemistry at the Great Wall Station, winter 1985. Li, H., (1989, p.126-129, chi) **45-686**
- Chemical compositions of aerosol particles and snowfalls in Alta, northern Norway. Lee, D.-I., et al, (1989, p.169-178, eng) **45-829**
- Reaction of sea ice to aerosol pollution of the atmosphere. Savchenko, V.G., et al, (1989, p.85-90, eng) **45-878**
- Chlorinated hydrocarbons in the antarctic atmosphere and snow water. Tulupov, P.E., et al, (1989, p.54-58, eng) **45-881**
- Literature survey on arctic pollution. Blackburn, D., et al, (1990, 24p., eng) **45-945**
- Method of assisting cold-starts, improving fuel economy and reducing emissions of engines at cold temperatures. Rao, V.K., et al, (1989, p.1-14, eng) **45-1210**
- Automotive exhaust emissions at low ambient temperature. Laurikko, J.K., (1989, p.35-46, eng) **45-1212**
- Influence of diesel fuel properties and ambient temperature on engines. Juva, A., et al, (1989, p.101-111, eng) **45-1221**
- Vehicle emission characteristics under cold ambient conditions. Larson, R.E., (1989, p.151-159, eng) **45-1228**
- CVS-cycle and average city trip emissions in low temperatures. Svensson, N.G., et al, (1989, p.161-163, eng) **45-1229**
- Behaviour of metal supported catalysts in subzero conditions. Aitta, E., et al, (1989, p.165-169, eng) **45-1230**
- Contamination of aqueous samples with formate and acetate from ambient air. Hewitt, A.D., et al, (1991, p.453-457, eng) **45-1697**
- Aerosol measurement at high alpine stations. Schiwkowski, M., et al, (1990, p.5321-5324, eng) **45-2220**
- Air-sea exchange of organic air pollutants in arctic oceans. Hinckley, D.A., et al, (1991, p.7201-7213, eng) **45-2559**
- Air pollution measurements at Barrow, AK. Jaffe, D.A., et al, (1991, p.7395-7405, eng) **45-2797**
- Pre-conference abstracts. (1991, 66p., eng) **45-2918**
- Brown snow: a long-range transport event in the Canadian Arctic. Welch, H.E., et al, (1991, p.280-286, eng) **45-3026**
- Chemical components of arctic tropospheric aerosols. Barrie, L.A., et al, (1990, p.211-226, eng) **45-3047**
- Environmental threats in the arctic. Stokke, O.S., (1990, p.22-41, eng) **45-3087**
- Arctic environmental cooperation: prospects and possibilities. Roginko, A.I.U., (1990, p.85-113, eng) **45-3090**
- Polar stratospheric clouds and ozone depletion. Toon, O.B., et al, (1991, p.68-74, eng) **45-3252**
- Polycyclic aromatic and organochlorine compounds in the atmosphere of northern Ellesmere Island, Canada. Patton, G.W., et al, (1991, p.10,867-10,877, eng) **45-3375**
- Model simulation of chemical depletion of arctic ozone during the winter of 1989. McConnell, J.C., et al, (1991, p.10,923-10,930, eng) **45-3376**
- Longitudinal and seasonal water chemistry variations in a northern Appalachian stream. Phillips, R.A., et al, (1990, p.489-498, eng) **45-3697**
- Physical factors influencing winter precipitation chemistry. Collett, J.S., Jr., et al, (1991, p.782-788, eng) **45-3819**
- Air snow interface**  
See *also*: Snow air interface
- Air soil interface**  
See *also*: Soil air interface
- Air temperature**  
Response of Greenland ice sheet to temperature changes. Braithwaite, R.J., et al, (1990, p.217-221, eng) **45-64**
- Yukon territory snow survey bulletin and water supply forecast—May. (1990, 24p., eng) **45-73**
- Yukon territory snow survey bulletin and water supply forecast—May. (1990, 24p., eng) **45-74**
- Yukon territory snow survey bulletin and water supply forecast—April. (1990, 24p., eng) **45-75**
- Yukon territory snow survey bulletin and water supply forecast—March. (1990, 25p., eng) **45-76**
- Air temperature and snow depth in Nepal Himalayas. Motoyama, H., et al, (1990, p.55-60, eng) **45-198**
- Automatic meteorological station in the Kunlun Mountains. Ohata, T., et al, (1990, p.73-85, eng) **45-200**
- Arctic region temperature mapping by integration of automated station data. Jacobs, J.D., (1990, p.84-96, eng) **45-362**
- Climate and CO<sub>2</sub> in a coupled atmosphere/ocean GCM. Washington, W.M., et al, (1989, p.1-38, eng) **45-380**
- Colorado climate: temperature, precipitation, frost and growth data. (1989, 290p., eng) **45-488**
- Climates of Canada. Phillips, D., (1990, 176p., eng) **45-54**
- Natural conditions in developed regions of Siberia. Klimovskii, I.V., ed, (1987, 172p., rus) **45-568**
- Dynamics of the coastal zone of the Vilyuy River power plant. Gotovtsev, S.P., et al, (1987, p.38-48, rus) **45-573**
- Variations in natural and climatic conditions in Yakutia. Gavrilova, M.K., (1987, p.146-159, rus) **45-586**
- Paleoclimatology and altitude of vegetation zones in Hokkaido. Ohmori, H., et al, (1989, p.1-18, jpn) **45-629**
- Drilling exploratory wells with pneumatic drills. Kudriashov, B.B., et al, (1990, 263p., rus) **45-634**
- Winter atmosphere over sea ice. Kottmeier, C., et al, (1990, p.16,551-16,560, eng) **45-717**
- Climate studies with a coupled atmosphere-upper-ocean-ice-sheet model. Fichefet, T., et al, (1989, p.249-261, eng) **45-793**
- Heavy snowfalls in the territories of the Ukraine and Moldavia. Mironchenko, G.V., et al, (1989, p.110-118, rus) **45-828**
- Converting the thermal energy of arctic sea water into electricity. Moskvicheva, V.N., et al, (1987, p.72-77, eng) **45-866**
- Antarctic automatic weather station data for the calendar year 1989. Keller, L.M., et al, (1990, 354p., eng) **45-939**
- Climate of the last thousand years. Jones, P.D., (1990, p.304-312, fre) **45-962**
- Thermal conditions of the cold period of the year. Davidovich, N.V., (1989, p.144-152, rus) **45-1051**
- Constituents of the mass balance of a glacier. Uvarov, V.N., (1989, p.206-209, rus) **45-1062**
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- Radiometeorological studies in marine conditions. Mikhailov, N.F., et al, (1990, 206p., rus) **45-1090**
- Changes in the air temperature field above glaciers. Volkova, M.V., et al, (1990, p.120-130, rus) **45-1114**
- Significant phenomena of the winter of 1989-1990. (1990, p.19-21, fre) **45-1129**
- Influence of diesel fuel properties and ambient temperature on engines. Juva, A., et al, (1989, p.101-111, eng) **45-1221**
- Sea ice observations and oceanic processes on the antarctic continental shelf. Jacobs, S.S., et al, (1990, p.135-136, eng) **45-1415**
- Role of the oceans in climatic variability and climatic change. Mysak, L.A., et al, (1990, p.352-369, eng) **45-1425**
- Anomalies in dates of formation and deterioration of stable snow cover. Murzabekova, U.N., (1990, p.95-99, rus) **45-1583**
- Climatic conditions in the northern European basin for the last 400 years. Dement'ev, A.A., (1989, p.67-75, rus) **45-1625**
- Snow and avalanches in the Swiss Alps, winter 1988/89. (1991, 155p., ger) **45-1650**
- Simulation of seasonal snowcover based on air temperature and precipitation. Motoyama, H., (1990, p.1104-1110, eng) **45-1651**
- Role of land ice in present and future sea-level change. Meier, M.F., (1990, p.171-184, eng) **45-1656**
- Three-wavelength method of measuring path-averaged turbulent heat fluxes. Andreas, E.L., (1990, p.801-814, eng) **45-1665**
- Response of the antarctic ice sheet to future greenhouse warming. Huybrechts, P., et al, (1990, p.93-102, eng) **45-1799**
- Winter environment of the Ohio River valley. Daly, S.F., et al, (1990, 57p., eng) **45-1999**
- Recent secular variations in the extent of Northern Hemisphere snow cover. Robinson, D.A., et al, (1990, p.1557-1560, eng) **45-2043**
- December to remember. Heim, R., et al, (1990, p.329-332, eng) **45-2049**
- Holocene paleoclimatology of the Queen Elizabeth Islands, Canadian High Arctic. Bradley, R.S., (1990, p.365-384, eng) **45-2074**
- Characteristics of the low-level temperature inversion along the Alaskan arctic coast. Kahl, J.D., (1990, p.537-548, eng) **45-2177**
- Air temperature variation over snow-covered terrain. Hogan, A., et al, (1990, p.1-12, eng) **45-2182**
- Rapid disintegration of the Wordie Ice Shelf in response to atmospheric warming. Doake, C.S.M., et al, (1991, p.328-330, eng) **45-2266**
- Relation between water vapor saturation and temperature. Afinogenov, L.P., (1987, p.129-133, rus) **45-2300**
- Impacts of Hudson Bay on the terrestrial climate of the Hudson Bay Lowlands. Rouse, W.R., (1991, p.24-30, eng) **45-2469**
- Detection of arctic climatic change using synoptic climatology. Kalkstein, L.S., et al, (1990, p.1153-1167, eng) **45-2535**
- Microphysical characteristics through the melting region of a midlatitude winter storm. Raga, G.B., et al, (1991, p.843-855, eng) **45-2663**
- Arctic snow and air temperature budget over sea ice during winter. Overland, J.E., et al, (1991, p.4651-4662, eng) **45-2677**
- Problems in geometeorology and the accumulation of winter cold. Koval'chuk, A.I., ed, (1990, 119p., rus) **45-2695**
- Temperature anomalies and atmospheric ice in the Ural caves. Ryzhkov, A.F., et al, (1990, p.25-28, rus) **45-2699**

**Air temperature (cont.)**

- Air temperature, rocks, and ground water in the Kungur cave. Dorofeev, E.P., [1990, p.29-34, rus] 45-2700
- Microclimatic characteristics of karst caves in Pamir-Alai. Sultanov, E.S., et al, [1990, p.61-63, rus] 45-2708
- Microclimates of caves in southern Siberia. Filipov, V.M., [1990, p.64-67, rus] 45-2709
- Modelling the accumulation of winter cold in rocks. Ezhov, I.U.A., [1990, p.79-87, rus] 45-2711
- Service temperature of steel in cold climates. Huther, M., et al, [1990, p.229-239, eng] 45-2734
- Study of the cold wave phenomenon in Quebec as a natural catastrophe. Lacroix, J., et al, [1990, p.138-157, fre] 45-2754
- Change in frost season characteristics in Winnipeg, 1872-1988. Rannie, W.F., [1990, p.168-177, eng] 45-2755
- Increased ocean heat transports and warmer climate. Rind, D., et al, [1991, p.7437-7461, eng] 45-2799
- Stratospheric sudden warming in late winter and shallow ozone hole in 1988. Kanzawa, H., et al, [1989, p.135-148, eng] 45-2979
- Effects of CO<sub>2</sub>-induced climatic changes on snowpack and streamflow. Cooley, K.R., [1990, p.511-522, eng] 45-2992
- Air temperature and precipitation variations at Svalbard. Brzdil, R., [1988, p.53-68, eng] 45-3027
- Agroclimatic and geomorphological characteristics of northern meadows. Krivoshechekov, V.S., et al, [1990, p.78-87, rus] 45-3038
- Analysis and prognosis of low temperatures adverse to plants using Markov chains. Liakatas, A., et al, [1990, p.381-384, eng] 45-3049
- Surface air temperature secular trends in northern high latitudes. Tsuchiya, I., [1991, p.43-51, eng] 45-3063
- Numerical model of snow-cover effects on mesoscale circulations. Segal, M., et al, [1991, p.1024-1042, eng] 45-3274
- Greenland ice sheet and greenhouse warming. Huybrechts, P., et al, [1991, p.399-412, eng] 45-3291
- Temperature potential for artificial snow-making. Mainguy, J., [1990, p.22-28, fre] 45-3303
- Acoustical radiation from thermally stressed sea ice. Xie, Y., et al, [1991, p.2215-2231, eng] 45-3380
- Arctic as a bellwether. Walsh, J.E., [1991, p.19-20, eng] 45-3488
- Interactions between oceans and ice sheets in the marginal zones of continents. Glazovskii, A.F., [1990, p.127-146, eng] 45-3524
- Qualitative models of Pleistocene glaciation, oceans, and climates. Grosswald, M.G., [1990, p.100-126, eng] 45-3541
- Sensitivity of sea ice break-up to air temperatures. Etkin, D.A., [1991, p.21-34, eng] 45-3547
- Guidelines on application of seasonal load restrictions. Mahoney, J.P., et al, [1990, p.75-84, eng] 45-3692
- Hydrology of Svalbard—hydrological problems in cold climate. Proceedings, [1990, 224p., eng] 45-3776
- Climatic time series of the Norwegian arctic meteorological stations—temperature and precipitation. Nordli, P.O., [1990, p.85-98, eng] 45-3785
- Cold air drainage in the Arctic. Hanssen-Bauer, I., [1990, p.99-110, eng] 45-3786
- On the relationship between snow distribution and snow melt. Gjessing, Y., [1990, p.111-119, eng] 45-3787
- Comments on atmospheric feedbacks. Blanchet, J.P., [1990, p.41-53, eng] 45-3821
- Commentary on sea ice feedback. Moritz, R.E., [1991, p.151-163, eng] 45-3823
- Air water interactions**
- Radiometeorological studies in marine conditions. Mikhailov, N.F., et al, [1990, 206p., rus] 45-1090
- Role of the oceans in climatic variability and climatic change. Mysak, L.A., et al, [1990, p.352-369, eng] 45-1475
- Large-scale features of ice cover formation in the Weddell gyre region. Bagriantsev, N.V., [1990, p.134-151, rus] 45-1564
- Role of heat transfer sources in changes to cyclone tracks. Abramov, V.A., et al, [1990, p.116-124, rus] 45-1642
- Calculating heat flux from the water to the atmosphere in the arctic basin. Blinov, N.I., et al, [1989, p.122-127, rus] 45-1661
- Dynamics of ice conditions in the coastal zone of Antarctica. Korotkov, A.I., et al, [1990, p.126-133, rus] 45-1751
- Arctic hurricane over the Bering Sea. Businger, S., et al, [1991, p.321-324, eng] 45-1944
- Local advection processes in the surface layer of the marginal ice zone. Clausen, M., [1991, p.1-27, eng] 45-2163
- Particulate matter and marine aerosol formation processes. Calvelli, G., et al, [1989, p.639-676, eng] 45-2296
- Relation between water vapor saturation and temperature. Afanasov, L.P., [1987, p.129-133, rus] 45-2300
- Air-sea exchange of organic air pollutants in arctic oceans. Hinkley, D.A., et al, [1991, p.7201-7213, eng] 45-2559
- Arctic system science: ocean-atmosphere-ice interactions. Moritz, R.E., ed, [1990, 132p. + append., eng] 45-2645
- Increased ocean heat transports and warmer climate. Rind, D., et al, [1991, p.7437-7461, eng] 45-2799
- Survey of standards for determination of vapour pressure over ice and water surfaces. Gibbins, C.J., [1990, p.859-885, eng] 45-3104
- Dynamics of ice conditions in the coastal zone of Antarctica. Korotkov, A.I., et al, [1990, p.261-270, eng] 45-3132
- Airborne equipment**
- Airborne cryogenic frost-point hygrometer: user's guide. Spyers-Duran, P.A., [1990, 41p., eng] 45-204
- Sea-ice thickness measurement using an electromagnetic sounding system. Kovacs, A., et al, [1990, p.1327-1337, eng] 45-837
- Investigating sea ice cover with an airborne scanning UHF radiometer. Aleksandrov, V.I.U., et al, [1989, p.78-87, rus] 45-1493
- Airborne radar**
- Automated ice motion tracking at the Alaska SAR facility. Kwok, R., [1989, p.608-611, eng] 45-241
- Monitoring snow cover with synthetic aperture radar. Bernier, M., et al, [1989, p.1251-1255, fre] 45-270
- LIMEX'89: active/passive microwave signatures of Newfoundland pack ice. Livingstone, C.E., et al, [1989, p.1524-1527, eng] 45-274
- SAR and passive microwave observations of the Odden during MIZEX'87. Sutherland, L.L., et al, [1989, p.1539-1544, eng] 45-278
- Radar polarimeter measurements of snow. Hallikainen, M., et al, [1989, p.1829-1831, eng] 45-280
- Helicopter-borne 8-channel FFT scatterometer. Hallikainen, M., et al, [1989, p.1832-1835, eng] 45-281
- Ice-type classifications from airborne radar waveform characteristics. Fedor, L.S., et al, [1989, p.1949-1952, eng] 45-286
- Integrated ice surveillance system for support of offshore oil and gas exploration. Rudkin, P., et al, [1989, p.2229-2231, eng] 45-290
- Search and rescue target detection experiment, Canso Bank, 1988. Dawe, B.R., et al, [1989, Var. p., eng] 45-550
- Helicopter radar report. Final draft, Sept. 1990. Lowry, R.T., [1990, 44p., eng] 45-588
- Seasonal and inter-annual variations in antarctic sea ice extent as mapped by radar altimetry. Laxon, S., [1990, p.1553-1556, eng] 45-1979
- Airborne radar altimeter observations of marginal sea ice. Drinkwater, M.R., [1991, p.4555-4572, eng] 45-2672
- Modified beta density function as a model for synthetic aperture radar clutter statistics. Maffett, A.L., et al, [1991, p.277-283, eng] 45-3190
- Time-delayed reflections in L-band synthetic aperture radar imagery of icebergs. Gray, A.L., et al, [1991, p.284-291, eng] 45-3191
- Evaluation of second-order texture parameters for sea ice classification from radar images. Shokr, M.E., [1991, p.10,625-10,640, eng] 45-3312
- Proceedings of the 2nd Synthetic Aperture Radar Workshop, Jun 1990. Kobrick, M., ed, [1990, 57p. + append., eng] 45-3752
- Synthetic aperture radar observations of the Greenland Ice Sheet. Jezek, K.C., et al, [1990, p.21-28, eng] 45-3753
- Comparison of active and passive microwave signatures of arctic sea ice. Drinkwater, M.R., et al, [1990, p.29-36, eng] 45-3754
- River and lake ice conditions as determined from AIRSAR imagery. Melloh, R.A., et al, [1990, p.37-42, eng] 45-3755
- Aircraft**
- Friction measurements under winter runway conditions. Yager, T.J., [1990, p.32-35, eng] 45-1184
- Charging of aircraft: high-velocity collisions. Keith, W.D., et al, [1990, p.218-222, eng] 45-2396
- Experimental study of the production of ice crystals by a twin-turboprop aircraft. Kelly, R.D., et al, [1991, p.217-226, eng] 45-2554
- Air aft-produced ice particles in a highly supercooled altocumulus cloud. Sassen, K., [1991, p.765-775, eng] 45-3209
- See (also): Airplanes; Balloons; Helicopters
- Aircraft icing**
- Bibliography on ice and fog: detection and warning systems. [1990, 95p., eng] 45-205
- Airfoil performance degradation due to ice accretion. Potapczuk, M.G., et al, [1990, p.679-691, eng] 45-372
- Facility to evaluate ground aircraft de-icing fluids. Laforte, J.L., et al, [1990, p.161-171, eng] 45-498
- Advanced instrumentation for aircraft icing research. Bachalo, W.D., et al, [1990, 100p., eng] 45-597
- Users manual for the NASA Lewis ice accretion prediction code (LEWICE). Ruff, G.A., et al, [1990, 231p., eng] 45-598
- Modeling of surface roughness effects on glaze ice accretion. Hansman, R.J., Jr., et al, [1990, p.35-42, eng] 45-599
- Ultrasonic techniques for aircraft ice accretion measurement. Hansman, R.J., Jr., et al, [1990, p.41-53, eng] 45-600
- Investigation of surface water behavior during glaze ice accretion. Hansman, R.J., Jr., et al, [1990, p.55-62, eng] 45-601
- Influence of ice accretion physics on the forecasting of aircraft icing conditions. Hansman, R.J., Jr., [1990, p.63-67, eng] 45-602
- Heat transfer of an airfoil in flight and in an icing wind tunnel. Poinatte, P.E., [1990, 184p., eng] 45-603
- Comparison of drop size distributions from two droplet sizing systems. Oldenburg, J.R., et al, [1990, 15p., eng] 45-604
- Debris/ice/TPS assessment and photographic analysis for Shuttle Mission STS-33R. Stevenson, C.G., et al, [1989, 170p., eng] 45-605
- Roll-along de-icer. Scott, D., [1990, p.86, eng] 45-621
- Thermal analysis of engine inlet anti-icing systems. Al-Khalil, K.M., et al, [1990, p.628-634, eng] 45-1015
- Swept wing ice accretion modeling. Potapczuk, M.G., et al, [1990, 24p., eng] 45-1131
- Fourth International Conference on Atmospheric Icing of Structures. [1988, 414p., eng] 45-1299
- Satellite images of icing clouds. Schickel, K.P., [1988, p.49-51, eng] 45-1309
- Effect of structural ice on aircraft component aerodynamics. Bragg, M.B., [1988, p.134-138, eng] 45-1327
- Microscopic and macroscopic observations of ice samples formed by accretion. Downs, S.J., [1988, p.157-161, eng] 45-1330
- Overview of icing research at ONERA. Guffond, D., et al, [1988, p.186-191, eng] 45-1336
- Efficient method for the numerical solution of Stefan problems. Keith, T.G., Jr., et al, [1988, p.192-196, eng] 45-1337
- Particle flows around fuselages and airfoils. Lecas, T., et al, [1988, p.197-201, eng] 45-1338
- Tensile properties of impact ice. Chu, M.L., et al, [1988, p.254-258, eng] 45-1349
- Ice accretion in different types of clouds. Hoffmann, H.E., [1988, p.272-276, eng] 45-1353
- Computer assisted aircraft icing forecast. Fuchs, W., [1988, p.390-393, eng] 45-1378
- Finite element studies of the electro impulse de-icing systems. Scavuzzo, R.J., et al, [1990, p.757-763, eng] 45-1676
- Remote sensor detection of aircraft icing conditions. Stankov, B.B., et al, [1990, 77p., eng] 45-1867
- Best flying season. Collins, R.L., [1991, p.51-55, eng] 45-1900
- Northeast snowstorms. Horne, T.A., [1991, p.86-87, eng] 45-1901
- Automated guidance for forecasting conditions conducive to aircraft icing. Schultz, P., et al, [1991, p.492-496, eng] 45-1919
- Piezoelectric ice sensor for aviation applications. Floyd, M.D., [1990, p.13-24, eng] 45-1924
- Aircraft icing as an applied winter storms problem. Politovich, M.K., [1991, p.235-240, eng] 45-1938
- Wave formation on a liquid layer for de-icing airplane wings. Yih, C.S., [1990, p.41-53, eng] 45-2053
- Rime and reion. Manningham, D., [1991, p.82-85, eng] 45-2179
- Aircraft landing areas**
- Northstar 89 flight deck deicer and hot air wand evaluation on the U.S.S. America (CV66). Rippman, J.A., et al, [1989, p.397-407, eng] 45-547
- BAS proposed construction of an airstrip at Rothera Point. [1989, 56p., eng] 45-1898
- Measuring the effectiveness of deicing fluids for reducing ice adhesion to rough surfaces. Lever, J.H., et al, [1991, p.221-227, eng] 45-3173
- See (also): Ice runways; Runways
- Airplanes**
- Friction measurements of aircraft on wet and icy runways. Yager, T.J., et al, [1990, 297p., eng] 45-558
- See (also): Tanker aircraft
- Airports**
- Asphalt concrete airport pavements during thaw weakening. Janoo, V.C., et al, [1991, 68p., eng] 45-2956
- Thermal analysis of forced-air airport foundation cooling. Smith, L.B., et al, [1991, p.399-409, eng] 45-3538
- Alasay**
- Characteristics of the formation of alassy peat bogs in northern Yakutia. Vasil'ev, I.S., [1989, p.82-87, rus] 45-670
- Formation of the alassy complex of deposits in the Mayn River basin. Kotov, A.N., [1990, p.59-64, rus] 45-3035
- Albedo**
- Physical parameterization of snow albedo for use in climate models. Marshall, S.E., [1989, 161p., eng] 45-567
- Distribution of surface radiation balance in northeastern Western Siberia. Skriabin, P.N., et al, [1990, p.28-33, rus] 45-1198
- Ice marginal ramps and alluvial fans in semiarid mountains. Kuhnle, M., [1990, p.55-68, eng] 45-1576
- Changes in global climate. Kondrat'ev, K.I.A., [1985, 280p., eng] 45-1710
- Factors in the stability of glacier systems. Lebedeva, I.M., [1990, p.64-75, rus] 45-1738
- High-resolution topography and albedo of the south polar layered deposits on Mars. Herkenhoff, K.E., et al, [1990, p.14,511-14,529, eng] 45-1839

- Spectral albedo and emissivity of CO<sub>2</sub> in Martian polar caps: model results. Warren, S.G., et al, [1990, p.14,717-14,741, eng] **45-1842**
- Temperature and moisture content of soils in Western Yamal. Sautkin, E.V., et al, [1989, p.111-119, rus] **45-2016**
- Date of snowmelt at Barrow, Alaska, U.S.A. Dutton, E.G., et al, [1991, p.115-119, eng] **45-2475**
- Glaciological and meteorological measurements in Dronning Maud Land. Winther, J.G., [1990, p.81-86, eng] **45-2834**
- Modeling the reflectance spectrum of Callisto at 0.25 to 4.1 millimicrons. Calvin, W.M., et al, [1991, p.305-317, eng] **45-2939**
- Dark-floor craters on Ganymede. Schenk, P.M., et al, [1991, p.318-346, eng] **45-2940**
- Snow depth required to mask the underlying surface. Baker, D.G., et al, [1991, p.387-392, eng] **45-3018**
- Parameterization of broad band radiative transfer properties of water, ice and mixed clouds. Rockel, B., et al, [1991, p.1-13, eng] **45-3267**
- Upper limit for sea ice albedo feedback contribution to global warming. Covey, C., et al, [1991, p.9169-9174, eng] **45-3412**
- Landsat mapping of surface albedo of the Colorado Front Range. Duguay, C.R., et al, [1991, p.213-223, eng] **45-3486**
- On the relationship between snow distribution and snow melt. Gjessing, Y., [1990, p.111-119, eng] **45-3787**
- Albedo measurements from snow—image processing of LANDSAT-5 TM data. Winther, J.G., et al, [1990, p.195-201, eng] **45-3795**
- Comments on atmospheric feedbacks. Blanchet, J.P., [1990, p.41-53, eng] **45-3821**
- Commentary on sea ice feedback. Moritz, R.E., [1991, p.151-163, eng] **45-3823**
- Alcohols**
- Ice nucleation by alcohols layered in water. Gavish, M., et al, [1990, p.973-975, eng] **45-917**
- Algae**
- Vertical fine structure of particulate matter and nutrients in sea ice of the high Arctic. Smith, R.E.H., et al, [1990, p.1348-1355, eng] **45-434**
- Ice algae impact on sea ice during spring. Cota, G.F., et al, [1990, p.1402-1415, eng] **45-435**
- Polar oceanography. Part B: chemistry, biology, and geology. Smith, W.O., Jr., ed, [1990, p.407-760, eng] **45-687**
- Chemical oceanography. Jones, E.P., et al, [1990, p.407-476, eng] **45-688**
- Polar phytoplankton. Smith, W.O., Jr., et al, [1990, p.477-525, eng] **45-689**
- Sea ice as biotope. Hempe!, G., [1990, p.367-374, ger] **45-732**
- Bacterioplankton in marginal ice zone of Weddell Sea. Cota, G.F., et al, [1990, p.1145-1167, eng] **45-882**
- Antarctic ice sheet during the Late Neogene. Mercer, J.H., [1987, p.21-33, eng] **45-884**
- Note on biological weathering on nunataks of the Juneau icefield, Alaska. Hall, K., et al, [1990, p.189-196, eng] **45-1298**
- Nitrogen utilization in ice algal communities. Harrison, W.G., et al, [1990, p.275-283, eng] **45-2033**
- Polar marine diatoms. Medlin, L.K., ed, [1990, 214p., eng] **45-2536**
- Techniques for sampling sea-ice algae. Horner, R., [1990, p.19-23, eng] **45-2540**
- Salinity stratification below sea ice during melting season. Matsuda, O., et al, [1990, p.357-362, eng] **45-2596**
- Filamentous green algae in freshwater streams on Signy Island, Antarctica. Hawes, I., [1989, p.1-18, eng] **45-2603**
- Benthic algal biomass and productivity in high subarctic streams, Alaska. LaPerriere, J.D., et al, [1989, p.63-75, eng] **45-2608**
- Distribution of aquatic and terrestrial vegetation in Antarctica. Broady, P.A., [1989, p.77-95, eng] **45-2609**
- Antarctic sea ice biota. Garrison, D.L., [1991, p.17-33, eng] **45-2621**
- Seaweed ecology in McMurdo Sound. Miller, K.A., et al, [1991, p.15-48, eng] **45-2622**
- Photosynthesis and nitrogen uptake by sea ice microalgae. Priscu, J.C., et al, [1991, p.201-210, eng] **45-2669**
- Marine biology of the Weddell Sea. Gulliksen, B., et al, [1990, p.131-138, eng] **45-2838**
- Photosynthesis-irradiance in pack ice microalgae. Lizotte, M.P., et al, [1991, p.175-184, eng] **45-3015**
- Ice algae in the Davis Strait. Booth, J.A., [1984, p.234-243, eng] **45-3070**
- Field studies of algal metabolism in ice-covered lakes in Alaska. Alexander, V., et al, [1970, p.31-52, eng] **45-3114**
- Arctic sea-ice biota. Horner, R.A., [1989, p.123-146, eng] **45-3115**
- Algal population\* in arctic sea ice: an investigation of heterotrophy. Horner, R., et al, [1972, p.454-458, eng] **45-3124**
- Chlorophyll and photosynthesis in sea ice microalgae. Legendre, L., et al, [1987, p.199-203, eng] **45-3134**
- Algal bloom under the ice off the coast of Finland. Hallfors, G., et al, [1974, p.89-104, eng] **45-3229**
- Photosynthesis and pigments of sea ice microalgae. Rochet, M., et al, [1986, p.211-226, eng] **45-3242**
- Responses of sea ice microalgae to climate and tides. Gosselin, M., et al, [1985, p.999-1006, eng] **45-3243**
- Improved chamber for in situ measurement of primary productivity by sea ice algae. Schrader, G.C., et al, [1982, p.522-524, eng] **45-3245**
- Primary productivity of the benthic microalgae in the Chukchi Sea near Barrow, Alaska. Matheke, G.E.M., et al, [1974, p.1779-1786, eng] **45-3247**
- Small volume, short-incubation-time method for measurement of photosynthesis as a function of incident irradiance. Lewis, M.R., et al, [1983, p.99-102, eng] **45-3248**
- Nitrogenous nutrition of sea-ice microalgae. Demers, S., et al, [1989, p.377-383, eng] **45-3285**
- Photosynthetic productivity of ice algae in Hokkaido. Satoh, H., et al, [1989, p.274-278, eng] **45-3313**
- Sub-ice microalgal strands in the antarctic coastal fast ice near Syowa Station. Watanabe, K., [1988, p.221-229, eng] **45-3314**
- Photosynthesis of arctic ice algae and salinity. Bates, S.S., et al, [1986, p.421-429, eng] **45-3319**
- Physiology of sea ice diatoms. Palmisano, A.C., et al, [1982, p.489-498, eng] **45-3320**
- Photosynthesis and primary production of ice algae in Hokkaido. Satoh, H., et al, [1989, p.1-8, eng] **45-3343**
- Rates of photoadaptation in sea ice diatoms from McMurdo Sound, Antarctica. Lizotte, M.P., et al, [1991, p.367-373, eng] **45-3347**
- Light and nutrient limitation of sea-ice microalgae (Hudson Bay, Canadian Arctic). Gosselin, M., et al, [1990, p.220-232, eng] **45-3348**
- Primary production of ice algae on a seasonally-ice-covered, continental shelf. Irwin, B.D., [1990, p.247-254, eng] **45-3356**
- Sea ice diatoms (Bacillariophyceae) of the Canadian Arctic. I. The genus *Stenoneis*. Poulin, M., [1990, p.156-167, eng] **45-3359**
- Diatoms in water column and sea ice in Lützow-Holm Bay. Tanimura, Y., et al, [1990, p.15-39, eng] **45-3360**
- On the algae found during the Arctic Expedition. Dickie, G., [1900, 6-12, eng] **45-3368**
- Development of ice periphyton of the Amur River under different light conditions. IUr'ev, D.N., et al, [1988, p.1546-1551, rus] **45-3369**
- Late spring diatom distribution between New Zealand and the Ross Ice Shelf. Burckle, L.H., et al, [1987, p.74-81, eng] **45-3372**
- Physiology of sea ice diatoms. II. Dark survival of three polar diatoms. Palmisano, A.C., et al, [1983, p.157-160, eng] **45-3384**
- Primary productivity in the coastal ice-covered area near Showa Station. Satoh, H., et al, [1991, p.30-38, eng] **45-3393**
- Marine diatoms from East Greenland. Østrup, E., [1900, p.395-476, dan] **45-3404**
- Benthic marine diatoms. Round, F.E., [1971, p.83-139, eng] **45-3405**
- Arctic diatom in Danish waters. Grøntved, J., [1950, 19p., eng] **45-3406**
- Incorporation of algae into sea ice. Ackley, S.F., [1982, p.54-55, eng] **45-3409**
- Algal and foram incorporation into new sea ice. Ackley, S.F., et al, [1987, p.1736, eng] **45-3410**
- Life in the antarctic sea ice zone. Hempel, G., [1991, p.249-254, eng] **45-3416**
- Living ice. Mel'nikov, I.A., [1984, p.68-77, rus] **45-3429**
- Response of a community of ice diatoms to a salinity gradient (Hudson Bay). Poulin, M., et al, [1983, p.191-202, fre] **45-3432**
- Dark survival of autotrophic, planktonic marine diatoms. Smayda, T.J., et al, [1974, p.195-202, eng] **45-3433**
- Ice algae in the East Siberian Sea in May 1987. Okolodkov, I.U.B., [1989, p.36-41, rus] **45-3434**
- Food webs and primary production in the Barents Sea. Sakshaug, E., [1991, p.1-8, eng] **45-3460**
- C-14 lipid distribution in psychrophilic marine diatom. Katakura, R., et al, [1991, p.9-16, eng] **45-3461**
- Late Pliocene-Pleistocene paleoclimate in the Janz Basin region: ODP Site 697. Burckle, L.H., et al, [1990, p.803-809, eng] **45-3529**
- Abiotic dynamics of Lake Kitezh, Antarctica. Contreras, M., et al, [1991, p.9-32, spa] **45-3552**
- Morphogenesis of the brown algae *Desmarestia antarctica*—seasonal variations. Wiencke, C., et al, [1991, p.65-78, eng] **45-3553**
- Alimentation**
- See *also*: Glacier alimentation
- Alkalinity**
- See *also*: Chemical properties
- All terrain vehicles**
- Workshop on Traction Mechanics on Deformable Terrain. South Lake Tahoe, CA, Oct. 9-11, 1989. Blaisdell, G.L., ed, [1990, 37p., eng] **45-1968**
- Initial impressions of a candidate mobile over-snow transport system. Blaisdell, G.L., et al, [1990, 13p. + appenda., eng] **45-1969**
- See *also*: Tracked vehicles
- Alluvium**
- Engineering geology of the USSR: Western Siberian and Turan plates. Trofimov, V.T., ed, [1990, 664p., rus] **45-1571**
- Effect of loading rate on the bending strength of alluvium reinforced ice. Weber, L.J., et al, [1991, p.71-84, eng] **45-2323**
- Flexural strength of sand-reinforced ice. Nixon, W.A., et al, [1991, p.14-27, eng] **45-2417**
- Alpine glaciation**
- Last glaciation and maximum glaciation in the Qinghai-Xizang Plateau. Shi, Y.F., et al, [1990, p.1-16, chi] **45-458**
- Late Quaternary glacial history of Mt. Katahdin and the nunatak hypothesis. Davis, P.T., [1989, p.119-134, eng] **45-2069**
- Reports on the Glaciological Survey of 1988. Armando, E., et al, [1989, p.155-204, ita] **45-2087**
- Ice on the equator: Quaternary geology of Mount Kenya, East Africa. Mahaney, W.C., [1990, 386p. + 7 plates, eng] **45-2393**
- See *also*: Mountain glaciers
- Alpine landscapes**
- Past and present permafrost distribution in the Turtmannal, Wallis, Swiss Alps. Van Tatenhove, F., et al, [1990, p.302-316, eng] **45-892**
- Alpine proglacial fluvial sediment budget. Warburton, J., [1990, p.261-272, eng] **45-2029**
- Satellite mapping of alpine pastures in the Himalayas. Lal, J.B., et al, [1991, p.425-443, eng] **45-2222**
- Analysis of the segmentation in the profile of alpine talus slopes. Francou, B., et al, [1990, p.53-60, eng] **45-2234**
- Pergelic soils of the western contiguous United States: distribution and taxonomy. Bockheim, J.G., et al, [1991, p.206-212, eng] **45-3485**
- Origin of silt-enriched alpine surface mantles in Indian Basin, Wyoming. Munn, L.C., et al, [1990, p.1670-1677, eng] **45-3863**
- Alpine soils**
- See *also*: Mountain soils
- Alpine tundra**
- Subsurface movement on solifluction slopes—a 20-year study. Price, L.W., [1991, p.200-205, eng] **45-3484**
- Structure and productivity of high-altitude plant communities of the southern Urals. Andreashkina, N.I., [1991, p.326-331, eng] **45-3862**
- Altimetry**
- See *also*: Height finding
- Altiplanation**
- Problem of cryoplanation terraces. Czudek, T., [1990, p.225-238, ger] **45-3054**
- Altitude**
- Reconstruction of the bedrock of Antarctica after deglaciation. Suetova, I.A., et al, [1989, p.127-131, rus] **45-1047**
- Thermal conditions of the cold period of the year. Davidovich, N.V., [1989, p.144-152, rus] **45-1051**
- Periglacial phenomena in New Zealand. Soons, J.M., et al, [1990, p.145-159, eng] **45-1295**
- Atmospheric icing with elevation on New England mountains. Ryerson, C.C., [1988, p.89-93, eng] **45-1318**
- Minimum altitudes for former periglacial landforms in Colorado and New Mexico. Marker, M.E., [1990, p.366-374, eng] **45-1418**
- Regularities in the occurrence of snow cover in the Amudaria River basin. Kalontarov, B.I., et al, [1990, p.92-96, rus] **45-1742**
- Altitude calculation of climatic snowlines and their changing rules in China. Wu, X.H., et al, [1991, p.56-60, eng] **45-2483**
- Variations of water isotope content with altitude in a mountain environment. Holdsworth, G., et al, [1991, p.7483-7494, eng] **45-2800**
- Slope denudation in the Altai highlands. Obyskalov, A.D., [1990, p.81-84, rus] **45-2821**
- Amorphous ice**
- X-ray study of high-density amorphous water. Bosio, L., et al, [1986, p.460-463, eng] **45-779**
- Identification of two distinct structural and dynamical domains in an amorphous water cluster. Buch, V., [1990, p.2631-2639, eng] **45-805**
- Anomalies in the viscosity of amorphous ice. Shavlov, A.V., [1989, p.1206-1207, eng] **45-1026**
- Spectra of dangling OH groups at ice cluster surfaces and within pores of amorphous ice. Rowland, B., et al, [1991, p.812-813, eng] **45-1904**
- Spectra of OH bonds in amorphous ice. Buch, V., et al, [1991, p.4091-4092, eng] **45-2167**
- Study of clathrate hydrates from vapour-deposited amorphous ice. Hallbrucker, A., et al, [1990, p.3785-3792, eng] **45-2415**
- Probing ice cluster surfaces with dangling-OH-mode absorption. Rowland, B., et al, [1991, p.1378-1384, eng] **45-3820**
- Amphibious vehicles**
- Technical evaluation of the MARIC 65-tonne amphibious hovercraft model 722. Yun, L., et al, [1989, p.79-96, eng] **45-2102**



**Analog simulation**

See *also*: Computerized simulation

**Analysis (chemistry)**

See *also*: Chemical analysis

**Analysis (mathematics)**

- Solution for solidification by convective and radiative cooling. Parang, M., et al, 1990, p.142-148, eng 45-221
- Geometrically nonlinear finite element analysis of a glulam timber dome. Davalos, J.F., 1989, 289p., eng 45-481
- Methods of calculating moisture migration in seasonal freezing and thawing of soils. IANITSKI, P.A., 1989, p.36-44, eng 45-651
- Using discriminant analysis to forecast wet snow avalanches. Kharitonov, G.G., et al, 1990, p.369-380, rus 45-1124
- Algorithm for a periodically stabilized regime in the solution of a Stefan problem. Shender, N.I., et al, 1990, p.105-110, rus 45-1206
- Modified differential method in solving the Stefan problem. Tetelbaum, A.S., 1990, p.111-118, rus 45-1207
- Spreading of oil spilled under ice. Yapa, P.D., et al, 1990, p.1468-1483, eng 45-1289
- Efficient method for the numerical solution of Stefan problems. Keith, T.G., Jr., et al, 1988, p.192-196, eng 45-1337
- Cepstrum analysis of signals reflected from sea ice. Oganessian, A.G., et al, 1989, p.99-105, rus 45-1496
- Creep and strength of ice cover subjected to loads and dies. Aleksandrov, V.M., et al, 1989, p.174-187, rus 45-1504
- Long waves in an ice cover-fluid system, under ice compression. Gol'dshteyn, R.V., et al, 1989, p.188-205, rus 45-1505
- Determining bending moments. Matskevich, D.G., et al, 1988, p.140-146, rus 45-1517
- Thermal expansion coefficients for sea ice. Johnson, J.B., et al, 1990, p.343-349, eng 45-1545
- Studying ice cover creep under loads distributed along a strip. Kreichman, M.M., et al, 1987, p.81-89, rus 45-1567
- Measuring path-averaged heat fluxes in free convection. Andreas, E.L., 1991, p.167-182, eng 45-1585
- Effect of snow and constant loads on the flexural strength of wooden structures. Denesh, N.D., 1990, p.16-20, rus 45-1587
- Feature extraction from two-dimensional images using fractal analysis. Baumgardner, D., 1991, p.185-187, eng 45-1599
- Determining estimation levels of snow cover. Kartashov, V.M., 1990, p.4-5, rus 45-1603
- Using a Kalman filter for calculating ice drift parameters. Lashov, E.S., et al, 1989, p.99-105, rus 45-1659
- Modified Nadreau yield function. Kormann, J.P., et al, 1990, p.89-92, eng 45-1770
- Surging glacial flows. Greenberg, J.M., et al, 1990, p.195-223, eng 45-1772
- Solving the Stefan problem for saline soils at subzero temperatures. Tetelbaum, A.S., 1989, p.13-24, rus 45-1825
- Numerical method for phase-change problems. Kim, C.J., et al, 1990, p.2721-2734, eng 45-1871
- Melting of ice in a porous medium heated from below. Zhang, X., et al, 1991, p.389-405, eng 45-1872
- Wave formation on a liquid layer for de-icing airplane wings. Yih, C.S., 1990, p.41-53, eng 45-2053
- Froude number paradoxes in modeling of snowdrift. Anno, Y., 1990, p.889-891, eng 45-2095
- Estimating snow transport from wind speed records. Tabler, R.D., et al, 1990, p.61-72, eng 45-2122
- Variations in permafrost thickness in response to changes in paleoclimate. Osterkamp, T.E., et al, 1991, p.4423-4434, eng 45-2228
- Natural convection heat transfer in water near its density maximum. Yen, Y.C., 1990, 92p., eng 45-2237
- Relation between water vapor saturation and temperature. Afonogenov, L.P., 1987, p.129-133, rus 45-2300
- Some questions on fracture mechanics of ice and ice covers. Gol'dshteyn, R.V., et al, 1991, p.615-618, eng 45-2371
- Wang's equation for ice forces from a pressure ridge. Nevel, D.E., 1991, p.666-672, eng 45-2376
- Heat transfer with freezing and thawing. Lunardini, V.J., 1991, 437p., eng 45-2390
- Parameterization of the accretion process between different precipitation elements. Mizuno, H., 1990, p.395-398, eng 45-2533
- Solution of the time discretized Stefan problem by Newton's method. Kelley, C.T., et al, 1990, p.851-872, eng 45-2583
- Modified differential method with smoothing coefficients for solving the Stefan problem. Tetelbaum, A.S., 1989, p.136-146, rus 45-2639
- Calculating thermal economy in horizontal mine shafts. Urganov, M.M., et al, 1990, p.88-89, rus 45-2712
- Determining the specific active area of scattering of a probed surface. Milekhin, O.F., et al, 1989, p.104-113, rus 45-2756

- Washout of unfrozen and frozen deposits of the Yamal Peninsula. Lovchuk, V.V., 1990, p.120-125, rus 45-2872
- Ice removal using a rotating working device. Sabatuskene, V.A., et al, 1989, p.403-408, eng 45-2927
- Calculating dielectric response function of cubic ice. Zaider, M., et al, 1990, p.25-39, eng 45-2948
- Enthalpy formulation for phase change problems. S.L., et al, 1991, p.1491-1502, eng 45-3023
- Iterative solution of a nonlinear system arising in phase-change problems. Williams, M.A., et al, 1990, p.1087-1101, eng 45-3056
- Estimated solutions of the one-dimensional Stefan problem. Aksenov, B.G., 1990, p.710-716, eng 45-3057
- Survey of standards for determination of vapour pressure over ice and water surfaces. Gibbins, C.J., 1990, p.859-885, eng 45-3104
- Prediction of freezing times of two-dimensional objects. Hossain, M.M., et al, 1989, p.651-657, eng 45-3107
- Creep of circular ice plates: analysis and experiment. Mahrenholtz, O., et al, 1991, p.47-53, eng 45-3147
- Temperature distribution in composting material in a cold environment. Ayorinde, O.A., et al, 1991, p.87-92, eng 45-3153
- Bearing capacity of shallow foundation on layered clay. Das, B.M., 1991, p.119-124, eng 45-3158
- Effect of internal waves on sea ice drift. Bruno, M.S., 1991, p.137-141, eng 45-3161
- Comparison of Laplace transform and finite difference solutions for an evolving permafrost region. Morland, L.W., et al, 1990, p.631-648, eng 45-3208
- Low temperature fracture mechanics of viscoelastic pavement structures. Selvadurai, A.P.S., et al, 1990, p.183-212, eng 45-3497
- Continuum damage modelling of polycrystalline ice. Sjolin, S.G., 1990, p.449-463, eng 45-3598
- Economic efficiency of icebreakers of different models and capacities. Arikainen, A.I., 1990, p.542-553, eng 45-3605
- Discrete element simulations of river ice transport. Babic, M., et al, 1990, p.564-574, eng 45-3607
- Moving and deforming finite-element simulation of two-dimensional Stefan problems. Zabarav, N., et al, 1990, p.495-506, eng 45-3699
- Diffraction of VLF radio waves by polar ice caps. Wait, J.R., 1991, p.1030-1032, eng 45-3700
- Stage distribution approach to estimating ice related flooding probabilities. Burn, D.H., 1989, p.953-960, eng 45-3773
- Transient creep of an ice sheet lying on a hydraulic base under a concentrated load. Aleksandrov, V.M., et al, 1991, p.793-799, eng 45-3774
- See *also*: Mathematical models; Statistical analysis; Stefan problem; Structural analysis; Thermal analysis
- Anchor ice**
- See *also*: Bottom ice
- Anchors**
- Deformation of reinforced concrete anchor foundations in the far north. Grebenets, V.I., et al, 1991, p.257-260, eng 45-3561
- Anemometers**
- Colloquium on the Dynamics of Natural Hazards and Glaciology, Grenoble, France, Dec. 5-7, 1990. 1990, Var.p., fre 45-1776
- Implementation of anemographic methods in the region of Lioran, France. Taillandier, J.M., et al, 1990, p.1/27-1/33, fre 45-1780
- Anemography of nocturnal cold air. Verreault, R., et al, 1990, p.1/34-1/42, fre 45-1781
- Animals**
- Bering, Chukchi, and Beaufort Seas coastal and ocean zones. 1988, 128 leaves, eng 45-807
- Frozen and alive. Storey, K.B., et al, 1990, p.92-97, eng 45-1017
- Consequences of an avalanche striking an ice-covered lake. Williams, M.W., et al, 1990, p.51-60, eng 45-2121
- Effect of abiotic factors on vole winter survival. Courtin, G.M., et al, 1991, p.45-52, eng 45-2472
- Abundance and distribution of invertebrates in Alaskan streams. Oswald, M.W., 1989, p.97-110, eng 45-2610
- Invertebrate community composition in arctic streams. Miller, M.C., et al, 1989, p.111-127, eng 45-2611
- Energy storage in copepods from antarctic lakes. Clarke, A., et al, 1989, p.183-191, eng 45-2616
- Vertical distributions of a planktonic harpacticoid and a calanoid (Copepoda) in a meromictic antarctic lake. Bayly, I.A.E., et al, 1989, p.207-214, eng 45-2617
- Role of ice in the ecology of marine mammals of the Bering Sea. Fay, F.H., 1974, p.383-399, eng 45-3119
- Acidic snowmelt effects on stream trout. Stanley, W., et al, 1990, p.227-237, eng 45-3304
- Ecology of sea colony birds of the Barents Sea. Belopol'ski, L.O., 1961, 346p., eng 45-3349
- Fishes of the northern seas of the U.S.S.R. Andriyashev, A.P., 1964, 617p., eng 45-3354
- Polar cod *Boreogadus saida* (Lesau.) and its importance in the Arctic. Klumov, S.K., 1937, p.175-188, rus 45-3430

- R-strategist in antarctic pack ice. Bergmans, M., et al, 1991, p.305-309, eng 45-3456
- Winter habitats of salmon and trout. Calkins, D.J., 1990, p.113-126, eng 45-3670
- Ecological aspects of lake regulation in northern Finland; part 3. Tikkanen, P., et al, 1989, 105p. + appends., fin 45-3846
- Ecological aspects of lake regulation in northern Finland; part 5. Alasaarela, E., et al, 1989, 49p., fin 45-3847
- Anion exchange**
- See *also*: Ion exchange
- Anisotropy**
- Development of ice crystal anisotropy in shear and comparisons of flow properties. Gao, X., et al, 1989, p.32-40, eng 45-1006
- RIGGS III: seismic short-refraction studies using an analytical curve-fitting technique. Kirchner, J.F., et al, 1990, p.109-126, eng 45-1612
- Crack nucleation due to elastic anisotropy in porous ice. Shyam Sunder, S., et al, 1990, p.249-265, eng 45-1617
- Frost action of soil revealed by magnetic susceptibility anisotropy. Warburton, J., 1990, p.507-510, eng 45-2214
- Four-photon polarization spectroscopy of a Rayleigh line wing in liquid water near 0 deg C. Bunkin, A.F., et al, 1990, p.29-31, eng 45-2930
- Antarctica**
- Application of the Global Positioning System in Antarctica. Whillans, I.M., et al, 1990, p.6-19, eng 45-529
- Passive microwave radiometry over Antarctica. Kidd, C., et al, 1990, p.1969-1973, eng 45-916
- Ice core investigations on the slope of the antarctic ice sheet. Petrov, V.N., et al, 1989, p.108-116, rus 45-1044
- Reconstruction of the bedrock of Antarctica after deglaciation. Suetova, I.A., et al, 1989, p.127-131, rus 45-1047
- Wild ice: Antarctic journeys. Naveen, R., et al, 1990, 222p., eng 45-1149
- Causes of the seismicity of Antarctica. Sadovskii, M.A., et al, 1990, p.1369-1374, rus 45-1859
- Effect of large ice sheets on earthquake genesis. Johnston, A.C., 1989, p.581-599, eng 45-1932
- Workshop on antarctic meteorite stranding surfaces. Cassidy, W.A., ed, 1990, 103p., eng 45-2426
- Some aspects of iron cycling in maritime antarctic lakes. Ellis-Evans, J.C., et al, 1989, p.149-164, eng 45-2613
- Biogeochemical study of organic substances in antarctic lakes. Matsumoto, G.I., 1989, p.265-289, eng 45-2619
- Creating a computer radar map of Antarctica. Spiridonov, I.U.G., et al, 1989, p.126-134, rus 45-2758
- Mineral resources potential of Antarctica. Spletstoesser, J.F., ed, 1990, 310p., eng 45-2801
- Uranium resource evaluation in Antarctica. Zeller, E.J., et al, 1990, p.95-116, eng 45-2806
- Geothermal resources of Antarctica. Kyle, P.R., 1990, p.117-123, eng 45-2807
- Assessment of petroleum resources in Antarctica. Behrendt, J.C., 1990, p.163-174, eng 45-2810
- Geology and hydrocarbon potential of the antarctic continental margin. Anderson, J.B., 1990, p.175-201, eng 45-2811
- Resource potential of antarctic icebergs. Wadhams, P., 1990, p.203-215, eng 45-2812
- Manganese nodule provinces of the southern ocean. Frakes, L.A., et al, 1990, p.217-221, eng 45-2813
- Antarctic logistic support for the earth sciences. Turner, M.D., et al, 1990, p.223-235, eng 45-2814
- Environmental impact of natural resource exploitation in Antarctica. Parker, B.C., et al, 1990, p.237-258, eng 45-2815
- Convention on the Regulation of Antarctic Mineral Resource Activities. Auburn, F., 1990, p.259-271, eng 45-2816
- Special report on the Antarctic Minerals Convention. Kimball, L.A., 1990, p.273-310, eng 45-2817
- Pre-conference abstracts. 1991, 66p., eng 45-2918
- Volcanoes of the antarctic plate and southern oceans. LeMasurier, W.E., ed, 1990, 487p., eng 45-2926
- Gazetteer of the Antarctic. Fourth edition. 1989, 145p., eng 45-2934
- Glaciers-ocean-atmosphere interactions. 1990, 131p., eng 45-3003
- Phytoplankton periodicity in antarctic surface waters. Hart, T.J., 1942, p.261-356, eng 45-3122
- Plankton diatoms of the southern seas. Hendey, N.I., 1937, p.151-364, eng 45-3123
- Comparison of Soviet arctic and antarctic policies. Joyner, C.C., 1991, p.284-299, eng 45-3338
- Adelie Coast**
- Dumont d'Urville aerodrome, Terre Adelie, Antarctica. Engler, M., et al, 1990, p.191-213, eng 45-501
- Ice core drilling on Adelie Coast. Donnou, D., et al, 1989, p.66-69, eng 45-1458

- SPOT imagery and nature and structure of ice on Adélie Coast. Chotin, E., et al, 1991, p.827-834, frej 45-3096
- Alasheyev Bight**  
Variability of natural conditions in Alasheyev Bight. Korotkov, A.I., 1990, p.117-133, rusj 45-1563
- Allan Hills**  
Ice age comparison of Yamato K-26, Allan Hills and Lewis Cliff. Fireman, E.L., 1990, p.47-48, engj 45-1082  
Gravity measurements on icefields west-southwest of the Allan Hills. Fudali, R.F., 1990, p.48-50, engj 45-1083  
Radio-echo sounding survey across the Allan Hills Icefield. Delisle, G., et al, 1990, p.50-52, engj 45-1084
- Amery Ice Shelf**  
Glaciological investigations of the Amery Ice Shelf in 1987-1989. Raikovskii, I.U.V., et al, 1990, p.114, rusj 45-1748
- Amundsen-Scott Station**  
Precipitation chemistry. Artz, R.S., 1988, p.99-101, engj 45-1  
Measuring blowing snow with a photo-electric particle counter at Pole Station, Antarctica. Wendler, G., 1989, p.9-16, engj 45-393  
Fallout in snow. Philpott, J.C., 1990, p.21, engj 45-918  
Beta radiation from snow. Dibb, J.E., et al, 1990, p.25, engj 45-919  
New methods in ice core processing. Stauffer, B., et al, 1989, p.151-157, engj 45-1468  
Environment One: plan for a new research station at the South Pole. Osgood, S.G., et al, 1991, p.250-271, engj 45-2338  
Vernal atmospheric mixing in the Antarctic. Murphy, B.B., et al, 1991, p.494-507, engj 45-2842  
Cation exchange with clay minerals in atmospheric precipitation. Sequeira, R., 1991, p.487-490, engj 45-3554  
Water vapor and ozone in polar stratospheres. Hofmann, D.J., et al, 1991, p.1011-1014, engj 45-3757
- Antarctic Peninsula**  
Cooperative climatological-glaciological program in the Antarctic Peninsula. Thompson, L.G., et al, 1990, p.69-70, engj 45-1156  
Glacial drainage systems along the Antarctic Peninsula and Palmer Archipelago. Williams, C., et al, 1990, p.116-117, engj 45-1411  
Model for aerosol components over the Antarctic Peninsula. Dick, A.L., 1990, p.179-196, engj 45-1441  
400 years isotope record of the Antarctic Peninsula climate. Aristarain, A.J., et al, 1990, p.2369-2372, engj 45-1990  
Determining the specific active area of scattering of a probed surface. Milekhin, O.E., et al, 1989, p.104-113, rusj 45-2756  
Mineralization in the northern Antarctic Peninsula area. Pride, D.E., et al, 1990, p.69-94, engj 45-2805
- Asuka Station**  
Borehole drilling for sewage disposal at Asuka Station. Ishizawa, K., et al, 1990, p.145-155, jpnj 45-980  
Antarctic penetrator program, No.1, 1989. Shibuya, K., et al, 1991, p.92-117, jpnj 45-3397
- Atka Iceport**  
Sea ice dynamics at Atka Iceport. Kipfstuhl, J., 1991, 88p., gerj 45-3521
- Beazare Coast**  
Antarctic glacier velocities from Landsat images. Lucchitta, B.K., et al, 1990, p.106-107, engj 45-1397
- Beardmore Glacier**  
Isotopes in glacial deposits at Beardmore Glacier. Hagen, E.H., et al, 1990, p.67-68, engj 45-1155  
Recovery and dating of carbon dioxide in polar ice cores. Wilson, A.T., et al, 1989, p.579-584, engj 45-1845
- Beaver Lake**  
Water level and ice melting observations on Beaver Lake. Piskun, A.A., 1990, p.55-64, rusj 45-2570  
Results of isotope hydrochemical testing of Beaver and Radok Lakes. Vand, U., et al, 1990, p.90-95, rusj 45-2573
- Bellinghamsen Sea**  
Major features of ice conditions in the Bellinghamsen Sea. Evseev, V.V., 1990, p.325-330, engj 45-729  
On the phytoplankton of the south-west Atlantic and the Bellinghamsen Sea, 1929-31. Hart, T.J., 1934, p.1-268, engj 45-3128
- Bellinghamsen Station**  
Hydrometeorological information distribution to ships from Bellinghamsen Station in 1986. Leont'ev, E.B., 1990, p.32-36, rusj 45-3078
- Black Island**  
Wind power in Antarctica: case histories of the North Wind HR3 wind turbine. Coleman, C.J., 1991, p.765-771, engj 45-2386
- Bransfield Strait**  
SIBEX Physical Oceanography Workshop, Cambridge, U.K., Mar. 9-27, 1987 1990, 38p., engj 45-304  
Icebergs as tracers of water movement in the Bransfield Strait. Madejaki, P., et al, 1990, p.259-263, engj 45-470
- Bread Bay**  
Application of GPS relative positioning for height determination above sea level in the antarctic marginal ice zone. Shibuya, K., et al, 1990, p.149-162, engj 45-2305
- Radio scattering characteristics of the Roi Baudouin ice shelf, East Antarctica. Uratsuka, S., et al, 1990, p.345-351, engj 45-2743
- Bunger Hills**  
Geomorphological structure of Bunger Hills. Bol'shianov, D.I.U., 1990, p.79-90, rusj 45-2572
- Byrd Glacier**  
Evidence for a frozen bed, Byrd Glacier, Antarctica. Scofield, J.P., et al, 1991, p.11,649-11,655, engj 45-3462
- Byrd Station**  
Record of the atmospheric methane sink from formaldehyde in polar ice cores. Staffelbach, T., et al, 1991, p.603-605, engj 45-1862
- Casey Station**  
Moraine formed by ice sheet near Casey Station. Xie, Y., et al, 1988, p.179-192, chij 45-47  
Weathering processes near Casey Station. Xie, Y., et al, 1988, p.193-213, chij 45-48
- Crary Ice Rise**  
Force, mass, and energy budgets of the Crary Ice Rise Complex, Antarctica. MacAyeal, D.R., et al, 1987, p.218-230, engj 45-18
- Dolleman Island**  
Geophysical aspects of ice core drilling in Antarctica. Moore, J.C., 1988, 168p. + appends, engj 45-1518  
Dielectric profiling in ice core studies. Moore, J., et al, 1991, p.81-92, engj 45-3066
- Dome C**  
Thermal ice core drill 4000. Augustin, L., et al, 1989, p.59-65, engj 45-1457  
Trace element analysis of antarctic ice cores. Boutron, C.F., et al, 1989, p.182-197, engj 45-1472
- Dronning Maud Land**  
Analyses of radio-echo data from Antarctica. Herzfeld, U.C., et al, 1988, p.95-110, engj 45-1091
- Dufek Massif**  
Economic potential of the Dufek Complex. De Wit, M.J., et al, 1990, p.33-52, engj 45-2803
- Dyer Plateau**  
Initiation of strain measurements on Dyer Plateau, Antarctic Peninsula. Raymond, C.F., et al, 1990, p.71, engj 45-1157
- East Antarctica**  
Soviet-French cooperation in isotopic research of ice cores. Lorius, C., et al, 1990, p.287-289, engj 45-724  
Antarctic ice sheet during the Late Neogene. Mercer, J.H., 1987, p.21-33, engj 45-884  
Natural remanent magnetization of dirt-ice layers from East Antarctica. Funaki, M., 1990, p.131-138, engj 45-978  
Climatic implications of microparticles in an antarctic coastal ice core. Yao, T.D., et al, 1990, p.1102-1109, engj 45-1144  
Computed velocities of antarctic outlet glaciers. MacDonald, T.R., et al, 1990, p.105-106, engj 45-1396
- Katabatic winds in the Adélie Coast sector. Wendler, G., 1990, p.226-228, engj 45-1439  
Banded iron formations in East Antarctica. Tingey, R.J., 1990, p.125-131, engj 45-2808
- Ekstrom Ice Shelf**  
Numerical simulations for determining ice shelf flow. Determann, J., 1991, 82p., gerj 45-3522
- Ellsworth Land**  
Crustal structure between the Antarctic Peninsula and Ellsworth Land. McGibbon, K.J., et al, 1991, p.475-479, engj 45-2949
- Erebus, Mount**  
Soluble and insoluble impurities in snow samples from Ross Island, Antarctica. Palais, J.M., et al, 1990, p.89-91, engj 45-1393  
Tracers of volcanic emissions in aerosol and snow samples. Palais, J.M., et al, 1990, p.217-218, engj 45-1435
- Filchner Ice Shelf**  
Roughness length of the snow surface of the Filchner-Ronne Ice Shelf. Heinemann, G., 1989, p.17-24, gerj 45-394  
Determining the specific active area of scattering of a probed surface. Milekhin, O.E., et al, 1989, p.104-113, rusj 45-2756  
Numerical modelling of ice shelf dynamics. Determann, J., 1991, p.187-195, engj 45-3459  
Numerical simulations for determining ice shelf flow. Determann, J., 1991, 82p., gerj 45-3522
- Filchner-Ronne Ice Shelf**  
Ice shelf water at the Weddell Sea shelf break. Foldvik, A., et al, 1990, p.125-130, engj 45-2837
- Fildes Peninsula**  
Periglacial landforms of Vestfold Hills and Fildes Peninsula. Zhang, Q., 1989, p.74-81, engj 45-1010  
Formation mechanism of sorted circles on Fildes Peninsula. Cui, Z., et al, 1989, p.82-90, engj 45-1011  
Coastal phenomena around Fildes Peninsula. Liu, G., et al, 1990, p.18-26, chij 45-2270
- Effect of sea salts on anion distribution in ice core from Fildes Peninsula. Han, M.W., et al, 1990, p.17-23, korj 45-3202
- Fimbul Ice Shelf**  
Studies on, and underneath, the ice shelf Fimbulisen. Orheim, O., et al, 1990, p.59-73, engj 45-2832  
Radio-echo investigations in Dronning Maud Land. Kennett, M., 1990, p.75-79, engj 45-2833  
Glaciological and meteorological measurements in Dronning Maud Land. Winther, J.G., 1990, p.81-86, engj 45-2834
- Fryzell, Lake**  
Geochemical processes in the Lake Fryzell Basin (Victoria Land, Antarctica). Green, W.J., et al, 1989, p.129-148, engj 45-2612  
Nitrogen transport by phytoplankton in ice-covered lakes. Prisco, J.C., 1989, p.173-182, engj 45-2615  
Vertical distribution of organic constituents in an antarctic lake: Lake Fryzell. Matsumoto, G.I., et al, 1989, p.291-303, engj 45-2620
- Gerlache Strait**  
Sedimentation and glacial history in Gerlache Strait. Griffith, T.W., 1988, 449p., engj 45-719
- Great Wall Station**  
Glacier formation and mass balance near the Great Wall Station. Ren, J., 1988, p.242-247, chij 45-51  
Synoptic processes at the Great Wall Station, Jan-Mar. 1985. Chen, S.M., et al, 1989, p.22-28, chij 45-683  
Ice, snow and rain chemistry at the Great Wall Station in summer 1985. Li, H.Z., et al, 1989, p.107-112, chij 45-685  
Precipitation chemistry at the Great Wall Station, winter 1985. Li, H., 1989, p.126-129, chij 45-686  
Seismological observation at the Great Wall Station during austral winter of 1986. Jia, G., 1990, p.81-85, chij 45-2171  
Morphologic analyses of snow crystals of Antarctica. Jia, G., et al, 1990, p.11-17, chij 45-2269
- Hoare, Lake**  
Sedimentation at Lake Hoare. Squyres, S.W., et al, 1991, p.363-379, engj 45-3457
- Jutulstraumen Glacier**  
Radio-echo investigations in Dronning Maud Land. Kennett, M., 1990, p.75-79, engj 45-2833
- King George Island**  
Ice formation and temperature regime on Nelson and King George Is. Ren, J., 1988, p.248-255, chij 45-52  
Glacier temperature regime near the Great Wall Station. Ren, J., 1990, p.22-27, chij 45-2170  
Morphogenesis of the brown algae *Desmarestia antarctica*—seasonal variations. Wiencke, C., et al, 1991, p.65-78, engj 45-3553
- King Sejong Station**  
Construction report on Sejong Station. Kim, D.W., 1990, p.51-67, korj 45-3203  
Meteorological data at King Sejong Station, 1990. Lee, B.Y., et al, 1990, p.75, engj 45-3204
- Kitezh, Lake**  
Abiotic dynamics of Lake Kitezh, Antarctica. Contreras, M., et al, 1991, p.9-32, spa 45-3552
- Law Dome**  
Snow stratigraphy and ice formation on Law Dome. Xie, Z., 1988, p.1-21, chij 45-35  
Temperature regime and thermal property of Law Dome active layer. Qin, D., et al, 1988, p.84-92, chij 45-39  
Ice crystals on Law Dome. Xie, Z., 1988, p.93-118, chij 45-40  
BHQ borehole ice core structure on Law Dome. Li, J., et al, 1988, p.119-131, chij 45-41  
Ice acoustics from BHQ on Law Dome. Zhang, J., et al, 1988, p.132-140, chij 45-42  
Structure, stratigraphy and bubble properties in ice core from Law Dome. Han, J.K., et al, 1988, p.153-163, chij 45-44  
Trace elements in BHQ ice core from Law Dome. Zhang, Y., et al, 1988, p.164-172, chij 45-45  
Isotopic analyses from BHQ ice core on Law Dome. Jiang, G., et al, 1988, p.173-178, chij 45-46  
Snow and ice cover physical characteristics at Law Dome. Xie, Z., et al, 1989, p.8-22, engj 45-1004  
Development of ice crystal anisotropy in shear and comparisons of flow properties. Gao, X., et al, 1989, p.32-40, engj 45-1006  
Crystal orientation fabrics from two ice cores. Jacka, T.H., et al, 1989, p.41-52, engj 45-1007  
Snow firm surface structure on Law Dome. Han, J.K., et al, 1989, p.53-63, engj 45-1008  
Ice core drilling at Law Dome in 1987. Etheridge, D.M., et al, 1989, p.86-96, engj 45-1441
- Law Dome**  
Scientific plan for deep ice drilling on Law Dome. Etheridge, D.M., 1990, 41p., engj 45-3533
- Lewis Cliff**  
Ice age comparison of Yamato K-26, Allan Hills and Lewis Cliff. Fireman, E.L., 1990, p.47-48, engj 45-1082  
Saline minerals in the Lewis Cliff ice tongue. Fitzpatrick, J.J., et al, 1990, p.57-69, engj 45-1687
- Litow-Holm Bay**  
Seismic telemetry network at Showa Station. 2. Akamatsu, J., et al, 1990, p.90-99, engj 45-1530

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- Lützow-Holm Bay (cont.)**  
Water exchange under fast ice in Lützow-Holm Bay. Ohshima, K.I., et al, [1991, p.74-80, eng] **45-3065**  
Diatoms in water column and sea ice in Lützow-Holm Bay. Tanimura, Y., et al, [1990, p.15-39, eng] **45-3360**
- Marguerite Bay**  
Modern sedimentary dynamics and Quaternary glacial history of Marguerite Bay, Antarctic Peninsula. Kennedy, D.S., [1988, 203p., eng] **45-720**
- Marie Byrd Land**  
Satellite observations of katabatic winds: Marie Byrd Land to Ross Ice Shelf. Bromwich, D.H., [1990, p.218-221, eng] **45-1456**
- Mawson Station**  
Impact of biogenic sulphur on sulphate aerosols at Mawson Station. Prospero, J.M., et al, [1991, p.221-223, eng] **45-2264**
- McMurdo Ice Shelf**  
Late Quaternary history of the Ross Sea from debris on the McMurdo Ice Shelf. Kellogg, T.B., et al, [1990, p.25-56, eng] **45-1686**
- McMurdo Sound**  
Seaweed ecology in McMurdo Sound. Miller, K.A., et al, [1991, p.35-48, eng] **45-2622**  
Photosynthesis and nitrogen uptake by sea ice microalgae. Priscu, J.C., et al, [1991, p.201-210, eng] **45-2669**  
Rates of photoadaptation in sea ice diatoms from McMurdo Sound, Antarctica. Lizotte, M.P., et al, [1991, p.367-373, eng] **45-3347**
- McMurdo Station**  
Wind power in Antarctica: case histories of the North Wind HR3 wind turbine. Coleman, C.J., [1991, p.765-771, eng] **45-2386**  
Vernal atmospheric mixing in the Antarctic. Murphey, B.B., et al, [1991, p.494-507, eng] **45-2842**  
McMurdo SAR Facility: report of the ad hoc science working team. Jezek, K.C., ed, [1991, 32p., eng] **45-2916**  
Water vapor and ozone in polar stratospheres. Hofmann, D.J., et al, [1991, p.1011-1014, eng] **45-3757**
- Mizuho Plateau**  
Surface mass balance variability on Mizuho Plateau. Zhang, W., et al, [1990, p.1-10, chi] **45-2268**  
Topographic and gravity anomaly maps near Mizuho Plateau. Nagao, T., et al, [1991, p.56-69, jpn] **45-3396**
- Mizuho Station**  
Dielectric profiling in ice core studies. Moore, J., et al, [1991, p.81-92, eng] **45-3066**  
Oxygen isotope profiles of deposited snow in different environments. Ageta, Y., et al, [1991, p.39-46, jpn] **45-3394**
- Nelson Island**  
Ice formation and temperature regime on Nelson and King George Is. Ren, J., [1988, p.248-255, chi] **45-52**  
Thickness of the Nelson I. ice sheet. Qian, S., et al, [1989, p.28-32, eng] **45-1005**  
Snow stratigraphy and ice formation on Nelson Ice Cap. Wang, X., et al, [1990, p.13-21, chi] **45-2169**  
Glacier temperature regime near the Great Wall Station. Ren, J., [1990, p.22-27, chi] **45-2170**
- Newcomb Bay**  
Sea ice physical properties near Casey Station. Allison, I., et al, [1988, p.214-233, chi] **45-49**
- Novolazarevskaya Station**  
Glaciological and geocryological investigations on Novolazarevskaya Station. Vtiurn, B.I., [1990, p.93-104, rus] **45-1561**
- Ongul Island**  
Seismic telemetry network at Showa Station. 2. Akamatsu, J., et al, [1990, p.90-99, eng] **45-1530**
- Palmer Archipelago**  
Glacial drainage systems along the Antarctic Peninsula and Palmer Archipelago. Williams, C., et al, [1990, p.116-117, eng] **45-1411**
- Palmer Station**  
Ultraviolet radiation environment of the Antarctic Peninsula. Lubin, D., [1989, 134p., eng] **45-2830**  
Effect of cloud cover on UV radiation over the Antarctic Peninsula. Lubin, D., et al, [1991, p.478-493, eng] **45-2841**
- Pensacola Mountains**  
Dufek intrusion of Antarctica. Ford, A.B., [1990, p.15-32, eng] **45-2802**  
Economic evaluation of platinum mining in Antarctica. Beike, D., [1990, p.53-67, eng] **45-2804**
- Princess Ragnhild Coast**  
Radio echo soundings in the Shirase Glacier and Princess Ragnhild Coast areas. Nishio, F., et al, [1991, p.93-102, eng] **45-3067**
- Fryd's Bay**  
SIBEX Physical Oceanography Workshop, Cambridge, U.K., Mar. 9-27, 1987, 38p., eng] **45-304**
- Queen Maud Land**  
Ice sheet volume in Queen Maud Land during cold stages. Hermichen, W.D., et al, [1990, p.301-306, eng] **45-726**  
Oxygen-18 thermometer from snow of Queen Maud Land. Hermichen, W.D., et al, [1990, p.307-311, eng] **45-727**  
Development of the JARE deep ice coring system. Fujii, Y., et al, [1990, p.303-345, jpn] **45-2595**
- Queen Maud Land**  
Radio-echo investigations in Dronning Maud Land. Kennett, M., [1990, p.75-79, eng] **45-2833**
- Queen Maud Land**  
Geology around the Norwegian antarctic station 'Troll', Jutulissen, Dronning Maud land. Dallmann, W.K., et al, [1990, 39p., eng] **45-3881**
- Queen Maud Mountains**  
Geodetic measurements in Dronning Maud Land. Eiken, T., et al, [1990, p.101-111, eng] **45-2836**
- Radok Lake**  
Results of isotope hydrochemical testing of Beaver and Radok Lakes. Vand, U., et al, [1990, p.90-95, rus] **45-2573**
- Ronne Ice Shelf**  
Roughness length of the snow surface of the Filchner-Ronne Ice Shelf. Heinemann, G., [1989, p.17-24, ger] **45-394**  
Ice-ocean interaction on Ronne Ice Shelf, Antarctica. Jenkins, A., et al, [1991, p.791-813, eng] **45-1718**  
Determining the specific active area of scattering of a probed surface. Milekhin, O.E., et al, [1989, p.104-113, rus] **45-2756**  
Numerical modelling of ice shelf dynamics. Determann, J., [1991, p.187-195, eng] **45-3459**  
Numerical simulations for determining ice shelf flow. Determann, J., [1991, 82p., ger] **45-3522**
- Ross Ice Shelf**  
Incident of clear air precipitation. Fisher, G.W., et al, [1989, p.155-159, eng] **45-472**  
Seismic reflection and refraction survey on Ross Ice Shelf. Ten Brink, U., et al, [1990, p.87-88, eng] **45-1392**  
104-m oxygen-isotope record at J-9 on Ross Ice Shelf. Grootes, P.M., et al, [1990, p.95-96, eng] **45-1395**  
Satellite observations of katabatic winds: Marie Byrd Land to Ross Ice Shelf. Bromwich, D.H., [1990, p.218-221, eng] **45-1436**  
Late Cenozoic glacial history of Ross Embayment. Clapperton, C.M., et al, [1990, p.253-272, eng] **45-1443**  
Deep hot water drill system with potential for bottom sampling. Koci, B.R., [1989, p.137-139, eng] **45-1466**  
Recent change in ice thickness in Windless Bight, Ross Ice Shelf, Antarctica? Delisle, G., [1990, p.350-351, eng] **45-1546**  
Ross Ice Shelf: glaciology and geophysics. Bentley, C.R., ed, [1990, 126p., eng] **45-1609**  
Seismic studies RIGGS I and RIGGS II of the Ross Ice Shelf. Robertson, J.D., et al, [1990, p.55-86, eng] **45-1610**  
Seismic studies RIGGS III and RIGGS IV of the Ross Ice Shelf. Albert, D.G., et al, [1990, p.87-108, eng] **45-1611**  
RIGGS III: seismic short-refraction studies using an analytical curve-fitting technique. Kirchner, J.F., et al, [1990, p.109-126, eng] **45-1612**  
Flow model of Ross Ice Shelf and climatic warming. Lingle, C.S., et al, [1991, p.6849-6871, eng] **45-2504**  
Late spring diatom distribution between New Zealand and the Ross Ice Shelf. Burckle, L.H., et al, [1987, p.74-81, eng] **45-3372**
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Geology and geochemistry of Transantarctic Mountains and Ross I. [1989, 321p., chi] **45-208**  
Archaeological techniques and technology on Ross Island, Antarctica. Ritchie, N.A., [1990, p.257-264, eng] **45-792**  
Distribution of aquatic and terrestrial vegetation in Antarctica. Broady, P.A., [1989, p.77-95, eng] **45-2609**
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Calving and drift of iceberg B-9 in the Ross Sea. Keys, H.J.R., et al, [1990, p.243-257, eng] **45-469**  
Sea ice characteristics and relationship with typhoons and subtropical high. Bian, L., [1989, p.45-54, chi] **45-684**  
Presence of Trident III on the antarctic continent. Dumas, B., [1986, p.223-237, fre] **45-1989**  
Production of Antarctic Bottom Water in the Weddell and Ross Seas. St. Pierre, D.B., [1989, 124p., eng] **45-2071**  
Cenozoic ice sheet fluctuation and Neogene stratigraphic signature. Bartek, L.R., et al, [1991, p.6753-6778, eng] **45-2501**  
Determination of some heavy metals in antarctic snow and coastal sea water. Saini, G., et al, [1990, p.27-30, eng] **45-3196**  
Late Quaternary glacial-interglacial fluctuation in the Ross Sea. Anderson, J.B., [1991, p.87-100, eng] **45-3281**
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BAS proposed construction of an airstrip at Rothera Point [1989, 56p., eng] **45-1898**
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Hydrogeography of the Schirmacher Hills region. Richter, W., [1991, p.367-373, ger] **45-3556**
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Glaciological and geocryological investigations on Novolazarevskaya Station. Vtiurn, B.I., [1990, p.93-104, rus] **45-1561**
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Ice-wedge chemistry on Seymour I. Kato, K., et al, [1990, p.181-190, eng] **45-1531**
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Isotope analysis of the Shackleton Ice Shelf. Savatugin, L., et al, [1990, p.291-298, eng] **45-725**
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Radio echo soundings in the Shirase Glacier and Princess Ragnhild Coast areas. Nishio, F., et al, [1991, p.93-102, eng] **45-3067**  
Equilibrium ice sheet profile in the Shirase Glacier drainage basin. Fujita, S., et al, [1991, p.12-29, eng] **45-3392**
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Snow and ice electrical conductivity from various glaciers. Kamiyama, K., et al, [1990, p.119-129, eng] **45-977**  
Sea ice temperature vertical distribution near Showa Station, 1984-1985. Matsuda, O., et al, [1990, p.139-144, eng] **45-979**  
Field surveys of terrestrial biology near Showa Station, 1986-1987. Inoue, M., et al, [1990, p.156-174, jpn] **45-981**  
Concentration of atmospheric carbon dioxide at the Japanese antarctic station, Syowa. Nakazawa, T., et al, [1991, p.126-135, eng] **45-2588**  
Salinity stratification below sea ice during melting season. Matsuda, O., et al, [1990, p.357-362, eng] **45-2596**  
Stratospheric sudden warming in late winter and shallow ozone hole in 1988. Kanzawa, H., et al, [1989, p.135-148, eng] **45-2979**  
Marine Observation Satellite 1 data at Showa Station. Yamanouchi, T., et al, [1991, p.22-30, eng] **45-3062**  
Sub-ice microalgal strands in the antarctic coastal fast ice near Syowa Station. Watanabe, K., [1988, p.221-229, eng] **45-3314**  
Primary productivity in the fast ice near Showa Station. Satoh, H., et al, [1988, p.287-292, eng] **45-3315**  
Primary productivity in the coastal ice-covered area near Showa Station. Satoh, H., et al, [1991, p.30-38, eng] **45-3393**  
Topographic and gravity anomaly maps near Mizuho Plateau. Nagao, T., et al, [1991, p.56-69, jpn] **45-3396**
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Mechanical weathering rates on Signy Island, maritime Antarctic. Hall, K., [1990, p.61-67, eng] **45-2235**  
Filamentous green algae in freshwater streams on Signy Island, Antarctica. Hawes, I., [1989, p.1-18, eng] **45-2603**  
Energy storage in copepods from antarctic lakes. Clarke, A., et al, [1989, p.183-191, eng] **45-2616**
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Continued analysis of the ice sheet field data of Siple Coast. Bindschadler, R.A., et al, [1990, p.72-73, eng] **45-1158**  
Geophysical studies at and around Upstream C camp, Siple Coast, 1988-1989. Bentley, C.R., et al, [1990, p.75-77, eng] **45-1160**
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Record of the atmospheric methane sink from formaldehyde in polar ice cores. Staffelfach, T., et al, [1991, p.603-605, eng] **45-1862**
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Antarctic ice sheet measurements using airborne radio echo sounder. Uratsuka, S., et al, [1989, p.297-306, jpn] **45-376**  
Glaciological field party in the Sør Rondane Mountains, 1989-1990. Motoyama, H., et al, [1990, p.225-234, jpn] **45-982**  
Revision of former ice sheet extent reconstruction in Sør Rondane Mountains. Hirakawa, K., et al, [1990, p.41-54, eng] **45-1528**  
Ground temperature regimes and periglacial processes in the Sør Rondane Mountains. Matsuoka, N., et al, [1990, p.55-66, eng] **45-1529**  
Dirt bands in the bare ice area of the Sør Rondane Mountains. Natsuka, H., et al, [1991, p.47-55, jpn] **45-3395**  
Antarctic penetrator program, No.1, 1989. Shibuya, K., et al, [1991, p.92-117, jpn] **45-3397**
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Analysis of the principal components of antarctic precipitations. Piccardi, G., et al, [1989, p.701-712, eng] **45-2297**
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Geodetic measurements in Dronning Maud Land. Eiken, T., et al, [1990, p.101-111, eng] **45-2836**
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Katabatic winds at Terra Nova Bay. Parish, T.R., et al, [1990, p.221-223, eng] **45-1437**  
Strong katabatic wind event at Terra Nova Bay. Bromwich, D.H., et al, [1990, p.223-225, eng] **45-1438**  
Particulate matter and marine aerosol formation processes. Calvelli, G., et al, [1989, p.639-676, eng] **45-2296**  
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- Properties of concrete mixed with sand frozen by liquid nitrogen. Negami, Y., et al., 1990, p.79-87, jpn 45-874
- Earth dams on permafrost. Bianov, G.F., et al., 1989, 152p., rus 45-1117
- Structure and physical properties of ice. Tyshko, K.P., 1989, p.167-173, rus 45-1503
- Experimental construction of ice moorings in Antarctica. Klokov, V.D., et al., 1990, p.106-110, rus 45-1746
- Drilling in the permafrost. Kudriashov, B.B., et al., 1990, 318p., eng 45-1854
- Method of construction in a pre-frozen limited soil mass. Mirenborg, I.U.S., et al., 1990, p.114-118, eng 45-2215
- Low density frozen saline soils for strength tests. Ayorinde, O.A., 1991, p.32-43, eng 45-2320
- Sludge dewatering in freezing beds. Martel, C.J., 1991, p.108-115, eng 45-2326
- Freeze crystallization leaves contaminants out in the cold. Roy, K.A., 1990, p.56-61, eng 45-2913
- Advanced treatment technologies. Koppers, H.M.M., et al., 1990, p.109-208, eng 45-3543
- Pilot scale studies of sludge dewatering in a freezing bed. Martel, C.J., et al., 1990, 15p., eng 45-3738
- Artificial ice**
- High performance inexpensive polarimetric radar for *in-situ* measurements. Hoover, F.A., et al., 1989, p.1820-1822, eng 45-279
- Polarimetric radar measurements of artificial sea ice. Onatott, R.G., et al., 1989, p.1938-1941, eng 45-283

- Polarimetric scattering measurements on artificially grown sea ice. Gogineni, S.P., et al., 1989, p.1942-1944, eng 45-284
- Comparison of measurement and theory for backscatter from thick salinated and desalinated ice. Bredow, J.W., et al., 1989, p.1953-1956, eng 45-287
- Model material for river ice breakup studies. Beltaos, S., et al., 1990, p.575-585, eng 45-3608
- Experience with a chemically-doped fine-grained model ice. Jalonen, R., et al., 1990, p.639-651, eng 45-3614
- Process to produce correct density (CD) model ice. Spencer, D.S., et al., 1990, p.745-755, eng 45-3625
- FGX model ice at the Masa-Yards Arctic Research Centre. Nortala-Hoikkaenen, A., 1990, p.247-259, eng 45-3680
- Artificial islands**
- Low density frozen saline soils for strength tests. Ayorinde, O.A., 1991, p.32-43, eng 45-2320
- Oceanographic and meteorological appendices Tarsiut Gulf 1982-83. 1984, n.p., eng 45-2854
- Operations report Tarsiut Gulf 1982-83. 1984, n.p., eng 45-2855
- Data results, Tarsiut Gulf 1982-83. 1984, 395p., eng 45-2856
- Instrumentation and equipment, Tarsiut Gulf 1982-83. 1984, 202p., eng 45-2857
- 1983 Arco ice stress sensor program at Tarsiut Island. Final report. 1984, 77p. + appends., eng 45-2858
- Gulf et al Tarsiut Island Research Program. 1982, 17p. + appends., eng 45-2859
- 1981/1982 ice rubble model tests. Final report. Wards, R.D., 1983, 363p. + appends., eng 45-2860
- Geotechnical appendices Tarsiut Gulf 1982-83. 1984, n.p., eng 45-2861
- Ice appendices Tarsiut Gulf 1982-83. 1984, Var. p., eng 45-2862
- National Research Council Canada ice measurements at Tarsiut, 1983. Frederking, R., et al., 1984, 22p. + appends., eng 45-2863
- Artificial melting**
- Study on snow melting methods for roads in Hokkaido. Ninagawa, K., et al., 1990, p.87-92, jpn 45-744
- Highway snow control research in Japan. Itagaki, K., 1990, 60p., eng 45-999
- See *also*: Artificial thawing
- Artificial nucleation**
- 2M3 isothermal cloud chamber for the study of artificial ice nuclei. Feng, D., et al., 1990, p.494-502, eng 45-1081
- Artificial precipitation**
- Review of important literature on rainmaking. Magono, N., 1986, p.482-490, eng 45-3731
- See *also*: Cloud seeding; Weather modification
- Artificial satellites**
- See *also*: Spacecraft
- Artificial snow**
- Fate of ice-nucleating bacteria in synthetic snow samples. Goodnow, R.A., et al., 1990, p.2223-2227, eng 45-436
- Temperature potential for artificial snow-making. Mainguy, J., 1990, p.22-28, fre 45-3303
- Estimated runoff from man-made snow. Eisel, L.M., et al., 1990, p.519-526, eng 45-3698
- See *also*: Snow manufacturing
- Artificial thawing**
- See *also*: Artificial melting
- Ash**
- See *also*: Volcanic ash
- Asphalt concretes**
- See *also*: Bituminous concretes
- Asphalts**
- See *also*: Bitumens
- Atlases**
- See *also*: Maps
- Atmosphere**
- Glaciers-ocean-atmosphere interactions. 1990, 131p., eng 45-3003
- See *also*: Air masses; Atmospheric physics; Meteorology; Stratosphere
- Atmospheric circulation**
- Arctic sea ice and atmospheric circulation. Wendler, G., et al., 1987, p.173-176, eng 45-112
- Köppen classification of glacial and interglacial climate simulations. Guetter, P.J., et al., 1990, p.193-215, eng 45-361
- Eurasian snow cover and the El Niño Southern Oscillation. Yasunari, T., 1989, p.613-622, jpn 45-626
- Water cycle and climate. Peixoto, J.P., et al., 1990, p.570-579, fre 45-964
- Effect of the arctic sea ice in January on the Asia-Western Pacific circulation in June. Fang, Z., 1990, p.113-119, eng 45-1170
- Arctic ozone crater in 1989. Evans, W.F.J., et al., 1990, p.1113-1121, eng 45-1428
- Experiment to model the climatic effects of the removal of arctic sea ice. Royer, J.F., et al., 1990, p.1-17, eng 45-1520

- Atmospheric processes and weather forecasting in the Arctic. Dmitriev, A.A., et al., 1989, 253p., rus 45-1573
- Preprint volume. 1991, 436p., eng 45-1933
- Jet streak circulations and the Valentine's Day ice storm of 1990 in central Illinois. Skowronski, J., 1991, p.88-89, eng 45-1934
- Diagnosing snow band air circulations via simulation. Hakim, G.J., et al., 1991, p.90-96, eng 45-1935
- Relationship of jet streaks to heavy precipitation in winter storms. Tollerud, E.I., et al., 1991, p.97-100, eng 45-1936
- Strongly temperature dependent microphysical processes and winter storms. Stewart, R.E., et al., 1991, p.231-234, eng 45-1937
- Evolution of a freezing rain storm, part 1: synoptic and mesoscale conditions. Zamora, R.J., et al., 1991, p.258-263, eng 45-1941
- Evolution of a freezing rain storm, part 2: remote sensor observations. Martner, B.E., et al., 1991, p.264-269, eng 45-1942
- Arctic hurricane over the Bering Sea. Businger, S., et al., 1991, p.321-324, eng 45-1944
- Influence of the atmosphere. Lins, H.F., et al., 1990, p.11-53, eng 45-2144
- Arctic contribution to upper-ocean variability in the North Atlantic. Walsh, J.E., et al., 1990, p.1462-1473, eng 45-2212
- Effect of circulation factors on hail intensity in the Caucasus region. Berekova, M.B., 1990, p.101-108, rus 45-2241
- Synergetics of ocean processes. Seidov, D.G., 1989, 287p., rus 45-2407
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- Air circulation in embankments in western Yakutia. Olovin, B.A., 1990, p.92-94, rus 45-2713
- Arctic hurricanes. Businger, S., 1991, p.18-33, eng 45-2788
- Air pollution measurements at Barrow, AK. Jaffe, D.A., et al., 1991, p.7395-7405, eng 45-2797
- Increased ocean heat transports and warmer climate. Rind, D., et al., 1991, p.7437-7461, eng 45-2799
- Variations of water isotope content with altitude in a mountain environment. Holdsworth, G., et al., 1991, p.7483-7494, eng 45-2800
- Dynamics, transport and photochemistry in the middle atmosphere of the Southern Hemisphere. Proceedings. O'Neill, A., ed., 1989, 257p., eng 45-2971
- Middle atmospheric dynamics and transport. McIntyre, M.E., 1989, p.1-18, eng 45-2972
- On data sources and quality for the Southern Hemisphere stratosphere. Karoly, D.J., et al., 1989, p.19-32, eng 45-2973
- Seasonal cycle of the polar stratosphere in the two hemispheres. O'Neill, A., et al., 1989, p.33-54, eng 45-2974
- Final warming of the stratosphere. Mechoso, C.R., 1989, p.55-69, eng 45-2975
- Comparison of the Southern Hemisphere springs of 1988 and 1987. Newman, P.A., et al., 1989, p.71-89, eng 45-2976
- Traveling planetary waves in the middle atmosphere. Hirota, I., 1989, p.111-116, eng 45-2977
- Dynamical properties of the antarctic circumpolar vortex inferred from aircraft observations. Hartmann, D.L., 1989, p.117-134, eng 45-2978
- Saharan dust deposition over Mont Blanc (French Alps) during the last 30 years. De Angelis, M., et al., 1991, p.61-75, eng 45-3020
- Brown snow: a long-range transport event in the Canadian Arctic. Welch, H.E., et al., 1991, p.280-286, eng 45-3026
- Polar lows over the Gulf of Alaska in conditions of reverse shear. Bond, N.A., et al., 1991, p.551-572, eng 45-3272
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- Ozone trend in the Northern Hemisphere: a numerical study. Pitari, G., et al., 1991, p.10,931-10,940, eng 45-3377
- Influence of atmospheric pressure gradient variations on polar atmosphere simulation. Simmons, A.J., et al., 1991, p.29-58, eng 45-3478
- Papal Front of 3 May 1987: a remarkable example of frontogenesis near the Alps. Volkert, H., et al., 1991, p.125-150, eng 45-3479
- Ozone column abundances during northern and southern springs. Hou, A.Y., et al., 1991, p.547-556, eng 45-3487
- Atmospheric composition**
- Carbon cycle instability as a cause of ice age oscillations. Saltzman, B., et al., 1988, p.177-185, eng 45-367
- Contamination of the global environment as observed in the Arctic. Pacyna, J.M., et al., 1990, p.149-157, eng 45-374
- Organochlorine air pollutants in the Canadian Arctic. Patton, G.W., 1989, 266p., eng 45-511

- Measurement of sulfur dioxide reaction rates in wintertime orographic clouds. Snider, J.R., [1989, 365p., eng] **45-512**
- Major element chemistry,  $\delta^{18}O$ ,  $\delta^{13}C$  and Sr-87/Sr-86 in a snow profile across central Scandinavia. Andersson, P., et al, [1990, p.2601-2608, eng] **45-955**
- D/H on Mars: effects of floods, volcanism, impacts, and polar processes. Carr, M.H., [1990, p.210-227, eng] **45-1023**
- Trends '90: a compendium of data on global change. Boden, T.A., et al, [1990, 257p. + appends., eng] **45-1089**
- Arctic ozone crater in 1989. Evans, W.F.J., et al, [1990, p.1113-1121, eng] **45-1428**
- Seasonal variation of some constituents of antarctic tropospheric air. Hogan, A.W., et al, [1990, p.2365-2368, eng] **45-1514**
- Ozone and aerosol distributions measured by airborne lidar during the 1988 Arctic Boundary Layer Experiment. Browell, E.V., et al, [1991, p.J242-J243, eng] **45-1601**
- Measurements of arctic total ozone during the polar winter. Kerr, J.B., et al, [1990, p.383-392, eng] **45-1680**
- Ozone depletion, greenhouse gases, and climate change. [1989, 122p., eng] **45-1712**
- Scheme for parameterizing ice-cloud water content in general circulation models. Heymsfield, A.J., et al, [1990, p.1865-1877, eng] **45-1803**
- Ice haze, snow, and the Mars water cycle. Kahn, R., [1990, p.14,677-14,693, eng] **45-1841**
- Record of the atmospheric methane sink from formaldehyde in polar ice cores. Staffelbach, T., et al, [1991, p.603-605, eng] **45-1862**
- Response of the West Antarctic Ice Sheet to CO<sub>2</sub>-induced climatic warming. Bentley, C.R., [1982, 32p., eng] **45-1928**
- Ultraviolet transmission of sea ice. Trodahl, H.J., et al, [1990, p.2177-2179, eng] **45-1994**
- Characteristics of the low-level temperature inversion along the Alaskan arctic coast. Kahl, J.D., [1990, p.537-548, eng] **45-2177**
- Impact of biogenic sulphur on sulphate aerosols at Mawson Station. Prospero, J.M., et al, [1991, p.221-223, eng] **45-2264**
- CO<sub>2</sub> measurements from polar ice cores: more data from different sites. Staffelbach, T., et al, [1991, p.91-96, eng] **45-2587**
- Concentration of atmospheric carbon dioxide at the Japanese antarctic station, Syowa. Nakazawa, T., et al, [1991, p.126-135, eng] **45-2588**
- Methane emission measurements from subarctic fens. Moore, T.R., et al, [1991, p.102-109, eng] **45-2792**
- Air pollution measurements at Barrow, AK. Jaffe, D.A., et al, [1991, p.7395-7405, eng] **45-2797**
- Ultraviolet radiation environment of the Antarctic Peninsula. Lubin, D., [1989, 134p., eng] **45-2830**
- Potential for ozone depletion in the arctic polar stratosphere. Brune, W.H., et al, [1991, p.1260-1266, eng] **45-2831**
- Pre-conference abstracts. [1991, 66p., eng] **45-2918**
- Dynamics, transport and photochemistry in the middle atmosphere of the Southern Hemisphere. Proceedings. O'Neill, A., ed, [1989, 257p., eng] **45-2971**
- Middle atmospheric dynamics and transport. McIntyre, M.E., [1989, p.1-18, eng] **45-2972**
- Nitrogen chemistry in Antarctica: a brief review. Solomon, S., [1989, p.191-201, eng] **45-2980**
- HOx and ClOx interactions in the ozone hole photochemistry. Crutzen, P.J., et al, [1989, p.203-212, eng] **45-2981**
- Antarctic ozone depletion and potential effects on the global ozone budget. Grose, W.L., et al, [1989, p.237-251, eng] **45-2982**
- Chemical components of arctic tropospheric aerosols. Barrie, L.A., et al, [1990, p.211-226, eng] **45-3047**
- Proceedings of the NIPR Symposium on Polar Meteorology and Glaciology, No.4. Kawaguchi, S., ed, [1991, 143p., eng] **45-3060**
- Duration of liquid water habitats on early Mars. McKay, C.P., et al, [1991, p.214-221, eng] **45-3192**
- Occurrence and characteristics of lower tropospheric ice crystals in the Arctic. Curry, J.A., et al, [1990, p.749-764, eng] **45-3239**
- Polar stratospheric clouds and ozone depletion. Toon, O.B., et al, [1991, p.68-74, eng] **45-3252**
- Polycyclic aromatic and organochlorine compounds in the atmosphere of northern Ellesmere Island, Canada. Patton, G.W., et al, [1991, p.10,867-10,877, eng] **45-3375**
- Model simulation of chemical depletion of arctic ozone during the winter of 1989. McConnell, J.C., et al, [1991, p.10,923-10,930, eng] **45-3376**
- Ozone trend in the Northern Hemisphere: a numerical study. Pitari, G., et al, [1991, p.10,931-10,940, eng] **45-3377**
- Arctic and sub-arctic soil emissions and global climatic changes. Christensen, T., [1991, p.205-210, eng] **45-3415**
- Catalog of smoke/obscurant characterization instruments. O'Brien, H.W., ed, [1984, 184p., eng] **45-3476**
- Ice particle concentrations and precipitation development in small polar maritime cumulonimbus clouds. Rangno, A.L., et al, [1991, p.207-241, eng] **45-3480**
- Ozone column abundances during northern and southern springs. Hou, A.Y., et al, [1991, p.547-556, eng] **45-3487**
- Increase in hydrogen peroxide in Greenland ice since the late 18th century. Sigg, A., et al, [1991, p.557-559, eng] **45-3525**
- Water vapor and ozone in polar stratospheres. Hofmann, D.J., et al, [1991, p.1011-1014, eng] **45-3577**
- Middle atmosphere and solar proton events. Reid, G.C., et al, [1991, p.1019-1022, eng] **45-3759**
- Structural and measurement problems of arctic atmospheric water balance. Lenart, W., [1990, p.37-45, eng] **45-3780**
- Climate of Mars. Haberle, R.M., [1990, p.70-80, eng] **45-3861**
- Atmospheric density**
- Model simulation of chemical depletion of arctic ozone during the winter of 1989. McConnell, J.C., et al, [1991, p.10,923-10,930, eng] **45-3376**
- Ozone trend in the Northern Hemisphere: a numerical study. Pitari, G., et al, [1991, p.10,931-10,940, eng] **45-3377**
- Atmospheric disturbances**
- Radar reflectivity-ice water content relationships for use above the melting level in hurricanes. Black, R.A., [1990, p.955-961, eng] **45-774**
- Heavy snowfalls in the territories of the Ukraine and Moldavia. Mironchenko, G.V., et al, [1989, p.110-118, rus] **45-828**
- Role of heat transfer sources in changes to cyclone tracks. Abramov, V.A., et al, [1990, p.116-124, rus] **45-1642**
- Arctic hurricane over the Bering Sea. Businger, S., et al, [1991, p.321-324, eng] **45-1944**
- Arctic hurricanes. Businger, S., [1991, p.18-33, eng] **45-2788**
- Formation, preservation and deterioration of ice-hoarfrost deposits. Guliaev, I.U.N., [1989, p.141-145, rus] **45-2873**
- Final warming of the stratosphere. Mechoso, C.R., [1989, p.55-69, eng] **45-2975**
- Forecasters handbook for the arctic. Sechrist, F.S., et al, [1989, 364p., eng] **45-3092**
- Papal Front of 3 May 1987: a remarkable example of frontogenesis near the Alps. Volkert, H., et al, [1991, p.125-130, eng] **45-3479**
- Atmospheric electricity**
- Radar detection of lightning and electric fields. Metcalf, J.I., [1989, 34p., eng] **45-89**
- Atmospheric physics**
- Some coolness concerning global warming. Lindzen, R.S., [1990, p.288-299, eng] **45-1986**
- Atmospheric pollution**
- See [also]: Air pollution
- Atmospheric pressure**
- Fluctuations of antarctic snow accumulation and Southern Hemisphere SLP. Enomoto, H., [1991, p.67-87, eng] **45-2444**
- Polar lows over the Gulf of Alaska in conditions of reverse shear. Bond, N.A., et al, [1991, p.551-572, eng] **45-3272**
- Influence of atmospheric pressure gradient variations on polar atmosphere simulation. Simmons, A.J., et al, [1991, p.29-58, eng] **45-3478**
- Attenuation**
- Experimental study of microwave transmission in snowpack. Abe, T., et al, [1990, p.915-921, eng] **45-369**
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- Specific attenuation in the UHF range of sea ice in various regions. Pasyukov, V.V., et al, [1989, p.36-45, rus] **45-1487**
- Attenuation of 3-cm band radar signals by snow cover in the Antarctic. Trepov, G.V., [1989, p.53-58, rus] **45-1489**
- Estimates of shock wave attenuation in snow. Johnson, J.B., [1990, 14p., eng] **45-1550**
- Attenuation in a power line passing over permafrost. Zakruzhnii, E.G., et al, [1986, p.28-34, eng] **45-2557**
- Communications channel serviceability during power line icing. Golov, P.I.A., et al, [1988, p.36-42, eng] **45-2568**
- Prediction of depolarisation distributions on earth-space paths. Fukuchi, H., [1990, p.325-330, eng] **45-2763**
- Infrared extinction properties of clouds in polar regions. Prabhakara, C., et al, [1990, p.1313-1329, eng] **45-2986**
- Sound absorption and winter performance of porous asphalt pavement. Camomilla, G., et al, [1990, p.1-8, eng] **45-3058**
- Infrared transmission through cirrus clouds: a radiative model for target detection. Liou, K.N., et al, [1990, p.1886-1896, eng] **45-3366**
- Primary productivity in the coastal ice-covered area near Showa Station. Satoh, H., et al, [1991, p.30-38, eng] **45-3393**
- Calculations of millimeter wave depolarization due to melting layer and rain. Zhang, W., et al, [1991, p.543-556, eng] **45-3445**
- Diffraction of VLF radio waves by polar ice caps. Wait, J.R., [1991, p.1030-1032, eng] **45-3700**
- See [also]: Atmospheric attenuation
- Aufeis**
- See [also]: Naleds
- Augers**
- Mechanized ice augers. Tavrizov, V.M., [1990, p.38-39, rus] **45-742**
- Performance of the UCPH shallow and hand augers. Clausen, H.B., et al, [1989, p.14-20, eng] **45-1449**
- Austria**
- Ice-rich diamicton blocks in Quaternary outwash sediments in Austria. Krainer, K., et al, [1990, p.249-254, eng] **45-2027**
- Alps
- Glaciers of the Austrian Alps 1986/87. Patzelt, G., [1988, p.177-192, ger] **45-1097**
- Velocity measurements at the Obersulzbachkees (Venediger Group) in 1985/86 and 1986/87. Slupetzky, H., [1988, p.199-202, eng] **45-1098**
- Tyrol
- Radioactivity profiles of the Chernobyl fallout on Tyrolean glaciers. Ambach, W., et al, [1989, p.5-8, ger] **45-392**
- Automation**
- See [also]: Computer applications
- Automobiles**
- See [also]: Motor vehicles
- Automotive vehicles**
- Automotive fuels at low temperatures. Diemand, D., [1991, 25p., eng] **45-2920**
- Avalanche deposits**
- Ice avalanches and overflows of glacial lakes. Röhlsberger, H., [1978, p.170-212, ger] **45-77**
- Estimate of snow avalanche debris transport, Kaghan Valley, Himalaya, Pakistan. Bell, I., et al, [1990, p.317-321, eng] **45-893**
- Ablation of avalanched and undisturbed snow, Himalaya Mountains, Pakistan. De Scally, F.A., et al, [1990, p.2757-2767, eng] **45-2113**
- Hydrological consequences of snow avalanches. Martinec, J., [1989, p.284-293, eng] **45-2771**
- Extreme value prediction of snow avalanche runoff. McClung, D.M., et al, [1991, p.163-175, eng] **45-3422**
- Avalanche engineering**
- See [also]: Snow fences
- Avalanche erosion**
- Geomorphic impact of spring avalanches in northwest Spitsbergen (79N). André, M.F., [1990, p.97-110, eng] **45-1292**
- Morphological changes in the Swiss Alps resulting from the 1987 summer storms. Naef, F., et al, [1989, p.36-42, eng] **45-2768**
- Avalanche forecasting**
- Acoustic and seismic signals from snow avalanches. Firstov, P.P., et al, [1990, p.67-71, rus] **45-321**
- Snow avalanches. Trabant, D.C., et al, [1990, p.147-176, eng] **45-408**
- Long range regional forecasting of avalanches and mudflows. Berri, B.L., et al, [1990, p.46-52, rus] **45-677**
- Prediction of snow avalanches in maritime climates. Conway, H., et al, [1989, 139p. + appends., eng] **45-814**
- Observations relating to wet snow stability. Conway, H., et al, [1989, Appendix C. 12p., eng] **45-815**
- Mapping snow cover in the mountains of Afghanistan by means of space photography. Kravtsova, V.I., [1989, p.44-49, rus] **45-1033**
- Geography of the distribution of avalanches on the earth. Glazovskaya, T.G., et al, [1989, p.68-73, rus] **45-1037**
- Avalanches on Sakhalin Island. Ivanov, A.V., [1990, p.364-368, rus] **45-1123**
- Using discriminant analysis to forecast wet snow avalanches. Kharitonov, G.G., et al, [1990, p.369-380, rus] **45-1124**
- Some characteristics of avalanche hazard periods and bench avalanches. Suchkov, V.E., [1990, p.381-393, rus] **45-1125**
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- Snow and avalanches in the Swiss Alps, winter 1988/89. [1991, 155p., ger] **45-1650**
- Electromagnetic emission during snow and ice deterioration. Berri, B.L., [1990, p.13-18, rus] **45-1730**
- Possibility of developing a general purpose automated system for avalanche hazard forecasting and an avalanche information bank. Dushkin, V.S., et al, [1990, p.80-86, rus] **45-1740**
- Avalanche diagnosis as a physics problem. Kanaev, L.A., et al, [1990, p.86-92, rus] **45-1741**
- ELSA, a knowledge-based system to analyze avalanche paths. Buisson, L., et al, [1990, p.2/60-2/67, fre] **45-1791**
- Avalanche hazard regions in Kazakhstan. Severki, I.V., et al, [1990, 170p., rus] **45-2205**
- Prediction of slope failure time by reciprocal of mean velocity. Fukuzono, T., [1990, p.45-81, jpn] **45-2302**

**Avalanche forecasting (cont.)**

- Regionalization of avalanche-prone territories of the USSR. Troshkina, E.S., [1991, p.48-55, rus] 45-2448
- Extreme value prediction of snow avalanche runoff. McClung, D.M., et al, [1991, p.163-175, eng] 45-3422

**Avalanche formation**

- Acoustic and seismic signals from snow avalanches. Firstov, P.P., et al, [1990, p.67-71, rus] 45-321
- Prediction of snow avalanches in maritime climates. Conway, H., et al, [1989, 139p. + appends., eng] 45-814

- High-speed powder-snow avalanches. Maeno, N., [1989, p.761-767, jpn] 45-870

- Geography of the distribution of avalanches on the earth. Glazovskaya, T.G., et al, [1989, p.68-73, rus] 45-1037

- Formation of extremely large avalanches in the Elbrus area, 1967-1987. Troshkina, E.S., et al, [1989, p.213-217, rus] 45-1064

- Avalanche development and surface characteristics of snow accumulations. Achakovskii, S.A., [1990, p.71-76, rus] 45-1106

- Avalanches on Sakhalin Island. Ivanov, A.V., [1990, p.364-368, rus] 45-1123

- Using discriminant analysis to forecast wet snow avalanches. Kharitonov, G.G., et al, [1990, p.369-380, rus] 45-1124

- Some characteristics of avalanche hazard periods and bench avalanches. Suchkov, V.E., [1990, p.381-393, rus] 45-1125

- Electromagnetic emission during snow and ice deterioration. Berri, B.L., [1990, p.13-18, rus] 45-1730

- Avalanche diagnosis as a physics problem. Kanaev, L.A., et al, [1990, p.86-92, rus] 45-1741

- Investigation of 1987 debris flows in the Swiss Alps. Haeblerli, W., et al, [1990, p.303-310, eng] 45-1975

- Avalanche hazard regions in Kazakhstan. Severskiĭ, I.V., et al, [1990, 170p., rus] 45-2205

- Snowpack structure and avalanching, Craigieburn State, New Zealand. McGregor, G.R., [1990, p.405-417, eng] 45-2213

- Regionalization of avalanche-prone territories of the USSR. Troshkina, E.S., [1991, p.48-55, rus] 45-2448

- Avalanche mechanics**
- Model for scaling avalanche speeds. McClung, D.M., [1990, p.188-198, eng] 45-61

- Internal structure of powder-snow avalanches. Nishimura, K., [1990, p.113-116, jpn] 45-114

- Snow avalanches. Trabant, D.C., et al, [1990, p.147-176, eng] 45-408

- High-speed powder-snow avalanches. Maeno, N., [1989, p.761-767, jpn] 45-870

- Similarity solutions for a Voellmy model of snow avalanches with finite mass. Hutter, K., et al, [1990, p.99-127, eng] 45-1024

- Avalanche development and surface characteristics of snow accumulations. Achakovskii, S.A., [1990, p.71-76, rus] 45-1106

- Avalanches on Sakhalin Island. Ivanov, A.V., [1990, p.364-368, rus] 45-1123

- Snow avalanche hazards and mitigation in the United States. [1990, 84p., eng] 45-1182

- Geomorphic impact of spring avalanches in northwest Spitsbergen (79N). André, M.F., [1990, p.97-110, eng] 45-1292

- Experiment on the dynamics of powder snow avalanches in the runout zone. Hermann, F., [1990, 262p., ger] 45-1775

- Colloquium on the Dynamics of Natural Hazards and Glaciochemistry, Grenoble, France, Dec. 5-7, 1990. [1990, Var.p., fre] 45-1776

- Water waves generated by an avalanche into a lake. Naaim, M., et al, [1990, p.2/8-2/16, fre] 45-1788

- Gravity and turbidity currents in powder avalanches. Beghin, P., [1990, p.2/17-2/24, fre] 45-1789

- Dynamics of granular motion. Locat, J., et al, [1990, p.2/42-2/48, fre] 45-1790

- Avalanche hazard regions in Kazakhstan. Severskiĭ, I.V., et al, [1990, 170p., rus] 45-2205

- Mobility of rock avalanches. Hungr, O., [1990, p.11-20, eng] 45-2301

- Shear cell experiments of snow and ice friction. Cassassa, G., et al, [1991, p.3745-3756, eng] 45-2442

- Regionalization of avalanche-prone territories of the USSR. Troshkina, E.S., [1991, p.48-55, rus] 45-2448

- Comparison of 18th century and modern ideas on avalanches. Carozzi, A.V., [1990, p.371-399, eng] 45-2938

- Optimum repair and maintenance of railroads in Siberia and the Far East. Diunin, A.K., ed, [1990, 78p., rus] 45-3004

- Effect of braking structures on the velocity and range of avalanches. Kozlov, I.U.V., et al, [1990, p.46-52, rus] 45-3010

- Mechanical properties of snow avalanche. Kuroda, M., [1986, p.432-438, eng] 45-3726

- Impact force of an avalanche. Shinoda, N., [1986, p.455-462, eng] 45-3729

**Avalanche modelling**

- Model for scaling avalanche speeds. McClung, D.M., [1990, p.188-198, eng] 45-61

- Numerical simulation of powder-snow avalanches. Fukushima, Y., et al, [1990, p.229-237, eng] 45-66

- Similarity solutions for a Voellmy model of snow avalanches with finite mass. Hutter, K., et al, [1990, p.99-127, eng] 45-1024

- Avalanche diagnosis as a physics problem. Kanaev, L.A., et al, [1990, p.86-92, rus] 45-1741

- Experiment on the dynamics of powder snow avalanches in the runout zone. Hermann, F., [1990, 262p., ger] 45-1775

- Gravity and turbidity currents in powder avalanches. Beghin, P., [1990, p.2/17-2/24, fre] 45-1789

- ELSA, a knowledge-based system to analyze avalanche paths. Buisson, L., et al, [1990, p.2/60-2/67, fre] 45-1791

- Saint-Venant model for studying snow avalanches. Martinet, G., [1990, p.2/68-2/75, fre] 45-1792

- Debris flows 1987 in Switzerland: modelling and fluvial sediment transport. Rickenmann, D., [1990, p.371-378, eng] 45-1974

- Avalanche tracks**
- Extreme value prediction of snow avalanche runoff. McClung, D.M., et al, [1991, p.163-175, eng] 45-3422

- Avalanche triggering**
- Hazardous hydrologic consequences of volcanic eruptions. Pierson, T.C., [1989, p.220-236, eng] 45-2769

- Mitigation of vehicle storage and traffic control problems during avalanche control. Morrall, J., [1991, p.191-200, eng] 45-3535

- Avalanches**
- Avalanches at Chamonix (Haute-Savoie, France). Bravard, Y., [1990, p.125-143, fre] 45-371

- Cold regions hydrology and hydraulics. Ryan, W.L., ed., [1990, 827p., eng] 45-404

- Snow avalanches. Trabant, D.C., et al, [1990, p.147-176, eng] 45-408

- Heavy snowfall and avalanche disasters. Yamada, Y., [1989, p.639-655, jpn] 45-628

- Laboratory on Avalanches and Mudflows of Moscow State University. Laptiev, M.N., et al, [1989, p.131-132, rus] 45-1048

- Local database of avalanche stations. Soldatov, A.I., et al, [1990, p.76-81, rus] 45-1107

- Method of computer mapping the exposure and slope of an area. Isaev, A.A., et al, [1990, p.81-84, rus] 45-1108

- Analysis of avalanches. [1990, p.22-24, fre] 45-1130

- Snow and avalanches in the Swiss Alps, winter 1988/89. [1991, 155p., ger] 45-1650

- Glaciological data bank. Suslov, V.F., et al, [1990, p.75-79, rus] 45-1739

- Possibility of developing a general purpose automated system for avalanche hazard forecasting and an avalanche information bank. Dushkin, V.S., et al, [1990, p.80-86, rus] 45-1740

- Elsevier's dictionary of glaciology in four languages. Kotliakov, V.M., ed, [1990, 336p., eng] 45-2091

- Consequences of an avalanche striking an ice-covered lake. Williams, M.W., et al, [1990, p.51-60, eng] 45-2121

- Avalanche hazard regions in Kazakhstan. Severskiĭ, I.V., et al, [1990, 170p., rus] 45-2205

- Hydrologic bibliography of Switzerland for 1989. Sevrak, B., et al, [1989, p.145-164, ger] 45-2766

- Hydrology of disasters. Starosolszky, Ö., ed, [1989, 319p., eng] 45-2767

- Hydrological consequences of snow avalanches. Martinec, J., [1989, p.284-293, eng] 45-2771

- Comparison of 18th century and modern ideas on avalanches. Carozzi, A.V., [1990, p.371-399, eng] 45-2938

- Snowsheds on the Baykal-Amur mainline. Iadrosnikov, V.I., [1991, p.4-6, rus] 45-2950

- Optimum repair and maintenance of railroads in Siberia and the Far East. Diunin, A.K., ed, [1990, 78p., rus] 45-3004

- Using lightweight avalanche protection walls for railroad lines. Vetoohkina, N.A., et al, [1990, p.41-46, rus] 45-3009

- Descent of a catastrophic avalanche on the western part of B.A.M. Kozlov, I.U.V., [1990, p.52-59, rus] 45-3011

- Review of avalanche classifications. Miyazaki, K., [1986, p.448-454, eng] 45-3728

- See (also): Snow slides
- Backscattering**
- Sea ice classification using synthetic aperture radar. Winebrenner, D.P., et al, [1989, p.34-36, eng] 45-228

- Active microwave classification of sea ice. Onstott, R.G., [1989, p.369-374, eng] 45-234

- Discrimination of sea ice types using SAR backscatter statistics. Shuchman, R.A., et al, [1989, p.381-385, eng] 45-236

- LIMEX'87 ice surface characteristics and their effect upon C-band SAR signatures. Drinkwater, M.R., [1989, p.390-393, eng] 45-238

- Simulation of sub-pixel terrain effects on radar backscattering of snow. Shi, J., et al, [1989, p.1009-1011, eng] 45-254

- Monitoring snow cover with synthetic aperture radar. Bernier, M., et al, [1989, p.1251-1255, fre] 45-270

- Absolute calibration of the CCRS C-band SAR during BEPERS-88. Ulander, L., [1989, p.1528-1531, eng] 45-275

- Azimuth dependence in SAR-imaging of open water leads in ice infested areas. Askne, J., et al, [1989, p.1532-1534, eng] 45-276

- Radar polarimetric measurements of snow. Hallikainen, M., et al, [1989, p.1829-1831, eng] 45-280

- Helicopter-borne 8-channel FFT scatterometer. Hallikainen, M., et al, [1989, p.1832-1835, eng] 45-281

- Polarimetric radar measurements of artificial sea ice. Onstott, R.G., et al, [1989, p.1938-1941, eng] 45-283

- Polarimetric scattering measurements on artificially grown sea ice. Gogineni, S.P., et al, [1989, p.1942-1944, eng] 45-284

- Radar studies of low-salinity sea ice. Hallikainen, M., et al, [1989, p.1945-1948, eng] 45-285

- Comparison of measurement and theory for backscatter from thick salinated and desalinated ice. Bredow, J.W., et al, [1989, p.1953-1956, eng] 45-287

- Estimation of the thickness of undeformed first year ice using radar backscatter. Soulis, E.D., et al, [1989, p.2366-2369, eng] 45-295

- Bottom characteristics of the antarctic ice sheet from radar. Moore, R.K., et al, [1989, p.2727-2729, eng] 45-299

- Millimeter-wave radar scattering from terrain: data handbook. Haddock, T.F., et al, [1990, 133p., eng] 45-313

- Sea ice velocity measurements by upward-looking Doppler current profilers. Belliveau, D.J., et al, [1990, p.596-602, eng] 45-353

- Backscattering from frost on icy satellites. Verbisser, A.J., et al, [1990, p.162-164, eng] 45-378

- Anomalous radar backscattering from ice particles in a cloud. Aivazian, G.M., [1989, p.51-56, eng] 45-856

- Laboratory investigation into microwave backscattering from sea ice. Bredow, J.W., [1989, 173p., eng] 45-1143

- Lidar observations of the horizontal orientation of ice crystals in cirrus clouds. Thomas, L., et al, [1990, p.211-216, eng] 45-1384

- Measurements of SAR backscatter signatures from sea ice. Livingstone, C.E., et al, [1991, p.29-41, eng] 45-1725

- Coherent backscatter and the radar characteristics of outer planet satellites. Hapke, B., [1990, p.407-417, eng] 45-1922

- Multi-frequency imaging radar polarimetry of sea ice. Drinkwater, M.R., [1990, p.365-376, eng] 45-2745

- Millimeter-wave radar scattering from snow: 1. Radiative transfer model. Kuga, Y., et al, [1991, p.329-341, eng] 45-3044

- Millimeter-wave radar scattering from snow: 2. Comparison of theory with experimental observations. Ulaby, F.T., et al, [1991, p.343-351, eng] 45-3045

- Modified beta density function as a model for synthetic aperture radar clutter statistics. Maffett, A.L., et al, [1991, p.277-283, eng] 45-3190

- Utilization of SAR data in the monitoring of snowpacks and wetlands. Leconte, R., et al, [1990, p.233-258, eng] 45-3807

- Abnormal radar backscattering of submillimeter waves from cloud ice particles. Aivazian, H.M., [1991, p.919-944, eng] 45-3886

- Bacteria**
- Fate of ice-nucleating bacteria in synthetic snow samples. Goodnow, R.A., et al, [1990, p.2223-2227, eng] 45-436

- Clustering of ice nucleation protein correlates with ice nucleation activity. Mueller, G.M., et al, [1990, p.416-422, eng] 45-820

- Thermophilic bacteria among arctic, subarctic, and alpine habitats. Boyd, W.L., et al, [1990, p.401-411, eng] 45-1419

- Winter fecal coliform concentrations in stream sediments. Kidd, D.R., [1989, n.p., eng] 45-1654

- Effect of the PVA freezing method on nitrification of sludge cell reactors. Myoga, H., et al, [1991, p.1117-1124, eng] 45-1675

- Bacterial treatment of mine drainage in a wetland. Batal, W., et al, [1989, p.550-557, eng] 45-1888

- Use of genetically altered bacteria to achieve plant frost control. Lindow, S.E., [1990, p.85-110, eng] 45-1980

- Alkylbenzyltrimethylammonium salts as inhibitors for the ice nucleating activity of *Erwinia ananas*. Watanabe, M., et al, [1988, p.201-206, eng] 45-3048

- Diversity of bacterial populations in the Beaufort Sea. Kaneko, T., et al, [1977, p.596-599, eng] 45-3095

- Oxidation of oil hydrocarbons by arctic pigmented *Mycobacterium* species. Koronelli, T.V., et al, [1981, p.167-170, rus] 45-3136

- Lipid composition of *Mycobacterium mucosum* oxidizing hydrocarbons. Koronelli, T.V., et al, [1977, p.1070-1073, rus] 45-3137

- Microorganisms of the eastern part of the Arctic Ocean. Kriss, A.E., [1945, p.268-276, rus] 45-3139

- Distribution of heterotrophic bacteria in the Atlantic Ocean. Kriss, A.E., [1970, p.362-371, rus] 45-3181

- Fermentative activity of microbial-antagonists. Trunova, O.N., [1977, p.91-97, rus] 45-3212

- Numbers and production of bacterioplankton in the Barents Sea. Rossova, E.I.A., [1977, p.878-882, rus] 45-3250

- Oil-oxidizing and heterotrophic microflora on the Eastern Murman coast. Dermicheva, S.G., [1985, p.139-143, eng] **45-3290**
- Bacterial productivity in arctic sea ice. Smith, R.E.H., et al. [1990, p.351-357, eng] **45-3361**
- Ice-nucleating pseudomonad. Fall, R., et al. [1985, p.257-265, eng] **45-3385**
- Ecological role of bacteria in detritus and aggregates in the Pacific Ocean. Sazhin, A.F., et al. [1989, p.682-692, rus] **45-3450**
- Baffin Bay**
- Currents and temperature data from northwestern Baffin Bay, Sep. 1983-Sep. 1984. Ross, C.K., [1990, 227p., eng] **45-1285**
- Currents and temperature data from southwestern Baffin Bay, Oct. 1984-Oct. 1985. Ross, C.K., [1990, 180p., eng] **45-1286**
- Balloons**
- First large balloon launch from Antarctica. Ground, J., et al. [1988, 108p., eng] **45-644**
- Baltic Sea**
- Detection and characterization of ice ridges in the Baltic Sea using CV-580 SAR imagery. Johansson, R., [1989, p.386-389, eng] **45-237**
- Radar studies of low-salinity sea ice. Hallikainen, M., et al. [1989, p.1945-1948, eng] **45-285**
- Winter ice intensity of the Baltic coast of Schleswig-Holstein. Koslowski, G., [1989, p.61-80, ger] **45-616**
- Coupled one-dimensional sea ice-ocean model applied to a semi-enclosed basin. Omstedt, A., [1990, p.568-582, eng] **45-1175**
- Development of the Earth's surface in Finland. Aartolahti, T., [1990, p.203-219, fin] **45-2421**
- Plankton under the ice in the Baltic Sea. Hickel, W., [1969, p.318-331, ger] **45-3388**
- Bank protection (waterways)**
- Bank recession and channel changes near dikes on the Tanana River, AK. Gatto, L.W., [1983, p.4.2-4.21, eng] **45-2492**
- Case study of bank erosion on the Kinak River, Alaska. Kraeger-Rovey, C., [1983, p.223-230, eng] **45-2958**
- Banks (waterways)**
- Calculating ice jam water levels. Buzin, V.A., [1989, p.79-84, eng] **45-662**
- Jam initiation in unobstructed channels: laboratory observations. Etema, R., [1990, p.673-684, eng] **45-2252**
- Bank recession and channel changes near dikes on the Tanana River, AK. Gatto, L.W., [1983, p.4.2-4.21, eng] **45-2492**
- Bank and channel changes near Dikes, Tanana River, Alaska. Gatto, L.W., [1983, p.212-222, eng] **45-2957**
- Case study of bank erosion on the Kinak River, Alaska. Kraeger-Rovey, C., [1983, p.223-230, eng] **45-2958**
- See *falsoy*: Shores
- Barents Sea**
- Barents Sea: petroleum resources and technological challenges. Overli, J.M., [1990, p.1-11, eng] **45-122**
- Ice Data Acquisition Program in the Barents Sea. Spring, W., et al. [1990, p.283-298, eng] **45-141**
- Identification and volume estimation of icebergs by remote sensing in the Barents Sea. Vefsnmo, S., et al. [1989, p.2355-2358, eng] **45-293**
- Iceberg wakes in Arctic sea ice. Nilsen, J.H., et al. [1990, p.81-86, eng] **45-523**
- Water circulation in the Barents Sea. Potanin, V.A., et al. [1989, p.110-117, rus] **45-1657**
- Presence of glacial deposits in the central basin of the Barents Sea. Gataullin, V.N., et al. [1990, p.1463-1467, rus] **45-1860**
- Maximum advance of the Scandinavian ice sheet onto the shelf of the Barents Sea in Valday time. Dunaev, N.N., et al. [1991, p.70-73, eng] **45-2478**
- Ice conditions in the Barents Sea during SIZEX 89. Sandven, S., et al. [1990, p.309-320, eng] **45-2740**
- Current problems in Quaternary geology of the Barents Sea. Pavlidis, I.U.A., et al. [1990, p.76-93, rus] **45-2876**
- Transfer of terrigenous suspended material to the Barents Sea by glaciers. Medvedev, V.S., et al. [1990, p.103-110, rus] **45-2878**
- Environmental conditions in the Southern Barents Sea.** Kvitrud, A., et al. [1991, p.125-130, eng] **45-3159**
- Icebergs in the Norwegian Continental Shelf in 1880-1881.** Kvitrud, A., et al. [1991, p.131-136, eng] **45-3160**
- Field investigation of ice in the Barents Sea.** Hoseth, K.A., et al. [1991, p.143-148, eng] **45-3162**
- Soviet maritime arctic.** Brigham, L.W., ed. [1991, 336p., eng] **45-3323**
- Oil and gas resources in the offshore Soviet arctic.** Clarke, J.W., [1991, p.108-122, eng] **45-3328**
- Geostrophic conditions of deterrance in the Barents Sea.** Östregren, W., [1991, p.201-214, eng] **45-3334**
- Botanical results from the voyage of the *Erma* to the Arctic Ocean, summer 1901. IV. Microflora of the Barents Sea and its ice. 1. Historical review of the microflora in the Barents Sea and adjacent seas.** Palibin, I.V., [1904, p.71-80, rus] **45-3351**
- Food webs and primary production in the Barents Sea.** Sakshaug, E., [1991, p.1-8, eng] **45-3460**
- Barometric pressure**
- See *falsoy*: Atmospheric pressure
- Barrier ice**
- See *falsoy*: Ice shelves
- Basal sliding**
- Ice-stream basal modeling: progress report. Alley, R.B., [1990, p.74, eng] **45-1159**
- Subglacial boundary-layer regelation mechanism. Shoemaker, E.M., [1990, p.263-268, eng] **45-1535**
- Surging glacial flows. Greenberg, J.M., et al. [1990, p.195-223, eng] **45-1772**
- Numerical modelling of ice shelf dynamics. Determann, J., [1991, p.187-195, eng] **45-3459**
- Evidence for a frozen bed, Byrd Glacier, Antarctica. Scofield, J.P., et al. [1991, p.11,649-11,655, eng] **45-3462**
- Bases**
- See *falsoy*: Foundations; Pavement bases; Permafrost bases
- Basins**
- See *falsoy*: River basins
- Beach erosion**
- See *falsoy*: Shore erosion
- Bearing strength**
- Geocryological studies of northern Western Siberia. Konstantinov, I.P., ed. [1990, 117p., rus] **45-1194**
- Thermal interaction of east-in-situ bored piles with frozen ground. Kamenskii, R.M., [1990, p.65-72, rus] **45-1201**
- Controlling the frozen regime of bearing ground of structures over mines. Gur'ianov, I.E., [1990, p.77-92, rus] **45-1203**
- Reliability of the frozen bearing ground of structures. Zhelezniak, I.I., [1990, 171p., rus] **45-2423**
- Temperature regime of structures with permafrost bases. Gokhman, M.R., et al. [1991, p.189-194, eng] **45-2996**
- Bearing capacity of shallow foundation on layered clay. Das, B.M., [1991, p.119-124, eng] **45-3158**
- Two and three dimensional response of nonlinear soil under gravity structures. Prasad, K.S.R., et al. [1991, p.253-260, eng] **45-3177**
- Threshold pavement thickness to survive spring thaw. White, T.D., et al. [1990, p.41-51, eng] **45-3690**
- Loading type effect on pavement deflection. Wiman, L.G., et al. [1990, p.829-839, eng] **45-3693**
- Repair of a road built on permafrost: dimensioning, building, monitoring. Kivikoski, H., [1989, 46p. + appendix, fin] **45-3849**
- See *falsoy*: Ice cover strength; Snow strength; Trafficability
- Beaufort Sea**
- Operating review of Molikpaq and Kulluk activities in the Beaufort Sea. Thomas, T.J., et al. [1990, p.351-374, eng] **45-144**
- Ice-type classifications from airborne radar waveform characteristics. Fedor, L., et al. [1989, p.1949-1952, eng] **45-286**
- Oil spill response guide. [1989, 314p., eng] **45-1478**
- Character and distribution of sea-ice and iceberg scours. Lewis, C.F.M., et al. [1990, p.57-101, eng] **45-1946**
- Scour shape and sub-scour disturbance studies from the Canadian Beaufort Sea. Gilbert, G.R., [1990, p.127-144, eng] **45-1948**
- Beaufort Sea Planning Area Oil and Gas Lease Sale 124. Draft environmental impact statement. [1990, 2 vols., eng] **45-2162**
- Canadian Beaufort Sea physical shore-zone analysis. Final report. Harper, J.R., et al. [1985, 105p. + appendix, eng] **45-2538**
- Beaufort Sea hindcast study 1970 to 1982. Final report. [1983, 41p., eng] **45-2848**
- Beaufort Sea hindcast update. Interim report. [1983, 289p., eng] **45-2849**
- Ice forces on Hans Island. Proposal for 1983. [1983, n.p., eng] **45-2850**
- Multiyear floe and hummock field survey in the east Beaufort Sea. Hudson, R.D., et al. [1982, 15p. + appendix, eng] **45-2851**
- Multi-year ice strength testing program. Bowden, W., et al. [1983, n.p., eng] **45-2852**
- Multi-year ice thickness distribution in the Beaufort Sea. Dikins, D.F., [1983, 35p. + appendix, eng] **45-2853**
- Oceanographic and meteorological appendices Tarsiut Gulf 1982-83. [1984, n.p., eng] **45-2854**
- Operations report Tarsiut Gulf 1982-83. [1984, n.p., eng] **45-2855**
- Data results, Tarsiut Gulf 1982-83. [1984, 395p., eng] **45-2856**
- Instrumentation and equipment, Tarsiut Gulf 1982-83. [1984, 202p., eng] **45-2857**
- 1983 Arco ice stress sensor program at Tarsiut Island. Final report. [1984, 77p. + appendix, eng] **45-2858**
- Gulf et al Tarsiut Island Research Program. [1982, 17p. + appendix, eng] **45-2859**
- Geotechnical appendices Tarsiut Gulf 1982-83. [1984, n.p., eng] **45-2861**
- Ice appendices Tarsiut Gulf 1982-83. [1984, Var. p., eng] **45-2862**
- National Research Council Canada ice measurements at Tarsiut, 1983. Frederking, R., et al. [1984, 22p. + appendix, eng] **45-2863**
- Diversity of bacterial populations in the Beaufort Sea. Kancko, T., et al. [1977, p.596-599, eng] **45-1159**
- Seasonal variations in chlorophyll and nutrients in a Canadian arctic estuary. Grainger, E.H., et al. [1982, p.294-301, eng] **45-3127**
- Life history of an amphipod species in the Beaufort Sea. Boudrias, M.A., et al. [1988, p.249-257, eng] **45-5133**
- Bedrock**
- Radio echo soundings in the Shirase Glacier and Princess Ragnhild Coast areas. Nishio, F., et al. [1991, p.93-102, eng] **45-3067**
- Glacitectonic deformation in sediment and bedrock, Hat Creek, British Columbia. Broster, B.E., [1991, p.5-20, eng] **45-3824**
- Geology around the Norwegian antarctic station 'Troll'. Jutulussen, Dronning Maud land. Dallmann, W.K., et al. [1990, 39p., eng] **45-3881**
- Bering Sea**
- Sea ice drift and deformation in the western Arctic. Pease, C.H., et al. [1989, p.1276-1281, eng] **45-444**
- Interannual variability of cold water at the bottom of the continental shelf of the southeastern Bering Sea. Ohtani, K., et al. [1990, p.230-235, jpn] **45-869**
- Interaction between ocean waves and ice in the Bering Sea. Squire, V.A., [1979, 27p., eng] **45-943**
- Spring bloom oceanographic interaction at the Bering Sea ice edge zone. Niebauer, H.J., et al. [1990, p.22,229-22,241, eng] **45-1413**
- Arctic hurricane over the Bering Sea. Businger, S., et al. [1991, p.321-324, eng] **45-1944**
- Outer Continental Shelf Environmental Assessment Program. Final reports of principal investigators, Vol.70. [1990, 652p., eng] **45-2153**
- Navarin Basin Oil and Gas Lease Sale 107. Final environmental impact statement. [1991, Var. p., eng] **45-2172**
- Air-sea exchange of organic air pollutants in arctic oceans. Hinckley, D.A., et al. [1991, p.7201-7213, eng] **45-2559**
- Role of ice in the ecology of marine mammals of the Bering Sea. Fay, F.H., [1974, p.383-399, eng] **45-3119**
- Influence of ice on the primary productivity of the Bering Sea. McRoy, C.P., et al. [1974, p.403-421, eng] **45-3120**
- Diatoms as hydrographic tracers: example from Bering Sea sediments. Sancetta, C., [1981, p.279-281, eng] **45-3219**
- Studies of primary production in the eastern Bering Sea. McRoy, C.P., et al. [1972, p.199-216, eng] **45-3233**
- Phytoplankton communities in seasonally ice covered areas. Saito, K., et al. [1978, p.27-35, eng] **45-3284**
- Bibliographies**
- Icebreakers and icebreaking. Jan. 1978-Dec. 1989. (Bibliography). [1990, 104p., eng] **45-82**
- Deicing techniques and equipment. Apr. 1983-Apr. 1990. (Bibliography). [1990, 90p., eng] **45-83**
- Bibliography on ice and fog: detection and warning systems. [1990, 95p., eng] **45-205**
- Annual report of the Norwegian Polar Research Institute. [1989, 61p., eng] **45-210**
- Literature survey on arctic pollution. Blackburn, D., et al. [1990, 24p., eng] **45-45**
- Annotated list of Soviet literature on glaciology for 1987. Kottikov, V.M., ed. [1990, p.193-230, rus] **45-1762**
- Ice engineering for rivers and lakes bibliography. Wortley, C.A., [1990, 158p., eng] **45-2311**
- Environmental effects information database report. [1989, Var. p., eng] **45-2539**
- In search of library excellence in cold regions research. Liston, N.C., [1990, p.1066-1069, eng] **45-2580**
- Bibliography of Quaternary geology of the Copper River, AK. Ferriss, O.J., Jr., [1991, 20p., eng] **45-2692**
- Hydrologic bibliography of Switzerland for 1989. Sevruck, B., et al. [1989, p.145-164, ger] **45-2766**
- Bioenvironments**
- See *falsoy*: Ecology; Ecosystems
- Biogeography**
- Abundance and distribution of invertebrates in Alaskan streams. Oswood, M.W., [1989, p.97-110, eng] **45-2610**
- Invertebrate community composition in arctic streams. Miller, M.C., et al. [1989, p.111-127, eng] **45-2611**
- Hydrographic observations of an arctic front in the Greenland Sea. Aken, H.M., et al. [1991, p.4739-4750, eng] **45-2683**
- Latest Cretaceous to Cenozoic climate and oceanography of the Weddell Sea. Kennett, J.P., et al. [1990, p.937-960, eng] **45-3531**
- Biology**
- See *falsoy*: Cryobiology; Marine biology; Microbiology
- Biomass**
- Polar phytoplankton. Smith, W.O., Jr., et al. [1990, p.477-525, eng] **45-689**
- Relationship of biomass to depth to frozen soil in Alaskan tundra. Gross, M.F., et al. [1990, p.275-282, eng] **45-890**
- Phosphatase enzyme activity at subzero temperatures in arctic tundra soils. Neal, J.L., [1990, p.883-884, eng] **45-1019**
- Spring bloom oceanographic interaction at the Bering Sea ice edge zone. Niebauer, H.J., et al. [1990, p.22,229-22,241, eng] **45-1413**



**Biomass (cont.)**

- Nutrients, stream discharge and microbiology of arctic streams. Hullar, M.A., et al, [1989, p.19-26, eng] 45-2604
- Benthic algal biomass and productivity in high subarctic streams, Alaska. LaPerriere, J.D., et al, [1989, p.63-75, eng] 45-2608
- Phytoplankton response during winter-spring transition in the Fram Strait. Smith, W.O., Jr., et al, [1991, p.4549-4554, eng] 45-2671
- Ice algae in the Davis Strait. Booth, J.A., [1984, p.234-243, eng] 45-3070
- Influence of ice on the primary productivity of the Bering Sea. McRoy, C.P., et al, [1974, p.403-421, eng] 45-3120
- Physico-chemical and biological oceanography of Hudson Bay. Roff, J.C., et al, [1986, p.265-291, eng] 45-3129
- Convenient apparatus for *in situ* primary production studies. Watt, W.D., [1965, p.298-300, eng] 45-3218
- Biological production in the Gulf of St. Lawrence. Dunbar, M.J., [1979, p.151-171, eng] 45-3231
- Studies of primary production in the eastern Bering Sea. McRoy, C.P., et al, [1972, p.199-216, eng] 45-3233
- Improved chamber for *in situ* measurement of primary productivity by sea ice algae. Schrader, G.C., et al, [1982, p.522-524, eng] 45-3245
- Primary production of phytoplankton in Baffin Bay. Harrison, W.G., et al, [1982, p.335-345, eng] 45-3246
- Primary productivity of the benthic microalgae in the Chukchi Sea near Barrow, Alaska. Matheke, G.E.M., et al, [1974, p.1779-1786, eng] 45-3247
- Primary productivity in the fast ice near Showa Station. Satoh, H., et al, [1988, p.287-292, eng] 45-3315
- Effects of environmental variation on sinking rates of marine phytoplankton. Culver, M.E., et al, [1989, p.262-270, eng] 45-3318
- Photosynthesis and primary production of ice algae in Hokkaido. Satoh, H., et al, [1989, p.1-8, eng] 45-3343
- Primary production of ice algae on a seasonally-ice-covered, continental shelf. Irwin, B.D., [1990, p.247-254, eng] 45-3356
- Trophic relationships of the sea ice meiofauna in Frobisher Bay, arctic Canada. Grainger, E.H., et al, [1990, p.283-292, eng] 45-3358
- Bacterial productivity in arctic sea ice. Smith, R.E.H., et al, [1990, p.351-357, eng] 45-3361
- Primary productivity in the coastal ice-covered area near Showa Station. Satoh, H., et al, [1991, p.30-38, eng] 45-3393
- Food webs and primary production in the Barents Sea. Sakshaug, E., [1991, p.1-8, eng] 45-3460
- Antarctic sea ice: a habitat for the foraminifer *Neogloboquadrina pachyderma*. Dieckmann, G.S., et al, [1991, p.182-189, eng] 45-3837
- Structure and productivity of high-altitude plant communities of the southern Urals. Andreiashkina, N.I., [1991, p.326-331, eng] 45-3862
- Biota**  
See *also*: Ecology
- Bitumens**  
Fatigue characterization of Alaska paving materials (final report). Coetzee, N.F., et al, [1988, 126p., eng] 45-311
- Asphalt performance at low temperatures. Biczysko, S.J., [1990, p.20-25, eng] 45-853
- Research on low temperature properties of asphalts. Moriyoishi, A., et al, [1989, p.131-138, jpn] 45-872
- Analysis of modified bitumen roofing materials using the stiffness modulus. Norris, R.E., et al, [1991, p.401-417, eng] 45-2463
- Sound absorption and winter performance of porous asphalt pavement. Camonilla, G., et al, [1990, p.1-8, eng] 45-3058
- Surface cracking in asphalt layers. Kunst, P.A.J.C., et al, [1990, 199p., eng] 45-3108
- Evaluation of some polymer modified asphalts in Alberta. Anderson, K.O., et al, [1990, p.3-40, eng] 45-3491
- Investigative study on production of modified asphalts in Japan. Himeno, K., et al, [1990, p.43-67, eng] 45-3492
- Cold temperature properties of polymer-modified asphalt mixtures. Ali, N., et al, [1990, p.71-94, eng] 45-3493
- Softening point and brittle point of asphalt mixtures. Yamada, M., [1990, p.237-253, eng] 45-3499
- Bituminous concretes**  
Fatigue characterization of Alaska paving materials (final report). Coetzee, N.F., et al, [1988, 126p., eng] 45-311
- Freeze-thaw testing of bituminous concrete moisture susceptibility. Bolzán, P.E., [1989, p.9-16, eng] 45-1152
- Evaluation of effects of deicing additives on properties of asphalt mixtures. Mogawer, W.S., et al, [1989, p.41-53, eng] 45-1153
- Properties of asphalt-oil shale ash bituminous mixtures under normal and freeze-thaw conditions. Al-Massid, H., et al, [1989, p.54-62, eng] 45-1154
- Design of asphalt concrete mixtures in cold climates using soft asphalts. Palsat, D.P., et al, [1990, p.19-49, eng] 45-3507
- Blasting**  
Satellite transmission of data on blasting in Greenland. Madsen, N.K., et al, [1990, p.225-234, eng] 45-136
- Blast-excavating frozen ground using slit and borehole charges. Iurko, A.A., [1988, p.12-13, rus] 45-798
- Rock blasting in seasonally freezing ground. Reference manual. Frash, G.B., [1990, 110p., rus] 45-1703
- See *also*: Explosion effects; Ice blasting
- Blowing snow**  
Sublimation rate of collected blowing snow in a cyclone type collector. Sato, T., [1990, p.91-98, jpn] 45-112
- Saltation of snow. Pomeroy, J.W., et al, [1990, p.1583-1594, eng] 45-223
- Measuring blowing snow with a photo-electric particle counter at Pole Station, Antarctica. Wendler, G., [1989, p.9-16, eng] 45-393
- Drifting snow hazard and its control in the Tian Shan Mountains. Wei, W., [1989, p.53-58, eng] 45-402
- Snow and wind: blowing snow. Higashiura, M., [1989, p.623-638, jpn] 45-627
- Safe vehicle speed on winter roads in blowing snow. Fukuzawa, Y., et al, [1990, p.171-178, jpn] 45-780
- Measurement of visibility in blowing snow. Ishimoto, K., [1990, p.195-202, jpn] 45-783
- Wind tunnel simulation of antarctic snowdrifting. Kim, D.H., et al, [1989, 15p., eng] 45-816
- Snow collection mechanism and capacity of snow fence. Takeuchi, M., [1989, p.10-15, eng] 45-909
- Development of a vehicle-mounted blowing snow monitor. Ishimoto, K., et al, [1987, p.13-17, jpn] 45-922
- Colloquium on the Dynamics of Natural Hazards and Glaciochemistry, Grenoble, France, Dec. 5-7, 1990. [1990, Var.p., fre] 45-1776
- Testing of windbreak models under natural blowing snow conditions in Quebec. Verreault, R., et al, [1990, p.1/12-1/18, fre] 45-1778
- Numerical models of wind. Solignac, C., [1990, p.1/19-1/26, fre] 45-1779
- Implementation of anemographic methods in the region of Lioran, France. Taillandier, J.M., et al, [1990, p.1/27-1/33, fre] 45-1780
- Transport of snow by wind in mountains. Castelle, T., et al, [1990, p.1/65-1/83, fre] 45-1784
- Study on transportability conditions of snow at a high mountain site. Guyomarçh, G., et al, [1990, p.1/84-1/92, fre] 45-1785
- Two-phase wind-tunnel study on snow transport by wind. Naaim, F., [1990, p.1/93-1/103, fre] 45-1786
- Estimating snow transport from wind speed records. Tabler, R.D., et al, [1990, p.61-72, eng] 45-2122
- Sublimation rate of collected blowing snow in a collector. Sato, T., [1990, p.93-116, jpn] 45-2304
- Measuring blowing snow by visibility meters. Nohara, T., et al, [1988, p.189-192, jpn] 45-2514
- Measuring the efficiency of snow fences by vehicle-mounted blowing-snow counters. Ishimoto, K., et al, [1988, p.193-196, jpn] 45-2515
- Microclimatic conditions of caves in SW spurs of the Gissar Range. Khalimov, R.KH., [1990, p.59-60, rus] 45-2707
- Snowstorm. Shiotani, M., [1986, p.56-67, eng] 45-3706
- Boats**  
See *also*: Ships
- Boys**  
See *also*: Swamps
- Booms (equipment)**  
See *also*: Ice booms
- Borehole instruments**  
Borehole drilling for sewage disposal at Asuka Station. Ishizawa, K., et al, [1990, p.145-155, jpn] 45-980
- Ice drilling instrumentation. Hancock, W.H., et al, [1989, p.38-50, eng] 45-1454
- Electronic instrumentation used in borehole surveying. Kelly, J.R., et al, [1989, p.171-179, eng] 45-1471
- High-temperature penetrometer for boring ice and rocks by melting. Kudriashov, B.B., et al, [1990, p.66-73, rus] 45-2488
- Development of the JARE deep ice coring system. Fujii, Y., et al, [1990, p.303-345, jpn] 45-2595
- Studies on, and underneath, the ice shelf Fimbulisen. Orheim, O., et al, [1990, p.59-73, eng] 45-2832
- Field strength values of multi-year ice off Herschel Island. Iyer, S.H., et al, [1991, p.63-70, eng] 45-3149
- In situ* multi-year sea ice strength using NRCC borehole indenter. Sinha, N.K., [1991, p.229-236, eng] 45-3174
- Ice cover strength decay using borehole indenter. Sinha, N.K., [1990, p.735-744, eng] 45-3624
- Boreholes**  
Transient temperature solution for bore-hole model testing. Hanson, B., et al, [1987, p.140-148, eng] 45-7
- BHQ borehole ice core structure on Law Dome. Li, J., et al, [1988, p.119-131, chi] 45-41
- Thermal characteristics of the permafrost within a rock glacier. Mühl, D.V., et al, [1990, p.151-158, eng] 45-56
- Analysis of Norman Wells core samples. Final report. Patterson, D.E., et al, [1987, 60p. + append., eng] 45-384
- Physical and thermal properties of core specimens, Norman Wells Pipeline. Patterson, D.E., et al, [1989, 23p. + append., eng] 45-385
- Physical and thermal properties of Norman Wells-Zama Pipeline core specimens. Patterson, D.E., et al, [1988, 59p. + append., eng] 45-387
- Borehole drilling for sewage disposal at Asuka Station. Ishizawa, K., et al, [1990, p.145-155, jpn] 45-980
- Drilling and geophysical studies of the borehole in the Vavilov Ice Dome. Vasil'ev, N.I., et al, [1989, p.249, rus] 45-1072
- Hot-water drilling and bore-hole closure in cold ice. Humphrey, N., et al, [1990, p.287-298, eng] 45-1539
- Flow laws for glacier ice: comparison of numerical predictions and field measurements. Van der Veen, C.J., et al, [1990, p.324-339, eng] 45-1543
- Drilling boreholes filled with an ethanol-based antifreeze fluid. Morev, V.A., et al, [1990, p.181-184, rus] 45-1759
- Characteristics of restoring the temperature field disturbed by drilling. Berkovchenko, S.A., [1989, p.43-47, rus] 45-2007
- Recurrent infiltration ice on the northern shore of the Sea of Okhotsk. Meshkov, A.P., et al, [1989, p.132-136, rus] 45-2499
- Geotechnical appendices Tarsiut Gulf 1982-83. [1984, n.p., eng] 45-2861
- Evidence for episodic Late Holocene subsidence in estuarine deposits. Combellick, R.A., [1990, 67p., eng] 45-3086
- Scientific plan for deep ice drilling on Law Dome. Etheridge, D.M., [1990, 41p., eng] 45-3533
- Boring**  
See *also*: Drilling
- Botany**  
See *also*: Geobotanical interpretation; Paleobotany; Plants (botany); Vegetation
- Bottom friction**  
See *also*: Basal sliding
- Bottom ice**  
Vertical fine structure of particulate matter and nutrients in sea ice of the high Arctic. Smith, R.E.H., et al, [1990, p.1348-1355, eng] 45-434
- Contact supercooling of water layers and bottom ice formations in the sea. Cherepanov, N.V., et al, [1989, p.124-134, rus] 45-1499
- Passive and active bottom ice formation. Tyshko, K.P., et al, [1989, p.135-143, rus] 45-1500
- Outer Continental Shelf Environmental Assessment Program; Final reports of principal investigators, Vol.72. [1990, 634p., eng] 45-2155
- Cryogenic diagenesis as the cause of ice deposits in arctic marine sediments. Danilov, I.D., [1991, p.78-80, eng] 45-2479
- Bottom sediment**  
Weathering processes near Casey Station. Xie, Y., et al, [1988, p.193-213, chj] 45-48
- Gas hydrate and acoustically laminated sediments. Max, M.D., [1990, 72p., eng] 45-314
- Diatom sediments and Holocene paleotemperature variations. Koc Karpuz, N., et al, [1990, p.557-580, eng] 45-953
- Low-mineralized massive ice in marine sediments. Ivanov, A.V., [1989, p.217-219, rus] 45-1065
- Engineering geology of the USSR; shelves of the USSR. Dzhandzhgava, K.I., ed, [1990, 239p., rus] 45-1534
- PCB and PCT contamination in Winter Quarters Bay. Risebrough, R.W., et al, [1990, p.523-529, eng] 45-1645
- Late Mesozoic and Cenozoic paleoceanography of the northern polar oceans. Thiede, J., et al, [1990, p.427-458, eng] 45-1692
- Observed deformation structures beneath relict iceberg scours. Woodworth-Lynas, C.M.T., [1990, p.103-125, eng] 45-1947
- Temperature of water masses and the surface of bottom sediments of Lake Krugloye. Kotlov, S.B., et al, [1989, p.102-110, rus] 45-2015
- Cryogenic diagenesis as the cause of ice deposits in arctic marine sediments. Danilov, I.D., [1991, p.78-80, eng] 45-2479
- Ocean drilling program proposal for arctic ocean drilling. Mudie, P.J., et al, [1988, 20p. + append., eng] 45-2600
- Glacimarine environments: processes and sediments. Dowdeswell, J.A., ed, [1990, 423p., eng] 45-2778
- Role of subglacial and marine processes in the production of laminated sediments. Domack, E.W., [1990, p.91-103, eng] 45-2783
- Iceberg scours in the geological record. Woodworth-Lynas, C.M.T., et al, [1990, p.217-233, eng] 45-2786
- Arctic oceanic climate in late Cenozoic time. Herman, Y., et al, [1980, p.557-562, eng] 45-3094
- Variability in sterol flux in the ice-covered lagoon Saroma Ko, Hokkaido, Japan. Sasaki, H., et al, [1990, p.8-15, eng] 45-3342
- Conclusions and recommendations regarding Prince William Sound oil spill. Reimnitz, E., et al, [1990, 3p., eng] 45-3832

- Ecological aspects of lake regulation in northern Finland; part 5. Alasaarela, E., et al, 1989, 49p, finj 45-3847
- Bottom sediments**  
Utilization of ground penetrating radar to conduct sediment surveys of frozen reservoirs. Iivari, T.A., et al, 1988, p.1055-1061, eng 45-3099  
Engineering geology of eroding coastlines. Kurfurst, P.J., et al, 1991, p.179-188, eng 45-3270
- Bottom topography**  
Morphology and plate tectonics: the modern polar oceans. Johnson, G.L., 1990, p.11-28, eng 45-1266  
Sediment patterns in the southern Weddell Sea. Flitterer, D.K., et al, 1990, p.381-401, eng 45-1270  
Seismic studies RIGGS I and RIGGS II of the Ross Ice Shelf. Robertson, J.D., et al, 1990, p.55-86, eng 45-1610  
Seismic studies RIGGS III and RIGGS IV of the Ross Ice Shelf. Albert, D.G., et al, 1990, p.87-108, eng 45-1611  
Arctic Ocean region. Grantz, A., ed, 1990, 644p. + 11 maps and charts in a separate case, eng 45-1688  
Scour shape and sub-scour disturbance studies from the Canadian Beaufort Sea. Gilbert, G.R., 1990, p.127-144, eng 45-1948  
Submerged shoreline on the inner continental shelf of Maine. Shipp, R.C., et al, 1989, p.11-28, eng 45-2056  
Ocean eddy-ocean jet interaction in a marginal ice zone. Smith, D.C., IV, et al, 1991, p.4675-4689, eng 45-2679  
Radio-echo investigations in Dronning Maud Land. Kennett, M., 1990, p.75-79, eng 45-2833  
Sedimentation at Lake Hoare. Squyres, S.W., et al, 1991, p.363-379, eng 45-3457  
Influence of ice cover on transverse bed slopes in a curved alluvial channel. Tsai, W.F., et al, 1990, p.800-810, eng 45-3630  
Hazards to antarctic exploration and production. Reid, D.E., et al, 1990, p.31-45, eng 45-3756  
See *also*: Ocean bottom
- Boulders**  
See *also*: Rocks
- Bound water**  
See *also*: Hygroscopic water
- Boundary layer**  
Observation of the boundary layer on the top of ice growing from melt. Krasinski, M.J., et al, 1990, p.625-632, eng 45-614  
Subglacial boundary-layer regulation mechanism. Shoemaker, E.M., 1990, p.263-268, eng 45-1535  
Measuring path-averaged heat fluxes in free convection. Andreas, E.L., 1991, p.167-182, eng 45-1585  
Characteristics of the low-level temperature inversion along the Alaskan arctic coast. Kahl, J.D., 1990, p.537-548, eng 45-2177  
Fluctuating movement of the permafrost boundary. Mel'nikov, P.I., et al, 1989, p.50-52, eng 45-2597  
Aircraft observations of the arctic atmospheric boundary layer. Walter, B., et al, 1991, p.4663-4673, eng 45-2678  
Aircraft observations of atmospheric flow parallel to the ice edge. Shaw, W.J., et al, 1991, p.4691-4708, eng 45-2680  
Aerodynamic roughness of different types of sea ice. Guest, P.S., et al, 1991, p.4709-4721, eng 45-2681  
Observational evaluation of the snow breeze. Segal, M., et al, 1991, p.412-424, eng 45-3271  
Polar lows over the Gulf of Alaska in conditions of reverse shear. Bond, N.A., et al, 1991, p.551-572, eng 45-3272  
Numerical model of snow-cover effects on mesoscale circulations. Segal, M., et al, 1991, p.1024-1042, eng 45-3274  
Modelling the ice/water boundary layer. Omstedt, A., 1990, p.387-395, eng 45-3592  
See *also*: Interfaces; Turbulent boundary layer
- Boundary value problem**  
Comparison of Laplace transform and finite difference solutions for an evolving permafrost region. Morland, L.W., et al, 1990, p.631-648, eng 45-3208
- Boundary value problems**  
Calculating formula of time-dependent temperature regime of frozen soil. Wang, J.F., 1990, p.128-133, eng 45-485  
High speed numerical technique to solve coupled moving boundary value heat problems. Sharma, R.K., et al, 1990, p.1-8, eng 45-1080  
Numerical method for phase-change problems. Kim, C.J., et al, 1990, p.2721-2734, eng 45-1871  
River ice cover cracking for various boundary conditions. Abdel-Zaher, A.K., et al, 1991, p.363-375, eng 45-2348  
Moving and deforming finite-element simulation of two-dimensional Stefan problems. Zabarav, N., et al, 1990, p.495-506, eng 45-3699
- Brakes (motion arresters)**  
Studless tires use in Japan. Horiuchi, K., 1989, p.209-215, eng 45-1234
- Breakup**  
See *also*: Ice breakup
- Bricks**  
Phase transitions of water in brick during cooling. Nakamura, M., et al, 1985, p.1567-1570, eng 45-777  
Phase transition of water in brick during cooling 2: effects of cooling rate. Nakamura, M., et al, 1987, p.1116-1119, eng 45-778  
Predicting the durability of paving bricks. Winslow, D., 1991, p.29-33, eng 45-2761  
Frost resistance of clay bricks; test method proposal. Silvenoinen, K., 1990, 14p., eng 45-3854
- Bridges**  
Formation of ice on roads beneath bridges. Barker, H.W., et al, 1990, p.1180-1184, eng 45-1653  
Plastic highway bridges. Plecnik, J., et al, 1991, p.64-65, eng 45-3477  
See *also*: Ice crossings; Pontoon bridges; River crossings
- Brightness**  
Results from ground-based radiometry of snow. Hallikainen, M., et al, 1989, p.1231-1234, eng 45-265  
Correlation of radiometry observations with Colorado River basin snowpack properties. Josberger, E.G., et al, 1989, p.1239-1242, eng 45-267  
Determination of areal snow water equivalent on the Canadian prairies using passive microwave satellite data. Goodison, B.E., 1989, p.1243-1246, eng 45-268  
Converting digital microwave radiances to units of brightness temperatures. Farmer, L.D., et al, 1990, 16p., eng 45-932  
Microwave satellite spring runoff correlations. Wankiewicz, A., 1990, p.331-344, eng 45-3812
- Brines**  
Passive microwave observations of Weddell Sea ice cover. Grenfell, T.C., 1989, p.141-148, eng 45-709  
Distribution of the volume of air and brine pockets in sea ice. Nazintsev, I.U.L., et al, 1989, p.109-123, rusj 45-1498  
Deterioration of ice and frozen rock monoliths by brines. Laboratornye issledovaniia razrusheniia i da i ledoporodnykh monolitov rassolami, 1989, p.83-95, rusj 45-1830  
Prospecting for man-induced cryopegs using transient processes. Nim, I.U.A., 1989, p.117-130, rusj 45-1833  
Possible Martian brines: radar observations and models. Zent, A.P., et al, 1990, p.14,531-14,542, eng 45-1840  
Hydrogeological construction of the Udachnaya kimberlite plug. Drozdov, A.V., et al, 1989, p.146-155, rusj 45-2640  
Brine-induced advection of dissolved aromatic hydrocarbons to arctic bottom waters. Payne, J.R., et al, 1991, p.940-951, eng 45-3818
- Brittleness**  
Research on low temperature properties of asphalts. Moriyoshi, A., et al, 1989, p.131-138, jpnj 45-872  
Wing cracks and brittle compressive fracture. Cannon, N.P., et al, 1990, p.1955-1962, eng 45-1168  
Brittle compressive fracture of ice. Schulson, E.M., 1990, p.1963-1976, eng 45-1169  
Performance of thermoplastic elastomers (TPEs) at subzero temperatures. Brugada, R., 1989, p.67-73, eng 45-1216  
Electromagnetic emission during snow and ice deterioration. Berri, B.L., 1990, p.13-18, rusj 45-1730  
Ductile-brittle transition in ice & size effect. Schulson, E.M., et al, 1991, p.554-568, eng 45-2366  
Size effects in the fracture of quasi-brittle materials. Bazant, Z.P., et al, 1991, p.595-604, eng 45-2369  
On the ductile to brittle transition in ice under compression: physical processes. Schulson, E.M., 1990, p.103-114, eng 45-2725  
Brittle compressive failure of freshwater columnar ice under biaxial loading. Smith, T.R., et al, 1991, p.207-214, eng 45-3171
- Bubbles**  
Structure, stratigraphy and bubble properties in ice core from Law Dome. Han, J.K., et al, 1988, p.153-163, chij 45-44  
Experimental study of the air inclusions into ice formed on fixed cylinders. Gribelin, P., et al, 1988, p.162-166, eng 45-1331  
Void formation in unidirectional solidification. Tagavi, K., et al, 1990, p.239-255, eng 45-1422  
Air-content measurement correction for polar ice sampling. Martinic, P., et al, 1990, p.299-303, eng 45-1540  
New method for assessment of air voids in plastic concrete. Ansari, F., 1990, p.901-909, eng 45-2313  
CO2 measurements from polar ice cores: more data from different sites. Staffebach, T., et al, 1991, p.91-96, eng 45-2587  
See *also*: Gas inclusions
- Bubbling**  
On-site experimental verification of the air bubble method. Endo, K., et al, 1990, p.287-292, jpnj 45-755  
Computer simulation of ice control with thermal-bubble plumes—a line source configuration. Baddour, R.E., 1990, p.509-513, eng 45-902
- Use of aeration to prevent ice buildup at gaging station controls. Wagner, C.R., 1990, p.155-158, eng 45-2195  
Ice clearance using air-lifted propeller streams. Jarvi, A., 1990, p.627-638, eng 45-3613  
Study on ice control at fishing harbor by air-bubble method. Mizuno, Y., et al, 1990, p.697-708, eng 45-3620
- Building**  
See *also*: Construction
- Building codes**  
Heat flux and temperature measurement in building systems. Flanders, S.N., 1986, p.101-120, eng 45-2098  
Calibration transfer standards for fenestration systems. Goss, W.P., et al, 1991, p.251-260, eng 45-2662  
See *also*: Design criteria; Specifications
- Building materials**  
See *also*: Construction materials
- Buildings**  
Predicting roof snow loads on gabled structures. Sack, R.L., et al, 1990, p.2763-2779, eng 45-956  
Failures of agricultural buildings in Estonia caused by snow loads. Keskkula, T., 1990, p.195-200, eng 45-1150  
Icing condition sensors for building management applications. Jones, T.M., 1990, p.36-38, eng 45-2023  
Heat flux and temperature measurement in building systems. Flanders, S.N., 1986, p.101-120, eng 45-2098  
Effect of permafrost conditions and type of foundations on deformation of building in Vorkuta. Belotserkovskaja, G.V., 1991, p.161-163, eng 45-2399  
Basic causes of deformation of buildings constructed on permafrost. Zhukov, V.F., 1991, p.174-178, eng 45-2400  
In-situ heat flux measurements in buildings. Flanders, S.N., ed, 1991, 260p., eng 45-2648  
Heat flux transducers to study building insulations. Perrine, E.L., 1991, p.3-12, eng 45-2649  
Systematic errors with surface mounted heat flux transducers. Trethowen, H.A., 1991, p.15-27, eng 45-2650  
HFT guard plate for exterior envelope surface measurements. Christian, J.E., 1991, p.29-51, eng 45-2651  
Development of a method to assess HFT shunting error. Mack, R.T., et al, 1991, p.53-79, eng 45-2652  
Verification of a thin-heater device as a secondary HFT calibration source. Beardon, T.W., et al, 1991, p.81-94, eng 45-2653  
Heat flux transducers to determine heat transfer coefficients. Emery, A.F., et al, 1991, p.97-110, eng 45-2654  
Prediction of errors for in-situ measurement of thermal resistance. Flanders, S.N., et al, 1991, p.193-219, eng 45-2659  
Applications and development of IR techniques for building research in Finland. Kaasinen, H., et al, 1991, p.90-98, eng 45-2924  
Snow load and the damage it causes to structures. Furukawa, I., 1986, p.327-349, eng 45-3721  
Finnish cold climate building technology and community development, part 9. Nyman, M., ed, 1990, 70p., finj 45-3879  
See *also*: Houses; Industrial buildings; Large panel buildings; Portable shelters; Prefabrication; Residential buildings
- Buoyancy**  
Effect of density on the trajectory of ice pieces around a ship's hull. Jones, S.J., et al, 1990, p.661-673, eng 45-3616
- Cables (power lines)**  
See *also*: Power lines; Transmission lines
- Cables (ropes)**  
Cable rime accretion measurements on a Laurentian mountain. McComber, P., et al, 1990, p.1022-1032, eng 45-2443
- Calorimetry**  
See *also*: Temperature measurement
- Calving**  
Calving event in Greenland in Aug. 1982. Epprecht, W., 1987, p.169-172, eng 45-11  
Airborne radar characteristics of sea ice types. Jeffries, M.O., et al, 1989, p.2715-2718, eng 45-296  
Calving and drift of iceberg B-9 in the Ross Sea. Keys, H.J.R., et al, 1990, p.243-257, eng 45-469  
Dynamics of ice conditions in the coastal zone of Antarctica. Korotkov, A.I., et al, 1990, p.126-133, rusj 45-1751  
Iceberg-calving rates reconstructed from paleo-sea levels. Lowell, T.V., 1991, p.155-158, eng 45-2180  
Is Antarctica breaking apart. Hill, C., 1990, p.22-23, eng 45-2240  
Radar detection of a calving event at the Milne Ice Shelf. N.W.T. Jeffries, M.O., et al, 1990, p.321-331, eng 45-2741  
Dynamics of ice conditions in the coastal zone of Antarctica. Korotkov, A.I., et al, 1990, p.261-270, eng 45-3132  
Sea level response to ice sheet evolution. Jacobs, S.S., 1991, p.23-47, eng 45-3279

## Calving (cont.)

- Waves induced by calving of Unteraargletscher. Funk, M., et al. (1990, p.372-384, eng) 45-3591
- Canada**
- Northern hydrology: Canadian perspectives. Prowse, T.D., ed. (1990, 308p., eng) 45-211
- Northern hydrology: an overview. Prowse, T.D., (1990, p.1-36, eng) 45-212
- Snow hydrology. Marsh, P., (1990, p.37-61, eng) 45-213
- Glacier hydrology. Young, G.J., (1990, p.135-162, eng) 45-217
- Water-quality research. Gregor, D.J., (1990, p.163-186, eng) 45-218
- Regional hydrology. Wedel, J.H., (1990, p.207-226, eng) 45-220
- Mining in Canada's north—a technical overview. Udd, J.E., (1989, p.15-25, eng) 45-328
- Climatic variability and the hydrological cycle in the Canadian North. Lawford, R.G., (1988, p.143-162, eng) 45-520
- Climates of Canada. Phillips, D., (1990, 176p., eng) 45-554
- Quaternary geology of Canada and Greenland. Fulton, R.J., ed. (1989, 839p. + suppl., eng) 45-610
- Climate change and erosion processes in mountain regions of western Canada. Slaymaker, O., (1990, p.171-182, eng) 45-620
- Study on snow chemistry in Canada: research in progress and prospects. Jones, H.G., (1990, p.3/5-3/12, fre) 45-1793
- Physico-chemical and pollen composition of the Canadian arctic ice cap. Bourgeois, J.C., et al. (1990, p.3/15-3/21, fre) 45-1794
- Research study of highway snowdrifting in Canada. Baker, H.A., et al. (1991, p.719-728, eng) 45-2381
- Field experiences versus standards and designs. Booth, R.J., et al. (1991, p.351-355, eng) 45-2459
- Ice thickness data, winter 1988-1989. (1991, 74p., eng) 45-2693
- Annual report 1990. (1991, 17p., eng) 45-2765
- Marine ecology in arctic Canada. Mansfield, A.W., (1975, p.11/27-II/47, eng) 45-3222
- Ecology of the marine fishes of arctic Canada. McAllister, D.E., (1975, p.11/49-II/65, eng) 45-3223
- Glacier atlas of Canada. Ommanney, C.S.L., (1989, 54 leaves, eng) 45-3261
- Baffin Bay**
- Primary production of phytoplankton in Baffin Bay. Harrison, W.G., et al. (1982, p.335-345, eng) 45-3246
- Baffin Island**
- Cambridge Fiord basin evolution during Baffin I. deglaciation. Stravers, J.A., et al. (1991, p.72-90, eng) 45-2315
- British Columbia**
- Dinitrogen fixation in primary succession in Canada. Blundon, D.J., et al. (1990, p.255-263, eng) 45-888
- Fate of N-15-labelled fertilizer applied on snow at two forest sites in British Columbia. Preston, C.M., et al. (1990, p.1583-1592, eng) 45-1027
- Cathedral Massif Glacier map 1:5000. Slupetzky, H., et al. (1988, p.125-136, ger) 45-1093
- Glaciectonic deformation in sediment and bedrock, Hat Creek, British Columbia. Broster, B.E., (1991, p.5-20, eng) 45-3824
- Geomorphology of a glacier marginal lake in British Columbia. Ryder, J.M., (1991, p.35-44, eng) 45-3826
- British Columbia—Mahoney Lake**
- Vernal stratification in a saline lake: causes and biological significance. Northcote, T.G., et al. (1990, p.105-114, eng) 45-2945
- Ellesmere Island**
- Application of C-14 AMS dating to Holocene glacier fluctuation chronology. Blake, W., Jr., (1989, p.570-578, eng) 45-1844
- Pollen variations in ice cap snow. Bourgeois, J.C., (1990, p.313-322, eng) 45-2413
- Hudson Bay**
- Spring surface circulation patterns detected using remote sensing of drifting ice floes in Hudson Bay, Canada. Larouche, P., (1989, p.780-782, eng) 45-251
- Hudson Bay and Ungava Bay ice-melt cycles for the period 1963-1983. Loucks, R.H., et al. (1989, 48p., eng) 45-1280
- Dynamics of the Laurentide Ice Sheet in Hudson Bay, Canada. Josenhans, H.W., et al. (1990, p.1-26, eng) 45-1552
- Impacts of Hudson Bay on the terrestrial climate of the Hudson Bay Lowlands. Rouse, W.R., (1991, p.24-30, eng) 45-2469
- Physico-chemical and biological oceanography of Hudson Bay. Roff, J.C., et al. (1986, p.265-291, eng) 45-3129
- Light and nutrient limitation of sea-ice microalgae (Hudson Bay, Canadian Arctic). Gosselein, M., et al. (1990, p.220-232, eng) 45-3348
- Response of a community of ice diatoms to a salinity gradient (Hudson Bay). Poulin, M., et al. (1983, p.191-202, fre) 45-3432
- Sensitivity of sea ice break-up to air temperatures. Etkin, D.A., (1991, p.21-34, eng) 45-3547
- Variation of upper layer dynamics during breakup of the seasonal ice cover in Hudson Bay. Lepage, S., et al. (1991, p.12,711-724, eng) 45-3558
- Keewatin**
- Brown snow: a long-range transport event in the Canadian Arctic. Welch, H.E., et al. (1991, p.280-286, eng) 45-3026
- Labrador**
- Reconstructed ice-flow patterns and ice limits using drift pebble lithology. Bell, T., et al. (1989, p.577-590, eng) 45-1613
- Reconstructed ice-flow patterns and ice limits using drift pebble lithology, outer Nachvak Fiord, northern Labrador: discussion and reply. Clark, P.U., et al. (1990, p.1002-1011, eng) 45-1685
- Labrador Sea**
- KRMS GEOSAT-LIMEX '87 data products. Eppler, D.T., et al. (1988, 42p., eng) 45-561
- Influence of Hudson Bay runoff and ice-melt on the salinity of the inner Newfoundland Shelf. Myers, R.A., et al. (1990, p.241-256, eng) 45-657
- Manitoba**
- Observed deformation structures beneath relict iceberg scours. Woodworth-Lynas, C.M.T., (1990, p.103-125, eng) 45-1947
- New Brunswick**
- Postglacial evolution of drainage in the St. John River basin. Kite, J.S., et al. (1989, p.135-142, eng) 45-2070
- New Brunswick—Northumberland Strait**
- Evaluation of ice conditions in the Northumberland Strait using C and X band SAR imagery. Dechka, J.A., et al. (1989, p.1142-1146, eng) 45-262
- Ice kinematic measurements from aerial photography. Brown, T.G., et al. (1989, p.1148-1151, eng) 45-263
- Newfoundland**
- Water masses and fronts, and their geographical position off Newfoundland. Nowak, W.S.W., (1990, 24p., eng) 45-353
- Sea ice data for the Newfoundland Shelf, 1988-1989. Fissel, D.B., et al. (1989, 165p., eng) 45-1288
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- Current meter, CTD and meteorological observations on the northern Grand Banks for Apr.-Oct. 1986. DeYoung, B., et al. (1988, 94p., eng) 45-1276
- Oceanographic observations of the Grand Banks. Petrie, B., et al. (1988, 270p., eng) 45-1277
- Northwest Territories**
- Snowbank hydrology in the continuous permafrost zone. Lewkowicz, A.G., et al. (1990, p.13-21, eng) 45-1186
- Sea-level change and glacier oscillation indicators on Melville Moraine, Northwest Territories. Dredge, L.A., (1990, p.1215-1224, eng) 45-1272
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- Influence of a simulated transport corridor on snowpack characteristics, Fort Norman, N.W.T., Canada. Kershaw, G.P., (1991, p.31-40, eng) 45-2470
- Chemical components of arctic tropospheric aerosols. Barrie, L.A., et al. (1990, p.211-226, eng) 45-3047
- Northwest Territories—Axel Heiberg Island**
- Thermal regime of an arctic valley glacier. Blatter, H., (1987, p.200-211, eng) 45-16
- Northwest Territories—Baffin Island**
- Arctic region temperature mapping by integration of automated station data. Jacobs, J.D., (1990, p.84-96, eng) 45-362
- Primary production in Frobisher Bay, arctic Canada. Grainger, E.H., (1979, p.9-30, eng) 45-3230
- Trophic relationships of the sea ice meiofauna in Frobisher Bay, arctic Canada. Grainger, E.H., et al. (1990, p.283-292, eng) 45-3358
- Northwest Territories—Barrow Strait**
- Ice algae impact on sea ice during spring. Cota, G.F., et al. (1990, p.1402-1415, eng) 45-435
- Northwest Territories—Devon Island**
- Survey of mycorrhizal plants on Truelove Lowland, Devon Island, N.W.T., Canada. Bledsoe, C., et al. (1990, p.1848-1856, eng) 45-3106
- Northwest Territories—Ellesmere Island**
- Topoclimatic studies of a high arctic plateau ice cap. Bradley, R.S., et al. (1987, p.149-158, eng) 45-8
- Radiation and cloud observations on a high arctic plateau ice cap. Serreze, M.C., et al. (1987, p.162-168, eng) 45-10
- Snowfall and oxygen isotope variations off Ellesmere I. Jeffries, M.O., et al. (1987, p.195-199, eng) 45-15
- High Arctic thrust block moraines. Evans, D.J.A., et al. (1991, p.93-97, eng) 45-2174
- Fens on a high arctic fault block. LaFarge-England, C., et al. (1991, p.80-98, eng) 45-2473
- Climate, hydrology and vegetation patterns, Hot Weather Creek, Arctic Canada. Edlund, S.A., et al. (1990, p.273-286, eng) 45-2527
- Polycyclic aromatic and organochlorine compounds in the atmosphere of northern Ellesmere Island, Canada. Patton, G.W., et al. (1991, p.10,867-10,877, eng) 45-3375
- Northwest Territories—Frobisher Bay**
- Sea ice fauna of Frobisher Bay, arctic Canada. Grainger, E.H., et al. (1985, p.23-30, eng) 45-3059
- Northwest Territories—Lancaster Sound**
- Lancaster Sound in the year 2000 (regional planning in the Canadian Arctic). Bondarenko, V.S., (1990, p.99-107, rus) 45-674
- Lancaster Sound region: a coastal atlas for environmental protection. Dickins, D., et al. (1990, Var. p., eng) 45-2103
- Northwest Territories—Liard River**
- Heat and mass balance of an abating ice jam. Prowse, T.D., (1990, p.629-635, eng) 45-903
- Northwest Territories—Mackenzie River Delta**
- Permafrost and paleoclimatology of the Mackenzie Delta. Allen, D.M., (1988, 154p., eng) 45-179
- Northwest Territories—Mould Bay**
- Solar heating of a stratified ocean in the presence of a static ice cover. Perovich, D.K., et al. (1990, p.18,233-18,245, eng) 45-1020
- Northwest Territories—Norman Wells**
- Permafrost and terrain research and monitoring: Norman Wells pipeline—Volume 1: environmental and engineering considerations. MacInnes, K.L., et al. (1989, 132p., eng) 45-32
- Analysis of Norman Wells core samples. Final report. Patterson, D.E., et al. (1987, 60p. + append., eng) 45-384
- Physical and thermal properties of core specimens, Norman Wells Pipeline. Patterson, D.E., et al. (1989, 23p. + append., eng) 45-385
- Physical and thermal properties of Norman Wells-Zama Pipeline core specimens. Patterson, D.E., et al. (1988, 59p. + append., eng) 45-387
- Northwest Territories—Queen Elizabeth Islands**
- Holocene paleoclimatology of the Queen Elizabeth Islands, Canadian High Arctic. Bradley, R.S., (1990, p.365-384, eng) 45-2074
- Northwest Territories—Resolute Bay**
- Marine metabolism at Resolute Bay, Northwest Territories. Welch, H.E., et al. (1975, p.11/69-II/75, eng) 45-3121
- Observations on marine life beneath sea ice, Resolute Bay, N.W.T. Green, J.M., et al. (1975, p.11/77-II/86, eng) 45-3130
- Nova Scotia**
- Long-term temperature monitoring program, 1987: Scotia-Fundy, Gulf of St. Lawrence, and Newfoundland. Gregory, D.N., et al. (1988, 491p., eng) 45-1275
- Long-term temperature monitoring program, 1989: Scotia-Fundy and the Gulf of St. Lawrence. Gregory, D.N., et al. (1990, 175p., eng) 45-1278
- Long-term temperature monitoring program, 1988: Scotia-Fundy and Gulf of St. Lawrence. Gregory, D.N., et al. (1989, 233p., eng) 45-1279
- Currents and sea level off Nova Scotia. Lively, R.R., (1989, 304p., eng) 45-1282
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- Ontario—Kitchener**
- Hydrologic processes in a southern Ontario wetland. Gehrels, J., et al. (1990, p.221-234, eng) 45-2942
- Ontario—Winnipeg**
- Change in frost season characteristics in Winnipeg, 1872-1988. Rannie, W.F., (1990, p.168-177, eng) 45-2755
- Prince Edward Island**
- Oceanographic observations off Prince Edward I., Canada. Drinkwater, K.F., et al. (1988, 37p., eng) 45-1283
- Saint Lawrence Gulf**
- Long-term temperature monitoring program, 1987: Scotia-Fundy, Gulf of St. Lawrence, and Newfoundland. Gregory, D.N., et al. (1988, 491p., eng) 45-1275
- Long-term temperature monitoring program, 1989: Scotia-Fundy and the Gulf of St. Lawrence. Gregory, D.N., et al. (1990, 175p., eng) 45-1278
- Long-term temperature monitoring program, 1988: Scotia-Fundy and Gulf of St. Lawrence. Gregory, D.N., et al. (1989, 233p., eng) 45-1279
- Monthly means of temperature, salinity and sigma-t for the Gulf of St. Lawrence. Petrie, B., (1990, 137p., eng) 45-1284
- Saint Lawrence, Gulf**
- Biological production in the Gulf of St. Lawrence. Dunbar, M.J., (1979, p.151-171, eng) 45-3231
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- Yukon territory snow survey measurements. Summary 1958-1987. (1989, 38p., eng) 45-72
- Yukon territory snow survey bulletin and water supply forecast—May. (1990, 24p., eng) 45-73
- Yukon territory snow survey bulletin and water supply forecast—May. (1990, 24p., eng) 45-74
- Yukon territory snow survey bulletin and water supply forecast—April. (1990, 24p., eng) 45-75
- Yukon territory snow survey bulletin and water supply forecast—March. (1990, 25p., eng) 45-76
- Development of thermokarst lakes during the Holocene at sites near Mayo, Yukon Territory. Burn, C.R., et al. (1990, p.161-176, eng) 45-1296
- Cryoplanation terraces, northern Yukon. Lauriol, B., (1990, p.347-351, eng) 45-1424

- Palaeoenvironmental implications of recent ice-wedge development. Burn, C.R., [1990, p.3-14, eng] 45-2230
- Yukon Territory snow survey bulletin and water supply forecast, April 1, 1991. [1991, 26p., eng] 45-2846
- Yukon Territory—Ruby Range
- Subsurface movement on solifluction slopes—a 20-year study. Price, L.W., [1991, p.200-205, eng] 45-3484
- Capillarity**
- Geotextiles as capillary barriers. Henry, K.S., [1990, p.30-36, eng] 45-3736
- Carbon dating**
- See *also*: Radioactive age determination
- Carbon dioxide**
- Carbon cycle instability as a cause of ice age oscillations. Saltzman, B., et al, [1988, p.177-185, eng] 45-367
- Climate and CO<sub>2</sub> in a coupled atmosphere/ocean GCM. Washington, W.M., et al, [1989, p.1-38, eng] 45-380
- Influence of CO<sub>2</sub> ice on the activity and near-surface differentiation of comet nuclei. Fanale, F.P., et al, [1990, p.403-413, eng] 45-897
- Physical and infrared spectral properties of CO<sub>2</sub> in astrophysical ice analogs. Sandford, S.A., et al, [1990, p.357-372, eng] 45-1002
- Using CO<sub>2</sub> samples in determining the absolute age of ice sequences. Zemtsov, A.A., et al, [1989, p.122-126, rus] 45-1046
- Role of the oceans in climatic variability and climatic change. Mysak, L.A., et al, [1990, p.352-369, eng] 45-1425
- Tundra lakes and streams as gas conduits to the atmosphere. Kling, G.W., et al, [1991, p.298-301, eng] 45-1474
- Seasonal variation of some constituents of antarctic tropospheric air. Hogan, A.W., et al, [1990, p.2365-2368, eng] 45-1514
- Spectral albedo and emissivity of CO<sub>2</sub> in Martian polar caps: model results. Warren, S.G., et al, [1990, p.14,717-14,741, eng] 45-1842
- Absorption coefficients of CO<sub>2</sub> ice on the Martian south polar cap. Calvin, W.M., [1990, p.14,743-14,750, eng] 45-1843
- Recovery and dating of carbon dioxide in polar ice cores. Wilson, A.T., et al, [1989, p.579-584, eng] 45-1845
- Response of the West Antarctic Ice Sheet to CO<sub>2</sub>-induced climatic warming. Bentley, C.R., [1982, 32p., eng] 45-1928
- Research agenda for a possible CO<sub>2</sub>-induced climate change. [1980, 122p., eng] 45-1929
- Potential response of antarctic sea ice to climatic change induced by atmospheric CO<sub>2</sub> increases. Ackley, S.F., [1981, 17p. + 3p. refs., eng] 45-1930
- Influence of short-term climate fluctuations on permafrost terrain. Brown, J., et al, [1982, 33p., eng] 45-1931
- Some coolness concerning global warming. Lindzen, R.S., [1990, p.288-299, eng] 45-1986
- Influence of humidity and temperature upon the rate of soil metabolism. Fischer, Z., [1990, p.17-24, eng] 45-2429
- Flow model of Ross Ice Shelf and climatic warming. Lingle, C.S., et al, [1991, p.6849-6871, eng] 45-2504
- Re-examination of CO<sub>2</sub>-climate relationship as deduced from Vostok ice core. Barnola, J.M., et al, [1991, p.83-90, eng] 45-2586
- CO<sub>2</sub> measurements from polar ice cores: more data from different sites. Staffelbach, T., et al, [1991, p.91-96, eng] 45-2587
- Concentration of atmospheric carbon dioxide at the Japanese antarctic station, Syowa. Nakazawa, T., et al, [1991, p.126-135, eng] 45-2588
- Effects of climate change on discharges and snow cover in Finland. Vehviläinen, B., et al, [1991, p.109-121, eng] 45-2989
- Effects of CO<sub>2</sub>-induced climatic changes on snowpack and streamflow. Cooley, K.R., [1990, p.511-522, eng] 45-2992
- Climate change; implications for water and ecological resources. Wall, G., ed, [1990, 342p., eng] 45-3294
- Results from a 2xCO<sub>2</sub> simulation with a general circulation model. Boer, G.J., [1990, p.45-49, eng] 45-3295
- Potential effects of global climate change on the United States. Smith, J.B., [1990, p.79-123, eng] 45-3296
- Climate change and water supply at a demand in western Canada. Lawford, R.G., [1990, p.193-200, eng] 45-3298
- Climate change moisture stresses on northern coniferous forests. Wein, R.W., et al, [1990, p.285-289, eng] 45-3301
- Environmental effects on CO<sub>2</sub> efflux from water track and tussock tundra in arctic Alaska, U.S.A. Oberbauer, S.F., et al, [1991, p.162-169, eng] 45-3481
- Arctic as a bellwether. Walsh, J.E., [1991, p.19-20, eng] 45-3488
- Preliminary measurements of CO<sub>2</sub> in melting snow. Sommerfeld, R.A., et al, [1991, p.1225-1228, eng] 45-3760
- Climate of Mars. Haberle, R.M., [1990, p.70-80, eng] 45-3861
- See *also*: Dry ice (trademark)
- Cargo**
- See *also*: Frozen cargo
- Carrying capacity**
- See *also*: Bearing strength
- Cartography**
- See *also*: Mapping
- Caterpillar tractors**
- See *also*: Tracked vehicles
- Cation exchange**
- See *also*: Ion exchange
- Caves**
- Problems in geometeorology and the accumulation of winter cold. Koval'chuk, A.I., ed, [1990, 119p., rus] 45-2695
- Formation of ice in caves, abandoned mining excavations, and talus. Martin, V.I., [1990, p.16-17, rus] 45-2697
- Snow caves. Ezhov, I.U.A., [1990, p.35-37, rus] 45-2701
- Microclimatic characteristics of freezing underground cavities. Russkikh, A.V., [1990, p.42-44, rus] 45-2703
- Microclimatic conditions of caves in SW spurs of the Gissar Range. Khalimov, R.K.H., [1990, p.59-60, rus] 45-2707
- Microclimatic characteristics of karst caves in Pamir-Alai. Sultanov, E.S., et al, [1990, p.61-63, rus] 45-2708
- Microclimates of caves in southern Siberia. Filippov, V.M., [1990, p.64-67, rus] 45-2709
- See *also*: Ice caves; Subglacial caves
- Cellular plastics**
- Temperature dependence on R-value of foam insulation. Bomberg, M.T., et al, [1991, p.241-267, eng] 45-2582
- See *also*: Thermal insulation
- Cement admixtures**
- Portland cement concrete materials manual. [1989, 208p., eng] 45-317
- Condensed silica fume in concrete. Malhotra, V.M., et al, [1987, 221p., eng] 45-323
- Comparison of latex-modified portland cement mortars. Walters, D.G., [1990, p.371-377, eng] 45-2073
- Cements**
- Portland cement concrete materials manual. [1989, 208p., eng] 45-317
- Condensed silica fume in concrete. Malhotra, V.M., et al, [1987, 221p., eng] 45-323
- Clay mortar and cement reinforcement rings for gas wells in permafrost. Gavril'ev, R.I., et al, [1990, p.72-76, rus] 45-1202
- Drilling in the permafrost. Kudriashov, B.B., et al, [1990, 318p., eng] 45-1854
- Cold weather construction materials part 2: tests on regulated-set cement. Houston, B.J., et al, [1982, 27p., eng] 45-3475
- See *also*: Soil cement
- Cermets**
- Elastic properties of a tungsten monocarbide-based metal/ceramic at low temperatures. Ulianov, V.L., et al, [1990, p.93-95, eng] 45-993
- Chambers**
- See *also*: Cloud chambers; Cold chambers; Test chambers; Wind tunnels
- Channels (waterways)**
- Ice conditions in pools of the dam of the Kolyma hydroelectric station during initial operation. Kozhevnikov, T.E., et al, [1990, p.104-107, eng] 45-855
- Observations of snow loads on drainage ditches at the gratings. Komatsu, J., et al, [1986, p.40-48, jpn] 45-927
- Boulder-paved river channels: a case study of a fluvio-periglacial landform. Davies, D.A., et al, [1990, p.213-231, eng] 45-1389
- Ice formation in frequently transited navigation channels. Ettema, R., et al, [1990, 110p., eng] 45-1972
- Jam initiation in unobstructed channels: laboratory observations. Ettema, R., [1990, p.673-684, eng] 45-2252
- Bank recession and channel changes near dikes on the Tanana River, AK. Gatto, L.W., [1983, p.4.2-4.21, eng] 45-2492
- Bank and channel changes near Dikes, Tanana River, Alaska. Gatto L.W., [1983, p.212-222, eng] 45-2957
- Mathematical model of ice cover edge dynamics of power plant tail race. Belolipetkii, V.M., et al, [1990, p.78-82, eng] 45-3268
- Observations of ship performance and the structure of fast ice channels in the northern Baltic Sea. Veitch, B., et al, [1991, 35p., eng] 45-3448
- Laboratory investigations of mixing processes under simulated ice cover. Loose, F., [1990, p.324-336, eng] 45-3587
- Investigation of trash rack heating to prevent frazil ice freezeup. Daly, S.F., et al, [1990, p.584-595, eng] 45-3609
- Ice clearance using air-lifted propeller streams. Jarvi, A., [1990, p.627-638, eng] 45-3613
- Hydraulic and morphological criteria of ice jamming at channel constrictions. Mayer, I., et al, [1990, p.680-689, eng] 45-3618
- Mathematical model for ice processes in river networks. Shen, H.T., et al, [1990, p.726-734, eng] 45-3623
- Influence of ice cover on transverse bed slopes in a curved alluvial channel. Tsai, W.F., et al, [1990, p.800-810, eng] 45-3630
- Ecological aspects of lake regulation in northern Finland; part 5. Allassaarela, E., et al, [1989, 49p., fin] 45-3847
- Charge transfer**
- Complex formation between dimethyl methylphosphonate and hexafluoroisopropanol. Leggett, D.C., [1990, 3p., eng] 45-191
- Theory of charge-transfer spectra in frozen media. Marcus, R.A., [1990, p.4963-4966, eng] 45-433
- Charging of aircraft: high-velocity collisions. Keith, W.D., et al, [1990, p.218-222, eng] 45-2396
- Calculating dielectric response function of cubic ice. Zaider, M., et al, [1990, p.25-39, eng] 45-2948
- Effect of liquid water on thunderstorm charging. Saunders, C.P.R., et al, [1991, p.11,007-11,017, eng] 45-3378
- Charts**
- See *also*: Maps; Meteorological charts
- Chemical analysis**
- Moraine formed by ice sheet near Casey Station. Xie, Y., et al, [1988, p.179-192, chi] 45-47
- Weathering processes near Casey Station. Xie, Y., et al, [1988, p.193-213, chi] 45-48
- Laboratory study on the scavenging of SO<sub>2</sub> by snow crystals. Mitra, S.K., et al, [1990, p.2307-2312, eng] 45-845
- Airborne trace metals in snow on the Japan Sea side of Japan. Ecker, F.J., et al, [1990, p.2593-2600, eng] 45-954
- Major element chemistry, delta 2H, delta 18O and Sr-87/Sr-86 in a snow profile across central Scandinavia. Andersson, P., et al, [1990, p.2601-2608, eng] 45-955
- Transfer of hydrogen from NADPH to NAD+ in frozen aqueous solution. Aso, Y., et al, [1990, p.2187-2188, eng] 45-957
- Ionic tracer movement through a Wyoming snowpack. Baies, R.C., et al, [1990, p.2749-2758, eng] 45-1176
- Synthetic products as basic components of low-pour motor oils. Tsvetkov, O.N., et al, [1990, p.189-192, eng] 45-1385
- Tracers of volcanic emissions in aerosol and snow samples. Palais, J.M., et al, [1990, p.217-218, eng] 45-1435
- Model for aerosol components over the Antarctic Peninsula. Dick, A.L., [1990, p.179-196, eng] 45-1441
- Ice-wedge chemistry on Seymour I. Kato, K., et al, [1990, p.181-190, eng] 45-1531
- Contamination of aqueous samples with formate and acetate from ambient air. Hewitt, A.D., et al, [1991, p.453-457, eng] 45-1697
- Density of antifreeze-water mixtures. Flowers, P.A., [1990, p.1068-1069, eng] 45-2075
- Chemical profiles of polar ice on Earth and Mars. Jones, H.G., [1991, p.43-57, eng] 45-2397
- Study of clathrate hydrates from vapour-deposited amorphous ice. Hallbrucker, A., et al, [1990, p.3785-3792, eng] 45-2415
- Evidence of carbonic acid in proton irradiated ices. Moore, M.H., et al, [1991, p.255-262, eng] 45-2467
- Deducing precipitation chemistry changes from snow cores. Metcalf, R.C., et al, [1990, p.299-316, eng] 45-2529
- Air pollution measurements at Barrow, AK. Jaffe, D.A., et al, [1991, p.7395-7405, eng] 45-2797
- Gas chromatography determination of volatile organics in soil. Hewitt, A.D., et al, [1991, 7p., eng] 45-2826
- Chemical components of arctic tropospheric aerosols. Barrie, L.A., et al, [1990, p.211-226, eng] 45-3047
- Determination of some heavy metals in antarctic snow and coastal sea water. Saini, G., et al, [1990, p.27-30, eng] 45-3196
- Air water interface in coastal surface waters. Loglio, G., et al, [1990, p.95-102, eng] 45-3200
- Polycyclic aromatic and organochlorine compounds in the atmosphere of northern Ellesmere Island, Canada. Patton, G.W., et al, [1991, p.10,867-10,877, eng] 45-3375
- Model simulation of chemical depletion of arctic ozone during the winter of 1989. McConnell, J.C., et al, [1991, p.10,923-10,930, eng] 45-3376
- Nonevaporative preconcentration technique for volatile and semivolatile solutes in certain polar solvents. Jenkins, T.F., et al, [1991, p.1341-1343, eng] 45-3447
- Scientific plan for deep ice drilling on Law Dome. Etheridge, D.M., [1990, 41p., eng] 45-3533
- Estimation of detection capability for toxic wastes. Grant, C.L., et al, [1991, p.15-33, eng] 45-3735
- Microwave-heated-acid dissolution of metals from contaminated soils and sediments. Hewitt, A.D., et al, [1989, p.463-470, eng] 45-3765
- Effect of gelatin on hydrolysis in frozen aqueous solutions. Sergeev, B.M., et al, [1991, p.978-983, eng] 45-3775
- See *also*: Frozen ground chemistry; Isotope analysis; Soil analysis
- Chemical composition**
- Impact of sampling protocols on winter storm estimates of wet deposition. Lynch, J.A., et al, [1990, 33p., eng] 45-206

**Chemical composition (cont.)**

- Proton irradiation of ice mixtures. Nuth, J.A., et al. [1989, p.565-569, eng] 45-397
- Ice algae impact on sea ice during spring. Cota, G.F., et al. [1990, p.1402-1415, eng] 45-435
- Isotope study of natural water and ice of western Siberia. Kritsuk, L.N., et al. [1989, p.48-64, eng] 45-649
- Record of solar proton events in a firn core from Windless Bight. Zeller, E.J., et al. [1990, p.92-94, eng] 45-1394
- PCB and PCT contamination in Winter Quarters Bay. Risebrough, R.W., et al. [1990, p.523-529, eng] 45-1645
- Formation of the chemical composition of meltwater. Ivanov, A.V., [1989, p.67-83, rus] 45-1829
- Zonality of the distribution of chemical elements in terrigenous rocks. Tumanov, V.R., [1989, p.130-141, rus] 45-1834
- Heat transfer from Atlantic waters to Arctic Ocean sea ice. Moore, R.M., et al. [1990, p.2149-2152, eng] 45-1993
- Ice core record of oceanic emissions of dimethylsulphide. Legrand, M., et al. [1991, p.144-146, eng] 45-2019
- Neptune's Triton: a moon rich in dry ice and carbon. Prentice, A.J.R., [1990, p.364-367, eng] 45-2083
- Aerosol measurement at high alpine stations. Schiwikowski, M., et al. [1990, p.S321-S324, eng] 45-2220
- Chemical composition of soil and ground waters in freezing swamps. Ivanov, A.V., et al. [1989, p.149-154, rus] 45-2447
- Heavy minerals in glacial material. Peuraniemi, V., [1990, p.165-185, eng] 45-2551
- Fractionating of O-18 in the snow-ice cover of the central Arctic Basin. Mel'nikov, I.A., et al. [1985, p.237-241, rus] 45-3241
- Polar stratospheric clouds and ozone depletion. Toon, O.B., et al. [1991, p.68-74, eng] 45-3252
- Freezing-point of mixtures of H<sub>2</sub>O-16 and H<sub>2</sub>O-18. Kiyosawa, K., [1991, p.583-588, eng] 45-3305
- Development of seawater batteries as a long-term arctic power source. Hammond, R., et al. [1990, p.1122-1129, eng] 45-3659
- See *also*: Atmospheric composition; Frozen ground chemistry; Geochemistry; Ice composition; Snow composition; Soil chemistry; Soil composition; Water chemistry
- Chemical ice prevention**
- Brine and immiscible liquids for spray ice removal. Sackinger, W.M., et al. [1990, p.575-581, eng] 45-160
- Evaluation of South Dakota Deicer No.2 and calcium magnesium acetate by shear testing. Ashworth, T., et al. [1989, p.1-8, eng] 45-808
- Sodium chloride and magnesium chloride road deicers. Goyal, G., et al. [1989, p.9-17, eng] 45-809
- Calcium magnesium acetate and rock salt road deicers. Manning, D.G., et al. [1989, p.18-26, eng] 45-810
- 1987-1988 City of Ottawa, Ontario, Canada deicer field trials. Hamilton, G.B., et al. [1989, p.27-38, eng] 45-811
- Calcium magnesium acetate and salt road deicers. Smith, R.L., Jr., [1989, p.39-48, eng] 45-812
- Anti-icing chitin coating system development. Bowers-Irons, G.L.A., et al. [1990, 16p., eng] 45-821
- Laboratory test for measurement of adhesion strength of spray ice to coated flat plates. Mulherin, N.D., et al. [1990, 44p., eng] 45-976
- Evaluation of effects of deicing additives on properties of asphalt mixtures. Mogawer, W.S., et al. [1989, p.41-53, eng] 45-1153
- Research to develop conductor deicing compounds. Baum, B., et al. [1988, p.372-375, eng] 45-1374
- Wave formation on a liquid layer for de-icing airplane wings. Yih, C.S., [1990, p.41-53, eng] 45-2053
- Highway deicing salts and the mobilization of selected heavy metals from stream sediments. Cole, H.D., [1990, 126p., eng] 45-3353
- See *also*: Salting
- Chemical properties**
- Freeze-thaw effects on oxygen photosynthesis in phosphatidylglycerol vesicles. Nénoné, E.K., et al. [1990, p.615-620, eng] 45-969
- Determination of alkaline earth metals in Japanese rain and snow by ICP emission spectrometry. Dokiya, Y., et al. [1988, p.145-165, eng] 45-1013
- Controlling the crystallization of water in closed voids. Kuz'min, G.P., et al. [1990, p.92-95, rus] 45-1204
- Scavenging ratios of acid related compounds during winter. Cadie, S.H., et al. [1990, p.2981-2989, eng] 45-1771
- Occurrence of zinc in antarctic ancient ice and recent snow. Boutron, C.F., et al. [1990, p.248-259, eng] 45-1847
- Trace metal and rare earth content of black precipitation events. Landsberger, S., et al. [1990, p.363-369, eng] 45-1899
- Hydrologic flow path definition and partitioning of spring meltwater. Maulé, C.P., et al. [1990, p.2959-2970, eng] 45-2078
- Gas-hydrogeochemical variations in the active layer in northeast USSR. Giotov, V.E., [1989, p.33-46, rus] 45-2627
- Potential for ozone depletion in the arctic polar stratosphere. Brune, W.H., et al. [1991, p.1260-1266, eng] 45-2831

- Hydrologic processes in a southern Ontario wetland. Gehrels, J., et al. [1990, p.221-234, eng] 45-2942
- Saharan dust deposition over Mont Blanc (French Alps) during the last 30 years. De Angelis, M., et al. [1991, p.61-75, eng] 45-3020
- Subice layering and origin of acidic waters in a small boreal lake during spring runoff. Roberge, J., et al. [1991, p.479-492, eng] 45-3105
- Acidic snowmelt effects on stream trout. Stansley, W., et al. [1990, p.227-237, eng] 45-3304
- Ozone trend in the Northern Hemisphere: a numerical study. Pitari, G., et al. [1991, p.10,931-10,940, eng] 45-3377
- Electrohydraulic and electrochemical phenomena during hull contact with ice. Androsenko, V., et al. [1990, p.531-541, eng] 45-3604
- Longitudinal and seasonal water chemistry variations in a northern Appalachian stream. Phillips, R.A., et al. [1990, p.489-498, eng] 45-3697
- Solvent-water partitioning and extraction of phosphonates. Leggett, D.C., [1990, p.889-895, eng] 45-3740
- Simulant interaction with ice and agent persistence estimation for cold regions. Leggett, D.C., [1988, p.237-247, eng] 45-3741
- Chemical reactions**
- See *also*: Photochemical reactions
- Chemicals**
- Alkylbenzyltrimethylammonium salts as inhibitors for the ice nucleating activity of *Erwinia ananas*. Watanabe, M., et al. [1988, p.201-206, eng] 45-3048
- Chernozem**
- Microelements in Siberian soils. Senichkina, M.G., et al. [1986, p.115-131, rus] 45-608
- Phosphorus in frozen meadow-chernozem soils in the Amga River valley. Antipina, D.K., [1988, p.35-38, rus] 45-640
- Potassium in frozen meadow-chernozem soils. Antipina, D.K., [1990, p.74-78, rus] 45-641
- Soils and soil-forming processes in the Central Asian facies. Nogina, N.A., [1990, p.1-11, eng] 45-1707
- Chile**
- Snowline depression in Chile during the Pleistocene. Caviedes, C.N., [1990, p.99-114, eng] 45-363
- Non-meteorological flood disasters in Chile. Peña, H., et al. [1989, p.243-258, eng] 45-2770
- China**
- On the temperature distribution of glaciers in China. Huang, M., [1990, p.210-217, eng] 45-63
- Data base of glacier inventory. Liu, Z.X., et al. [1990, p.167-174, chj] 45-457
- Atlas of river ice in China. [1990, 141p., eng] 45-1264
- Technical evaluation of the MARIC 65-tonne amphibious hovercraft model 722. Yun, L., et al. [1989, p.79-96, eng] 45-2102
- Researches of glacier lake outburst floods of the Yarkant River in Xinjiang. Zhang, X.S., et al. [1990, p.1014-1024, eng] 45-2178
- Permafrost and groundwater conditions, Huola River Basin, northeast China. Wang, B.L., [1990, p.45-52, eng] 45-2233
- River ice research in China. Sun, Z.C., et al. [1991, p.282-293, eng] 45-2340
- Altitude calculation of climatic snowlines and their changing rules in China. Wu, X.H., et al. [1991, p.56-60, eng] 45-2483
- Progress in the studies on physics of glaciers in China in the last ten years. Huang, M.H., [1991, p.353-357, eng] 45-3097
- Bohai Sea**
- Experiments on numerical sea ice forecasting in the Bohai Sea. Wu, H.D., et al. [1990, p.173-186, eng] 45-3675
- Chongce Ice Cap**
- Temperature distribution of Chongce Ice Cap, west Kunlun Mts. Zhou, T., et al. [1990, p.1024-1028, eng] 45-592
- Kunlun Mountains**
- Quaternary glaciers in the West Kunlun Mountains. Zheng, B.X., et al. [1990, p.61-72, eng] 45-199
- Automatic meteorological station in the Kunlun Mountains. Ohata, T., et al. [1990, p.73-85, eng] 45-200
- Temperatures of glaciers in the Kunlun Mountains. Shao, W.Z., et al. [1990, p.87-91, eng] 45-201
- Qinghai-Xizang Plateau**
- Periglacial geomorphology of the Qinghai-Xizang Plateau. Bian, C.Y., et al. [1990, p.147-153, chj] 45-455
- Last glacial and maximum glaciation in the Qinghai-Xizang Plateau. Shi, Y.F., et al. [1990, p.1-16, chj] 45-458
- Climatological analysis of snowfall on the Qinghai-Xizang Plateau. Zou, J., et al. [1989, p.411-422, eng] 45-1185
- Tian Shan Mountains**
- Drifting snow hazard and its control in the Tian Shan Mountains. Wei, W., [1989, p.53-58, eng] 45-402
- Xinjiang**
- Growth process of snow particles in snow clouds. You, L., et al. [1990, p.221-230, eng] 45-611

**Chlorophylls**

- Quantification of chlorophyll and salinity distributions in sea ice. Eicken, H., [1991, 105p., ger] 45-3523
- Chukchi Sea**
- Chukchi Sea Oil and Gas Lease Sale 126. Draft environmental impact statement. [1990, 2 vols., eng] 45-2159
- Chukchi Sea Oil and Gas Lease Sale 126. Final environmental impact statement. [1991, 2 vols., eng] 45-2173
- Circulation**
- See *also*: Atmospheric circulation; Drift; Ocean currents; Tidal currents
- City planning**
- See *also*: Urban planning
- Classifications**
- Sea ice classification using synthetic aperture radar. Winebrenner, D.P., et al. [1989, p.34-36, eng] 45-228
- Active microwave classification of sea ice. Onstott, R.G., [1989, p.369-374, eng] 45-234
- Combined active/passive microwave classification of sea ice. Livingstone, C.E., [1989, p.376-380, eng] 45-235
- Discrimination of sea ice types using SAR backscatter statistics. Shuchman, R.A., et al. [1989, p.381-385, eng] 45-236
- Extraction of sea ice information from SAR imagery. Olausen, T.I., et al. [1989, p.394-399, eng] 45-239
- Study of textural and tonal information for classifying sea ice from SAR imagery. Hirose, T.K., et al. [1989, p.747-750, eng] 45-243
- Ice classification algorithm development using aircraft imagery. Holt, B., et al. [1989, p.751-754, eng] 45-244
- Classification of SAR images from sea ice. Holback-Hanssen, E., et al. [1989, p.755-758, eng] 45-245
- Multivariate analysis of texture statistics for SAR sea ice discrimination. Barber, D.G., et al. [1989, p.759-762, eng] 45-246
- Texture measures for sea-ice classification from radar images. Shokr, M.E., [1989, p.763-768, eng] 45-247
- Knowledge based system for the interpretation of SAR images of sea ice. McAvoy, J.G., et al. [1989, p.844-847, eng] 45-252
- Radar studies of low-salinity sea ice. Hallikainen, M., et al. [1989, p.1945-1948, eng] 45-285
- Ice-type classifications from airborne radar waveform characteristics. Fedor, L.S., et al. [1989, p.1949-1952, eng] 45-286
- Radiobrightness of freezing terrain. Zuerndorfer, B., et al. [1989, p.2748-2751, eng] 45-302
- Textural characteristics of cloud- and ice-covered surfaces in polar regions. Welch, R.M., et al. [1989, p.2773-2776, eng] 45-303
- Köppen classification of glacial and interglacial climate simulations. Guetter, P.J., et al. [1990, p.193-215, eng] 45-361
- Wetlands considerations. Rundquist, L.A., [1990, p.371-397, eng] 45-414
- Aufeis formation and prevention. Slaughter, C.W., [1990, p.433-438, eng] 45-416
- Dynamics of the coastal zone of the Vilyuy River power plant. Gotovtsev, S.P., et al. [1987, p.38-48, rus] 45-573
- Classification of territory and forecasting its geological changes. Nefedova, T.V., [1990, p.46-49, rus] 45-637
- Snow cover in mountain systems of the Earth. Getker, M.I., et al. [1989, p.30-38, rus] 45-1031
- International classification for seasonal snow on the ground. Colbeck, S.C., et al. [1990, 23p., eng] 45-1174
- Snow/cloud discrimination with multispectral satellite measurements. Allen, R.C., Jr., et al. [1990, p.994-1004, eng] 45-1273
- Least-squares polynomial technique for discriminating between drops and graupel in 2D image records. Czyz, R.R., et al. [1991, p.J51-J55, eng] 45-1597
- Feature extraction from two-dimensional images using fractal analysis. Baumgardner, D., [1991, p.185-187, eng] 45-1599
- Observations on buried glacier ice and massive segregated ice, western arctic coast, Canada. French, H.M., et al. [1990, p.31-43, eng] 45-2232
- Sea ice thickness distribution in the northwestern Weddell Sea. Lange, M.A., et al. [1991, p.4821-4837, eng] 45-2690
- Classification of snow cover and precipitation using the special sensor microwave imager. Grody, N.C., [1991, p.7423-7435, eng] 45-2798
- Morphogenetic classification of forms of relief on a World Ocean shelf. Ionin, A.S., et al. [1990, p.24-50, rus] 45-2875
- SAR sea ice discrimination using texture statistics: a multivariate approach. Barber, D.G., et al. [1991, p.385-395, eng] 45-2947
- Analyzing landscape change in arctic ecosystems. Walker, D.A., et al. [1991, p.244-276, eng] 45-3187
- Texture analysis of radiometric signatures of new sea ice forming in arctic leads. Eppler, D.T., et al. [1991, p.233-241, eng] 45-3189

- Modified beta density function as a model for synthetic aperture radar clutter statistics. Maffett, A.L., et al, 1991, p.277-283, eng 45-3190
- Evaluation of second-order texture parameters for sea ice classification from radar images. Shokr, M.E., 1991, p.10,625-10,640, eng 45-3312
- Seasonal frost mounds. Pollard, W.H., 1991, p.214-218, eng 45-3367
- Classification system of winter conditions of small-craft harbor design for the Great Lakes. Wortley, C.A., 1990, p.821-834, eng 45-3632
- Classification of snow and frozen ground surfaces with SSM/I signatures. Neale, C.M.U., et al, 1990, p.345-355, eng 45-3813
- See (also): Landscape types; Soil classification
- Clathrates**
- Gas hydrate and acoustically laminated sediments. Max, M.D., 1990, 72p., eng 45-314
- SO<sub>2</sub> infrared spectra of clathrate hydrate films. Fleyfel, F., et al, 1990, p.7032-7037, eng 45-843
- Pressure-induced phase transitions in clathrate hydrates. Handa, Y.P., et al, 1991, p.623-627, eng 45-1903
- Study of clathrate hydrates from vapour-deposited amorphous ice. Hallbrucker, A., et al, 1990, p.3785-3792, eng 45-2415
- Clay**
- Influence of first phase change on the rheological behavior of clay between 0 and -5°C. Thimus, J.F., et al, 1991, p.107-111, eng 45-3156
- Bearing capacity of shallow foundation on layered clay. Das, B.M., 1991, p.119-124, eng 45-3158
- Interpretation of pile load tests at the Haga site. Whittle, A.J., 1991, p.267-274, eng 45-3179
- Clay minerals**
- Formation of the Lushan red boulder clay debris flow. Peng, H.X., 1990, p.87-90, chij 45-466
- Cation exchange with clay minerals in atmospheric precipitation. Sequira, R., 1991, p.487-490, eng 45-3554
- Clay soils**
- Estimating ice sheet thickness from clay profiles. Schokking, F., 1990, p.305-312, eng 45-357
- Compressive strength behavior of fine-grained frozen soils. Wijeweera, H., et al, 1990, p.472-483, eng 45-632
- Mechanical properties of frozen clays mixed with sandy soils. Enokido, M., et al, 1989, p.31-36, jpn 45-692
- Frost action in clay soils: unfrozen water content. Brown, S.C., et al, 1990, p.535-546, eng 45-1141
- Frost action in clay soils: suction of unfrozen water. Brown, S.C., et al, 1990, p.547-561, eng 45-1142
- Freeze-thaw effects on clay covers and liners. Chamberlain, E.J., et al, 1991, p.136-151, eng 45-2329
- Thermal regime of clayey soils at the Kungur weather station. Lukin, A.V., 1990, p.95-97, rus 45-2714
- Influence of first phase change on the rheological behavior of clay between 0 and -5°C. Thimus, J.F., et al, 1991, p.107-111, eng 45-3156
- New model of frost heave prediction for clayey soils. Chen, X.B., et al, 1991, p.213-214, eng 45-3426
- Clays**
- Sub-glacial sediment deformation model. Schokking, F., 1990, p.291-304, eng 45-356
- Freeze and thaw point of wet clay and its determination. Liu, Z.C., 1990, p.183-189, eng 45-500
- Rheological fundamentals of soil mechanics. Vialov, S.S., 1986, 564p., eng 45-612
- Thermal strain behaviour of clays cooled to cryogenic temperatures. Landva, J., et al, 1991, p.22-31, eng 45-2319
- Cryogenic properties of soils and rocks: 2. The influence of water types on the uniaxial mechanical behaviour of clays. Unsworth, J.F., et al, 1991, p.211-225, eng 45-3402
- Climate**
- Handbook on climate of the USSR. 1989, 268p., eng 45-309
- Climate and CO<sub>2</sub> in a coupled atmosphere/ocean GCM. Washington, W.M., et al, 1989, p.1-38, eng 45-380
- Colorado climate: temperature, precipitation, frost and growth data. 1989, 290p., eng 45-488
- Climate variability and the hydrological cycle in the Canadian North. Lawford, R.G., 1988, p.143-162, eng 45-520
- Meteorology source book. Parker, S.P., ed, 1988, 304p., eng 45-527
- Climates of Canada. Phillips, D., 1990, 176p., eng 45-554
- Experiences with a coupled global model. Foreman, S.J., 1989, p.275-288, eng 45-794
- Role of Antarctica in Southern Hemisphere climate. Satyrmurti, P., et al, 1986, p.39-50, eng 45-915
- Australian studies in antarctic weather and climate. Stretten, N.A., 1989, p.411-417, eng 45-1012
- Climate characteristics of the taiga in interior Alaska. Slaughter, C.W., et al, 1986, p.9-21, eng 45-1589
- Investigating the interrelationship between climate and permafrost. Anisimov, O.A., et al, 1990, p.13-20, rus 45-1630
- Modeling sea ice thermodynamics and dynamics in climate studies. Hibler, W.D., III, 1988, p.509-563, eng 45-1646
- Let's involve schoolkids in data collection efforts. Clagett, G.P., 1990, p.137-140, eng 45-2131
- Vegetation and climate of the Mal'k-Siyenak region in the Pleistocene. Prokhorova, T.P., 1989, p.10-20, rus 45-2494
- Hazards to antarctic exploration and production. Reid, D.E., et al, 1990, p.31-45, eng 45-3756
- See (also): Indoor climates
- Climate changes**
- 400 years isotope record of the Antarctic Peninsula climate. Aristarain, A.J., et al, 1990, p.2369-2372, eng 45-1990
- Climate control**
- Climates of Canada. Phillips, D., 1990, 176p., eng 45-554
- Climate change**
- Hydrology of Svalbard—hydrological problems in cold climate. Proceedings. 1990, 224p., eng 45-3776
- Climate changes**
- Climate changes in the last glacial-interglacial cycle. Kotliakov, V.M., et al, 1989, p.5-16, rus 45-5
- Stratigraphy of shallow snow core in Wilkes Land. Qin, D., 1988, p.22-59, chj 45-36
- Climate change effects on the snowmelt hydrology of western North American mountain basins. Rango, A., et al, 1989, p.181-183, eng 45-231
- Dynamics of altitudinal tree-limits in Sweden: a review. Kullman, L., 1990, p.103-116, eng 45-308
- Köppen classification of glacial and interglacial climate simulations. Guetter, P.J., et al, 1990, p.193-215, eng 45-361
- Snowline depression in Chile during the Pleistocene. Caviedes, C.N., 1990, p.99-114, eng 45-363
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- Ice-core record: climate sensitivity and future greenhouse warming. Lorius, C., et al, 1990, p.139-145, eng 45-377
- Climate variability and the hydrological cycle in the Canadian North. Lawford, R.G., 1988, p.143-162, eng 45-520
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- Global warming—are we entering the greenhouse century. Schneider, S.H., 1989, 317p. (Pertinent p.162-165 and p.300-302), eng 45-595
- Quaternary geology of Canada and Greenland. Fulton, R.J., ed, 1989, 839p. + suppl., eng 45-610
- Changes in mountain climate and glacio-hydrological responses. Barry, R.G., 1990, p.161-170, eng 45-619
- Climate change and erosion processes in mountain regions of western Canada. Slaymaker, O., 1990, p.171-182, eng 45-620
- Deterioration of antarctic ice sheet and sea-level rise. Nakawo, M., 1989, p.562-575, jpn 45-623
- Glacier fluctuations and climates in the Himalayas. Ageta, Y., 1989, p.576-586, jpn 45-624
- Simulation of a century of arctic ice cover variations. Häkkinen, S., et al, 1990, p.15,959-15,969, eng 45-711
- Holocene ice margin recession in West Greenland. Weidick, A., et al, 1990, p.389-399, eng 45-714
- Ice sheet volume in Queen Maud Land during cold stages. Hermichen, W.D., et al, 1990, p.301-306, eng 45-726
- On the role of cryosphere in the global climate/environment. Nakawo, M., 1990, p.185-194, jpn 45-782
- Climate studies with a coupled atmosphere-upper-ocean-ice-sheet model. Fichefet, T., et al, 1989, p.249-261, eng 45-793
- Global climatic events of the Neogene. Zubakov, V.A., 1990, 222p., rus 45-842
- Climate, tree-ring, and glacial fluctuations in the Rio Frias Valley, Rio Negro, Argentina. Villalba, R., et al, 1990, p.215-232, eng 45-886
- Salt oscillator in the glacial Atlantic? 1. The concept. Broecker, W.S., et al, 1990, p.469-477, eng 45-952
- Diatom sediments and Holocene paleotemperature variations. Koc Karpuz, N., et al, 1990, p.557-580, eng 45-953
- Climate change, hydrology, and water resources. Gleick, P.H., 1989, p.329-344, eng 45-960
- Climate of the last thousand years. Jones, P.D., 1990, p.304-312, fre 45-962
- Endogenic model of permanent variations in the climate of the Earth. Kovalenko, V.D., et al, 1990, p.111-124, rus 45-996
- Variations in glaciation in the Kungey Alatau mountain ridge. Glazyrin, G.E., et al, 1990, p.113-120, rus 45-1113
- Climate implications of microparticles in an antarctic coastal ice core. Yao, T.D., et al, 1990, p.1102-1109, eng 45-1144
- Cooperative climatological-glaciological program in the Antarctic Peninsula. Thompson, L.G., et al, 1990, p.69-70, eng 45-1156
- Model test of CCN-cloud albedo climate forcing. Ghan, S.J., et al, 1990, p.607-610, eng 45-1173
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- Development of thermokarst lakes during the Holocene at sites near Mayo, Yukon Territory. Burn, C.R., et al, 1990, p.161-176, eng 45-1296
- Role of the oceans in climatic variability and climatic change. Mysak, L.A., et al, 1990, p.352-369, eng 45-1425
- Climatic conditions in the northern European basin for the last 400 years. Dement'ev, A.A., 1989, p.67-75, rus 45-1625
- Role of land ice in present and future sea-level change. Meier, M.F., 1990, p.171-184, eng 45-1656
- Changes in global climate. Kondrat'ev, K.I.A., 1985, 280p., eng 45-1710
- One earth, one future: our changing global environment. Silver, C.S., et al, 1990, 196p., eng 45-1711
- Ozone depletion, greenhouse gases, and climate change. 1989, 122p., eng 45-1712
- Model studies of the "atmosphere-snow-sea ice" system in an annual cycle. Oreshko, A.P., et al, 1990, p.51-57, rus 45-1736
- Relation of periodic Greenland Sea sea-ice anomalies to climatic cycles. Mysak, L.A., et al, 1990, p.111-133, eng 45-1801
- Prospects for future climate. MacCracken, M.C., ed, 1990, 270p., eng 45-1853
- Response of the West Antarctic Ice Sheet to CO<sub>2</sub>-induced climatic warming. Bentley, C.R., 1982, 32p., eng 45-1928
- Research agenda for a possible CO<sub>2</sub>-induced climate change. 1980, 122p., eng 45-1929
- Potential response of antarctic sea ice to climatic change induced by atmospheric CO<sub>2</sub> increases. Ackley, S.F., 1981, 17p. + 3p. refs., eng 45-1930
- Influence of short-term climate fluctuations on permafrost terrain. Brown, J., et al, 1982, 33p., eng 45-1931
- Some coolness concerning global warming. Lindzen, R.S., 1990, p.288-299, eng 45-1986
- Ice core record of oceanic emissions of dimethylsulphide. Legrand, M., et al, 1991, p.144-146, eng 45-2019
- Holocene paleoclimatology of the Queen Elizabeth Islands, Canadian High Arctic. Bradley, R.S., 1990, p.365-384, eng 45-2074
- Climatic response to meridional sea-ice transport. Ledley, T.S., 1991, p.147-163, eng 45-2105
- Snow in mountain watersheds. Sommerfeld, R.A., et al, 1990, p.122-129, eng 45-2129
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- Influence of the atmosphere. Lins, H.F., et al, 1990, p.11-53, eng 45-2144
- Variability of the climate system and detection of the greenhouse effect. Wigley, T.M.L., et al, 1990, p.324-327, eng 45-2239
- Warming in the Arctic. Quadfasel, D., et al, 1991, p.385, eng 45-2262
- Revised projection of future greenhouse warming. Schlesinger, M.E., et al, 1991, p.219-221, eng 45-2263
- Breakup of antarctic ice. Zwally, H.J., 1991, p.274, eng 45-2265
- Rapid disintegration of the Wordie Ice Shelf in response to atmospheric warming. Deake, C.S.M., et al, 1991, p.328-330, eng 45-2266
- Polar research from satellites. Thomas, R.H., 1991, 91p., eng 45-2406
- Interaction of sea ice, snow and glaciers with the atmosphere and ocean. Kotliakov, V.M., ed, 1990, p.155-248, eng 45-2409
- Changing climate. Eronen, M., 1990, p.220-238, fin 45-2422
- Workshop on antarctic meteorite stranding surfaces. Cassidy, W.A., ed, 1990, 103p., eng 45-2426
- Climate change and glacier fluctuation during the last 1,000 years. Kotliakov, V.M., et al, 1991, p.1-12, eng 45-2434
- Runoff variation forecasts related to climatic changes. Kuznetsova, L.P., et al, 1991, p.126-132, eng 45-2438
- Date of snowmelt at Barrow, Alaska, U.S.A. Dutton, E.G., et al, 1991, p.115-119, eng 45-2475
- Detection of arctic climatic change using synoptic climatology. Kalkstein, L.S., et al, 1990, p.1153-1167, eng 45-2535
- Re-examination of CO<sub>2</sub>-climate relationship as deduced from Vostok ice core. Barnola, J.M., et al, 1991, p.83-90, eng 45-2586
- CO<sub>2</sub> measurements from polar ice cores: more data from different sites. Staffellbach, T., et al, 1991, p.91-96, eng 45-2587
- Arctic system science: ocean-atmosphere-ice interactions. Moritz, R.E., ed, 1990, 132p. + appenda., eng 45-2645

**Climatic changes (cont.)**

- Interannual variability of the spatial distribution of sea ice in the north polar region. Parkinson, C.L., [1991, p.4791-4801, eng] 45-2687
- Change in frost season characteristics in Winnipeg, 1872-1988. Rannic, W.F., [1990, p.168-177, eng] 45-2755
- Air pollution measurements at Barrow, AK. Jaffe, D.A., et al, [1991, p.7395-7405, eng] 45-2797
- Increased ocean heat transports and warmer climate. Rind, D., et al, [1991, p.7437-7461, eng] 45-2799
- West Antarctic Ice Sheet Initiative. Vol. I: implementation. Bindshadler, R.A., ed, [1991, 53p., eng] 45-2880
- Effects of climate change on discharges and snow cover in Finland. Vehviläinen, B., et al, [1991, p.109-121, eng] 45-2989
- Effects of CO<sub>2</sub>-induced climatic changes on snowpack and streamflow. Cooley, K.R., [1990, p.511-522, eng] 45-2992
- Glaciers-ocean-atmosphere interactions. [1990, 131p., eng] 45-3003
- Air temperature and precipitation variations at Svalbard. Brázdl, R., [1988, p.53-68, eng] 45-3027
- Surface air temperature secular trends in northern high latitudes. Tsuchiya, I., [1991, p.43-51, eng] 45-3063
- Danube ice floods during the last millenary. Déry, J., [1989, p.151-158, hun] 45-3102
- Polar stratospheric clouds and ozone depletion. Toon, O.B., et al, [1991, p.68-74, eng] 45-3252
- West Antarctic Ice Sheet Initiative. Discipline reviews. Bindshadler, R.A., ed, [1991, 143p., eng] 45-3277
- Ice cores and SeaRISE. Alley, R.B., [1991, p.111-130, eng] 45-3282
- Greenland ice sheet and greenhouse warming. Huybrechts, P., et al, [1991, p.399-412, eng] 45-3291
- Climate change; implications for water and ecological resources. Wall, G., ed, [1990, 342p., eng] 45-3294
- Results from a 2xCO<sub>2</sub> simulation with a general circulation model. Boer, G.J., [1990, p.45-49, eng] 45-3295
- Potential effects of global climate change on the United States. Smith, J.B., [1990, p.79-123, eng] 45-3296
- Implications of climate change for water resources in the Great Lakes basin. Clamen, M., [1990, p.179-186, eng] 45-3297
- Climate change and water supply and demand in western Canada. Lawford, R.G., [1990, p.193-200, eng] 45-3298
- Effects of an altered water regime on Great Lakes coastal wetlands. Mortsch, L., [1990, p.217-224, eng] 45-3299
- Stochastic simulation of climate change impacts on ice road operations. Woo, M.K., et al, [1990, p.259-264, eng] 45-3300
- Climate change moisture stresses on northern coniferous forests. Wein, R.W., et al, [1990, p.285-289, eng] 45-3301
- Forestry Canada's perspectives on climate change. Hall, J.P., et al, [1990, p.291-294, eng] 45-3302
- Arctic and sub-arctic soil emissions and global climatic changes. Christensen, T., [1991, p.205-210, eng] 45-3415
- Regional climate change impacts: 1. Impacts on water resources. Mimikou, M.A., et al, [1991, p.247-258, eng] 45-3444
- Antarctica and global change. Budd, W.F., [1991, p.271-299, eng] 45-3471
- Sea-level changes: consequences for the Southern Hemisphere. Lutjeharms, J.R.E., et al, [1991, p.317-337, eng] 45-3472
- Sea ice and climate. Zakharov, V.F., [1990, p.75-99, eng] 45-3540
- Qualitative models of Pleistocene glaciation, oceans, and climates. Grosswald, M.G., [1990, p.100-126, eng] 45-3541
- Sensitivity of sea ice break-up to air temperatures. Etkin, D.A., [1991, p.21-34, eng] 45-3547
- Potential effects of global warming on the primary productivity of a subalpine lake. Byron, E.R., et al, [1990, p.983-989, eng] 45-3695
- Change in hydrological cycle in cold region corresponding to greenhouse warming. Higuchi, K., [1990, p.47-49, eng] 45-3781
- Climatic time series of the Norwegian arctic meteorological stations—temperature and precipitation. Nordli, P.O., [1990, p.85-98, eng] 45-3785
- Comments on atmospheric feedbacks. Blanchet, J.P., [1990, p.41-53, eng] 45-3821
- Sea ice response to global climatic change. Hibler, W.D., III, [1990, p.125-150, eng] 45-3822
- Commentary on sea ice feedback. Moritz, R.E., [1991, p.151-163, eng] 45-3823
- Climatic extremes**  
See *Records (extremes)*
- Climatic factors**  
Energy balance model to calculate ice sheet ablation. Braithwaite, R.J., et al, [1990, p.222-228, eng] 45-65
- Prediction of snow avalanches in maritime climates. Conway, H., et al, [1989, 139p. + append., eng] 45-814
- Nonlinear seasonal energy balance model for polar continentality and climate study. Hyde, W.T., et al, [1990, p.18,653-18,668, eng] 45-883
- Water cycle and climate. Peixoto, J.P., et al, [1990, p.570-579, fre] 45-964
- Impact of climate on the temperature distribution of ice in the ice divide of the Austfonna (Nordostlandet). Larina, T.B., et al, [1989, p.185-190, rus] 45-1057
- Mass balance and ice flow velocity of the Davydov Glacier (1984-85). Aizin, V.B., et al, [1989, p.197-202, rus] 45-1060
- Formation of extremely large avalanches in the Elbrus area, 1967-1987. Troshkina, E.S., et al, [1989, p.213-217, rus] 45-1064
- Glaciers and climate: some new aspects of investigating the problems. Voloshina, A.P., [1989, p.251-260, rus] 45-1074
- Effect of the arctic sea ice in January on the Asia-Western Pacific circulation in June. Fang, Z., [1990, p.113-119, eng] 45-1170
- Tests of vehicles in the North. Bezverkhii, S.F., et al, [1989, p.93-99, eng] 45-1220
- Analysis of winter low-flow rates in New Hampshire streams. Melloh, R.A., [1990, 12p., eng] 45-1260
- Interaction of sea ice, snow, and glaciers with the atmosphere and ocean. Kotliakov, V.M., ed, [1990, 74p., eng] 45-1261
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- Perspectives on the status of Canadian prairie wetlands. Millar, J.C., [1989, p.829-852, eng] 45-1403
- Sea ice concentrations in the Canada Basin during 1988. Serreze, M.C., et al, [1990, p.22,253-22,267, eng] 45-1414
- Heavy trucks, climate and pavement damage. [1988, 175p., eng] 45-1479
- Experiment to model the climatic effects of the removal of arctic sea ice. Royer, J.F., et al, [1990, p.1-17, eng] 45-1520
- Sensitivity of glaciation to initial snow cover. Oglesby, R.J., [1990, p.219-235, eng] 45-1521
- Climatic factors in the stability of snow cover in Kazakhstan territory. Murzabekova, U.N., [1990, p.88-95, rus] 45-1582
- Causes of glaciation. Chernosvitov, P.I.U., [1990, p.169-174, rus] 45-1757
- 3-D sensitivity model for the antarctic ice sheet. Huybrechts, P., [1990, p.79-92, eng] 45-1798
- Response of the antarctic ice sheet to future greenhouse warming. Huybrechts, P., et al, [1990, p.93-102, eng] 45-1799
- Statistical analysis of data at the Giulie Alps glacier terminus. Serandrei Barbero, R., et al, [1989, p.139-149, ita] 45-1987
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- Impacts of Hudson Bay on the terrestrial climate of the Hudson Bay Lowlands. Rouse, W.R., [1991, p.24-30, eng] 45-2469
- Altitude calculation of climatic snowlines and their changing rules in China. Wu, X.H., et al, [1991, p.56-60, eng] 45-2483
- Climate, hydrology and vegetation patterns, Hot Weather Creek, Arctic Canada. Edlund, S.A., et al, [1990, p.273-286, eng] 45-2527
- Service temperature of steel in cold climates. Huther, M., et al, [1990, p.229-239, eng] 45-2734
- Relationships between weather and road safety: past and future research directions. Andrey, J., et al, [1990, p.123-137, eng] 45-2753
- Using a handbook on climate to evaluate snow transfer volumes. Matvienko, V.S., et al, [1990, p.17-23, rus] 45-3005
- Air temperature and precipitation variations at Svalbard. Brázdl, R., [1988, p.53-68, eng] 45-3027
- Dynamics of arctic ice in seasonal energy balance model of the climate with regional resolution. Kolomeev, M.P., et al, [1990, p.22-27, eng] 45-3269
- Surface energy budget of boreal forest soil temperature. Bonan, G.B., [1991, p.767-781, eng] 45-3293
- Climate model comparison of Gondwanan and Laurentide glaciations. Crowley, T.J., et al, [1991, p.9217-9226, eng] 45-3414
- Pingo slope steppe vegetation on an arctic plain. Walker, M.D., et al, [1991, p.170-188, eng] 45-3482
- CLASS—a Canadian land surface scheme for GCMs. 1. Soil model. Verseghy, D.L., [1991, p.111-133, eng] 45-3548
- Norwegian model for prediction of pavement deterioration (7). Bertelsen, D., [1990, p.875-886, eng] 45-3694
- Potential effects of global warming on the primary productivity of a subalpine lake. Byron, E.R., et al, [1990, p.983-989, eng] 45-3695
- Hydrology of Svalbard—hydrological problems in cold climate. Proceedings, [1990, 224p., eng] 45-3776
- Comments on atmospheric feedbacks. Blanchet, J.P., [1990, p.41-53, eng] 45-3821
- Sea ice response to global climatic change. Hibler, W.D., III, [1990, p.125-150, eng] 45-3822
- Commentary on sea ice feedback. Moritz, R.E., [1991, p.151-163, eng] 45-3823
- Climate of Mars. Haberle, R.M., [1990, p.70-80, eng] 45-3861
- Climatology**  
Implications of ice conditions for hydrocarbon production. Hotzel, I.S., [1989, 139p., eng] 45-391
- Climate of the last thousand years. Jones, P.D., [1990, p.304-312, fre] 45-962
- Reconstructing the Holocene climate from ice core studies. Kotliakov, V.M., et al, [1989, p.103-108, rus] 45-1043
- Laboratoire de Glaciologie et de Géophysique de l'Environnement. Forget, C., [1990, p.13-15, fre] 45-1127
- Mean annual cycle in global ocean wind stress. Trenberth, K.E., et al, [1990, p.1742-1760, eng] 45-1259
- Climate measurements by the EOS Geoscience Laser Ranging System. Spinhrne, J.D., et al, [1991, p.17-22, eng] 45-1512
- Detection of arctic climatic change using synoptic climatology. Kalkstein, L.S., et al, [1990, p.1153-1167, eng] 45-2535
- Forecasters handbook for the arctic. Sechrist, F.S., et al, [1989, 364p., eng] 45-3092
- Long term Lake Erie and Lake Superior ice cover variations. Assel, R.A., [1990, p.731-748, eng] 45-3238
- Holocene climatology-stratigraphy of the ice domes in Severnaya Zemlya. Kotliakov, V.M., et al, [1991, p.100-112, rus] 45-3440
- Climate related research in Svalbard. Sand, K., et al, [1990, p.203-217, eng] 45-3796
- Surface hydrology in climate models: the role of remote sensing. Thomas, G., [1990, p.109-122, eng] 45-3802
- See *Salsoy: Microclimatology; Paleoclimatology*
- Clothing**  
New cold weather clothing system for armed forces application. Farnworth, B., [1989, p.207-215, eng] 45-538
- Cloud chambers**  
2M3 isothermal cloud chamber for the study of artificial ice nuclei. Feng, D., et al, [1990, p.494-502, eng] 45-1081
- Influence of lead iodide aerosol dispersivity on its ice-forming activity. Baklanov, A.M., et al, [1991, p.9-14, eng] 45-2441
- Cloud cover**  
Radiation and cloud observations on a high arctic plateau ice cap. Serreze, M.C., et al, [1987, p.162-168, eng] 45-10
- Adaptation of the ISCCP cloud detection algorithm to combined AVHRR and SMMR arctic data. Key, J., et al, [1989, p.188-191, eng] 45-232
- Textural characteristics of cloud- and ice-covered surfaces in polar regions. Welch, R.M., et al, [1989, p.2773-2776, eng] 45-303
- Handbook on climate of the USSR. [1989, 268p., eng] 45-309
- Snow/cloud discrimination with multispectral satellite measurements. Allen, R.C., Jr., et al, [1990, p.994-1004, eng] 45-1273
- June cloud cover over the Arctic Ocean. Serreze, M.C., et al, [1990, p.2397-2400, eng] 45-1992
- Effect of cloud cover on UV radiation over the Antarctic Peninsula. Lubin, D., et al, [1991, p.478-493, eng] 45-2841
- Scene identification and its effect on cloud radiative forcing in the Arctic. Li, Z.Q., et al, [1991, p.9175-9188, eng] 45-3469
- Comments on atmospheric feedbacks. Blanchet, J.P., [1990, p.41-53, eng] 45-3821
- Cloud dissipation**  
New methods of influencing hail processes. Burtsev, I.I., [1990, p.23-33, eng] 45-2931
- Cloud droplets**  
Model of a convective cloud with the microstructure of water and ice phases. Kogteva, E.A., et al, [1989, p.41-55, rus] 45-490
- Comparison of drop size distributions from two droplet sizing systems. Oldenburg, J.R., et al, [1990, 15p., eng] 45-604
- Anomalous radar backscattering from ice particles in a cloud. Aivazian, G.M., [1989, p.51-56, eng] 45-856
- Exploratory study of ice nucleation by soot aerosols. DeMott, P.J., [1990, p.1072-1079, eng] 45-1274
- Calibration of probes for cloud droplet measurements. Gayet, J.F., et al, [1988, p.268-271, eng] 45-1352
- Measurement of cloud liquid water content and droplet size. Howe, J.B., [1991, 18p., eng] 45-2642
- Cloud condensation nuclei as a source of ice-forming nuclei in clouds. Rusinski, J., et al, [1991, p.123-133, eng] 45-3024
- Explanation for the existence of supercooled water at the top of cold clouds. Rauber, R.M., et al, [1991, p.1005-1023, eng] 45-3273
- Effect of liquid water on thunderstorm charging. Saunders, C.P.R., et al, [1991, p.11,007-11,017, eng] 45-3378

- Crystallization of supercooled water drops, induced by infrared radiation at the resonant frequency of ice. Dubrovich, N.A., et al, 1991, p.38-39, eng 45-3474
- Physical factors influencing winter precipitation chemistry. Collett, J.S., Jr., et al, 1991, p.782-788, eng 45-3819
- Scattering of cloud-reflected radar echoes. Ajvazian, H.M., et al, 1991, p.945-978, eng 45-3887
- Cloud electrification**
- Effect of liquid water on thunderstorm charging. Saunders, C.P.R., et al, 1991, p.11,007-11,017, eng 45-3378
- Cloud physics**
- Ice-forming activity of the atmospheric aerosol. Khorguani, V.G., et al, 1989, p.812-814, eng 45-482
- Growth process of snow particles in snow clouds. You, L., et al, 1990, p.221-230, eng 45-611
- Cloud physics of atmospheric icing. Finstad, K.J., et al, 1988, p.61-64, eng 45-1312
- Ice accretion in different types of clouds. Hoffmann, H.E., et al, 1988, p.272-276, eng 45-1353
- 2-13 micron spectrum of cirrus clouds. Lynch, D.K., et al, 1991, p.126-129, eng 45-1513
- Spectral properties of fog over the Malaspina Glacier. Ormsby, J.P., et al, 1991, p.179-185, eng 45-1720
- Ice particle development in cumuliform clouds. Hobbs, P.V., et al, 1990, p.2710-2722, eng 45-1802
- Storm and cloud dynamics. Cotton, W.R., et al, 1989, 883p., eng 45-2427
- Microphysical characteristics through the melting region of a midlatitude winter storm. Raga, G.B., et al, 1991, p.843-855, eng 45-2663
- Algorithm to estimate the heating budget from vertical hydrometeor profiles. Tao, W.K., et al, 1990, p.1232-1244, eng 45-2985
- Explanation for the existence of supercooled water at the top of cold clouds. Rauber, R.M., et al, 1991, p.1005-1023, eng 45-3273
- Cloud seeding**
- Efficiency of ice-forming aerosol generators. Kim, N.S., et al, 1989, p.46-59, rus 45-26
- Cloud seeding for hail suppression in South Africa. Mather, G.K., et al, 1990, p.806-811, eng 45-797
- New methods of influencing hail processes. Burtsev, I.I., et al, 1990, p.23-33, eng 45-2931
- Crystallization of supercooled water drops, induced by infrared radiation at the resonant frequency of ice. Dubrovich, N.A., et al, 1991, p.38-39, eng 45-3474
- Review of important literature on rainmaking. Magono, N., et al, 1986, p.482-490, eng 45-3731
- See *also*: Artificial precipitation; Cloud dissipation; Fog dispersal; Hail prevention; Weather modification
- Cloud seeding generators**
- See *also*: Smoke generators
- Clouds**
- Potential for ozone depletion in the arctic polar stratosphere. Brune, W.H., et al, 1991, p.1260-1266, eng 45-2831
- Vernal atmospheric mixing in the Antarctic. Murphy, B.B., et al, 1991, p.494-507, eng 45-2842
- Nitrogen chemistry in Antarctica: a brief review. Solomon, S., et al, 1989, p.191-201, eng 45-2980
- Nitric acid transport from stratosphere to troposphere and ice sheet. Iwasaka, Y., et al, 1991, p.12-21, eng 45-3061
- Clouds (meteorology)**
- Radar sounder (final report Aug. 1987-Sep. 1988). Nathanson, F.E., et al, 1988, 139p., eng 45-316
- Model of a convective cloud with the microstructure of water and ice phases. Kogteva, E.A., et al, 1989, p.41-55, rus 45-490
- Laboratory study on the scavenging of SO<sub>2</sub> by snow crystals. Mitra, S.K., et al, 1990, p.2307-2312, eng 45-845
- Topographic effects on precipitating snow clouds in Japan. Kikuchi, K., et al, 1987, p.109-128, eng 45-905
- Model test of CCN-cloud albedo climate forcing. Ghan, S.J., et al, 1990, p.607-610, eng 45-1173
- Lidar observations of the horizontal orientation of ice crystals in cirrus clouds. Thomas, L., et al, 1990, p.211-216, eng 45-1384
- Climate measurements by the EOS Geoscience Laser Ranging System. Spinhrne, J.D., et al, 1991, p.17-22, eng 45-1512
- Feature extraction from two-dimensional images using fractal analysis. Baumgardner, D., et al, 1991, p.185-187, eng 45-1599
- Ice particle development in cumuliform clouds. Hobbs, P.V., et al, 1990, p.2710-2722, eng 45-1802
- Scheme for parameterizing ice-cloud water content in general circulation models. Heymsfield, A.J., et al, 1990, p.1865-1877, eng 45-1803
- Storm and cloud dynamics. Cotton, W.R., et al, 1989, 883p., eng 45-2427
- Morphological structure of snowburst in the winter monsoon surges. Shirooka, R., et al, 1990, p.677-686, eng 45-2532
- Algorithm to estimate the heating budget from vertical hydrometeor profiles. Tao, W.K., et al, 1990, p.1232-1244, eng 45-2985
- Infrared extinction properties of clouds in polar regions. Prabhakara, C., et al, 1990, p.1313-1329, eng 45-2986
- Microphysical and radiative characteristics of convective clouds during COHMEX. Fulton, R., et al, 1991, p.98-116, eng 45-3016
- Cloud condensation nuclei as a source of ice-forming nuclei in clouds. Rosinski, J., et al, 1991, p.123-133, eng 45-3024
- Occurrence and characteristics of lower tropospheric ice crystals in the Arctic. Curry, J.A., et al, 1990, p.749-764, eng 45-3239
- Polar stratospheric clouds and ozone depletion. Toon, O.B., et al, 1991, p.68-74, eng 45-3252
- Parameterization of broad band radiative transfer properties of water, ice and mixed clouds. Rockel, B., et al, 1991, p.1-13, eng 45-3267
- Infrared transmission through cirrus clouds: a radiative model for target detection. Liou, K.N., et al, 1990, p.1886-1896, eng 45-3366
- Ice particle concentrations and precipitation development in small polar maritime cumuliform clouds. Rangno, A.L., et al, 1991, p.207-241, eng 45-3480
- Review of important literature on ice accretion. Imai, I., et al, 1986, p.491-496, eng 45-3732
- Interpretation of sea ice using NOAA-AVHRR data. Ahlins, K., et al, 1990, 46p., eng 45-3850
- See *also*: Hail clouds; Supercooled clouds
- Coal**
- Design engineering problems of surface coal mines in arctic Alaska. Sengupta, M., et al, 1990, p.735-743, eng 45-175
- Overview of coal mining in Alaska. Sims, J.F.M., et al, 1989, p.3-8, eng 45-326
- Coal mining in and below permafrost on Svalbard. Brugmans, P.J., et al, 1989, p.87-93, eng 45-335
- Rock mechanics investigations in the Svea Coal Mine, Svalbard. Myrvang, A.M., et al, 1989, p.95-103, eng 45-336
- Coal resources of the Susitna lowland, Alaska. Merritt, R.D., et al, 1990, 181p. + append., eng 45-489
- Geochemistry of the snow cover around coal mines. Makarov, V.N., et al, 1990, p.37-44, rus 45-671
- Alaska's high-rank coals. 1990, 36p., eng 45-931
- Studying the geocryological conditions of the Apsat coal deposits. Nim, I.U.A., et al, 1989, p.126-135, rus 45-2638
- Coal geology and coal resources of the Transantarctic Mountains. Coates, D.A., et al, 1990, p.133-162, eng 45-2809
- Coastal topographic features**
- Morphodynamics of tidal inlet systems in Maine. FitzGerald, D.M., et al, 1989, p.67-96, eng 45-2059
- See *also*: Shoreline modification
- Coasts**
- See *also*: Banks (waterways); Beaches; Shores
- Coatings**
- Ferromanganese rock varnish in North Norway: a subglacial origin. Whalley, W.B., et al, 1990, p.265-275, eng 45-432
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- Development of improved ice-making techniques for storage heat pumps. Stewart, W.E., Jr., et al, 1988, p.419-431, eng 45-2562
- Model surface treatment for testing in ice. Tatinclaux, J.C., et al, 1990, p.766-775, eng 45-3627
- See *also*: Protective coatings
- Codes**
- See *also*: Building codes; Standards
- Cohesion**
- Rheological fundamentals of soil mechanics. Vialov, S.S., et al, 1986, 564p., eng 45-612
- Measurement within the snow cover. Coleou, C., et al, 1990, p.16-18, fre 45-1128
- Studying the equivalent cohesion of sea ice. Zanegin, V.G., et al, 1987, p.94-101, rus 45-1569
- Measurements of the cohesive force of water frost. Hatzes, A.P., et al, 1991, p.113-121, eng 45-2289
- Friction and cohesion in ice rubble reviewed. Ettema, R., et al, 1991, p.316-325, eng 45-2343
- Method of determining the equivalent cohesion of saline frozen soils. Aksekov, V.I., et al, 1990, p.107-115, rus 45-2898
- Determining long-term equivalent cohesion of frozen soils. Vorob'evskii, B.E., et al, 1990, p.121-123, rus 45-2900
- Cold chambers**
- Facility to evaluate ground aircraft de-icing fluids. Laforte, J.L., et al, 1990, p.161-171, eng 45-498
- Arctic environmental facilities: test capabilities. 1990, 17p., eng 45-823
- Cold exposure**
- Cold: an operational hazard. Lewis, S.B., et al, 1989, p.217-221, eng 45-539
- See *also*: Frostbite
- Cold storage**
- Ice storages. Saastamoinen, J.J., et al, 1989, 63p., eng 45-566
- Field surveys of terrestrial biology near Showa Station, 1986-1987. Inoue, M., et al, 1990, p.156-174, jpn 45-981
- Using natural cold in automated underground cold storage areas. Kuz'min, M.P., et al, 1990, p.98-100, rus 45-2715
- Simplified analysis for cold storage in porous capsules with solidification. Chen, S.L., et al, 1991, p.108-116, eng 45-3467
- Cold stress**
- Building a worldwide roofing community. 1991, 536p., eng 45-2452
- Single-ply roof membranes under cold temperatures. Turenne, R.G., et al, 1991, p.7-14, eng 45-2453
- Aging of chlorosulfopolyethylene roofing. Shul'zhenko, I.U.P., et al, 1991, p.327-334, eng 45-2458
- Glass transition temperatures of polymeric roofing membranes. Dutt, O., et al, 1991, p.495-501, eng 45-2465
- Thermal analysis of polymer roofing membranes. Gaddy, G.D., et al, 1991, p.502-507, eng 45-2466
- Electron microscope observation of freezing stress response in plant tissues. Malone, S.R., et al, 1991, p.871-881, eng 45-3275
- Low temperature fracture mechanics of viscoelastic pavement structures. Selvadurai, A.P.S., et al, 1990, p.183-212, eng 45-3497
- Cold tolerance**
- Cold tolerance of plants used for cold-regions revegetation. Reid, W.H., et al, 1990, 15p., eng 45-1433
- Freezing resistance of arctic tundra plants on Svalbard. Odasz, A.M., et al, 1990, p.1-8, eng 45-2115
- Plant cold hardiness. Calkins, J.B., et al, 1990, p.194-211, eng 45-2964
- Analysis and prognosis of low temperatures adverse to plants using Markov chains. Liakatas, A., et al, 1990, p.381-384, eng 45-3049
- Autumn freeze testing of one-year reciprocal families of *Pinus sylvestris* (L.). Nilsson, J.E., et al, 1990, p.501-511, eng 45-3206
- Growth and survival of seedlings of various *Picea* species under northern climatic conditions. Junttila, O., et al, 1990, p.69-81, eng 45-3207
- Electron microscope observation of freezing stress response in plant tissues. Malone, S.R., et al, 1991, p.871-881, eng 45-3275
- Water content during abscisic acid induced freezing in bromegrass cells. Tanino, K., et al, 1990, p.460-464, eng 45-3276
- Experiments on lichen growth 2. Effects of a seasonal snow cover. Benedict, J.B., et al, 1991, p.189-199, eng 45-3483
- See *also*: Acclimatization; Viability
- Cold weather concreting**
- See *also*: Winter concreting
- Cold weather construction**
- Antarctic testbed for extraterrestrial operation and technology. Bell, L., et al, 1990, p.1188-1197, eng 45-375
- Ecological monitoring of oil-gas construction in the cryolithozone. Antonov-Druzhinin, V.P., et al, 1990, p.21-23, rus 45-383
- Mountain glaciers—an overview with emphasis on Alaska. Coffin, J.H., et al, 1990, p.177-258, eng 45-409
- Culverts. Ashton, W.S., et al, 1990, p.557-577, eng 45-421
- Dumont d'Urville aerodrome, Terre Adélie, Antarctica. Engler, M., et al, 1990, p.191-213, eng 45-501
- Improving thermal insulation of external wall panel joints. Zheleznyi, V.I., et al, 1985, p.27-38, rus 45-633
- Steel gallery supports for construction in the north. Buidakov, I.U.K., et al, 1990, p.12-14, rus 45-800
- Field surveys of terrestrial biology near Showa Station, 1986-1987. Inoue, M., et al, 1990, p.156-174, jpn 45-981
- Earth dams on permafrost. Biiarov, G.F., et al, 1989, 152p., rus 45-1117
- Construction and design of ventilated foundations on permafrost. Goncharov, I.U.M., et al, 1990, p.47-58, rus 45-1200
- General geocryology. Ershov, E.D., et al, 1990, 558p., rus 45-1473
- Deterioration of polyvinylchloride-based materials in cold regions. Bockarev, R.N., et al, 1990, 119p., rus 45-1669
- Cost estimation in construction; for northern regions. Handbook Liberman, I.A., et al, 1990, 224p., rus 45-1866
- BAS proposed construction of an airstrip at Rothera Point. 1989, 56p., eng 45-1898
- Illusion of natural rapids from a dam with tethered boulders. Barr, D.W., et al, 1991, p.54-57, eng 45-1996
- Roller-compacted concrete pavement construction at Fort Drum, New York. Cortez, E.R., et al, 1990, p.8-17, eng 45-2088
- Method of construction in a pre frozen limited soil mass. Mirenburg, I.U.S., et al, 1990, p.114-118, eng 45-2215
- Initial period of operation of the channel dam of the Kureika hydroelectric station. Miznikov, I.U.N., et al, 1990, p.578-583, eng 45-2293
- Cold regions engineering. 1991, 790p., eng 45-2316
- Winter sewer construction in Campbell Lake. Corwin, B.J., et al, 1991, p.126-135, eng 45-2328
- Impact of cold weather on building construction scheduling. Shahbodaglou, F., et al, 1991, p.230-239, eng 45-2336



**Cold weather construction (cont.)**

- Environment One: plan for a new research station at the South Pole. Osgood, S.G., et al, [1991, p.250-271, eng] 45-2338
- Cold climate building research at Wasa Base, Antarctica. Haugun, D., [1991, p.272-281, eng] 45-2339
- Basic causes of deformation of buildings constructed on permafrost. Zhukov, V.F., [1991, p.174-178, eng] 45-2400
- Development of the cryolithozone of Transbaikal. Aleksandrov, A.S., et al, [1990, 105p., rus] 45-2425
- Field experiences versus standards and designs. Booth, R.J., et al, [1991, p.351-355, eng] 45-2459
- Cold weather roofing application. Stoll, J.W., [1991, p.418-422, eng] 45-2464
- Design and construction of ash dumps. Sysoev, I.U.M., et al, [1990, 249p., rus] 45-2574
- Are transportation engineers prepared for winter. [1990, p.1040-1046, eng] 45-2576
- ASCE technical council on cold regions monograph series. Tart, R.G., Jr., et al, [1990, p.1047-1052, eng] 45-2577
- Information systems for cold regions engineering. Alkire, B.D., [1990, p.1053-1059, eng] 45-2578
- Cold regions engineering, a research agenda. Carlson, R.F., [1990, p.1060-1065, eng] 45-2579
- Laying pile foundations in northern regions. Zavizion, V.G., et al, [1991, p.20-22, rus] 45-2952
- Research, design, and construction of roads in permafrost regions. Popov, B.I., et al, [1990, 271p., rus] 45-2998
- Effect of spatial variability in insulation moisture content profiles. Ayorinde, O.A., et al, [1991, p.101-105, eng] 45-3155
- Construction report on Sejong Station. Kim, D.W., [1990, p.51-67, kor] 45-3203
- Finnish building; construction technology developed for cold climates. [1991, 219p., eng] 45-3453
- Cold weather construction materials part 2: tests on regulated-set cement. Houston, B.J., et al, [1982, 27p., eng] 45-3475
- Thermal analysis of forced-air airport foundation cooling. Smith, L.B., et al, [1991, p.399-409, eng] 45-3538
- Installation of deeply laid molded-in-place and combination piles in permafrost soils in Noril'sk. Necliudov, V.S., et al, [1991, p.252-256, eng] 45-3560
- Deformation of reinforced concrete anchor foundations in the far north. Grebenets, V.I., et al, [1991, p.257-260, eng] 45-3561
- Rubble-spray ice islands. Gulati, K.C., et al, [1990, p.596-605, eng] 45-3610
- Thirty-five years of sea-ice runway operation—McMurdo Station, Antarctica. Barthelemy, J.L., [1990, p.864-877, eng] 45-3636
- Gravel-pad foundations to control groundwater movements in frost-susceptible soil—a case study. Walum, R.S., [1990, p.175-186, eng] 45-3793
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- Finnish cold climate construction technology, part 2. [1990, 112p. + appends., fin] 45-3874
- Finnish cold climate construction. Part 3. Traffic and arteries. Laukkanen, K., et al, [1990, 58p. + appends., fin] 45-3875
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- Cold weather operation**
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- Antarctic testbed for extraterrestrial operation and technology. Bell, L., et al, [1990, p.1188-1197, eng] 45-375
- Measurement and evaluation of winter precipitation. Tabler, R.D., et al, [1990, p.9-38, eng] 45-405
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- Water quality considerations. Jokela, J.B., [1990, p.349-369, eng] 45-413
- Portable ARGOS data link. Bader, C.M., et al, [1989, p.1272-1275, eng] 45-443
- How to achieve cold weather underways replenishment capability. Miller, M.O., et al, [1989, p.193-206, eng] 45-337
- Testing of the M138 auxiliary mine dispenser (FLIPPER). O'Bryon, M.K., [1990, 32p. + appends., eng] 45-551
- System analysis of gas transportation mainlines in western Siberia. [Akoviev, E.I., et al, [1989, 300p., rus] 45-639
- First large balloon launch from Antarctica. Ground, J., et al, [1988, 108p., eng] 45-644
- Thermal regime of hydraulic-fill structures during winter operation. Panteleev, V.G., et al, [1990, p.36-40, eng] 45-669
- Peculiarities of maintaining underground gas lines in the Far North. Borovkov, V.A., [1989, p.30-31, rus] 45-707
- Sequence of leads in cooling gas stations in polar compressor stations. Kosachev, V.P., et al, [1990, p.29-31, rus] 45-733
- Testing of construction design. Mironov, N.G., et al, [1990, p.40-41, rus] 45-734
- Study on roads for the 21st century in snowy and cold regions. [1990, p.5-24, jpn] 45-743
- Archaeological techniques and technology on Ross Island, Antarctica. Ritchie, N.A., [1990, p.257-264, eng] 45-792
- Subzero Engineering Conference proceedings. [1989, 470p., eng] 45-1209
- Development of data capture/analysis system for the use in cold start investigation. Mina, T.I., et al, [1989, p.15-33, eng] 45-1211
- Automotive exhaust emissions at low ambient temperature. Laurikko, J.K., [1989, p.35-46, eng] 45-1212
- Safe winter driving. Craellus, K., [1989, p.61-66, eng] 45-1215
- Data acquisition system requirements for cold weather testing. Leier, T.E., [1989, p.139-143, eng] 45-1226
- Vehicle emission characteristics under cold ambient conditions. Larson, R.E., [1989, p.151-159, eng] 45-1228
- CVS-cycle and average city trip emissions in low temperatures. Svensson, N.G., et al, [1989, p.161-163, eng] 45-1229
- Evolution of diesel fuel cold flow—the next frontier. Brown, G.I., et al, [1989, p.223-237, eng] 45-1236
- Present and future fuels and lubricants in cold climate operation. Haatela, O., et al, [1989, p.239-250, eng] 45-1237
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- Investigation of a novel aid for cold starting of diesels. Zheng, J., et al, [1989, p.321-331, eng] 45-1244
- Gargling and cold starting of engines in field conditions. Olsaukas, K., [1989, p.333-335, eng] 45-1245
- Cold starting the Volvo way. Håkansson, N.O., et al, [1989, p.337-344, eng] 45-1246
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- Low temperature operability of diesel vehicles. Ricketard, D.J., et al, [1989, p.375-382, eng] 45-1249
- Heater/defroster testing in the real world. Leier, T.E., et al, [1989, p.405-411, eng] 45-1250
- Effects of MTBE on gasoline engine cold weather operation. Viljanen, J., et al, [1989, p.413-420, eng] 45-1251
- Synthetic automotive lubricants for superior low-temperature operation. Aho, E., et al, [1989, p.421-437, eng] 45-1252
- Antarctic automatic weather stations: austral summer 1988-1989. Stearns, C.R., et al, [1990, p.242-243, eng] 45-1440
- Operations and maintenance of a northern pipeline. Sangster, R.H.B., [1990, p.377-384, eng] 45-1960
- Use of central vehicle wash facilities in cold weather. Gerdes, G.L., et al, [1990, 22p., eng] 45-1973
- Status of AirLand Battlefield Environment (ALBE) winter tactical decision aids. Aitken, G.W., et al, [1990, 14p., eng] 45-1978
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- Experiment of a warmed scaffolding in a building site. Kärrläinen, H., et al, [1990, 52p. + appends., fin] 45-3851
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- Finnish building technique in cold regions, part 10. Kärrläinen, H., et al, [1990, 58p., fin] 45-3880
- Cold weather operations**
- Mitigation of vehicle storage and traffic control problems during avalanche control. Morrall, J., [1991, p.191-200, eng] 45-3535
- Isdammen: the public water supply in Longyearbyen. Björnson, B., [1990, p.1-8, eng] 45-3777
- Cold weather performance**
- Effect of cold climate on polymers. Cherskii, I.N., [1990, p.603-613, eng] 45-163
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- Design of urban sedimentation basins in Anchorage. Jokela, J.B., et al, [1990, p.761-789, eng] 45-427
- Compact acoustic recorder. Stein, R., [1989, p.1258-1262, eng] 45-441
- Sealing cracks in flexible pavements in cold regions. Chong, G.J., et al, [1988, p.12-19, eng] 45-525
- Cold regions design limits for conventional surface ships. Schultz, L.A., [1989, p.99-111, eng] 45-534
- New cold weather clothing system for armed forces application. Farnworth, B., [1989, p.207-215, eng] 45-538
- On the improvement of warship capability under spray icing conditions. Zakrzewski, W.P., et al, [1989, p.467-477, eng] 45-549
- "Sever" fireproof coatings. Sorin, V.S., et al, [1988, p.29-30, rus] 45-799
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- Reflection cracking studies at Thule Air Base, Greenland using AC 2.5 and fabrics. Eaton, R.A., et al, [1980, p.381-396, eng] 45-995
- Friction measurements under winter runway conditions. Yager, T.J., [1990, p.32-35, eng] 45-1184
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- Indoor test of ice and snow tires on iced drum. Shimizu, K., et al, [1989, p.47-52, eng] 45-1213
- Design of sub-arctic type winter tyres. Lindstrom, L., et al, [1989, p.53-60, eng] 45-1214
- Performance of thermoplastic elastomers (TPEs) at subzero temperatures. Brugada, R., [1989, p.67-73, eng] 45-1216
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- Good diesel fuel cold properties reduce engine performance. Mikkonen, S., et al, [1989, p.123-132, eng] 45-1224
- Behaviour of metal supported catalysts in subzero conditions. Aitta, E., et al, [1989, p.165-169, eng] 45-1230
- Refinery/additive technologies and low temperature engine oil pumpability. Rossi, A., [1989, p.257-267, eng] 45-1239
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- Saab Direct Ignition System and its cold start performance. Jiewertz, S., et al, [1989, p.345-353, eng] 45-1247
- Low temperature pumpability studies in a heavy-duty diesel engine, part II. Machleder, W.H., et al, [1989, p.439-453, eng] 45-1253
- Low temperature operability of diesel engines. Ricketard, D.J., et al, [1989, p.33-37, eng] 45-1290
- Heavy trucks, climate and pavement damage. [1988, 175p., eng] 45-1479
- Deterioration of polyvinylchloride-based materials in cold regions. Bochkarev, R.N., et al, [1990, 119p., rus] 45-1669
- CRREL research on materials in cold environments. Dutta, P.K., [1990, 20p., eng] 45-2002
- Road grip of winter tires on ice. Nordström, O., et al, [1990, 79p. + appends., swe] 45-2036
- Study of the present status of studded tires. Samuelsson, E., [1990, 9p. + appends., swe] 45-2039
- Field test of studded and non-studded winter tires; subjective rating. Samuelsson, E., [1990, 17p. + appends., swe] 45-2040
- Frost resistance of elastomers. Bukhina, M.F., et al, [1989, 176p., rus] 45-2204
- Wind power in Antarctica: case histories of the North Wind HR3 wind turbine. Coleman, C.J., [1991, p.765-771, eng] 45-2386
- Recommended cold regions meteorological instrumentation. Bates, R.E., [1991, p.772-783, eng] 45-2387
- Lubricants at low temperatures. Diamond, D., [1990, 24p., eng] 45-2487
- Requirements for protection of DC ice melting units on overhead lines. Molodtsov, B.S., et al, [1989, p.40-44, eng] 45-2567
- Communications channel serviceability during power line icing. Golov, P.I.A., et al, [1988, p.36-42, eng] 45-2568
- Strength and deformability of plastic pipe in cold climate. Riabets, I.U.S., et al, [1989, p.132-135, eng] 45-2584
- Service temperature of steel in cold climates. Huther, M., et al, [1990, p.229-239, eng] 45-2734
- Long-term compressive strength of silica-fume concrete. Ancin, P.C., et al, [1990, p.164-170, eng] 45-2773

- Automotive fuels at low temperatures. Diemand, D., [1991, 25p., eng] 45-2920
- Sound absorption and winter performance of porous asphalt pavement. Camomilla, G., et al, [1990, p.1-8, eng] 45-3058
- Low-temperature decontamination with DS2. Parker, L.V., et al, [1991, 23p., eng] 45-3260
- Telemetry channel of the radio echo sounding system "Meteorit-2—MARZ". Gorbatova, E.S., et al, [1990, p.42-48, rus] 45-3443
- Bioremediation of petroleum spills in arctic and subarctic environments. Travis, M.D., [1990, p.4-12, eng] 45-3465
- Plastic highway bridges. Plecnik, J., et al, [1991, p.64-65, eng] 45-3477
- Proceedings. [1990, 2 vols., eng] 45-3490
- Temperature regime of road pavements in Czechoslovakia. Políček, I., et al, [1990, p.53-63, eng] 45-3691
- Loading type effect on pavement deflection. Wiman, L.G., et al, [1990, p.829-839, eng] 45-3693
- Cold weather survival**
- Coping strategies and mood during cold weather training. Vickers, R.R., Jr., et al, [1989, 14p., eng] 45-382
- Winter fecal coliform concentrations in stream sediments. Kidd, D.R., [1989, n.p., eng] 45-1654
- Energy storage in copepods from antarctic lakes. Clarke, A., et al, [1989, p.183-191, eng] 45-2616
- Experiments on lichen growth 2. Effects of a seasonal snow cover. Benedict, J.B., [1991, p.189-199, eng] 45-3483
- Cold weather tests**
- Fatigue characterization of Alaska paving materials (final report). Coetzee, N.F., et al, [1988, 126p., eng] 45-311
- Facility to evaluate ground aircraft de-icing fluids. Laforte, J.L., et al, [1990, p.161-171, eng] 45-498
- Testing of construction design. Mironov, N.G., et al, [1990, p.40-41, rus] 45-734
- Test plan for transportable maintenance shelter qualification test. Rhodes, D.A., [1990, 16p. + appendix., eng] 45-1208
- Subzero Engineering Conference proceedings. [1989, 470p., eng] 45-1209
- Indoor test of ice and snow tires on iced drum. Shimizu, K., et al, [1989, p.47-52, eng] 45-1213
- Tests of vehicles in the North. Bezverkhii, S.F., et al, [1989, p.93-99, eng] 45-1220
- Data acquisition system requirements for cold weather testing. Leier, T.E., [1989, p.139-143, eng] 45-1226
- Electronic wheel slip control systems for commercial vehicles. Göhring, E., [1989, p.287-299, eng] 45-1241
- Outdoor construction test facility, Saskatoon, Canada. Hedlin, C.P., [1991, p.377-381, eng] 45-2460
- Surface cracking in asphalt layers. Kunst, P.A.J.C., et al, [1990, 199p., eng] 45-3108
- Temperature distribution in composting material in a cold environment. Ayorinde, O.A., et al, [1991, p.87-92, eng] 45-3153
- Growth and survival of seedlings of various *Picea* species under northern climatic conditions. Junttila, O., et al, [1990, p.69-81, eng] 45-3207
- Cold weather construction materials part 2: tests on regulated-set cement. Houston, B.J., et al, [1982, 27p., eng] 45-3475
- Collisions**
- See *also*: Ice crystal collision
- Colloids**
- Effect of gelatin on hydrolysis in frozen aqueous solutions. Sergeev, B.M., et al, [1991, p.978-983, eng] 45-3775
- See *also*: Soil colloids
- Colored ice**
- Natural remnant magnetization of dirt-ice layers from East Antarctica. Funaki, M., [1990, p.131-138, eng] 45-978
- Green icebergs and remote sensing. Lee, R.L., Jr., [1990, p.1862-1874, eng] 45-1171
- Communication cables**
- See *also*: Transmission lines
- Communications**
- See *also*: Radio communication; Telecommunication
- Compaction**
- See *also*: Snow compaction; Soil compaction
- Composite materials**
- Plastic highway bridges. Plecnik, J., et al, [1991, p.64-65, eng] 45-3477
- Composition**
- See *also*: Chemical composition
- Compressive properties**
- Influence of grain size on compressive strength of polycrystalline ice. Cannon, N.P., [1985, 75p., eng] 45-183
- Condensed silica fume in concrete. Malhotra, V.M., et al, [1987, 221p., eng] 45-323
- Effect of temperature and galvanization on the compressive strength of cold-formed angles. Polyzois, D., et al, [1990, p.440-451, eng] 45-398
- Bending and compression properties of young sea ice. Lau, P.A., et al, [1989, p.1292-1297, eng] 45-447
- Compressive strength of natural fresh water ice. Shen, L.T., et al, [1990, p.141-146, chi] 45-454
- Compressibility of diesel and methanol fuels at low temperatures. Varde, K.S., [1989, p.455-459, eng] 45-1254
- Long waves in an ice cover-fluid system, under ice compression. Gol'dshtein, R.V., et al, [1989, p.188-205, rus] 45-1505
- Determining the uniaxial compressive strength of sea ice. Zanevri, V.G., [1988, p.48-54, rus] 45-1515
- Modified Nadreau yield function. Kormann, J.P., et al, [1990, p.89-92, eng] 45-1770
- Strain gradient influence on brittle failure of ice. Sayed, M., [1990, p.179-191, eng] 45-1909
- Behavior of laboratory-made spray ice in triaxial compression testing. Steel, A., et al, [1990, p.192-204, eng] 45-1910
- Long-term compressive strength of silica-fume concrete. Altcin, P.C., et al, [1990, p.164-170, eng] 45-2773
- Determining the creep properties of saline frozen soils. Brushkov, A.V., et al, [1990, p.83-90, rus] 45-2894
- Stress strain characteristics of fine-grained frozen soils. Wijeweera, H., et al, [1989, 93p., eng] 45-2923
- Creep of circular ice plates: analysis and experiment. Mahrenholtz, O., et al, [1991, p.47-53, eng] 45-3147
- Field strength values of multi-year ice off Herschel Island. Iyer, S.H., et al, [1991, p.63-70, eng] 45-3149
- Field investigation of ice in the Barents Sea. Hoseth, K.A., et al, [1991, p.143-148, eng] 45-3162
- Brittle compressive failure of freshwater columnar ice under biaxial loading. Smith, T.R., et al, [1991, p.207-214, eng] 45-3171
- Crack growth stability in S2 ice. DeFranco, S.J., et al, [1990, p.168-181, eng] 45-3574
- Parametric expressions for ice compressive and flexural strength. Hirayama, K., et al, [1990, p.196-209, eng] 45-3576
- See *also*: Frozen ground compression; Snow compression
- Compressors**
- Compression-annealing experiments for ice. Huang, M., et al, [1988, p.141-152, chi] 45-43
- Computer applications**
- Real-time radar detection of icebergs shadows. Orlando, J.R., et al, [1990, p.112-118, eng] 45-615
- Terskol workshop on geoinformation systems of mountain territories. Kravtsova, V.I., [1989, p.228-232, rus] 45-1068
- High speed numerical technique to solve coupled moving boundary value heat problems. Sharma, R.K., et al, [1990, p.1-8, eng] 45-1080
- Local database of avalanche stations. Soldatov, A.I., et al, [1990, p.76-81, rus] 45-1107
- Method of computer mapping the exposure and slope of an area. Iseev, A.A., et al, [1990, p.81-84, rus] 45-1108
- Development of data capture/analysis system for the use in cold start investigation. Mina, T.I., et al, [1989, p.15-33, eng] 45-1211
- Possibility of developing a general purpose automated system for avalanche hazard forecasting and an avalanche information bank. Dushkin, V.S., et al, [1990, p.80-86, rus] 45-1740
- CLER expert system for snowdrifts. Moutte, F., [1990, p.1/104-1/113, fre] 45-1787
- ELSA, a knowledge-based system to analyze avalanche paths. Buisson, L., et al, [1990, p.2/60-2/67, fre] 45-1791
- Preprints. [1991, 517p., eng] 45-1913
- Impact of cold weather on building construction scheduling. Shahbodaghlou, F., [1991, p.230-239, eng] 45-2336
- Formalization of ice data for computer processing. Likhachev, A.V., [1990, p.54-59, rus] 45-2436
- Creating a computer radar map of Antarctica. Spiridonov, I.U.G., et al, [1989, p.126-134, rus] 45-2758
- Calculating dielectric response function of cubic ice. Zaider, M., et al, [1990, p.25-39, eng] 45-2948
- Deformation of a floating drilling platform made of built-up ice. Derradji-Aouat, A., et al, [1991, p.1-8, eng] 45-3141
- Computer programs**
- Data processing of depolarization due to rain and ice crystals. van de Kamp, M.M.J.L., [1989, 92p., eng] 45-85
- Portable ARGOS data link. Bader, C.M., et al, [1989, p.1272-1275, eng] 45-443
- TAKU computer program to model glacier flow. Pearce, B.R., et al, [1989, 85p., eng] 45-557
- Users manual for the NASA Lewis ice accretion prediction code (LEWICE). Ruff, G.A., et al, [1990, 231p., eng] 45-398
- Algorithm for determining motion vectors in ice floe images. Manohar, M., et al, [1988, p.343-347, eng] 45-606
- Ice calculations and forecasts in an automated information system. Gudkovich, Z.M., [1990, p.11-17, rus] 45-1632
- Status of AirLand Battlefield Environment (ALBE) winter tactical decision aids. Aitken, G.W., et al, [1990, 14p., eng] 45-1978
- MUTID: User-friendly one-dimensional thermal model. Braley, W.A., et al, [1991, p.1-10, eng] 45-2317
- Two packages for meteorological data processing and runoff simulation for personal computers. Gandolfi, C., et al, [1987, p.192-198, eng] 45-2437
- Fatigue endurance program for classification of built-up roofing. Bonafont, R.L., [1991, p.26-32, eng] 45-2454
- Enhancements to the Shaft Modeling Tool Kit. Cowper, D.N.B., et al, [1990, 42p., eng] 45-2646
- Design criteria for arctic offshore production structures. Computer programs. [1984, n.p., eng] 45-2847
- ISTORE—a model to simulate and optimize the operation of ice-storage air-conditioning systems. Musgrove, A.R., [1990, p.199-208, eng] 45-3055
- Appraisal of a multisurface plasticity model for soils. Derradji-Aouat, A., et al, [1991, p.75-82, eng] 45-3151
- Thirty-five years of sea-ice runway operation—McMurdo Station, Antarctica. Barthelemy, J.L., [1990, p.864-877, eng] 45-3636
- Modelling the Kootenay watershed with satellite data. Kite, G.W., [1990, p.123-134, eng] 45-3803
- HYDROTEL, a hydrological model designed to make use of remotely sensed and GIS data. Fortin, J.P., et al, [1990, p.177-185, eng] 45-3805
- Using spreadsheet software in water-balance modeling. Dexter, L.R., et al, [1991, p.527-536, eng] 45-3817
- Digital transmission of satellite images to an icebreaker. Mätkisara, K., et al, [1990, 39p., fin] 45-3852
- Computerized simulation**
- Stability of gas hydrates. Rodger, P.M., [1990, p.6080-6089, eng] 45-713
- Influence of CO ice on the activity and near-surface differentiation of comet nuclei. Fanale, F.P., et al, [1990, p.403-413, eng] 45-897
- Computer simulation of ice control with thermal-bubble plumes—line source configuration. Baddour, R.E., [1990, p.509-513, eng] 45-902
- Two-dimensional numerical modelling of large motions of floating bodies in waves. Sen, D., et al, [1989, p.257-277, eng] 45-967
- Volume and routing of late-glacial runoff from the southern Laurentide Ice Sheet. Teller, J.T., [1990, p.12-23, eng] 45-1075
- Integrating radar-rainfall data into the hydrologic modeling process. Engdahl, T.L., et al, [1990, p.69-73, eng] 45-1430
- Microcomputer simulation of phase change heat transfer. Farag, I.H., et al, [1990, p.43-65, eng] 45-1432
- Validation study of the CRREL shallow snow mobility model. Blaisdell, G.L., et al, [1990, 72p., eng] 45-1510
- Numerical modeling of structure-frozen soil/ice interaction. Paszewala, U.G.A., et al, [1990, p.133-151, eng] 45-1523
- Analysis of subsour stresses on buried submarine pipelines—Vol.2. Been, K., et al, [1990, 204p., eng] 45-1557
- Analysis of subsour stresses on buried submarine pipelines—Vol.3. Murray, A., et al, [1990, 45p. + appendix., eng] 45-1558
- One-dimensional temperature modeling techniques: review and recommendations. Balick, L.K., et al, [1990, 17p., eng] 45-1698
- Numerical simulations for rare ice gouge depths. Wang, A.T., [1990, p.19-32, eng] 45-1764
- Computer graphics of the Great Lakes ice cycle. Asael, R.A., et al, [1991, p.331-335, eng] 45-1917
- Automated guidance for forecasting conditions conducive to aircraft icing. Schultz, P., et al, [1991, p.492-496, eng] 45-1919
- Design ice gouge depth computation through computer simulations. Wang, A.T., [1990, p.237-247, eng] 45-1953
- Second validation study of the CRREL shallow snow mobility model. Richmond, P.W., et al, [1990, 39p., eng] 45-2094
- Stochastic simulation of rain-on-snowmelt events. Brunengo, M.J., [1990, p.110-121, eng] 45-2128
- 2-D microscopic simulation of heat and mass transport in dry snow. Christon, M., et al, [1990, p.87-105, eng] 45-2168
- Researches of glacier lake outburst floods of the Yarkant River in Xinjiang. Zhang, X.S., et al, [1990, p.1014-1024, eng] 45-2178
- Computer predictions of thaw beneath gravel embankments on warm permafrost. Bigl, S.R., et al, [1991, p.191-199, eng] 45-2333
- Modeling runoff in semiarid rangeland watersheds. Heydarpour, J., [1989, p.210-215, eng] 45-2403
- Two packages for meteorological data processing and runoff simulation for personal computers. Gandolfi, C., et al, [1987, p.192-198, eng] 45-2437
- On the numerical simulation of the sea ice ridging process. Hopkins, M.A., et al, [1991, p.4809-4820, eng] 45-2689
- Dynamic forces induced by buckling failure of moving ice. Vinogradov, O.G., et al, [1990, p.49-60, eng] 45-2721
- Use of satellite data for water resources modelling—a Canadian example. Kite, G.W., [1991, p.21-29, eng] 45-2796
- Particle beam simulation to model ice jamming and ridging. Hopkins, M.A., [1991, p.1274-1278, eng] 45-2829

**Computerized simulation (cont.)**

- ISTORE—a model to simulate and optimize the operation of ice-storage air-conditioning systems. Musgrove, A.R., (1990, p.199-208, eng) 45-3055
- Ice island simulator. Wang, A.T., et al, (1991, p.29-37, eng) 45-3145
- Ice cover melting under turbulent flow conditions. Sarraf, S., et al, (1990, p.313-316, eng) 45-3194
- Basis for ice formation design. LaFleur, R.S., (1990, p.393-401, eng) 45-3195
- Simulation studies help predict oil impact in Alaska offshore areas. Signorini, S., et al, (1990, p.41-44, eng) 45-3546
- Snow hydrology of a headwater arctic basin. 2. Conceptual analysis and computer modeling. Hinzman, L.D., et al, (1991, p.1111-1121, eng) 45-3551
- Thermal response of ice rubble: predictions and observations. Crossdale, K.R., et al, (1990, p.153-167, eng) 45-3573
- Norwegian model for prediction of pavement deterioration (7). Bertelsen, D., (1990, p.875-886, eng) 45-3694
- Computer model of moisture and temperature effects beneath pavements. Pufahl, D.E., et al, (1990, p.259-269, eng) 45-3750
- Effective use of satellite-observed snow cover data in the snowmelt-runoff model (SRM). Rango, A., (1990, p.19-31, eng) 45-3798
- Using spreadsheet software in water-balance modeling. Dexter, L.R., et al, (1991, p.527-536, eng) 45-3817
- Computers**
- Data acquisition system requirements for cold weather testing. Leier, T.E., (1989, p.139-143, eng) 45-1226
- Concrete**
- Estimation of ice worn action on hydraulic structures. Korzhavin, K.N., et al, (1990, p.995-998, eng) 45-3647
- Concrete admixtures**
- Heat reflecting properties of monolithic concrete with antifreeze admixtures. Solov'eva, R.F., et al, (1990, p.33-34, rus) 45-23
- Study of the frost resistance of concrete with the plasticizer TOP-2. Sheinkman, A.N., et al, (1990, p.28-30, rus) 45-31
- Condensed silica fume in concrete. Malhotra, V.M., et al, (1987, 221p., eng) 45-323
- Simplification of cold weather concreting with new antifreezing admixtures (Part 4). Watanabe, H., et al, (1989, p.14-21, jpn) 45-906
- Simplification of winter concreting with a new type of antifreeze admixture (Part 3). Watanabe, H., et al, (1988, p.1-17, jpn) 45-910
- Study on simplification of winter concreting using the new type antifreeze admixtures (Part 2). Watanabe, H., et al, (1987, p.14-38, jpn) 45-921
- Study on simplification of winter concreting using the new type of antifreeze admixtures. Watanabe, H., et al, (1986, p.27-36, jpn) 45-925
- Antifreeze admixtures for cold regions concreting: a literature review. Korhonen, C.J., (1990, 14p., eng) 45-974
- Standardizing the sustained deformation of frost-resistant concrete. Onina, M.M., (1990, p.38-39, rus) 45-1606
- Concrete with cementing materials in a marine environment. Malhotra, V.M., et al, (1988, p.31-72, eng) 45-1812
- Superplasticizers, pozzolans, and granulated blast-furnace slags in concretes: a review. Malhotra, V.M., (1987, p.63-88, eng) 45-1819
- Drilling in the permafrost. Kudriashov, B.B., et al, (1990, 318p., eng) 45-1854
- Antifreeze admixture developed in Japan. Sakai, K., et al, (1991, p.26-30, eng) 45-1982
- Antifreeze admixtures for cold weather concreting. Korhonen, C.J., et al, (1991, p.38-41, eng) 45-1983
- Durability of dry-mix shotcrete. Seegbrecht, G.W., et al, (1989, p.47-50, eng) 45-2110
- Durability of dry-mix shotcrete containing regulated-set cement. Gebler, S.H., (1989, p.56-58, eng) 45-2112
- New admixtures for cold weather concreting. Korhonen, C.J., et al, (1991, p.200-209, eng) 45-2334
- High-performance concrete in all-weather deck pours. Strand, G.W., (1991, p.210-229, eng) 45-2335
- Long-term compressive strength of silica-fume concrete. Altcin, P.C., et al, (1990, p.164-170, eng) 45-2773
- Cold weather construction materials part 2: tests on regulated-set cement. Houston, B.J., et al, (1982, 27p., eng) 45-3475
- Concrete aggregates**
- Condensed silica fume in concrete. Malhotra, V.M., et al, (1987, 221p., eng) 45-323
- Doing more with less: optimizing concrete mix. (1990, p.18-25, eng) 45-526
- Pumping of lightweight concrete using non- presoaked lightweight aggregate. Yonezawa, T., et al, (1988, p.625-654, eng) 45-1817
- Freeze-thaw durability of shotcrete. Morgan, D.R., (1989, p.86-93, eng) 45-2082
- Mechanism of expansion of concrete aggregate due to frost action. Rusin, Z., (1991, p.614-624, eng) 45-3399

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- Low-temperature effects on the microstructure of cement paste exposed to seawater. Ramachandran, V.S., et al, (1990, p.340-347, eng) 45-358
- Curing of concrete. Mather, B., (1987, p.145-159, eng) 45-1820
- Concrete durability**
- Condensed silica fume in concrete. Malhotra, V.M., et al, (1987, 221p., eng) 45-323
- Concrete in marine environment. (1988, 739p., eng) 45-1811
- Concrete with cementing materials in a marine environment. Malhotra, V.M., et al, (1988, p.31-72, eng) 45-1812
- Concrete wharves in tidal zones. Gilbride, P., et al, (1988, p.199-225, eng) 45-1813
- Distress in precast concrete piles. Khanna, J., et al, (1988, p.277-320, eng) 45-1815
- Pumping of lightweight concrete using non- presoaked lightweight aggregate. Yonezawa, T., et al, (1988, p.625-654, eng) 45-1817
- Shotcrete durability: an evaluation. Glassgold, I.L., (1989, p.78-85, eng) 45-2081
- Freeze-thaw durability of shotcrete. Morgan, D.R., (1989, p.86-93, eng) 45-2082
- Roller-compacted concrete pavement construction at Fort Drum, New York. Cortez, E.R., et al, (1990, p.8-17, eng) 45-2088
- Durability of dry-mix shotcrete. Seegbrecht, G.W., et al, (1989, p.47-50, eng) 45-2110
- Durability of prestressed concrete tanks. Schupack, M., et al, (1989, p.51-55, 58, eng) 45-2111
- Durability of dry-mix shotcrete containing regulated-set cement. Gebler, S.H., (1989, p.56-58, eng) 45-2112
- Forecasting the frost resistance of concrete based on local materials. Akimov, A.V., et al, (1988, 83p., rus) 45-2306
- New method for assessment of air voids in plastic concrete. Ansari, F., (1990, p.901-909, eng) 45-2313
- Predicting concrete service life in cases of deterioration due to freezing and thawing. Final report. Bryant, L.M., et al, (1991, 28p. + appends., eng) 45-2694
- Concrete freezing**
- Effective control of the frost resistance of concrete. Alrapetov, G.A., et al, (1990, p.24-25, rus) 45-22
- Heat reflecting properties of monolithic concrete with antifreeze admixtures. Solov'eva, R.F., et al, (1990, p.33-34, rus) 45-23
- Frost and salt resistance of concrete. Gladkov, V.S., (1990, p.9-11, rus) 45-24
- Study of the frost resistance of concrete with the plasticizer TOP-2. Sheinkman, A.N., et al, (1990, p.28-30, rus) 45-31
- Condensed silica fume in concrete. Malhotra, V.M., et al, (1987, 221p., eng) 45-323
- Frost susceptibility of concrete in near-saturated states. Soo, K.S., (1989, 143p., eng) 45-478
- Expansion and shrinkage behavior of concrete subjected to freezing and thawing. Watanabe, H., et al, (1989, p.16-29, jpn) 45-907
- Standardizing the sustained deformation of frost-resistant concrete. Onina, M.M., (1990, p.38-39, rus) 45-1606
- Field tests on frost heaving damage of small sized U-trough. Suzuki, T., et al, (1990, p.163-171, jpn) 45-1663
- Drilling in the permafrost. Kudriashov, B.B., et al, (1990, 318p., eng) 45-1854
- Control of plastic shrinkage cracking in cold weather. Senbetta, E., et al, (1991, p.49-53, eng) 45-1984
- Frost lenses? Sure. But in concrete? Perenchio, W.F., et al, (1990, p.51-53, eng) 45-2048
- Forecasting the frost resistance of concrete based on local materials. Akimov, A.V., et al, (1988, 83p., rus) 45-2306
- Mechanism of expansion of concrete aggregate due to frost action. Rusin, Z., (1991, p.614-624, eng) 45-3399
- Concrete hardening**
- Properties of concrete mixed with sand frozen by liquid nitrogen. Negami, Y., et al, (1990, p.79-87, jpn) 45-874
- Concrete heating**
- Concrete heating by warm air blowers. Sasaki, O., et al, (1988, p.71-76, jpn) 45-2508
- Concrete pavements**
- Fatigue characterization of Alaska paving materials (final report). Coetzee, N.F., et al, (1988, 126p., eng) 45-311
- Freeze-thaw testing of bituminous concrete moisture susceptibility. Bolzán, P.E., (1989, p.9-16, eng) 45-1152
- Properties of asphalt-oil shale ash bituminous mixtures under normal and freeze-thaw conditions. Al-Massaid, H., et al, (1989, p.54-62, eng) 45-1154
- Freeze thaw tests of asphalt concrete pavements. Janoo, V.C., et al, (1990, 56p., eng) 45-1699
- Roller-compacted concrete pavement construction at Fort Drum, New York. Cortez, E.R., et al, (1990, p.8-17, eng) 45-2088

- Asphalt concrete airport pavements during thaw weakening. Janoo, V.C., et al, (1991, 68p., eng) 45-2956
- On adhesive layer of thin concrete block overlay. Inuzuka, M., (1990, p.97-112, eng) 45-3494
- Silane coupling agents to reduce moisture susceptibility of asphalt concrete. Stolle, D.F.E., et al, (1990, p.115-145, eng) 45-3495
- Applicability of RCCP in cold areas. Hagiwara, T., et al, (1990, p.135-154, eng) 45-3511
- Present status and subject of roller compacted concrete pavement in Japan. Tada, H., et al, (1990, p.157-175, eng) 45-3512
- Twenty-five year report on the continuously reinforced concrete pavement in Koriyama. Ohta, H., et al, (1990, p.179-201, eng) 45-3513
- Concrete pavement rehabilitation and overlay: Ontario's experience. Kazmierowski, T.J., et al, (1990, p.205-230, eng) 45-3514
- Evaluation system of airport concrete pavements. Hachiya, Y., et al, (1990, p.233-238, eng) 45-3515
- Concrete piles**
- Thermal interaction of cast-in-situ bored piles with frozen ground. Kamenskii, R.M., (1990, p.65-72, rus) 45-1201
- Steel fiber reinforced concrete jackets for repairing concrete piles. Khanna, J., et al, (1988, p.227-252, eng) 45-1814
- Distress in precast concrete piles. Khanna, J., et al, (1988, p.277-320, eng) 45-1815
- Installation of deeply laid molded-in-place and combination piles in permafrost soils in Noril'sk. Nekliudov, V.S., et al, (1991, p.252-256, eng) 45-3560
- Concrete placing**
- Pumping of lightweight concrete using non- presoaked lightweight aggregate. Yonezawa, T., et al, (1988, p.625-654, eng) 45-1817
- Shotcrete durability: an evaluation. Glassgold, I.L., (1989, p.78-85, eng) 45-2081
- Precooling concrete using frozen sand. Kurita, M., et al, (1990, p.60-65, eng) 45-2108
- Cold weather construction materials part 2: tests on regulated-set cement. Houston, B.J., et al, (1982, 27p., eng) 45-3475
- Installation of deeply laid molded-in-place and combination piles in permafrost soils in Noril'sk. Nekliudov, V.S., et al, (1991, p.252-256, eng) 45-3560
- See *also*: Winter concreting
- Concrete slabs**
- Thermal analysis of forced-air airport foundation cooling. Smith, L.B., et al, (1991, p.399-409, eng) 45-3538
- Concrete strength**
- Condensed silica fume in concrete. Malhotra, V.M., et al, (1987, 221p., eng) 45-323
- Low-temperature effects on the microstructure of cement paste exposed to seawater. Ramachandran, V.S., et al, (1990, p.340-347, eng) 45-358
- Frost susceptibility of concrete in near-saturated states. Soo, K.S., (1989, 143p., eng) 45-478
- Properties of concrete mixed with sand frozen by liquid nitrogen. Negami, Y., et al, (1990, p.79-87, jpn) 45-874
- Expansion and shrinkage behavior of concrete subjected to freezing and thawing. Watanabe, H., et al, (1989, p.16-29, jpn) 45-907
- Concrete structures with nonmetallic reinforcements. Saliia, G.Sh., et al, (1990, 143p. (Pertinent p.88-96), rus) 45-984
- Design and behavior of composite ice-resisting walls. Adams, P.F., et al, (1988, p.457-479, eng) 45-1816
- Tutill concrete symposium, Nov. 1987. (1987, 350p., eng) 45-1818
- Superplasticizers, pozzolans, and granulated blast-furnace slags in concretes: a review. Malhotra, V.M., (1987, p.63-88, eng) 45-1819
- Curing of concrete. Mather, B., (1987, p.145-159, eng) 45-1820
- Development of high-strength concrete technology and application in Norway. Maage, M., (1987, p.161-183, eng) 45-1821
- Shotcrete durability: an evaluation. Glassgold, I.L., (1989, p.78-85, eng) 45-2081
- Precooling concrete using frozen sand. Kurita, M., et al, (1990, p.60-65, eng) 45-2108
- Durability of dry-mix shotcrete containing regulated-set cement. Gebler, S.H., (1989, p.56-58, eng) 45-2112
- Long-term compressive strength of silica-fume concrete. Altcin, P.C., et al, (1990, p.164-170, eng) 45-2773
- Deterioration of lightweight fly ash concrete due to gradual cryogenic frost cycles. Khayat, K.H., (1991, p.233-239, eng) 45-3828
- Finnish cold climate construction technology. part 5. Punakallio, E., ed, (1991, 68p. + appends., fin) 45-3877
- Concrete structures**
- Durability of prestressed concrete tanks. Schupack, M., et al, (1989, p.51-55, 58, eng) 45-2111
- Prediction of wall temperature gradients in concrete storage structures. Jofriet, J.C., et al, (1991, p.12-19, eng) 45-2665

- Deformation of reinforced concrete anchor foundations in the far north. Grebenets, V.I., et al, (1991, p.257-260, eng) 45-3561
- Concretes**
- Effective control of the frost resistance of concrete. Altrapetov, G.A., et al, (1990, p.24-25, rus) 45-22
- Portland cement concrete materials manual. (1989, 208p., eng) 45-317
- Finnish cold climate construction technology, part 5. Punakallio, E., ed, (1991, 68p. + appends., fin) 45-3877
- See *also*: Bituminous concretes; Cellular concretes; Lightweight concretes; Precast concretes; Prestressed concretes; Reinforced concretes
- Condensation**
- Properties and effect of freezing rain and winter fog on outline insulators. Farzaneh, M., et al, (1990, p.33-46, eng) 45-1765
- Surface kinetic limitation of ice crystal growth in the stratosphere. Mackenzie, A.R., (1990, p.S259-S262, eng) 45-2218
- Condensation of humidity onto a snow covered roof. Nordell, B., (1990, p.287-298, eng) 45-2528
- Explanation for the existence of supercooled water at the top of cold clouds. Rauber, R.M., et al, (1991, p.1005-1023, eng) 45-3273
- Ice-rink roof structures and the "stalagmite" effect. Bloudek, K., (1989, p.151-153, eng) 45-3466
- Condensation nuclei**
- Model test of CCN-cloud albedo climate forcing. Ghan, S.J., et al, (1990, p.607-610, eng) 45-1173
- Cloud condensation nuclei as a source of ice-forming nuclei in clouds. Rosinski, J., et al, (1991, p.123-133, eng) 45-3024
- Condensation trails**
- Aircraft-produced ice particles in a highly supercooled altocumulus cloud. Sassen, K., (1991, p.765-775, eng) 45-3209
- Conductivity**
- See *also*: Electrical resistivity; Superconductivity; Thermal conductivity
- Conferences**
- See *also*: Meetings
- Conservation**
- See *also*: Environmental impact
- Consolidation**
- See *also*: Settlement (structural); Thaw consolidation
- Construction**
- Geocryological forecasting during construction of a roadbed. Tsernant, A.A., et al, (1990, p.7-9, rus) 45-1604
- Roof bolting parameters in placer mines. Kychkin, N.L., et al, (1990, p.569-572, eng) 45-2932
- Polar class icebreaker oceanographic mission upgrade. Tilyou, M., et al, (1991, p.218-230, eng) 45-3053
- Technical aspects of ice navigation and port construction in Soviet arctic. Watson, G.G., (1991, p.158-176, eng) 45-3332
- Repair of frost damages on main road 21 in Tulli, Kilpisjärvi. Saarelainen, S., (1990, 54p. + appends., fin) 45-3841
- Prevention of snow drifting with the help of road levelling and design. Saarelainen, S., et al, (1990, 36p., fin) 45-3842
- Repair structures of frost damages on main road 21 in Peera, Finland. Saarelainen, S., (1990, 62p. + appends., fin) 45-3843
- Penetration of snow into the ceiling structures; tests using marked material. Käräinen, H., et al, (1989, 55p. + appends., fin) 45-3848
- Repair of a road built on permafrost; dimensioning, building, monitoring. Kivikoski, H., (1989, 46p. + appends., fin) 45-3849
- Improvement of icing on main road 21; construction and monitoring. Lehtonen, J., (1990, 60p., fin) 45-3873
- See *also*: Cold weather construction; Modular construction
- Construction equipment**
- Thermal drilling in a permafrost zone. Musienko, V.A., et al, (1989, p.24-29, rus) 45-708
- First arctic pipeline and later developments. Brown, R.J., (1990, p.323-334, eng) 45-1956
- Vessel requirements for arctic pipeline trenching and installation. Jolles, W.H., (1990, p.347-364, eng) 45-1958
- Ice and snow—construction materials. Renkel, A.F., (1991, p.37-39, rus) 45-2953
- Construction materials**
- Thermistor-based thermal conductivity measurement system. Atkins, R.T., et al, (1990, 11p., eng) 45-190
- Properties of asphalt-oil shale ash bituminous mixtures under normal and freeze-thaw conditions. Al-Massaid, H., et al, (1989, p.54-62, eng) 45-1154
- Moisture in membrane roofs. Tobiasson, W., (1989, p.31-32, 37-38, eng) 45-1581
- Deterioration of polyvinylchloride-based materials in cold regions. Bochkarev, R.N., et al, (1990, 119p., rus) 45-1669
- Effect of saline soil cements on frozen rocks and construction materials. Galdaenko, E.I., (1989, p.114-123, rus) 45-2636
- Cold weather construction materials part 2: tests on regulated-set cement. Houston, B.J., et al, (1982, 27p., eng) 45-3475
- Plastic highway bridges. Plecnik, J., et al, (1991, p.64-65, eng) 45-3477
- See *also*: Bituminous concretes; Bricks; Cellular concretes; Cellular materials; Cements; Ceramics; Concretes; Ice (construction material); Insulation; Masonry; Mortars; Panels; Plastics; Plates; Snow (construction material)
- Construction sites**
- See *also*: Site surveys
- Construction standards**
- See *also*: Building codes
- Containers**
- See *also*: Tanks (containers)
- Continental ice**
- See *also*: Land ice
- Continuous permafrost**
- Snowbank hydrology in the continuous permafrost zone. Lewkowicz, A.G., et al, (1990, p.13-21, eng) 45-1186
- Karst drainage in a permafrost setting: the case of Akpatok Island, Northwest Territories, Canada. Lauriol, B., et al, (1990, p.129-144, eng) 45-1294
- Tundra polygons in Quebec. Gray, J.T., et al, (1991, p.111-117, eng) 45-2997
- Contrails**
- See *also*: Condensation trails
- Convection**
- Role of thermal convection in heat and mass transport in the subarctic snow cover. Sturm, M., (1989, 209p., eng) 45-505
- Solidification of an alloy cooled from above: Part I. Equilibrium growth. Kerr, R.C., et al, (1990, p.323-342, eng) 45-970
- Measuring path-averaged heat fluxes in free convection. Andreas, E.L., (1991, p.167-182, eng) 45-1585
- Melting of ice in a porous medium heated from below. Zhang, X., et al, (1991, p.389-405, eng) 45-1872
- Effect of orientation on solidification for mixed-convection flow in a rectangular channel. Incropera, F.P., et al, (1990, p.377-396, eng) 45-1925
- Numerical study of three-dimensional natural convection during freezing of water. Yeoh, G.H., et al, (1990, p.899-914, eng) 45-2176
- Natural convection heat transfer in water near its density maximum. Yen, Y.C., (1990, 92p., eng) 45-2237
- Evidence for stability enhancement of sea ice in the Greenland and Labrador Seas. Marsden, R.F., et al, (1991, p.4783-4789, eng) 45-2686
- Microphysical and radiative characteristics of convective clouds during COHMEX. Fulton, R., et al, (1991, p.98-116, eng) 45-3016
- Fluid mixing during melting. Woods, A.W., (1991, p.1393-1404, eng) 45-3030
- Unsteady free convective flow in an enclosure containing water near its density maximum. Oosthuizen, P.H., et al, (1990, p.83-91, eng) 45-3098
- Natural convection in the subarctic snow cover. Sturm, M., et al, (1991, p.11,657-11,671, eng) 45-3463
- Papal Front of 3 May 1987: a remarkable example of frontogenesis near the Alps. Volkert, H., et al, (1991, p.125-150, eng) 45-3479
- Heat transfer around an ice cylinder melting in saline water. Fukusako, S., et al, (1990, p.35-41, eng) 45-3869
- Coolants**
- Investigation of a novel aid for cold starting of diesels. Zheng, J., et al, (1989, p.321-331, eng) 45-1244
- Cooling**
- Experimental measurements of the effects of frost formation on heat exchanger performance. Emery, A.F., et al, (1990, p.1-7, eng) 45-3865
- See *also*: Air conditioning; Cryogenics; Ice refrigeration; Liquid cooling; Radiant cooling; Refrigeration
- Cooling rate**
- Cooling rate and freezing temperature of supercooled water. Saito, A., et al, (1989, p.31-38, jpn) 45-700
- Lubricant low temperature pumpability studies. May, C.J., et al, (1989, p.277-286, eng) 45-1240
- Solute partitioning in freezing soils. Konrad, J.M., et al, (1990, p.726-736, eng) 45-1869
- Critical cooling rates to avoid ice crystallization in solutions of cryoprotective agents. Sutton, R.L., (1991, p.101-105, eng) 45-2261
- Intracellular ice formation during freezing of protoplasts. Pitt, R.E., et al, (1989, p.44-63, eng) 45-2965
- Further inquiry into the cryobehavior of aqueous solutions of glycerol. Chang, Z.H., et al, (1991, p.268-278, eng) 45-3100
- Cooling systems**
- Sequence of leads in cooling gas stations in polar compressor stations. Kosachev, V.P., et al, (1990, p.29-31, rus) 45-733
- Air coolers with varying spaced finning during hoarfrost formation. Chepurnof, M.N., et al, (1989, p.29-32, rus) 45-802
- Microcomputer simulation of phase change heat transfer. Farag, I.H., et al, (1990, p.43-65, eng) 45-1432
- Ice-on-coil diurnal ice storage cooling system. Sohn, C.W., et al, (1990, 49p., eng) 45-1551
- Thermal energy storage with encapsulated ice. Laybourn, D.R., (1988, p.1971-1988, eng) 45-2563
- Thermal analysis of forced-air airport foundation cooling. Smith, L.B., et al, (1991, p.399-409, eng) 45-3538
- See *also*: Air conditioning; Cryogenics; Refrigeration
- Cooperation**
- See *also*: International cooperation
- Core analysis**
- See *also*: Drill core analysis
- Core samplers**
- Borehole gas sampler operation control and methods of gas sampling in ice sheets. Zemtsov, A.A., et al, (1990, p.73-79, rus) 45-2489
- Techniques for sampling sea-ice algae. Horner, R., (1990, p.19-23, eng) 45-2540
- See *also*: Ice coring drills
- Cores**
- See *also*: Drill core analysis; Ice cores
- Coring**
- High-resolution magnetostratigraphy of late-Quaternary arctic marine sediments. Nowaczyk, N.R., (1991, 187p., ger) 45-3458
- Cornices**
- See *also*: Snow cornices
- Corona discharge**
- See *also*: Electric corona
- Correlation**
- Arctic region temperature mapping by integration of automated station data. Jacobs, J.D., (1990, p.84-96, eng) 45-362
- Quaternary age: paleogeography and lithology. Ianush, A.L., ed, (1989, 251p., rus) 45-786
- Great periglacial runoff system in northern Eurasia. Grosvald, M.G., et al, (1989, p.5-13, rus) 45-787
- Using loess-soil formation to correlate glacial, periglacial, and coastal zones. Velichko, A.A., et al, (1989, p.14-21, rus) 45-788
- Correlating marine, loess, and glacial-flatland formations. Zubakov, V.A., (1989, p.21-24, rus) 45-789
- Middle Pleistocene glacial and periglacial formations in the Russian Plain. Udartsev, V.P., et al, (1989, p.193-200, rus) 45-790
- Paleogeography and chronostratigraphy of the Pleistocene in Siberia. Arkhipov, S.A., (1989, p.201-214, rus) 45-791
- Chrono-stratigraphic scale of the Pleistocene glacial epoch in Siberia. Arkhipov, S.A., (1989, p.20-30, rus) 45-1135
- Palynology and glacial theory. Volkova, V.S., (1989, p.40-48, rus) 45-1136
- Paleogeographical regularities of glacial lithogenesis. Sudakova, N.G., (1990, 158p., rus) 45-1865
- Statistical analysis of data at the Giulie Alps glacier terminus. Serandrei Barbero, R., et al, (1989, p.139-149, ita) 45-1987
- Top/bottom multisensor remote sensing of arctic sea ice. Comiso, J.C., et al, (1991, p.2693-2709, eng) 45-2042
- Comparison of altimeter and radar measurements over Greenland pack ice. Fetterer, F.M., et al, (1991, p.569-583, eng) 45-2224
- Vertical fine structure of temperature profile in the subarctic front zone. Navrotkii, V.V., et al, (1991, p.468-474, rus) 45-2935
- Stratigraphy and correlation of Quaternary deposits in Asia and the Pacific. Khudiakov, G.I., ed, (1991, 208p., rus) 45-3436
- History of the Darkhat paleolake. Lukina, N.V., (1991, p.85-90, rus) 45-3438
- Principles for correlating Quaternary events in southern USSR. Sgibnev, V.V., et al, (1991, p.96-100, rus) 45-3439
- Microwave satellite spring runoff correlations. Wankiewicz, A., (1990, p.331-344, eng) 45-3812
- Paleogene and neogene of northeastern USSR. Baranova, I.U.P., ed, (1989, 181p., rus) 45-3834
- Corrosion**
- Immersion tests of high-strength steels for icebreakers. Inoue, T., et al, (1990, p.178-187, eng) 45-132
- Corrosion of welds in high-strength steels for icebreakers. Inoue, T., et al, (1990, p.188-196, eng) 45-133
- Corrosion of the underwater portion of hulls of icebreakers. Markovich, R.A., (1989, p.113-126, rus) 45-1120
- Corrosion protection of car bodies in Finland. Rönholm, M., (1989, p.75-76, eng) 45-1217
- Effect of saline soil cements on frozen rocks and construction materials. Galdaenko, E.I., (1989, p.114-123, rus) 45-2636
- Cathodic protection in Cook Inlet arctic waters. Hedborg, C.E., (1991, p.24-28, eng) 45-3025
- Cost analysis**
- Design of urban sedimentation basins in Anchorage. Jokela, J.B., et al, (1990, p.761-789, eng) 45-427
- Ice prediction systems prove their worth in winter cost savings. McDonald, A., et al, (1990, p.19-20, eng) 45-852
- Converting the thermal energy of arctic sea water into electricity. Moskviceva, V.N., et al, (1987, p.72-77, eng) 45-866
- Probability based design approach to climatic loadings in Hungary. Krómer, I., (1988, p.30-33, eng) 45-1305

## Cost analysis (cont.)

- Power failures from wet snow. Baldit, M., et al, [1988, p.39-43, eng] 45-1307
- Ice-on-coil diurnal ice storage cooling system. Sohn, C.W., et al, [1990, 49p., eng] 45-1551
- Evaluating the economic effectiveness of hail prevention operations. Danov, E.I., et al, [1989, p.51-55, rus] 45-1614
- Evaluating the economic effectiveness of extending arctic navigation. Arikainen, A.I., et al, [1989, 70p., rus] 45-1714
- Cost estimation in construction; for northern regions. Handbook. Liberman, I.A., [1990, 224p., rus] 45-1866
- Construction strategies for arctic offshore pipelines. McKeehan, D.S., [1990, p.335-345, eng] 45-1957
- Cost-effectiveness of geotextiles; review of performance in Alaskan roads. Reckard, M., [1991, 50p., eng] 45-2000
- Field method of glacial indicator tracing. Hirvas, H., et al, [1990, p.248, eng] 45-2553
- Using natural cover in automated underground cold storage areas. Kuz'min, M.P., et al, [1990, p.98-100, rus] 45-2715
- Economic evaluation of platinum mining in Antarctica. Beike, D., [1990, p.53-67, eng] 45-2804
- Winter maintenance. Pearson, D., [1990, p.337-379, eng] 45-3470
- Economic efficiency of icebreakers of different models and capacities. Arikainen, A.I., [1990, p.542-553, eng] 45-3605
- Efficiency analysis of a steam heat distribution system. Phetteplace, G.E., [1991, p.199-213, eng] 45-3746
- Prevention of snow drifting with the help of road levelling and design. Saarelainen, S., et al, [1990, 36p., fin] 45-3842
- See *also*: Economic analysis
- Countermeasures**
- Using lasers and infrared heaters as UNREP icing countermeasures. Schultz, L.A., et al, [1989, 267p., eng] 45-92
- Selecting antiskid materials applied to ice- and snow-covered roadways. [1990, 135p., eng] 45-319
- Avalanches at Chamonix (Haute-Savoie, France). Bravard, Y., [1990, p.125-143, fre] 45-371
- Drifting snow hazard and its control in the Tian Shan Mountains. Wei, W., [1989, p.53-58, eng] 45-402
- Aufeis formation and prevention. Slaughter, C.W., [1990, p.433-458, eng] 45-416
- Considerations in the design and operation of hydro power intakes. Gemperline, E.J., [1990, p.517-556, eng] 45-420
- Sealing cracks in flexible pavements in cold regions. Chong, G.J., et al, [1988, p.12-19, eng] 45-525
- Arctic/cold weather operations symposium, 1989; proceedings, volume 1. [1989, 488p., eng] 45-532
- Cold: an operational hazard. Lewis, S.B., et al, [1989, p.217-221, eng] 45-539
- Investigating the use of geotextiles to mitigate frost heave. Henry, K.S., [1990, 28p., eng] 45-841
- Reflection cracking studies at Thule Air Base, Greenland using AC 2.5 and fabrics. Eaton, R.A., et al, [1980, p.381-396, eng] 45-995
- Ice jam mitigation. Belore, H.S., et al, [1990, p.675-685, eng] 45-1078
- Ice tests on an "Enthusiast" class harbor tug. Glebko, I.U.V., et al, [1989, p.26-28, rus] 45-1139
- Snow avalanche hazards and mitigation in the United States. [1990, 84p., eng] 45-1182
- Controlling the frozen regime of bearing ground of structures over mines. Gur'ianov, I.E., [1990, p.77-92, rus] 45-1203
- Antifrost system of windshield. Takada, H., [1989, p.171-178, eng] 45-1231
- Oil spill response guide. [1989, 314p., eng] 45-1478
- Hot-water drilling and bore-hole closure in cold ice. Humphrey, N., et al, [1990, p.287-298, eng] 45-1539
- Best flying season. Collins, R.L., [1991, p.51-55, eng] 45-1900
- Proceedings. [1990, 499p., eng] 45-1945
- Geotechnical monitoring for an arctic offshore pipeline. Hanna, A.J., et al, [1990, p.385-394, eng] 45-1961
- Fighting large-scale forest fires. Valendik, E.N., [1990, 192p., rus] 45-1997
- Basic causes of deformation of buildings constructed on permafrost. Zhukov, V.F., [1991, p.174-178, eng] 45-2400
- Snowsheds on the Baykal-Amur mainline. IAdroshnikov, V.I., [1991, p.4-6, rus] 45-2950
- Frost protection on the Baykal-Amur mainline. Kondrat'ev, V.G., et al, [1991, p.6-7, rus] 45-2951
- Optimum repair and maintenance of railroads in Siberia and the Far East. Diunin, A.K., ed, [1990, 78p., rus] 45-3004
- Interaction between a snow layer and retaining structures. Shevchuk, S.S., [1990, p.26-31, rus] 45-3006
- Using electric heating to protect railroad switches from snowdrifts. Kvon, I.A.D., et al, [1990, p.31-36, rus] 45-3007
- Snow transport and protecting roads from snowdrifts. Komarov, A.A., et al, [1990, p.36-40, rus] 45-3008

- Using lightweight avalanche protection walls for railroad lines. Vetoshkina, N.A., et al, [1990, p.41-46, rus] 45-3009
- Effect of braking structures on the velocity and range of avalanches. Kozlov, I.U.V., et al, [1990, p.46-52, rus] 45-3010
- Protecting mountainous sections of the Frunze-Osh highway from snowdrifts. Avdeev, L.M., et al, [1990, p.60-63, rus] 45-3012
- Prediction of conductor ice accretion and mitigation of its rotational effects. Skelton, P.L.L., et al, [1990, p.965-980, eng] 45-3400
- Bioremediation of petroleum spills in arctic and subarctic environments. Travis, M.D., [1990, p.4-12, eng] 45-3465
- Ice jam mitigation on the Torneelven River. Zachrisson, G., [1990, p.845-857, eng] 45-3634
- See *also*: Bank protection (waterways); Dust control; Evaporation control; Flood control; Frost protection; Hail prevention; Ice prevention; Ice removal; Landslide control; Protection; Slope protection
- Coverings**
- Design optimization of jacket platforms for ice infested waters. Wang, L.Y., et al, [1990, p.1056-1070, eng] 45-3653
- Crack propagation**
- Wing cracks and brittle compressive fracture. Cannon, N.P., et al, [1990, p.1955-1962, eng] 45-1168
- Brittle compressive fracture of ice. Schulson, E.M., [1990, p.1963-1976, eng] 45-1169
- Crack nucleation due to elastic anisotropy in porous ice. Shyam Sunder, S., et al, [1990, p.249-265, eng] 45-1617
- On the ductile to brittle transition in ice under compression: physical processes. Schulson, E.M., [1990, p.103-114, eng] 45-2725
- Crack opening and propagation in S2 freshwater ice. Weber, L.J., et al, [1991, p.245-252, eng] 45-3176
- Brittle to ductile transition during indentation of ice. Gold, L.W., [1991, p.182-190, eng] 45-3534
- Crack growth stability in S2 ice. DeFranco, S.J., et al, [1990, p.168-181, eng] 45-3574
- Cracking (fracturing)**
- Transverse cracks in highways of Northeast China. Wang, B.C., et al, [1990, p.126-135, eng] 45-127
- Influence of grain size on compressive strength of polycrystalline ice. Cannon, N.P., [1985, 75p., eng] 45-183
- Effect of grain size on the tensile strength of ice at two strain-rates. Lee, R.W., [1985, 114p., eng] 45-492
- Ice and steel—a comparison of creep and failure. Sinha, N.K., [1989, p.201-212, eng] 45-518
- Sealing cracks in flexible pavements in cold regions. Chong, G.J., et al, [1988, p.12-19, eng] 45-525
- Asphalt performance at low temperatures. Biczysko, S.J., [1990, p.20-25, eng] 45-853
- Ice forces on flat, vertical indentors pushed through floating ice sheets. Nakazawa, N., et al, [1990, 62p., eng] 45-937
- Reflection cracking studies at Thule Air Base, Greenland using AC 2.5 and fabrics. Eaton, R.A., et al, [1980, p.381-396, eng] 45-995
- Brittle compressive fracture of ice. Schulson, E.M., [1990, p.1963-1976, eng] 45-1169
- Performance of thermoplastic elastomers (TPEs) at subzero temperatures. Brugada, R., [1989, p.67-73, eng] 45-1216
- Fraass breaking point test: automatic testing and an examination of asphalt quality. Sasaki, K., et al, [1990, p.10-17, jpn] 45-1666
- Strain gradient influence on brittle failure of ice. Sayed, M., [1990, p.179-191, eng] 45-1909
- Control of plastic shrinkage cracking in cold weather. Senbetta, E., et al, [1991, p.49-53, eng] 45-1984
- Cost-effectiveness of geotextiles; review of performance in Alaskan roads. Reckard, M., [1991, 50p., eng] 45-2000
- Precooling concrete using frozen sand. Kurita, M., et al, [1990, p.60-65, eng] 45-2108
- Palaeoenvironmental implications of recent ice-wedge development. Burn, C.R., [1990, p.3-14, eng] 45-2230
- Low temperature brittle fracture behavior of steel in mixed modes I and II. Maccagno, T.M., et al, [1991, p.111-128, eng] 45-2294
- Directionality of ice cracking events. Zakarauskas, P., et al, [1991, p.722-734, eng] 45-2402
- Service temperature of steel in cold climates. Huther, M., et al, [1990, p.229-239, eng] 45-2734
- Surface cracking in asphalt layers. Kunst, P.A.J.C., et al, [1990, 199p., eng] 45-3108
- Acoustical radiation from thermally stressed sea ice. Xie, Y., et al, [1991, p.2215-2231, eng] 45-3380
- Low temperature fracture mechanics of viscoelastic pavement structures. Selvadurai, A.P.S., et al, [1990, p.183-212, eng] 45-3497
- St. Anne Test Road revisited twenty years later. Deme, I.J., et al, [1990, p.215-233, eng] 45-3498
- Test methods to characterize low temperature cracking. Janoo, V.C., et al, [1990, p.257-287, eng] 45-3500
- Crack growth stability in S2 ice. DeFranco, S.J., et al, [1990, p.168-181, eng] 45-3574

- Integral analysis of the initiation of river ice cover cracking. Abdel-Zaher, A.K., et al, [1990, p.511-530, eng] 45-3603
- Ice sheet penetration by indenter pairs. Parsons, B.L., [1990, p.1031-1043, eng] 45-3651
- Cracks**
- Effect of frost heave deformations on airport pavement. Dolinchenko, V.A., et al, [1990, p.12-13, eng] 45-1014
- See *also*: Ice cracks
- Creep**
- Investigation into the creep behavior of CRREL tunnel, Alaska. Huang, S.L., et al, [1989, p.65-73, eng] 45-333
- Concentric crater fill on Mars: an aeolian alternative to ice-rich mass wasting. Zimbelman, J.R., et al, [1989, p.397-407, eng] 45-395
- Numerical modeling of structure-frozen soil/ice interaction. Puswewala, U.G.A., et al, [1990, p.133-151, eng] 45-1523
- Mechanics of aeolian transport of snow and sand. Kind, R.J., [1990, p.855-866, eng] 45-2097
- See *also*: Ice creep; Rheology; Snow creep; Soil creep
- Crevasse detection**
- Very short pulse C-band radar for crevasse detection. Sultz, T., et al, [1991, p.103-107, eng] 45-3068
- Crossings**
- See *also*: Bridges; Ice crossings; River crossings
- Crude oil**
- Operations and maintenance of a northern pipeline. Sangster, R.H.B., [1990, p.377-384, eng] 45-1960
- Assessment of petroleum resources in Antarctica. Behre, J.C., [1990, p.163-174, eng] 45-2810
- Petroleum geology and geochemistry of the Arctic National Wildlife Refuge 1002 area. Banet, A.C., Jr., [1990, 26p. + appends., eng] 45-3884
- Crustal structure**
- See *also*: Earth crust; Tectonics
- Cryobiology**
- Frozen and alive. Storey, K.B., et al, [1990, p.92-97, eng] 45-1017
- High latitude limnology. Vincent, W.F., ed, [1989, 323p., eng] 45-2602
- Filamentous green algae in freshwater streams on Signy Island, Antarctica. Hawes, I., [1989, p.1-18, eng] 45-2603
- Recent insights on the role of cryoprotective agents in vitrification. MacFarlane, D.R., et al, [1990, p.345-358, eng] 45-2961
- Prediction of devitrification tendency. Boutron, P., et al, [1990, p.359-377, eng] 45-2962
- Experimental dissection of devitrification in aqueous solutions of 1,3-butanediol. Mehl, P.M., [1990, p.378-400, eng] 45-2963
- Intracellular ice formation during freezing of protoplasts. Pitt, R.E., et al, [1989, p.44-63, eng] 45-2965
- Inhibition of ice recrystallization by insect thermal hysteresis proteins. Knight, C.A., et al, [1986, p.256-262, eng] 45-2966
- Ice recrystallization in a model system and in frozen muscle tissue. Martino, M.N., et al, [1989, p.138-148, eng] 45-2967
- Ice crystal patterns of extracellular macromolecules in artificial gels. Allenspach, A.L., et al, [1989, p.170-179, eng] 45-2968
- Ultrastructural organization of yeast isolated from an antarctic glacier. Ayzov, S.S., et al, [1983, p.914-922, rus] 45-2984
- Sea ice fauna of Frobisher Bay, arctic Canada. Grainger, E.H., et al, [1985, p.23-30, eng] 45-3059
- Phytoplankton in coastal waters of the Arctic Ocean at Point Barrow, Alaska. Bursa, A., [1963, p.239-262, eng] 45-3071
- Further inquiry into the cryobehavior of aqueous solutions of glycerol. Chang, Z.H., et al, [1991, p.268-278, eng] 45-3100
- Marine ecology study in Frobisher Bay, arctic Canada. Grainger, E.H., [1975, p.261-266, eng] 45-3112
- Metabolic activities of phytoplankton associated with arctic sea ice. Allen, M.B., [1970, p.1-17, eng] 45-3113
- Field studies of algal metabolism in ice-covered lakes in Alaska. Alexander, V., et al, [1970, p.31-52, eng] 45-3114
- Arctic sea-ice biota. Horner, R.A., [1989, p.123-146, eng] 45-3115
- Ecology of Arctic Ocean cryopelagic fauna. Mel'nikov, I.A., [1989, p.235-255, eng] 45-3118
- Influence of ice on the primary productivity of the Bering Sea. McRoy, C.P., et al, [1974, p.403-421, eng] 45-3120
- Marine metabolism at Resolute Bay, Northwest Territories. Welch, H.E., et al, [1975, p.11/69-11/75, eng] 45-3121
- Algal populations in arctic sea ice: an investigation of heterotrophy. Horner, R., et al, [1972, p.454-458, eng] 45-3124
- Physical control of phytoplankton production under sea ice (Manitounok Sound, Hudson Bay). Legendre, L., et al, [1981, p.1385-1392, eng] 45-3126
- Observations on marine life beneath sea ice, Resolute Bay, N.W.T. Green, J.M., et al, [1975, p.11/77-11/86, eng] 45-3130

- Life history of an amphipod species in the Beaufort Sea. Boudrias, M.A., et al, [1988, p.249-257, eng] 45-3133
- Chlorophyll and photosynthesis in sea ice microalgae. Legendre, L., et al, [1987, p.199-203, eng] 45-3134
- Arctic sea ice faunal assemblage: meiofauna. Carey, A.G., Jr., et al, [1982, p.1-8, eng] 45-3135
- Oxidation of oil hydrocarbons by arctic pigmented *Mycobacterium* species. Koronelli, T.V., et al, [1981, p.167-170, rus] 45-3136
- Lipid composition of *Mycobacterium mucosum* oxidizing hydrocarbons. Koronelli, T.V., et al, [1977, p.1070-1073, rus] 45-3137
- Activity of microorganisms oxidizing hydrocarbons assayed in natural waters. Il'inskiĭ, V.V., et al, [1989, p.658-662, rus] 45-3138
- Microorganisms of the eastern part of the Arctic Ocean. Kriss, A.E., [1945, p.268-276, rus] 45-3139
- Distribution of heterotrophic bacteria in the Atlantic Ocean. Kriss, A.E., [1970, p.362-371, rus] 45-3181
- Hydrobiological studies in the Arctic Ocean (SP-22, Dec. 1979-Apr. 1980). Mel'nikov, I.A., [1981, p.397, rus] 45-3182
- Hydrobiological studies at SP-22 in the Arctic Ocean (Spring 1981). Mel'nikov, I.A., [1982, p.158, rus] 45-3183
- Hydrobiological studies in the central part of the Arctic Ocean (Spring 1976). Mel'nikov, I.A., [1976, p.1134-1135, rus] 45-3184
- Hydrobiological studies in the central part of the Arctic Ocean. Mel'nikov, I.A., [1976, p.547-550, rus] 45-3185
- Cryobiological observations in the central Arctic Basin. Mel'nikov, I.A., [1979, p.150-155, rus] 45-3186
- Fermentative activity of microbial-antagonists. Trunova, O.N., [1977, p.91-97, rus] 45-3212
- Faunal assemblage inhabiting seasonal sea ice. Kern, J.C., et al, [1983, p.159-167, eng] 45-3217
- Present and planned marine ecological activities in Greenland. Petersen, G.H., [1975, p.11/1-11/12, eng] 45-3220
- Marine ecology in arctic Canada. Mansfield, A.W., [1975, p.11/27-11/47, eng] 45-3222
- Problems in management oriented studies of birds and mammals in European high Arctic. Larsen, T., [1975, p.11/109-11/117, eng] 45-3226
- Interrelationships of Arctic Ocean mammals in the sea ice habitat. Stirling, I., et al, [1975, p.11/129-11/136, eng] 45-3227
- Algal bloom under the ice off the coast of Finland. Hillfors, G., et al, [1974, p.89-104, eng] 45-3229
- Primary production in Frobisher Bay, arctic Canada. Grainger, E.H., [1979, p.9-30, eng] 45-3230
- Ultramicroscopic forms in the Barents Sea littoral mud. Mishustina, I.E., et al, [1973, p.138-140, rus] 45-3232
- Distribution of heterotrophic microorganisms in the Greenland Sea. Mishustina, I.E., et al, [1963, p.914-921, rus] 45-3240
- Photosynthesis and pigments of sea ice microalgae. Rochet, M., et al, [1986, p.211-226, eng] 45-3242
- Responses of sea ice microalgae to climate and tides. Gosselin, M., et al, [1985, p.999-1006, eng] 45-3243
- Hydrobiological studies in the Arctic Ocean at SP-23 (May-October 1977). Mel'nikov, I.A., et al, [1978, p.378-379, rus] 45-3249
- Numbers and production of bacterioplankton in the Barents Sea. Rossova, E.I.A., [1977, p.878-882, rus] 45-3250
- Hydrobiological studies in the central Arctic Basin (Spring 1978). Mel'nikov, I.A., [1978, p.1132, rus] 45-3255
- Life histories of copepods in high latitudes. Conover, R.J., [1988, p.127-142, eng] 45-3262
- Phytoplankton communities in seasonally ice covered areas. Saito, K., et al, [1978, p.27-35, eng] 45-3284
- Nitrogenous nutrition of sea-ice microalgae. Demers, S., et al, [1989, p.377-383, eng] 45-3285
- Osmotic responses of amphipods in arctic waters. Aarset, A.V., et al, [1987, p.189-193, eng] 45-3286
- Feeding ecology of under-ice amphipods. Carey, A.G., Jr., et al, [1987, p.29-33, eng] 45-3287
- Adaptations to low temperature and brine exposure in amphipods. Aarset, A.V., et al, [1987, p.129-133, eng] 45-3288
- Effects of temperature on metabolic rates of copepods. Tande, K.S., [1988, p.457-461, eng] 45-3289
- Oil-oxidizing and heterotrophic microflora on the Eastern Murman coast. Deimicheva, S.G., [1985, p.139-143, eng] 45-3290
- Photosynthetic productivity of ice algae in Hokkaido. Satoh, H., et al, [1989, p.274-278, eng] 45-3313
- Sub-ice microalgal strands in the antarctic coastal fast ice near Syowa Station. Watanabe, K., [1988, p.221-229, eng] 45-3314
- Primary productivity in the fast ice near Showa Station. Satoh, H., et al, [1988, p.287-292, eng] 45-3315
- Observation of the plankton in drift ice. Tamura, T., [1951, p.134-138, jpn] 45-3316
- Size, age and diet of polar cod, *Boreogadus saida* (Lepechin 1773), in ice covered waters. Lønne, O.J., et al, [1989, p.187-191, eng] 45-3317
- Photosynthesis of arctic ice algae and salinity. Bates, S.S., et al, [1986, p.421-429, eng] 45-3319
- Physiology of sea ice diatoms. Palmisano, A.C., et al, [1982, p.489-498, eng] 45-3320
- Exploratory studies on the physiology and ecology of a psychrophilic marine diatom. Bunt, J.S., et al, [1966, p.96-100, eng] 45-3321
- Copepods in arctic sea ice. Grainger, E.H., et al, [1986, p.303-310, eng] 45-3322
- Low temperature tolerance and osmotic regulation in amphipods. Aarset, A.V., et al, [1988, p.35-41, eng] 45-3339
- Diver-operated electric suction sampler for sympagic (=under-ice). Lønne, O.J., [1988, p.135-136, eng] 45-3340
- Grazing by a choanoflagellate from sea ice in Hokkaido. Marchant, H.J., [1990, p.1-7, eng] 45-3341
- Variability in sterol flux in the ice-covered lagoon Saroma Ko, Hokkaido, Japan. Sasaki, H., et al, [1990, p.8-15, eng] 45-3342
- Photosynthesis and primary production of ice algae in Hokkaido. Satoh, H., et al, [1989, p.1-8, eng] 45-3343
- Phytoplankton bloom under sea ice in Hokkaido. Fukuchi, M., et al, [1989, p.9-15, eng] 45-3344
- Zooplankton abundance under sea ice in Hokkaido. Nishiyama, T., et al, [1987, p.123-137, eng] 45-3345
- Abundance of *Parasagitta elegans* under sea ice in Hokkaido. Kotori, M., et al, [1987, p.138-144, eng] 45-3346
- Rates of photoadaptation in sea ice diatoms from McMurdo Sound, Antarctica. Lizotte, M.P., et al, [1991, p.367-373, eng] 45-3347
- Light and nutrient limitation of sea-ice microalgae (Hudson Bay, Canadian Arctic). Gosselin, M., et al, [1990, p.220-232, eng] 45-3348
- Ecology of sea colony birds of the Barents Sea. Belopol'skiĭ, L.O., [1961, 346p., eng] 45-3349
- Microbiological investigations in the Central Arctic in 1956. Kriss, A.E., [1957, p.199-202, rus] 45-3350
- Botanical results from the voyage of the *Ermak* to the Arctic Ocean, summer 1901. IV. Microflora of the Barents Sea and its ice. 1. Historical review of the microflora in the Barents Sea and adjacent seas. Palibin, I.V., [1904, p.71-80, rus] 45-3351
- Effect of ice on habitat conditions in the littoral zone of the White Sea. Savos'kin, I.U.M., [1967, p.197-202, rus] 45-3352
- Fishes of the northern seas of the U.S.S.R. Andriushev, A.P., [1964, 617p., eng] 45-3354
- Heterotrophic microorganisms in the Indian Ocean and adjacent antarctic seas. Lebedeva, M.N., [1958, p.557-560, rus] 45-3355
- Primary production of ice algae on a seasonally-ice-covered, continental shelf. Irwin, B.D., [1990, p.247-254, eng] 45-3356
- Salinity tolerance of arctic marine amphipods. Shea, J.R., et al, [1990, p.275-281, eng] 45-3357
- Trophic relationships of the sea ice meiofauna in Frobisher Bay, arctic Canada. Grainger, E.H., et al, [1990, p.283-292, eng] 45-3358
- Sea ice diatoms (Bacillariophyceae) of the Canadian Arctic. I. The genus *Stenoneis*. Poulin, M., [1990, p.156-167, eng] 45-3359
- Diatoms in water column and sea ice in Lützow-Holm Bay. Tanimura, Y., et al, [1990, p.15-39, eng] 45-3360
- Bacterial productivity in arctic sea ice. Smith, R.E.H., et al, [1990, p.351-357, eng] 45-3361
- On the algae found during the Arctic Expedition. Dickie, G., [1900, p.6-12, eng] 45-3368
- Development of ice periphyton of the Amur River under different light conditions. Iur'ev, D.N., et al, [1988, p.1546-1551, rus] 45-3369
- Distribution of a microbial population in the world ocean. Kriss, A.E., et al, [1960, p.34-41, eng] 45-3370
- Biological seasons in the plankton of different seas. Bogorov, B.G., [1941, p.404-407, eng] 45-3371
- Physiology of sea ice diatoms. II. Dark survival of three polar diatoms. Palmisano, A.C., et al, [1983, p.157-160, eng] 45-3384
- High-latitude phytoplankton. Allen, M.B., [1971, p.261-276, eng] 45-3386
- Plankton under the ice in the Baltic Sea. Hickel, W., [1969, p.318-331, ger] 45-3388
- Ecosystems of continental shelves. Golikov, A.N., et al, [1973, p.219-234, eng] 45-3389
- Can plankton production proceed during winter darkness in subarctic lakes. Rodhe, W., [1955, p.117-122, eng] 45-3390
- Observation on young specimens of *Ammodytes dubius*. Holmquist, C., [1958, p.10-14, eng] 45-3407
- On the food of seals in the Canadian eastern Arctic. Dunbar, M.J., [1941, p.150-155, eng] 45-3408
- Incorporation of algae into sea ice. Ackley, S.F., [1982, p.54-55, eng] 45-3409
- Algal and foram incorporation into new sea ice. Ackley, S.F., et al, [1987, p.1736, eng] 45-3410
- Living ice. Mel'nikov, I.A., [1984, p.68-77, rus] 45-3429
- Polar cod *Boreogadus saida* (Leresn.) and its importance in the Arctic. Klumov, S.K., [1937, p.175-188, rus] 45-3430
- Microorganisms as indicators of hydrological phenomena in seas and oceans. Kriss, A.E., et al, [1958, p.397-413, rus] 45-3431
- Response of a community of ice diatoms to a salinity gradient (Hudson Bay). Poulin, M., et al, [1983, p.191-202, fre] 45-3432
- Dark survival of autotrophic, planktonic marine diatoms. Smayda, T.J., et al, [1974, p.195-202, eng] 45-3433
- Ice algae in the East Siberian Sea in May 1987. Okolodkov, I.U.B., [1989, p.36-41, rus] 45-3434
- Ecological role of bacteria in detritus and aggregates in the Pacific Ocean. Sazhin, A.F., et al, [1989, p.682-692, rus] 45-3450
- Sedimentation at Lake Hoare. Squyres, S.W., et al, [1991, p.363-379, eng] 45-3457
- Morphogenesis of the brown algae *Desmarestia antarctica*-seasonal variations. Wiencke, C., et al, [1991, p.65-78, eng] 45-3553
- Winter habitats of salmon and trout. Calkins, D.J., [1990, p.113-126, eng] 45-3670
- Cryogenic processes**
- Cryolithology of the lower course of the Lena River. Kunitskiĭ, V.V., [1989, 162p., rus] 45-2424
- See *also*: Geocryology
- Cryogenic soils**
- Classification and diagnostics of soils in the subarctic Kola Peninsula. Nikonov, V.V., et al, [1989, p.4-18, rus] 45-1118
- Effect of fires on frozen soils. Tarabukina, V.G., et al, [1990, 119p., rus] 45-1572
- Soils and soil-forming processes in the Central Asian facies. Nogina, N.A., [1990, p.1-11, eng] 45-1707
- Soil formation on the yedomas of the Kolyma Lowland. Mazhitova, G.G., [1990, p.12-23, eng] 45-1708
- Autonomous taiga soil formation on the coast of the Sea of Okhotsk. Sedov, S.N., et al, [1990, p.24-35, eng] 45-1709
- Conditions and processes of the cryogenic migration of substances. Romanov, V.P., ed, [1989, 128p., rus] 45-1823
- Moisture transfer and ice formation in freezing, water-saturated soil. Kazanskiĭ, O.A., [1989, p.3-13, rus] 45-1824
- Solving the Stefan problem for saline soils at subzero temperatures. Tetel'baum, A.S., [1989, p.13-24, rus] 45-1825
- Mathematical model of periodically stabilizing phase front variations. Tetel'baum, A.S., et al, [1989, p.96-99, rus] 45-1831
- Pedogenic zonation of soils of the southern circumpolar region. Bockheim, J.G., et al, [1990, p.47-66, eng] 45-1855
- Methods of studying the thermal regime of soils in the cryolithozone. Pavlov, A.V., ed, [1989, 128p., rus] 45-2003
- Studying the thermal regime of natural complexes of tundra zones. Pavlov, A.V., et al, [1989, p.6-20, rus] 45-2004
- Process study of sorted patterns in arctic soils. Final report. Hallet, B., [1991, 20p., eng] 45-2140
- Soils in the main cryogenic areas of the northern Russian Plain. Makeev, A.O., et al, [1989, 270p., rus] 45-2210
- Effect of erosion and deflation on the structure of soil cover. Dzhanapeisov, R.D., et al, [1990, 91p., rus] 45-2244
- Influence of humidity and temperature upon the rate of soil metabolism. Fischer, Z., [1990, p.17-24, eng] 45-2429
- Thermic and humidity relations of chosen Spitsbergen soils. Angiel, M., [1990, p.25-37, eng] 45-2430
- Rate of cellulose decomposition in soils of Spitsbergen tundra. Bienkowski, P., [1990, p.39-45, eng] 45-2431
- Development of soil structure in some turbic cryosols in the Canadian low Arctic. Smith, C.A.S., et al, [1991, p.11-29, eng] 45-2664
- Problems of soil science in Siberia: collected scientific papers. Gadzhiev, I.M., ed, [1990, 183p., rus] 45-2904
- Current soil research problems in Siberia and the Far East. Gadzhiev, I.M., et al, [1990, p.34-42, rus] 45-2907
- Soil cover of Siberia: formation and use. Volkovintser, V.I., et al, [1990, p.143-151, rus] 45-2909
- Taiga soils in the northwestern part of the Yenisey mountain ridge. Korsunov, V.M., et al, [1990, p.152-163, rus] 45-2910
- Problems of agroindustrial use of lacustrine thermokarst. Tishin, M.I., ed, [1990, 116p., rus] 45-3031
- Agroclimatic and geothermophysical characteristics of northern meadows. Krivoshechekov, V.S., et al, [1990, p.78-87, rus] 45-3038
- Forecasting midyear temperatures of coarsely dispersed soils. Stepanov, I.V., et al, [1990, p.112-115, rus] 45-3042
- Investigation of heat and mass transport during freezing in peat soils. Gamaiunov, N.I., et al, [1990, p.88-97, eng] 45-3051
- Arctic and sub-arctic soil emissions and global climatic changes. Christensen, T., [1991, p.205-210, eng] 45-3415

**Cryogenic structures**

- Cryoplanation terraces, northern Yukon. Lauriol, B., (1990, p.347-351, eng) 45-1424
- Engineering geology of the USSR; shelves of the USSR. Dzhandzhgava, K.I., ed, (1990, 239p., rus) 45-1534
- Permafrost conditions during the formation of Upper Quaternary deposits. Kotov, A.N., et al, (1989, p.117-131, rus) 45-2498
- Mineral composition of Late Pleistocene cryolithogenic deposits. Kotov, A.N., et al, (1989, p.152-156, rus) 45-2500
- Thermal regime and cryogenic structure of coarse elastic deposits. Gorbunov, A.P., et al, (1990, p.54-58, rus) 45-2706
- Morphogenetic classification of forms of relief on a World Ocean shelf. Ionin, A.S., et al, (1990, p.24-50, rus) 45-2875
- Effect of salinity on the cryogenic structure of frozen soils. Khimenkov, A.N., et al, (1990, p.55-62, rus) 45-2890
- Effect of the cryogenic structure of saline frozen soils on their strength. Minaev, A.N., (1990, p.124-128, rus) 45-2901
- Formation of the alassy complex of deposits in the Mayn River basin. Kotov, A.N., (1990, p.59-64, rus) 45-3035

**Cryogenic textures**

- Effect of salinity on the cryogenic structure of frozen soils. Khimenkov, A.N., et al, (1990, p.55-62, rus) 45-2890
- Formation of the alassy complex of deposits in the Mayn River basin. Kotov, A.N., (1990, p.59-64, rus) 45-3035

**Cryogenics**

- Airborne cryogenic frost-point hygrometer. Spyers-Duran, P.A., (1991, p.303-306, eng) 45-1593
- Development of a cryogenic dew/frost point hygrometer. Buck, A.L., et al, (1991, p.322-326, eng) 45-1594
- Strength of cryogenic engineering alloys under electromagnetic loads. Strizhalo, V.A., et al, (1990, 154p., rus) 45-1856
- Precooling concrete using frozen sand. Kurita, M., et al, (1990, p.60-65, eng) 45-2108
- Critical cooling rates to avoid ice crystallization in solutions of cryoprotective agents. Sutton, R.L., (1991, p.101-105, eng) 45-2261
- Rock characteristics under very low temperatures. Aoki, K., et al, (1990, p.319-325, eng) 45-2295
- Thermal strain behaviour of clays cooled to cryogenic temperatures. Landva, J., et al, (1991, p.22-31, eng) 45-2319
- Supergene corundum in the Quaternary permafrost of Yakutia. Zigert, Kh., et al, (1990, p.155-159, eng) 45-2476
- Measuring the heat of sublimation of dry ice with a polystyrene foam cup calorimeter. Burgstahler, A.W., et al, (1991, p.332-333, eng) 45-3362
- Cryogenic properties of soils and rocks: 1. Anomalous behaviour of water. Quinn, F.X., et al, (1991, p.195-209, eng) 45-3401
- Cryogenic properties of soils and rocks: 2. The influence of water types on the uniaxial mechanical behaviour of clays. Unsworth, J.F., et al, (1991, p.211-225, eng) 45-3402
- Deterioration of lightweight fly ash concrete due to gradual cryogenic frost cycles. Khayat, K.H., (1991, p.233-239, eng) 45-3828

See *also*: Refrigeration

**Cryopedology**

See *also*: Geocryology

**Cryoplanation**

See *also*: Altiplanation

**Cryostats**

See *also*: Thermostats

**Cryoturbation**

- Development of soil structure in some turbic cryosols in the Canadian low Arctic. Smith, C.A.S., et al, (1991, p.11-29, eng) 45-2664
- Tundra polygons in Quebec. Gray, J.T., et al, (1991, p.111-117, eng) 45-2997

**Crystal growth**

- Solidification of an alloy cooled from above. Part 2. Non-equilibrium interfacial kinetics. Kerr, R.C., et al, (1990, p.331-348, eng) 45-1087
- See *also*: Ice crystal growth; Snow crystal growth

**Crystal optics**

See *also*: Ice crystal optics

**Crystallization**

See *also*: Ice crystal growth; Recrystallization; Snow crystal growth

**Crystallization nuclei**

See *also*: Ice crystal nuclei

**Crystals**

- New perspectives on freezing and melting. Oxtoby, D.W., (1990, p.725-730, eng) 45-825
- Evolution of diesel fuel cold flow—the next frontier. Brown, G.I., et al, (1989, p.223-237, eng) 45-1236
- See *also*: Ice crystals; Snow crystals

**Cubic ice**

- Calculating dielectric response function of cubic ice. Zaider, M., et al, (1990, p.25-39, eng) 45-948

**Culverts**

- Culverts. Ashton, W.S., et al, (1990, p.557-577, eng) 45-421

**Currents**

See *also*: Ocean currents; Tidal currents

**Cutting**

See *also*: Ice cutting

**Cyclic variations**

See *also*: Periodic variations

**Cyclones**

See *also*: Atmospheric disturbances

**Czechoslovakia****—Berounka River**

- Ice jams and flood control on the Berounka River. Matoušek, V., (1990, p.699-710, eng) 45-2254

**Damage**

- Avalanches at Chamonix (Haute-Savoie, France). Bravard, Y., (1990, p.125-143, fre) 45-371
- Additional hull reinforcements for ships used in the Arctic. Karavanov, S.B., et al, (1989, p.100-106, rus) 45-1140
- Failures of agricultural buildings in Estonia caused by snow loads. Keskküla, T., (1990, p.195-200, eng) 45-1150
- Freeze-thaw testing of bituminous concrete moisture susceptibility. Bolzán, P.E., (1989, p.9-16, eng) 45-1152

Note on biological weathering on nunataks of the Juneau Icefield, Alaska. Hall, K., et al, (1990, p.189-196, eng) 45-1298

Heavy trucks, climate and pavement damage. (1988, 175p., eng) 45-1479

Analysis of subscour stresses on buried submarine pipelines—summary report. Comfort, G., et al, (1990, 30p., eng) 45-1555

Analysis of subscour stresses on buried submarine pipelines—vol.1A and 1B. Comfort, G., et al, (1990, 106p. + 324p., eng) 45-1556

Analysis of subscour stresses on buried submarine pipelines—Vol.2. Been, K., et al, (1990, 204p., eng) 45-1557

Analysis of subscour stresses on buried submarine pipelines—Vol.3. Murray, A., et al, (1990, 45p. + appends., eng) 45-1558

Deterioration of polyvinylchloride-based materials in cold regions. Bochkarev, R.N., et al, (1990, 119p., rus) 45-1669

Proceedings. (1990, 499p., eng) 45-1945

Case study analysis of the probability of ice scour-induced damage for submarine pipelines. Comfort, G., (1990, p.145-164, eng) 45-1949

Examination of potential pipeline monitoring techniques. Witney, K.C., (1990, p.445-453, eng) 45-1964

Improvements in snow sensor installation techniques. Gehrke, F., et al, (1990, p.154-155, eng) 45-2135

Basic causes of deformation of buildings constructed on permafrost. Zhukov, V.F., (1991, p.174-178, eng) 45-2400

Dynamics, flexural response, and damage of ships in ice. Vaughan, H., et al, (1990, p.133-144, eng) 45-2727

Probabilistic concept of safe speeds for arctic shipping. Tunik, A.L., et al, (1990, p.295-306, eng) 45-2739

Alkylbenzyltrimethylammonium salts as inhibitors for the ice nucleating activity of *Erwinia ananas*. Watanabe, M., et al, (1988, p.201-206, eng) 45-3048

Mechanism of expansion of concrete aggregate due to frost action. Rusin, Z., (1991, p.614-624, eng) 45-3399

Continuum damage modelling of polycrystalline ice. Sjöland, S.G., (1990, p.449-463, eng) 45-3598

Electrohydraulic and electrochemical phenomena during hull contact with ice. Androsenko, V., et al, (1990, p.531-541, eng) 45-3604

Repair of frost damages on main road 21 in Tulli, Kilpisjärvi. Saarelainen, S., (1990, 54p. + appends., fin) 45-3841

Repair structures of frost damages on main road 21 in Peera, Finland. Saarelainen, S., (1990, 62p. + appends., fin) 45-3843

**Damping**

Dynamics of the elastic ice sheet. Kajaste-Rudnitski, J., (1990, 60p., eng) 45-827

Contribution of damping in the Maattanen model. Xu, J.Z., et al, (1990, p.1097-1104, eng) 45-3656

**Dams**

Frost heave damage to dam in Northeast China. Cao, Z.Y., (1990, p.709-718, eng) 45-172

Ice conditions in pools of the dam of the Kolyma hydroelectric station during initial operation. Kozhevnikova, T.E., et al, (1990, p.104-107, eng) 45-855

Illusion of natural rapids from a dam with tethered boulders. Barr, D.W., et al, (1991, p.54-57, eng) 45-1996

Effect of river barrages on ice regime. Starosolszky, O., (1990, p.711-718, eng) 45-2255

On-line early warning system for ice jams and stoppages on the upper Niagara River. Crisman, R.D., (1990, p.719-736, eng) 45-2256

Mathematical model of ice cover edge dynamics of power plant tail race. Belolipetkii, V.M., et al, (1990, p.78-82, eng) 45-3268

Impact of dams on the ice regime of rivers. Michel, B., (1990, p.690-696, eng) 45-3619

Cold air drainage in the Arctic. Hanssen-Bauer, I., (1990, p.99-110, eng) 45-3786

See *also*: Earth dams; Ice dams

**Data processing**

Data processing of depolarization due to rain and ice crystals. van de Kamp, M.M.J.L., (1989, 92p., eng) 45-85

Integration of digital elevation model parameters with mountain radar imagery. Gratton, D.J., et al, (1989, p.60-62, eng) 45-229

Automated ice motion tracking at the Alaska SAR facility. Kwok, R., et al, (1989, p.608-611, eng) 45-241

Study of textural and tonal information for classifying sea ice from SAR imagery. Hirose, T.K., et al, (1989, p.747-750, eng) 45-243

Ice classification algorithm development using aircraft imagery. Holt, B., et al, (1989, p.751-754, eng) 45-244

Multivariate analysis of texture statistics for SAR sea ice discrimination. Barber, D.G., et al, (1989, p.759-762, eng) 45-246

Texture measures for sea-ice classification from radar images. Shokr, M.E., (1989, p.763-768, eng) 45-247

Comparison of remotely sensed sea ice parameters. Schweiger, A.J., et al, (1989, p.769-772, eng) 45-248

Sensitivity of sea ice algorithms to tie point selection. Steffen, K., et al, (1989, p.773-776, eng) 45-249

Utilization of local texture transforms for adaptive filtering of SAR sea ice imagery. Salter, D.F., et al, (1989, p.777-779, eng) 45-250

Knowledge based system for the interpretation of SAR images of sea ice. McAvoy, J.G., et al, (1989, p.844-847, eng) 45-252

Automated tracking of arctic ice floes in multitemporal SAR imagery. McConnell, R., et al, (1989, p.1112-1116, eng) 45-255

Automated analysis of polar satellite imagery. Banfield, J., et al, (1989, p.1117-1120, eng) 45-256

Object-based feature-tracking algorithms for SAR images of the marginal ice zone. Daida, J., et al, (1989, p.1121-1124, eng) 45-257

Hough transform technique for extracting lead features from sea ice imagery. Fetterer, F.M., et al, (1989, p.1125-1128, eng) 45-258

Extraction of ridge feature characteristics from SAR images of sea ice. Vesceky, J.F., et al, (1989, p.1129-1132, eng) 45-259

Automatic estimation of ice kinematics using remote sensing data. Flasche, H., et al, (1989, p.1133-1136, eng) 45-260

Data base of glacier inventory. Liu, Z.X., et al, (1990, p.167-174, chi) 45-457

Terskol workshop on geoinformation systems of mountain territories. Kravtsova, V.I., (1989, p.228-232, rus) 45-1068

Local database of avalanche stations. Soldatov, A.I., et al, (1990, p.76-81, rus) 45-1107

Development of data capture/analysis system for the use in cold start investigation. Mina, T.I., et al, (1989, p.15-33, eng) 45-1211

Data acquisition system requirements for cold weather testing. Leier, T.E., (1989, p.139-143, eng) 45-1226

Least-squares polynomial technique for discriminating between drops and graupel in 2D image records. Czys, R.R., et al, (1991, p.J51-155, eng) 45-1597

Ice calculations and forecasts in an automated information system. Gudkovich, Z.M., (1990, p.11-17, rus) 45-1632

Glaciological data bank. Suslov, V.F., et al, (1990, p.75-79, rus) 45-1739

Possibility of developing a general purpose automated system for avalanche hazard forecasting and an avalanche information bank. Dushkin, V.S., et al, (1990, p.80-86, rus) 45-1740

Preprints. (1991, 517p., eng) 45-1913

Road weather information systems: a strategy and guideline. Doore, G.S., (1991, p.15-22, eng) 45-1914

Reviewing meteorological data on the DARE-II workstation. Smart, J.R., et al, (1991, p.157-163, eng) 45-1915

Climate information needs in the Midwest. Kunkel, K.E., et al, (1991, p.265-267, eng) 45-1916

Snow surveys and water supply forecasting. Johnson, D.E., (1990, p.15-22, eng) 45-2117

Let's involve schoolkids in data collection efforts. Clagett, G.P., (1990, p.137-140, eng) 45-2131

Polar research. Molnia, B.F., (1990, p.59-60, eng) 45-2243

Polar research from satellites. Thomas, R.H., (1991, 91p., eng) 45-2406

Formalization of ice data for computer processing. Likhachev, A.V., (1990, p.54-59, rus) 45-2436

In search of library excellence in cold regions research. Liston, N.C., (1990, p.1066-1069, eng) 45-2580

Geophysical sea ice products at the Alaska SAR facility. Holt, B., et al, (1990, p.333-344, eng) 45-2742

Algorithms to enhance radar image. Kahloun, F., et al, (1991, 47p. + appends., eng) 45-2840

On data sources and quality for the Southern Hemisphere stratosphere. Karoly, D.J., et al, (1989, p.19-32, eng) 45-2973

- Marine Observation Satellite 1 data at Showa Station. Yamanouchi, T., et al, (1991, p.22-30, eng) 45-3062
- Very short pulse C-band radar for crevasse detection. Sultz, T., et al, (1991, p.103-107, eng) 45-3068
- Sea-level changes: consequences for the Southern Hemisphere. Lutjeharms, J.R.E., et al, (1991, p.317-337, eng) 45-3472
- Development of an Alaskan radiocarbon data base as a subset of the IRDB. Galloway, J.P., et al, (1989, p.83-87, eng) 45-3751
- Qualitative evaluation of data networks for streamflow simulation in Manitoba. Warkentin, A.A., (1990, p.215-223, eng) 45-3806
- Determination of snow water equivalent on the Canadian prairies. Goodison, B.E., et al, (1990, p.297-316, eng) 45-3809
- Data transmission**
- Satellite transmission of data on blasting in Greenland. Madsen, N.K., et al, (1990, p.225-234, eng) 45-136
- Portable ARGOS data link. Bader, C.M., et al, (1989, p.1272-1275, eng) 45-443
- Antarctic penetrator program, No.1, 1989. Shibuya, K., et al, (1991, p.92-117, jpn) 45-3397
- Digital transmission of satellite images to an icebreaker. Mäkitarva, K., et al, (1990, 39p., fin) 45-3852
- Dating**
- See *also*: Age determination
- Davis Strait**
- Ice algae in the Davis Strait. Booth, J.A., (1984, p.234-243, eng) 45-3070
- Decomposition**
- Proton irradiation of ice mixtures. Nuth, J.A., et al, (1989, p.565-569, eng) 45-397
- Low-temperature destabilization of oil emulsion systems in water treatment technology. Andrienko, N.M., (1989, p.95-98, eng) 45-666
- Constructed wetlands for wastewater treatment: municipal, industrial, and agricultural. (1989, 831p., eng) 45-1873
- Decomposition in wastewater wetlands. Kadlec, R.H., (1989, p.459-468, eng) 45-1885
- Rate of cellulose decomposition in soils of Spitsbergen tundra. Bienkowski, P., (1990, p.39-45, eng) 45-2431
- Methane emission measurements from subarctic fens. Moore, T.R., et al, (1991, p.102-109, eng) 45-2792
- Microbial transformation of polychlorinated biphenyls in polar marine regions. Izrael', I.U.A., et al, (1990, p.4-7, eng) 45-3052
- Polar stratospheric clouds and ozone depletion. Toon, O.B., et al, (1991, p.68-74, eng) 45-3252
- Model simulation of chemical depletion of arctic ozone during the winter of 1989. McConnell, J.C., et al, (1991, p.10,923-10,930, eng) 45-3376
- Ozone trend in the Northern Hemisphere: a numerical study. Pitari, G., et al, (1991, p.10,931-10,940, eng) 45-3377
- Defects**
- See *also*: Crystal defects
- Deflation**
- See *also*: Wind erosion
- Deformation**
- Sub-glacial sediment deformation model. Schokking, F., (1990, p.291-304, eng) 45-356
- Styles of subglacial glaciotectonic deformation within the context of the Anglian ice-sheet. Hart, J.K., et al, (1990, p.227-241, eng) 45-431
- Bending of a conifer branch at subfreezing temperatures: implications for snow interception. Schmidt, R.A., et al, (1990, p.1250-1253, eng) 45-589
- Peculiarities of maintaining underground gas lines in the Far North. Borovkov, V.A., (1989, p.30-31, rus) 45-707
- Chemo-genic heaving of frozen rocks. Lebedenko, I.U.P., (1989, p.57-66, eng) 45-860
- Effect of frost heave deformations on airport pavement. Dolinchenko, V.A., et al, (1990, p.12-13, eng) 45-1014
- Profiling top of buried pipe of the trans Alaska pipeline using the TSI pipe locator. McDevitt, P.G., et al, (1988, p.279-286, eng) 45-1181
- Reversed direct-stress testing of ice: initial experimental results and analysis. Cole, D.M., (1990, p.303-321, eng) 45-1620
- Strength of cryogenic engineering alloys under electromagnetic loads. Strizhalo, V.A., et al, (1990, 154p., rus) 45-1856
- Observed deformation structures beneath relict iceberg scours. Woodworth-Lynas, C.M.T., (1990, p.103-125, eng) 45-1947
- Mechanisms of failure and soil deformation during scouring. Been, K., (1990, p.179-191, eng) 45-1951
- On small scale ice scour modelling. Poorooshasb, F., et al, (1990, p.193-235, eng) 45-1952
- Effect of permafrost conditions and type of foundations on deformation of building in Vorkuta. Belotserkovskaja, G.V., (1991, p.161-163, eng) 45-2399
- Iceberg scours in the geological record. Woodworth-Lynas, C.M.T., et al, (1990, p.217-233, eng) 45-2786
- Determining the creep properties of saline frozen soils. Brushkov, A.V., et al, (1990, p.83-90, rus) 45-2894
- Effect of the cryogenic structure of saline frozen soils on their strength. Minaev, A.N., (1990, p.124-128, rus) 45-2901
- Model for attenuating creep of frozen sand. Domaschuk, L., et al, (1991, p.145-161, eng) 45-3421
- Deformation of reinforced concrete anchor foundations in the far north. Grebenets, V.I., et al, (1991, p.257-260, eng) 45-3561
- Loading type effect on pavement deflection. Wiman, L.G., et al, (1990, p.829-839, eng) 45-3693
- See *also*: Ice deformation; Plastic deformation; Rheology; Snow deformation
- Defrosting**
- Antifrost system of windshield. Takada, H., (1989, p.171-178, eng) 45-1231
- Heater/defroster testing in the real world. Leier, T.E., et al, (1989, p.405-411, eng) 45-1250
- Study of frost melting on a heat pump heat exchanger. Sugawara, M., et al, (1990, p.570-583, eng) 45-2774
- Degree days**
- Long-term temperature monitoring program, 1987: Scotia-Fundy, Gulf of St. Lawrence, and Newfoundland. Gregory, D.N., et al, (1988, 491p., eng) 45-1275
- Long-term temperature monitoring program, 1989: Scotia-Fundy and the Gulf of St. Lawrence. Gregory, D.N., et al, (1990, 175p., eng) 45-1278
- Long-term temperature monitoring program, 1988: Scotia-Fundy and Gulf of St. Lawrence. Gregory, D.N., et al, (1989, 233p., eng) 45-1279
- Deicing**
- See *also*: Ice removal
- Deltas**
- Maine lakes and their outlet deltas. Caldwell, D.W., et al, (1989, p.97-108, eng) 45-2060
- Possible climate change and its impact on snowmelt and water supply in California. Roos, M., (1990, p.130-136, eng) 45-2130
- Glacimarine processes at grounding-line fans and their growth to ice-contact deltas. Powell, R.D., (1990, p.53-73, eng) 45-2781
- Dendritic ice**
- On the growth of marine icicles. Chung, K.K., et al, (1990, p.393-408, eng) 45-1681
- Origin of spongy ice. Makkonen, L., (1990, p.1022-1030, eng) 45-3650
- Dendrochronology**
- See *also*: Age determination
- Density (mass/volume)**
- Temperature-salinity-density ratio near the Pacific subarctic front. Kuz'min, V.A., (1989, p.58-61, rus) 45-737
- Distinguishing the Pacific subarctic front. Kuz'min, V.A., (1988, p.60-62, rus) 45-876
- Good diesel fuel cold properties reduce engine performance. Mikkonen, S., et al, (1989, p.123-132, eng) 45-1224
- Density of antifreeze-water mixtures. Flowers, P.A., (1990, p.1068-1069, eng) 45-2075
- Promotion of H-bond cage dynamics by alcohol in supercooled water. Bulone, D., et al, (1991, p.6816-6826, eng) 45-2776
- Unsteady free convective flow in an enclosure containing water near its density maximum. Oosthuizen, P.H., et al, (1990, p.83-91, eng) 45-3098
- See *also*: Atmospheric density; Ice density; Snow density
- Density (number/volume)**
- See *also*: Ion density (concentration); Particle size distribution
- Deposits**
- See *also*: Glacial deposits; Lacustrine deposits; Marine deposits; Quaternary deposits; Sediments
- Depth**
- See *also*: Permafrost depth; Snow depth
- Depth hoar**
- Summertime formation of depth hoar in central Greenland. Alley, R.B., et al, (1990, p.2393-2396, eng) 45-1991
- Desert soils**
- Soil development rates in the Transantarctic Mountains. Bockheim, J.G., (1990, p.59-77, eng) 45-715
- Pedogenic zonation of soils of the southern circumpolar region. Bockheim, J.G., et al, (1990, p.47-66, eng) 45-1855
- Effect of erosion and deflation on the structure of soil cover. Dzhaneisov, R.D., et al, (1990, 91p., rus) 45-2244
- Design**
- Design and performance of the antarctic radar depth sounder. Raju, G., et al, (1990, p.247-254, eng) 45-68
- Meter/gate station design improvements: phase 1. Final report. (1988, 58p., eng) 45-318
- Oden—Sweden's latest icebreaker built by GVA. (1989, p.24-25, eng) 45-368
- Drifting snow. Tabler, R.D., et al, (1990, p.95-145, eng) 45-407
- Culverts. Ashton, W.S., et al, (1990, p.557-577, eng) 45-421
- Evaluation of precipitation measurements in the Arctic. Clagett, G.P., (1990, p.617-639, eng) 45-422
- Noise Package: an autonomous ambient noise measurement system. Spychalski, S.E., et al, (1989, p.1255-1257, eng) 45-440
- Compact acoustic recorder. Stein, R., (1989, p.1258-1262, eng) 45-441
- Computer-controlled yo-yo CTD system for the Arctic. Andersen, R., et al, (1989, p.1263-1266, eng) 45-442
- Severe Environment Surface Mooring (SESMOOR). Kery, S.M., (1989, p.1398-1405, eng) 45-450
- Heat pipe application for naval vessel surface deicing. Beltran, M.R., et al, (1989, p.339-366, eng) 45-546
- Testing of construction design. Mironov, N.G., et al, (1990, p.40-41, rus) 45-734
- Mechanized ice augers. Tavrizov, V.M., (1990, p.38-39, rus) 45-742
- Steel gallery supports for construction in the north. Buldakov, I.U.K., et al, (1990, p.12-14, rus) 45-800
- Geocryological changes in hydroelectric station reservoir basins. Kudoiarov, L.I., et al, (1990, p.55-60, eng) 45-854
- Converting the thermal energy of arctic sea water into electricity. Moskvicheva, V.N., et al, (1987, p.72-77, eng) 45-866
- Testing the propulsive performance of models of ice navigating ships. Tsol, L.G., et al, (1989, p.14-19, rus) 45-1138
- Ice tests on an "Enthusiast" class harbor tug. Glebko, I.U.V., et al, (1989, p.26-28, rus) 45-1139
- Additional hull reinforcements for ships used in the Arctic. Karavanov, S.B., et al, (1989, p.100-106, rus) 45-1140
- Designing electrical grounding for permafrost with inclined interface layers. Shevtsov, I.U.V., (1989, p.83-84, rus) 45-1167
- Construction and design of ventilated foundations on permafrost. Goncharov, I.U.M., et al, (1990, p.47-58, rus) 45-1200
- Controlling the frozen regime of bearing ground of structures over mines. Gur'ianov, I.E., (1990, p.77-92, rus) 45-1203
- Design of sub-arctic type winter tyres. Lindstrom, L., et al, (1989, p.53-60, eng) 45-1214
- Influence of diesel fuel properties and ambient temperature on engines. Juva, A., et al, (1989, p.101-111, eng) 45-1221
- Snowmobile suspension system design under university-industry collaboration. Sankar, S., et al, (1989, p.183-191, eng) 45-1232
- Vehicle operation under arctic conditions. Rosenkranz, J., (1989, p.301-315, eng) 45-1242
- Measuring electrical characteristics of dielectric materials. Trepov, G.V., (1989, p.46-52, rus) 45-1488
- Laboratory and field tests of a wire mesh frazil collector. Foltyn, E.P., (1990, 10p., eng) 45-1511
- Development of a cryogenic dew/frost point hygrometer. Buck, A.L., et al, (1991, p.322-326, eng) 45-1594
- Reversed direct-stress testing of ice: equipment and example results. Cole, D.M., et al, (1990, p.295-302, eng) 45-1619
- Piezoelectric ice sensor for aviation applications. Floyd, M.D., (1990, p.13-24, eng) 45-1924
- Proceedings. (1990, 499p., eng) 45-1945
- Operations and maintenance of a northern pipeline. Sangster, R.H.B., (1990, p.377-384, eng) 45-1960
- Geotechnical monitoring for an arctic offshore pipeline. Hanna, A.J., et al, (1990, p.385-394, eng) 45-1961
- Performance of instruments and the success of monitoring programs in the offshore environment. DiBiagio, E., (1990, p.395-417, eng) 45-1962
- Improving borehole and blasthole drilling in frozen conglomerate. Panasenko, N.N., et al, (1990, p.58-61, rus) 45-2246
- Width of planned snow-retention afforestation roads. Kolomiets, V.A., (1990, p.93-94, rus) 45-2247
- Glacial waters, solid transport and decantation in hydroelectrical systems. Bezinge, A., et al, (1989, p.247-256, fre) 45-2286
- Steep climbs for Scania-powered snow groomers. Brebeck, J., (1990, p.36-38, eng) 45-2290
- Design and construction of ash dumps. Syssov, I.U.M., et al, (1990, 249p., rus) 45-2574
- Icebreaker manoeuvrability. Peirce, T.H., et al, (1990, p.145-154, eng) 45-2728
- Design features and operation capability of the new US antarctic research vessel. Kennedy, H., et al, (1990, p.167-176, eng) 45-2730
- Mathematical model for predicting icebreaker performance. Carter, D., et al, (1990, p.177-192, eng) 45-2731
- Safe convoy of non-ice class ships along the Northern Sea Route. Arnikanov, A.I., et al, (1990, p.259-267, eng) 45-2736
- Research, design, and construction of roads in permafrost regions. Popov, B.I., et al, (1990, 271p., rus) 45-2998
- Cathodic protection in Cook Inlet arctic waters. Hedborg, C.E., (1991, p.24-28, eng) 45-3025
- Treatment of wastewater in polar environments—status and future trends in Scandinavia. Rusten, B., et al, (1990, p.99-106, eng) 45-3028
- Polar class icebreaker oceanographic mission upgrade. Tilyou, M., et al, (1991, p.218-230, eng) 45-3053
- Taymyr: a new nuclear icebreaker for the Soviet Union. (1989, p.E314-E315, eng) 45-3103



**Design (cont.)**

- Spray ice islands for exploration in the Canadian Beaufort Sea. Weaver, J.S., et al, [1991, p.17-22, eng] 45-3143
- Laboratory tests with a hybrid thermosyphon. Haynes, F.D., et al, [1991, p.93-99, eng] 45-3154
- Design of sealed fluid-filled in situ ice stress sensors. Spencer, P.A., et al, [1991, p.177-185, eng] 45-3167
- Two and three dimensional response of nonlinear soil under gravity structures. Prasad, K.S.R., et al, [1991, p.253-260, eng] 45-3177
- Basis for ice formation design. LaFleur, R.S., [1990, p.393-401, eng] 45-3195
- Tire snow traction performance. Ohoyama, K., et al, [1990, p.86-88, eng] 45-3205
- Heat pipes for ground heating and cooling. Vasiliev, L.L., [1988, p.125-138, eng] 45-3216
- Technical developments and the future of Soviet arctic marine transportation. Brigham, L.W., [1991, p.125-139, eng] 45-3329
- Design of a high-pressure low-temperature triaxial deformation cell for ice. Sammonds, P.R., et al, [1991, p.177-188, eng] 45-3423
- Testing system for strain rate control of ice deformation. Rist, M.A., et al, [1991, p.189-200, eng] 45-3424
- Plastic highway bridges. Plecnik, J., et al, [1991, p.64-65, eng] 45-3477
- Mitigation of vehicle storage and traffic control problems during avalanche control. Morrall, J., [1991, p.191-200, eng] 45-3535
- Physical modelling of icebreaking ships in fine-grain model ice. Enkvist, E., [1990, p.15-42, eng] 45-3563
- Rubble-spray ice islands. Gulati, K.C., et al, [1990, p.596-605, eng] 45-3610
- Way of preventing structures from damage due to ice pressure. Ao, B.J., et al, [1990, p.858-863, eng] 45-3635
- Total ice force on multi-legged structures. Kato, K., [1990, p.574-983, eng] 45-3645
- Design optimization of jacket platforms for ice infested waters. Wang, L.Y., et al, [1990, p.1056-1070, eng] 45-3653
- Development of seawater batteries as a long-term arctic power source. Hammond, R., et al, [1990, p.1122-1129, eng] 45-3659
- Repair of frost damages on main road 21 in Tulli, Kilpisjärvi. Saarelainen, S., [1990, 54p. + appends., fin] 45-3841
- Prevention of snow drifting with the help of road levelling and design. Saarelainen, S., et al, [1990, 36p., fin] 45-3842
- Repair structures of frost damages on main road 21 in Peera, Finland. Saarelainen, S., [1990, 62p. + appends., fin] 45-3843
- Finnish cold climate construction technology, part 2. [1990, 112p. + appends., fin] 45-3874
- Design criteria**
- Engineering analysis of ice/propeller interaction data. Summary 300 555p. Laskow, V., et al, [1986, 55p., eng] 45-186
- Engineering analysis of ice/propeller interaction data. Laskow, V., et al, [1986, 322p. + appends., eng] 45-188
- Culverts. Ashton, W.S., et al, [1990, p.557-577, eng] 45-421
- Design criteria for oceanographic survey ships operated in the Marginal Ice Zone (MIZ). Strasel, E.S., et al, [1989, p.69-98, eng] 45-533
- Cold regions design limits for conventional surface ships. Schultz, L.A., [1989, p.99-111, eng] 45-534
- Sludge freezing in shallow layers. Vesilind, P.A., et al, [1990, p.646-650, eng] 45-844
- Failures of agricultural buildings in Estonia caused by snow loads. Keakkula, T., [1990, p.195-200, eng] 45-1150
- Designing electrical grounding for permafrost with inclined interface layers. Shevtsov, I.U.V., [1989, p.83-84, rus] 45-1167
- Test plan for transportable maintenance shelter qualification test. Rhodes, D.A., [1990, 16p. + appends., eng] 45-1200
- Allowing for ice conditions in designing offshore construction. Trusakov, P.A., [1987, p.89-94, rus] 45-1568
- Design and operational characteristics of a heated radome for air motion measurement. Brown, E.N., [1991, p.134-139, eng] 45-1592
- Numerical simulations for rare ice gouge depths. Wang, A.T., [1990, p.19-32, eng] 45-1764
- Ice design criteria for wide arctic structures. Blanchet, D., [1990, p.701-725, eng] 45-1868
- Soil temperatures and freezing indices at depth. McCormick, G., [1990, p.749-751, eng] 45-1870
- Vessel requirements for arctic pipeline trenching and installation. Jolles, W.H., [1990, p.347-364, eng] 45-1958
- Improving borehole and blasthole drilling in frozen conglomerate. Pansaenko, N.N., et al, [1990, p.58-61, rus] 45-2246
- Improved methods of testing piles in frozen soils. Vialov, S.S., et al, [1991, p.155-161, eng] 45-2398
- Thaw-subidence effects on offshore pipelines. Nixon, J.F., [1991, p.28-39, eng] 45-2418

- Design features and operation capability of the new US antarctic research vessel. Kennedy, H., et al, [1990, p.167-176, eng] 45-2730
- Ramming icebreaking performance of the USCGC polar class icebreakers. Minnick, P.V., et al, [1990, p.283-294, eng] 45-2738
- Temperature regime of structures with permafrost bases. Gokhman, M.R., et al, [1991, p.189-194, eng] 45-2996
- Research, design, and construction of roads in permafrost regions. Popov, B.I., et al, [1990, 271p., rus] 45-2998
- Classification system of winter conditions of small-craft harbor design for the Great Lakes. Wortley, C.A., [1990, p.821-834, eng] 45-3632
- Traffic and transport on ice cover in Nenjiang River. Xu, B.M., et al, [1990, p.835-844, eng] 45-3633
- Thirty-five years of sea-ice runway operation—McMurdo Station, Antarctica. Barthelemy, J.L., [1990, p.864-877, eng] 45-3636
- Sources of uncertainties in methods of ice design for offshore structures. Foroughi, A.R., [1990, p.923-930, eng] 45-3641
- Repair of frost damages on main road 21 in Tulli, Kilpisjärvi. Saarelainen, S., [1990, 54p. + appends., fin] 45-3841
- See *also*: Building codes
- Detection**
- Evaluation of a field kit for detection of TNT in water and soils. Jenkins, T.F., et al, [1990, 14p., eng] 45-192
- Adaptation of the ISCCP cloud detection algorithm to combined AVHRR and SMMR arctic data. Key, J., et al, [1989, p.188-191, eng] 45-223
- Detection and characterization of ice ridges in the Baltic Sea using CV-580 SAR imagery. Johansson, R., [1989, p.386-389, eng] 45-237
- Automated analysis of polar satellite imagery. Banfield, J., et al, [1989, p.1117-1120, eng] 45-256
- Search and rescue target detection experiment. Canoso Bank, 1988. Dawe, B.R., et al, [1989, Var. p., eng] 45-550
- Real-time radar detection of iceberg shadows. Orlando, J.R., et al, [1990, p.112-118, eng] 45-615
- Environmental influences on mine detection. Hogan, A.W., et al, [1990, 6p., eng] 45-933
- Profiling top of buried pipe of the trans Alaska pipeline using the TSI pipe locator. McDevitt, P.G., et al, [1988, p.279-286, eng] 45-1181
- Snow/cloud discrimination with multispectral satellite measurements. Allen, R.C., Jr., et al, [1990, p.994-1004, eng] 45-1273
- Use of polarization to characterize precipitation and discriminate large hail. Balakrishnan, N., et al, [1990, p.1525-1540, eng] 45-1382
- Field test results on a precipitation occurrence and identification sensor. Wiggins, W.L., et al, [1991, p.348-351, eng] 45-1596
- Least-squares polynomial technique for discriminating between drops and graupel in 2D image records. Czyn, R.R., et al, [1991, p.351-355, eng] 45-1597
- One-dimensional temperature modeling techniques: review and recommendations. Balick, L.K., et al, [1990, 17p., eng] 45-1698
- New method for assessment of air voids in plastic concrete. Ansari, F., [1990, p.901-909, eng] 45-2313
- Surface radar investigations of an icing mound on the Sagavanirktok River, Alaska. Arcone, S.A., et al, [1990, p.353-363, eng] 45-2744
- Detection of waves in frazil ice in synthetic aperture radar imagery. Wadhams, P., et al, [1991, p.8835-8852, eng] 45-3019
- Detection of objects buried in wet snowpack by an FM-CW radar. Yamaguchi, Y., et al, [1991, p.201-208, eng] 45-3188
- Texture analysis of radiometric signatures of new sea ice forming in arctic leads. Eppler, D.T., et al, [1991, p.233-241, eng] 45-3189
- Ocean feature study using synthetic aperture radar. Ikeda, M., et al, [1991, p.10,593-10,602, eng] 45-3309
- Comparative ground truth and remotely sensed measurements of Baltic Sea ice ridges. Kankaanperä, P., et al, [1990, p.1130-1143, eng] 45-3660
- Abnormal radar backscattering of submillimeter waves from cloud ice particles. Ajvazian, H.M., [1991, p.919-944, eng] 45-3886
- See *also*: Crevasse detection; Ice detection; Moisture detection
- Deterioration**
- Norwegian model for prediction of pavement deterioration (7). Bertelsen, D., [1990, p.875-886, eng] 45-3694
- See *also*: Ice deterioration
- Deuterium oxide**
- See *also*: Heavy water
- Deuterium oxide ice**
- Luminescence spectrum of irradiated deuterium oxide ice. Vernon, C.F., et al, [1990, p.529-531, eng] 45-590
- Development**
- See *also*: Economic development; Land development; Landscape development; Natural resources

- Dew point**
- Antifrost system of windshield. Takada, H., [1989, p.171-178, eng] 45-1231
- Diagenesis**
- Cryogenic diagenesis as the cause of ice deposits in arctic marine sediments. Danilov, I.D., [1991, p.78-80, eng] 45-2479
- Dictionaries**
- Elsevier's dictionary of glaciology in four languages. Kotliakov, V.M., ed, [1990, 336p., eng] 45-2091
- Russian-English arctic environment glossary. [1991, 154p., eng] 45-3085
- Dielectric properties**
- Physical and thermal properties of Norman Wells-Zama Pipeline core specimens. Patterson, D.E., et al, [1988, 59p. + appends., eng] 45-387
- Implications of dielectric properties of icy satellites for radar sounding. Thompson, W.R., et al, [1990, p.336-354, eng] 45-848
- Radar reflections from wet snow at weather radar wavelengths. De Wolf, D.A., et al, [1990, p.1843-1847, eng] 45-1016
- Microwave snow sounding for trafficability analysis. Alalommäki, J., et al, [1989, p.145-150, eng] 45-1227
- Geophysical aspects of ice core drilling in Antarctica. Moore, J.C., [1988, 168p. + appends., eng] 45-1518
- Surface emissivity at below-zero temperatures. Kondrat'ev, K.I.A., et al, [1991, p.7-9, eng] 45-2477
- Dielectric studies of the transition of ice Ih to ice XI. Zaretskii, A.V., et al, [1991, p.757-768, eng] 45-2485
- Application of the theory of dispersion forces to the surface melting of ice. Elbaum, M., et al, [1991, p.1713-1716, eng] 45-2589
- Calculating dielectric response function of cubic ice. Zaider, M., et al, [1990, p.25-39, eng] 45-2948
- Dielectric profiling in ice core studies. Moore, J., et al, [1991, p.81-92, eng] 45-3066
- Model for the complex permittivity of ice at frequencies below 1 THz. Hufford, G., [1991, p.677-682, eng] 45-3381
- Real permittivity of snow at 1 MHz and 0 C. Peria, R., [1991, p.215-219, eng] 45-3427
- Diesel engines**
- Subzero Engineering Conference proceedings. [1989, 470p., eng] 45-1209
- Development of data capture/analysis system for the use in cold start investigation. Mina, T.I., et al, [1989, p.15-33, eng] 45-1211
- Automotive exhaust emissions at low ambient temperature. Laurikko, J.K., [1989, p.35-46, eng] 45-1212
- Influence of diesel fuel properties and ambient temperature on engines. Juva, A., et al, [1989, p.101-111, eng] 45-1221
- Good diesel fuel cold properties reduce engine performance. Mikkonen, S., et al, [1989, p.123-132, eng] 45-1224
- Investigation of a novel aid for cold starting of diesels. Zheng, J., et al, [1989, p.321-331, eng] 45-1244
- Cold starting the Volvo way. Hakansson, N.O., et al, [1989, p.337-344, eng] 45-1246
- Low temperature operability of diesel vehicles. Rieckard, D.J., et al, [1989, p.375-382, eng] 45-1249
- Synthetic automotive lubricants for superior low-temperature operation. Aho, E., et al, [1989, p.421-437, eng] 45-1252
- Low temperature pumpability studies in a heavy-duty diesel engine, part II. Machleder, W.H., et al, [1989, p.439-453, eng] 45-1253
- Low temperature operability of diesel engines. Rieckard, D.J., et al, [1989, p.33-37, eng] 45-1290
- Steep climbs for Scania-powered snow groomers. Brebeck, J., [1990, p.36-38, eng] 45-2290
- Diffraction**
- See *also*: X ray diffraction
- Diffusion**
- Double-diffusive underwater ice formation. Krylov, A.D., [1989, p.92-94, rus] 45-736
- See *also*: Ion diffusion; Self diffusion; Thermal diffusion; Turbulent diffusion; Vapor diffusion
- Discontinuous permafrost**
- Permafrost and terrain research and monitoring: Norman Wells pipeline—Volume 1: environmental and engineering considerations. MacInnes, K.L., et al, [1989, 132p., eng] 45-32
- Ground water. Nelson, G.L., et al, [1990, p.317-348, eng] 45-412
- Soil and rock temperatures in discontinuous permafrost. King, L., [1990, p.177-188, eng] 45-1297
- Palaeoenvironmental implications of recent ice-wedge development. Burn, C.R., [1990, p.3-14, eng] 45-2230
- Permafrost and groundwater conditions, Huola River Basin, northeast China. Wang, B.L., [1990, p.45-52, eng] 45-2233
- Surface energy budget of boreal forest soil temperature. Bonan, G.B., [1991, p.767-781, eng] 45-3293
- See *also*: Taliks
- Dislocations (materials)**
- Mechanisms of failure and soil deformation during scouring. Been, K., [1990, p.179-191, eng] 45-1951

- Examination of dislocations in ice. Final report. Baker, I., et al, 1991, 8p., eng 45-2141
- Dispersions**
- Glacial dispersal trains. Dilabio, R.N.W., 1990, p.109-122, eng 45-2548
- Disposal**
- See *also*: Snow disposal; Waste disposal
- Distribution**
- Ice particle development in cumuliform clouds. Hobbs, P.V., et al, 1990, p.2710-2722, eng 45-1802
- Zonality of the distribution of chemical elements in terrigenous rocks. Tumanov, V.R., 1989, p.130-141, rus 45-1834
- Altitude calculation of climatic snowlines and their changing rules in China. Wu, X.H., et al, 1991, p.56-60, eng 45-2483
- Ice thickness distribution in the Arctic Ocean. Wadhams, P., 1990, p.3-20, eng 45-2718
- Distribution of heterotrophic microorganisms in the Greenland Sea. Mishustina, I.E., et al, 1963, p.914-921, rus 45-3240
- Distribution of a microbial population in the world ocean. Kriss, A.E., et al, 1960, p.34-41, eng 45-3370
- See *also*: Permafrost distribution; Sea ice distribution; Snow cover distribution
- Disturbances**
- See *also*: Atmospheric disturbances
- Diurnal variations**
- Diurnal variation of precipitation in Langtang Valley, Nepal Himalayas. Ueno, K., et al, 1990, p.93-101, eng 45-202
- Docks**
- Classification system of winter conditions of small-craft harbor design for the Great Lakes. Wortley, C.A., 1990, p.821-834, eng 45-3632
- See *also*: Piers; Wharves
- Domes**
- See *also*: Pings
- Doped ice**
- Dielectric observations of the transformation of single crystals of KOH-doped ice Ih to ice XI. Oguro, M., et al, 1991, p.401-403, eng 45-1902
- Dielectric studies of the transition of ice Ih to ice XI. Zaretskii, A.V., et al, 1991, p.757-768, eng 45-2485
- Doped ice relaxation time related to metal ion activity. Abe, H., et al, 1991, p.617-621, eng 45-2599
- Experience with a chemically-doped fine-grained model ice. Jalonen, R., et al, 1990, p.639-651, eng 45-3614
- Drainage**
- Spring breakup flows in Anchorage storm drains. Billman, D., et al, 1990, p.669-693, eng 45-424
- Proceedings. Vol.2. 1988, 105p., eng 45-759
- Drainage from swamps in river basins. Ivanov, K.E., et al, 1988, p.62-65, eng 45-766
- Drainage effect on the environment. Shiklomanov, I.A., et al, 1988, p.66-71, eng 45-767
- Water table of drained peatlands in Ontario. Berry, G.J., et al, 1988, p.72-79, eng 45-768
- Nitrogen and phosphorus dynamics and the fate of agricultural runoff. Neely, R.K., et al, 1989, p.92-131, eng 45-834
- Observations of snow loads on drainage ditches at the gratings. Komatsu, J., et al, 1986, p.40-48, jpn 45-927
- Analysis of winter low-flow rates in New Hampshire streams. Mellob, R.A., 1990, 12p., eng 45-1260
- Postglacial evolution of drainage in the St. John River basin. Kite, J.S., et al, 1989, p.135-142, eng 45-2070
- Yukon Territory snow survey bulletin: Mar. 1991, 1991, 25p., eng 45-2093
- Thermal regime surrounding a longitudinal edge drain. Allen, W.L., 1991, p.164-177, eng 45-2331
- Equilibrium ice sheet profile in the Shirase Glacier drainage basin. Fujita, S., et al, 1991, p.12-29, eng 45-3392
- Glacial and glaciofluvial material transport in subpolar glaciers; examples from Svalbard. Sollid, J.L., et al, 1990, p.159-165, eng 45-3792
- Improvement of icing on main road 21; construction and monitoring. Lehtonen, J., 1990, 60p., fin 45-3873
- See *also*: Runoff; Subglacial drainage; Subsurface drainage; Surface drainage
- Drains**
- Tests on surface components of snow removal drains: tests on snow removal drain covers. Maeda, T., et al, 1990, p.209-214, jpn 45-750
- Thermal regime surrounding a longitudinal edge drain. Allen, W.L., 1991, p.164-177, eng 45-2331
- Snow drainage ditches in Hokkaido. Sakaguchi, K., 1988, p.211-216, jpn 45-2516
- Snow drainage ditches as winter (severe winter) countermeasures in Shimokawa. Yoshikawa, M., et al, 1988, p.217-222, jpn 45-2517
- Drake Passage**
- SIBEX Physical Oceanography Workshop, Cambridge, U.K., Mar. 9-27, 1987. 1990, 38p., eng 45-304
- Dredging**
- Offshore hard minerals. Hale, P.B., 1990, p.551-565, eng 45-1695
- OCS Mining Program: Norton Sound Lease Sale. Final environmental impact statement. 1991, Var. p., eng 45-2160
- OCS Mining Program: Norton Sound Lease Sale. Second draft environmental impact statement. 1990, Var. p., eng 45-2161
- Drift**
- Spring surface circulation patterns detected using remote sensing of drifting ice floes in Hudson Bay, Canada. Larouche, P., 1989, p.780-782, eng 45-251
- Automatic estimation of ice kinematics using remote sensing data. Flesche, H., et al, 1989, p.1133-1136, eng 45-260
- Determination of ice displacements from sequential SAR imagery. Oliphant, K.D., et al, 1989, p.1152-1155, eng 45-264
- Ice edge motion during MIZEX'87. Sandven, S., et al, 1989, p.1535-1538, eng 45-277
- Observations of sea ice drift off Newfoundland using satellite imagery and ice beacons. Peterson, I.K., et al, 1989, p.2359-2362, eng 45-294
- Sea ice velocity measurements by upward-looking Doppler current profilers. Belliveau, D.J., et al, 1990, p.596-602, eng 45-353
- Sea ice drift and deformation in the western Arctic. Pease, C.H., et al, 1989, p.1276-1281, eng 45-444
- Sea-ice velocity measurement verification of an acoustic current profiler. Melrose, S.K., et al, 1989, p.1304-1307, eng 45-449
- Calving and drift of iceberg B-9 in the Ross Sea. Keys, H.J.R., et al, 1990, p.243-257, eng 45-469
- Icebergs as tracers of water movement in the Braniff Strait. Madejski, P., et al, 1990, p.259-263, eng 45-470
- Optimum drifter deployment for iceberg drift forecasting. Venkatesh, S., et al, 1990, p.117-131, eng 45-495
- Two-dimensional free drift model for river ice cover formation. Ho, C.F., 1990, 169p., eng 45-506
- Iceberg wakes in Arctic sea ice. Nilsen, J.H., et al, 1990, p.81-86, eng 45-523
- Arctic environmental drifting buoy, Aug. 1987-Apr. 1988. Honjo, S., et al, 1990, 128p., eng 45-565
- Algorithm for determining motion vectors in ice floe images. Manohar, M., et al, 1988, p.343-347, eng 45-606
- Influence of shape on iceberg wave-induced velocity statistics. Lever, J.H., et al, 1990, p.263-269, eng 45-716
- Divergent redistribution of ice in the Northern Arctic Ocean. Nazirov, M., 1987, p.244-254, eng 45-862
- Sea-ice kinematics as determined by remotely-sensed ice drift. Lewis, J.K., et al, 1989, p.1113-1121, eng 45-900
- Data report on the Weddell Ice Dynamics Experiment. Crane, D.R., et al, 1990, n.p., eng 45-944
- Modelling the behaviour of oil spills in ice-infested waters. Venkatesh, S., et al, 1990, p.303-329, eng 45-1151
- Coupled one-dimensional sea ice-ocean model applied to a semi-enclosed basin. Omstedt, A., 1990, p.568-582, eng 45-1175
- Sea ice fluctuations in the western Labrador Sea (1963-1988). Peterson, I.K., et al, 1990, 130p., eng 45-1287
- Sea ice data for the Newfoundland Shelf, 1988-1989. Fissel, D.B., et al, 1989, 165p., eng 45-1288
- Predictions and studies with a one-dimensional ice-ocean model. Riedinger, S.H., et al, 1990, p.1545-1562, eng 45-1386
- Sea ice concentrations in the Canada Basin during 1988. Serreze, M.C., et al, 1990, p.22,253-22,267, eng 45-1414
- Basic elements of the ice regime of the Barents Sea. Zubakin, G.K., et al, 1989, p.93-102, rus 45-1626
- Ice formations and their distribution functions. Zubakin, G.K., et al, 1989, p.109-116, rus 45-1628
- Modelling of ice drift in the arctic basin. Kolesov, S.A., 1990, p.32-38, rus 45-1634
- Hydrodynamic model of steady-state ice drift. Ponomarev, V.I., 1990, p.39-52, rus 45-1635
- Calculating the parameters of ice drift in the Greenland Sea. Zubakin, G.K., 1990, p.105-115, rus 45-1641
- Calculating pressure and drift in unbroken ice cover. Tsarev, V.A., 1990, p.125-129, rus 45-1643
- "Ice rivers" in arctic seas. Benzeman, V.IU., 1989, p.91-98, rus 45-1658
- Using a Kalman filter for calculating ice drift parameters. Lashov, E.S., et al, 1989, p.99-105, rus 45-1659
- Three-dimensional structure of iceberg tracks. Pisarevskaja, L.G., et al, 1989, p.140-144, rus 45-1662
- Shear flow of sea ice in the marginal ice zone with collision rheology. Leppäranta, M., et al, 1990, p.57-74, eng 45-1679
- Structure and dynamics of the Arctic Ocean ice cover. Untersteiner, N., 1990, p.37-51, eng 45-1689
- Characteristics of the total drift of compacted ice in a coastal zone. Truskov, P.A., et al, 1990, p.110-114, rus 45-1747
- Modelling of iceberg drift motions near a large offshore structure. Isaacson, M., et al, 1990, p.47-58, eng 45-1766
- Wave-induced drift force in the marginal ice zone. Masson, D., 1991, p.3-10, eng 45-1806
- Push and tidal deformation of drifting ice. Legen'kov, A.P., 1988, 104p., rus 45-1861
- Two-layer wind-driven coastal circulation model. Poon, Y.K., et al, 1991, p.2535-2548, eng 45-2041
- Outer Continental Shelf Environmental Assessment Program: Final reports of principal investigators, Vol.72. 1990, 634p., eng 45-2155
- Arctic contribution to upper-ocean variability in the North Atlantic. Walsh, J.E., et al, 1990, p.1462-1473, eng 45-2212
- Long-range forecasting of intensive ice drift on the Yenisey River. Efremova, N.D., 1989, p.82-87, rus 45-2276
- Two-dimensional surface drift model for river ice. Shen, H.T., et al, 1991, p.355-362, eng 45-2347
- Seasonal ice zone studies. Sandven, S., et al, 1990, p.567-591, eng 45-2391
- Ice rafting of sedimentary material in the Azov Sea. Aibulatov, N.A., et al, 1991, p.179-187, eng 45-2440
- Long-term iceberg collision-risk assessment methods for fixed offshore structures. Korsnes, R., 1989, p.203-214, eng 45-2591
- Radiogrammetric image processing. Leberl, F.W., 1990, 595p. (pertinent p.499-525), eng 45-2601
- Fram Strait satellite image-derived ice motions. Emery, W.J., et al, 1991, p.4751-4768, eng 45-2684
- Ice Technology for Polar Operations: proceedings of the 2nd international conference. 1990, 426p., eng 45-2717
- Interaction of arctic offshore structures with drifting ice islands and thick sea ice floes. Sackinger, W.M., et al, 1990, p.211-228, eng 45-2733
- Analysis of ice island dynamics. Lu, M.C., et al, 1990, p.241-256, eng 45-2735
- Radar detection of a calving event at the Milne Ice Shelf. N.W.T. Jeffries, M.O., et al, 1990, p.321-331, eng 45-2741
- Design of a sea ice forecasting system for the Barents Sea. Preller, R., et al, 1990, p.379-393, eng 45-2746
- Deployment strategy for satellite tracked drifters to support iceberg drift forecasting. El-Tahan, M., et al, 1990, p.395-411, eng 45-2747
- Icebergs as oceanographic tracers (in the example of the Weddell Sea). Nazirov, M., 1989, p.142-148, rus 45-2760
- Ice pattern recognition on space photos including drift. Bahun, V.V., et al, 1990, p.386-391, eng 45-2911
- Effect of internal waves on sea ice drift. Bruno, M.S., 1991, p.137-141, eng 45-3161
- Observations of short-period ice floe accelerations during leg II of the *Polarbørn* drift. Martin, S., et al, 1991, p.10,567-10,580, eng 45-3307
- Ocean feature study using synthetic aperture radar. Ikeda, M., et al, 1991, p.10,593-10,602, eng 45-3309
- Studies of the ice dynamics in the Arctic Basin over long-term periods. Appel, L.L., et al, 1990, p.111-123, eng 45-3569
- Ice investigations for the proof of tidal power plant designs. Bernshtein, L.B., et al, 1990, p.136-142, eng 45-3571
- Ice cover simulation for arctic estuary. Ivanov, V.V., et al, 1990, p.210-218, eng 45-3577
- Summer sea ice simulation in the East Greenland area. Lu, Q.M., et al, 1990, p.337-351, eng 45-3588
- Sea ice response to global climatic change. Hibler, W.D., III, 1990, p.125-150, eng 45-3822
- See *also*: Continental drift; Snowdrifts
- Drift stations**
- Sea ice drift and deformation in the western Arctic. Pease, C.H., et al, 1989, p.1276-1281, eng 45-444
- Optimum drifter deployment for iceberg drift forecasting. Venkatesh, S., et al, 1990, p.117-131, eng 45-495
- Arctic environmental drifting buoy, Aug. 1987-Apr. 1988. Honjo, S., et al, 1990, 128p., eng 45-565
- Compendium of environmental data collected during the *Iceshelf-88* exercise. Bucca, P.J., 1990, n.p., eng 45-936
- Data report on the Weddell Ice Dynamics Experiment. Crane, D.R., et al, 1990, n.p., eng 45-944
- Deployment strategy for satellite tracked drifters to support iceberg drift forecasting. El-Tahan, M., et al, 1990, p.395-411, eng 45-2747
- Drill core analysis**
- Ice core analysis. Shoji, H., 1990, p.99-112, jpn 45-113
- Collection of intact cores from a rocky desert and a glacial till soil. Lewis, T.E., et al, 1990, p.938-940, eng 45-225
- Analysis of Norman Wells core samples. Final report. Patterson, D.E., et al, 1987, 60p. + appends., eng 45-384
- Physical and thermal properties of core specimens. Norman Wells Pipeline. Patterson, D.E., et al, 1989, 23p. + appends., eng 45-385
- Thermal data and core specimen analysis. Norman Wells Pipeline. Rieborough, D.W., 1989, 30p. + appends., eng 45-386

**Drill core analysis (cont.)**

- Identification of annual layers in superimposed ice from Storöybjökulen in northeastern Svalbard. Jonsson, S., et al., 1990, p.41-54, eng 45-1187
- New methods in ice core processing. Stauffer, B., et al., 1989, p.151-157, eng 45-1468
- Trace element analysis of antarctic ice cores. Boutron, C.F., et al., 1989, p.182-197, eng 45-1472
- Geophysical aspects of ice core drilling in Antarctica. Moore, J.C., 1988, 168p. + appends, eng 45-1518
- Comments on "6000-year climate records in an ice core from the Høghetta ice dome in northern Spitsbergen". Dowdeswell, J.A., et al., 1990, p.353-356, eng 45-1549
- Holocene paleoclimatology of the Queen Elizabeth Islands, Canadian High Arctic. Braaten, R.S., 1990, p.365-384, eng 45-2074
- Saharan dust deposition over Mont Blanc (French Alps) during the last 30 years. De Angelis, M., et al., 1991, p.61-75, eng 45-3020
- Spatial variability of sea-ice properties in the northwestern Weddell Sea. Eicken, H., et al., 1991, p.10,603-10,615, eng 45-3310
- Core processing, analysis and transportation, JAGE-89. Shoji, H., et al., 1991, p.129-141, jpn 45-3398
- Plutonium and Pb-210 activities in two cores from Prince William Sound. Bothner, M.H., et al., 1990, 10p., eng 45-3831
- See *also*: Coring; Ice cores
- Drilling**
- Deep ice core drilling project in Greenland. Proenza, L.M., et al., 1990, p.171-177, eng 45-131
- Ice coring devices. Proenza, L.M., et al., 1990, p.555-564, eng 45-158
- Mining in the Arctic. Bandopadhyay, S., ed., 1989, 244p., eng 45-325
- Diamond core drilling through continental ice and permafrost. With, E., 1989, p.107-111, eng 45-337
- Slope optimization at the Valdez Creek placer mine. Martin, P.L., 1989, p.227-236, eng 45-350
- Radar reflections from water injected into an antarctic glacier. Davis, C.H., et al., 1990, p.723-726, eng 45-721
- Drilling and geophysical studies of the borehole in the Vavilov Ice Dome. Vasil'ev, N.I., et al., 1989, p.249, rus 45-1072
- Borehole drilling to the bed of ice stream B. Engelhardt, H., et al., 1990, p.83-84, eng 45-1258
- Ice core drilling. 1989, 205p., eng 45-1446
- German ice core drilling since 1981. Bässlér, K.H., et al., 1989, p.3-5, eng 45-1447
- Refinements of the UCPH shallow drill. Gundestrup, N.S., et al., 1989, p.6-13, eng 45-1448
- Performance of the UCPH shallow and hand augers. Clausen, H.B., et al., 1989, p.14-20, eng 45-1449
- New directions in drilling and related activities. Koci, B.R., 1989, p.21-23, eng 45-1450
- Electromechanical drilling in dry holes to medium depths. Schwander, J., et al., 1989, p.32-37, eng 45-1453
- Electromechanical ice core drilling systems: a discussion. Kuivinen, K.C., et al., 1989, p.54-56, eng 45-1456
- Characteristics of simultaneous thawing and erosion of frozen sand. Medvedskii, R.I., 1990, p.667-671, eng 45-1684
- Drilling in the permafrost. Kudriashov, B.B., et al., 1990, 318p., eng 45-1854
- Scientific plan for deep ice drilling on Law Dome. Etheridge, D.M., 1990, 41p., eng 45-3533
- See *also*: Offshore drilling; Percussion drilling; Rock drilling; Rotary drilling
- Drilling fluids**
- Design of a drill to work in a fluid filled hole. Koci, B.R., 1989, p.28-31, eng 45-1452
- Hole liquids. Gundestrup, N.S., 1989, p.51-53, eng 45-1455
- Drilling boreholes filled with an ethanol-based antifreeze fluid. Morev, V.A., et al., 1990, p.181-184, rus 45-1759
- Drilling in the permafrost. Kudriashov, B.B., et al., 1990, 318p., eng 45-1854
- Drills**
- Mining machines. Alimov, O.D., 1989, p.59-61, eng 45-332
- Drilling exploratory wells with pneumatic drills. Kudriashov, B.B., et al., 1990, 263p., rus 45-634
- Improving borehole and blasthole drilling in frozen conglomerate. Panasenko, N.N., et al., 1990, p.58-61, rus 45-2246
- See *also*: Ice coring drills; Ice drills; Thermal drills
- Drops (liquids)**
- Measuring the size of water droplets on slides. Laforte, J.L., et al., 1988, p.263-267, eng 45-1351
- See *also*: Cloud droplets; Raindrops
- Dry ice (tradedmark)**
- Measuring the heat of sublimation of dry ice with a polystyrene foam cup calorimeter. Burgstahler, A.W., et al., 1991, p.332-333, eng 45-3362
- Drying**
- See *also*: Freeze drying

**Dust**

- Chemical composition of snow cover as an indicator of gas and dust emissions. Shul'kin, V.M., 1981, p.101-109, rus 45-207
- Saharan dust deposition over Mont Blanc (French Alps) during the last 30 years. De Angelis, M., et al., 1991, p.61-75, eng 45-3020
- See *also*: Cosmic dust
- Dynamic loads**
- Analysis tools for high and low velocity ice indentation problems. Vivatrat, V., 1987, 119p., eng 45-87
- Acoustic emission generated by moving loads on sea ice: preliminary results. Langhorne, P.J., et al., 1990, p.337-342, eng 45-1623
- Model pile-settlement behavior in frozen sand. Steizer, D.L., et al., 1991, p.1-13, eng 45-2416
- Dynamic forces induced by buckling failure of moving ice. Vinogradov, O.G., et al., 1990, p.49-60, eng 45-2721
- Dynamics, flexural response, and damage of ships in ice. Vaughan, H., et al., 1990, p.133-144, eng 45-2727
- Study of indenter friction against an ice sheet. Igoshin, V.A., et al., 1990, p.71-74, eng 45-3265
- Numerical simulation of dynamic ice structure interaction. Eranti, E., 1990, p.912-922, eng 45-3640
- Contribution of damping in the Maantenen model. Xu, J.Z., et al., 1990, p.1097-1104, eng 45-3656
- Dynamic properties**
- Structure and dynamics of cryogenic systems of oil and gas deposits. Zaikanov, V.G., et al., 1989, p.22-27, rus 45-102
- Dynamics of the elastic ice sheet. Kajaste-Rudnitski, J., 1990, 60p., eng 45-827
- Studies on the fluidized snow dynamics. Nishimura, K., 1990, 55p., eng 45-2284
- Antarctic ice cover dynamic activity zones in the Vostok Station region. Blinov, K.V., et al., 1990, p.79-89, rus 45-2490
- On the numerical simulation of the sea ice ridging process. Hopkins, M.A., et al., 1991, p.4809-4820, eng 45-2689
- Modelling of ship penetration into a mush ice field. Shih, L.Y., 1991, p.293-300, eng 45-2987
- Dynamometers**
- Low temperature operability of diesel vehicles. Rickeard, D.J., et al., 1989, p.375-382, eng 45-1249
- Effect of testing methods on the measured strength properties of saline frozen soils. Grishin, P.A., 1990, p.99-103, rus 45-2896
- Earth crust**
- Reconstruction of the bedrock of Antarctica after deglaciation. Suetova, I.A., et al., 1989, p.127-131, rus 45-1047
- Earth dams**
- Fracturing in earth dams with zones of frozen ground in shore-junctions. Belan, V.I., 1990, p.79-83, rus 45-521
- Use of thermosiphons in meliorative development of central Yakutia. Chzhan, R.V., et al., 1987, p.117-126, rus 45-581
- Earth dams on permafrost. Biianov, G.F., et al., 1989, 152p., rus 45-1117
- Frozen ground areas formed in earth dams and their surroundings. Belan, V.I., 1990, p.74-79, rus 45-1588
- Initial period of operation of the channel dam of the Kureika hydroelectric station. Miznikov, I.U.N., et al., 1990, p.578-583, eng 45-2293
- Design and construction of ash dumps. Sysoev, I.U.M., et al., 1990, 249p., rus 45-2574
- Earth fills**
- See *also*: Hydraulic fill; Rock fills
- Earthquakes**
- Seismic telemetry network at Showa Station. 2. Akamatsu, J., et al., 1990, p.90-99, eng 45-1530
- Causes of the aseismicity of Antarctica. Sadovskii, M.A., et al., 1990, p.1369-1374, rus 45-1859
- Effect of large ice sheets on earthquake genesis. Johnston, A.C., 1989, p.581-599, eng 45-1932
- Seismological observation at the Great Wall Station during austral winter of 1986. Jia, G., 1990, p.81-85, chi 45-2171
- Evidence for episodic Late Holocene subsidence in estuarine deposits. Combelick, R.A., 1990, 67p., eng 45-3086
- Performance of an earthquake motion simulator for a small geotechnical centrifuge. Ketcham, S.A., et al., 1991, p.361-368, eng 45-3772
- See *also*: Seismology
- Earthwork**
- Reinforced earth walls in cold regions. Noto, S., 1986, p.29-33, jpn 45-929
- See *also*: Excavation; Trenching; Tunneling (excavation)
- Ecology**
- Conference on ecological impact of oil and gas industry, 1988. 1989, 235p., rus 45-99
- Engineering and geocryological studies of gas-deposit areas, Western Siberia. Moskalenko, N.G., et al., 1989, p.3-15, rus 45-100
- Human factors of geochemical changes in arctic oil and gas regions. Evseev, A.V., et al., 1989, p.15-21, rus 45-101

- Environmental protection of gas- and oil-production areas in the Arctic. Romanovskaya, N.V., et al., 1989, p.107-112, rus 45-108
- Environmental protection of West Siberian oil-bearing areas. Abzalov, R.Z., et al., 1989, p.128-135, rus 45-109
- Ice algae impact on sea ice during spring. Cota, G.F., et al., 1990, p.1402-1415, eng 45-435
- Bering, Chukchi, and Beaufort Seas coastal and ocean zones. 1988, 128 leaves, eng 45-807
- Northern prairie wetlands. Van der Valk, A.G., ed., 1989, 400p., eng 45-831
- International conference on mountain ecology in Tsakhkadzor. Ananicheva, M.D., 1989, p.184, rus 45-1056
- Regional ecological-geochemical analysis of landscapes. Kasimov, N.S., et al., 1990, p.59-74, rus 45-1966
- Ecological problems in geocryology (geocryology). Popov, A.I., et al., 1990, p.145-151, rus 45-1967
- Antarctic sea ice biota. Garrison, D.L., 1991, p.17-33, eng 45-2621
- Seaweed ecology in McMurdo Sound. Miller, K.A., et al., 1991, p.35-48, eng 45-2622
- General ecology and paleogeography of the polar oceans. Matishov, G.G., et al., 1990, 223p., rus 45-2881
- Problems of soil science in Siberia; collected scientific papers. Gadzhiev, I.M., ed., 1990, 183p., rus 45-2904
- Ecological soil petrography and mineralogy. Gradusov, B.P., et al., 1990, p.13-34, rus 45-2906
- Ecological aspects of erosion processes in western Siberia. Tanasienko, A.A., et al., 1990, p.95-100, rus 45-2908
- Soil cover of Siberia: formation and use. Volkovintser, V.I., et al., 1990, p.143-151, rus 45-2909
- Ultrastructural organization of yeast isolated from an antarctic glacier. Abyzov, S.S., et al., 1983, p.914-922, rus 45-2984
- Environmental threats in the arctic. Stokke, O.S., 1990, p.22-41, eng 45-3087
- Environmental threats of military presence in the arctic. Heinenen, L., 1990, p.42-69, eng 45-3088
- Life history of an amphipod species in the Beaufort Sea. Boudrias, M.A., et al., 1988, p.249-257, eng 45-3133
- Oxidation of oil hydrocarbons by arctic pigmented *Mycobacterium* species. Koronelli, T.V., et al., 1981, p.167-170, rus 45-3136
- Lipid composition of *Mycobacterium mucosum* oxidizing hydrocarbons. Koronelli, T.V., et al., 1977, p.1070-1073, rus 45-3137
- Activity of microorganisms oxidizing hydrocarbons assayed in natural waters. Il'inski, V.V., et al., 1989, p.658-662, rus 45-3138
- Microorganisms of the eastern part of the Arctic Ocean. Kriss, A.E., 1945, p.268-276, rus 45-3139
- Distribution of heterotrophic bacteria in the Atlantic Ocean. Kriss, A.E., 1970, p.362-371, rus 45-3181
- Hydrobiological studies in the Arctic Ocean (SP-22, Dec. 1979-Apr. 1980). Mel'nikov, I.A., 1981, p.397, rus 45-3182
- Hydrobiological studies at SP-22 in the Arctic Ocean (Spring 1981). Mel'nikov, I.A., 1982, p.158, rus 45-3183
- Hydrobiological studies in the central part of the Arctic Ocean (Spring 1976). Mel'nikov, I.A., 1976, p.1134-1135, rus 45-3184
- Hydrobiological studies in the central part of the Arctic Ocean. Mel'nikov, I.A., 1976, p.547-550, rus 45-3185
- Cryobiological observations in the central Arctic Basin. Mel'nikov, I.A., 1979, p.150-155, rus 45-3186
- Fermentative activity of microbial-antagonists. Trunova, O.N., 1977, p.91-97, rus 45-3212
- Dissolved and suspended organic carbon in ice of the arctic basin. Mel'nikov, I.A., 1985, p.86-89, rus 45-3213
- Nutrients and organic matter in the snow and ice cover of the arctic basin. Mel'nikov, I.A., et al., 1985, p.90-93, rus 45-3214
- Marine ecology in arctic Canada. Mansfield, A.W., 1975, p.11/27-11/47, eng 45-3222
- Ecology of the marine fishes of arctic Canada. McAllister, D.E., 1975, p.11/49-11/65, eng 45-3223
- Role of marine mammals in the arctic ecosystems: research objectives, needs and direction. Smith, T.G., et al., 1975, 11/137-11/145, eng 45-3228
- Ultramicroscopic forms in the Barents Sea littoral mud. Mishustina, I.E., et al., 1973, p.138-140, rus 45-3232
- Distribution of heterotrophic microorganisms in the Greenland Sea. Mishustina, I.E., et al., 1963, p.914-921, rus 45-3240
- Hydrobiological studies in the Arctic Ocean at SP-23 (May-October 1977). Mel'nikov, I.A., et al., 1978, p.378-379, rus 45-3249
- Numbers and production of bacterioplankton in the Barents Sea. Rosova, E.I.A., 1977, p.878-882, rus 45-3250
- Hydrobiological studies in the central Arctic Basin (Spring 1978). Mel'nikov, I.A., 1978, p.1132, rus 45-3255
- Ecology of sea colony birds of the Barents Sea. Belopolskii, L.O., 1961, 346p., eng 45-3349

- Microbiological investigations in the Central Arctic in 1956. Kriss, A.E., [1957, p.199-202, rus] 45-3350
- Botanical results from the voyage of the *Erma* to the Arctic Ocean, summer 1901. IV. Microflora of the Barents Sea and its ice. 1. Historical review of the microflora in the Barents Sea and adjacent seas. Palibin, I.V., [1904, p.71-80, rus] 45-3351
- Effect of ice on habitat conditions in the littoral zone of the White Sea. Savos'kin, I.U.M., [1967, p.197-202, rus] 45-3352
- Fishes of the northern seas of the U.S.S.R. Andriiashev, A.P., [1964, 617p., eng] 45-3354
- Heterotrophic microorganisms in the Indian Ocean and adjacent antarctic seas. Lebedeva, M.N., [1958, p.557-560, rus] 45-3355
- Development of ice periphyton of the Amur River under different light conditions. Iur'ev, D.N., et al, [1988, p.1546-1551, rus] 45-3369
- Distribution of a microbial population in the world ocean. Kriss, A.E., et al, [1960, p.34-41, eng] 45-3370
- Biological seasons in the plankton of different seas. Bogorov, B.G., [1941, p.404-407, eng] 45-3371
- Life in the antarctic sea ice zone. Hempel, G., [1991, p.249-254, eng] 45-3416
- Living ice. Mel'nikov, I.A., [1984, p.68-77, rus] 45-3429
- Polar cod *Boreogadus saida* (Leresn.) and its importance in the Arctic. Klumov, S.K., [1937, p.175-188, rus] 45-3430
- Microorganisms as indicators of hydrological phenomena in seas and oceans. Kriss, A.E., et al, [1958, p.397-413, rus] 45-3431
- Ice algae in the East Siberian Sea in May 1987. Okolodkov, I.U.B., [1989, p.36-41, rus] 45-3434
- Ecological role of bacteria in detritus and aggregates in the Pacific Ocean. Sazhin, A.F., et al, [1989, p.682-692, rus] 45-3450
- Winter habitats of salmon and trout. Calkins, D.J., [1990, p.113-126, eng] 45-3670
- Ecological aspects of lake regulation in northern Finland. Part 1. General results. Alasaarela, E., et al, [1989, 56p., fin] 45-3844
- Ecological aspects of lake regulation in northern Finland; part 2. Hellsten, S., et al, [1989, 131p. + appends., fin] 45-3845
- Ecological aspects of lake regulation in northern Finland; part 3. Tikkanen, P., et al, [1989, 105p. + appends., fin] 45-3846
- Ecological aspects of lake regulation in northern Finland; part 5. Alasaarela, E., et al, [1989, 49p., fin] 45-3847
- See *also*: Ecosystems; Paleocology; Plant ecology
- Economic analysis**
- Evaluating the economic effectiveness of hail prevention operations. Danov, E.I., et al, [1989, p.51-55, rus] 45-1614
- Evaluating the economic effectiveness of extending arctic navigation. Arikainen, A.I., et al, [1989, 70p., rus] 45-1714
- Impacts of heavy snowfall during December 1989 in the Lake Erie snowbelt. Schmidlin, T.W., [1990, p.135-142, eng] 45-2193
- Economic efficiency of icebreakers of different models and capacities. Arikainen, A.I., [1990, p.542-553, eng] 45-3605
- National economic basis for developing ice navigating transport ships. Arikainen, A.I., [1989, p.9-19, rus] 45-3835
- See *also*: Cost analysis
- Economic development**
- Mineral resource development. Westermeyer, W.E., et al, [1990, p.92-100, eng] 45-123
- Alaska's mineral industry, 1989. Bundtzen, T.K., et al, [1989, 100p., eng] 45-491
- Natural conditions in developed regions of Siberia. Klimovskii, I.V., ed, [1987, 172p., rus] 45-568
- Geocryological problems in developing arctic shallow-water areas. Kamenskii, R.M., et al, [1987, p.3-8, rus] 45-569
- Environmental protection in an iron and steel industry area. Poiseev, I.I., [1987, p.159-165, rus] 45-587
- Bering, Chukchi, and Beaufort Seas coastal and ocean zones. [1988, 128 leaves, eng] 45-807
- Geocryological problems in the development of the Yamal Peninsula. Mel'nikov, E.S., et al, [1990, 53p., rus] 45-1719
- Mapping glacial-nival phenomena and human activity. Osokin, N.I., et al, [1990, p.177-181, rus] 45-1758
- Changes in the thermal regime of frost mounds in the northern taiga. Goriainov, P.A., [1989, p.88-95, rus] 45-2013
- Chukchi Sea Oil and Gas Lease Sale 126. Draft environmental impact statement. [1990, 2 vols., eng] 45-2159
- OCS Mining Program: Norton Sound Lease Sale. Final environmental impact statement. [1991, Var. p., eng] 45-2160
- OCS Mining Program: Norton Sound Lease Sale. Second draft environmental impact statement. [1990, Var. p., eng] 45-2161
- Beaufort Sea Planning Area Oil and Gas Lease Sale 124. Draft environmental impact statement. [1990, 2 vols., eng] 45-2162
- Navarin Basin Oil and Gas Lease Sale 107. Final environmental impact statement. [1991, Var. p., eng] 45-2172
- Chukchi Sea Oil and Gas Lease Sale 126. Final environmental impact statement. [1991, 2 vols., eng] 45-2173
- Development of the cryolithozone of Transbaikalia. Aleksandrov, A.S., et al, [1990, 105p., rus] 45-2425
- Environmental aspects on the development of hydrocarbon resources in the arctic seas. Jumppanen, P., [1990, p.117-130, eng] 45-2726
- Mineral resources potential of Antarctica. Spletstoeser, J.F., ed, [1990, 310p., eng] 45-2801
- Economic potential of the Dufek Complex. De Wit, M.J., et al, [1990, p.33-52, eng] 45-2803
- Economic evaluation of platinum mining in Antarctica. Beike, D., [1990, p.53-67, eng] 45-2804
- Environmental impact of natural resource exploitation in Antarctica. Parker, B.C., et al, [1990, p.237-258, eng] 45-2815
- Convention on the Regulation of Antarctic Mineral Resource Activities. Auburn, F., [1990, p.259-271, eng] 45-2816
- Special report on the Antarctic Minerals Convention. Kimball, L.A., [1990, p.273-310, eng] 45-2817
- Geomorphology of the Kuray basin and economic development of its lands. Novikov, I.S., [1990, p.84-89, rus] 45-2822
- Summary of water-use data in Alaska, 1986. Petrik, W.A., [1990, 68p., eng] 45-2844
- See *also*: Land development; Landscape development; Natural resources
- Ecosystems**
- Structure and dynamics of cryogenic systems of oil and gas deposits. Zaikanov, V.G., et al, [1989, p.22-27, rus] 45-102
- Environmental protection of geocryological zones in Western Siberia. Mel'nikov, E.S., et al, [1989, p.36-43, rus] 45-104
- Chart of territories with ecological protection. Iseeva-Petrova, L.S., et al, [1989, p.148-158, rus] 45-110
- Soil development rates in the Transantarctic Mountains. Bockheim, J.G., [1990, p.59-77, eng] 45-715
- Freshwater wetlands and wildlife. Sharitz, R.R., ed, [1989, 1765p., eng] 45-1400
- Biogeomorphology and spatial structure of northern patterned peatlands. Madsen, B.J., [1989, p.235-247, eng] 45-1401
- Prairie wetlands: characteristics, importance to waterfowl, and status. Krapu, G.L., et al, [1989, p.811-828, eng] 45-1402
- Perspectives on the status of Canadian prairie wetlands. Millar, J.B., [1989, p.829-852, eng] 45-1403
- Status of the national wetlands inventory in Alaska. Hall, J.V., [1989, p.853-859, eng] 45-1404
- Wetland creation and restoration: the status of the science. Kusler, J.A., ed, [1990, 594p., eng] 45-1406
- Creation of wetlands in the northeastern United States. Lowry, D.J., [1990, p.267-280, eng] 45-1407
- Regional analysis of the creation and restoration of kettle and pothole wetlands. Hollands, G.G., [1990, p.281-298, eng] 45-1408
- Regional analysis of fringe wetlands in the Midwest: creation and restoration. Levine, D.A., et al, [1990, p.299-325, eng] 45-1409
- Creation and restoration of riparian wetlands in the agricultural Midwest. Willard, D.E., et al, [1990, p.327-350, eng] 45-1410
- Wetlands ecosystems: natural water purifiers? Hammer, D.A., et al, [1989, p.5-19, eng] 45-1874
- Snow in mountain watersheds. Sommerfeld, R.A., et al, [1990, p.122-129, eng] 45-2129
- Comparisons between lakes and seas during the arctic winter. Welch, H., [1991, p.11-23, eng] 45-2468
- Snowpack and the subnival environment for an open meadow. Auerbach, N.A., et al, [1991, p.41-44, eng] 45-2471
- Air-sea exchange of organic air pollutants in arctic oceans. Hinckley, D.A., et al, [1991, p.7201-7213, eng] 45-2559
- Ecological soil petrography and mineralogy. Gradusov, B.P., et al, [1990, p.13-34, rus] 45-2906
- Cryobiological observations in the central Arctic Basin. Mel'nikov, I.A., [1979, p.150-155, rus] 45-3186
- Analyzing landscape change in arctic ecosystems. Walker, D.A., et al, [1991, p.244-276, eng] 45-3187
- Productivity of phytocenoses in mountain tundra of the Khibini Mountains. Luk'ianova, L.M., et al, [1991, p.181-187, eng] 45-3263
- Effects of an altered water regime on Great Lakes coastal wetlands. Mortsch, L., [1990, p.217-224, eng] 45-3299
- Development of ice periphyton of the Amur River under different light conditions. Iur'ev, D.N., et al, [1988, p.1546-1551, rus] 45-3369
- Productivity of agrophytocenoses in the eastern European tundra. Arhegova, I.B., ed, [1991, 152p., rus] 45-3391
- Environmental effects on CO2 efflux from water track and tussock tundra in arctic Alaska, U.S.A. Oberbauer, S.F., et al, [1991, p.162-169, eng] 45-3481
- Studies of the arctic water resources: state-of-the-art and future plans. Ivanov, V.V., [1990, p.63-74, eng] 45-3783
- Ecological aspects of lake regulation in northern Finland. Part 1. General results. Alasaarela, E., et al, [1989, 56p., fin] 45-3844
- Ecological aspects of lake regulation in northern Finland; part 5. Alasaarela, E., et al, [1989, 49p., fin] 45-3847
- See *also*: Ecology; Forest ecosystems; Paleocology; Plant ecology
- Ecuador**
- Andes Mountains**
- Glacial and volcanic geomorphology of the Chimborazo—Carihuairazo Massif, Ecuadorian Andes. Clapperton, C.M., [1990, p.91-116, eng] 45-2789
- Education**
- Engineering geology, hydrogeology, and cryopedology departments. Sergeev, E.M., et al, [1989, p.47-59, eng] 45-880
- Density of antifreeze-water mixtures. Flowers, P.A., [1990, p.1068-1069, eng] 45-2075
- Let's involve schoolkids in data collection efforts. Clagett, G.P., [1990, p.137-140, eng] 45-2131
- Education and continuing development for the civil engineer. [1990, 1101p., eng] 45-2575
- Are transportation engineers prepared for winter. [1990, p.1040-1046, eng] 45-2576
- ASCE technical council on cold regions monograph series. T... R.G., Jr., et al, [1990, p.1047-1052, eng] 45-2577
- Information systems for cold regions engineering. Alkire, B.D., [1990, p.1053-1059, eng] 45-2578
- Snow as a field-teaching medium for earth science. Custer, S.G., [1991, p.34-43, eng] 45-2790
- Measuring the heat of sublimation of dry ice with a polystyrene foam cup calorimeter. Burgstahler, A.W., et al, [1991, p.332-333, eng] 45-3362
- Elastic properties**
- Elastic properties of a tungsten monocarbide-based metaloceramic at low temperatures. Uliyanov, V.L., et al, [1990, p.93-95, eng] 45-993
- Low-temperature performance of elastomeric bearings. Roeder, C.W., et al, [1990, p.113-132, eng] 45-1522
- See *also*: Ice elasticity; Snow elasticity; Viscoelasticity
- Elastic waves**
- Dynamics of the elastic ice sheet. Kajaste-Rudnitski, J., [1990, 60p., eng] 45-827
- Electric cables**
- See *also*: Transmission lines
- Electric charge**
- See *also*: Charge transfer; Static electricity
- Electric equipment**
- Sequence of leads in cooling gas stations in polar compressor stations. Kosachev, V.P., et al, [1990, p.29-31, rus] 45-733
- Mechanized ice augers. Tavrizov, V.M., [1990, p.38-39, rus] 45-742
- Icing condition sensors for building management applications. Jones, T.M., [1990, p.36-38, eng] 45-2023
- Cathodic protection in Cook Inlet arctic waters. Hedborg, C.E., [1991, p.24-28, eng] 45-3025
- Electric heating**
- Thermal interaction of cast-in-situ bored piles with frozen ground. Kamenskii, R.M., [1990, p.65-72, rus] 45-1201
- Cold starting the Volvo way. Hakansson, N.O., et al, [1989, p.337-344, eng] 45-1246
- Electro-Impulse De-Icing (EIDI) of transmission line towers. Rosa, R., [1988, p.381-385, eng] 45-1376
- De-icing of microwave dishes and power lines by electromagnetic impulse. Zumwalt, G.W., et al, [1988, p.386-389, eng] 45-1377
- Using electric heating to protect railroad switches from snowdrifts. Kvon, I.A.D., et al, [1990, p.31-36, rus] 45-3007
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- Electric potential**
- Freeze and thaw point of wet clay and its determination. Liu, Z.C., [1990, p.183-189, eng] 45-500
- Development of seawater batteries as a long-term arctic power source. Hammond, R., et al, [1990, p.1122-1129, eng] 45-3659
- Electric power**
- Glaciers and the hydropower planning for Greenland. Weidick, A., [1990, p.654-663, eng] 45-168
- Mineral and hydroelectric resources in Greenland. Taagholt, J., [1989, p.33-41, eng] 45-330
- Mountain glaciers—an overview with emphasis on Alaska. Coffin, J.H., et al, [1990, p.177-258, eng] 45-409
- Considerations in the design and operation of hydro power intakes. Gemperline, E.J., [1990, p.517-556, eng] 45-420
- Dynamics of the coastal zone of the Vilyuy River power plant. Gotovtsev, S.P., et al, [1987, p.38-48, rus] 45-573
- Inventor of the ice generator. Konopleva, N., [1990, p.8-10, rus] 45-706

**Electric power (cont.)**

- Converting the thermal energy of arctic sea water into electricity. Moskvicheva, V.N., et al, 1987, p.72-77, eng 45-866
- Designing electrical grounding for permafrost with inclined interface layers. Shevtsov, I.U.V., 1989, p.83-84, rus 45-1167
- Data acquisition system requirements for cold weather testing. Leier, T.E., 1989, p.139-143, eng 45-1226
- Ice-on-coil diurnal ice storage cooling system. Sohn, C.W., et al, 1990, 49p., eng 45-1551
- Possible climate change and its impact on snowmelt and water supply in California. Roos, M., 1990, p.130-136, eng 45-2130
- Attenuation in a power line passing over permafrost. Zakruzhnii, E.G., et al, 1986, p.28-34, eng 45-2557
- Design and construction of ash dumps. Sysoev, I.U.M., et al, 1990, 249p., rus 45-2574
- Comparison of parametric and non-parametric methods for runoff forecasting. Galeati, G., 1990, p.79-94, eng 45-2988
- Optimum operation of hydro-electric plants during the ice regime of rivers. Foulds, D., ed, 1991, 81p., eng 45-3542
- Ice investigations for the proof of tidal power plant designs. Bernshetin, L.B., et al, 1990, p.136-142, eng 45-3571
- Frazil ice problems at Stornorrforv water power plant in the Ume River. Sahiberg, J., 1990, p.427-441, eng 45-3596
- Influence on ice conditions of variations in winter discharge from power plants. Asvall, R.P., 1990, p.554-574, eng 45-3606
- Development of seawater batteries as a long-term arctic power source. Hammond, R., et al, 1990, p.1122-1129, eng 45-3659
- Snow research and electric power generation. Hori, S., 1986, p.1-11, eng 45-3702
- See *also*: Nuclear power; Wind power generation
- Electrical conductivity**  
See *also*: Electrical resistivity
- Electrical grounding**  
Designing electrical grounding for permafrost with inclined interface layers. Shevtsov, I.U.V., 1989, p.83-84, rus 45-1167
- Electrical insulation**  
Influence of snow density on conductivity of snowfall measured by AC method. Asano, K., et al, 1990, p.19-26, eng 45-904
- Leakage current depending on the insulator shapes and their ice accreted conditions. Sugawara, N., et al, 1988, p.291-295, eng 45-1357
- Effects of ice coating on the dielectric strength of high-voltage insulators. Kannus, K., et al, 1988, p.296-300, eng 45-1358
- Ice accumulation on DC power transmission line insulators. Farzaneh, M., et al, 1988, p.301-304, eng 45-1359
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- Withstand voltage characteristics of insulator string covered with snow or ice. Matsuda, H., et al, 1991, p.1243-1250, eng 45-3468
- Electrical measurement**  
Radio and electrical measurements on glacial streams. Walford, M.E.R., 1987, p.239-242, eng 45-20
- Profiling top of buried pipe of the trans Alaska pipeline using the TSI pipe locator. McDevitt, P.G., et al, 1988, p.279-286, eng 45-1181
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- Dielectric observations of the transformation of single crystals of KOH-doped ice Ih to ice XI. Oguro, M., et al, 1991, p.401-403, eng 45-1902
- Measurements of the DC resistivity of annual sea ice. Sackinger, W.M., et al, 1990, p.79-89, eng 45-2723
- Estimation of standard error of impedance-estimated frost resistance. Repo, T., et al, 1989, p.67-74, eng 45-3251
- Real permittivity of snow at 1 MHz and 0 C. Perla, R., 1991, p.215-219, eng 45-3427
- Electrical properties**  
Measuring electrical characteristics of dielectric materials. Trepov, G.V., 1989, p.46-52, rus 45-1488
- Electrical and acoustic properties of saline frozen soils. Zykov, I.U.D., et al, 1990, p.128-136, rus 45-2902
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- See *also*: Dielectric properties; Geoelectricity; Ice electrical properties; Snow electrical properties
- Electrical prospecting**  
See *also*: Electromagnetic prospecting
- Electrical resistivity**  
Arctic acoustics and experiments in the Marginal Ice Zone. Meredith, R.W., et al, 1989, 75p., eng 45-312

- Influence of snow density on conductivity of snowfall measured by AC method. Asano, K., et al, 1990, p.19-26, eng 45-904
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- Measurements of the DC resistivity of annual sea ice. Sackinger, W.M., et al, 1990, p.79-89, eng 45-2723
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- Estimation of standard error of impedance-estimated frost resistance. Repo, T., et al, 1989, p.67-74, eng 45-3251
- Terrestrial geophysics in the SeaRISE Project. Bentley, C.R., 1991, p.49-54, eng 45-3280
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- Electricity**  
See *also*: Atmospheric electricity; Cloud electrification; Geoelectricity; Hailstone electrification; Static electricity
- Electromagnetic properties**  
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See *also*: Scanning electron microscopy
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See *also*: Altitude
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Subzero Engineering Conference proceedings, 1989, 470p., eng 45-1209

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- Cold regions engineering, a research agenda. Carlson, R.F., 1990, p.1060-1065, eng 45-2579
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- See *also*: Avalanche engineering; Human factors engineering; Military engineering; Municipal engineering; Sanitary engineering
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Dumont d'Urville aerodrome, Terre Adélie, Antarctica. Engler, M., et al, 1990, p.191-213, eng 45-501
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- Acidic snowmelt effects on stream trout. Stanley, W., et al, (1990, p.227-237, eng) 45-3304
- Ecological aspects of developing oil and gas resources in non-Soviet arctic regions. Epifanov, A.A., et al, (1990, p.150-160, rus) 45-3411
- White phosphorous linked as cause of waterfowl deaths at Alaskan firing range. (1991, p.5, eng) 45-3455
- Environmental effects on CO<sub>2</sub> efflux from water track and tussock tundra in arctic Alaska, U.S.A. Oberbauer, S.F., et al, (1991, p.162-169, eng) 45-3481
- Simulation studies help predict oil impact in Alaska offshore areas. Signorini, S., et al, (1990, p.41-44, eng) 45-3546
- Oil spill in the Gulf of Finland in 1987. Hirvi, J.P., (1990, p.127-141, eng) 45-3671
- Scientists solve mystery of duck deaths. (1991, p.S11, eng) 45-3734
- Environmental protection**
- Alaskan oil spill bioremediation project. (1989, 16p., eng) 45-80
- Conference on ecological impact of oil and gas industry, 1988. (1989, 235p., rus) 45-99
- Environmental protection of geocryological zones in Western Siberia. Mel'nikov, E.S., et al, (1989, p.36-43, rus) 45-104
- Using monitors in permafrost with oil and gas deposits. Popkov, O.N., et al, (1989, p.58-65, rus) 45-106
- Environmental protection of gas- and oil-production areas in the Arctic. Romanovski, N.V., et al, (1989, p.107-112, rus) 45-108
- Environmental protection of West Siberian oil-bearing areas. Abzalov, R.Z., et al, (1989, p.128-135, rus) 45-109
- Chart of territories with ecological protection. Isaeva-Petrova, L.S., et al, (1989, p.148-158, rus) 45-110
- Waste management at Terra Nova Bay. Cervellati, R., et al, (1990, p.664-682, eng) 45-169
- Environmental protection and mining in Greenland. Hansen, M.M., (1990, p.684-698, eng) 45-170
- Closure of the Black Angel zinc and lead mine in Greenland. Asmund, G., et al, (1990, p.744-759, eng) 45-176
- Ecological monitoring of oil-gas construction in the cryolithozone. Antonov-Druzhinin, V.P., et al, (1990, p.21-23, rus) 45-383
- Principles and methods of ecosystem monitoring. Grin, A.M., ed, (1989, 168p., rus) 45-429
- Environmental protection in an iron and steel industry area. Poiseev, I.I., (1987, p.159-165, rus) 45-587
- Cry for help. Kanevskii, Z., (1990, p.34-40, 62-63, rus) 45-630
- Prairie wetlands: characteristics, importance to waterfowl, and status. Krapu, G.L., et al, (1989, p.811-828, eng) 45-1402
- General geocryology. Ershov, E.D., (1990, 558p., rus) 45-1473
- Problems in background monitoring of natural environments in the Far North. Evseev, A.V., et al, (1990, p.46-58, rus) 45-1965
- 1990 annual report on Alaska's mineral resources. Schneider, J.L., ed, (1990, 67p., eng) 45-2038
- Cold region environmental concerns. Alter, A.J., (1990, p.257-298, eng) 45-2092
- Lancaster Sound region: a coastal atlas for environmental protection. Dickins, D., et al, (1990, Var. p., eng) 45-2103
- Tongass: Alaska's vanishing rain forest. Ketchum, R.G., et al, (1987, 112p., eng) 45-2104
- Snow sensors in wilderness areas. Brandow, C.A., (1990, p.145-149, eng) 45-2133
- Environmental protection of Lake Saroma, Hokkaido. Takeuchi, T., et al, (1988, p.65-70, jpn) 45-2507
- Convention on the Regulation of Antarctic Mineral Resource Activities. Auburn, F., (1990, p.259-271, eng) 45-2816
- Special report on the Antarctic Minerals Convention. Kimball, L.A., (1990, p.273-310, eng) 45-2817
- Soviet maritime arctic. Brigham, L.W., ed, (1991, 336p., eng) 45-3323
- Environmental protection in the Soviet arctic seas. Roginko, A., (1991, p.63-82, eng) 45-3327
- Legal regime of Soviet arctic marine areas. Butler, W.E., (1991, p.215-234, eng) 45-3335
- International cooperation in the Arctic: Soviet attitudes and actions. Young, O.R., et al, (1991, p.258-283, eng) 45-3337
- Tailings management in the Canadian Arctic: Echo Bay's Lupin Mine. Wilson, H.R., (1991, p.213-214, eng) 45-3363
- Ecological aspects of developing oil and gas resources in non-Soviet arctic regions. Epifanov, A.A., et al, (1990, p.150-160, rus) 45-3411
- Environmental tests**
- Hydrologic flow path definition and partitioning of spring meltwater. Maulé, C.P., et al, (1990, p.2959-2970, eng) 45-2078
- Environments**
- Russian-English arctic environment glossary. (1991, 154p., eng) 45-3085
- See *also*: Arctic landscapes; Alpine landscapes; Deserts; Forest land; Landscape types; Littoral zone; Ocean environments; Planetary environments; Steppes; Subarctic landscapes; Taiga; Tundra
- Eolian soils**
- Concentric crater fill on Mars: an aeolian alternative to ice-rich mass wasting. Zimbelman, J.R., et al, (1989, p.397-407, eng) 45-395
- Dune development in an Alaskan subarctic environment. Dijkman, J.W.A., et al, (1990, p.93-109, eng) 45-1191
- Niveo-aeolian sedimentation in Greenland. Dijkman, J.W.A., (1990, p.83-96, eng) 45-1291
- Pleistocene periglacial eolian deposits in Alaska. Lea, P.D., (1990, p.582-591, eng) 45-1412
- Stabilization of dunes in winter. Lemieux, G.H., et al, (1990, p.1/2-1/11, fre) 45-1777
- Role of sublimation in particle supply for aeolian transport in cold environments. Neuman, C.M., (1990, p.329-335, eng) 45-2032
- Late-glacial dunes, ventifacts, and wind direction in west-central Maine. McKeon, J.B., (1989, p.89-101, eng) 45-2067
- Mechanics of aeolian transport of snow and sand. Kind, R.J., (1990, p.855-866, eng) 45-2097
- Epigenesis**
- Frozen types of landscape structures in northwest Komsomolets I. Smirnov, I.P., (1989, p.388-393, rus) 45-493
- Growth and deformation of ice wedges. Mackay, J.R., (1990, p.15-29, eng) 45-2231
- Equipment**
- Fence characterization for intrusion detection systems. Walsh, M.R., et al, (1990, 23p., eng) 45-98
- Norhtar 89 flight deck deicer and hot air wand evaluation on the U.S.S. America (CV66). Rippman, J.A., et al, (1989, p.397-407, eng) 45-347
- Roll-along de-icer. Scott, D., (1990, p.86, eng) 45-621
- Archaeological techniques and technology on Ross Island, Antarctica. Ritchie, N.A., (1990, p.257-264, eng) 45-792

**Equipment (cont.)**

- Case histories of attempts to remove three small ice jams. Doyle, P.F., [1991, p.331-335, eng] **45-3536**
- Study on ice control at fishing harbor by air-bubble method. Mizuno, Y., et al, [1990, p.697-708, eng] **45-3620**
- Drop impact tests on freshwater ice: spherical head. Timco, G.W., et al, [1990, p.776-787, eng] **45-3628**
- Way of preventing structures from damage due to ice pressure. Ao, B.J., et al, [1990, p.858-863, eng] **45-3635**
- See *also*: Airborne equipment; Construction equipment; Electric equipment; Electronic equipment; Infrared equipment; Machinery; Military equipment; Photographic equipment; Portable equipment; Railroad equipment; Rescue equipment; Telemetering equipment; Test equipment
- Erle, Lake**
- Impacts of heavy snowfall during December 1989 in the Lake Erie snowbelt. Schmidlin, T.W., [1990, p.135-142, eng] **45-2193**
- Erosion**
- Arctic stream scour: a case history. Barrett, J.K., et al, [1990, p.791-803, eng] **45-428**
- Erosion processes in the tundra zone of the European USSR. Zharkova, I.U.G., et al, [1990, p.106-111, rus] **45-803**
- Slope denudation in the Altai highlands. Obyskalov, A.D., [1990, p.81-84, rus] **45-2821**
- Bank and channel changes near Dikes, Tanana River, Alaska. Gatto L.W., [1983, p.212-222, eng] **45-2957**
- Case study of bank erosion on the Kinak River, Alaska. Kraeger-Rovey, C., [1983, p.223-230, eng] **45-2958**
- See *also*: Avalanche erosion; Bank protection (waterways); Glacial erosion; Ice erosion; Shore erosion; Snow erosion; Soil erosion; Water erosion; Wind erosion
- Errors**
- See *also*: Accuracy
- Estuaries**
- Glacimarine environments: processes and sediments. Dowdeswell, J.A., ed, [1990, 423p., eng] **45-2778**
- Sediment transport and deposition in a glacial fjord. Cowan, E.A., et al, [1990, p.75-89, eng] **45-2782**
- Role of large-scale under-ice topography in separating estuary and ocean on an arctic shelf. Macdonald, R.W., et al, [1991, p.37-53, eng] **45-2791**
- Seasonal variations in chlorophyll and nutrients in a Canadian arctic estuary. Grainger, E.H., et al, [1982, p.294-301, eng] **45-3127**
- Ice cover simulation for arctic estuary. Ivanov, V.V., et al, [1990, p.210-218, eng] **45-3577**
- See *also*: Deltas
- Evaporation**
- Evaporation and spread of chemicals on snow and ice. Kawamura, P.I., et al, [1987, p.53-76, eng] **45-180**
- Evaporation and snowmelt estimates from satellite data. Miller, W., [1990, p.298-303, eng] **45-2668**
- See *also*: Evapotranspiration; Ice sublimation; Snow evaporation; Sublimation; Transpiration
- Evapotranspiration**
- Evapotranspiration from a small Alaskan arctic watershed. Kane, D.L., et al, [1990, p.253-272, eng] **45-2526**
- Excavation**
- Archaeological techniques and technology on Ross Island, Antarctica. Ritchie, N.A., [1990, p.257-264, eng] **45-792**
- Formation of ice in caves, abandoned mining excavations, and talus. Martin, V.I., [1990, p.16-17, rus] **45-2697**
- Forming pit reservoirs in permafrost by contour blasting. Taurik, V.A., et al, [1991, p.34-36, rus] **45-2954**
- See *also*: Earthwork; Pits (excavations); Rock excavation; Trenching; Tunneling (excavation)
- Expansion**
- See *also*: Thermal expansion
- Expeditions**
- Outline of the Japanese Arctic Glaciological Expedition in 1989 (JAGE 1989). Watanabe, O., et al, [1990, p.103-106, eng] **45-203**
- Geologists in the Far North. Onoprienko, V.I., [1990, 137p., rus] **45-638**
- Arctic research in the United States, Vol.4. [1990, 106p., eng] **45-1398**
- Report on the 27th Soviet Antarctic Expedition. [1990, 177p., rus] **45-1560**
- 1989-90 Australian Antarctic Research Program. Initial summary research activity. [1990, 152p., eng] **45-1810**
- Report of the 26th Soviet Antarctic Expedition. [1988, 140p., rus] **45-2018**
- Soviet maritime arctic. Brigham, L.W., ed, [1991, 336p., eng] **45-3323**
- Arctic Ocean in Russian history to 1945. Barr, W., [1991, p.11-12, eng] **45-3324**
- 1987 expedition of the icebreaker 'Sibir' to the North Pole. Frolov, I., [1991, p.33-44, eng] **45-3325**
- See *also*: Traverses
- Expenses**
- See *also*: Cost analysis
- Experimentation**
- Ice under pressure. Chang, R., et al, [1990, p.789-790, eng] **45-899**

- Density of antifreeze-water mixtures. Flowers, P.A., [1990, p.1068-1069, eng] **45-2075**
- Measuring the heat of sublimation of dry ice with a polystyrene foam cup calorimeter. Burgstahler, A.W., et al, [1991, p.332-333, eng] **45-3362**
- Antarctic penetrator program, No.1, 1989. Shibuya, K., et al, [1991, p.92-117, jpn] **45-3397**
- Morphogenesis of the brown algae *Desmarestia antarctica*-seasonal variations. Wiencke, C., et al, [1991, p.65-78, eng] **45-3553**
- Model surface treatment for testing in ice. Tatinclaux, J.C., et al, [1990, p.766-775, eng] **45-3627**
- Exploration**
- Mineral exploration and development in AK. Green, C.B., et al, [1989, p.205-209, eng] **45-347**
- Glaciation and gold-placer formation in AK. Reger, R.D., et al, [1990, 30p., eng] **45-653**
- Exploration activity heats up in the Alaskan offshore. [1990, p.34-35, eng] **45-2555**
- Environmental aspects on the development of hydrocarbon resources in the arctic areas. Jumppanen, P., [1990, p.117-130, eng] **45-2726**
- Mineral resources potential of Antarctica. Spletstoesser, J.F., ed, [1990, 310p., eng] **45-2801**
- Mineralization in the northern Antarctic Peninsula area. Pride, D.E., et al, [1990, p.69-94, eng] **45-2805**
- Uranium resource evaluation in Antarctica. Zeller, E.J., et al, [1990, p.95-116, eng] **45-2806**
- Coal geology and coal resources of the Transantarctic Mountains. Coates, D.A., et al, [1990, p.133-162, eng] **45-2809**
- Assessment of petroleum resources in Antarctica. Behrendt, J.C., [1990, p.163-174, eng] **45-2810**
- Geology and hydrocarbon potential of the antarctic continental margin. Anderson, J.B., [1990, p.175-201, eng] **45-2811**
- Antarctic logistic support for the earth sciences. Turner, M.D., et al, [1990, p.223-235, eng] **45-2814**
- Petroleum geology and geochemistry of the Arctic National Wildlife Refuge 1002 area. Banet, A.C., Jr., [1990, 26p. + appends., eng] **45-3884**
- Explosion effects**
- Production of phreatic explosions in the interaction of lava and ice. Vinogradov, V.N., et al, [1990, p.89-98, eng] **45-1076**
- New methods of influencing hail processes. Burtsev, I.I., [1990, p.23-33, eng] **45-2931**
- See *also*: Blasting; Ice blasting; Nuclear explosions
- Explosives**
- Evaluation of a field kit for detection of TNT in water and soils. Jenkins, T.F., et al, [1990, 14p., eng] **45-192**
- Determining low levels of nitroaromatics and nitramines in water. Miyares, P.H., et al, [1990, 26p., eng] **45-663**
- Determining explosives residues in soil. Bauer, C.F., et al, [1990, p.541-552, eng] **45-839**
- Environmental influences on mine detection. Hogan, A.W., et al, [1990, 6p., eng] **45-933**
- Liquid chromatographic separation of 2,4,6-trinitrotoluene. Walsh, M.E., et al, [1990, p.313-315, eng] **45-1431**
- Simplified field method for the determination of TNT in soil. Jenkins, T.F., [1990, 18p., eng] **45-1586**
- Determining the breakdown parameters of packed and frozen explosives. Dzhoz, V.F., et al, [1990, p.33-35, rus] **45-2245**
- Composting of explosives-contaminated soils in cold climates. Ayorinde, O.A., et al, [1991, 29p., eng] **45-2917**
- Exposure**
- Method of computer mapping the exposure and slope of an area. Iasev, A.A., et al, [1990, p.81-84, rus] **45-1108**
- See *also*: Cold exposure; Orientation; Slope orientation
- Extraterrestrial ice**
- 2.5-5.0 micrometer spectra of Io: evidence for H<sub>2</sub>S and H<sub>2</sub>O frozen in SO<sub>2</sub>. Salama, F., et al, [1990, p.66-82, eng] **45-305**
- Concentric crater fill on Mars: an aeolian alternative to ice-rich mass wasting. Zimbelman, J.R., et al, [1989, p.397-407, eng] **45-395**
- Phase diagram for ammonia-water mixtures at high pressures: implications for icy satellites. Cynn, H.C., et al, [1989, p.433-441, eng] **45-396**
- Proton irradiation of ice mixtures. Nuth, J.A., et al, [1989, p.565-569, eng] **45-397**
- Extensional and compressional instabilities in icy satellite lithospheres. Herrick, D.L., et al, [1990, p.191-204, eng] **45-846**
- Evolution of topography on comets II. Icy craters and trenches. Colwell, J.E., et al, [1990, p.205-215, eng] **45-847**
- Implications of dielectric properties of icy satellites for radar sounding. Thompson, W.R., et al, [1990, p.336-354, eng] **45-848**
- Ice and minerals on Callisto: a reassessment of the reflectance spectra. Roush, T.L., et al, [1990, p.355-382, eng] **45-849**
- Ice sublimation and rheology: implications for the Martian polar layered deposits. Hofstadter, M.D., et al, [1990, p.352-361, eng] **45-895**
- Recent water release in the Tharsis region of Mars. Mouginiis-Mark, P.J., [1990, p.362-373, eng] **45-896**

- Influence of CO ice on the activity and near-surface differentiation of comet nuclei. Fanale, F.P., et al, [1990, p.403-413, eng] **45-897**
- Heating and melting of small icy satellites by the decay of Al-26. Prialinik, D., et al, [1990, p.281-286, eng] **45-1001**
- Physical and infrared spectral properties of CO<sub>2</sub> in astrophysical ice analogs. Sandford, S.A., et al, [1990, p.357-372, eng] **45-1002**
- Volume- and surface-binding energies of ice systems containing CO, CO<sub>2</sub>, and H<sub>2</sub>O. Sandford, S.A., et al, [1990, p.188-192, eng] **45-1022**
- D/H on Mars: effects of floods, volcanism, impacts, and polar processes. Carr, M.H., [1990, p.210-227, eng] **45-1023**
- Radiative thermophysics of snow and ice. Krass, M.S., et al, [1990, 260p., rus] **45-1532**
- Thermal history models for KOSI sublimation experiments. Spohn, T., et al, [1990, p.358-371, eng] **45-1724**
- Effect of sunlight penetration on the thermal regime of icy regoliths. Fanale, F.P., et al, [1990, p.193-204, eng] **45-1906**
- Evolution of the water regime of Phobos. Fanale, F.P., et al, [1990, p.380-395, eng] **45-1921**
- Coherent backscatter and the radar characteristics of outer planet satellites. Hapke, B., [1990, p.407-417, eng] **45-1922**
- Scattering properties of natural snow and frost: comparison with icy satellite photometry. Verbiscer, A.J., et al, [1990, p.418-428, eng] **45-1923**
- Rheology of solid methane and nitrogen: applications to Triton. Eluzkiewicz, J., et al, [1990, p.1753-1756, eng] **45-2044**
- Koyaanisnuuyaw: the hypothesis of a perennially dichotomous Triton. Moore, J.M., et al, [1990, p.1757-1760, eng] **45-2045**
- Nitrogen frost migration on Triton: a historical model. Spencer, J.R., [1990, p.1769-1772, eng] **45-2046**
- Stability of nitrogen on Triton. Stansberry, J.A., et al, [1990, p.1773-1776, eng] **45-2047**
- Neptune's Triton: a moon rich in dry ice and carbon. Prentice, A.J.R., [1990, p.364-367, eng] **45-2083**
- Fluid volcanism on Miranda and Ariel: flow morphology and composition. Schenk, P.M., [1991, p.1887-1906, eng] **45-2166**
- Mass and energy transport in sublimating cometary ice cracks. Kömle, N.I., et al, [1991, p.73-84, eng] **45-2287**
- Planetary applications of slurry rheology. Kargel, J.S., et al, [1991, p.93-112, eng] **45-2288**
- Measurements of the cohesive force of water frost. Hatzes, A.P., et al, [1991, p.113-121, eng] **45-2289**
- Chemical profiles of polar ice on Earth and Mars. Jones, H.G., [1991, p.43-57, eng] **45-2397**
- Searching for the waters of Mars. Squyres, S.W., [1989, p.20-28, eng] **45-2534**
- Model of the thermal conductivity of porous water ice at low gas pressures. Steiner, G., et al, [1991, p.507-513, eng] **45-2793**
- Ice sublimation below artificial crusts: results from comet simulation experiments. Kömle, N.I., et al, [1991, p.515-524, eng] **45-2794**
- Structure of the planets. Elder, J.W., [1987, 210p. (Pertinent p.100-105, 151-156), eng] **45-2922**
- Modeling the reflectance spectrum of Callisto at 0.25 to 4.1 millimicrons. Calvin, W.M., et al, [1991, p.305-317, eng] **45-2939**
- Dark-floor craters on Ganymede. Schenk, P.M., et al, [1991, p.318-346, eng] **45-2940**
- Gas release from comets. Natesco, G., et al, [1991, p.411-413, eng] **45-2941**
- Duration of liquid water habitats on early Mars. McKay, C.P., et al, [1991, p.214-221, eng] **45-3192**
- Climate of Mars. Haberle, R.M., [1990, p.70-80, eng] **45-3861**
- Extraterrestrial material**
- See *also*: Cosmic dust
- Extremes**
- See *also*: Records (extremes)
- Facsimiles**
- See *also*: Replicas
- Falling snow**
- Velocity of falling snowflakes. Magono, C., [1986, p.36-55, eng] **45-3705**
- Fallout**
- Radioactivity profiles of the Chernobyl fallout on Tyrolean glaciers. Ambach, W., et al, [1989, p.5-8, ger] **45-392**
- First radiocesium profile and snow cover mass measurements. Kasi, S.S.H., [1988, p.101-105, eng] **45-770**
- Fallout in snow. Philippot, J.C., [1990, p.21, eng] **45-918**
- Beta radiation from snow. Dibb, J.E., et al, [1990, p.25, eng] **45-919**
- Scientists discover problems using Chernobyl fallout for dating the Greenland ice sheet. Dibb, J.E., [1989, p.8-9, eng] **45-959**
- Dating snow accumulation on glaciers by Chernobyl fallout. Pourchet, M., et al, [1990, p.3/22-3/27, fre] **45-1795**

- Decline of Pb-210 fallout on Greenland in the last century. Nijampurkar, V.N., et al, 1990, p.100-102, eng 45-1905
- Dispersion of Chernobyl fallout by meltwater in an alpine glacier. Ambach, W., et al, 1989, p.151-153, eng 45-2086
- Farming**  
See *also*: Agriculture
- Fast ice**  
Geomorphology of the Onega Cliffs littoral zone of the White Sea. Matoshko, A.V., et al, 1988, p.62-69, rus 45-682
- Major features of ice conditions in the Bellingshausen Sea. Evseev, V.V., 1990, p.325-330, eng 45-729
- Effective areas of radiation of pressure ridges in fast ice. Kuznetsov, N.M., et al, 1989, p.106-108, rus 45-1497
- Variability of natural conditions in Alasheyev Bight. Korotkov, A.I., 1990, p.117-133, rus 45-1563
- Numerical investigation of border ice failure. Abdel-Zaher, A.K., 1990, p.13-25, eng 45-2183
- Strain in shore fast ice due to incoming ocean waves and swell. Fox, C., et al, 1991, p.4531-4547, eng 45-2670
- Water exchange under fast ice in Lützw-Holm Bay. Ohshima, K.I., et al, 1991, p.74-80, eng 45-3065
- Safety measures for operations on antarctic fast ice. Grigor'ev, I.U.A., et al, 1990, p.44-51, rus 45-3081
- Remote monitoring of thermal structure and growth of shore-fast ice off the Labrador coast. Peterson, I., et al, 1991, p.123-130, eng 45-3419
- Observations of ship performance and the structure of fast ice channels in the northern Baltic Sea. Veitch, B., et al, 1991, 35p., eng 45-3448
- Fatigue (materials)**  
Fatigue characterization of Alaska paving materials (final report). Coetzee, N.F., et al, 1988, 126p., eng 45-311
- Cost-effectiveness of geotextiles; review of performance in Alaskan roads. Reckard, M., 1991, 50p., eng 45-2000
- Fatigue endurance program for classification of built-up roofing. Bonafont, R.L., 1991, p.26-32, eng 45-2454
- Durability assessment of roofing membranes. Beech, J.C., 1991, p.227-233, eng 45-2456
- Fauna**  
See *also*: Animals
- Feeding (hydrology)**  
See *also*: Alimentation
- Fences**  
See *also*: Snow fences
- Films**  
SO<sub>2</sub> infrared spectra of clathrate hydrate films. Fleyfel, F., et al, 1990, p.7032-7037, eng 45-843
- Evidence of carbonic acid in proton irradiated ices. Moore, M.H., et al, 1991, p.255-262, eng 45-2467
- Application of the theory of dispersion forces to the surface melting of ice. Elbaum, M., et al, 1991, p.1713-1716, eng 45-2589
- See *also*: Water films
- Filters**  
Texture segmentation using localized spatial filtering. Final report. Du, L.J., 1990, 46p., eng 45-88
- See *also*: Optical filters
- Filtration**  
See *also*: Seepage
- Fines**  
Effect of fines in sand on friction on ice. Blaisdell, G.L., et al, 1990, 16p. + figs., eng 45-1970
- See *also*: Frozen fines
- Finland**  
Development of the Earth's surface in Finland. Aartolahti, T., 1990, p.203-219, fin 45-2421
- Hydrological yearbook 1984-1986. Leppäjärvi, R., ed, 1990, 235p., eng 45-2845
- Effects of climate change on discharges and snow cover in Finland. Vehviläinen, B., et al, 1991, p.109-121, eng 45-2989
- Algal bloom under the ice off the coast of Finland. Hillfors, G., et al, 1974, p.89-104, eng 45-3229
- Finland, Gulf**  
Oil spill in the Gulf of Finland in 1987. Hirvi, J.P., 1990, p.127-141, eng 45-3671
- Fires**  
"Sever" fireproof coatings. Sorin, V.S., et al, 1988, p.29-30, rus 45-799
- Effect of fires on frozen soils. Tarabukina, V.G., et al, 1990, 119p., rus 45-1572
- Fire in taiga communities of interior Alaska. Dyrness, C.T., et al, 1986, p.74-86, eng 45-1590
- See *also*: Forest fires
- Firn**  
Composition of particles in firn and ice cores from Greenland. Kumai, M., et al, 1990, p.1-18, eng 45-194
- Snow firn surface structure on Law Dome. Han, J.K., et al, 1989, p.53-63, eng 45-1008
- Soluble and insoluble impurities in snow samples from Ross Island, Antarctica. Palais, J.M., et al, 1990, p.89-91, eng 45-1393
- Record of solar proton events in a firn core from Windless Bight. Zeller, E.J., et al, 1990, p.92-94, eng 45-1394
- Attenuation of 3-cm band radar signals by snow cover in the Antarctic. Trepov, G.V., 1989, p.53-58, rus 45-1489
- Modern pollen spectrum from Dye 3, south Greenland ice sheet. Bourgeois, J.C., 1990, p.340-342, eng 45-1544
- Problem of the thermal physics of snow-firn sequences. Bozhinskii, A.N., et al, 1990, p.35-39, rus 45-1733
- Firn stratification**  
Stratigraphy of shallow snow core in Wilkes Land. Qin, D., 1988, p.22-59, chi 45-36
- Solar proton events in antarctic snow. Dreschhoff, G.A.M., et al, 1990, p.333-346, eng 45-1434
- Snow stratigraphy and ice formation on Nelson Ice Cap. Wang, X., et al, 1990, p.13-21, chi 45-2169
- Flexural strength**  
Condensed silica fume in concrete. Malhotra, V.M., et al, 1987, 221p., eng 45-323
- Variations in mechanical properties within a multi-year ice floe. Tucker, W.B., et al, 1989, p.1287-1291, eng 45-446
- Bending and compression properties of young sea ice. Lau, P.A., et al, 1989, p.1292-1297, eng 45-447
- Determination of flexural strength in urea model ice. Borland, S.L., 1990, 9p., eng 45-840
- Performance of thermoplastic elastomers (TPEs) at subzero temperatures. Brugada, R., 1989, p.67-73, eng 45-1216
- Effect of snow and constant loads on the flexural strength of wooden structures. Denesh, N.D., 1990, p.16-20, rus 45-1587
- Roller-compacted concrete pavement construction at Fort Drum, New York. Cortez, E.R., et al, 1990, p.8-17, eng 45-2088
- Flexural strength of sand-reinforced ice. Nixon, W.A., et al, 1991, p.14-27, eng 45-2417
- Changes in the flexural strength of ice under radiation decay. Prowse, T.D., et al, 1990, p.341-354, eng 45-2531
- Strength and deformability of plastic pipe in cold climate. Riabets, I.U.S., et al, 1989, p.132-135, eng 45-2584
- Dynamics, flexural response, and damage of ships in ice. Vaughan, H., et al, 1990, p.133-144, eng 45-2727
- Seasonal variability of physical-mechanical characteristics of sea ice. Gavrilov, V.P., et al, 1991, p.53-57, eng 45-3013
- Ice motions forced by boundary layer turbulence. DiMarco, R.L., et al, 1991, p.10,617-10,624, eng 45-3311
- Parametric expressions for ice compressive and flexural strength. Hirayama, K., et al, 1990, p.196-209, eng 45-3576
- Results from in situ four point bending tests with Baltic Sea ice. Kujala, P., et al, 1990, p.261-278, eng 45-3582
- Floating ice**  
Boundary element analysis for the flow around a submerged ice floe. Rahman, M., et al, 1990, p.69-72, eng 45-365
- Equations for local ice energy dissipations during ship ramming. Blanchet, D., et al, 1990, p.101-115, eng 45-494
- Preliminary results of model tests of the DD-963 in broken ice fields. Thomas, W.L., III, et al, 1989, p.113-121, eng 45-535
- Ship-ice impact load model correlated with full-scale impact data. St. John, J.W., et al, 1989, p.123-138, eng 45-536
- Deflection of floating ice in proximity of a slow-moving pressure field. Bukatov, A.E., et al, 1988, p.3-8, rus 45-875
- Modelling the behaviour of oil spills in ice-infested waters. Venkatesh, S., et al, 1990, p.303-329, eng 45-1151
- Recent change in ice thickness in Windless Bight, Ross Ice Shelf, Antarctica?. Delisle, G., 1990, p.350-351, eng 45-1546
- Measurement of ice forces on small vessels—phase 3: detailed physical calibration. Final report. Glen, I.F., et al, 1990, 31p. + appends., eng 45-1648
- Model tests of the grounding resistance of fresh and consolidated ice rubble. Sayed, M., et al, 1990, p.73-82, eng 45-1768
- Stability of floating and submerged blocks. Daly, S.F., et al, 1990, p.737-752, eng 45-2257
- Model tests of a naval combatant in broken ice fields. Thomas, W.L., III, et al, 1990, p.155-165, eng 45-2729
- Modelling of ship penetration into a mush ice field. Shih, L.Y., 1991, p.293-300, eng 45-2987
- Effect of density on the trajectory of ice pieces around a ship's hull. Jones, S.J., et al, 1990, p.661-673, eng 45-3616
- Process to produce correct density (CD) model ice. Spencer, D.S., et al, 1990, p.745-755, eng 45-3625
- Numerical simulation of dynamic ice structure interaction. Eranti, E., 1990, p.912-922, eng 45-3640
- Sources of uncertainties in methods of ice design for offshore structures. Foroughi, A.R., 1990, p.923-930, eng 45-3641
- Lori ice cleaner. Korppoo, S., 1990, p.341-342, eng 45-3688
- See *also*: Ice floes
- Floating structures**  
Feasibility study of an oil production ship concept for arctic conditions. Sandvik, P.C., 1990, p.590-600, eng 45-162
- Severe Environment Surface Mooring (SESMOOR). Kery, S.M., 1989, p.1398-1405, eng 45-450
- International Ice Patrol's air-deployed bathythermograph system. Alfultia, M.A., 1989, p.1652-1657, eng 45-723
- Study on floating ice booms. Mizuno, Y., 1990, p.305-310, jpn 45-758
- Flood control**  
Model study of the Cazenovia Creek ice control structure. Gooch, G.E., et al, 1990, 31p., eng 45-934
- Ice jams and flood control on the Berounka River. Matoušek, V., 1990, p.699-710, eng 45-2254
- Danube ice floods during the last millenary. Déri, J., 1989, p.151-158, hun 45-3102
- Case histories of attempts to remove three small ice jams. Doyle, P.F., 1991, p.331-335, eng 45-3536
- Forecasting of river water level elevation due to ice jams. Havlik, A., 1990, p.606-615, eng 45-3611
- Flood forecasting**  
Forecasting of river water level elevation due to ice jams. Havlik, A., 1990, p.606-615, eng 45-3611
- Ice jam mitigation on the Torneälven River. Zachrisson, G., 1990, p.845-857, eng 45-3634
- Stage distribution approach to estimating ice related flooding probabilities. Burn, D.H., 1989, p.953-960, eng 45-3773
- Flooding**  
Use of water of taliks above permafrost for water supply to oil fields. Burchak, T.V., et al, 1989, p.15-24, eng 45-647
- Ice jam mitigation. Belore, H.S., et al, 1990, p.675-685, eng 45-1078
- Laboratory and field tests of a wire mesh frazil collector. Foltyn, E.P., 1990, 10p., eng 45-1511
- Ice jam analysis at Idaho Falls, Snake River, Idaho. Zufelt, J.E., et al, 1990, 18p., eng 45-2035
- 1948 flood on the Columbia River. Speers, D.D., et al, 1990, p.160-163, eng 45-2137
- Floodplains**  
Evolution of the alluvial fans of the Alfeld. Borsy, Z., 1990, p.229-246, eng 45-1578
- Temperature evolution of floodplain geosystems in northern Yakutia. Zaikanov, V.G., 1989, p.95-102, rus 45-2014
- Stage distribution approach to estimating ice related flooding probabilities. Burn, D.H., 1989, p.953-960, eng 45-3773
- Floods**  
Severe freezing periods and ice jams on the Salmon River. Bilelo, M.A., 1990, p.235-244, eng 45-137
- D/H on Mars: effects of floods, volcanism, impacts, and polar processes. Carr, M.H., 1990, p.210-227, eng 45-1023
- Debris flows 1987 in Switzerland: modelling and fluvial sediment transport. Rickenmann, D., 1990, p.371-378, eng 45-1974
- Investigation of 1987 debris flows in the Swiss Alps. Haeblerli, W., et al, 1990, p.303-310, eng 45-1975
- Flood of Aug. 1987 in Switzerland. Naef, F., et al, 1990, p.222-227, ger 45-1985
- 1948 flood on the Columbia River. Speers, D.D., et al, 1990, p.160-163, eng 45-2137
- Floods. Mathai, H.F., 1990, p.97-120, eng 45-2147
- Researches of glacier lake outburst floods of the Yarkant River in Xinjiang. Zhang, X.S., et al, 1990, p.1014-1024, eng 45-2178
- Hydrology of disasters. Starosolszky, Ö., ed, 1989, 319p., eng 45-2767
- Morphological changes in the Swiss Alps resulting from the 1987 summer storms. Naef, F., et al, 1989, p.36-42, eng 45-2768
- Hazardous hydrologic consequences of volcanic eruptions. Pierson, T.C., 1989, p.220-236, eng 45-2769
- Non-meteorological flood disasters in Chile. Peña, H., et al, 1989, p.243-258, eng 45-2770
- Exogenous processes in the southern Lake Baykal area. Imetkhenov, A.B., 1990, p.111-114, rus 45-2871
- Danube ice floods during the last millenary. Déri, J., 1989, p.151-158, hun 45-3102
- Flora**  
See *also*: Plants (botany); Vegetation
- Flow**  
See *also*: Air flow; Fluid flow; Glacier flow; Laminar flow; Pipe flow; Plastic flow; Rheology; River flow; Shear flow; Stream flow; Turbulent flow; Unsteady flow; Viscous flow; Water flow
- Flow measurement**  
Low temperature operability of diesel engines. Rieckard, D.J., et al, 1989, p.33-37, eng 45-1290



- w measurement (cont.)**  
 Report on improving the accuracy of observations of flow in winter. Hiragaki, T., et al, 1988, p.489-494, jpn 45-2519
- Techniques for streamflow measurement under ice conditions.** Pelletier, P.M., 1990, p.317-340, eng 45-2530
- Accuracy of selected techniques for estimating ice-affected streamflow.** Walker, J.F., 1991, p.697-712, eng 45-2969
- Numerical modelling of ice shelf dynamics.** Determann, J., 1991, p.187-195, eng 45-3459
- Ice rate**
- Arctic stream scour: a case history.** Barrett, J.K., et al, 1990, p.791-803, eng 45-428
- Analysis of winter low-flow rates in New Hampshire streams.** Melloh, R.A., 1990, 12p, eng 45-1260
- Measuring water flow using ultrasound.** Zatylnikov, A.I., 1988, p.13-19, rus 45-1857
- Low model of Ross Ice Shelf and climatic warming.** Lingle, C.S., et al, 1991, p.6849-6871, eng 45-2504
- Glacial dynamics (glaciology).** Whillans, I., 1991, p.131-143, eng 45-3283
- Numerical simulations for determining ice shelf flow.** Determann, J., 1991, 82p., ger 45-3522
- See also: Water transport**
- Ice dynamics**
- Wave formation on a liquid layer for de-icing airplane wings.** Yih, C.S., 1990, p.41-53, eng 45-2053
- Analysis for ice formation design.** LaFleur, R.S., 1990, p.393-401, eng 45-3195
- Internal waves and velocity fine structure in the Arctic Ocean.** D'Asaro, E.A., et al, 1991, p.12,725-12,738, eng 45-3559
- Ice flow**
- Model for scaling avalanche speeds.** McClung, D.M., 1990, p.188-198, eng 45-61
- Boundary element analysis for the flow around a submerged ice floe.** Rahman, M., et al, 1990, p.69-72, eng 45-365
- Liquid-elastic stability threshold in the presence of turbulence.** Lever, J.H., et al, 1989, p.407-419, eng 45-968
- Similarity solutions for a Voellmy model of snow avalanches with finite mass.** Hutter, K., et al, 1990, p.99-127, eng 45-1024
- Article flows around fuselages and airfoils.** Lucas, T., et al, 1988, p.197-201, eng 45-1338
- Temperature regime of oil and gas pipelines laid jointly in frozen ground.** Danielian, I.U.S., et al, 1988, p.91-96, eng 45-1426
- Critical assessment of low temperature properties of multi-grade SAE 10W-30 engine oils.** Deysarkar, A.K., et al, 1990, p.502-507, eng 45-1525
- Liquid volcanism on Miranda and Ariel: flow morphology and composition.** Schenk, P.M., 1991, p.1887-1906, eng 45-2166
- Stability of floating and submerged blocks.** Daly, S.F., et al, 1990, p.737-752, eng 45-2257
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- Laboratory tests with a hybrid thermosyphon.** Haynes, F.D., et al, 1991, p.93-99, eng 45-3154
- Numerical study of the right angled thermosyphon.** Lock, G.S.H., et al, 1991, p.113-117, eng 45-3157
- Heat transfer in a right-angled thermosyphon.** Lock, G.S.H., et al, 1991, p.261-265, eng 45-3178
- Winter channel formation in sluced disposal areas.** Panteleev, V.G., et al, 1990, p.709-718, eng 45-3621
- See also: Air flow; Glacier flow; Laminar flow; Pipe flow; River flow; Stream flow; Turbulent flow; Unsteady flow; Water flow**
- Ice infiltration**
- See also: Seepage**
- Ice**
- See also: Liquids**
- Ice masses**
- See also: Channels (waterways)**
- Ice plastics**
- See also: Cellular plastics**
- Ice**
- Spectral properties of fog over the Malaespina Glacier, AK.** Ormsby, J.P., et al, 1991, p.179-185, eng 45-1720
- Properties and effect of freezing rain and winter fog on outline insulators.** Farzaneh, M., et al, 1990, p.33-46, eng 45-1765
- Investigations of space-time variations in meteorological visibility.** Laikhtman, V.I., et al, 1987, p.108-120, rus 45-2299
- See also: Advection fog; Ice fog; Supercooled fog**
- Ice formation**
- Biography on ice and fog: detection and warning systems.** 1990, 95p., eng 45-205
- Ice**
- See also: Forest canopy**
- Footings**
- Experimental study of adfreeze heaving of augered caisson footings.** Iordanesco, M., et al, 1991, p.152-163, eng 45-2330
- See also: Foundations; Pavement bases; Permafrost bases**
- Forecasting**
- Optimum drifter deployment for iceberg drift forecasting.** Venkatesh, S., et al, 1990, p.117-131, eng 45-495
- Role of heat balance studies in geocryological forecasting.** Pavlov, A.V., et al, 1987, p.18-25, rus 45-571
- Dynamics of the coastal zone of the Vilyuy River power plant.** Gotovtsev, S.P., et al, 1987, p.38-48, rus 45-573
- Classification of territory and forecasting its geological changes.** Nefedova, T.V., 1990, p.46-49, rus 45-637
- Methods of forecasting hail.** Fedchenko, L.M., et al, 1989, p.36-42, eng 45-877
- Topographic effects on precipitating snow clouds in Japan.** Kikuchi, K., et al, 1987, p.109-128, eng 45-905
- Predicting roof snow loads on gabled structures.** Sack, R.L., et al, 1990, p.2763-2779, eng 45-956
- Glacier fluctuations in Tien Shan as a trend in glaciological predictions.** Serebriannyi, L.R., et al, 1989, p.87-91, rus 45-1040
- Improving the forecasting of snow water content in a glacier basin.** Gruzinov, A.V., 1990, p.45-49, rus 45-1104
- Calculating and forecasting glacier mass balance with minimal information.** Vilesov, E.N., et al, 1990, p.109-113, rus 45-1112
- Variations in glaciation in the Kungey Alatau mountain ridge.** Glazyrin, G.E., et al, 1990, p.113-120, rus 45-1113
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- Forecasting the temperature of the active layer of rocks.** Slavin-Borovskii, V.B., et al, 1989, p.20-31, rus 45-2005
- Methods for stochastic modelling of temperature fields in the cryolithozone.** Sagaldachnyi, I.U.A., et al, 1989, p.31-43, rus 45-2006
- Western Snow Conference, 58th, 1990, 170p., + append., eng 45-2114**
- Status of the California Cooperative Snow Surveys Program.** Hart, D., et al, 1990, p.9-14, eng 45-2116
- Snow surveys and water supply forecasting.** Johnson, D.E., 1990, p.15-22, eng 45-2117
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- Long-term iceberg collision-risk assessment methods for fixed offshore structures.** Korsnes, R., 1989, p.203-214, eng 45-2591
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- Predicting the durability of paving bricks.** Winslow, D., 1991, p.29-33, eng 45-2761
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- Accuracy of selected techniques for estimating ice-affected streamflow.** Walker, J.F., 1991, p.697-712, eng 45-2969
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- Freezing point depressions of dilute potassium chloride solutions.** Partanen, J.I., 1990, p.317-320, eng 45-3374
- Freezing point depression of dilute aqueous sodium chloride solutions.** Partanen, J.I., et al, 1991, p.172-176, eng 45-3403
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- New model of frost heave prediction for clayey soils.** Chen, X.B., et al, 1991, p.213-214, eng 45-3426
- Norwegian model for prediction of pavement deterioration (7).** Bertelsen, D., 1990, p.875-886, eng 45-3694
- Updating hydrological model forecasts.** Assaf, H., et al, 1990, p.149-175, eng 45-3804
- See also: Avalanche forecasting; Flood forecasting; Frost forecasting; Ice forecasting; Long range forecasting; Permafrost forecasting; Runoff forecasting; Weather forecasting**
- Forest canopy**
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- Hydrological role of forest geosystems.** Snytko, V.A., ed, 1989, 165p., rus 45-33
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- Tongass: Alaska's vanishing rain forest.** Ketchum, R.G., et al, 1987, 112p., eng 45-2104
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- Climate change: implications for water and ecological resources.** Wall, G., ed, 1990, 342p., eng 45-3294
- Climate change moisture stresses on northern coniferous forests.** Wein, R.W., et al, 1990, p.285-289, eng 45-3301
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- Forest fires**
- Development of thermokarst lakes during the Holocene at sites near Mayo, Yukon Territory.** Burn, C.R., et al, 1990, p.161-176, eng 45-1296
- Fighting large-scale forest fires.** Valendik, E.N., 1990, 192p., rus 45-1997
- Climate change moisture stresses on northern coniferous forests.** Wein, R.W., et al, 1990, p.285-289, eng 45-3301
- Forest lines**
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- Paleoclimatology and altitude of vegetation zones in Hokkaido.** Ohmori, H., et al, 1989, p.1-18, jpn 45-629
- Forest soils**
- Snow cover, freezing and thawing of soil in pine forests.** Korepanov, A.A., 1989, p.54-58, eng 45-858
- Soil freezing and thawing in the middle taiga of the European USSR.** Derugin, A.A., 1989, p.81-88, eng 45-859
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- Fire in taiga communities of interior Alaska.** Dyrness, C.T., et al, 1986, p.74-86, eng 45-1590
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- Forest strips**
- Wind tunnel tests on highway parking shelter snowbreaks.** Takabe, N., et al, 1990, p.221-226, jpn 45-752
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- See also: Protective vegetation**
- Forest trees**
- See also: Trees (plants)**
- Forestry**
- Forestry equipment—terrain interaction.** 1989, 291p., eng 45-1700
- Terrain information system for use in forestry operations.** Granberg, H.B., 1989, p.113-143, eng 45-1701
- Influence of a snow fence on young reforestation.** Mullenbach, P., et al, 1990, 9p., frey 45-1723

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- Fossil ice**  
First discovery of fossil ice of 1000-1700 year B.P. in Japan. Yoshida, M., et al, 1990, p.258-259, eng) 45-70
- Fossils**  
Holocene ice margin recession in West Greenland. Weidick, A., et al, 1990, p.389-399, eng) 45-714  
Fens on a high arctic fault block. LaFarge-England, C., et al, 1991, p.80-98, eng) 45-2473  
Diatoms as hydrographic tracers: example from Bering Sea sediments. Sancetta, C., 1981, p.279-281, eng) 45-3219
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Building foundation in saline permafrost. Uhre, N., et al, 1990, p.117-125, eng) 45-126  
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Study on asphalt mats for cold regions. Sugimoto, Y., et al, 1990, p.263-268, jpn) 45-754  
Geocryological studies of northern Western Siberia. Konstantinov, I.P., ed, 1990, 117p., rus) 45-1194  
Construction and design of ventilated foundations on permafrost. Goncharov, I.U.M., et al, 1990, p.47-58, rus) 45-1200  
Controlling the frozen regime of bearing ground of structures over mines. Gur'ianov, I.E., 1990, p.77-92, rus) 45-1203  
Characteristics of foundation work on permafrost. Galdaenko, E.I., et al, 1990, p.95-104, rus) 45-1205  
Ventilated passages for cooling frozen bearing ground. Kazarmovskii, I.I., et al, 1990, p.32-33, rus) 45-1605  
Method of construction in a pre-frozen limited soil mass. Mirenburg, I.U.S., et al, 1990, p.114-118, eng) 45-2215  
Processed-snow foundation design at the summit of the Greenland Ice Cap. Curtis, K.C., et al, 1991, p.240-249, eng) 45-2337  
Effect of permafrost conditions and type of foundations on deformation of building in Vorkuta. Belotserkovskaja, G.V., 1991, p.161-163, eng) 45-2399  
Reliability of the frozen bearing ground of structures. Zhelezniak, I.I., 1990, 171p., rus) 45-2423  
Development of the cryolithozone of Transbaikalia. Aleksandrov, A.S., et al, 1990, 105p., rus) 45-2425  
Saline frozen soils as a foundation for structures; collected scientific papers. Vialov, S.S., ed, 1990, 143p., rus) 45-2882  
Laying pile foundations in northern regions. Zavizion, V.G., et al, 1991, p.20-22, rus) 45-2952  
Laboratory tests with a hybrid thermosyphon. Haynes, F.D., et al, 1991, p.93-99, eng) 45-3154  
Bearing capacity of shallow foundation on layered clay. Das, B.M., 1991, p.119-124, eng) 45-3158  
Two and three dimensional response of nonlinear soil under gravity structures. Prasad, K.S.R., et al, 1991, p.253-260, eng) 45-3177  
Thermal analysis of forced-air airport foundation cooling. Smith, L.B., et al, 1991, p.399-409, eng) 45-3538  
Installation of deeply laid molded-in-place and combination piles in permafrost soils in Noril'sk. Neikiudov, V.S., et al, 1991, p.252-256, eng) 45-3560  
Gravel-pod foundations to control groundwater movements in frost-susceptible soil—a case study. Walum, R.S., 1990, p.175-186, eng) 45-3793  
See *also*: Pavement bases; Permafrost bases; Roadbeds
- Fracture zones**  
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- Fracturing**  
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Fractal crushing. Palmer, A.C., et al, 1991, p.531-541, eng) 45-2364  
Size effects in the fracture of quasi-brittle materials. Bazant, Z.P., et al, 1991, p.595-604, eng) 45-2369  
Brittle to ductile transition during indentation of ice. Gold, L.W., 1991, p.182-190, eng) 45-3534  
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- Fram Strait**  
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Avalanches at Chamonix (Haute-Savoie, France). Bravard, Y., 1990, p.125-143, fre) 45-371
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USACRREL underwater frazil ice detector. Daly, S.F., et al, 1991, p.758-764, eng) 45-2385  
Frazil ice blockage of intake trash racks. Daly, S.F., 1991, 12p., eng) 45-2921  
Detection of waves in frazil ice in synthetic aperture radar imagery. Wadhams, P., et al, 1991, p.8835-8852, eng) 45-3019  
River frazil ice: a simplified theoretical model. Kolodko, J., 1990, p.252-260, eng) 45-3581  
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Process study of sorted patterns in arctic soils. Final report. Hallet, B., 1991, 20p., eng) 45-2140  
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See *also*: Seasonal freeze thaw
- Freeze thaw tests**  
Canada-France ground freezing experiment: phase 8: fourth freeze cycle. 1989, 73p., eng) 45-388  
Canada-France ground freezing experiment: phase 7. 1988, 35p., eng) 45-389  
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- Freeze thaw tests (cont.)**
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- See *also*: Artificial freezing; Concrete freezing; Ice formation; Pipeline freezing; Regulation; Sea water freezing; Seasonal freeze thaw; Soil freezing; Spray freezing; Vacuum freezing
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- See *also*: Frost penetration
- Freezing front**
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- See *also*: Antifreezes
- Freezing points**
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- Freezing point depression of dilute aqueous sodium chloride solutions. Partanen, J.I., et al, (1991, p.172-176, eng) 45-3403
- See *also*: Melting points
- Freezing rate**
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- Freezing of water and wastewater sludges. Vesilind, P.A., et al, (1990, p.854-862, eng) 45-1086
- Friction**
- See *also*: Glacier friction; Ice friction; Internal friction; Metal ice friction; Metal snow friction; Plastics ice friction; Plastics snow friction; Rubber ice friction; Rubber snow friction; Skid resistance; Wood ice friction; Wood snow friction
- Fronts (meteorology)**
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- Predicting concrete service life in cases of deterioration due to freezing and thawing. Final report. Bryant, L.M., et al, (1991, 28p. + appends., eng) 45-2694
- Mechanism of expansion of concrete aggregate due to frost action. Rusin, Z., (1991, p.614-624, eng) 45-3399
- Temperature regime of road pavements in Czechoslovakia. Poliček, I., et al, (1990, p.53-63, eng) 45-3691
- Norwegian model for prediction of pavement deterioration (7). Bertelsen, D., (1990, p.875-886, eng) 45-3694
- Prediction of damage to flexible pavements in seasonal frost areas. Allen, W.L., et al, (1990, p.234-247, eng) 45-3748

- Computer model of moisture and temperature effects beneath pavements. Pufahl, D.E., et al, (1990, p.259-269, eng) 45-37-50
- Frost deposit**  
See /also/: Hoarfrost
- Frost forecasting**  
Frost forecasting from local weather reports. Fujita, T., et al, (1990, p.95-100, jpn) 45-746
- Bridge and roadway frost: occurrence and prediction by use of an expert system. Takle, E.S., (1990, p.727-734, eng) 45-796
- Semi-empirical transient method for modeling frost formation on a flat plate. Sherif, S.A., et al, (1990, p.15-23, eng) 45-3867
- Frost heave**  
Frost heave damage to dam in Northeast China. Cao, Z.Y., (1990, p.709-718, eng) 45-172
- Canada-France ground freezing experiment: phase 8: fourth freeze cycle. (1989, 73p., eng) 45-388
- Canada-France ground freezing experiment: phase 7. (1988, 35p., eng) 45-389
- Third freeze cycle of the Canada-France ground freezing experiment (1988, 76p., eng) 45-390
- Effect of load on frost heaving of subsoil. Jiang, H.J., et al, (1990, p.41-47, chi) 45-460
- Problems with the segregation potential theory by W. van Gassen and D.C. Sego—comments. Konrad, J.M., (1990, p.215-216, eng) 45-502
- New concept of frost-heave characteristics of soils, by Otto J. Svec—comments. Nixon, J.F., et al, (1990, p.217-222, eng) 45-503
- Investigating the use of geotextiles to mitigate frost heave. Henry, K.S., (1990, 28p., eng) 45-841
- Chemogenic heaving of frozen rocks. Lebedenko, I.U.P. (1989, p.57-66, eng) 45-840
- Experiments to improve frost heaving test methods. Mizushima, T., et al, (1987, p.1-10, jpn) 45-923
- Improving the strength of gas pipelines under complicated conditions. Kharionovskii, V.V., (1990, 179p., rus) 45-985
- Effect of frost heave deformations on airport pavement. Dolinchenko, V.A., et al, (1990, p.12-13, eng) 45-1014
- Ground temperature regimes and periglacial processes in the Sør Rondane Mountains. Matsuoka, N., et al, (1990, p.55-66, eng) 45-150
- Frost heave forces on H and pipe piles embedded in Fairbanks silt. Johnson, J.B., et al, (1988, 83p., eng) 45-1649
- Field tests on frost heaving damage of small sized U-trough. Suzuki, T., et al, (1990, p.163-171, jpn) 45-1663
- Freeze thaw tests of asphalt concrete pavements. Janoo, V.C., et al, (1990, 56p., eng) 45-1699
- Moisture transfer and ice formation in freezing, water-saturated soil. Kazanskii, O.A., (1989, p.3-13, rus) 45-1824
- Ice formation in saline soils. Konrad, J.M., (1989, 3 vols., eng) 45-2037
- Roller-compacted concrete pavement construction at Fort Drum, New York. Cortez, E.R., et al, (1990, p.8-17, eng) 45-2088
- Method of construction in a pre-frozen limited soil mass. Mirenburg, I.U.S., et al, (1990, p.114-118, eng) 45-2215
- Soil-pipe interaction during frost heaving around a buried chilled pipeline. Shen, M., et al, (1991, p.11-21, eng) 45-2318
- Experimental study of adfreeze heaving of augered caisson footings. Iordanescu, M., et al, (1991, p.152-163, eng) 45-2330
- Countermeasures against frost heave on national highways. Saito, T., et al, (1988, p.171-176, jpn) 45-2513
- Permafrost and thermokarst. Higgins, C.G., et al, (1990, p.211-218, eng) 45-2593
- Transport equations during ice segregation in a dispersed medium. Horiguchi, K., (1991, p.297-298, eng) 45-3210
- Cryogenic heaving in conjunction with seasonal and long-term freezing of rocks. Nevechena, V.L., (1989, p.44-49, eng) 45-3253
- New model of frost heave prediction for clayey soils. Chen, X.B., et al, (1991, p.213-214, eng) 45-3426
- Thermal stresses development in pavements during wintertime. Laforte, M.A., (1990, p.149-179, eng) 45-3496
- Repair of frost damages on main road 21 in Tuuli, Kilpisjärvi. Saarelainen, S., (1990, 54p. + appends., fin) 45-3841
- Repair structures of frost damages on main road 21 in Peera, Finland. Saarelainen, S., (1990, 62p. + appends., fin) 45-3843
- Frost mounds**  
Seasonal frost mounds at the head of the Urumqi River. Zhu, C., et al, (1990, p.55-62, chi) 45-462
- Water and energy regime of palas bogs in West Siberia. Moskin, I.U.P., (1988, p.18-21, eng) 45-762
- Changes in the thermal regime of frost mounds in the northern taiga. Gorianov, P.A., (1989, p.88-95, rus) 45-2013
- Surface radar investigations of an icing mound on the Sagavanirktok River, Alaska. Arcone, S.A., et al, (1990, p.353-363, eng) 45-2744
- Seasonal frost mounds. Pollard, W.H., (1991, p.214-218, eng) 45-3367
- See /also/: Hummocks; Pings
- Frost penetration**  
Surface energy balance and surface temperature in cold regions. Lunardini, V.J., et al, (1990, p.101-110, eng) 45-124
- Canada-France ground freezing experiment: phase 8: fourth freeze cycle. (1989, 73p., eng) 45-388
- Canada-France ground freezing experiment: phase 7. (1988, 35p., eng) 45-389
- Comparison of two methods of calculating soil freezing depth. Gel'fan, A.N., (1989, p.78-83, eng) 45-665
- Investigating the use of geotextiles to mitigate frost heave. Henry, K.S., (1990, 28p., eng) 45-841
- Frost depth and load restrictions on roads during spring thaw. Madden, D.A., et al, (1990, 33p., eng) 45-1670
- Solute partitioning in freezing soils. Konrad, J.M., et al, (1990, p.726-736, eng) 45-1869
- Soil temperatures and freezing indices at depth. McCormick, G., (1990, p.749-751, eng) 45-1870
- Evaluating bearing ground stability of gas fields in the cryolithozone. Ivlev, A.I.U., (1989, p.66-73, rus) 45-2010
- Calculating the effect of water reserves and depth of soil freezing. Kvarmarov, V.D., (1989, p.21-29, rus) 45-2275
- Numerical analysis of frost shields. Coutermarsh, B.A., et al, (1991, p.178-190, eng) 45-2332
- Hydrological yearbook 1984-1986. Leppäjärvi, R., ed, (1990, 235p., eng) 45-2845
- Temperature regime of road pavements in Czechoslovakia. Políček, I., et al, (1990, p.53-63, eng) 45-3691
- Repair structures of frost damages on main road 21 in Peera, Finland. Saarelainen, S., (1990, 62p. + appends., fin) 45-3843
- Repair of a road built on permafrost: dimensioning, building, monitoring. Kivikoski, H., (1989, 46p. + appends., eng) 45-3849
- See /also/: Thaw depth
- Frost protection**  
Freeze thaw protection of foundations and walls in permafrost. Pang, G.L., et al, (1990, p.111-116, eng) 45-125
- Fire and frost prevention in a coal mine. Wan, C.H., et al, (1989, p.237-239, eng) 45-351
- Energy dissipation in small hydraulic structures. Wang, S.R., et al, (1990, p.83-86, chi) 45-465
- Anti-frost system of windshield. Takada, H., (1989, p.171-178, eng) 45-1231
- Numerical analysis of frost shields. Coutermarsh, B.A., et al, (1991, p.178-190, eng) 45-2332
- Mechanistic approach to pavement design for Nome Airport. Vinson, T.S., et al, (1991, p.416-427, eng) 45-2353
- Use of rigid insulation below grade for roadways and parking areas. Larsen, L.A., et al, (1991, p.428-437, eng) 45-2354
- Concrete heating by warm air blowers. Sasaki, O., et al, (1988, p.71-76, jpn) 45-2508
- Countermeasures against frost heave on national highways. Saito, T., et al, (1988, p.171-176, jpn) 45-2513
- Use of insulation for frost prevention: Jackman Airport, Maine, 1986-1987 winter. Kestler, M.A., et al, (1991, 45p., eng) 45-2643
- Phase-change numerical heat transfer analysis with applications to frost shielding. Farag, I.H., et al, (1991, p.29-36, eng) 45-2915
- Frost protection on the Baykal-Amur mainline. Kondrat'ev, V.G., et al, (1991, p.6-7, rus) 45-2951
- Alkylbenzylidimethylammonium salts as inhibitors for the ice nucleating activity of *Erwinia ananas*. Watanabe, M., et al, (1988, p.201-206, eng) 45-3048
- Evaluation of some polymer modified asphalts in Alberta. Anderson, K.O., et al, (1990, p.3-40, eng) 45-3491
- On adhesive layer of thin concrete block overlay. Inuzuka, M., (1990, p.97-112, eng) 45-3494
- Phase change heat transfer analysis with applications to frost shielding. Farag, I.H., et al, (1990, p.9-13, eng) 45-3739
- Improvement of icing on main road 21, construction and monitoring. Lehtonen, J., (1990, 60p., fin) 45-3873
- Frost resistance**  
Effective control of the frost resistance of concrete. Afrapetov, G.A., et al, (1990, p.24-25, rus) 45-22
- Frost and salt resistance of concrete. Gladkov, V.S., (1990, p.9-11, rus) 45-24
- Study of the frost resistance of concrete with the plasticizer TOP-2. Shefinkman, A.N., et al, (1990, p.28-30, rus) 45-31
- Effect of cold climate on polymers. Cherskii, I.N., (1990, p.603-613, eng) 45-163
- Wear and tightness of moving seals. Popov, S.N., et al, (1990, p.614-623, eng) 45-164
- Condensed silica fume in concrete. Malhotra, V.M., et al, (1987, 221p., eng) 45-323
- Frost susceptibility of concrete in near-saturated states. Soo, K.S., (1989, 143p., eng) 45-478
- Frost resistant mortars for railroad slab tracks. Watanabe, K., et al, (1989, p.205-214, jpn) 45-873
- Experiments to improve frost heaving test methods. Mizushima, T., et al, (1987, p.1-10, jpn) 45-923
- Standardizing the sustained deformation of frost-resistant concrete. Onina, M.M., (1990, p.38-39, rus) 45-1606
- Freezing resistance of arctic tundra plants on Svalbard. Odess, A.M., (1990, p.1-8, eng) 45-2115
- Frost resistance of elastomers. Bukhina, M.F., et al, (1989, 176p., rus) 45-2204
- Modeling winter grain crop survival in a zone with stable snow cover. Bogomolova, N.A., et al, (1990, p.113-118, rus) 45-2272
- Forecasting the frost resistance of concrete based on local materials. Akimov, A.V., et al, (1988, 83p., rus) 45-2306
- New method for assessment of air voids in plastic concrete. Ansari, F., (1990, p.901-909, eng) 45-2313
- Frost resistance of lightweight concrete. Uozumi, K., et al, (1988, p.83-86, jpn) 45-2509
- Effect of freeze thaw action on wear-resistant asphalt pavements. Tsukahara, K., et al, (1988, p.159-164, jpn) 45-2512
- Predicting the durability of paving bricks. Winslow, D., (1991, p.29-33, eng) 45-2761
- Autumn freeze testing of one-year reciprocal families of *Pinus sylvestris* (L.). Nilsson, J.E., et al, (1990, p.501-511, eng) 45-3206
- Estimation of standard error of impedance-estimated frost resistance. Repo, T., et al, (1989, p.67-74, eng) 45-3251
- Cold temperature properties of polymer-modified asphalt mixtures. Ali, N., et al, (1990, p.71-94, eng) 45-3493
- Seasonal variations in bearing capacity of asphalt pavements. Kasahara, A., et al, (1990, p.281-298, eng) 45-3517
- Prediction of damage to flexible pavements in seasonal frost areas. Allen, W.L., et al, (1990, p.234-247, eng) 45-3748
- Deterioration of lightweight fly ash concrete due to gradual cryogenic frost cycles. Khayat, K.H., (1991, p.233-239, eng) 45-3828
- Frost resistance of clay bricks; test method proposal. Silvenoinen, K., (1990, 14p., eng) 45-3854
- Finnish cold climate construction technology. Part 4. Timber construction. Kanko, T., ed, (1991, 62p. + appends., fin) 45-3876
- Frost shattering**  
Mechanical weathering rates on Signy Island, maritime Antarctic. Hall, K., (1990, p.61-67, eng) 45-2235
- Frost weathering**  
Weathering processes near Casey Station. Xie, Y., et al, (1988, p.193-213, chi) 45-48
- Experimental frost and salt weathering of chalk. Part 2. Jerwood, L.C., et al, (1990, p.699-708, eng) 45-1998
- Problem of cryoplanation terraces. Czudek, T., (1990, p.225-238, ger) 45-3654
- Frozen cargo**  
Determining the breakdown parameters of packed and frozen explosives. Dzhos, V.F., et al, (1990, p.33-35, rus) 45-2245
- Using natural cold in automated underground cold storage areas. Kuz'min, M.P., et al, (1990, p.98-100, rus) 45-2715
- Frozen ground**  
Microelements in Siberian soils. Senichkina, M.G., et al, (1986, p.115-131, rus) 45-608
- Rheological fundamentals of soil mechanics. Vialov, S.S., (1986, 564p., eng) 45-612
- Blast-excavating frozen ground using slit and borehole charges. Iurko, A.A., (1988, p.12-13, rus) 45-798
- Geocryological studies of northern Western Siberia. Konstantinov, I.P., ed (1990, 117p., rus) 45-1194
- In-House Laboratory Independent Research Program—FY88. Diemand, D., ed, (1990, 18p., eng) 45-1399
- Frozen ground areas formed in earth dams and their surroundings. Belan, V.I., (1990, p.74-79, rus) 45-1588
- Soils and soil-forming processes in the Central Asian facies. Nogina, N.A., (1990, p.1-11, eng) 45-1707
- Effect of freezing and thawing on the microwave signatures of bare soil. Wegmüller, U., (1990, p.123-135, eng) 45-1727
- Heat-moisture-salt regime of frozen ground during fall watering. Ivanov, V.A., et al, (1989, p.24-36, rus) 45-1826
- Role of sublimation in particle supply for aeolian transport in cold environments. Neuman, C.M., (1990, p.329-335, eng) 45-2032
- Effect of saline soil cements on frozen rocks and construction materials. Galdanenko, E.I., (1989, p.114-123, rus) 45-2636
- Saline frozen soils and their distribution over USSR territory. Dubikov, G.I., et al, (1990, p.3-9, rus) 45-2883
- Effect of salinity on the cryogenic structure of frozen soils. Khimenkov, A.N., et al, (1990, p.55-62, rus) 45-2890
- Classifying frozen soils according to salinity. Panchenko, V.I., et al, (1990, p.70-73, rus) 45-2892

## Frozen ground (cont.)

- Spatial and temporal influence of soil frost on infiltration and erosion of sagebrush rangelands. Blackburn, W.H., et al, 1990, p.991-997, eng 45-3696
- Classification of snow and frozen ground surfaces with SSM/I signatures. Neale, C.M.U., et al, 1990, p.345-355, eng 45-3813
- See *also*: Geocryology; Soil freezing
- Frozen ground chemistry**
- Microelements in Siberian soils. Senichkina, M.G., et al, 1986, p.115-131, rus 45-608
- Phosphorus in frozen meadow-chernozem soils in the Amga River valley. Antipina, D.K., 1988, p.35-38, rus 45-640
- Potassium in frozen meadow-chernozem soils. Antipina, D.K., 1990, p.74-78, rus 45-641
- Effect of fires on frozen soils. Tarabukina, V.G., et al, 1990, 119p., rus 45-1572
- Autonomous taiga soil formation on the coast of the Sea of Okhotsk. Sedov, S.N., et al, 1990, p.24-35, eng 45-1709
- Physicochemical processes in the cryolithozone. Mel'nikov, P.I., et al, 1989, p.1-6, eng 45-3264
- Frozen ground compression**
- Compressive strength behavior of fine-grained frozen soils. Wijeweera, H., et al, 1990, p.472-483, eng 45-632
- Freezing earth pressure in open system. Enokido, M., 1990, p.57-64, jpn 45-691
- Extensional and compressional instabilities in icy satellite lithospheres. Herrick, D.L., et al, 1990, p.191-204, eng 45-846
- Frozen ground mechanics**
- Investigation into the creep behavior of CRREL tunnel, Alaska. Huang, S.L., et al, 1989, p.65-73, eng 45-333
- Canada-France ground freezing experiment: phase 7. 1988, 35p., eng 45-389
- Frozen ground effects on infiltration and runoff. Kane, D.L., et al, 1990, p.259-300, eng 45-410
- Viscoelastoplastic model of frozen soil. Cai, Z.M., et al, 1990, p.31-40, chi 45-459
- Cyclic load effects on model pile behavior in frozen sand. Stelzer, D.L., 1989, 349p., eng 45-480
- Fracturing in earth dams with zones of frozen ground in shore-junctions. Belan, V.I., 1990, p.79-83, rus 45-521
- Mechanical properties of frozen clays mixed with sandy soils. Enokido, M., et al, 1989, p.31-36, jpn 45-692
- Peculiarities of maintaining underground gas lines in the Far North. Borovkov, V.A., 1989, p.30-31, rus 45-707
- Improving the strength of gas pipelines under complicated conditions. Kharionovskii, V.V., 1990, 179p., rus 45-985
- Permafrost and other frozen ground. Williams, P.J., 1990, p.117-123, eng 45-990
- Earth dams on permafrost. Bivanov, G.F., et al, 1989, 152p., rus 45-1117
- Frost heave forces on H and pipe piles embedded in Fairbanks silt. Johnson, J.B., et al, 1988, 83p., eng 45-1649
- Rock blasting in seasonally freezing ground. Reference manual. Frash, G.B., 1990, 110p., rus 45-1703
- Hydraulic properties in an operational model of frozen soil. Lundin, L.-C., 1990, p.289-310, eng 45-2089
- Initial period of operation of the channel dam of the Kureika hydroelectric station. Miznikov, I.U.N., et al, 1990, p.578-583, eng 45-2293
- Laboratory study of shock waves in frozen soil. Dutta, P.K., et al, 1991, p.54-70, eng 45-2322
- Development of the cryolithozone of Transbaikal. Aleksandrov, A.S., et al, 1990, 105p., rus 45-2425
- Linear problem of water-ice phase transitions in unsaturated soils. Tsypkin, G.G., 1990, p.384-389, eng 45-2561
- Washout of unfrozen and frozen deposits of the Yamal Peninsula. Lovchuk, V.V., 1990, p.120-125, rus 45-2872
- Saline frozen soils as a foundation for structures; collected scientific papers. Vialov, S.S., ed, 1990, 143p., rus 45-2882
- Investigations of saline permafrost on the arctic shore (review). Velli, I.U.I.A., 1990, p.9-20, rus 45-2884
- Transfer of salt in frozen dispersed soils. Ostroumov, V.E., 1990, p.45-55, rus 45-2889
- Forecasting long-term deformation of frozen saline soils. Roman, L.T., et al, 1990, p.73-83, rus 45-2893
- Determining the creep properties of saline frozen soils. Brushkov, A.V., et al, 1990, p.83-90, rus 45-2894
- Method of determining the equivalent cohesion of saline frozen soils. Aksenov, V.I., 1990, p.107-115, rus 45-2898
- Determining long-term equivalent cohesion of frozen soils. Vorob'evskii, B.E., 1990, p.121-123, rus 45-2900
- Improving the underground development of thawed and frozen placers. Sherstov, V.A., et al, 1989, 162p., rus 45-3000
- Cryogenic heaving in conjunction with seasonal and long-term freezing of rocks. Nevecheria, V.L., 1989, p.44-49, eng 45-3253
- Cryogenic properties of soils and rocks: 2. The influence of water types on the uniaxial mechanical behaviour of clays. Unsworth, J.F., et al, 1991, p.211-225, eng 45-3402
- Model for attenuating creep of frozen sand. Domaschuk, L., et al, 1991, p.140-161, eng 45-3421
- Mechanical properties of sea ice and adfreeze strength of sea ice and subsea soil. Sadovskii, A.V., et al, 1990, p.417-426, eng 45-3595
- Frozen ground physics**
- Frozen ground effects on infiltration and runoff. Kane, D.L., et al, 1990, p.259-300, eng 45-410
- Effect of fires on frozen soils. Tarabukina, V.G., et al, 1990, 119p., rus 45-1572
- Rock blasting in seasonally freezing ground. Reference manual. Frash, G.B., 1990, 110p., rus 45-1703
- Saline frozen soils as a foundation for structures; collected scientific papers. Vialov, S.S., ed, 1990, 143p., rus 45-2882
- Features of thermophysical properties of saline frozen soils. Shelkin, I.V., 1990, p.20-24, rus 45-2885
- Effect of saline solutions on frozen soils and mortars. Galdaenko, E.I., 1990, p.62-70, rus 45-2891
- Electrical and acoustic properties of saline frozen soils. Zykov, I.U.D., et al, 1990, p.128-136, rus 45-2902
- Frozen ground settling**
- Profiling top of buried pipe of the trans Alaska pipeline using the TSI pipe locator. McDevitt, P.G., et al, 1988, p.279-286, eng 45-1181
- Treatment of unstable foundation areas in Alaska's pavement management system. Johnson, E.G., 1991, p.448-453, eng 45-2356
- Frozen ground strength**
- Design engineering problems of surface coal mines in arctic Alaska. Sengupta, M., 1990, p.735-743, eng 45-175
- Investigation into the creep behavior of CRREL tunnel, Alaska. Huang, S.L., et al, 1989, p.65-73, eng 45-333
- Cone penetrometer tests in permafrost—the Fox Tunnel, Alaska. Ladanyi, B., et al, 1989, p.75-82, eng 45-334
- Viscoelastoplastic model of frozen soil. Cai, Z.M., et al, 1990, p.31-40, chi 45-459
- Cyclic load effects on model pile behavior in frozen sand. Stelzer, D.L., 1989, 349p., eng 45-480
- Compressive strength behavior of fine-grained frozen soils. Wijeweera, H., et al, 1990, p.472-483, eng 45-632
- Determination of mean annual temperature of permafrost soil. Khrustalev, L.N., et al, 1989, p.89-93, eng 45-652
- Mechanical properties of frozen clays mixed with sandy soils. Enokido, M., et al, 1989, p.31-36, jpn 45-692
- Constitutive model for frozen sand. Adachi, T., et al, 1990, p.208-212, eng 45-851
- Numerical modeling of structure-frozen soil/ice interaction. Puswewala, U.G.A., et al, 1990, p.133-151, eng 45-1523
- Cone penetrometer and pressuremeter tests in permafrost: the Fox Tunnel, Alaska. Huneault, P., et al, 1989, 123p. + appends., eng 45-2052
- Cold regions engineering. 1991, 790p., eng 45-2316
- Soil-pipe interaction during frost heaving around a buried chilled pipeline. Shen, M., et al, 1991, p.11-21, eng 45-2318
- Thermal strain behaviour of clays cooled to cryogenic temperatures. Landva, J., et al, 1991, p.22-31, eng 45-2319
- Low density frozen saline soils for strength tests. Ayorinde, O.A., 1991, p.32-43, eng 45-2320
- Single pile and pile group in permafrost. Vialov, S.S., et al, 1991, p.44-53, eng 45-2321
- Laboratory study of shock waves in frozen soil. Dutta, P.K., et al, 1991, p.54-70, eng 45-2322
- Improved methods of testing piles in frozen soils. Vialov, S.S., et al, 1991, p.155-161, eng 45-2398
- Model pile-settlement behavior in frozen sand. Stelzer, D.L., et al, 1991, p.1-13, eng 45-2416
- Reliability of the frozen bearing ground of structures. Zhelezniak, I.I., 1990, 171p., rus 45-2423
- Prevention of oil well collapse in permafrost. Medvedskii, R.I., et al, 1989, p.74-82, eng 45-2585
- Saline frozen soils as a foundation for structures; collected scientific papers. Vialov, S.S., ed, 1990, 143p., rus 45-2882
- Investigations of saline permafrost on the arctic shore (review). Velli, I.U.I.A., 1990, p.9-20, rus 45-2884
- Estimating strength and rheological properties of saline frozen soils. Mirenburg, I.U.S., et al, 1990, p.90-98, rus 45-2895
- Effect of testing methods on the measured strength properties of saline frozen soils. Grishin, P.A., 1990, p.99-103, rus 45-2896
- Effect of salinity on strength and rheological properties of frozen soils. Iarkin, A.N., 1990, p.103-107, rus 45-2897
- Strength of frozen saline soils in the Yamal Peninsula. Brushkov, A.V., et al, 1990, p.115-120, rus 45-2899
- Effect of the cryogenic structure of saline frozen soils on their strength. Minaev, A.N., 1990, p.124-128, rus 45-2901
- Stress strain characteristics of fine-grained frozen soils. Wijeweera, H., et al, 1989, 93p., eng 45-2923
- Installation of deeply laid molded-in-place and combination piles in permafrost soils in Noril'sk. Nekliudov, V.S., et al, 1991, p.252-256, eng 45-3560
- Pressuremeter stress relaxation testing in a permafrost tunnel. Ladanyi, B., et al, 1991, p.213-224, eng 45-3830
- Frozen ground temperature**
- Thermal characteristics of the permafrost within a rock glacier. Mühl, D.V., et al, 1990, p.151-158, eng 45-56
- Radiobrightness of freezing terrain. Zuerndorfer, B., et al, 1989, p.2748-2751, eng 45-302
- Variations in geocryological conditions of gas pipeline routes in Yakutia. Konstantinov, I.P., et al, 1987, p.126-134, rus 45-582
- Compressive strength behavior of fine-grained frozen soils. Wijeweera, H., et al, 1990, p.472-483, eng 45-632
- Variations in the salinity of seasonally and perennially frozen soils. Anisimova, N.P., 1990, p.40-46, rus 45-1199
- Thermal interaction of cast-in-situ bored piles with frozen ground. Kamenskii, R.M., 1990, p.65-72, rus 45-1201
- Algorithm for a periodically stabilized regime in the solution of a Stefan problem. Shender, N.I., et al, 1990, p.105-110, rus 45-1206
- Effect of fires on frozen soils. Tarabukina, V.G., et al, 1990, 119p., rus 45-1572
- Summer temperature distribution of moss cover in cryolithozone regions. Stashenko, A.I., 1990, p.167-170, rus 45-1717
- Methods of studying the thermal regime of soils in the cryolithozone. Pavlov, A.V., ed, 1989, 128p., rus 45-2003
- Studying the thermal regime of natural complexes of tundra zones. Pavlov, A.V., et al, 1989, p.6-20, rus 45-2004
- Forecasting the temperature of the active layer of rocks. Slaviv-Borovskii, V.B., et al, 1989, p.20-31, rus 45-2005
- Observing rock temperatures while surveying cryogenic-hydrogeological operations. Petrova, R.G., et al, 1989, p.47-57, rus 45-2008
- Modelling the thermal regime of ground in non-disturbed and disturbed complexes. Stashenko, A.I., 1989, p.79-88, rus 45-2012
- Temperature and moisture content of soils in Western Yamal. Sautkin, E.V., et al, 1989, p.111-119, rus 45-2016
- Investigations of ground thermal regime in cryolithozone regions. Beikhova, M.G., 1989, p.120-122, rus 45-2017
- Frozen type filled ash dump. Kuznetsov, G.I., et al, 1990, p.77-83, rus 45-2248
- Thermal regime of clayey soils at the Kungur weather station. Lukin, A.V., 1990, p.95-97, rus 45-2714
- Saline frozen soils as a foundation for structures; collected scientific papers. Vialov, S.S., ed, 1990, 143p., rus 45-2882
- Effect of salinity on strength and rheological properties of frozen soils. Iarkin, A.N., 1990, p.103-107, rus 45-2897
- Strength of frozen saline soils in the Yamal Peninsula. Brushkov, A.V., et al, 1990, p.115-120, rus 45-2899
- Determining long-term equivalent cohesion of frozen soils. Vorob'evskii, B.E., 1990, p.121-123, rus 45-2900
- Frozen ground thermodynamics**
- Calculating formula of time-dependent temperature regime of frozen soil. Wang, J.F., 1990, p.128-133, eng 45-485
- Numerical study of an underground heat tube. Sulaiman, F., 1989, 171p., eng 45-508
- Permafrost and other frozen ground. Williams, P.J., 1990, p.117-123, eng 45-990
- Thermomodification flow of thin intervening layers of unfrozen water in bundles of quartz fibers. Brovka, G.P., et al, 1990, p.294-297, eng 45-1271
- Temperature regime of oil and gas pipelines laid jointly in frozen ground. Danielian, I.U.S., et al, 1988, p.91-96, eng 45-1426
- Frozen type filled ash dump. Kuznetsov, G.I., et al, 1990, p.77-83, rus 45-2248
- Calculating thermal economy in horizontal mine shafts. IURganov, M.M., et al, 1990, p.88-89, rus 45-2712
- Features of thermophysical properties of saline frozen soils. Shelkin, I.V., 1990, p.20-24, rus 45-2885
- Transfer of salt in frozen dispersed soils. Ostroumov, V.E., 1990, p.45-55, rus 45-2889
- Frozen lakes**
- Anomalous temperature and oxygen gradients under the ice of a high-plains lake in Wyoming. Rahel, F.J., 1990, p.751-755, eng 45-2020
- Comparisons between lakes and seas during the arctic winter. Welch, H., 1991, p.11-23, eng 45-2468
- High latitude limnology. Vincent, W.F., ed, 1989, 323p., eng 45-2602
- Nitrogen transport by phytoplankton in ice-covered lakes. Priscu, J.C., 1989, p.173-182, eng 45-2615

- Vertical distributions of a planktonic harpacticoid and a calanoid (Copepoda) in a meromictic antarctic lake. Bayly, I.A.E., et al, [1989, p.207-214, eng] **45-2617**
- Antarctic fjords as precursors to meromictic lakes. Gallagher, J.B., et al, [1989, p.235-254, eng] **45-2618**
- Vertical distribution of organic constituents in an antarctic lake: Lake Fryxell. Matsumoto, G.I., et al, [1989, p.291-303, eng] **45-2620**
- Utilization of ground penetrating radar to conduct sediment surveys of frozen reservoirs. Iivari, T.A., et al, [1988, p.1055-1061, eng] **45-3099**
- See *also*: Icebound lakes
- Frozen liquids**
- Theory of charge-transfer spectra in frozen media. Marcus, R.A., [1990, p.4963-4966, eng] **45-433**
- Transfer of hydrogen from NADPH to NAD<sup>+</sup> in frozen aqueous solution. Aso, Y., et al, [1990, p.2187-2188, eng] **45-957**
- Study of the frozen water-poly(vinyl alcohol) system by H-2 and C-13 NMR spectroscopy. Gusev, D.G., et al, [1990, p.651-655, eng] **45-958**
- Frozen-liquid PMR spectra and interactions of water with spherical carbon adsorbents. Turov, V.V., et al, [1990, p.102-105, eng] **45-2285**
- Glass transition of the amorphous phase in frozen aqueous systems. Blond, G., et al, [1991, p.239-247, eng] **45-2937**
- Effect of gelatin on hydrolysis in frozen aqueous solutions. Sergeev, B.M., et al, [1991, p.978-983, eng] **45-3775**
- Frozen rivers**
- See *also*: Icebound rivers
- Frozen rock strength**
- Strength characteristics of rocks after having been at low temperature. Inada, Y., et al, [1982, p.335-342, jpn] **45-115**
- Effect of low temperature on polymeric binding agent for rock mass. Inada, Y., et al, [1982, p.343-350, jpn] **45-116**
- Easy method for estimating the strength of rocks at low temperature. Inada, Y., et al, [1981, p.477-487, jpn] **45-117**
- Mechanical characteristics of rocks at low temperatures. Inada, Y., et al, [1980, p.1221-1227, jpn] **45-118**
- Thermal properties of rocks at low temperatures. Inada, Y., et al, [1980, p.1228-1233, jpn] **45-119**
- Mechanical characteristics of rocks related to cooling. Inada, Y., et al, [1979, p.979-985, jpn] **45-120**
- Exploitation of mineral resources in the north. Proskuriakov, N.M., et al, [1989, p.27-32, eng] **45-329**
- Rock mechanics investigations in the Svea Coal Mine, Svalbard. Myrvang, A.M., et al, [1989, p.95-103, eng] **45-336**
- Natural conditions in developed regions of Siberia. Klimovskii, I.V., ed, [1987, 172p., rus] **45-568**
- Seasonally thawing and freezing layers of the Lena-Aldan interfluvium. Vasil'ev, I.S., [1987, p.65-77, rus] **45-576**
- Drilling exploratory wells with pneumatic drills. Kudriashov, B.B., et al, [1990, 263p., rus] **45-634**
- Chemogenic heaving of frozen rocks. Lebedenko, I.U.P., [1989, p.57-66, eng] **45-860**
- General geocryology. Ershov, E.D., [1990, 558p., rus] **45-1473**
- Relict cryolithozone in the Timan-Pechora petroleum province. Oberman, N.G., [1989, p.88-96, rus] **45-2633**
- Frozen rock temperature**
- Thermal properties of rocks at low temperatures. Inada, Y., et al, [1980, p.1228-1233, jpn] **45-119**
- Data basis for permafrost studies in Greenland. Kern-Hansen, C., [1990, p.635-644, eng] **45-166**
- Geocryology of the USSR. Mountainous regions of southern USSR. Ershov, E.D., ed, [1989, 358p., rus] **45-430**
- Natural conditions in developed regions of Siberia. Klimovskii, I.V., ed, [1987, 172p., rus] **45-568**
- Geocryological subdivision map of the Baykal-Amur region. Fotiev, S.M., et al, [1987, p.25-38, rus] **45-572**
- Engineering-geocryological evaluation of dispersed rock masses, Yakutia. An, V.V., et al, [1987, p.77-89, rus] **45-577**
- Cryolithology of loose deposits in the Kenkeme River valley. Botulu, T.A., [1987, p.138-141, rus] **45-584**
- Origin of the ice in the outcrop "Ledyanaya Gora". Karpov, E.G., [1987, p.142-146, rus] **45-585**
- Temperature field in a system of excavations during ice formation. Kol'chik, I.U.N., et al, [1990, p.47-51, rus] **45-801**
- General geocryology. Ershov, E.D., [1990, 558p., rus] **45-1473**
- Heat transfer when drilling in permafrost. Sedov, V.T., [1990, 126p., rus] **45-1533**
- Thermodynamic processes management in a mining operations area. El'chaninov, E.A., [1989, 236p., rus] **45-1668**
- Methods of studying the thermal regime of soils in the cryolithozone. Pavlov, A.V., ed, [1989, 128p., rus] **45-2003**
- Forecasting the temperature of the active layer of rocks. Slavin-Borovskii, V.B., et al, [1989, p.20-31, rus] **45-2005**
- Observing rock temperatures while surveying cryogenic-hydrogeological operations. Petrova, R.G., et al, [1989, p.47-57, rus] **45-2008**
- Temperature evolution of floodplain geosystems in northern Yakutia. Zaikanov, V.G., [1989, p.95-102, rus] **45-2014**
- Formation of a specific subaqueous talik in a coastal zone of the Kara Sea. Grigor'ev, N.F., et al, [1989, p.74-78, rus] **45-2631**
- Relict cryolithozone in the Timan-Pechora petroleum province. Oberman, N.G., [1989, p.88-96, rus] **45-2633**
- Air temperature, rocks, and ground water in the Kungur cave. Dorofeev, E.P., [1990, p.29-34, rus] **45-2700**
- Frozen rocks**
- Characteristics of perennally frozen rocks in Baykal type depressions. An, V.V., [1989, p.96-100, rus] **45-2**
- Underground mining of frozen placer deposits in USSR. Evstioch, A.S., et al, [1989, p.241-244, eng] **45-352**
- Geocryology of the USSR. Mountainous regions of southern USSR. Ershov, E.D., ed, [1989, 358p., rus] **45-430**
- Natural conditions in developed regions of Siberia. Klimovskii, I.V., ed, [1987, 172p., rus] **45-568**
- Gas dynamic studies of frozen rocks. Olovin, B.A., [1987, p.9-18, rus] **45-570**
- Seasonally thawing and freezing layers of the Lena-Aldan interfluvium. Vasil'ev, I.S., [1987, p.65-77, rus] **45-576**
- Borehole hydraulic mining of frozen rock in Yakutia. Kuz'min, G.P., et al, [1987, p.113-117, rus] **45-580**
- Cryogenic migration of ions and bound moisture in ice-saturated disperse rocks. Lebedenko, I.U.P., [1989, p.1-9, eng] **45-645**
- Gas hydrates in rocks at subzero temperatures. Iakushev, V.S., et al, [1990, p.899-903, rus] **45-678**
- General geocryology. Ershov, E.D., [1990, 558p., rus] **45-1473**
- Geological prospecting of rocks for deep-freezing shafts. Lamparski, H., [1988, p.307-308, ger] **45-1475**
- Technical problems in deep-freeze planning and the deep-freezing process. Szendzielorz, H., [1988, p.308-310, ger] **45-1476**
- Conditions and processes of the cryogenic migration of substances. Romanov, V.P., ed, [1989, 175p., rus] **45-1823**
- Deterioration of rocks and frozen rock monoliths by brines. *Laboratornye issledovaniia razrusheniia l'da i ledoporodnykh monolitov rassolami*, [1989, p.83-95, rus] **45-1830**
- Zonality of the distribution of chemical elements in terrigenous rocks. Tumanov, V.R., [1989, p.130-141, rus] **45-1834**
- Experimental frost and salt weathering of chalk. Part 2. Jerwood, L.C., et al, [1990, p.699-708, eng] **45-1998**
- Structure and properties of rocks in the Udokan cryolithozone. Shesternev, D.M., et al, [1990, 124p., rus] **45-2034**
- Mechanical weathering rates on Signy Island, maritime Antarctic. Hall, K., [1990, p.61-67, eng] **45-2235**
- Supergene corundum in the Quaternary permafrost of Yakutia. Zigert, Kh., et al, [1990, p.155-159, eng] **45-2476**
- High-temperature penetrometer for boring ice and rocks by melting. Kudriashov, B.B., et al, [1990, p.66-73, rus] **45-2488**
- Effect of saline soil cements on frozen rocks and construction materials. Galdaenko, E.I., [1989, p.114-123, rus] **45-2636**
- Problems in geometeorology and the accumulation of winter cold. Koval'chuk, A.I., ed, [1990, 119p., rus] **45-2695**
- Thermal regime and cryogenic structure of coarse elastic deposits. Gorbunov, A.P., et al, [1990, p.54-58, rus] **45-2706**
- Cryogenic heaving in conjunction with seasonal and long-term freezing of rocks. Nevecheria, V.L., [1989, p.44-49, eng] **45-3253**
- Study of ancient glacial deposits: a practical guide. Chumakov, N.M., [1990, 93p., rus] **45-3836**
- Frozen soil**
- See *also*: Frozen ground
- Fuel additives**
- Subzero Engineering Conference proceedings. [1989, 470p., eng] **45-1209**
- Evolution of diesel fuel cold flow—the next frontier. Brown, G.I., et al, [1989, p.223-237, eng] **45-1236**
- Present and future fuels and lubricants in cold climate operation. Haahela, O., et al, [1989, p.239-250, eng] **45-1237**
- Low temperature operability of diesel vehicles. Rickeard, D.J., et al, [1989, p.375-382, eng] **45-1249**
- Effects of MTBE on gasoline engine cold weather operation. Viljanen, J., et al, [1989, p.413-420, eng] **45-1251**
- Low temperature operability of diesel engines. Rickeard, D.J., et al, [1989, p.33-37, eng] **45-1290**
- Fuels**
- Subzero Engineering Conference proceedings. [1989, 470p., eng] **45-1209**
- Automotive exhaust emissions at low ambient temperature. Laurikko, J.K., [1989, p.35-46, eng] **45-1212**
- Influence of diesel fuel properties and ambient temperature on engines. Juva, A., et al, [1989, p.101-111, eng] **45-1221**
- Good diesel fuel cold properties reduce engine performance. Mikkonen, S., et al, [1989, p.123-132, eng] **45-1224**
- Evolution of diesel fuel cold flow—the next frontier. Brown, G.I., et al, [1989, p.223-237, eng] **45-1236**
- Present and future fuels and lubricants in cold climate operation. Haahela, O., et al, [1989, p.239-250, eng] **45-1237**
- Compressibility of diesel and methanol fuels at low temperatures. Varde, K.S., [1989, p.455-459, eng] **45-1254**
- Automotive fuels at low temperatures. Diemand, D., [1991, 25p., eng] **45-2920**
- Graphical method simplifies diesel cloud point determinations. Khan, H.U., et al, [1990, p.98-101, eng] **45-3101**
- Fungi**
- Fungi in reclamation of cold climate mining wastes. Veith, D.L., et al, [1989, p.177-188, eng] **45-346**
- Cellular slime molds in soils of Alaskan tundra, U.S.A. Stephenson, S.L., et al, [1991, p.104-107, eng] **45-2474**
- Ultrastructural organization of yeast isolated from an antarctic glacier. Abyzov, S.S., et al, [1983, p.914-922, rus] **45-2984**
- Survey of mycorrhizal plants on Truelove Lowland, Devon Island, N.W.T., Canada. Bledsoe, C., et al, [1990, p.1848-1856, eng] **45-3106**
- Gamma irradiation**
- Time and space distribution of initial gamma-field levels in Tien Shan. Getker, M.I., et al, [1990, p.61-71, rus] **45-1105**
- Accuracy of soil property measurement by gamma beams. Miyazaki, T., et al, [1991, p.127-137, eng] **45-2271**
- Gas inclusions**
- Ice-core record: climate sensitivity and future greenhouse warming. Lorius, C., et al, [1990, p.139-145, eng] **45-377**
- SO<sub>2</sub> infrared spectra of clathrate hydrate films. Fleyfel, F., et al, [1990, p.7032-7037, eng] **45-843**
- Gas liquefaction**
- See *also*: Liquefied gases
- Gas pipelines**
- Environmental protection of gas and oil-production areas in the Arctic. Romanovskaia, N.V., et al, [1989, p.107-112, rus] **45-108**
- Gas pipelining in permafrost. Antonov-Druzhinin, V.P., [1990, p.392-404, eng] **45-146**
- Technology of pipeline construction on the Yamburg gas condensate field. Kurbatov, N.I., et al, [1990, p.492-502, eng] **45-153**
- Corrosion protection of gas pipelines buried in permafrost. Sackinger, W.M., [1990, p.565-574, eng] **45-159**
- Meter/gate station design improvements: phase 1. Final report. [1988, 58p., eng] **45-318**
- Variations in geocryological conditions of gas pipeline routes in Yakutia. Konstantinov, I.P., et al, [1987, p.126-134, rus] **45-582**
- System analysis of gas transportation mainlines in western Siberia. Iakovlev, E.I., et al, [1989, 300p., rus] **45-639**
- Peculiarities of maintaining underground gas lines in the Far North. Borovkov, V.A., [1989, p.30-31, rus] **45-707**
- Testing of construction design. Mironov, N.G., et al, [1990, p.40-41, rus] **45-734**
- Improving the strength of gas pipelines under complicated conditions. Kharonovskii, V.V., [1990, 179p., rus] **45-985**
- Improving the stability of main gas pipelines in the cryolithozone. Mazur, I.I., et al, [1990, 72p., rus] **45-1706**
- Gas production**
- Engineering and geocryological studies of gas-deposit areas, Western Siberia. Moakalenko, N.G., et al, [1989, p.3-15, rus] **45-100**
- Geotechnical systems of gas fields in the Tyumen North. Kravtsov, I.U.V., et al, [1989, p.32-36, rus] **45-103**
- Thermal properties of permafrost in the North. Pavlov, A.V., et al, [1989, p.52-58, rus] **45-105**
- Geocryological-geothermal conditions in gas-condensate fields. Repin, A.C., et al, [1989, p.58-65, rus] **45-2009**
- Evaluating bearing ground stability of gas fields in the cryolithozone. Ivliv, A.I.U., [1989, p.66-73, rus] **45-2010**
- Environmental aspects of the exploitation of arctic oil and gas reserves. Jumpanen, P., [1990, p.70-84, eng] **45-3089**
- Oil and gas resources in the offshore Soviet arctic. Clarke, J.W., [1991, p.108-122, eng] **45-3328**
- Ecological aspects of developing oil and gas resources in non-Soviet arctic regions. Epifanov, A.A., et al, [1990, p.150-160, rus] **45-3411**
- Gas wells**
- Drilling exploratory wells with pneumatic drills. Kudriashov, B.B., et al, [1990, 263p., rus] **45-634**

## Gas wells (cont.)

Clay mortar and cement reinforcement rings for gas wells in permafrost. Gavril'ev, R.I., et al, 1990, p.72-76, rusj 45-1202

## Gases

Gas pressure calibration using mercury melting curve with ice-salt mixtures. Lusk, J., 1990, p.852-856, engj 45-712

Stability of gas hydrates. Rodger, P.M., 1990, p.6080-6089, engj 45-713

Arctic ozone crater in 1989. Evans, W.F.J., et al, 1990, p.1113-1121, engj 45-1428

Radon measurements as indicators of permafrost distribution. Sellmann, P.V., et al, 1990, p.331-336, engj 45-1622

Study of clathrate hydrates from vapour-deposited amorphous ice. Hallbrucker, A., et al, 1990, p.3785-3792, engj 45-2415

Gas-hydrogeochemical variations in the active layer in northeast USSR. Giotov, V.E., 1989, p.33-46, rusj 45-2627

Methane emission measurements from subarctic fens. Moore, T.R., et al, 1991, p.102-109, engj 45-2792

Gas release from comets. Nottesco, G., et al, 1991, p.411-413, engj 45-2941

Productivity of phytocenoses in mountain tundra of the Khibini Mountains. Luk'ianova, L.M., et al, 1991, p.181-187, engj 45-3263

Probing ice cluster surfaces with dangling-OH-mode absorption. Rowland, B., et al, 1991, p.1378-1384, engj 45-3820

See (also): Carbon dioxide; Hydrogen; Liquefied gases; Natural gas; Oxygen

## Gazetteers

Gazetteer of the Antarctic. Fourth edition. 1989, 145p., engj 45-2934

Alaska place names. Schorr, A.E., 1991, 191p., engj 45-3860

## Geobotanical interpretation

Experiment in composing a geobotanical map of the Noril'sk city region. Moskalenko, N.G., 1972, p.54-63 + map, rusj 45-1716

Terrain, snow distribution and vegetation patterns. Evans, B.W., et al, 1989, p.270-278, engj 45-1981

## Geochemical cycles

Contamination of the global environment as observed in the Arctic. Paचना, J.M., et al, 1990, p.149-157, engj 45-374

## Geochemistry

Human factors of geochemical changes in arctic oil and gas regions. Evseev, A.V., et al, 1989, p.15-21, rusj 45-101

Quaternary geology of Canada and Greenland. Fulton, R.J., ed, 1989, 839p. + suppl., engj 45-610

Geochemistry of the snow cover around coal mines. Makarov, V.N., 1990, p.37-44, rusj 45-671

Conditions and processes of the cryogenic migration of substances. Romanov, V.P., ed, 1989, 175p., rusj 45-1823

Primary geochemical aureoles of kimberlites in the cryolithozone. IAgnyshv, B.S., 1989, p.142-153, rusj 45-1835

New models for the origin of Valles Marineris closed depressions. Spencer, J.R., et al, 1990, p.14,301-14,313, engj 45-1838

Regional ecological-geochemical analysis of landscapes. Kasimov, N.S., et al, 1990, p.59-74, rusj 45-1966

Geochemistry of Alph River and tributaries in Walcott Bay. De Mora, S.J., et al, 1991, p.73-86, engj 45-2072

Geochemical-mineralogical profiles through fresh and weathered till. Shilts, W.W., et al, 1990, p.187-216, engj 45-2552

Geochemical processes in the Lake Fryxell Basin (Victoria Land, Antarctica). Green, W.J., et al, 1989, p.129-148, engj 45-2612

Geochemistry of cryogenic salts in eastern Yakutia. Makarov, V.N., 1989, p.47-61, rusj 45-2628

Neogene paleoclimate development of the antarctic Weddell Sea region: organic geochemistry. Macko, S.A., et al, 1990, p.881-897, engj 45-3530

Petroleum geology and geochemistry of the Arctic National Wildlife Refuge 1002 area. Banet, A.C., Jr., 1990, 26p. + appends., engj 45-3884

## Geochronology

Late Cenozoic geologic controls on placer-gold distribution. Kaufman, D.S., et al, 1989, p.26-45, engj 45-193

Soil development rates in the Transantarctic Mountains. Bockheim, J.G., 1990, p.59-77, engj 45-715

Quaternary age: paleogeography and lithology. Ianshin, A.L., ed, 1989, 251p., rusj 45-786

Using loess-soil formation to correlate glacial, periglacial, and coastal zones. Velichko, A.A., et al, 1989, p.14-21, rusj 45-788

Middle Pleistocene glacial and periglacial formations in the Russian Plain. Udartsev, V.P., et al, 1989, p.193-200, rusj 45-790

Paleogeography and chronostratigraphy of the Pleistocene in Siberia. Arkhipov, S.A., 1989, p.201-214, rusj 45-791

Global climatic events of the Neogene. Zubakov, V.A., 1990, 222p., rusj 45-842

Chrono-stratigraphic scale of the Pleistocene glacial epoch in Siberia. Arkhipov, S.A., 1989, p.20-30, rusj 45-1135

Svalbard radiocarbon date list 1. Forman, S.L., et al, 1990, 48p., engj 45-1180

## Geocryology

Conference on ecological impact of oil and gas industry, 1988. 1989, 235p., rusj 45-99

Engineering and geocryological studies of gas-deposit areas, Western Siberia. Moskalenko, N.G., et al, 1989, p.3-15, rusj 45-100

Structure and dynamics of cryogenic systems of oil and gas deposits. Zaikanov, V.G., et al, 1989, p.22-27, rusj 45-102

Geotechnical systems of gas fields in the Tyumen North. Kravtsov, I.U.V., et al, 1989, p.32-36, rusj 45-103

Environmental protection of geocryological zones in Western Siberia. Mel'nikov, E.S., et al, 1989, p.36-43, rusj 45-104

Thermal properties of permafrost in the North. Pavlov, A.V., et al, 1989, p.52-56, rusj 45-105

Using monitors in permafrost with oil and gas deposits. Popkov, O.N., et al, 1989, p.58-65, rusj 45-106

Typification of engineering effects in permafrost regions using numerical criteria. Popkov, O.N., et al, 1989, p.65-69, rusj 45-107

Interaction between permafrost and a deposit of natural gas hydrates. Tipenko, G.S., et al, 1990, p.73-84, rusj 45-322

Geocryology of the USSR. Mountainous regions of southern USSR. Ershov, E.D., ed, 1989, 358p., rusj 45-430

Frozen types of landscape structures in northwest Komsomolets I. Smirnov, I.P., 1989, p.388-393, rusj 45-493

Natural conditions in developed regions of Siberia. Klimovskii, I.V., ed, 1987, 172p., rusj 45-568

Geocryological problems in developing arctic shallow-water areas. Kamenskii, R.M., et al, 1987, p.3-8, rusj 45-569

Gas dynamic studies of frozen rocks. Olovin, B.A., 1987, p.9-18, rusj 45-570

Role of heat balance studies in geocryological forecasting. Pavlov, A.V., et al, 1987, p.18-25, rusj 45-571

Geocryological subdivision map of the Baykal-Amur region. Fotiev, S.M., et al, 1987, p.25-38, rusj 45-572

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**Geothermal prospecting (cont.)**

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- Evolution of the alluvial fans of the Altoid. Borsy, Z., [1990, p.229-246, eng] 45-1578
- Leba River alluvial fan and its palaeogeomorphological significance. Rachocki, A.H., [1990, p.305-317, eng] 45-1579
- Reconstructed ice-flow patterns and ice limits using drift pebble lithology. Bell, T., et al, [1989, p.577-590, eng] 45-1613
- Saline minerals in the Lewis Cliff ice tongue. Fitzpatrick, J.J., et al, [1990, p.57-69, eng] 45-1687
- Presence of glacial deposits in the central basin of the Barents Sea. Gataullin, V.N., et al, [1990, p.1463-1467, rus] 45-1860
- Paleogeographical regularities of glacial lithogenesis. Sudakova, N.G., [1990, 158p., rus] 45-1865

- Observations of debris transport and discharge on K2 Glacier, West China. Drozdowski, E., [1989, p.31-47, eng] 45-1988
- Ice-rich diamicton blocks in Quaternary outwash sediments in Austria. Krainer, K., et al, [1990, p.249-254, eng] 45-2027
- Studies in Maine geology. Tucker, R.D., ed, [1989, 6 vols., eng] 45-2054
- Deposition of the glaciomarine mud in the Gulf of Maine. Oldale, R.N., [1989, p.1-10, eng] 45-2055
- Morphodynamics of tidal inlet systems in Maine. FitzGerald, D.M., et al, [1989, p.67-96, eng] 45-2059
- Late Wisconsinan deglaciation of coastal Maine. Smith, G.W., et al, [1989, p.13-32, eng] 45-2063
- Late Wisconsinan glacial and glaciomarine sediments in Maine. Retelle, M.J., et al, [1989, p.33-51, eng] 45-2064
- Stratified waterlain glacial sediments in Maine. Weddie, T.K., [1989, p.53-69, eng] 45-2065
- Deglaciation of the Androscoggin River valley in Maine and New Hampshire. Thompson, W.B., et al, [1989, p.71-88, eng] 45-2066
- Late-glacial dunes, ventifacts, and wind direction in west-central Maine. McKeon, J.B., [1989, p.89-101, eng] 45-2067
- Cryogenic processes in moraines of the Zailiyskiy Alatau. Kan, M.S., et al, [1990, p.167-173, rus] 45-2408
- Paleoclimatic implications of an early Holocene glacier advance on Disko Island, West Greenland. Ingólfsson, O., et al, [1990, p.297-311, eng] 45-2412
- Cryolithology of the lower course of the Lena River. Kunitakii, V.V., [1989, 162p., rus] 45-2424
- Deposits of the glacial paleohelf in the Bol'shezemel'skaya tundra. Lavrushin, I.U.A., et al, [1989, p.3-51, rus] 45-2445
- Role of icebergs in terrigenous sedimentation in the world ocean. Vasil'ev, V.P., [1990, p.113-119, rus] 45-2491
- Formation of relief, correlated deposits and placers in northeast USSR. Ivanov, V.F., ed, [1989, 156p., rus] 45-2493
- History of the development of the relief of northern Chukotka. Glushkova, S.I.U., et al, [1989, p.73-88, rus] 45-2495
- Pleistocene glaciations of the Cherskiy mountain system. Krutous, V.I., et al, [1989, p.102-112, rus] 45-2497
- Mineral composition of Late Pleistocene cryolithogenic deposits. Kotov, A.N., et al, [1989, p.152-156, rus] 45-2500
- Cenozoic ice sheet fluctuation and Neogene stratigraphic signature. Bartek, L.R., et al, [1991, p.6753-6778, eng] 45-2501
- Glacial indicator tracing. Kujansuu, R., ed, [1990, p.252p., eng] 45-2541
- Outline of glacial indicator tracing. Saarnisto, M., [1990, p.1-13, eng] 45-2542
- Modelling of glacial transport of tills. Puranen, R., [1990, p.15-34, eng] 45-2543
- Formation, deposition, and identification of subglacial and supraglacial tills. Dreimanis, A., [1990, p.35-59, eng] 45-2544
- Glacial morphology as an indicator of the direction of glacial transport. Lundqvist, J., [1990, p.61-70, eng] 45-2545
- Boulder transport in shield areas. Bouchard, M., et al, [1990, p.87-107, eng] 45-2547
- Glacial dispersal trains. Dilabio, R.N.W., [1990, p.109-122, eng] 45-2548
- Compositional variability of till in marginal areas of continental glaciers. Stewart, R.A., et al, [1990, p.123-149, eng] 45-2549
- Lithology and transport distance of glaciofluvial material. Lilleaköld, M., [1990, p.151-164, eng] 45-2550
- Heavy minerals in glacial material. Peuraniemi, V., [1990, p.165-185, eng] 45-2551
- Geochemical-mineralogical profiles through fresh and weathered till. Shilts, W.W., et al, [1990, p.187-216, eng] 45-2552
- Field methods for glacial indicator tracing. Hirvas, H., et al, [1990, p.217-248, eng] 45-2553
- Glaciomarine environments: processes and sediments. Dowdeswell, J.A., ed, [1990, 423p., eng] 45-2778
- On the description and modelling of glaciomarine sediments and sedimentation. Dowdeswell, J.A., et al, [1990, p.1-13, eng] 45-2779
- Role of subglacial and marine processes in the production of laminated sediments. Domack, E.W., [1990, p.91-103, eng] 45-2783
- Rafting in glaciomarine environments. Gilbert, R., [1990, p.105-120, eng] 45-2784
- Recent sedimentation processes on World Ocean shelves. Abulvalov, N.A., ed, [1990, 207p., rus] 45-2874
- Current problems in Quaternary geology of the Barents Sea. Pavlidis, I.U.A., et al, [1990, p.76-93, rus] 45-2876
- Transfer of terrigenous suspended material to the Barents Sea by glaciers. Medvedev, V.S., et al, [1990, p.103-110, rus] 45-2878
- Thermoluminescence properties of fiord sediments from Spitsbergen. Forman, S.L., [1990, p.377-384, eng] 45-3292

- Principles for correlating Quaternary events in southern USSR. Sgibnev, V.V., et al, [1991, p.96-100, rus] 45-3439
- Freed from a glacier after 25 years—glacial and meteorological aspects. Ambach, W., et al, [1990, p.183-188, ger] 45-3763
- Glacial and glaciofluvial material transport in subpolar glaciers; examples from Svalbard. Sollid, J.L., et al, [1990, p.159-165, eng] 45-3792
- Subglacially formed dunes in a drumlin field. Shaw, J., et al, [1991, p.21-34, eng] 45-3825
- Glacial sedimentary sequences in the Bern and Solothurn Seeland and Mittelland. Pugin, A., [1991, p.177-205, fre] 45-3827
- Study of ancient glacial deposits; a practical guide. Chumakov, N.M., [1990, 93p., rus] 45-3836
- Glacial erosion**
- Geomorphic patterns produced by the last Canadian ice sheet. Clark, C.D., et al, [1989, p.97-100, eng] 45-230
- Reconstruction of ice dome dynamics in the Finger Lakes region, NY. Ridky, R.W., et al, [1990, p.1055-1064, eng] 45-403
- Comment and reply on "Drumlins, subglacial meltwater floods, and ocean responses". Forström, L., et al, [1990, p.804-805, eng] 45-618
- Glacial meltwater runoff and paleogeographic reconstructions. Bol'shianov, D.I.U., et al, [1990, p.58-64, rus] 45-705
- Quaternary river valley development in the Moscow marginal ice zone. Antonov, S.I., et al, [1989, p.62-67, rus] 45-710
- Effects of glacial surging on sedimentation in a modern ice-contact lake, Alaska. Smith, N.D., [1990, p.1393-1403, eng] 45-894
- Discussion of Hirano and Aniya's (1986,1989) explanation of glacial-valley cross profile development. Harbor, J.M., et al, [1990, p.369-381, eng] 45-961
- Current trends in the development of the glacier system of Elbrus Mountain. Voikovskii, K.F., et al, [1989, p.73-80, rus] 45-1038
- Glacier fluctuations in Tien Shan as a trend in glaciological predictions. Serebriannyi, L.R., et al, [1989, p.87-91, rus] 45-1040
- Degradation of glaciers of the northern Tien Shan during the Holocene. Mel'nikova, A.P., et al, [1989, p.91-97, rus] 45-1041
- Implications of rock slope development for glacial history in Antarctica. Augustinus, P.C., et al, [1990, p.55-62, eng] 45-1188
- Dynamics of the Laurentide Ice Sheet in Hudson Bay, Canada. Josenhans, H.W., et al, [1990, p.1-26, eng] 45-1552
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- Oligocene-Miocene oxygen isotopes, eustasy and margin erosion. Miller, K.G., et al, [1991, p.6829-6848, eng] 45-2503
- Hydrology of Svalbard—hydrological problems in cold climate. Proceedings, [1990, 224p., eng] 45-3776
- Glaciofluvial sediment transport and erosion. Tomasson, H., [1990, p.27-36, eng] 45-3779
- Erosion and sediment transport in Svalbard. Bogen, J., [1990, p.147-158, eng] 45-3791
- Glacitectonic deformation in sediment and bedrock, Hat Creek, British Columbia. Broster, B.E., [1991, p.5-20, eng] 45-3824
- Glacial sedimentary sequences in the Bern and Solothurn Seeland and Mittelland. Pugin, A., [1991, p.177-205, fre] 45-3827
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- Areas of gravitational spreading of ridges. Varnes, D.J., et al, [1989, 36p., eng] 45-320
- Sedimentation and glacial history in Gerlache Strait. Griffith, T.W., [1988, 449p., eng] 45-719
- Correlating marine, loess, and glacial-landformations. Zubakov, V.A., [1989, p.21-24, rus] 45-789
- Middle Pleistocene glacial and periglacial formations in the Russian Plain. Udartsev, V.P., et al, [1989, p.193-200, rus] 45-790
- Chrono-stratigraphic scale of the Pleistocene glacial epoch in Siberia. Arkhipov, S.A., [1989, p.20-30, rus] 45-1135
- Revision of former ice sheet extent reconstruction in Sor Rondane Mountains. Hirakawa, K., et al, [1990, p.41-54, eng] 45-1528
- Dynamics of the Laurentide Ice Sheet in Hudson Bay, Canada. Josenhans, H.W., et al, [1990, p.1-26, eng] 45-1552
- Ice-lobe contact sedimentary scarps. Kasprzak, L., et al, [1989, p.69-81, eng] 45-2001
- Glaciation and shore displacement on Svalbard. Österholm, H., [1990, p.301-317, eng] 45-2031
- Studies in Maine geology. Tucker, R.D., ed, [1989, 6 vols., eng] 45-2054

- Submerged shoreline on the inner continental shelf of Maine. Shipp, R.C., et al, 1989, p.11-28, eng 45-2056
- Late Quaternary geologic history of the Maine coast. Belknap, D.F., et al, 1989, p.29-46, eng 45-2057
- Geomorphology and late Quaternary evolution of the Saco Bay region. Kelley, J.T., et al, 1989, p.47-65, eng 45-2058
- Morphodynamics of tidal inlet systems in Maine. FitzGerald, D.M., et al, 1989, p.67-96, eng 45-2059
- Maine lakes and their outlet deltas. Caldwell, D.W., et al, 1989, p.97-108, eng 45-2060
- Changing perspectives of the Quaternary surficial geology of Maine. Borns, H.W., Jr., 1989, p.1-11, eng 45-2062
- Late Wisconsinan deglaciation of coastal Maine. Smith, G.W., et al, 1989, p.13-32, eng 45-2063
- Deglaciation of the Androscoggin River valley in Maine and New Hampshire. Thompson, W.B., et al, 1989, p.71-88, eng 45-2066
- Late Wisconsin glacial geology of the eastern portion of Mount Desert Island. Lowell, T.V., 1989, p.103-118, eng 45-2068
- Late Quaternary glacial history of Mt. Katahdin and the nunatak hypothesis. Davis, P.T., 1989, p.119-134, eng 45-2069
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- Cenozoic ice sheet fluctuation and Neogene stratigraphic signature. Bartek, L.R., et al, 1991, p.6753-6778, eng 45-2501
- Tertiary ice sheet dynamics: the snow gun hypothesis. Prentice, M.L., et al, 1991, p.6811-6827, eng 45-2502
- Oligocene-Miocene oxygen isotopes, eustasy and margin erosion. Miller, K.G., et al, 1991, p.6829-6848, eng 45-2503
- Glacial indicator tracing. Kujansuu, R., ed, 1990, p.252p., eng 45-2541
- Outline of glacial indicator tracing. Saarnisto, M., 1990, p.1-13, eng 45-2542
- Modelling of glacial transport of tills. Puranen, R., 1990, p.15-34, eng 45-2543
- Formation, deposition, and identification of subglacial and supraglacial tills. Dreimanis, A., 1990, p.35-59, eng 45-2544
- Glacial morphology as an indicator of the direction of glacial transport. Lundqvist, J., 1990, p.61-70, eng 45-2545
- Boulder transport in shield areas. Bouchard, M., et al, 1990, p.87-107, eng 45-2547
- Glacial dispersal trains. Dilabio, R.N.W., 1990, p.109-122, eng 45-2548
- Lithology and transport distance of glaciofluvial material. Lillieskold, M., 1990, p.151-164, eng 45-2550
- Heavy minerals in glacial material. Peuraniemi, V., 1990, p.165-185, eng 45-2551
- Geochemical-mineralogical profiles through fresh and weathered till. Shultz, W.W., et al, 1990, p.187-216, eng 45-2552
- Field methods for glacial indicator tracing. Hirvas, H., et al, 1990, p.217-248, eng 45-2553
- Geomorphological structure of Bungler Hills. Bol'shianov, D.I., 1990, p.79-90, rus 45-2572
- Bibliography of Quaternary geology of the Copper River, AK. Ferrians, O.J., Jr., 1991, 20p., eng 45-2692
- Late Quaternary glacial-interglacial fluctuation in the Ross Sea. Anderson, J.B., 1991, p.87-100, eng 45-3281
- Late Pliocene-Pleistocene paleoclimate in the Jane Basin region: ODP Site 697. Burckle, L.H., et al, 1990, p.803-809, eng 45-3529
- Neogene paleoclimate development of the antarctic Weddell Sea region: organic geochemistry. Macko, S.A., et al, 1990, p.881-897, eng 45-3530
- Latest Cretaceous to Cenozoic climate and oceanography of the Weddell Sea. Kennett, J.P., et al, 1990, p.937-960, eng 45-3531
- Glaciotectonic deformation in sediment and bedrock, Hat Creek, British Columbia. Broster, B.E., 1991, p.5-20, eng 45-3824
- Subglacially formed dunes in a drumlin field. Shaw, J., et al, 1991, p.21-34, eng 45-3825
- Geomorphology of a glacier marginal lake in British Columbia. Ryder, J.M., 1991, p.35-44, eng 45-3826
- Glacial sedimentary sequences in the Bern and Solothurn Seeland and Mittelland. Pugin, A., 1991, p.177-205, fre 45-3827
- Study of ancient glacial deposits; a practical guide. Chumakov, N.M., 1990, 93p., rus 45-3836
- Glacial hydrology**
- Radio and electrical measurements on glacial streams. Walford, M.E.R., 1987, p.239-242, eng 45-20
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- Glacier hydrology. Young, G.J., 1990, p.135-162, eng 45-217
- Studies of ice sheet hydrology using SAR. Bindschadler, R.A., et al, 1989, p.2719-2721, eng 45-297
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- Mountain glaciers—an overview with emphasis on Alaska. Coffin, J.H., et al, 1990, p.177-258, eng 45-409
- Himalayan glaciers as a sustainable water resource. Hasnain, S.I., 1989, p.106-112, eng 45-1674
- Sloping land with snow and ice. Lang, H., 1989, p.146-162, eng 45-2749
- Hydrology of Svalbard—hydrological problems in cold climate. Proceedings, 1990, 224p., eng 45-3776
- Isdammen: the public water supply in Longyearbyen. Björnsen, B., 1990, p.1-8, eng 45-3777
- Glaciofluvial sediment transport and erosion. Tomasson, H., 1990, p.27-36, eng 45-3779
- Groundwater in cold climates: interaction between glacier and karst aquifers. Lauritzen, S.E., 1990, p.139-146, eng 45-3790
- See *also*: Subglacial drainage
- Glacial lakes**
- Ice avalanches and overflows of glacial lakes. Rothlisberger, H., 1978, p.170-212, ger 45-77
- Mountain glaciers—an overview with emphasis on Alaska. Coffin, J.H., et al, 1990, p.177-258, eng 45-409
- Quaternary geology of Canada and Greenland. Fulton, R.J., ed, 1989, 839p. + suppl., eng 45-610
- Ice floes and glacier-dammed lakes of Altai during the Pleistocene. Rudolf, A.N., 1990, p.43-52, rus 45-704
- Effects of glacial surging on sedimentation in a modern ice-contact lake, Alaska. Smith, N.D., 1990, p.1393-1403, eng 45-894
- Ice-dammed lake drainage mechanisms in Greenland. Russell, A.J., et al, 1988, p.143-147, eng 45-1094
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- Maine lakes and their outlet deltas. Caldwell, D.W., et al, 1989, p.97-108, eng 45-2060
- Researches of glacier lake outburst floods of the Yarkant River in Xinjiang. Zhang, X.S., et al, 1990, p.1014-1024, eng 45-2178
- Moraine formation as a product of subglacial sedimentation. Sharpe, D.R., et al, 1990, p.1478-1486, eng 45-2482
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- Glacial periods**
- See *also*: Ice age theory; Paleoclimatology; Pleistocene
- Glacial rivers**
- Discharge of suspended sediments in the glacier-nourished Adishura River. Karalashvili, T.V., 1989, p.210-212, rus 45-1063
- Extraordinary melt-water run-off near Søndre Strømfjord, West Greenland. Russell, A.J., 1990, p.353, eng 45-1548
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- Pleistocene glaciations of the Cherskiy mountain system. Krutous, V.I., et al, 1989, p.102-112, rus 45-2497
- Tazlina River meander loop—a case history. Swanson, J.E., 1983, p.231-239, eng 45-2959
- Glaciofluvial sediment transport and erosion. Tomasson, H., 1990, p.27-36, eng 45-3779
- Glaciation**
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- Ice sheet glaciation of the Western Siberian shelf in the Late Pleistocene. Grosval'd, M.G., 1989, p.48-57, rus 45-1137
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- Boulder fields of Mt. Fulufljället, west-central Sweden. Kleman, J., et al, 1990, p.63-78, eng 45-1189
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- Quaternary glaciations in the Southern Hemisphere. Clapperton, C.M., 1990, p.299-304, eng 45-1444
- Sensitivity of glaciation to initial snow cover. Ogleby, R.J., 1990, p.219-235, eng 45-1521
- Revision of former ice sheet extent reconstruction in Sör Rondane Mountains. Hirakawa, K., et al, 1990, p.41-54, eng 45-1528
- Glaciers of Georgia. Gobedzhishvili, R.G., 1989, 128p., rus 45-1584
- Reconstructed ice-flow patterns and ice limits using drift pebble lithology. Bell, T., et al, 1989, p.577-590, eng 45-1613
- Reconstructed ice-flow patterns and ice limits using drift pebble lithology, outer Nachvak Fjord, northern Labrador: discussion and reply. Clark, P.U., et al, 1990, p.1002-1011, eng 45-1685
- Traces of continental glaciation in the area of Tikai. Grosval'd, M.G., et al, 1990, p.115-116, rus 45-1749
- Recent glaciation of antarctic islands. Vinogradov, O.N., et al, 1990, p.117-126, rus 45-1750
- Causes of glaciation. Chernosvitov, P.I.U., 1990, p.169-174, rus 45-1757
- Glaciation and shore displacement on Svalbard. Osterholm, H., 1990, p.301-317, eng 45-2031
- Cambridge Fjord basin evolution during Baffin I. deglaciation. Stravers, J.A., et al, 1991, p.72-90, eng 45-2315
- Interaction of sea ice, snow and glaciers with the atmosphere and ocean. Kotliakov, V.M., ed, 1990, p.155-248, eng 45-2409
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- Maximum advance of the Scandinavian ice sheet onto the shelf of the Barents Sea in Valdai time. Dunayev, N.N., et al, 1991, p.70-73, eng 45-2478
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- Using satellite photography for investigating Late Pleistocene glaciation areas. Glushkova, O.I.U., 1989, p.89-101, rus 45-2496
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**Glaciation (cont.)**

- Recent sedimentation processes on World Ocean shelves. Afublatov, N.A., ed. (1990, 207p., rus) 45-2874
- Current problems in Quaternary geology of the Barents Sea. Pavlidis, I.U.A., et al. (1990, p.76-93, rus) 45-2876
- Western Novaya Zemlya bays in relation to Late Valdai glaciation. Dunaev, N.N., et al. (1990, p.94-103, rus) 45-2877
- Holocene climates of the Vestfold Hills, Antarctica, and Macquarie Island. Pickard, J., et al. (1984, p.173-182, eng) 45-2983
- Recent glaciation of antarctic islands. Vinogradov, O.N., et al. (1990, p.249-260, eng) 45-3131
- Late Quaternary glacial-interglacial fluctuation in the Ross Sea. Anderson, J.B., (1991, p.87-100, eng) 45-3281
- Climate model comparison of Gondwanan and Laurentide glaciations. Crowley, T.J., et al. (1991, p.9217-9226, eng) 45-3414
- Quaternary glaciation in the Yenisey region in Siberia. Sukhorukova, S.S., (1991, p.80-84, rus) 45-3437
- Orbital forcing of low-frequency glacioeustasy. Matthews, R.K., et al. (1991, p.6797-6803, eng) 45-3473
- Qualitative models of Pleistocene glaciation, oceans, and climates. Grosswald, M.G., (1990, p.100-126, eng) 45-3541
- Glacitectonic deformation in sediment and bedrock, Hat Creek, British Columbia. Broster, B.E., (1991, p.5-20, eng) 45-3824
- Development of river valleys in Pleistocene glaciation regions (Kolyma). Rudnev, A.V., (1989, p.127-137, rus) 45-3838
- Morphogenesis in stratified plains and reconstruction of paleoclimates. Illarionov, A.G., (1989, p.162-167, rus) 45-3870
- Paleoclimates of the Late Pleistocene and the Holocene in northern Siberia. Danilov, I.D., (1989, p.167-172, rus) 45-3871
- See *also*: Alpine glaciation
- Glacier ablation**
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- Energy balance model to calculate ice sheet ablation. Braithwaite, R.J., et al. (1990, p.222-228, eng) 45-65
- Cartographic analysis of the interrelations in glacier systems. Glebova, L.N., et al. (1989, p.24-29, rus) 45-1030
- Current trends in the development of the glacier system of Elbrus Mountain. Voitkovskii, K.F., et al. (1989, p.73-80, rus) 45-1038
- Characteristics of ice formation on temperate glaciers. Bazhev, A.B., (1989, p.153-162, rus) 45-1052
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- Mass balance and ice flow velocity of the Davydov Glacier (1984-85). Aizin, V.B., et al. (1989, p.197-202, rus) 45-1060
- Constituents of the mass balance of a glacier. Uvarov, V.N., (1989, p.206-209, rus) 45-1062
- Radio-echo sounding survey across the Allan Hills Icefield. Delisle, G., et al. (1990, p.50-52, eng) 45-1084
- Effect of rocky debris on glacier ablation. Tikhonovskaya, A.A., et al. (1990, p.131-138, rus) 45-1115
- Glacial drainage systems along the Antarctic Peninsula and Palmer Archipelago. Williams, C., et al. (1990, p.116-117, eng) 45-1111
- Glaciological investigations of the Amery Ice Shelf in 1987-1989. Raikovskii, I.U.V., et al. (1990, p.114, rus) 45-1748
- Meltwater discharge from a debris-free and a debris-covered glacier. Matson, L.E., (1990, p.237-242, eng) 45-2203
- Tertiary ice sheet dynamics: the snow gun hypothesis. Prentice, M.L., et al. (1991, p.6811-6827, eng) 45-2502
- Glacier alimentation**
- Thermal conditions of the cold period of the year. Davidovich, N.V., (1989, p.144-152, rus) 45-1051
- Characteristics of ice formation on temperate glaciers. Bazhev, A.B., (1989, p.153-162, rus) 45-1052
- Alimentation of rock glaciers of Tien Shan. Tarakanov, A.G., (1989, p.175-183, rus) 45-1055
- Mass balance and ice flow velocity of the Davydov Glacier (1984-85). Aizin, V.B., et al. (1989, p.197-202, rus) 45-1060
- Dating snow accumulation on glaciers by Chernobyl fallout. Pourchet, M., et al. (1990, p.3/22-3/27, fre) 45-1795
- Interaction of sea ice, snow and glaciers with the atmosphere and ocean. Kotliakov, V.M., ed. (1990, p.155-248, eng) 45-2409
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- On the use of glacial striae for reconstruction of paleo-ice sheet flow patterns. Kleman, J., (1990, p.217-236, eng) 45-2025
- High Arctic thrust block moraines. Evans, D.J.A., et al. (1991, p.93-97, eng) 45-2174
- Evidence for a frozen bed, Byrd Glacier, Antarctica. Scofield, J.P., et al. (1991, p.11.649-11.655, eng) 45-3462
- Interactions between oceans and ice sheets in the marginal zones of continents. Glazovskii, A.F., (1990, p.127-146, eng) 45-3524
- Glacier deposits**
- See *also*: Glacial deposits
- Glacier erosion**
- See *also*: Glacial erosion
- Glacier flow**
- Ice flow over an undulating base. Reeh, N., (1987, p.177-185, eng) 45-13
- Force, mass, and energy budgets of the Cray Ice Rise Complex, Antarctica. MacAyeal, D.R., et al. (1987, p.218-230, eng) 45-18
- Landslides as a possible trigger of glacier surge. Gardner, J.S., et al. (1990, p.159-162, eng) 45-57
- Geomorphic patterns produced by the last Canadian ice sheet. Clark, C.D., et al. (1989, p.97-100, eng) 45-230
- Ice-marginal thrusting of drift and bedrock: thermal regime, subglacial aquifers, and glacial surges. Mooers, H.D., (1990, p.849-862, eng) 45-381
- Reconstruction of ice dome dynamics in the Finger Lakes region, NY. Ridky, R.W., et al. (1990, p.1055-1064, eng) 45-403
- TAKU computer program to model glacier flow. Pearce, B.R., et al. (1989, 85p., eng) 45-557
- Fast-flowing outlet glaciers on Svalbard ice caps. Dowdeswell, J.A., et al. (1990, p.778-781, eng) 45-617
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- Mass balance and ice flow velocity of the Davydov Glacier (1984-85). Aizin, V.B., et al. (1989, p.197-202, rus) 45-1060
- Davydov Glacier reaction to man-made destruction of its terminus. Aizin, V.B., et al. (1989, p.202-206, rus) 45-1061
- Gravity measurements on icefields west-southwest of the Allan Hills. Fudali, R.F., (1990, p.48-50, eng) 45-1083
- Microfossil assemblages from Upstream B and ice-stream flow models. Scherer, R.P., (1990, p.54-55, eng) 45-1085
- Velocity measurements at the Obersulzbachkees (Venediger Group) in 1985/86 and 1986/87. Slupetzky, H., (1988, p.199-202, eng) 45-1098
- Mass balance comparison of two Swedish glaciers. Stroeven, A.P., et al. (1990, p.113-118, eng) 45-1192
- Computed velocities of antarctic outlet glaciers. MacDonald, T.R., et al. (1990, p.105-106, eng) 45-1396
- Antarctic glacier velocities from Landsat images. Lucchitta, B.K., et al. (1990, p.106-107, eng) 45-1397
- Digital terrain models as a tool for glacier studies. Rentach, H., et al. (1990, p.273-278, eng) 45-1537
- Flow laws for glacier ice: comparison of numerical predictions and field measurements. Van der Veen, C.J., et al. (1990, p.324-339, eng) 45-1543
- Reconstructed ice-flow patterns and ice limits using drift pebble lithology. Bell, T., et al. (1989, p.577-590, eng) 45-1613
- Ice topography over subglacial lakes. Shoemaker, E.M., (1990, p.323-329, eng) 45-1621
- Surging glacial flows. Greenberg, J.M., et al. (1990, p.195-223, eng) 45-1772
- Mass balance of the Taku Glacier, Alaska from 1946 to 1986. Pelto, M.S., et al. (1990, p.121-130, eng) 45-1773
- Observations of debris transport and discharge on K2 Glacier, West China. Drozdowski, E., (1989, p.31-47, eng) 45-1988
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- Iceberg-calving rates reconstructed from paleo-sea levels. Lowell, T.V., (1991, p.155-158, eng) 45-2180
- AVHRR imagery reveals antarctic ice dynamics. Bindachader, R.A., et al. (1990, p.741-742, eng) 45-2238
- Antarctic ice cover dynamic activity zones in the Voetok Station region. Blinov, K.V., et al. (1990, p.79-89, rus) 45-2490

- Glacial flow indicators in air photographs. Kujansuu, R., (1990, p.71-86, eng) 45-2546
- Glacial dispersal trains. Dilabio, R.N.W., (1990, p.109-122, eng) 45-2548
- Geomorphological structure of Bunge Hills. Bol'shiyanov, D.I.U., (1990, p.79-90, rus) 45-2572
- Yearly dynamics of the front zone of the Hansa Glacier (1987-1988). Dabrowski, S., et al. (1990, p.109-130, pol) 45-2581
- Progress in the studies on physics of glaciers in China in the last ten years. Huang, M.H., (1991, p.353-357, eng) 45-3097
- Evidence for a frozen bed, Byrd Glacier, Antarctica. Scofield, J.P., et al. (1991, p.11.649-11.655, eng) 45-3462
- Waves induced by calving of Unteraargletscher. Funk, M., et al. (1990, p.372-384, eng) 45-3591
- Glacial and glaciofluvial material transport in subpolar glaciers; examples from Svalbard. Sollied, J.L., et al. (1990, p.159-165, eng) 45-3792
- Forecasting of closure of Russel Fjord by Hubbard Glacier. Trabant, D.C., et al. (1991, 34p., eng) 45-3833
- Glacier fluctuations**
- See *also*: Glacier oscillation
- Glacier formation**
- Glacier formation and mass balance near the Great Wall Station. Ren, J., (1988, p.242-247, chj) 45-51
- Ice formation and temperature regime on Nelson and King George Is. Ren, J., (1988, p.248-255, chj) 45-52
- Rock glaciers in the mountains of Central Asia. Gorbunov, A.P., et al. (1989, 164p., rus) 45-613
- Isotope analysis of the Shackleton Ice Shelf. Savatugin, L., et al. (1990, p.291-298, eng) 45-725
- Glacier fluctuations in Tien Shan as a trend in glaciological predictions. Serbrianniy, L.R., et al. (1989, p.87-91, rus) 45-1040
- Observations of debris transport and discharge on K2 Glacier, West China. Drozdowski, E., (1989, p.31-47, eng) 45-1988
- Glacier friction**
- Discussion of Hirano and Aniya's (1988, 1989) explanation of glacial-valley cross profile development. Harbor, J.M., et al. (1990, p.369-381, eng) 45-961
- Mechanism of self-regulation and attenuation in glacier catastrophe. Kazanskii, A.B., et al. (1990, p.156-164, rus) 45-1755
- Glacier heat balance**
- Thermal regime of an arctic valley glacier. Blatter, H., (1987, p.200-211, eng) 45-16
- Response of Greenland ice sheet to temperature changes. Braithwaite, R.J., et al. (1990, p.217-221, eng) 45-64
- Energy balance model to calculate ice sheet ablation. Braithwaite, R.J., et al. (1990, p.222-228, eng) 45-65
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- Mathematical model of glacier percolation zone. Cai, B.L., et al. (1990, p.223-226, eng) 45-486
- Temperature distribution of Chongce Ice Cap, west Kunlun Mts. Zhou, T., et al. (1990, p.1024-1028, eng) 45-592
- Mass balance and thermal regime of a crater glacier at Ushkovskii Volcano. Murav'ev, I.A.D., et al. (1990, p.411-424, eng) 45-1705
- Glacier temperature regime near the Great Wall Station. Ren, J., (1990, p.22-27, chj) 45-2170
- Progress in the studies on physics of glaciers in China in the last ten years. Huang, M.H., (1991, p.353-357, eng) 45-3097
- Glacio-climatology of Antarctica. Aver'ianov, V.G., (1990, 198p., rus) 45-3532
- Glacier hydrology**
- Mass balance measurements on Norwegian glaciers in 1988 and 1989. Ostrem, G., et al. (1991, 78p., nor) 45-3856
- Glacier ice**
- On the temperature distribution of glaciers in China. Huang, M., (1990, p.210-217, eng) 45-63
- Temperatures of glaciers in the Kunlun Mountains. Shao, W.Z., et al. (1990, p.87-91, eng) 45-201
- Isotope variations in the temperate glaciers of the Eurasian Arctic. Vaikmae, R.A., (1990, p.45-55, eng) 45-373
- Radioactivity profiles of the Chernobyl fallout on Tyrolean glaciers. Ambach, W., et al. (1989, p.5-8, ger) 45-392
- Mountain glaciers—an overview with emphasis on Alaska. Coffin, J.H., et al. (1990, p.177-258, eng) 45-409
- Radar reflections from water injected into an antarctic glacier. Davis, C.H., et al. (1990, p.723-726, eng) 45-721
- Identification of annual layers in superimposed ice from Stordykkulen in northeastern Svalbard. Jonsson, S., et al. (1990, p.41-54, eng) 45-1187
- Electrical parameters of surface layers of shelf and continental glaciers. Bogorodskii, V.V., et al. (1989, p.23-31, rus) 45-1485
- Measuring the velocity of electromagnetic wave propagation in a glacier. Sheremet'ev, A.N., (1989, p.59-64, rus) 45-1490
- Thickness and movement velocity of ice cover in the area of Dome B. Sheremet'ev, A.N., (1989, p.65-71, rus) 45-1491

- Subglacial boundary-layer regelation mechanism. Shoemaker, E.M., [1990, p.263-268, eng] 45-1535
- Boudinage: a source of stratigraphic disturbance in glacial ice in central Greenland. Cunningham, J., et al, [1990, p.269-272, eng] 45-1536
- Air-content measurement correction for polar ice sampling. Martinier, P., et al, [1990, p.299-303, eng] 45-1540
- Laboratory simulations of glacial abrasion: comparison with theory. Iverson, N.R., [1990, p.304-314, eng] 45-1541
- Problem of the thermal physics of snow-firn sequences. Bozhinskii, A.N., et al, [1990, p.35-39, rus] 45-1733
- Conditions for the occurrence of a melting ice layer in glaciers. Larina, T.B., [1990, p.40-44, rus] 45-1734
- Factors in the stability of glacier systems. Lebedeva, I.M., [1990, p.64-75, rus] 45-1738
- Recent glaciation of antarctic islands. Vinogradov, O.N., et al, [1990, p.117-126, rus] 45-1750
- Hydrothermal regime of the ice-divide area of Austfonna, Nordaustlandet. Zagorodnov, V.S., et al, [1990, p.133-141, rus] 45-1752
- Observations on buried glacier ice and massive segregated ice, western arctic coast, Canada. French, H.M., et al, [1990, p.31-43, eng] 45-2232
- Interaction of sea ice, snow and glaciers with the atmosphere and ocean. Kotliakov, V.M., ed, [1990, p.155-248, eng] 45-2409
- Using satellite photography for investigating Late Pleistocene glaciation areas. Glushkova, O.I.U., [1989, p.89-101, rus] 45-2496
- Cenozoic ice sheet fluctuation and Neogene stratigraphic signature. Bartek, L.R., et al, [1991, p.6753-6778, eng] 45-2501
- Formation, deposition, and identification of subglacial and supraglacial tills. Dreimanis, A., [1990, p.35-59, eng] 45-2544
- Glacial morphology as an indicator of the direction of glacial transport. Lundqvist, J., [1990, p.61-70, eng] 45-2545
- Progress in the studies on physics of glaciers in China in the last ten years. Huang, M.H., [1991, p.353-357, eng] 45-3097
- Recent glaciation of antarctic islands. Vinogradov, O.N., et al, [1990, p.249-260, eng] 45-3131
- Glacier mass balance**
- Radiation and cloud observations on a high arctic plateau ice cap. Serreze, M.C., et al, [1987, p.162-168, eng] 45-10
- Spatial distribution of glacier annual mass balance. Kononov, V.G., [1987, p.212-217, eng] 45-17
- Force, mass, and energy budgets of the Cray Ice Rise Complex, Antarctica. MacAyeal, D.R., et al, [1987, p.218-230, eng] 45-18
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- Coherent radar contour mapping of ice stream thickness. Davis, C.H., et al, [1989, p.2734-2737, eng] 45-301
- Breonic, Aurine and Pusterasi alpine glaciers through the 7 September 1985 Landsat TM image. Attardo, C., et al, [1989, p.3-19, ita] 45-359
- Mountain glaciers—an overview with emphasis on Alaska. Coffin, J.H., et al, [1990, p.177-258, eng] 45-409
- Glaciological field party in the Sør Rondane Mountains, 1989-1990. Motoyama, H., et al, [1990, p.225-234, jpn] 45-982
- Evolution of the antarctic ice sheet since Late Pleistocene. Zhang, Q., [1989, p.67-73, eng] 45-1009
- Characteristics of ice formation on temperate glaciers. Bazhev, A.B., [1989, p.153-162, rus] 45-1052
- Formation of the annual mass balance of a conic summit glacier. Kunakhovich, M.G., [1989, p.163-169, rus] 45-1053
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- Glaciers and climate: some new aspects of investigating the problems. Voloshina, A.P., [1989, p.251-260, rus] 45-1074
- Variations in water reserves of some glaciers of Central Asia. Akbarov, A.A., [1990, p.84-94, rus] 45-1109
- Space and time variability in the specific mass balance of a glacier. Adzhumerov, N.R., et al, [1990, p.94-105, rus] 45-1110
- Loss of mass in a mountain glacier. Merkuskin, A.S., [1990, p.106-108, rus] 45-1111
- Calculating and forecasting glacier mass balance with minimal information. Vilesov, E.N., et al, [1990, p.109-113, rus] 45-1112
- Identification of annual layers in superimposed ice from Storöyökulen in northeastern Svalbard. Jonason, S., et al, [1990, p.41-54, eng] 45-1187
- Mass balance comparison of two Swedish glaciers. Stroeven, A.P., et al, [1990, p.113-118, eng] 45-1192
- Small glaciers as sensitive indicators of climatic fluctuations. Grudd, H., [1990, p.119-123, eng] 45-1193
- Mass balance and thermal regime of a crater glacier at Ushkovskii Volcano. Murav'ev, I.A.D., et al, [1990, p.411-424, eng] 45-1705
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- Mass balance of the Taku Glacier, Alaska from 1946 to 1986. Pelto, M.S., et al, [1990, p.121-130, eng] 45-1773
- Response of the antarctic ice sheet to future greenhouse warming. Huybrechts, P., et al, [1990, p.93-102, eng] 45-1799
- Model of late Pleistocene ice sheet growth. Deblonde, G., et al, [1990, p.103-110, eng] 45-1800
- Iceberg-calving rates reconstructed from paleo-sea levels. Lowell, T.V., [1991, p.155-158, eng] 45-2180
- Annual balance of North Cascade glaciers. Pelto, M.S., [1990, p.201-212, eng] 45-2199
- Variations of Mount Kenya's glaciers 1963-87. Hastenrath, S., et al, [1989, p.202-210, eng] 45-2250
- Interaction of sea ice, snow and glaciers with the atmosphere and ocean. Kotliakov, V.M., ed, [1990, p.155-248, eng] 45-2409
- Two types of catastrophic glacial advance. Kazanskii, A.B., [1991, p.193-195, eng] 45-2480
- Equilibrium ice sheet profile in the Shirase Glacier drainage basin. Fujita, S., et al, [1991, p.12-29, eng] 45-3392
- Numerical modelling of ice shelf dynamics. Determann, J., [1991, p.187-195, eng] 45-3459
- Evidence for a frozen bed, Byrd Glacier, Antarctica. Scofield, J.P., et al, [1991, p.11,649-11,655, eng] 45-3462
- Antarctica and global change. Budd, W.F., [1991, p.271-299, eng] 45-3471
- Glacio-climatology of Antarctica. Aver'ianov, V.G., [1990, 198p., rus] 45-3532
- Mass balance measurements on Norwegian glaciers in 1988 and 1989. Ostrem, G., et al, [1991, 78p., nor] 45-3856
- Glacier melting**
- Potential for basal melting under Summit, Greenland. Firestone, J., et al, [1990, p.163-168, eng] 45-58
- Summer 1987 flooding in glacial basins of the Pennine Alps. Rey, Y., et al, [1990, p.115-124, fre] 45-370
- Ice-marginal thrusting of drift and bedrock: thermal regime, subglacial aquifers, and glacial surges. Mooers, H.D., [1990, p.849-862, eng] 45-381
- Ferromanganese rock varnish in North Norway: a subglacial origin. Whalley, W.B., et al, [1990, p.265-275, eng] 45-432
- Runoff from Heigou Glacier on Bogeda Mountain. Hu, X.G., et al, [1990, p.71-82, chi] 45-464
- Mathematical model of glacier percolation zone. Cai, B.L., et al, [1990, p.223-226, eng] 45-486
- Comment and reply on "Drumlins, subglacial meltwater floods, and ocean responses". Forsström, L., et al, [1990, p.804-805, eng] 45-618
- Changes in mountain climate and glacio-hydrological responses. Barry, R.G., [1990, p.161-170, eng] 45-619
- Deterioration of antarctic ice sheet and sea-level rise. Nakawo, M., [1989, p.562-575, jpn] 45-623
- Meltwater genesis and distribution. Loopmann, A., [1990, p.341-344, eng] 45-731
- On the role of cryosphere in the global climate/environment. Nakawo, M., [1990, p.185-194, jpn] 45-782
- Salinity history of the northern Atlantic during the last deglaciation. Broecker, W.S., [1990, p.459-467, eng] 45-951
- Salt oscillator in the glacial Atlantic? 1. The concept. Broecker, W.S., et al, [1990, p.469-477, eng] 45-952
- New approach to solving thermophysical problems of paleoglaciology. Fafko, L.I., [1989, p.133-138, rus] 45-1049
- Volume and routing of late-glacial runoff from the southern Laurentide Ice Sheet. Teller, J.T., [1990, p.12-23, eng] 45-1075
- Extraordinary melt-water run-off near Søndre Strømfjord, West Greenland. Russell, A.J., [1990, p.353, eng] 45-1548
- Himalayan glaciers as a sustainable water resource. Haanain, S.I., [1989, p.106-112, eng] 45-1674
- Conditions for the occurrence of a melting ice layer in glaciers. Larina, T.B., [1990, p.40-44, rus] 45-1734
- Behavior of a glacier-derived suspended sediment plume in a small arctic inlet. Dowdeswell, J.A., et al, [1991, p.111-123, eng] 45-2021
- Alpine proglacial fluvial sediment budget. Warburton, J., [1990, p.261-272, eng] 45-2029
- Moraine formation as a product of subglacial sedimentation. Sharpe, D.R., et al, [1990, p.1478-1486, eng] 45-2482
- Glacimarine environments: processes and sediments. Dowdeswell, J.A., ed, [1990, 423p., eng] 45-2778
- Glacimarine processes at grounding-line fans and their growth to ice-contact deltas. Powell, R.D., [1990, p.53-73, eng] 45-2781
- Sediment transport and deposition in a glacial fjord. Cowan, E.A., et al, [1990, p.75-89, eng] 45-2782
- Progress in the studies on physics of glaciers in China in the last ten years. Huang, M.H., [1991, p.353-357, eng] 45-3097
- Water and ice resources of the Issyk-Kul-Chu region, their current and future state. Dukikh, A.N., et al, [1991, p.390-396, eng] 45-3237
- Greenland ice sheet and greenhouse warming. Huybrechts, P., et al, [1991, p.399-412, eng] 45-3291
- Thermoluminescence properties of fiord sediments from Spitsbergen. Forman, S.L., [1990, p.377-384, eng] 45-3292
- Hydrology of Svalbard—hydrological problems in cold climate. Proceedings, [1990, 224p., eng] 45-3776
- Drainage pattern in a subpolar glacier: Brøggerbreen, Svalbard. Hagen, J.O., et al, [1990, p.121-131, eng] 45-3788
- Erosion and sediment transport in Svalbard. Bogen, J., [1990, p.147-158, eng] 45-3791
- Glacial and glaciofluvial material transport in subpolar glaciers; examples from Svalbard. Sollid, J.L., et al, [1990, p.159-165, eng] 45-3792
- Glacier movement**
- See *alsoy*: Glacier flow
- Glacier oscillation**
- Quaternary glaciers in the West Kunlun Mountains. Zheng, B.X., et al, [1990, p.61-72, eng] 45-199
- Breonic, Aurine and Pusterasi alpine glaciers through the 7 September 1985 Landsat TM image. Attardo, C., et al, [1989, p.3-19, ita] 45-359
- Carbon cycle instability as a cause of ice age oscillations. Saltzman, B., et al, [1988, p.177-185, eng] 45-367
- Last glaciation and maximum glaciation in the Qinghai-Xizang Plateau. Shi, Y.F., et al, [1990, p.1-16, chi] 45-458
- Rock glaciers in the mountains of Central Asia. Gorbunov, A.P., et al, [1989, 164p., rus] 45-613
- Glacier fluctuations and climates in the Himalayas. Ageta, Y., [1989, p.576-586, jpn] 45-624
- Fluctuations in Gebler's Glacier over 150 years. Reviakin, V.S., et al, [1990, p.89-93, rus] 45-672
- Holocene ice margin recession in West Greenland. Weidick, A., et al, [1990, p.389-399, eng] 45-714
- Climate, tree-ring, and glacial fluctuations in the Rio Frías Valley, Rio Negro, Argentina. Villalba, R., et al, [1990, p.215-232, eng] 45-886
- Climate of the last thousand years. Jones, P.D., [1990, p.304-312, fre] 45-962
- Current trends in the development of the glacier system of Elbrus Mountain. Voitkovskii, K.F., et al, [1989, p.73-80, rus] 45-1038
- Airborne topographic mapping of glacier fluctuations. Kuz'michenok, V.A., [1989, p.80-87, rus] 45-1039
- Glacier fluctuations in Tien Shan as a trend in glaciological predictions. Serebriannyi, L.R., et al, [1989, p.87-91, rus] 45-1040
- Trends in current fluctuations of Alpine glaciers. Tiulina, T.I.U., [1989, p.169-175, rus] 45-1054
- Recent and glacial snowline in the southern Carpathian Mountains. Horedt, H., [1988, p.167-176, ger] 45-1096
- Glaciers of the Austrian Alps 1986/87. Patzelt, G., [1988, p.177-192, ger] 45-1097
- Velocity measurements at the Obersulzbachkees (Venediger Group) in 1985/86 and 1986/87. Slupetzky, H., [1988, p.199-202, eng] 45-1098
- Variations in water reserves of some glaciers of Central Asia. Akbarov, A.A., [1990, p.84-94, rus] 45-1109
- Space and time variability in the specific mass balance of a glacier. Adzhumerov, N.R., et al, [1990, p.94-105, rus] 45-1110
- Svalbard radiocarbon date list 1. Forman, S.L., et al, [1990, 48p., eng] 45-1180
- Sea-level change and glacier oscillation indicators on Melville Moraine, Northwest Territories. Dredge, L.A., [1990, p.1215-1224, eng] 45-1272
- Quaternary glaciations in the subantarctic and the Antarctic Peninsula area. Clapperton, C.M., [1990, p.229-252, eng] 45-1442
- Late Cenozoic glacial history of Ross Embayment. Clapperton, C.M., et al, [1990, p.253-272, eng] 45-1443
- Thickness and movement velocity of ice cover in the area of Dome B. Sheremet'ev, A.N., [1989, p.65-71, rus] 45-1491
- Dynamics of the Laurentide Ice Sheet in Hudson Bay, Canada. Josenhans, H.W., et al, [1990, p.1-26, eng] 45-1552
- Ice marginal ramps and alluvial fans in semiarid mountains. Kühle, M., [1990, p.55-68, eng] 45-1576
- Glaciers of Georgia. Gobeidzhishvili, R.G., [1989, 128p., rus] 45-1584
- Role of land ice in present and future sea-level change. Meier, M.F., [1990, p.171-184, eng] 45-1656
- Reconstructed ice-flow patterns and ice limits using drift pebble lithology, outer Nachvak Fjord, northern Labrador: discussion and reply. Clark, P.U., et al, [1990, p.1002-1011, eng] 45-1685
- Electromagnetic emission during snow and ice deterioration. Berri, B.L., [1990, p.13-18, rus] 45-1730

**Glacier oscillation (cont.)**

- Oscillations of glaciers in the interior of Tien Shan. Solomina, O.N., [1990, p.142-149, rus] 45-1753
- Mechanism of self-regulation and attenuation in glacier catastrophe. Kazanskiĭ, A.B., et al, [1990, p.156-164, rus] 45-1755
- 3-D sensitivity model for the antarctic ice sheet. Huybrechts, P., [1990, p.79-92, eng] 45-1798
- Application of C-14 AMS dating to Holocene glacier fluctuation chronology. Blake, W., Jr., [1989, p.570-578, eng] 45-1844
- Statistical analysis of data at the Giulie Alps glacier terminus. Serandrei Barbero, R., et al, [1989, p.139-149, ita] 45-1987
- Glaciation and shore displacement on Svalbard. Osterholm, H., [1990, p.301-317, eng] 45-2031
- Deglaciation of the Androscoggin River valley in Maine and New Hampshire. Thompson, W.B., et al, [1989, p.71-88, eng] 45-2066
- Holocene paleoclimatology of the Queen Elizabeth Islands, Canadian High Arctic. Bradley, R.S., [1990, p.365-384, eng] 45-2074
- Reports on the Glaciological Survey of 1988. Armando, E., et al, [1989, p.155-204, ita] 45-2087
- Researches of glacier lake outburst floods of the Yarkant River in Xinjiang. Zhang, X.S., et al, [1990, p.1014-1024, eng] 45-2178
- Pleistocene deglaciation model based upon predictions of sea level change. Tushingham, A.M., et al, [1991, p.4497-4523, eng] 45-2229
- Variations of Mount Kenya's glaciers 1963-87. Hastenrath, S., et al, [1989, p.202-210, eng] 45-2250
- Holocene glacier variations in Norway. Nesje, A., et al, [1991, p.25-40, eng] 45-2314
- Cambridge Fjord basin evolution during Baffin I. deglaciation. Stravers, J.A., et al, [1991, p.72-90, eng] 45-2315
- Paleoclimatic implications of an early Holocene glacier advance on Disko Island, West Greenland. Ingólfsson, O., et al, [1990, p.297-311, eng] 45-2412
- Climate change and glacier fluctuation during the last 1,000 years. Kotliakov, V.M., et al, [1991, p.1-12, eng] 45-2434
- Flow model of Ross Ice Shelf and climatic warming. Lingle, C.S., et al, [1991, p.6849-6871, eng] 45-2504
- Modelling of glacial transport of tills. Puranen, R., [1990, p.15-34, eng] 45-2543
- Yearly dynamics of the front zone of the Hansa Glacier (1987-1988). Dabrowski, S., et al, [1990, p.109-130, pol] 45-2581
- Effect of sedimentary changes on glacial marine facies architecture. Boulton, G.S., [1990, p.15-52, eng] 45-2780
- Orbital forcing of low-frequency glaciocustasy. Matthews, R.K., et al, [1991, p.6797-6803, eng] 45-3473
- Forecasting of closure of Russel Fjord by Hubbard Glacier. Trabant, D.C., et al, [1991, 34p., eng] 45-3833
- Glacier surfaces**
- Fast-flowing outlet glaciers on Svalbard ice caps. Dowdeswell, J.A., et al, [1990, p.778-781, eng] 45-617
- Impact of climate on the temperature distribution of ice in the ice divide of the Austfonna (Nordaustlandet). Larina, T.B., et al, [1989, p.185-190, rus] 45-1057
- Cathedral Massif Glacier map 1:5000. Slupetzky, H., et al, [1988, p.125-136, ger] 45-1093
- Changes in the air temperature field above glaciers. Volkova, M.V., et al, [1990, p.120-130, rus] 45-1114
- Effect of rocky debris on glacier ablation. Tikhanovskaia, A.A., et al, [1990, p.131-138, rus] 45-1115
- Electrical parameters of surface layers of shelf and continental glaciers. Bogorodskii, V.V., et al, [1989, p.23-31, rus] 45-1485
- Digital terrain models as a tool for glacier studies. Rentsch, H., et al, [1990, p.273-278, eng] 45-1537
- Ice topography over subglacial lakes. Shoemaker, E.M., [1990, p.323-329, eng] 45-1621
- Features of turbulent exchange in the periglacial layer of air. Moskalenko, I.G., et al, [1990, p.57-64, rus] 45-1737
- Mechanism of self-regulation and attenuation in glacier catastrophe. Kazanskiĭ, A.B., et al, [1990, p.156-164, rus] 45-1755
- Meltwater discharge from a debris-free and a debris-covered glacier. Mattson, L.E., [1990, p.237-242, eng] 45-2203
- Geomorphological structure of Bunge Hills. Bol'shianov, D.I.U., [1990, p.79-90, rus] 45-2572
- Glacier surges**
- Landslides as a possible trigger of glacier surge. Gardner, J.S., et al, [1990, p.159-162, eng] 45-57
- Mountain glaciers—an overview with emphasis on Alaska. Coffin, J.H., et al, [1990, p.177-258, eng] 45-409
- Effects of glacial surging on sedimentation in a modern ice-contact lake, Alaska. Smith, N.D., [1990, p.1393-1403, eng] 45-894
- World's northernmost surging glacier. Higgins, A.K., et al, [1988, p.111-123, eng] 45-1092
- Possibilities of aerotopographic monitoring of surging glaciers. Osipova, G.B., et al, [1990, p.149-156, rus] 45-1754

- Mechanism of self-regulation and attenuation in glacier catastrophe. Kazanskiĭ, A.B., et al, [1990, p.156-164, rus] 45-1755
- Surging glacial flows. Greenberg, J.M., et al, [1990, p.193-223, eng] 45-1772
- Evolution of glacier surge as analyzed through satellite images. Espizua, L.E., et al, [1990, p.255-259, eng] 45-2028
- Two types of catastrophic glacial advance. Kazanskiĭ, A.B., [1991, p.193-195, eng] 45-2480
- Glacier surveys**
- Spatial distribution of glacier annual mass balance. Kononov, V.G., [1987, p.212-217, eng] 45-17
- On the temperature distribution of glaciers in China. Huang, M., [1990, p.210-217, eng] 45-63
- Glaciers and the hydropower planning for Greenland. Weidick, A., [1990, p.654-663, eng] 45-168
- Outline of the Japanese Arctic Glaciological Expedition in 1989 (JAGE 1989). Watanabe, O., et al, [1990, p.103-106, eng] 45-203
- Glacier hydrology. Young, G.J., [1990, p.135-162, eng] 45-217
- Breonie, Aurine and Pusteresi alpine glaciers through the 7 September 1985 Landsat TM image. Attardo, C., et al, [1989, p.3-19, ita] 45-359
- Data base of glacier inventory. Liu, Z.X., et al, [1990, p.167-174, chi] 45-457
- Fast-flowing outlet glaciers on Svalbard ice caps. Dowdeswell, J.A., et al, [1990, p.778-781, eng] 45-617
- Fluctuations in Giebler's Glacier over 150 years. Reviakin, V.S., et al, [1990, p.89-93, rus] 45-672
- Satellite image atlas of glaciers of the world. Williams, R.S., Jr., ed, [1989, 48p., eng] 45-817
- Glaciers of Irian Jaya, Indonesia. Allison, I., et al, [1989, p.1-20, eng] 45-818
- Glaciers of New Zealand. Chinn, T.J.H., [1989, p.21-48, eng] 45-819
- Cartographic analysis of the interrelations in glacier systems. Glebova, L.N., et al, [1989, p.24-29, rus] 45-1030
- Current trends in the development of the glacier system of Elbrus Mountain. Voitkovskii, K.F., et al, [1989, p.73-80, rus] 45-1038
- Airborne topographic mapping of glacier fluctuations. Kuz'michenok, V.A., [1989, p.80-87, rus] 45-1039
- Stratification of ice cores from Spitsbergen. Valkmäe, R.A., et al, [1989, p.97-103, rus] 45-1042
- Mass balance of Spitsbergen glaciers from 1985 through 1988. Troitskii, L.S., [1989, p.194-197, rus] 45-1059
- Analyses of radio-echo data from Antarctica. Herzfeld, U.C., et al, [1988, p.95-110, eng] 45-1091
- Glaciers of the Austrian Alps 1986/87. Patzelt, G., [1988, p.177-192, ger] 45-1097
- Digital terrain models as a tool for glacier studies. Rentsch, H., et al, [1990, p.273-278, eng] 45-1537
- Glaciers of Georgia. Gobedzhishvili, R.G., [1989, 128p., rus] 45-1584
- Possibilities of aerotopographic monitoring of surging glaciers. Osipova, G.B., et al, [1990, p.149-156, rus] 45-1754
- Observations of debris transport and discharge on K2 Glacier, West China. Drozdowski, E., [1989, p.31-47, eng] 45-1988
- Reports on the Glaciological Survey of 1988. Armando, E., et al, [1989, p.155-204, ita] 45-2087
- Variations of Mount Kenya's glaciers 1963-87. Hastenrath, S., et al, [1989, p.202-210, eng] 45-2250
- McMurdo SAR Facility: report of the ad hoc science working team. Jezek, K.C., ed, [1991, 32p., eng] 45-2916
- Radio echo soundings in the Shirase Glacier and Princess Ragnhild Coast areas. Nishio, F., et al, [1991, p.93-102, eng] 45-3067
- Glacier atlas of Canada. Ommanney, C.S.L., [1989, 54 leaves, eng] 45-3261
- Drainage pattern in a subpolar glacier: Bröggerbreen, Svalbard. Hagen, J.O., et al, [1990, p.121-131, eng] 45-3788
- Mass balance measurements on Norwegian glaciers in 1988 and 1989. Östrem, G., et al, [1991, 78p., nor] 45-3856
- Glacier thickness**
- PC-based portable ice-radar receiver. Hammond, W.R., et al, [1990, p.255-257, eng] 45-69
- Coherent radar contour mapping of ice stream thickness. Davis, C.H., et al, [1989, p.2734-2737, eng] 45-301
- Estimating ice sheet thickness from clay profiles. Schokking, F., [1990, p.305-312, eng] 45-357
- Reconstruction of ice dome dynamics in the Finger Lakes region, NY. Ridky, R.W., et al, [1990, p.1055-1064, eng] 45-403
- Impact of climate on the temperature distribution of ice in the ice divide of the Austfonna (Nordaustlandet). Larina, T.B., et al, [1989, p.185-190, rus] 45-1057
- Analyses of radio-echo data from Antarctica. Herzfeld, U.C., et al, [1988, p.95-110, eng] 45-1091
- Recent glaciation of antarctic islands. Vinogradov, O.N., et al, [1990, p.117-126, rus] 45-1750
- Recent glaciation of antarctic islands. Vinogradov, O.N., et al, [1990, p.249-260, eng] 45-3131

- Equilibrium ice sheet profile in the Shirase Glacier drainage basin. Fujita, S., et al, [1991, p.12-29, eng] 45-3392
- Evidence for a frozen bed, Byrd Glacier, Antarctica. Scofield, J.P., et al, [1991, p.11,649-11,654, eng] 45-3462
- See *also*: Ice cover thickness
- Glacier tongues**
- Fluctuations in Giebler's Glacier over 150 years. Reviakin, V.S., et al, [1990, p.89-93, rus] 45-672
- Davydov Glacier reaction to man-made destruction of its terminus. Alzin, V.B., et al, [1989, p.202-206, rus] 45-1061
- Saline minerals in the Lewis Cliff ice tongue. Fitzpatrick, J.J., et al, [1990, p.57-69, eng] 45-1687
- Statistical analysis of data at the Giulie Alps glacier terminus. Serandrei Barbero, R., et al, [1989, p.139-149, ita] 45-1987
- Glacier variations**
- See *also*: Glacier oscillation
- Glaciers**
- Cold regions hydrology and hydraulics. Ryan, W.L., ed, [1990, 827p., eng] 45-404
- Principles and methods of geosystem monitoring. Grin, A.M., ed, [1989, 168p., rus] 45-429
- Quaternary geology of Canada and Greenland. Fulton, R.J., ed, [1989, 839p., + suppl., eng] 45-610
- Sedimentation and glacial history in Gerlache Strait. Griffith, T.W., [1988, 447p., eng] 45-719
- Snow and ice electrical conductivity from various glaciers. Kamiyama, K., et al, [1990, p.119-129, eng] 45-977
- Radar sounding of the surface of the Earth from space. Nazirov, M., et al, [1990, 200p., rus] 45-986
- Complex glaciological mapping. Khodakov, V.G., et al, [1989, p.17-74, rus] 45-1029
- Cartographic analysis of the interrelations in glacier systems. Glebova, L.N., et al, [1989, p.24-29, rus] 45-1030
- International symposium on Ice and Climate. Glazovskii, A.F., [1989, p.236-246, rus] 45-1070
- Glaciers and climate: some new aspects of investigating the problems. Voloshina, A.P., [1989, p.251-260, rus] 45-1074
- Variations in water reserves of some glaciers of Central Asia. Akbarov, A.A., [1990, p.84-94, rus] 45-1109
- Changes in the air temperature field above glaciers. Volkova, M.V., et al, [1990, p.120-130, rus] 45-1114
- Electrical parameters of surface layers of shelf and continental glaciers. Bogorodskii, V.V., et al, [1989, p.23-31, rus] 45-1485
- Quaternary alluvial fans in the Karakoram Mountains. Derbyshire, E., et al, [1990, p.27-53, eng] 45-1575
- Alluvial fans in Japan and South Korea. Ono, Y., [1990, p.91-107, eng] 45-1577
- Glaciers of Georgia. Gobedzhishvili, R.G., [1989, 128p., rus] 45-1584
- Glaciological data bank. Suslov, V.F., et al, [1990, p.75-79, rus] 45-1739
- Dispersion of Chernobyl fallout by meltwater in an alpine glacier. Ambach, W., et al, [1989, p.151-153, eng] 45-2086
- Snow and ice. Meier, M.F., [1990, p.131-158, eng] 45-2149
- Aerosol measurement at high alpine stations. Schiwikowski, M., et al, [1990, p.321-324, eng] 45-2220
- Determining the specific active area of scattering of a probed surface. Milekhin, O.E., et al, [1989, p.104-113, rus] 45-2756
- Slope denudation in the Altai highlands. Obyskalov, A.D., [1990, p.81-84, rus] 45-2821
- Transfer of terrigenous suspended material to the Barents Sea by glaciers. Medvedev, V.S., et al, [1990, p.103-110, rus] 45-2878
- Glaciers-ocean-atmosphere interactions. [1990, 131p., eng] 45-3003
- Glacier atlas of Canada. Ommanney, C.S.L., [1989, 54 leaves, eng] 45-3261
- Holocene climatology-stratigraphy of the ice domes in Severnaya Zemlya. Kotliakov, V.M., et al, [1991, p.100-112, rus] 45-3440
- See *also*: Cirque glaciers; Mountain glaciers; Rock glaciers
- Glaciology**
- Collection of antarctic scientific explorations, No.5. Studies on glaciology. [1988, 278p., chi] 45-34
- Rock glaciers in the mountains of Central Asia. Gorbunov, A.P., et al, [1989, 164p., rus] 45-613
- Complex glaciological mapping. Khodakov, V.G., et al, [1989, p.17-24, rus] 45-1029
- New approach to solving thermophysical problems of paleoglaciology. Falko, L.I., [1989, p.133-138, rus] 45-1049
- Workshop on glaciology (Institute of Geography, USSR Academy of Sciences). [Parsava, T.V., 1989, p.250, rus] 45-1073
- Laboratoire de Glaciologie et de Géophysique de l'Environnement. Forget, C., [1990, p.13-15, fre] 45-1127
- Annotated list of Soviet literature on glaciology for 1987. Kotliakov, V.M., ed, [1990, p.193-230, rus] 45-1762
- Elsevier's dictionary of glaciology in four languages. Kotliakov, V.M., ed, [1990, 336p., eng] 45-2091

- Glaciology. Barry, R.G., et al, (1990, p.58-59, eng) 45-2242
- Climate related research in Svalbard. Sand, K., et al, (1990, p.203-217, eng) 45-3796
- Glaze**
- Modeling of surface roughness effects on glaze ice accretion. Hansman, R.J., Jr., et al, (1990, p.35-42, eng) 45-599
- Investigation of surface water behavior during glaze ice accretion. Hansman, R.J., Jr., et al, (1990, p.55-62, eng) 45-601
- Dangerous wind velocities and glaze icing in mountainous regions. Podrezov, O.A., (1990, 222p., rus) 45-983
- Microphysics of surface roughness in glaze ice accretion. Hansman, R.J., Jr., et al, (1988, p.139-146, eng) 45-1328
- Formation of air mass and frontal ice-hoarfrost deposits (Volga region). Maksimovich, S.N., (1989, p.138-143, ru) 45-1851
- Small-scale meteorology of freezing precipitation. Hogan, A.W., (1991, p.454-462, eng) 45-2357
- Modeling of surface roughness effects on glaze ice accretion. Hansman, R.J., Jr., et al, (1991, p.54-60, eng) 45-3235
- Global change**
- Glaciers-ocean-atmosphere interactions. (1990, 131p., eng) 45-3003
- Climate change; implications for water and ecological resources. Wall, G., ed, (1990, 342p., eng) 45-3294
- Results from a 2xCO2 simulation with a general circulation model. Boer, G.J., (1990, p.45-49, eng) 45-3295
- Potential effects of global climate change on the United States. Smith, J.B., (1990, p.79-123, eng) 45-3296
- Svalbard contribution to global studies of arctic hydrology and sediment transfer. Clark, M.J., (1990, p.75-83, eng) 45-3784
- Opportunities for remote sensing initiatives within a Canadian GEWEX program. Lawford, R.G., (1990, p.365-372, eng) 45-3817
- Global warming**
- Glaciers-ocean-atmosphere interactions. (1990, 131p., eng) 45-3003
- Greenland ice sheet and greenhouse warming. Huybrechts, P., et al, (1991, p.399-412, eng) 45-3291
- Climate change; implications for water and ecological resources. Wall, G., ed, (1990, 342p., eng) 45-3294
- Results from a 2xCO2 simulation with a general circulation model. Boer, G.J., (1990, p.45-49, eng) 45-3295
- Potential effects of global climate change on the United States. Smith, J.B., (1990, p.79-123, eng) 45-3296
- Implications of climate change for water resources in the Great Lakes basin. Clamen, M., (1990, p.179-186, eng) 45-3297
- Climate change and water supply and demand in western Canada. Lawford, R.G., (1990, p.193-200, eng) 45-3298
- Effects of an altered water regime on Great Lakes coastal wetlands. Mortsch, L., (1990, p.217-224, eng) 45-3299
- Stochastic simulation of climate change impacts on ice road operations. Woo, M.K., et al, (1990, p.259-264, eng) 45-3300
- Upper limit for sea ice albedo feedback contribution to global warming. Covey, C., et al, (1991, p.9169-9174, eng) 45-3412
- Thermal response of the active layer to climatic warming in a permafrost environment. Kane, D.L., et al, (1991, p.111-122, eng) 45-3418
- Sensitivity of sea ice break-up to air temperatures. Etkin, D.A., (1991, p.21-34, eng) 45-3547
- Global warming and arctic shipping. Jansson, J.E., (1990, p.19-27, eng) 45-3663
- Change in hydrological cycle in cold region corresponding to greenhouse warming. Higuchi, K., (1990, p.47-49, eng) 45-3781
- Commentary on sea ice feedback. Moritz, R.E., (1991, p.151-163, eng) 45-3823
- Arctic Ocean: its role in the global climate engine. Jones, E.P., et al, (1991, p.55-60, eng) 45-3857
- Glossaries**
- See *also*: Dictionaries
- Gold**
- Environmental impact of gold mining in East Greenland. Brooks, C.K., (1990, p.624-634, eng) 45-165
- Late Cenozoic geologic controls on placer-gold distribution. Kaufman, D.S., et al, (1989, p.26-45, eng) 45-193
- Drift mining at Tenderfoot Creek. Groppe, C., et al, (1989, p.211-215, eng) 45-348
- Alaska's mineral industry, 1989. Bundtzen, T.K., et al, (1989, 100p., eng) 45-491
- Grain size**
- Elastic and rheological properties of sea ice and its texture. Hellmann, H., (1990, 99p., ger) 45-79
- Influence of grain size on compressive strength of polycrystalline ice. Cannon, N.P., (1985, 75p., eng) 45-183
- Physical and thermal properties of core specimens, Norman Wells Pipeline. Patterson, D.E., et al, (1989, 23p. + append., eng) 45-385
- Physical and thermal properties of Norman Wells-Zama Pipeline core specimens. Patterson, D.E., et al, (1988, 59p. + append., eng) 45-387
- Effect of grain size on the tensile strength of ice at two strain-rates. Lee, R.W., (1985, 114p., eng) 45-492
- Ice and steel—a comparison of creep and failure. Sinha, N.K., (1989, p.201-212, eng) 45-518
- Formation conditions of the ice-mineral complex of Ice Mountain. Kuznetsova, T.P., et al, (1989, 172p., rus) 45-1116
- Thermic and humidity relations of chosen Spitsbergen soils. Angiel, M., (1990, p.25-37, eng) 45-2430
- Grasses**
- Scheduling fall seedings for cold-climate revegetation. Racine, C.H., et al, (1990, 6p., eng) 45-1664
- Water content during abscisic acid induced freezing in bromegrass cells. Tanino, K., et al, (1990, p.460-464, eng) 45-3276
- Graupel**
- See *also*: Snow pellets
- Gravimetric prospecting**
- Airborne gravity measurement over sea-ice: the western Weddell Sea. Brozyna, J., et al, (1990, p.1941-1944, eng) 45-1995
- Crustal structure between the Antarctic Peninsula and Ellsworth Land. McGibbon, K.J., et al, (1991, p.475-479, eng) 45-2949
- Gravity anomalies**
- Topographic and gravity anomaly maps near Mizuho Plateau. Nagao, T., et al, (1991, p.56-69, jpn) 45-3396
- Great Britain**
- Snow survey of Great Britain 1989/90. (1990, 22p., eng) 45-1178
- Great Lakes**
- Computer graphics of the Great Lakes ice cycle. Assel, R.A., et al, (1991, p.331-335, eng) 45-1917
- Great Lakes winter of 1990. Assel, R.A., et al, (1990, p.143-154, eng) 45-2194
- Implications of climate change for water resources in the Great Lakes basin. Clamen, M., (1990, p.179-186, eng) 45-3297
- Effects of an altered water regime on Great Lakes coastal wetlands. Mortsch, L., (1990, p.217-224, eng) 45-3299
- Greenland**
- Calving event in Greenland in Aug. 1982. Epprecht, W., (1987, p.169-172, eng) 45-11
- Potential for basal melting under Summit, Greenland. Firestone, J., et al, (1990, p.163-168, eng) 45-58
- Response of Greenland ice sheet to temperature changes. Braithwaite, R.J., et al, (1990, p.217-221, eng) 45-64
- Energy balance model to calculate ice sheet ablation. Braithwaite, R.J., et al, (1990, p.222-228, eng) 45-65
- Deep ice core drilling project in Greenland. Proenza, L.M., et al, (1990, p.171-177, eng) 45-131
- Satellite transmission of data on blasting in Greenland. Madsen, N.K., et al, (1990, p.225-234, eng) 45-136
- Ice concentrations affecting navigation to Scoresby Sund in East Greenland. Christensen, F.T., et al, (1990, p.245-256, eng) 45-138
- Onshore oil field development in East Greenland. Mai, H., et al, (1990, p.504-514, eng) 45-154
- Environmental impact of gold mining in East Greenland. Brooks, C.K., (1990, p.624-634, eng) 45-165
- Data basis for permafrost studies in Greenland. Kern-Hansen, C., (1990, p.635-644, eng) 45-166
- Mineral resource exploration in Greenland. Thorning, L., et al, (1990, p.645-653, eng) 45-167
- Glaciers and the hydropower planning for Greenland. Weidick, A., (1990, p.654-663, eng) 45-168
- Environmental protection and mining in Greenland. Hansen, M.M., (1990, p.684-698, eng) 45-170
- Closure of the Black Angel zinc and lead mine in Greenland. Asmund, G., et al, (1990, p.744-759, eng) 45-176
- Composition of particles in firn and ice cores from Greenland. Kumai, M., et al, (1990, p.1-18, eng) 45-194
- Outline of the Japanese Arctic Glaciological Expedition in 1989 (JAGE 1989). Watanabe, O., et al, (1990, p.103-106, eng) 45-203
- Studies of ice sheet hydrology using SAR. Bindshadler, R.A., et al, (1989, p.2719-2721, eng) 45-297
- Mineral and hydroelectric resources in Greenland. Taagholt, J., (1989, p.33-41, eng) 45-330
- Quaternary geology of Canada and Greenland. Fulton, R.J., ed, (1989, 839p. + suppl., eng) 45-610
- Scientists discover problems using Chernobyl fallout for dating the Greenland ice sheet. Dibb, J.E., (1989, p.8-9, eng) 45-959
- Ice-dammed lake drainage mechanisms in Greenland. Russell, A.J., et al, (1988, p.143-147, eng) 45-1094
- Origin of sediments in lakes on the Greenland ice sheet. Olinger, C.T., et al, (1990, p.77-93, eng) 45-1143
- Niveo-aeolian sedimentation in Greenland. Dijkmans, J.W.A., (1990, p.83-96, eng) 45-1291
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- Modern pollen spectrum from Dye 3, south Greenland ice sheet. Bourgeois, J.C., (1990, p.340-342, eng) 45-1544
- Extraordinary melt-water run-off near Søndre Strømfjord, West Greenland. Russell, A.J., (1990, p.353, eng) 45-1548
- CI-36 profile in Greenland ice from AD 1265 to 1865. Conard, N.J., et al, (1989, p.585-591, eng) 45-1846
- Decline of Pb-210 fallout on Greenland in the last century. Nijampurkar, V.N., et al, (1990, p.100-102, eng) 45-1905
- Effect of large ice sheets on earthquake genesis. Johnston, A.C., (1989, p.581-599, eng) 45-1932
- Summertime formation of depth hoar in central Greenland. Alley, R.B., et al, (1990, p.2393-2396, eng) 45-1991
- Medium scale landforms of glacial erosion in South Greenland: process and form. Glasser, N.F., et al, (1990, p.211-215, eng) 45-2024
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- Processed-snow foundation design at the summit of the Greenland Ice Cap. Curtis, K.C., et al, (1991, p.240-249, eng) 45-2337
- Paleoclimatic implications of an early Holocene glacier advance on Disko Island, West Greenland. Ingólfsson, O., et al, (1990, p.297-311, eng) 45-2412
- Logistic support of United States research in Greenland: current situation and prospects. (1990, 20p., eng) 45-2486
- Comments on the so-called salt lakes of Greenland. Williams, W.D., (1991, p.67-74, eng) 45-2943
- Present and planned marine ecological activities in Greenland. Petersen, G.H., (1975, p.II/1-II/12, eng) 45-3220
- Greenland ice sheet and greenhouse warming. Huybrechts, P., et al, (1991, p.399-412, eng) 45-3291
- Core processing, analysis and transportation. JAGE-89. Shoji, H., et al, (1991, p.129-141, jpn) 45-3398
- Marine diatoms from East Greenland. Østrup, E., (1900, p.395-476, dan) 45-3404
- Observation on young specimens of *Ammodytes dubius*. Holmquist, C., (1958, p.10-14, eng) 45-3407
- Increase in hydrogen peroxide in Greenland ice since the late 18th century. Sigg, A., et al, (1991, p.557-559, eng) 45-3525
- Arctic hydrology in Greenland—permafrost hydrology and data technology. Thomsen, T., (1990, p.9-26, eng) 45-3778
- Jakobshavn Isfjord**
- Holocene ice margin recession in West Greenland. Weidick, A., et al, (1990, p.389-399, eng) 45-714
- Thule Air Base**
- Reflection cracking studies at Thule Air Base, Greenland using AC 2.5 and fabrics. Eaton, R.A., et al, (1980, p.381-396, eng) 45-995
- Victoria Fjord**
- World's northernmost surging glacier. Higgins, A.K., et al, (1988, p.111-123, eng) 45-1092
- Greenland Ice Sheet**
- Volcanic ash from the 1362 A.D. Oraefajokull eruption (Iceland) in the Greenland Ice Sheet. Palais, J.M., et al, (1991, p.1241-1244, eng) 45-3762
- Greenland Sea**
- Ice concentrations on the north east Greenland shelf. Lintrup, M.J., et al, (1990, p.272-281, eng) 45-140
- Long term ice forecasting potential in East Greenland waters. Zorn, R., et al, (1990, p.300-309, eng) 45-142
- Ice edge motion during MIZEX'87. Sandven, S., et al, (1989, p.1535-1538, eng) 45-277
- SAR and passive microwave observations of the Odden during MIZEX'87. Sutherland, L.L., et al, (1989, p.1539-1544, eng) 45-278
- USNS *Bartlett* cruise to the Greenland Sea in September 1989. Data report. Bourke, R.H., et al, (1990, 122p., eng) 45-451
- Relation of periodic Greenland Sea sea-ice anomalies to climatic cycles. Mysak, L.A., et al, (1990, p.111-133, eng) 45-1801
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- Ground effect machines**
- See *also*: Air cushion vehicles
- Ground freezing**
- See *also*: Soil freezing
- Ground ice**
- Interaction between permafrost and a deposit of natural gas hydrates. Tipenko, G.S., et al, (1990, p.73-84, rus) 45-322

**Ground ice (cont.)**

- Concentric crater fill on Mars: an aeolian alternative to ice-rich mass wasting. Zimbelman, J.R., et al, (1989, p.397-407, eng) **45-395**
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- See *also*: Ice lenses; Ice veins; Ice wedges
- Ground temperature**  
See *also*: Soil temperature
- Ground thawing**  
Thaw slumping in Fenghuo Mountain area along Qinghai-Xizang Highway. Wang, S.L., (1990, p.63-70, chi) **45-463**
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- Improvement of icing on main road 21; construction and monitoring. Lehtonen, J., (1990, 60p., fin) **45-3873**
- See *also*: Soil water; Superpermafrost ground water; Superpermafrost ground water; Water table
- Grounded ice**  
Reconstructed ice-flow patterns and ice limits using drift pebble lithology, outer Nachvak Fiord, northern Labrador: discussion and reply. Clark, P.U., et al, (1990, p.1002-1011, eng) **45-1685**
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- 1981/1982 ice rubble model tests. Final report. Wards, R.D., (1983, 363p. + appendix, eng) **45-2860**
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- Grounding**  
See *also*: Electrical grounding
- Growth**  
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- Gullies**  
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- Hail**  
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- Hailstorm over Telangana. Pandharinath, N., et al, (1990, p.433-438, eng) **45-3050**

**Hail clouds**

Anomalous radar backscattering from ice particles in a cloud. Aivazian, G.M., [1989, p.51-56, eng] **45-856**  
 Methods of forecasting hail. Fedchenko, L.M., et al, [1989, p.36-42, eng] **45-877**  
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 Abnormal radar backscattering of submillimeter waves from cloud ice particles. Ajvazian, H.M., [1991, p.919-944, eng] **45-3886**  
 Scattering of cloud-reflected radar echoes. Ajvazian, H.M., [1991, p.945-978, eng] **45-3887**

**Hail prevention**

Cloud seeding for hail suppression in South Africa. Mather, G.K., et al, [1990, p.806-811, eng] **45-797**  
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 New methods of influencing hail processes. Burtsev, I.I., [1990, p.23-33, eng] **45-2931**

**Hailstone electrification**

Charging of aircraft: high-velocity collisions. Keith, W.D., et al, [1990, p.218-222, eng] **45-2396**

**Hailstone growth**

Anomalous radar backscattering from ice particles in a cloud. Aivazian, G.M., [1989, p.51-56, eng] **45-856**  
 Stationary and self-oscillation regimes of hail formation. Smirnov, V.I., [1989, p.37-43, eng] **45-879**  
 Hailstone formation in a Montana hailstorm. Miller, L.J., et al, [1990, p.1619-1646, eng] **45-1383**  
 Physics of supercooling of thin water skins covering gyrating hailstones. List, R., [1990, p.1919-1925, eng] **45-1804**  
 Comments on "Physics of supercooling of thin water skins covering gyrating hailstones". Knight, C.A., et al, [1991, p.217-220, eng] **45-1805**  
 Abnormal radar backscattering of submillimeter waves from cloud ice particles. Ajvazian, H.M., [1991, p.919-944, eng] **45-3886**

**Hailstones**

Use of polarization to characterize precipitation and discriminate large hail. Balakrishnan, N., et al, [1990, p.1525-1540, eng] **45-1382**  
 Hail resistance of plastic components of the building shell. Filuler, P., [1990, p.88-95, eng] **45-2556**  
 See *also*: Artificial hailstones

**Handbooks**

See *also*: Manuals

**Harbors**

See *also*: Ports

**Hardening**

See *also*: Concrete hardening

**Hardness**

See *also*: Ice hardness; Snow hardness

**Hardness tests**

Comment on "Enhanced boulder weathering under late-lying snow patches". McCarroll, D., [1990, p.467-469, eng] **45-2258**  
 Use of the Schmidt test hammer to detect enhanced boulder weathering under late-lying snowpatches. Ballantyne, C.K., et al, [1990, p.471-474, eng] **45-2259**

**Haze**

Effect of aerosols on radiation transfer in the Arctic. Ivanov, V.A., et al, [1989, p.47-54, rus] **45-609**  
 Ice haze, snow, and the Mars water cycle. Kahn, R., [1990, p.14,677-14,693, eng] **45-1841**  
 Cold region environmental concerns. Alter, A.J., [1990, p.257-298, eng] **45-2092**

**Health**

Coping strategies and mood during cold weather training. Vickers, R.R., Jr., et al, [1989, 14p., eng] **45-382**

**Heat**

See *also*: Latent heat; Specific heat

**Heat balance**

Surface energy balance and surface temperature in cold regions. Lunardini, V.J., et al, [1990, p.101-110, eng] **45-124**  
 Regional energy balance. Rouse, W.R., [1990, p.187-206, eng] **45-219**  
 Surface heat budget of a polynya off Queen Maud Land. Ramesh Kumar, M.R., et al, [1989, p.1063-1070, eng] **45-522**  
 Role of heat balance studies in geocryological forecasting. Pavlov, A.V., et al, [1987, p.18-25, rus] **45-371**  
 Surface energy balance of a perennial snowbank, Melville Island, Northwest Territories, Canada. Young, K.L., et al, [1990, p.290-301, eng] **45-891**  
 Properties of snow cover in northeastern Western Siberia. Sergeev, B.P., [1990, p.18-28, rus] **45-1197**  
 Experiment to model the climatic effects of the removal of arctic sea ice. Royer, J.F., et al, [1990, p.1-17, eng] **45-1520**  
 Radiative thermophysics of snow and ice. Krass, M.S., et al, [1990, 260p., rus] **45-1532**

Modelling of fall-winter ice phenomena. Petrov, V.M., et al, [1990, p.53-61, rus] **45-1636**  
 Space-time variations in characteristics of ice cover. Makshas, A.P., et al, [1990, p.71-80, rus] **45-1638**  
 Factors in the stability of glacier systems. Lebedeva, I.M., [1990, p.64-75, rus] **45-1738**  
 Stability of nitrogen on Triton. Stansberry, J.A., et al, [1990, p.1773-1776, eng] **45-2047**  
 Impacts of Hudson Bay on the terrestrial climate of the Hudson Bay Lowlands. Rouse, W.R., [1991, p.24-30, eng] **45-2469**  
 Arctic snow and air temperature budget over sea ice during winter. Overland, J.E., et al, [1991, p.4651-4662, eng] **45-2677**  
 Aircraft observations of atmospheric flow parallel to the ice edge. Shaw, W.J., et al, [1991, p.4691-4708, eng] **45-2680**  
 Calculating thermal economy in horizontal mine shafts. I'Urganov, M.M., et al, [1990, p.88-89, rus] **45-2712**  
 Hydro-thermodynamic and microclimatic investigations of a meadow-improving plot. Gavrilova, M.K., [1990, p.36-45, rus] **45-3033**  
 Dynamics of arctic ice in seasonal energy balance model of the climate with regional resolution. Kolomeev, M.P., et al, [1990, p.22-27, eng] **45-3269**  
 Simulations of continental ice sheet growth over the last glacial-interglacial cycle. Deblonde, G., et al, [1991, p.9189-9215, eng] **45-3413**  
 Sea ice dynamics at Atka Iceport. Kipfstuhl, J., [1991, 88p., ger] **45-3521**  
 See *also*: Glacier heat balance; Permafrost heat balance

**Heat capacity**  
 Thermal regime of hydraulic-fill structures during winter operation. Pantelev, V.G., et al, [1990, p.36-40, eng] **45-669**  
 Calculating thermal economy in horizontal mine shafts. I'Urganov, M.M., et al, [1990, p.88-89, rus] **45-2712**

**Heat conductivity**  
 See *also*: Thermal conductivity

**Heat flux**  
 Sea ice physical properties near Casey Station. Allison, I., et al, [1988, p.214-233, chi] **45-49**  
 Path-averaged turbulent heat fluxes from scintillation measurements at two wavelengths. Andreas, E.L., [1990, p.93-105, eng] **45-804**  
 Effect of surface ice on solar pond performance. Atkinson, J.F., [1990, p.207-214, eng] **45-1018**  
 Predictions and studies with a one-dimensional ice-ocean model. Riedlinger, S.H., et al, [1990, p.1545-1562, eng] **45-1386**  
 Measuring path-averaged heat fluxes in free convection. Andreas, E.L., [1991, p.167-182, eng] **45-1585**  
 Calculating heat flux from the water to the atmosphere in the arctic basin. Blinov, N.I., et al, [1989, p.122-127, rus] **45-1661**  
 Three-wavelength method of measuring path-averaged turbulent heat fluxes. Andreas, E.L., [1990, p.801-814, eng] **45-1665**  
 Heat flux and temperature measurement in building systems. Flanders, S.N., [1986, p.101-120, eng] **45-2098**  
 MUTID: User-friendly one-dimensional thermal model. Braley, W.A., et al, [1991, p.1-10, eng] **45-2317**  
 Heat flux at the ice-ocean interface. Wettlaufer, J.S., [1991, p.7215-7236, eng] **45-2560**  
 In-situ heat flux measurements in buildings. Flanders, S.N., ed, [1991, 260p., eng] **45-2648**  
 Heat flux transducers to study building insulations. Perrine, E.L., [1991, p.3-12, eng] **45-2649**  
 Systematic errors with surface mounted heat flux transducers. Trethowen, H.A., [1991, p.15-27, eng] **45-2650**  
 HFT guard plate for exterior envelope surface measurements. Christian, J.E., [1991, p.29-51, eng] **45-2651**  
 Development of a method to assess HFT shunting error. Mack, R.T., et al, [1991, p.53-79, eng] **45-2652**  
 Verification of a thin-heater device as a secondary HFT calibration source. Beardon, T.W., et al, [1991, p.81-94, eng] **45-2653**  
 Heat flux transducers to determine heat transfer coefficients. Emery, A.F., et al, [1991, p.97-110, eng] **45-2654**  
 Heat flux transducer measurement of thermal performance of walls. Burch, D.M., et al, [1991, p.111-122, eng] **45-2655**  
 Thermal admittance of a wall measured by heat flux. Bellatir, S., et al, [1991, p.123-142, eng] **45-2656**  
 Heat flux transducers to measure energy conservation in houses. Kippenhan, C.J., et al, [1991, p.143-158, eng] **45-2657**  
 Using parameter estimation to analyze building envelope thermal performance. Beck, J.V., et al, [1991, p.161-191, eng] **45-2658**  
 Prediction of errors for in-situ measurement of thermal resistance. Flanders, S.N., et al, [1991, p.193-219, eng] **45-2659**  
 Calibration transfer standards for fenestration systems. Goss, W.P., et al, [1991, p.251-260, eng] **45-2662**  
 Numerical study of interannual ocean forcing on arctic ice. Fleming, G.H., et al, [1991, p.4589-4603, eng] **45-2673**

Aircraft observations of the arctic atmospheric boundary layer. Walter, B., et al, [1991, p.4663-4673, eng] **45-2788**  
 Thermodynamic model for sea ice advance and retreat. Tang, C.L., [1991, p.4723-4737, eng] **45-2682**  
 Arctic hurricanes. Businger, S., [1991, p.18-33, eng] **45-2788**  
 Estimating soil surface temperature from meteorological data. Pikul, J.L., Jr., [1991, p.187-195, eng] **45-2928**  
 Water exchange under fast ice in Lützow-Holm Bay. Ohshima, K.I., et al, [1991, p.74-80, eng] **45-3065**  
 Summer sea ice simulation in the East Greenland area. Lu, Q.M., et al, [1990, p.337-351, eng] **45-3588**  
 Frazil ice problems at Stornorffors water power plant in the Urne River. Sahlberg, J., [1990, p.427-441, eng] **45-3596**  
 Thermal regimes of waters in cold regions. Ono, N., [1990, p.49-58, eng] **45-3665**  
 See *also*: Heat transfer; Ice heat flux; Snow heat flux

**Heat loss**  
 Effect of winter heat loss on treatment plant efficiency. Wells, S.A., [1990, p.34-39, eng] **45-306**  
 Turbulent mixing near the Yermak Plateau during the Coordinated Eastern Arctic Experiment. Padman, L., et al, [1991, p.4769-4782, eng] **45-2685**  
 Measurement of heat losses from a buried heat distribution system. Phetteplace, G.E., [1991, p.47-54, eng] **45-3743**

**Heat measurement**  
 See *also*: Temperature measurement

**Heat pipes**  
 Numerical study of an underground heat tube. Sulaiman, F., [1989, 171p., eng] **45-508**  
 Heat pipe application for naval vessel surface deicing. Beltran, M.R., et al, [1989, p.339-366, eng] **45-546**  
 Mathematical modeling and analysis of heat pipe start-up from the frozen state. Jang, J.H., et al, [1990, p.586-594, eng] **45-1262**  
 Heat pipes for ground heating and cooling. Vasiliev, L.L., [1988, p.125-138, eng] **45-3216**  
 Measurement of heat losses from a buried heat distribution system. Phetteplace, G.E., [1991, p.47-54, eng] **45-3743**  
 Efficiency analysis of a steam heat distribution system. Phetteplace, G.E., [1991, p.199-213, eng] **45-3746**

**Heat recovery**  
 Water thermal storage with solidification. Chen, S.L., et al, [1991, p.79-90, eng] **45-2762**  
 Heat pipes for ground heating and cooling. Vasiliev, L.L., [1988, p.125-138, eng] **45-3216**  
 Cold start improvements with a heat store. Schatz, O., [1991, 9p., eng] **45-3829**

**Heat sources**  
 Effect of surface ice on solar pond performance. Atkinson, J.F., [1990, p.207-214, eng] **45-1018**

**Heat transfer**  
 Thermal properties of permafrost in the North. Pavlov, A.V., et al, [1989, p.57-58, rus] **45-105**  
 Solution for solidification by convective and radiative cooling. Parang, M., et al, [1990, p.142-148, eng] **45-221**  
 Ice balls for air conditioners. Gilmore, V.E., [1990, p.45-46, eng] **45-364**  
 Mathematical model of glacier percolation zone. Cai, B.L., et al, [1990, p.223-226, eng] **45-486**  
 Effect of cooling rate on freezing temperature of supercooled water. Saito, A., et al, [1990, p.1697-1709, eng] **45-487**  
 Water-source and ice-maker heat pumps. Aceves-Saborio, S.M., [1989, 213p., eng] **45-507**  
 Numerical study of an underground heat tube. Sulaiman, F., [1989, 171p., eng] **45-508**  
 Ice storages. Saastamoinen, J.J., [1989, 63p., eng] **45-566**  
 Heat transfer of an airfoil in flight and in an icing wind tunnel. Poinette, P.E., [1990, 184p., eng] **45-603**  
 Theoretical and field study of temperature fields in thawing soils. Bronfenbrenner, L.E., et al, [1989, p.33-39, eng] **45-648**  
 Free convection heat transfer along a horizontal ice cylinder immersed in seawater. Fukusako, S., et al, [1990, p.57-64, jpn] **45-697**  
 Heat transfer in shells and tubes during ice formation. Saito, A., et al, [1989, p.221-233, jpn] **45-698**  
 Phase changes in water with coiled copper wires. Hirasawa, Y., et al, [1989, p.161-166, jpn] **45-699**  
 Solidification of an alloy in a cavity cooled through its top surface. Cao, W.Z., et al, [1990, p.427-434, eng] **45-772**  
 Thermal analysis of engine inlet anti-icing systems. Al-Khalil, K.M., et al, [1990, p.628-634, eng] **45-1015**  
 High speed numerical technique to solve coupled moving boundary value heat problems. Sharma, R.K., et al, [1990, p.1-8, eng] **45-1080**  
 Fundamentals of phase change: freezing, melting, and sublimation. Bayazitoglu, Y., ed, [1990, 81p., eng] **45-1161**  
 Heat transfer analysis for ice objects melting in air. Janna, W.S., et al, [1990, p.1-8, eng] **45-1162**



**Heat transfer (cont.)**

- Forced convective heat transfer with freezing from tandem cylinders. Oosthuizen, P.H., et al, 1990, p.65-73, eng 45-1166
- Modified differential method in solving the Stefan problem. Tetelbaum, A.S., 1990, p.111-118, rus 45-1207
- Mathematical modeling and analysis of heat pipe start-up from the frozen state. Jang, J.H., et al, 1990, p.586-594, eng 45-1262
- Ice formation in water flow around cooled cylinders. Hirata, T., et al, 1990, p.707-713, eng 45-1263
- Microcomputer simulation of phase change heat transfer. Farag, I.H., et al, 1990, p.43-65, eng 45-1432
- Contact supercooling of water layers and bottom ice formations in the sea. Cherepanov, N.V., et al, 1989, p.124-134, rus 45-1499
- Radiative thermophysical properties of snow and ice. Krass, M.S., et al, 1990, 260p., rus 45-1532
- Mechanism of frazil ice formation in the Antarctic. Korotkov, A.I., 1990, p.105-116, rus 45-1562
- Role of heat transfer sources in changes to cyclone tracks. Abramov, V.A., et al, 1990, p.116-124, rus 45-1642
- Tube assembly heat exchange with solidification of the heat carrier. Semenov, V.I.U., et al, 1990, p.567-571, eng 45-1683
- Physics of supercooling of thin water skins covering gyrating hailstones. List, R., 1990, p.1919-1925, eng 45-1804
- Comments on "Physics of supercooling of thin water skins covering gyrating hailstones". Knight, C.A., et al, 1991, p.217-220, eng 45-1805
- Heat-moisture-salt regime of frozen ground during fall watering. Ivanov, V.A., et al, 1989, p.24-36, rus 45-1826
- Numerical method for phase-change problems. Kim, C.J., et al, 1990, p.2721-2734, eng 45-1871
- Melting of ice in a porous medium heated from below. Zhang, X., et al, 1991, p.389-405, eng 45-1872
- Heated effluent effects on ice-covered rivers. Sarraf, S., 1990, p.161-178, eng 45-1908
- Numerical study on freezing heat transfer in water-saturated porous media. Sasaki, A., et al, 1990, p.17-32, eng 45-1926
- Estimation of sublimation rate from ice disk on heating plate at low pressures. Tachiwaki, T., et al, 1990, p.2038-2040, eng 45-2022
- Natural convection heat transfer in water near its density maximum. Yen, Y.C., 1990, 92p., eng 45-2237
- Revised projection of future greenhouse warming. Schlesinger, M.E., et al, 1991, p.219-221, eng 45-2263
- Rapid disintegration of the Wordie Ice Shelf in response to atmospheric warming. Doake, C.S.M., et al, 1991, p.328-330, eng 45-2266
- Analysis of waterbody surface heat exchange. Huang, N.C., et al, 1991, p.326-335, eng 45-2344
- Heat exchange at the ice/water interface on flowing water. Haussler, R., et al, 1991, p.348-354, eng 45-2346
- Heat transfer with freezing and thawing. Lunardini, V.J., 1991, 437p., eng 45-2390
- Interaction of sea ice, snow and glaciers with the atmosphere and ocean. Kotliakov, V.M., ed, 1990, p.155-248, eng 45-2409
- Thermal energy storage with encapsulated ice. Laybourn, D.R., 1988, p.1971-1988, eng 45-2563
- Heat transfer under frosting conditions to plain and thick-finned tubes. Al-Sahaf, J., et al, 1991, p.1-17, eng 45-2566
- Prediction of wall temperature gradients in concrete storage structures. Jofriet, J.C., et al, 1991, p.12-19, eng 45-2665
- Water thermal storage with solidification. Chen, S.L., et al, 1991, p.79-90, eng 45-2762
- Increased ocean heat transports and warmer climate. Rind, D., et al, 1991, p.7437-7461, eng 45-2799
- Phase-change numerical heat transfer analysis with applications to frost shielding. Farag, I.H., et al, 1991, p.29-36, eng 45-2915
- Inward solidification of a superheated liquid in a cooled horizontal tube. Viskanta, R., et al, 1982, p.39-46, eng 45-2933
- Algorithm to estimate the heating budget from vertical hydrometeor profiles. Tao, W.K., et al, 1990, p.1232-1244, eng 45-2985
- Investigation of heat and mass transport during freezing in peat soils. Gamaiunov, N.I., et al, 1990, p.88-97, eng 45-3051
- Laboratory tests with a hybrid thermosyphon. Haynes, F.D., et al, 1991, p.93-99, eng 45-3154
- Numerical study of the right angled thermosyphon. Lock, G.S.H., et al, 1991, p.113-117, eng 45-3157
- Heat transfer in a right-angled thermosyphon. Lock, G.S.H., et al, 1991, p.261-265, eng 45-3178
- Ice cover melting under turbulent flow conditions. Sarraf, S., et al, 1990, p.313-316, eng 45-3194
- Performance of triangular spine fins under frosting conditions. Kondepudi, S.N., et al, 1988, p.1-7, eng 45-3215
- Freezing of a binary alloy saturating a packed bed of spheres. Cao, W.Z., et al, 1991, p.46-53, eng 45-3234
- Modeling of surface roughness effects on glaze ice accretion. Hansman, R.J., Jr., et al, 1991, p.54-60, eng 45-3235
- Unsteady heat and mass transfer with phase changes in an insulation slab: frosting effects. Tao, Y.X., et al, 1991, p.1593-1603, eng 45-3364
- Holographic interferometry experiments on the growth of ice from a horizontal pipe. Spatz, T.L., et al, 1991, p.1847-1859, eng 45-3365
- Heat and mass transfer in frozen porous media. Van Loon, W.K.P., 1991, 204p., eng 45-3452
- Simplified analysis for cold storage in porous capsules with solidification. Chen, S.L., et al, 1991, p.108-116, eng 45-3467
- Laboratory investigations of mixing processes under simulated ice cover. Loose, F., 1990, p.324-336, eng 45-3587
- Modelling the ice/water boundary layer. Omstedt, A., 1990, p.387-395, eng 45-3592
- Effects of water transfer on temperature and ice regime. Tesaker, E., 1990, p.474-485, eng 45-3600
- Heat transfer in reservoirs during ice formation. Ivanov, A.V., 1990, p.143-148, eng 45-3672
- Phase change heat transfer analysis with applications to frost shielding. Farag, I.H., et al, 1990, p.9-13, eng 45-3739
- On the relationship between snow distribution and snow melt. Gjessing, Y., 1990, p.111-119, eng 45-3787
- Experimental measurements of the effects of frost formation on heat exchanger performance. Emery, A.F., et al, 1990, p.1-7, eng 45-3865
- Semi-empirical transient method for modeling frost formation on a flat plate. Sherif, S.A., et al, 1990, p.15-23, eng 45-3867
- Heat transfer under an ice cylinder melting in saline water. Fukusako, S., et al, 1990, p.35-41, eng 45-3869
- See *also*: Heat flux; Permafrost heat transfer
- Heat transfer coefficient**
- Heat reflecting properties of monolithic concrete with antifreeze admixtures. Solov'eva, R.F., et al, 1990, p.33-34, rus 45-23
- On the rate of heat transfer between a lake and an ice sheet. Hamblin, P.F., et al, 1990, p.173-182, eng 45-499
- Air coolers with varying spaced finning during hoarfrost formation. Chepurnov, M.N., et al, 1989, p.29-32, rus 45-802
- Converting the thermal energy of arctic sea water into electricity. Moskvicheva, V.N., et al, 1987, p.72-77, eng 45-866
- Fundamentals of phase change: freezing, melting, and sublimation. Bayazitoglu, Y., ed, 1990, 81p., eng 45-1161
- Melting heat transfer from a horizontal ice cylinder in saline water. Fukusako, S., et al, 1990, p.15-23, eng 45-1164
- Experimental study of formation and melting of ice about horizontal tubes. Torikoshi, K., et al, 1990, p.57-63, eng 45-1165
- Convective heat transfer coefficient for icing of cylinders. Szilder, K., et al, 1988, p.147-151, eng 45-1329
- Heat flux transducers to determine heat transfer coefficients. Emery, A.F., et al, 1991, p.97-110, eng 45-2654
- Features of thermophysical properties of saline frozen soils. Shelkin, I.V., 1990, p.20-24, rus 45-2885
- River ice cover initiation due to the spreading of border ice. Matoušek, V., 1990, p.352-362, eng 45-3589
- River surface temperature determination in calm weather. Matoušek, V., 1990, p.363-371, eng 45-3590
- Heating**
- Scania battery heater for heavy trucks. Friedel, G., 1989, p.113-118, eng 45-1222
- Vehicle operation under arctic conditions. Rosenkranz, J., 1989, p.301-315, eng 45-1242
- Garaging and cold starting of engines in field conditions. Olsauskas, K., 1989, p.333-335, eng 45-1245
- Heater/defroster testing in the real world. Leier, T.E., et al, 1989, p.405-411, eng 45-1250
- Automotive and construction equipment for arctic use; heating and cold starting. Diemand, D., 1991, 28p., eng 45-2919
- Heat pipes for ground heating and cooling. Vasiliev, L.L., 1988, p.125-138, eng 45-3216
- Measurement of heat losses from a buried heat distribution system. Phetteplace, G.E., 1991, p.47-54, eng 45-3743
- Efficiency analysis of a steam heat distribution system. Phetteplace, G.E., 1991, p.199-213, eng 45-3746
- Cold start improvements with a heat store. Schatz, O., 1991, 9p., eng 45-3829
- Experiment of a warmed scaffolding in a building site. Kärräinen, H., et al, 1990, 52p. + appends., fin 45-3851
- Finnish cold climate building technology and community development, part 9. Nyman, M., ed, 1990, 70p., fin 45-3879
- See *also*: Concrete heating; Electric heating; Pipeline heating; Radiant heating; Transition heating
- Heaving**
- See *also*: Frost heave
- Heavy water**
- Raman spectroscopic study of dilute HOD in liquid H<sub>2</sub>O in the temperature range -31.5 to 160 C. Hare, D.E., et al, 1990, p.6954-6961, eng 45-1172
- Freezing-point of mixtures of H<sub>2</sub>O-16 and H<sub>2</sub>O-18. Kiyosawa, K., 1991, p.583-588, eng 45-3305
- Hedges**
- See *also*: Snow hedges
- Height**
- See *also*: Altitude
- Height finding**
- Integration of digital elevation model parameters with mountain radar imagery. Gratton, D.J., et al, 1989, p.60-62, eng 45-229
- Slope correction by relocation for satellite radar altimetry. Cooper, A.P.R., 1989, p.2730-2733, eng 45-300
- Sea ice concentration estimated from Geosat waveforms. Chase, J.K., et al, 1990, p.18,015-18,025, eng 45-1607
- Comparison of altimeter and radar measurements over Greenland pack ice. Fetterer, F.M., et al, 1991, p.569-583, eng 45-2224
- Satellite radar altimeter capability for ice sheet surface change measurement. Partington, K.C., et al, 1991, p.585-609, eng 45-222-
- Application of GPS relative positioning for height determination above sea level in the antarctic marginal ice zone. Shibuya, K., et al, 1990, p.149-162, eng 45-2305
- Airborne radar altimeter observations of marginal sea ice. Drinkwater, M.R., 1991, p.4555-4572, eng 45-2672
- Radar altimeter ground truth measurements in Antarctica. 1989, p.1-3, eng 45-3258
- See *also*: Cloud height indicators
- Helicopters**
- Helicopter radar simulations from fine resolution airborne SAR imagery. Lowry, R.T., et al, 1989, p.2209-2212, eng 45-289
- Test plan for transportable maintenance shelter qualification test. Rhodes, D.A., 1990, 16p. + appends., eng 45-1208
- Rime and reason. Manningham, D., 1991, p.82-85, eng 45-2179
- Heterogeneous nucleation**
- Phase transition of water in brick during cooling 2: effects of cooling rate. Nakamura, M., et al, 1987, p.1116-1119, eng 45-778
- Clustering of ice nucleation protein correlates with ice nucleation activity. Mueller, G.M., et al, 1990, p.416-422, eng 45-820
- Mechanisms of heterogeneous ice nucleation onto mixed ice nuclei in the atmosphere. Smorodin, V.E., 1990, p.S249-S253, eng 45-2217
- Influence of lead iodide aerosol dispersity on its ice-forming activity. Baklanov, A.M., et al, 1991, p.9-14, eng 45-2441
- Theory of ice crystal nucleation on substrates. Gorbunov, B.Z., 1991, p.564-570, eng 45-2564
- Probability of heterogeneous nucleation on substrates. Gorbunov, B.Z., et al, 1991, p.570-574, eng 45-2565
- Cloud condensation nuclei as a source of ice-forming nuclei in clouds. Rosinski, J., et al, 1991, p.123-133, eng 45-3024
- Alkylbenzyltrimethylammonium salts as inhibitors for the ice nucleating activity of *Erwinia ananas*. Watanabe, M., et al, 1988, p.201-206, eng 45-3048
- Ice particle concentrations and precipitation development in small polar maritime cumulonimbus clouds. Rangno, A.L., et al, 1991, p.207-241, eng 45-3480
- High pressure ice**
- Phase diagram for ammonia-water mixtures at high pressures: implications for icy satellites. Cynn, H.C., et al, 1989, p.433-441, eng 45-396
- X-ray study of high-density amorphous water. Bosio, L., et al, 1986, p.460-463, eng 45-779
- Equation of state and metallization of ice under very high pressure. Hama, J., et al, 1990, p.8107-8111, eng 45-992
- Neutron scattering study of high pressure ice. Li, J.-C., et al, 1991, p.6770-6775, eng 45-2775
- Thermodynamic properties of ice, water, and a mixture of the two at high pressures. Nagornov, O.V., et al, 1990, p.378-385, eng 45-3254
- High pressure tests**
- Phase diagram for ammonia-water mixtures at high pressures: implications for icy satellites. Cynn, H.C., et al, 1989, p.433-441, eng 45-396
- Pressure-induced phase transitions in clathrate hydrates. Handa, Y.P., et al, 1991, p.623-627, eng 45-1903
- Thermodynamic properties of ice, water, and a mixture of the two at high pressures. Nagornov, O.V., et al, 1990, p.378-385, eng 45-3254
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- Study on roads for the 21st century in snowy and cold regions. 1990, p.5-24, jpn 45-743
- Are transportation engineers prepared for winter. 1990, p.1040-1046, eng 45-2576
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- Guidelines on application of seasonal load restrictions. Mahoney, J.P., et al, 1990, p.75-84, eng 45-3692

- Highways**  
 See *also*: Roads
- Himalaya Mountains**  
 Snow surveys in Nepal Himalayas. Ohta, T., et al, 1990, p.29-30, eng 45-196  
 Air temperature and snow depth in Nepal Himalayas. Motoyama, H., et al, 1990, p.55-60, eng 45-198  
 Diurnal variation of precipitation in Langtang Valley, Nepal Himalayas. Ueno, K., et al, 1990, p.93-101, eng 45-202  
 Water and sediment yields into the Sutlej River from the High Himalaya. Sharma, P.D., et al, 1991, p.87-100, eng 45-3885
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 Geologists in the Far North. Onoprienko, V.I., 1990, 137p., rus 45-638  
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 Canada-USSR Arctic Science Exchange Programme. Slipchenko, W., 1991, p.235-257, eng 45-3336  
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 See *also*: Depth hoar
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 See *also*: Air cushion vehicles
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 Human factors of geochemical changes in arctic oil and gas regions. Evseev, A.V., et al, 1989, p.15-21, rus 45-101  
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 See *also*: Frost mounds; Pingos
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 Phase diagram for ammonia-water mixtures at high pressures: implications for icy satellites. Cynn, H.C., et al, 1989, p.433-441, eng 45-396  
 Gas hydrates in rocks at subzero temperatures. Iakushev, V.S., et al, 1990, p.899-903, rusj 45-678  
 Stability of gas hydrates. Rodger, P.M., 1990, p.6080-6089, eng 45-713  
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 Gas hydrates of the Arctic Ocean region. Kvenvolden, K.A., et al, 1990, p.539-549, eng 45-1694  
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 See *also*: Earth fills; Rock fills
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 Thermal regime of hydraulic-fill structures during winter operation. Panteleev, V.G., et al, 1990, p.36-40, eng 45-669  
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- See *also*: Dams; Docks; Locks (waterways); Offal structures; Piers; Sluices (hydraulic engineering); Wharves
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 Hydraulic and morphological criteria of ice jamming at channel constrictions. Mayer, I., et al, 1990, p.680-689, eng 45-3618  
 Unbalanced ice transportation at ice bar river reach. Ren, Z.W., 1990, p.719-725, eng 45-3622  
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 River ice hydraulics. Majewski, W., 1990, p.29-47, eng 45-3664
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 Geology and hydrocarbon potential of the antarctic continental margin. Anderson, J.B., 1990, p.175-201, eng 45-2811  
 Microbial transformation of polychlorinated biphenyls in polar marine regions. Izrael, I.U.A., et al, 1990, p.4-7, eng 45-3052  
 Oxidation of oil hydrocarbons by arctic pigmented *Mycobacterium* species. Koronelli, T.V., et al, 1981, p.167-170, rusj 45-3136  
 Lipid composition of *Mycobacterium mucosum* oxidizing hydrocarbons. Koronelli, T.V., et al, 1977, p.1070-1073, rusj 45-3137  
 Activity of microorganisms oxidizing hydrocarbons assayed in natural waters. Il'inski, V.V., et al, 1989, p.658-662, rusj 45-3138  
 Environmental protection in the Soviet arctic seas. Roginko, A., 1991, p.63-82, eng 45-3327  
 Brine-induced advection of dissolved aromatic hydrocarbons to arctic bottom waters. Payne, J.R., et al, 1991, p.940-951, eng 45-3818
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 Ice propeller interaction forces. Keinonen, A.J., et al, 1990, 2 vols., eng 45-185  
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 See *also*: Electric power
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 Transfer of hydrogen from NADPH to NAD<sup>+</sup> in frozen aqueous solution. Aso, Y., et al, 1990, p.2187-2188, eng 45-957

**Hydrogen bonds**

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**Hydrogeochemistry**

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**Hydrology**

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- Up-to-date method to study marsh-ridden areas in West Siberia. Novikov, S.M., 1988, p.14-17, eng 45-761
- Hydrology of wetlands and man's influence on it. Verry, E.S., 1988, p.41-61, eng 45-765
- Northern prairie wetlands. Van der Valk, A.G., ed, 1989, 400p., eng 45-831
- Hydrologic studies of wetlands in the northern prairie. Winter, T.C., 1989, p.16-54, eng 45-832
- Water and wetland resources of the Nebraska sandhills. Novacek, J.M., 1989, p.340-384, eng 45-836
- Methods of mapping snowmelt and glacier runoff in mountainous countries. Ananicheva, M.D., et al, 1989, p.49-55, rus 45-1034
- International Association of Hydrological Sciences, Baltimore, May 1989. Krenke, A.N., 1989, p.232-236, rus 45-1069
- Sediment patterns in the southern Weddell Sea. Fütterer, D.K., et al, 1990, p.381-401, eng 45-1270
- Ground water input in kettle hole peatlands. Kratz, T.K., et al, 1989, p.1141-1151, eng 45-1405
- Wetland creation and restoration: the status of the science. Kusler, J.A., ed, 1990, 594p., eng 45-1406
- Creation of wetlands in the northeastern United States. Lowry, D.J., 1990, p.267-280, eng 45-1407
- Regional analysis of the creation and restoration of kettle and pothole wetlands. Hollands, G.G., 1990, p.281-298, eng 45-1408
- Regional analysis of fringe wetlands in the Midwest: creation and restoration. Levine, D.A., et al, 1990, p.299-325, eng 45-1409
- Creation and restoration of riparian wetlands in the agricultural Midwest. Willard, D.E., et al, 1990, p.327-350, eng 45-1410
- Passive microwave remote sensing contribution to hydrological variables. Choudhury, B.J., 1991, p.63-84, eng 45-1797
- Hydrologic factors in wetland water treatment. Kadlec, R.H., 1989, p.21-40, eng 45-1875
- Western Snow Conference, 58th, 1990, 170p., + append., eng 45-2114
- Learning from watching snowmelt. Frazier, J.W., et al, 1990, p.35-40, eng 45-2119
- Snow hydrology of an alpine basin in the Sierra Nevada. Kattelmann, R., 1990, p.41-50, eng 45-2120
- Consequences of an avalanche striking an ice-covered lake. Williams, M.W., et al, 1990, p.51-60, eng 45-2121
- Surface water hydrology. Wolman, M.G., ed, 1990, 374p., eng 45-2143
- Hydrology of lakes and wetlands. Winter, T.C., et al, 1990, p.159-187, eng 45-2150
- New hydrologic instrumentation in the U.S. Geological Survey. Latkovich, V.J., et al, 1991, p.739-747, eng 45-2383
- Geomorphic controls of groundwater hydrology. Coates, D.R., 1990, p.341-356, eng 45-2594
- Flatlands with snow and ice. Chernogaeva, G.M., 1989, p.324-331, eng 45-2750
- Humid temperate flatlands. Chernogaeva, G.M., 1989, p.332-337, eng 45-2751
- Hydrologic bibliography of Switzerland for 1989. Sevruck, B., et al, 1989, p.145-164, ger 45-2766
- Use of satellite data for water resources modelling—a Canadian example. Kite, G.W., 1991, p.21-29, eng 45-2796
- Water and ice resources of the Issyk-Kul-Chu region, their current and future state. Dikikh, A.N., et al, 1991, p.390-396, eng 45-3237
- Effects of an altered water regime on Great Lakes coastal wetlands. Mortsch, L., 1990, p.217-224, eng 45-3299
- Microorganisms as indicators of hydrological phenomena in seas and oceans. Kriss, A.E., et al, 1958, p.397-413, rus 45-3431
- Hydrogeography of the Schirmacher Hills region. Richter, W., 1991, p.367-373, ger 45-3556

- Hydrology of Svalbard—hydrological problems in cold climate. Proceedings. [1990, 224p., eng] 45-3776
- Proceedings of the Workshop on Applications of Remote Sensing in Hydrology. [1990, 386p., eng] 45-3797
- Application of remotely sensed data in a distributed-parameter watershed model. Leavesley, G.H., et al., [1990, p.47-68, eng] 45-3799
- Determination of characteristics for hydrological modelling using remote sensing. Whiting, J., [1990, p.79-92, eng] 45-3801
- Surface hydrology in climate models: the role of remote sensing. Thomas, G., [1990, p.109-122, eng] 45-3802
- Modelling the Kootenay watershed with satellite data. Kite, G.W., [1990, p.123-134, eng] 45-3803
- Updating hydrological model forecasts. Assaf, H., et al., [1990, p.149-175, eng] 45-3804
- HYDROTEL, a hydrological model designed to make use of remotely sensed and GIS data. Fortin, J.P., et al., [1990, p.177-185, eng] 45-3805
- Qualitative evaluation of data networks for streamflow simulation in Manitoba. Warkentin, A.A., [1990, p.215-223, eng] 45-3806
- See *also*: Glacial hydrology; Permafrost hydrology; Snow hydrology; Surface waters
- Hydrometeors**  
See *also*: Precipitation (meteorology)
- Hydrothermal processes**  
Year-round temperature simulation of cold climate lakes. Gu, R., et al., [1990, p.147-160, eng] 45-497
- Heat and mass balance of an ablating ice jam. Prowse, T.D., [1990, p.629-635, eng] 45-903
- Effect of fires on frozen soils. Tarabukina, V.G., et al., [1990, 119p., rus] 45-1572
- Icebergs as oceanographic tracers (in the example of the Weddell Sea). Nazirov, M., [1989, p.142-148, rus] 45-2760
- Winter channel formation in sluiced disposal areas. Pantelev, V.G., et al., [1990, p.709-718, eng] 45-3621
- Hygrometers**  
Airborne cryogenic frost-point hygrometer: user's guide. Spyers-Duran, P.A., [1990, 41p., eng] 45-204
- Airborne cryogenic frost-point hygrometer. Spyers-Duran, P.A., [1991, p.303-306, eng] 45-1593
- Development of a cryogenic dew/frost point hygrometer. Buck, A.L., et al., [1991, p.322-326, eng] 45-1594
- See *also*: Moisture meters
- Hygroscopic water**  
Phase transitions of water in brick during cooling. Nakamura, M., et al., [1985, p.1567-1570, eng] 45-777
- Phase transition of water in brick during cooling 2: effects of cooling rate. Nakamura, M., et al., [1987, p.1116-1119, eng] 45-778
- Frozen-liquid PMR spectra and interactions of water with spherical carbon adsorbents. Turov, V.V., et al., [1990, p.102-105, eng] 45-2285
- Cryogenic properties of soils and rocks: 1. Anomalous behaviour of water. Quinn, F.X., et al., [1991, p.195-209, eng] 45-3401
- Cryogenic properties of soils and rocks: 2. The influence of water types on the uniaxial mechanical behaviour of clays. Unsworth, J.F., et al., [1991, p.211-225, eng] 45-3402
- Hygroscopicity**  
Effect of salinity on hydro- and thermophysical properties of soils. Loseva, S.G., et al., [1990, p.24-33, rus] 45-2886
- Hypothermia**  
See *also*: Cold exposure
- Ice**  
New perspectives on freezing and melting. Oxtoby, D.W., [1990, p.725-730, eng] 45-825
- In-House Laboratory Independent Research Program—FY88. Diemand, D., ed., [1990, 18p., eng] 45-1399
- 1990-91 Australian Antarctic Research Program. Antarctic Treaty exchange information: Supplement A to particulars for Australian National Antarctic Research Expeditions. [1990, 262p., eng] 45-1920
- Elsevier's dictionary of glaciology in four languages. Kotliakov, V.M., ed., [1990, 336p., eng] 45-2091
- Russian-English arctic environment glossary. [1991, 154p., eng] 45-3085
- Twenty years of ice symposia. Frankenstein, G.E., [1990, p.43-65, eng] 45-3564
- See *also*: Artificial ice; Bottom ice; Capillary ice; Colored ice; Cubic ice; Dendritic ice; Deuterium oxide ice; Doped ice; Dry ice (trademark); Extraterrestrial ice; Fast ice; Floating ice; Fossil ice; Frazil ice; Glacier ice; Glaciology; Glaze; Ground ice; Grounded ice; High pressure ice; Interstitial ice; Lake ice; Land ice; Naleds; Pack ice; River ice; Salt ice; Sea ice; Snow ice; Spongy ice; Superheated ice; Underwater ice; Vitreous ice; Young ice
- Ice accretion**  
Experiments on the growth of spongy ice near a stagnant point. Lock, G.S.H., et al., [1990, p.143-150, eng] 45-55
- Airfoil performance degradation due to ice accretion. Potapczuk, M.G., et al., [1990, p.679-691, eng] 45-372
- Arctic/cold weather operations symposium, 1989; proceedings, volume 1. [1989, 488p., eng] 45-532
- Cold regions design limits for conventional surface ships. Schultz, L.A., [1989, p.99-111, eng] 45-534
- Effectiveness of deicing chemicals in reducing ice adhesion to nonskid surfaces. Lever, J.H., et al., [1989, p.297-307, eng] 45-543
- Users manual for the NASA Lewis ice accretion prediction code (LEWICE). Ruff, G.A., et al., [1990, 231p., eng] 45-598
- Modeling of surface roughness effects on glaze ice accretion. Hansman, R.J., Jr., et al., [1990, p.35-42, eng] 45-599
- Ultrasonic techniques for aircraft ice accretion measurement. Hansman, R.J., Jr., et al., [1990, p.43-53, eng] 45-600
- Investigation of surface water behavior during glaze ice accretion. Hansman, R.J., Jr., et al., [1990, p.55-62, eng] 45-601
- Influence of ice accretion physics on the forecasting of aircraft icing conditions. Hansman, R.J., Jr., [1990, p.63-67, eng] 45-602
- Heat transfer of an airfoil in flight and in an icing wind tunnel. Poinatte, P.E., [1990, 184p., eng] 45-603
- Comparison of drop size distributions from two droplet sizing systems. Oldenburg, J.R., et al., [1990, 15p., eng] 45-604
- Flow in the diffuser of an icing wind tunnel. Addy, H.E., Jr., et al., [1990, 9p., eng] 45-607
- Evaluation of state-of-the-art drilling platform icing models. Brown, R.D., et al., [1989, 80p., eng] 45-654
- On determining ice accumulation rates in the past 40,000 years using *in situ* cosmogenic C-14. Lal, D., et al., [1990, p.1303-1306, eng] 45-994
- Swept wing ice accretion modeling. Potapczuk, M.G., et al., [1990, 24p., eng] 45-1131
- Fourth International Conference on Atmospheric Icing of Structures. [1988, 414p., eng] 45-1299
- Atmospheric icing: a review. Lozowski, E.P., et al., [1988, p.1-6, eng] 45-1300
- Observation of ice accretion on power transmission lines. Takagi, Y., et al., [1988, p.84-88, eng] 45-1317
- Atmospheric icing with elevation on New England mountains. Ryerson, C.C., [1988, p.89-93, eng] 45-1318
- Analysis of ice overload on single and bundled conductors. Flocchini, G., et al., [1988, p.99-103, eng] 45-1320
- Studies of icing and ice-snow accretion in Mt. Zao. Yano, K., [1988, p.109-113, eng] 45-1322
- Density of natural ice accretions. Jones, K.F., [1988, p.114-118, eng] 45-1323
- Freezing rain in Quebec. Felin, B., [1988, p.119-123, eng] 45-1324
- Effect of structural ice on aircraft component aerodynamics. Bragg, M.B., [1988, p.134-138, eng] 45-1327
- Microphysics of surface roughness in glaze ice accretion. Hansman, R.J., Jr., et al., [1988, p.139-146, eng] 45-1328
- Convective heat transfer coefficient for icing of cylinders. Szilder, K., et al., [1988, p.147-151, eng] 45-1329
- Microscopic and macroscopic observations of ice samples formed by accretion. Downs, S.J., [1988, p.157-161, eng] 45-1330
- Experimental study of the air inclusions into ice formed on fixed cylinders. Gribelin, P., et al., [1988, p.162-166, eng] 45-1331
- Models of atmospheric icing of ships. Zakrzewski, W.P., et al., [1988, p.202-207, eng] 45-1339
- Evaluation of state-of-the-art drilling platform ice accretion models. Brown, R.D., et al., [1988, p.208-213, eng] 45-1340
- Theoretical model for rime ice accretion on conductors. Skelton, P.L.I., et al., [1988, p.214-218, eng] 45-1341
- Theoretical model of ice accretion on overhead line conductors. Poos, G., et al., [1988, p.219-223, eng] 45-1342
- Model for ice accretion on overhead transmission lines. Skelton, P.L.I., et al., [1988, p.224-226, eng] 45-1343
- Model for transmission line icing. Finstad, K.J., et al., [1988, p.227-231, eng] 45-1344
- Simulation of some rime characteristics by using an aggregate model. Personne, P., et al., [1988, p.243-247, eng] 45-1347
- Ice accretion in different types of clouds. Hoffmann, H.E., [1988, p.272-276, eng] 45-1353
- Effect of corona discharge on ice accretion. Teisseyre, Y., et al., [1988, p.310-313, eng] 45-1361
- Ballistic accretion on a point seed. Rambaldi, S., et al., [1988, p.411-414, eng] 45-1381
- Properties and effect of freezing rain and winter fog on outline insulators. Farzaneh, M., et al., [1990, p.33-46, eng] 45-1765
- Physics of supercooling of thin water skins covering gyrating hailstones. List, R., [1990, p.1919-1923, eng] 45-1804
- Relationship of ice cover growth on the Kuybyshev and Gor'kiy reservoirs to temperature anomalies of Atlantic waters. Podsechina, T.V., [1989, p.87-93, rus] 45-2277
- Cable rime accretion measurements on a Laurentian mountain. McComber, P., et al., [1990, p.1022-1032, eng] 45-2443
- Heat transfer under frosting conditions to plain and thick-finned tubes. Al-Sahaf, J., et al., [1991, p.1-17, eng] 45-2566
- Computer model of atmospheric ice accretion on transmission lines. Jones, K.F., et al., [1991, 24p., eng] 45-2641
- Formation, preservation and deterioration of ice-hoarfrost deposits. Guliaev, I.U.N., [1989, p.141-145, rus] 45-2873
- Comments on "Laboratory and wind tunnel evaluations of the Rosemount icing detector". Hill, G.E., [1991, p.305-306, eng] 45-2929
- Modeling of surface roughness effects on glaze ice accretion. Hansman, R.J., Jr., et al., [1991, p.54-60, eng] 45-3235
- Prediction of conductor ice accretion and mitigation of its rotational effects. Skelton, P.L.I., et al., [1990, p.965-980, eng] 45-3400
- Accumulation of ice on slopes of pumped storage plant basins. Shatalina, I.N., et al., [1990, p.442-448, eng] 45-3597
- Numerical modelling of mixed snow and sea spray icing. Horjen, L., [1990, p.945-960, eng] 45-3643
- Study on ice accretion. Imai, I., [1986, p.68-87, eng] 45-3707
- Icing on overhead electric transmission lines. Oguchi, H., [1986, p.88-101, eng] 45-3708
- Review of important literature on ice accretion. Imai, I., [1986, p.491-496, eng] 45-3732
- Study of ice accretion in water. [1986, p.497-500, eng] 45-3733
- Comparative study of icing rates in the White Mountains of New Hampshire. Govoni, J.W., [1990, 5p., eng] 45-3745
- See *also*: Ice growth; Icing rate
- Ice acoustics**  
Ice acoustics from BHQ on Law Dome. Zhang, J., et al., [1988, p.132-140, chi] 45-42
- Arctic acoustics ultrasonic modeling studies. Chamuel, J.R., [1990, 136p., eng] 45-822
- Sea-ice thickness measurement using an electromagnetic sounding system. Kovaca, A., et al., [1990, p.1327-1337, eng] 45-837
- Influence of environmental conditions on acoustical properties of sea ice. Jezek, K.C., et al., [1990, p.1903-1912, eng] 45-838
- Observations of wave/ice interactions and ambient noise generation in the Marginal Ice Zone. Rottier, P., [1989, 36 leaves, eng] 45-965
- Acoustic emission generated by moving loads on sea ice: preliminary results. Langhorne, P.J., et al., [1990, p.337-342, eng] 45-1623
- Sea ice noise-generating processes. Pritchard, R.S., [1990, p.2830-2842, eng] 45-2291
- Observation and inversion of seismo-acoustic waves in a complex arctic ice environment. Miller, B.E., et al., [1991, p.1668-1685, eng] 45-2666
- Ice Technology for Polar Operations: proceedings of the 2nd international conference. [1990, 426p., eng] 45-2717
- Examination of ice deformation by acoustic emission measurement. Rist, M.A., et al., [1990, p.91-102, eng] 45-2724
- Acoustical radiation from thermally stressed sea ice. Xie, Y., et al., [1991, p.2215-2231, eng] 45-3380
- Ice adhesion**  
Effectiveness of deicing chemicals in reducing ice adhesion to nonskid surfaces. Lever, J.H., et al., [1989, p.297-307, eng] 45-543
- Study of adhesion and friction of fluoroplast coating in contact with ice. Igoshin, V.A., et al., [1989, p.83-87, eng] 45-664
- Laboratory test for measurement of adhesion strength of spray ice to coated flat plates. Mulherin, N.D., et al., [1990, 44p., eng] 45-976
- Adhesive peel strength of artificial ice. Scavuzzo, R.J., et al., [1988, p.167-169, eng] 45-1332
- Determining bending moments. Matakovich, D.G., et al., [1988, p.140-146, rus] 45-1517
- Determining loads from adhered ice on a support column system. Shkhinik, K.N., et al., [1987, p.76-80, rus] 45-1566
- Frost heave forces on H and pipe piles embedded in Fairbanks silt. Johnson, J.B., et al., [1988, 83p., eng] 45-1649
- Experimental study of adfreeze heaving of augered caisson footings. Iordanescu, M., et al., [1991, p.152-163, eng] 45-2330
- Friction and cohesion in ice rubble reviewed. Ettema, R., et al., [1991, p.316-325, eng] 45-2343
- Evaluation of an impact test for measuring ice adhesion strength. Anderson, L.O., et al., [1991, p.215-220, eng] 45-3172
- Measuring the effectiveness of deicing fluids for reducing ice adhesion to rough surfaces. Lever, J.H., et al., [1991, p.221-227, eng] 45-3173
- Mechanical properties of sea ice and adfreeze strength of sea ice and subsea soil. Sadovskii, A.V., et al., [1990, p.417-426, eng] 45-3595

## Ice age

See *also*: Pleistocene

## Ice age theory

- Dynamics of the Pleistocene climate: observation and theory. Maasch, K.A., [1989, 159p., eng] 45-513
- Palynology and glacial theory. Volkova, V.S., [1989, p.40-48, rus] 45-1136

## Ice air interface

- Topoclimatic studies of a high arctic plateau ice cap. Bradley, R.S., et al, [1987, p.149-158, eng] 45-8
- Arctic sea ice and atmospheric circulation. Wendler, G., et al, [1987, p.173-176, eng] 45-12
- Temperature regime and thermal property of Law Dome active layer. Qin, D., et al, [1988, p.84-92, chi] 45-39

- Sea ice and climate in the North Atlantic since the Pliocene. Raymo, M.E., [1989, 182p., eng] 45-504
- Study on the polar ocean and the Sea of Okhotsk. Aota, M., et al, [1989, p.600-612, jpn] 45-625

- Sea ice characteristics and relationship with typhoons and subtropical high. Biaz, L., [1989, p.45-54, chi] 45-684
- Winter atmosphere over sea ice. Kottmeier, C., et al, [1990, p.16,551-16,560, eng] 45-717

- Reaction of sea ice to aerosol pollution of the atmosphere. Savchenko, V.G., et al, [1989, p.85-90, eng] 45-878
- International symposium on Ice and Climate. Glazovskii, A.F., [1989, p.236-246, rus] 45-1070

- Changes in the air temperature field above glaciers. Volkova, M.V., et al, [1990, p.120-130, rus] 45-1114
- Modelling of fall-winter ice phenomena. Petrov, V.M., et al, [1990, p.53-61, rus] 45-1636

- Structure and dynamics of the Arctic Ocean ice cover. Untersteiner, N., [1990, p.37-51, eng] 45-1689
- Turbulent transfer over snow and ice. Morris, E.M., [1989, p.205-223, eng] 45-1809

- Isotopic-oxygen composition of structure-forming ice of the active layer. Mikhalev, D.V., [1989, p.162-169, rus] 45-1837
- Local advection processes in the surface layer of the marginal ice zone. Claussen, M., [1991, p.1-27, eng] 45-2163

- 2-D microscopic simulation of heat and mass transport in dry snow. Christon, M., et al, [1990, p.87-105, eng] 45-2168
- Surface kinetic limitation of ice crystal growth in the stratosphere. Mackenzie, A.R., [1990, p.S259-S262, eng] 45-2218

- Relation between water vapor saturation and temperature. Afinogenov, L.P., [1987, p.129-133, rus] 45-2300
- Analysis of waterbody surface heat exchange. Huang, N.C., et al, [1991, p.326-335, eng] 45-2344

- Interaction of sea ice, snow and glaciers with the atmosphere and ocean. Kotliakov, V.M., ed, [1990, p.155-248, eng] 45-2409
- Application of the theory of dispersion forces to the surface melting of ice. Elbaum, M., et al, [1991, p.1713-1716, eng] 45-2589

- Arctic system science: ocean-atmosphere-ice interactions. Moritz, R.E., ed, [1990, 132p. + appends., eng] 45-2645
- Aerodynamic roughness of different types of sea ice. Guest, P.S., et al, [1991, p.4709-4721, eng] 45-2681

- Growth and decay of ice. Lock, G.S.H., [1990, 434p., eng] 45-3069
- Regularities of spatial-temporal variability of antarctic stationary polynyas. Korotkov, A.I., [1990, p.25-32, rus] 45-3077

- Sea ice spatial-temporal variability and navigation conditions. Romanov, A.A., [1990, p.62-70, rus] 45-3082
- Survey of standards for determination of vapour pressure over ice and water surfaces. Gibbins, C.J., [1990, p.859-885, eng] 45-3104

- Modeling of surface roughness effects on glaze ice accretion. Hansman, R.J., Jr., et al, [1991, p.54-60, eng] 45-3235
- Glacio-climatology of Antarctica. Aver'ianov, V.G., [1990, 198p., rus] 45-3532

- Ice bearing capacity  
See *also*: Ice cover strength
- Ice blasting  
Forming pit reservoirs in permafrost by contour blasting. Tsurik, V.A., et al, [1991, p.34-36, rus] 45-2954

- Case histories of attempts to remove three small ice jams. Doyle, P.F., [1991, p.331-335, eng] 45-3536
- Ice booms  
Study on floating ice booms. Mizuno, Y., [1990, p.305-310, jpn] 45-758

- Ice bottom surface  
Statistical descriptions of keel-related features in the under-ice draft distribution. Key, J., et al, [1989, p.2346-2349, eng] 45-291

- Bottom characteristics of the antarctic ice sheet from radar. Moore, R.K., et al, [1989, p.2727-2729, eng] 45-299
- Apparent coherent energy loss of ice-reflected, high-frequency LFM pulses. Posey, J.W., et al, [1989, p.1240-1245, eng] 45-438

- Studies of sea ice thickness from submarine and aircraft. [1989, 105p., eng] 45-562
- Concurrent remote sensing of arctic sea ice from submarine and aircraft. Wadhams, P., et al, [1989, 20p., eng] 45-563

- Top/bottom multisensor remote sensing of arctic sea ice. Comiso, J.C., et al, [1989, 56p., eng] 45-564
- Arctic acoustics ultrasonic modeling studies. Chamuel, J.R., [1990, 136p., eng] 45-822

- Morphology of a multi-year ice ridge in the High Arctic. Connors, D.N., et al, [1989, p.1123-1128, eng] 45-901
- Evolution of ice cover roughness. Ashton, G.D., et al, [1991, p.294-305, eng] 45-2341

- Modeling the acoustic scattering by under-ice-ridge keels. Rubenstein, D., et al, [1991, p.666-672, eng] 45-2401
- Radio scattering characteristics of the Roi Baudouin ice shelf, East Antarctica. Uratsuka, S., et al, [1990, p.345-351, eng] 45-2743

- Role of large-scale under-ice topography in separating estuary and ocean on an arctic shelf. Macdonald, R.W., et al, [1991, p.37-53, eng] 45-2791
- Ice breaking  
Icebreakers and icebreaking. Jan. 1978-Dec. 1989. (Bibliography). [1990, 104p., eng] 45-82

- Evaluation of a simplified ridge modelling method. Comfort, G., et al, [1990, 2 vols., eng] 45-96
- Considerations in the design and operation of hydro power intakes. Gempeline, E.J., [1990, p.517-556, eng] 45-420

- Bending and compression properties of young sea ice. Lau, P.A., et al, [1989, p.1292-1297, eng] 45-447
- Generation of electromagnetic fields by fracture of the ice cover of marine areas. Kachurin, L.G., et al, [1989, p.815-817, eng] 45-483

- Equations for local ice energy dissipations during ship ramming. Blanchet, D., et al, [1990, p.101-115, eng] 45-494
- Observations of wave/ice interactions and ambient noise generation in the Marginal Ice Zone. Rotter, P., [1989, 36 leaves, eng] 45-965

- Results of comparative model tests with a conceptual hull form and the original R-class icebreaker. Carter, D., [1990, 21p. + appends., eng] 45-1177
- Papers on air cushion technology: icebreaking, cold weather operations, vehicles. Hincney, M.J., ed, [1989, 96p., eng] 45-2100

- Sea ice noise-generating processes. Pritchard, R.S., [1990, p.2830-2842, eng] 45-2291
- Fractal crushing. Palmer, A.C., et al, [1991, p.531-541, eng] 45-2364

- Fracture resistance to cracking in ice: initiation and growth. Dempsey, J.P., et al, [1991, p.579-594, eng] 45-2368
- Laboratory observations of macroscopic failure modes in freshwater ice. Timco, G.W., [1991, p.605-614, eng] 45-2370

- Some questions on fracture mechanics of ice and ice covers. Gol'dshtein, R.V., et al, [1991, p.615-618, eng] 45-2371
- Loads and vibration induced by compressive failure of ice. Jordaan, J.J., et al, [1991, p.638-649, eng] 45-2374

- Directionality of ice cracking events. Zakarauskas, P., et al, [1991, p.722-734, eng] 45-2402
- FE-modelling of ice failure load during ship bow indentation into multi-year ice. Liukkonen, S., et al, [1991, 40p. + appends., eng] 45-2691

- Dynamic forces induced by buckling failure of moving ice. Vinogradov, O.G., et al, [1990, p.49-60, eng] 45-2721
- Chaos in continuous-mode icebreaking. Ettema, R., et al, [1991, p.131-144, eng] 45-3420

- IAHR Symposium on Ice, 10th, 1990. [1990, 3 vols., eng] 45-3562
- Physical modelling of icebreaking ships in fine-grain model ice. Enkvist, E., [1990, p.15-42, eng] 45-3563

- Ship model tests in ice with systematically varied ice parameters. Iives, L., et al, [1990, p.616-626, eng] 45-3612
- Drop impact tests on freshwater ice: spherical head. Timco, G.W., et al, [1990, p.776-787, eng] 45-3628

- Mathematical modelling of icebreaking pattern based on the elastic wave theory. Wang, S.L., et al, [1990, p.811-820, eng] 45-3631
- Numerical simulation of dynamic ice structure interaction. Eranti, E., [1990, p.912-922, eng] 45-3640

- Field tests of ice indentation. Frederking, R., et al, [1990, p.931-944, eng] 45-3642
- Ice sheet penetration by indenter pairs. Parsons, B.L., [1990, p.1031-1043, eng] 45-3651

- See *also*: Ice cutting; Icebreakers
- Ice breakup  
Working group on river ice jams. Field studies and research needs. Beltaos, S., et al, [1990, 121p., eng] 45-97

- Climatic variability and the hydrological cycle in the Canadian North. Lawford, R.G., [1988, p.143-162, eng] 45-520
- Heat and mass balance of an ablating ice jam. Prowse, T.D., [1990, p.629-635, eng] 45-903

- Breaking of sea ice by ocean waves. Allan, A.J., [1975, 12p. + appends., eng] 45-938
- Dividing Kazakhstan according to the development of river ice. Bellinson, M.M., [1989, p.56-61, rus] 45-1035

- Ice deformation and breakup by the water stream from a propeller. Gavrilov, V.P., et al, [1989, p.206-213, rus] 45-1506
- Variability of natural conditions in Alasheyev Bight. Korotkov, A.I., [1990, p.117-133, rus] 45-1563

- Production of Antarctic Bottom Water in the Weddell and Ross Seas. St. Pierre, D.B., [1989, 124p., eng] 45-2071
- Restigouche River Ice Project. Beltaos, S., et al, [1990, p.159-173, eng] 45-2196

- Role of natural flaws in river ice breakup. Demuth, M.N., et al, [1990, p.213-218, eng] 45-2200
- Ice jams and flood control on the Berouinka River. Matoušek, V., [1990, p.699-710, eng] 45-2254

- Effect of river barrages on ice regime. Starosolszky, O., [1990, p.711-718, eng] 45-2255
- Forecasting of ice cover breakup dates and ice removal from reservoirs. Poliakov, K.N., [1989, p.102-108, rus] 45-2279

- Calculating the breakup of ice cover on rivers and reservoirs. Borshch, S.V., et al, [1989, p.113-120, rus] 45-2281
- River ice cover cracking for various boundary conditions. Abdel-Zaher, A.K., et al, [1991, p.363-375, eng] 45-2348

- Strain in shore fast ice due to incoming ocean waves and swell. Fox, C., et al, [1991, p.4531-4547, eng] 45-2670
- Hydrological yearbook 1984-1986. Leppäjärvi, R., ed, [1990, 235p., eng] 45-2845

- Fracture and breakup of river ice cover: discussion and reply. Demuth, M.N., et al, [1991, p.336-339, eng] 45-3537
- Optimum operation of hydro-electric plants during the ice regime of rivers. Foulda, D., ed, [1991, 81p., eng] 45-3542

- Sensitivity of sea ice break-up to air temperatures. Etkin, D.A., [1991, p.21-34, eng] 45-3547
- Variation of upper layer dynamics during breakup of the seasonal ice cover in Hudson Bay. Lepage, S., et al, [1991, p.12,711-12,724, eng] 45-3558

- Ice thermal processes in the mouth areas of the Siberian rivers. Ivanov, V.V., et al, [1990, p.219-230, eng] 45-3578
- Model material for river ice breakup studies. Beltaos, S., et al, [1990, p.575-585, eng] 45-3608

- Impact of dams on the ice regime of rivers. Michel, B., [1990, p.690-696, eng] 45-3619
- Ice jam mitigation on the Torneläven River. Zachrisson, G., [1990, p.845-857, eng] 45-3634

- On the motion of river ice near a breaking front. Ferrick, M.G., et al, [1990, p.201-213, eng] 45-3677
- Ice bridges  
See *also*: Ice crossings

- Ice caps  
See *also*: Ice sheets
- Ice caves  
Problems in geometeorology and the accumulation of winter cold. Koval'chuk, A.I., ed, [1990, 119p., rus] 45-2695

- Formation of ice in caves, abandoned mining excavations, and talus. Martin, V.I., [1990, p.16-17, rus] 45-2697
- Permafrost and ground ice in the Kungur cave. Dorofeev, E.P., [1990, p.18-24, rus] 45-2698

- Temperature anomalies and atmospheric ice in the Ural caves. Ryzhkov, A.F., et al, [1990, p.25-28, rus] 45-2699
- Air temperature, rocks, and ground water in the Kungur cave. Dorofeev, E.P., [1990, p.29-34, rus] 45-2700

- Snow caves. Ezhov, I.U.A., [1990, p.35-37, rus] 45-2701
- Thermal regime of karst caves and tunnels in the Central Volga region. Stankevich, E.F., et al, [1990, p.38-41, rus] 45-2702

- Thermal regime of caves in glaciers in northern Kirgizia. Mikhailov, V.N., [1990, p.68-71, rus] 45-2710
- Modelling the accumulation of winter cold in rocks. Ezhov, I.U.A., [1990, p.79-87, rus] 45-2711

- Natural air conditioning in the Kungur Ice Cave. Vishnevskaya, N.L., et al, [1990, p.104-105, rus] 45-2716
- Ice composition  
Ice crystals on Law Dome. Xie, Z., [1988, p.93-118, chi] 45-40

- Trace elements in BHQ ice core from Law Dome. Zhang, Y., et al, [1988, p.164-172, chi] 45-45
- Composition of particles in firn and ice cores from Greenland. Kumai, M., et al, [1990, p.1-18, eng] 45-194

- Ice core analysis of Svalbard and Severnaya Zemlya ice sheets. Zagorodnov, V.S., et al, [1990, p.19-28, eng] 45-195
- SEM observations of microparticles in antarctic ice cores. Higashi, A., et al, [1990, p.31-53, eng] 45-197

- Geology and geochemistry of Transantarctic Mountains and Ross I. [1989, 321p., chi] 45-208
- 2.5-5.0 micrometer spectra of ice: evidence for H2S and H2O frozen in SO2. Salama, F., et al, [1990, p.66-82, eng] 45-305

- Isotope variations in the temperate glaciers of the Eurasian Arctic. Valkmae, R.A., [1990, p.45-55, eng] 45-373

- Contamination of the global environment as observed in the Arctic. Pacyna, J.M., et al, 1990, p.149-157, eng 45-374
- Ice-core record: climate sensitivity and future greenhouse warming. Lorius, C., et al, 1990, p.139-145, eng 45-377
- Vertical fine structure of particulate matter and nutrients in sea ice of the high Arctic. Smith, R.E.H., et al, 1990, p.1348-1355, eng 45-434
- Variations in mechanical properties within a multi-year ice floe. Tucker, W.B., et al, 1989, p.1287-1291, eng 45-446
- Signals of atmospheric pollution in polar snow and ice. Wolff, E.W., 1990, p.189-205, eng 45-467
- Ice, snow and rain chemistry at the Great Wall Station in summer 1985. Li, H.Z., et al, 1989, p.107-112, chj 45-685
- Change in concentration of petroleum products at low temperatures. Nemirovskaja, I.A., 1989, p.273-280, eng 45-771
- Ice and minerals on Callisto: a reassessment of the reflectance spectra. Roush, T.L., et al, 1990, p.355-382, eng 45-849
- Ice sublimation and rheology: implications for the Martian polar layered deposits. Hofstadter, M.D., et al, 1990, p.352-361, eng 45-895
- Snow and ice electrical conductivity from various glaciers. Kamiyama, K., et al, 1990, p.119-129, eng 45-977
- Seasonal growth bands in pingo ice. Mackay, J.R., 1990, p.1115-1125, eng 45-987
- Oil contamination of antarctic ice. Ventajas, L., et al, 1990, 23p., spa 45-1000
- Heating and melting of small icy satellites by the decay of Al-26. Pralnik, D., et al, 1990, p.281-286, eng 45-1001
- Physical and infrared spectral properties of CO<sub>2</sub> in astrophysical ice analogs. Sandford, S.A., et al, 1990, p.357-372, eng 45-1002
- Anatomy of a freezing lead. Gow, A.J., et al, 1990, p.18,221-18,232, eng 45-1021
- Volume- and surface-binding energies of ice systems containing CO, CO<sub>2</sub>, and H<sub>2</sub>O. Sandford, S.A., et al, 1990, p.188-192, eng 45-1022
- Formation of the chemical composition of ice in Siberia and the Far East. Ivanov, A.V., 1989, p.62-67, rus 45-1036
- Formation conditions of the ice-mineral complex of Ice Mountain. Kuznetsova, T.P., et al, 1989, 172p., rus 45-1116
- Trace element analysis of antarctic ice cores. Boutron, C.F., et al, 1989, p.182-197, eng 45-1472
- Geophysical aspects of ice core drilling in Antarctica. Moore, J.C., 1988, 168p., + appends., eng 45-1518
- Ice-wedge chemistry on Seymour I. Kato, K., et al, 1990, p.181-190, eng 45-1531
- Air-entrapment measurement correction for polar ice sampling. Martinier, P., et al, 1990, p.299-303, eng 45-1540
- O-18 concentrations in sea ice of the Weddell Sea, Antarctica. Lange, M.A., et al, 1990, p.315-323, eng 45-1542
- Modern pollen spectrum from Dye 3, south Greenland ice sheet. Bourgeois, J.C., 1990, p.340-342, eng 45-1544
- Analyzing the mineralization of ice cover on rivers and reservoirs. Ergin, V.P., 1990, p.89-100, rus 45-1624
- Physico-chemical and pollen composition of the Canadian arctic ice cap. Bourgeois, J.C., et al, 1990, p.3/15-3/21, frej 45-1794
- Formation of the chemical composition of meltwater. Ivanov, A.V., 1989, p.67-83, rus 45-1829
- Occurrence of zinc in antarctic ancient ice and recent snow. Boutron, C.F., et al, 1990, p.248-259, eng 45-1847
- Record of the atmospheric methane sink from formaldehyde in polar ice cores. Staffebach, T., et al, 1991, p.603-605, eng 45-1862
- Heat transfer from Atlantic waters to Arctic Ocean sea ice. Moore, R.M., et al, 1990, p.2149-2152, eng 45-1993
- Palaeoenvironmental implications of recent ice-wedge development. Burn, C.R., 1990, p.3-14, eng 45-2230
- Impact of biogenic sulphur on sulphate aerosols at Mawson Station. Prospero, J.M., et al, 1991, p.221-223, eng 45-2264
- Planetary applications of slurry rheology. Kargel, J.S., et al, 1991, p.93-112, eng 45-2288
- Analysis of the principal components of antarctic precipitations. Piccardi, G., et al, 1989, p.701-712, eng 45-2297
- Chemical profiles of polar ice on Earth and Mars. Jones, H.G., 1991, p.43-57, eng 45-2397
- Ice rafting of sedimentary material in the Azov Sea. Aibulatov, N.A., et al, 1991, p.179-187, eng 45-2440
- Chemical composition of soil and ground waters in freezing swamps. Ivanov, A.V., et al, 1989, p.149-154, rus 45-2447
- Comparisons between lakes and seas during the arctic winter. Welch, H., 1991, p.11-23, eng 45-2468
- Antarctic sea ice biota. Garrison, D.L., 1991, p.17-33, eng 45-2621
- Gas release from comets. Nottesco, G., et al, 1991, p.411-413, eng 45-2941
- C-rich micrometeorites on the early Earth and icy planetary bodies. Maurette, M., et al, 1990, p.167-172, eng 45-3014
- Nitric acid transport from stratosphere to troposphere and ice sheet. Iwasaka, Y., et al, 1991, p.12-21, eng 45-3061
- Dielectric profiling in ice core studies. Moore, J., et al, 1991, p.81-92, eng 45-3066
- Organic compounds in antarctic matrices: sea water, particulate, pack and sediments. Desideri, P., et al, 1990, p.63-70, eng 45-3198
- Effect of sea salts on anion distribution in ice core from Fildes Peninsula. Han, M.W., et al, 1990, p.17-23, kor 45-3202
- Dissolved and suspended organic carbon in ice of the arctic basin. Mel'nikov, I.A., 1985, p.86-89, rus 45-3213
- Nutrients and organic matter in the snow and ice cover of the arctic basin. Mel'nikov, I.A., et al, 1985, p.90-93, rus 45-3214
- Fractionating of O-18 in the snow-ice cover of the central Arctic Basin. Mel'nikov, I.A., et al, 1985, p.237-241, rus 45-3241
- Hydrobiological studies in the Arctic Ocean at SP-23 (May-October 1977). Mel'nikov, I.A., et al, 1978, p.378-379, rus 45-3249
- Spatial variability of sea-ice properties in the northwestern Weddell Sea. Eicken, H., et al, 1991, p.10,603-10,615, eng 45-3310
- Core processing, analysis and transportation, JAGE-89. Shoji, H., et al, 1991, p.129-141, jpn 45-3398
- Increase in hydrogen peroxide in Greenland ice since the late 18th century. Sigg, A., et al, 1991, p.557-559, eng 45-3525
- IAHR Symposium on Ice, 10th, 1990, 3 vols., eng 45-3562
- Effect of soil type on the bending strength of alluvium reinforced ice. Weber, L.J., et al, 1990, p.486-499, eng 45-3601
- Process to produce correct density (CD) model ice. Spencer, D.S., et al, 1990, p.745-755, eng 45-3625
- Ice conditions
- Northern hydrology: an overview. Prowse, T.D., 1990, p.1-36, eng 45-212
- LIMEX'87 ice surface characteristics and their effect upon C-band SAR signatures. Drinkwater, M.R., 1989, p.390-393, eng 45-238
- Extraction of sea ice information from SAR imagery. Olauassen, T.I., et al, 1989, p.394-399, eng 45-239
- Ice classification algorithm development using aircraft imagery. Holt, B., et al, 1989, p.751-754, eng 45-244
- Knowledge based system for the interpretation of SAR images of sea ice. McAvoy, J.G., et al, 1989, p.844-847, eng 45-252
- Study on sea ice monitoring using MOS-1/MSR. Cho, K., et al, 1989, p.991-994, eng 45-253
- Evaluation of ice conditions in the Northumberland Strait using C and X band SAR imagery. Dechka, J.A., et al, 1989, p.1142-1146, eng 45-262
- Ice kinematic measurements from aerial photography. Brown, T.G., et al, 1989, p.1148-1151, eng 45-263
- Labrador ice margin experiment LIMEX'89; an overview. Raney, R.K., et al, 1989, p.1517-1519, eng 45-272
- LIMEX'89: active/passive microwave signatures of Newfoundland pack ice. Livingstone, C.E., et al, 1989, p.1524-1527, eng 45-274
- SAR and passive microwave observations of the Odden during MIZEX'87. Sutherland, L.L., et al, 1989, p.1539-1544, eng 45-278
- Helicopter radar simulations from fine resolution airborne SAR imagery. Lowry, R.T., et al, 1989, p.2209-2212, eng 45-289
- Airborne radar characteristics of sea ice types. Jeffries, M.O., et al, 1989, p.2715-2718, eng 45-296
- Noise immunity of towed receiving devices in marine seismic prospecting. Buravtsev, V.I.U., et al, 1988, p.34-42, rus 45-681
- Statistical study on sea ice in the Okhotsk Sea observed by GMS for 10 years. Kano, Y., et al, 1989, p.43-58, eng 45-718
- Preliminary study of an advanced automatic station for marine data acquisition in Antarctica. Gasparoni, F., et al, 1989, p.1646-1651, eng 45-722
- Ice conditions in pools of the dam of the Kolyma hydroelectric station during initial operation. Kozhevnikova, T.E., et al, 1990, p.104-107, eng 45-855
- Atlas of river ice in China. 1990, 141p., eng 45-1264
- Variability of natural conditions in Alasheyev Bight. Korotkov, A.I., 1990, p.117-133, rus 45-1563
- Dynamics of ice conditions in the coastal zone of Antarctica. Korotkov, A.I., et al, 1990, p.126-133, rus 45-1751
- Mapping glacial-nival phenomena and human activity. Osokin, N.I., et al, 1990, p.177-181, rus 45-1758
- Report of the International Ice Patrol in the North Atlantic. 1988, 118p., eng 45-1864
- Computer graphics of the Great Lakes ice cycle. Assel, R.A., et al, 1991, p.331-335, eng 45-1917
- Winter environment of the Ohio River valley. Daly, S.F., et al, 1990, 57p., eng 45-1999
- Lancaster Sound region: a coastal atlas for environmental protection. Dickins, D., et al, 1990, Var. p., eng 45-2103
- Rime and reason. Manningham, D., 1991, p.82-85, eng 45-2179
- Great Lakes winter of 1990. Assel, R.A., et al, 1990, p.143-154, eng 45-2194
- Determining the condition of sea ice in the fall. Bukharov, M.V., et al, 1990, p.175-185, rus 45-2209
- Effect of river barrages on ice regime. Starosolszky, O., 1990, p.711-718, eng 45-2255
- Long range forecasting of ice conditions on non-arctic seas, USSR 1990/91. 1990, 9p., rus 45-2309
- River ice research in China. Sun, Z.C., et al, 1991, p.282-293, eng 45-2340
- Ice conditions on inland waterways. Frankenstein, G.E., et al, 1990, p.61-65, eng 45-2647
- Airborne radar altimeter observations of marginal sea ice. Drinkwater, M.R., 1991, p.4555-4572, eng 45-2672
- Polar ice-breaker caught in active shear ridge. Voelker, R.P., et al, 1990, p.269-281, eng 45-2737
- Ice conditions in the Barents Sea during SIZEZ '88. Sandven, S., et al, 1990, p.309-320, eng 45-2740
- Geophysical sea ice products at the Alaska SAR facility. Holt, B., et al, 1990, p.333-344, eng 45-2742
- Design of a sea ice forecasting system for the Barents Sea. Preller, R., et al, 1990, p.379-393, eng 45-2746
- Operations report Tarsiut Gulf 1982-83. 1984, n.p., eng 45-2855
- Data results, Tarsiut Gulf 1982-83. 1984, 395p., eng 45-2856
- Sea ice observations from the Winter Weddell Gyre Study-'89. Meese, D.A., et al, 1991, 161p., eng 45-2903
- Sea ice distribution and navigation difficulties. Buzuev, A.I.A., et al, 1990, p.20-25, rus 45-3076
- Hydrometeorological information distribution to ships from Bellingshausen Station in 1986. Leont'ev, E.B., 1990, p.32-36, rus 45-3078
- Trafficability study for the Soviet nuclear icebreaker *Rossia* voyage. Wells, D.G., 1991, 60p., + appends., eng 45-3091
- Dynamics of ice conditions in the coastal zone of Antarctica. Korotkov, A.I., et al, 1990, p.261-270, eng 45-3132
- Environmental conditions in the Southern Barents Sea. Kvitrud, A., et al, 1991, p.125-130, eng 45-3159
- Icebergs in the Norwegian Continental Shelf in 1880-1881. Kvitrud, A., et al, 1991, p.131-136, eng 45-3160
- Observations of ship performance and the structure of fast ice channels in the northern Baltic Sea. Veitch, B., et al, 1991, 35p., eng 45-3448
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- Optimum operation of hydro-electric plants during the ice regime of rivers. Foulds, D., ed, 1991, 81p., eng 45-3542
- Ice investigations for the proof of tidal power plant designs. Bernshtein, L.B., et al, 1990, p.136-142, eng 45-3571
- Effects of water transfer on temperature and ice regime. Tesaker, E., 1990, p.474-485, eng 45-3600
- Influence on ice conditions of variations in winter discharge from power plants. Asvall, R.P., 1990, p.554-574, eng 45-3606
- Classification system of winter conditions of small-craft harbor design for the Great Lakes. Wortley, C.A., 1990, p.821-834, eng 45-3632
- Prediction of the horizontal progressions of arctic ice by remote methods. Frankenstein, S., et al, 1990, p.1113-1121, eng 45-3658
- Oil spill in the Gulf of Finland in 1987. Hirvi, J.P., 1990, p.127-141, eng 45-3671
- Experiments on numerical sea ice forecasting in the Bohai Sea. Wu, H.D., et al, 1990, p.173-186, eng 45-3675
- Proceedings of the 2nd Synthetic Aperture Radar Workshop, Jun 1990. Kobrick, M., ed, 1990, 57p., + appends., eng 45-3752
- River and lake ice conditions as determined from AIRSAR imagery. Melloh, R.A., et al, 1990, p.37-42, eng 45-3755
- Interpretation of synthetic aperture radar imagery of snow-covered river ice. Melloh, R.A., et al, 1990, 13p., eng 45-3766
- Interpreting passive and active microwave imagery over snow-covered lakes. Melloh, R.A., et al, 1990, p.259-278, eng 45-3808
- See *also*: Sea ice distribution
- Ice (construction material)
- Antarctica, an ice territory. Rissio Valle, H., 1990, p.11-19, spa 45-53
- Using glacier ice to support mine walls. Fangel, H., 1990, p.720-726, eng 45-173
- Constructing large ice structures. Falco, L.I., 1990, p.104-106, rus 45-1745
- Experimental construction of ice moorings in Antarctica. Klokov, V.D., et al, 1990, p.106-110, rus 45-1746
- Behavior of laboratory-made spray ice in triaxial compression testing. Steel, A., et al, 1990, p.192-204, eng 45-1910

**Ice (construction material) (cont.)**

- Effect of loading rate on the bending strength of alluvium reinforced ice. Weber, L.J., et al, 1991, p.71-84, eng 45-2323
- Flexural strength of sand-reinforced ice. Nixon, W.A., et al, 1991, p.14-27, eng 45-2417
- Ice and snow—construction materials. Renkel, A.F., 1990, p.43-45, rus 45-2432
- Snow and ice—construction materials. Renkel, A.F., 1990, p.50-52, rus 45-2433
- Ice and snow—construction materials. Renkel, A.F., 1991, p.37-39, rus 45-2953
- Conference on offshore mechanics and arctic engineering, 10th, 1991, 1991, 287p., eng 45-3140
- Deformation of a floating drilling platform made of built-up ice. Derradji-Aouat, A., et al, 1991, p.1-8, eng 45-3141
- Comparison between different construction methods of ice islands. Szilder, K., et al, 1991, p.9-15, eng 45-3142
- Spray ice islands for exploration in the Canadian Beaufort Sea. Weaver, J.S., et al, 1991, p.17-22, eng 45-3143
- Technical aspects of ice navigation and port construction in Soviet arctic. Watson, G.G., 1991, p.158-176, eng 45-3332
- Effect of soil type on the bending strength of alluvium reinforced ice. Weber, L.J., et al, 1990, p.486-499, eng 45-3601
- Ice control**
- Passage of ice through hydroelectric structures. Korzhavin, K.N., ed, 1990, 182p., rus 45-28
- Harm of the ice pressure and its prevention measures. Pang, G.L., et al, 1990, p.727-733, eng 45-174
- Ice interaction with a rubble mound breaker: a case study. Macintosh, K.J., 1985, 121p., eng 45-182
- Selecting anti-skid materials applied to ice- and snow-covered roadways. 1990, 135p., eng 45-319
- On-site experimental verification of the air bubble method. Endo, K., et al, 1990, p.287-292, jpn 45-753
- Study on floating ice booms. Mizuno, Y., 1990, p.305-310, jpn 45-758
- Computer simulation of ice control with thermal-bubble plumes—line source configuration. Baddour, R.E., 1990, p.509-513, eng 45-902
- Model study of the Cazenovia Creek ice control structure. Gooch, G.E., et al, 1990, 31p., eng 45-934
- Longitudinal floating structures to control ice jams. Calkins, D.J., 1990, 9p., eng 45-975
- Ice jam mitigation. Belore, H.S., et al, 1990, p.675-685, eng 45-1078
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- Ice jam analysis at Idaho Falls, Snake River, Idaho. Zufelt, J.E., et al, 1990, 18p., eng 45-2035
- Effect of river barrages on ice regime. Starosolszky, O., 1990, p.711-718, eng 45-2255
- Ice engineering for rivers and lakes bibliography. Wortley, C.A., 1990, 158p., eng 45-2311
- River Ice Management (RIM) Program. Carey, K.L., 1991, p.376-385, eng 45-2349
- Designing for control of ice conditions in marinas. Wortley, C.A., 1991, p.386-395, eng 45-2350
- Ice conditions on inland waterways. Frankenstein, G.E., et al, 1990, p.61-65, eng 45-2647
- Frazil ice blockage of intake trash racks. Daly, S.F., 1991, 12p., eng 45-2921
- Danube ice floods during the last millenary. Déri, J., 1989, p.151-158, hun 45-3102
- Investigation of trash rack heating to prevent frazil ice freezeup. Daly, S.F., et al, 1990, p.584-595, eng 45-3609
- Ice clearance using air-lifted propeller streams. Jarvi, A., 1990, p.627-638, eng 45-3613
- Study on ice control at fishing harbor by air-bubble method. Mizuno, Y., et al, 1990, p.697-708, eng 45-3620
- See also:** Ice prevention
- Ice cores**
- Stratigraphy of shallow snow core in Wilkes Land. Qin, D., 1988, p.22-59, chi 45-36
- Ice acoustics from BHQ on Law Dome. Zhang, J., et al, 1988, p.132-140, chi 45-42
- Structure, stratigraphy and bubble properties in ice core from Law Dome. Han, J.K., et al, 1988, p.153-163, chi 45-44
- Ice core analysis. Shoji, H., 1990, p.99-112, jpn 45-113
- Deep ice core drilling project in Greenland. Proenza, L.M., et al, 1990, p.171-177, eng 45-131
- Composition of particles in firm and ice cores from Greenland. Kumai, M., et al, 1990, p.1-18, eng 45-194
- Ice core analysis of Svalbard and Severnaya Zemlya ice sheets. Zagorodnov, V.S., et al, 1990, p.19-28, eng 45-195
- SEM observations of microparticles in antarctic ice cores. Higashi, A., et al, 1990, p.31-53, eng 45-197

- Geology and geochemistry of Transantarctic Mountains and Ross I. 1989, 321p., chi 45-208
- Ice-core record: climate sensitivity and future greenhouse warming. Lorius, C., et al, 1990, p.139-145, eng 45-377
- Analysis of Norman Wells core samples. Final report. Patterson, D.E., et al, 1987, 60p. + appends., eng 45-384
- Polar ice core and palaeo-environment. Fujii, Y., 1989, p.535-561, jpn 45-622
- Soviet-French cooperation in isotopic research of ice cores. Lorius, C., et al, 1990, p.287-289, eng 45-724
- Ice sheet volume in Queen Maud Land during cold stages. Hermichen, W.D., et al, 1990, p.301-306, eng 45-726
- Development of ice crystal anisotropy in shear and comparisons of flow properties. Gao, X., et al, 1989, p.32-40, eng 45-1006
- Crystal orientation fabrics from two ice cores. Jacka, T.H., et al, 1989, p.41-52, eng 45-1007
- Snow firn surface structure on Law Dome. Han, J.K., et al, 1989, p.53-63, eng 45-1008
- Stratification of ice cores from Spitsbergen. Valkmae, R.A., et al, 1989, p.97-103, rus 45-1042
- Reconstructing the Holocene climate from ice core studies. Kotliakov, V.M., et al, 1989, p.103-108, rus 45-1043
- Ice core investigations on the slope of the antarctic ice sheet. Petrov, V.N., et al, 1989, p.108-116, rus 45-1044
- International symposium on Ice and Climate. Glazovskii, A.F., 1989, p.236-246, rus 45-1070
- Trends '90: a compendium of data on global change. Boden, T.A., et al, 1990, 257p. + appends., eng 45-1089
- Climatic implications of microparticles in an antarctic coastal ice core. Yao, T.D., et al, 1990, p.1102-1109, eng 45-1144
- Cooperative climatological-glaciological program in the Antarctic Peninsula. Thompson, L.G., et al, 1990, p.69-70, eng 45-1156
- Identification of annual layers in superimposed ice from Storöyjakulen in northeastern Svalbard. Jonsson, S., et al, 1990, p.41-54, eng 45-1187
- 104-m oxygen-isotope record at J-9 on Ross Ice Shelf. Grootes, P.M., et al, 1990, p.93-96, eng 45-1395
- Ice core drilling. 1989, 205p., eng 45-1446
- New methods in ice core processing. Stauffer, B., et al, 1989, p.151-157, eng 45-1468
- Trace element analysis of antarctic ice cores. Boutron, C.F., et al, 1989, p.182-197, eng 45-1472
- Geophysical aspects of ice core drilling in Antarctica. Moore, J.C., 1988, 168p. + appends., eng 45-1518
- Boudinage: a source of stratigraphic disturbance in glacial ice in central Greenland. Cunningham, J., et al, 1990, p.269-272, eng 45-1536
- Comments on "6000-year climate records in an ice core from the Høghetta ice dome in northern Spitsbergen". Dowdeswell, J.A., et al, 1990, p.353-356, eng 45-1549
- Glaciological investigations of the Amery Ice Shelf in 1987-1989. Ratkovskii, I.U.V., et al, 1990, p.114, rus 45-1748
- Recovery and dating of carbon dioxide in polar ice cores. Wilson, A.T., et al, 1989, p.579-584, eng 45-1845
- Cl-36 profile in Greenland ice from AD 1265 to 1865. Conard, N.J., et al, 1989, p.585-591, eng 45-1846
- Occurrence of zinc in antarctic ancient ice and recent snow. Boutron, C.F., et al, 1990, p.248-259, eng 45-1847
- Record of the atmospheric methane sink from formaldehyde in polar ice cores. Staffelbach, T., et al, 1991, p.603-605, eng 45-1862
- Decline of Pb-210 fallout on Greenland in the last century. Nijampurkar, V.N., et al, 1990, p.100-102, eng 45-1905
- 400 years isotope record of the Antarctic Peninsula climate. Aristarain, A.J., et al, 1990, p.2369-2372, eng 45-1990
- Ice core record of oceanic emissions of dimethylsulphide. Legrand, M., et al, 1991, p.144-146, eng 45-2019
- Impact of biogenic sulphur on sulphate aerosols at Mawson Station. Prospero, J.M., et al, 1991, p.221-223, eng 45-2264
- Deuterium excess in recent antarctic snow. Petit, J.R., et al, 1991, p.5113-5122, eng 45-2283
- Re-examination of CO<sub>2</sub>-climate relationship as deduced from Vostok ice core. Barnola, J.M., et al, 1991, p.83-90, eng 45-2586
- CO<sub>2</sub> measurements from polar ice cores: more data from different sites. Staffelbach, T., et al, 1991, p.91-96, eng 45-2587
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- Chemical and glaciological studies. Corr, H., 1990, p.87-89, eng 45-2835
- Saharan dust deposition over Mont Blanc (French Alps) during the last 30 years. De Angelis, M., et al, 1991, p.61-75, eng 45-3020
- Proceedings of the NIPR Symposium on Polar Meteorology and Glaciology, No.4. Kawaguchi, S., ed, 1991, 143p., eng 45-3060
- Dielectric profiling in ice core studies. Moore, J., et al, 1991, p.81-92, eng 45-3066

- Effect of sea salts on anion distribution in ice core from Fildes Peninsula. Han, M.W., et al, 1990, p.17-23, kor 45-3202
- Ice cores and SeaRISE. Alley, R.B., 1991, p.111-130, eng 45-3282
- Core processing, analysis and transportation. JAGE-89. Shoji, H., et al, 1991, p.129-141, jpn 45-3398
- Increase in hydrogen peroxide in Greenland ice since the late 18th century. Sigg, A., et al, 1991, p.557-559, eng 45-3525
- Scientific plan for deep ice drilling on Law Dome. Etheridge, L.M., 1990, 41p., eng 45-3533
- Volcanic ash from the 1362 A.D. Oraefajokull eruption (Iceland) in the Greenland Ice Sheet. Palais, J.M., et al, 1991, p.1241-1244, eng 45-3762
- Ice coring drills**
- Ice coring devices. Proenza, L.M., et al, 1990, p.555-564, eng 45-158
- Soviet experience of deep drilling in Antarctic. Kudrashov, B.B., 1989, p.113-122, eng 45-338
- Ice core drilling. 1989, 205p., eng 45-1446
- German ice core drilling since 1981. Bässler, K.H., et al, 1989, p.3-5, eng 45-1447
- Refinements of the UCPH shallow drill. Gundestrup, N.S., et al, 1989, p.6-13, eng 45-1448
- Performance of the UCPH shallow and hand augers. Clausen, H.B., et al, 1989, p.14-20, eng 45-1449
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- Ice coring and sampling at high altitudes. Koci, B.R., 1989, p.24-27, eng 45-1451
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- Electromechanical drilling in dry holes to medium depths. Schwander, J., et al, 1989, p.32-37, eng 45-1453
- Ice drilling instrumentation. Hancock, W.H., et al, 1989, p.38-50, eng 45-1454
- Hole liquids. Gundestrup, N.S., 1989, p.51-53, eng 45-1455
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- Ice core drilling at Law Dome in 1987. Etheridge, D.M., et al, 1989, p.86-96, eng 45-1461
- Antifreeze-thermodrilling of cores in arctic sheet glaciers. Zagorodnov, V.S., 1989, p.97-109, eng 45-1462
- Drilling with ethanol-based antifreeze in Antarctica. Morev, V.A., et al, 1989, p.110-113, eng 45-1463
- Evaluation of hot water drills. Bässler, K.H., et al, 1989, p.116-122, eng 45-1464
- Medium depth cores. Rado, C., 1990, p.3/28-3/30, frej 45-1796
- Development of the JARE deep ice coring system. Fujii, Y., et al, 1990, p.303-345, jpn 45-2595
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- Laboratory investigations of mixing processes under simulated ice cover. Loose, F., 1990, p.324-336, eng 45-3587
- Frazil ice problems at Stornorffors water power plant in the Ume River. Sahlberg, J., 1990, p.427-441, eng 45-3596
- Calculation of water level in a river reach with frazil ice jam. Sun, Z.C., et al, 1990, p.756-765, eng 45-3626
- Investigation of manoeuvring qualities of ships in ice conditions. Tronin, V.A., et al, 1990, p.788-799, eng 45-3629
- Influence of ice cover on transverse bed slopes in a curved alluvial channel. Tsai, W.F., et al, 1990, p.800-810, eng 45-3630
- Way of preventing structures from damage due to ice pressure. Ao, B.J., et al, 1990, p.858-863, eng 45-3635
- Measurements of flow velocity under the ice cover. Yamaguchi, H., et al, 1990, p.1155-1170, eng 45-3662
- Ice cover and flow in reservoirs. Bagidska, M., et al, 1990, p.99-111, eng 45-3669
- Isdammen: the public water supply in Longyearbyen. Björnson, B., 1990, p.1-8, eng 45-3777
- Change in hydrological cycle in cold region corresponding to greenhouse warming. Higuchi, K., 1990, p.47-49, eng 45-3781
- Brine-induced advection of dissolved aromatic hydrocarbons to arctic bottom waters. Payne, J.R., et al, 1991, p.940-951, eng 45-3818
- Sea ice response to global climatic change. Hibler, W.D., III, 1990, p.125-150, eng 45-3822
- Commentary on sea ice feedback. Moritz, R.E., 1991, p.151-163, eng 45-3823
- Ice cover strength**
- Ice/structure interaction tests with ice containing flaws. Timco, G.W., 1987, p.186-194, eng 45-14
- Methods of ice design for offshore structures. Foroughi, A.R., 1990, p.405-427, eng 45-147
- Ice propeller interaction forces. Keinonen, A.J., et al, 1990, 2 vols., eng 45-185
- Preliminary observations of Labrador Sea marginal ice zone rheology using C-band SAR. Drinkwater, M.R., et al, 1989, p.1138-1141, eng 45-261
- Ice forces on flat, vertical indentors pushed through floating ice sheets. Nakazawa, N., et al, 1990, 62p., eng 45-937
- Measurements of strain in sea ice during FRAM 3. Williams, R.G., et al, 1989, 7p. + appends., eng 45-950
- Ice jam mitigation. Belore, H.S., et al, 1990, p.675-685, eng 45-1078
- Transform equations of long flexural-gravity waves in an ice-covered sea. Iakovlev, V.V., 1990, p.107-113, rus 45-1121
- Cylindrical flexural-gravity waves in an ice-covered sea. Tschenko, V.A., et al, 1990, p.114-120, rus 45-1122
- Creep and strength of ice cover subjected to loads and dies. Aleksandrov, V.M., et al, 1989, p.174-187, rus 45-1504
- Numerical investigation of border ice failure. Abdel-Zaher, A.K., 1990, p.13-25, eng 45-2183
- Role of natural flaws in river ice breakup. Demuth, M.N., et al, 1990, p.213-218, eng 45-2200
- Dynamic transport of river ice. Shen, H.T., et al, 1990, p.659-671, eng 45-2251
- Ice forces on structures. Gerwick, B.C., Jr., 1990, p.1263-1301, eng 45-2392
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- Ramming icebreaking performance of the USCG polar class icebreakers. Minnick, P.V., et al, 1990, p.283-294, eng 45-2738
- Multi-year ice strength testing program. Bawden, W., et al, 1983, n.p., eng 45-2852
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- On the shear strength of geophysical scale ice rubble. Hopkins, M.A., et al, 1991, p.201-212, eng 45-3425
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- Ship model tests in ice with systematically varied ice parameters. Ilves, L., et al, 1990, p.616-626, eng 45-3612
- Ice cover strength decay using borehole indenter. Sinha, N.K., 1990, p.735-744, eng 45-3624
- Drop impact tests on freshwater ice: spherical head. Timco, G.W., et al, 1990, p.776-787, eng 45-3628
- Small scale field indentation tests on first year sea ice. Chin, S.N., et al, 1990, p.878-889, eng 45-3637
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- Ice sheet penetration by indenter pairs. Parsons, B.L., 1990, p.1031-1043, eng 45-3651
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- Low-velocity rigid sphere vertical impact on a floating ice sheet. Zhao, Z.G., et al, 1990, p.301-312, eng 45-3684
- See (also): Ice strength**
- Ice cover thickness**
- Ice propeller interaction forces. Keinonen, A.J., et al, 1990, 2 vols., eng 45-185
- Estimation of the thickness of undeformed first year ice using radar backscatter. Soulia, E.D., et al, 1989, p.2366-2369, eng 45-295
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- Sea ice and climate. Zakharov, V.F., [1990, p.75-99, eng] **45-3540**
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- Helicopterborne remote sensing of antarctic sea ice. Granberg, H.B., et al, [1990, p.313-325, eng] **45-3685**
- See *also*: Glacier thickness
- Ice cracks**
- Ice/structure interaction tests with ice containing flaws. Timco, G.W., [1987, p.186-194, eng] **45-14**
- Mechanics of creep brittle materials, I. Cocks, A.C.F., ed, [1989, 309p., eng] **45-514**
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- Model for the creep of ice including the effects of microcracking. Cocks, A.C.F., [1989, p.213-229, eng] **45-519**
- Ice forces on flat, vertical indentors pushed through floating ice sheets. Nakazawa, N., et al, [1990, 62p., eng] **45-937**
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- Tensile strength of cracked ice by E.M. Schulson, S.G. Hoxie, W.A. Nixon. Parsons, B.L., [1991, p.221-222, eng] **45-3428**
- Crack growth stability in S2 ice. DeFranco, S.J., et al, [1990, p.168-181, eng] **45-3574**
- Continuum damage modelling of polycrystalline ice. Sjöland, S.G., [1990, p.449-463, eng] **45-3598**
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- Crystallography of impacted ice. Jones, S.J., et al, [1990, p.652-660, eng] **45-3615**
- Ice force calculation with the creep damage and cracking model of ice. Pulkkinen, E., [1990, p.159-171, eng] **45-3674**
- Ice creep**
- Compression-annealing experiments for ice. Huang, M., et al, [1988, p.141-152, chi] **45-43**
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- Mechanics of creep brittle materials, I. Cocks, A.C.F., ed, [1989, 309p., eng] **45-514**
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- Thermodynamics of ice creep. Ivanov, A.I., [1990, p.165-169, rus] **45-1756**
- Studies of polycrystalline ice creep. Ivanov, A.I., [1990, p.184-188, rus] **45-1760**
- AVHRR imagery reveals antarctic ice dynamics. Bindschadler, R.A., et al, [1990, p.741-742, eng] **45-2238**
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- Tensile strength of cracked ice by E.M. Schulson, S.G. Hoxie, W.A. Nixon. Parsons, B.L., [1991, p.221-222, eng] **45-3428**
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- Ice force calculation with the creep damage and cracking model of ice. Pulkkinen, E., [1990, p.159-171, eng] **45-3674**
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- Ice crystal nuclei**
- Theory of ice crystal nucleation on substrates. Gorbunov, B.Z., [1991, p.564-570, eng] **45-2564**
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- Ice crystal optics**
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- Scattering of cloud-reflected radar echoes. Ajvazian, H.M., [1991, p.945-978, eng] **45-3887**
- Ice crystal replicas**
- Ice crystal patterns of extracellular macromolecules in artificial gels. Allenspach, A.L., et al, [1989, p.170-179, eng] **45-2968**
- Ice crystal size**
- Growth rate of snow crystals in Wilkes Land. Qin, D., et al, [1988, p.75-83, chi] **45-38**
- Ice crystals on Law Dome. Xie, Z., [1988, p.93-118, chi] **45-40**
- Effects of numbers, sizes and crystal structures on measurements of ice hydrometeors. Berthel, R.O., [1990, 21p., eng] **45-824**
- Observations on falling motion of natural ice crystals. Ferrari, A., et al, [1989, p.137-146, ita] **45-991**
- Snow and ice cover physical characteristics at Law Dome. Xie, Z., et al, [1989, p.8-22, eng] **45-1004**
- Effect of grain size variation on damage in polycrystalline ice. Wu, M.S., et al, [1991, p.542-553, eng] **45-2365**
- Ice crystal structure**
- Ice crystals on Law Dome. Xie, Z., [1988, p.93-118, chi] **45-40**
- BHQ borehole ice core structure on Law Dome. Li, J., et al, [1988, p.119-131, chi] **45-41**
- Backscattering from frost on icy satellites. Verbiscer, A.J., et al, [1990, p.162-164, eng] **45-378**
- Mechanism of habit change for atmospheric ice crystal growth. Lu, Q.J., [1989, 153p., eng] **45-479**
- Structure of water. Eagland, D., [1990, p.548-552, fre] **45-963**
- Development of ice crystal anisotropy in shear and comparisons of flow properties. Gao, X., et al, [1989, p.32-40, eng] **45-1006**
- Crystal orientation fabrics from two ice cores. Jacka, T.H., et al, [1989, p.41-52, eng] **45-1007**
- Snow firm surface structure on Law Dome. Han, J.K., et al, [1989, p.53-63, eng] **45-1008**
- Oriented growth of ice crystals in moving water streams. Cherepanov, N.V., et al, [1989, p.144-153, rus] **45-1501**
- Study on space-oriented crystal structures of arctic sea ice. Strakhov, M.V., [1989, p.154-166, rus] **45-1502**
- Feature extraction from two-dimensional images using fractal analysis. Baumgardner, D., [1991, p.J85-J87, eng] **45-1599**
- Studies of polycrystalline ice creep. Ivanov, A.I., [1990, p.184-188, rus] **45-1760**
- Behavior of single ice crystals due to dislocation. Brown, R.L., [1991, p.483-493, eng] **45-2360**
- Visco-elasticity and the compressive failure of polycrystalline ice. Duval, P., et al, [1991, p.494-503, eng] **45-2361**
- Anelastic straining in polycrystalline ice. Cole, D.M., [1991, p.504-518, eng] **45-2362**
- Microstructure and mechanical behaviour of ice. Sinha, N.K., [1991, p.519-530, eng] **45-2363**
- Effect of grain size variation on damage in polycrystalline ice. Wu, M.S., et al, [1991, p.542-553, eng] **45-2365**

**Ice crystal structure (cont.)**

- Ice crystal patterns of extracellular macromolecules in artificial gels. Allenspach, A.L., et al, 1989, p.170-179, eng 45-2968
- Crystallography of impacted ice. Jones, S.J., et al, 1990, p.652-660, eng 45-3615
- Ice crystals**
- Compression-annealing experiments for ice. Huang, M., et al, 1988, p.141-152, chj 45-43
- Structure, stratigraphy and bubble properties in ice core from Law Dome. Han, J.K., et al, 1988, p.153-163, chj 45-44
- Sea ice physical properties near Casey Station. Allison, I., et al, 1988, p.214-233, chj 45-49
- Data processing of depolarization due to rain and ice crystals. van de Kamp, M.M.J.L., 1989, 92p., eng 45-85
- Influence of grain size on compressive strength of polycrystalline ice. Cannon, N.P., 1985, 75p., eng 45-183
- Incident of clear air precipitation. Fisher, G.W., et al, 1989, p.155-159, eng 45-472
- Model of a convective cloud with the microstructure of water and ice phases. Kogteva, E.A., et al, 1989, p.41-55, rus 45-490
- Bending of a conifer branch at subfreezing temperatures: implications for snow interception. Schmidt, R.A., et al, 1990, p.1250-1253, eng 45-589
- Lidar observations of the horizontal orientation of ice crystals in cirrus clouds. Thomas, L., et al, 1990, p.211-216, eng 45-1384
- Examination of dislocations in ice. Final report. Baker, I., et al, 1991, 8p., eng 45-2141
- Experimental study of the production of ice crystals by a twin-turboprop aircraft. Kelly, R.D., et al, 1991, p.217-226, eng 45-2554
- Permafrost and ground ice in the Kungur cave. Dorofeev, E.P., 1990, p.18-24, rus 45-2698
- Examination of ice deformation by acoustic emission measurement. Rist, M.A., et al, 1990, p.91-102, eng 45-2724
- On the ductile to brittle transition in ice under compression: physical processes. Schulson, E.M., 1990, p.103-114, eng 45-2725
- Prediction of depolarisation distributions on earth-space paths. Fukuchi, H., 1990, p.325-330, eng 45-2763
- Algorithm to estimate the heating budget from vertical hydrometeor profiles. Tao, W.K., et al, 1990, p.1232-1244, eng 45-2985
- Microphysical and radiative characteristics of convective clouds during COHMEX. Fulton, R., et al, 1991, p.98-116, eng 45-3016
- Aircraft-produced ice particles in a highly supercooled altocumulus cloud. Sassen, K., 1991, p.765-775, eng 45-3209
- Rheological model of polycrystalline ice. Ivchenko, A.B., 1990, p.230-237, eng 45-3579
- Continuum damage modelling of polycrystalline ice. Sjöland, S.G., 1990, p.449-463, eng 45-3598
- Ice cutting**
- Ice removal using a rotating working device. Sabatauskene, V.A., et al, 1989, p.403-408, eng 45-2927
- Ice dams**
- Formation and failure of natural dams. Costa, J.E., et al, 1987, 39p., eng 45-530
- Ice floes and glacier-dammed lakes of Altai during the Pleistocene. Rudolf, A.N., 1990, p.43-52, rus 45-704
- Ice-dammed lake drainage mechanisms in Greenland. Russell, A.J., et al, 1988, p.143-147, eng 45-1094
- Simulation of flood waves from outburst of glacier-dammed lake. Fernández, P.C., et al, 1991, p.42-53, eng 45-1655
- Ice dating**
- Isotopic analyses from BHQ ice core on Law Dome. Jiang, G., et al, 1988, p.173-178, chj 45-46
- First discovery of fossil ice of 1000-1700 year B.P. in Japan. Yoshida, M., et al, 1990, p.258-259, eng 45-70
- Scientists discover problems using Chernobyl fallout for dating the Greenland ice sheet. Dibb, J.E., 1989, p.8-9, eng 45-959
- On determining ice accumulation rates in the past 40,000 years using *in situ* cosmogenic C-14. Lal, D., et al, 1990, p.1303-1306, eng 45-994
- Using CO2 samples in determining the absolute age of ice sequences. Zemtsov, A.A., et al, 1989, p.122-126, rus 45-1046
- Ice age comparison of Yamato K-26, Allan Hills and Lewis Cliff. Fireman, E.L., 1990, p.47-48, eng 45-1082
- Identification of annual layers in superimposed ice from Storöyökulen in northeastern Svalbard. Jonsson, S., et al, 1990, p.41-54, eng 45-1187
- Late Quaternary history of the Ross Sea from debris on the McMurdo Ice Shelf. Kellogg, T.B., et al, 1990, p.25-56, eng 45-1686
- Dating snow accumulation on glaciers by Chernobyl fallout. Pourchet, M., et al, 1990, p.3/22-3/27, frej 45-1795
- CI-36 profile in Greenland ice from AD 1265 to 1865. Conard, N.J., et al, 1989, p.585-591, eng 45-1486

- Borehole gas sampler operation control and methods of gas sampling in ice sheets. Zemtsov, A.A., et al, 1990, p.73-79, rus 45-2489
- Ice deformation**
- Elastic and rheological properties of sea ice and its texture. Hellmann, H., 1990, 99p., ger 45-79
- Sea ice drift and deformation in the western Arctic. Pease, C.H., et al, 1989, p.1276-1281, eng 45-444
- Model for the creep of ice including the effects of microcracking. Cocks, A.C.F., 1989, p.213-229, eng 45-519
- Electro-expulsive ice removal application to vertical launch system hatch and to personnel access hatch. Embry, G.D., et al, 1989, p.307-325, eng 45-544
- Creep and strength of ice cover subjected to loads and dies. Aleksandrov, V.M., et al, 1989, p.174-187, rus 45-1504
- Ice deformation and breakup by the water stream from a propeller. Gavrilov, V.P., et al, 1989, p.206-213, rus 45-1506
- Ice deformation by a ship-raising pontoon. Gavrilov, V.P., et al, 1989, p.238-243, rus 45-1509
- Boudinage: a source of stratigraphic disturbance in glacial ice in central Greenland. Cunningham, J., et al, 1990, p.269-272, eng 45-1536
- Flow laws for glacier ice: comparison of numerical predictions and field measurements. Van der Veen, C.J., et al, 1990, p.324-339, eng 45-1543
- On the constitutive modeling of transient creep in polycrystalline ice. Shyam Sunder, S., et al, 1990, p.267-294, eng 45-1618
- Finite element studies of the electro impulse de-icing systems. Scavuzzo, R.J., et al, 1990, p.757-763, eng 45-1676
- Ice physics. Petrenko, V.F., 1990, p.3-8, rus 45-1728
- Characteristics of the total drift of compacted ice in a coastal zone. Truskov, P.A., et al, 1990, p.110-114, rus 45-1747
- Thermodynamics of ice creep. Ivanov, A.I., 1990, p.165-169, rus 45-1756
- Studies of polycrystalline ice creep. Ivanov, A.I., 1990, p.184-188, rus 45-1760
- Push and tidal deformation of drifting ice. Legen'kov, A.P., 1988, 104p., rus 45-1861
- Examination of dislocations in ice. Final report. Baker, I., et al, 1991, 8p., eng 45-2141
- Behavior of single ice crystals due to dislocation. Brown, R.L., 1991, p.483-493, eng 45-2360
- Visco-elasticity and the compressive failure of polycrystalline ice. Duval, P., et al, 1991, p.494-503, eng 45-2361
- Anelastic straining in polycrystalline ice. Cole, D.M., 1991, p.504-518, eng 45-2362
- Fractal crushing. Palmer, A.C., et al, 1991, p.531-541, eng 45-2364
- Effect of grain size variation on damage in polycrystalline ice. Wu, M.S., et al, 1991, p.542-553, eng 45-2365
- Some questions on fracture mechanics of ice and ice covers. Gol'dshtein, R.V., et al, 1991, p.615-618, eng 45-2371
- Examination of ice deformation by acoustic emission measurement. Rist, M.A., et al, 1990, p.91-102, eng 45-2724
- Deformation of a floating drilling platform made of built-up ice. Derradij-Aouat, A., et al, 1991, p.1-8, eng 45-3141
- Field strength values of multi-year ice off Herschel Island. Iyer, S.H., et al, 1991, p.63-70, eng 45-3149
- Late Quaternary glacial-interglacial fluctuation in the Ross Sea. Anderson, J.B., 1991, p.87-100, eng 45-3281
- Observations of short-period ice floe accelerations during leg II of the *Polarbjörn* drift. Martin, S., et al, 1991, p.10,567-10,580, eng 45-3307
- Ice motions forced by boundary layer turbulence. DiMarco, R.L., et al, 1991, p.10,617-10,624, eng 45-3311
- Design of a high-pressure low-temperature triaxial deformation cell for ice. Sammonds, P.R., et al, 1991, p.177-188, eng 45-3423
- Testing system for strain rate control of ice deformation. Rist, M.A., et al, 1991, p.189-200, eng 45-3424
- Brittle to ductile transition during indentation of ice. Gold, L.W., 1991, p.182-190, eng 45-3534
- Deformation of natural ice island ice under constant strain rate uniaxial compression. Jeffries, M.O., et al, 1990, p.238-251, eng 45-3580
- Effect of soil type on the bending strength of alluvium reinforced ice. Weber, L.J., et al, 1990, p.486-499, eng 45-3601
- Steel-ice friction coefficient under high contact pressure. Enoki, K., et al, 1990, p.902-911, eng 45-3639
- Transient creep of an ice sheet lying on a hydraulic base under a concentrated load. Aleksandrov, V.M., et al, 1991, p.793-799, eng 45-3774
- Ice density**
- Density of natural ice accretions. Jones, K.F., 1988, p.114-118, eng 45-1323
- Specific attenuation in the UHF range of sea ice in various regions. Pasyukov, V.V., et al, 1989, p.36-45, rus 45-1487

- Distribution of the volume of air and brine pockets in sea ice. Nazintsev, I.U.L., et al, 1989, p.109-123, rus 45-1498
- Microwave and physical properties of sea ice in the winter MIZ. Tucker, W.B., et al, 1991, p.4573-4587, eng 45-2084
- Effect of density on the trajectory of ice pieces around a ship's hull. Jones, S.J., et al, 1990, p.661-673, eng 45-3616
- Process to produce correct density (CD) model ice. Spencer, D.S., et al, 1990, p.745-755, eng 45-3625
- Ice detection**
- Sea ice classification using synthetic aperture radar. Winebrenner, D.P., et al, 1989, p.34-36, eng 45-228
- Imaging radiometer system for ice navigation. Healy, G., et al, 1989, p.277-280, eng 45-233
- International Ice Patrol Side-Looking Airborne Radar (SLAR) experiment 1988. Osmer, S.R., et al, 1989, p.2193-2196, eng 45-288
- Integrated ice surveillance system for support of offshore oil and gas exploration. Rudkin, P., et al, 1989, p.2229-2231, eng 45-290
- Identification and volume estimation of icebergs by remote sensing in the Barents Sea. Vefsnmo, S., et al, 1989, p.2355-2358, eng 45-293
- Debris/ice/TPS assessment and photographic analysis for Shuttle Mission STS-33R. Stevenson, C.G., et al, 1989, 170p., eng 45-605
- Ice prediction systems prove their worth in winter cost savings. McDonald, A., et al, 1990, p.19-20, eng 45-852
- Functional specifications for second-generation ice navigation system. Final report. Gautier, C., et al, 1990, 100p. + append., eng 45-930
- Detecting and predicting icing conditions on road, bridge, and runway surfaces. Kelley, J.R., et al, 1988, p.394-398, eng 45-1379
- Development of a freezing rain sensor for automated surface observing systems. Starr, K.M., et al, 1991, p.338-343, eng 45-1595
- Report of the International Ice Patrol in the North Atlantic. 1988, 118p., eng 45-1864
- Remote sensor detection of aircraft icing conditions. Stankov, B.B., et al, 1990, 77p., eng 45-1867
- Piezoelectric ice sensor for aviation applications. Floyd, M.D., 1990, p.13-24, eng 45-1924
- Icing condition sensors for building management applications. Jones, T.M., 1990, p.36-38, eng 45-2023
- Ice detector measurements of atmospheric icing on a cable. McComber, P., et al, 1990, p.51-64, eng 45-2186
- Radar monitoring of ice on the upper Niagara River. Crissman, R.D., et al, 1991, p.406-415, eng 45-2352
- Spray and ice measurement instrumentation for ships. Ryerson, C.C., et al, 1991, p.748-757, eng 45-2384
- USACRREL underwater frazil ice detector. Daly, S.F., et al, 1991, p.758-764, eng 45-2385
- Cable rime accretion measurements on a Laurentian mountain. McComber, P., et al, 1990, p.1022-1032, eng 45-2443
- Algorithms to enhance radar image. Kahloun, F., et al, 1991, 47p. + append., eng 45-2840
- Comments on "Laboratory and wind tunnel evaluations of the Rosemount icing detector". Hill, G.E., 1991, p.305-306, eng 45-2929
- Snow and ice detection by a dielectric pavement freezing-detector (DPF). Takeichi, K., et al, 1990, p.319-337, eng 45-3502
- Ice deterioration**
- Atlantic ice massif-cycle and isolation processes. Kozlovskii, A.M., 1990, p.331-339, eng 45-730
- Influence of CO ice on the activity and near-surface differentiation of comet nuclei. Fanale, F.P., et al, 1990, p.403-413, eng 45-897
- Interaction of sea ice, snow, and glaciers with the atmosphere and ocean. Kotliakov, V.M., ed, 1990, 74p., eng 45-1261
- Sea ice concentrations in the Canada Basin during 1988. Serreze, M.C., et al, 1990, p.22,253-22,267, eng 45-1414
- Problems of ice and snow deterioration. Epifanov, V.P., 1990, p.9-12, rus 45-1729
- Electromagnetic emission during snow and ice deterioration. Berri, B.L., 1990, p.13-18, rus 45-1730
- Deterioration of ice and frozen rock monoliths by brines. Laboratornyye issledovaniya razrusheniia i da i ledoproduknykh monolitov rassolami, 1989, p.83-95, rus 45-1830
- Deterioration of freshwater ice due to radiation decay. Prowse, T.D., et al, 1990, p.685-697, eng 45-2253
- Changes in the flexural strength of ice under radiation decay. Prowse, T.D., et al, 1990, p.341-354, eng 45-2531
- Formation, preservation and deterioration of ice-hoarfrost deposits. Guliaev, I.U.N., 1989, p.141-145, rus 45-2873
- Ice cover strength decay using borehole indenter. Sinha, N.K., 1990, p.735-744, eng 45-3624
- Ice distribution**
- See *alseoy*: Ice conditions; Sea ice distribution

- Ice domes**  
See *also*: Pingos
- Ice drills**  
Electrochaude thermal drill for glaciers. Rado, C., et al, [1987, p.236-238, eng] 45-19  
Diamond core drilling through continental ice and permafrost. With, E., [1989, p.107-111, eng] 45-337  
Drilling of ice and rock by means of melting. Litvinenko, V.S., [1989, p.127-131, eng] 45-340  
Mechanized ice augers. Tavrizov, V.M., [1990, p.38-39, rus] 45-742  
Hot water drill for glacier in Greenland. Iken, A., et al, [1989, p.123-136, eng] 45-1465  
Deep hot water drill system with potential for bottom sampling. Koci, B.R., [1989, p.137-139, eng] 45-1466  
Danish contribution to the family of hot-water glacier drills. Olesen, O.B., [1989, p.140-148, eng] 45-1467  
Investigation of ice and rock drilling by melting. Litvinenko, V.S., [1989, p.160-163, eng] 45-1469  
Electrochaude: recent development in borehole drilling. Rado, C., et al, [1989, p.164-168, eng] 45-1470
- Ice edge**  
Hough transform technique for extracting lead features from sea ice imagery. Fetterer, F.M., et al, [1989, p.1125-1128, eng] 45-258  
Ice edge motion during MIZEX'87. Sandven, S., et al, [1989, p.1535-1538, eng] 45-277  
Role of ice properties in wave-ice interaction during LIMEX '1987. Winsor, W.D., et al, [1989, p.2350-2354, eng] 45-292  
KRMS GEOSAT-LIMEX '87 data products. Eppler, D.T., et al, [1988, 42p., eng] 45-561  
Study on the polar ocean and the Sea of Okhotsk. Aota, M., et al, [1989, p.600-612, jpn] 45-625  
Sea ice characteristics and relationship with typhoons and subtropic high. Bian, L., [1989, p.45-54, chi] 45-684  
Quaternary river valley development in the Moscow marginal ice zone. Antonov, S.I., et al, [1989, p.62-67, rus] 45-710  
Statistical study on sea ice in the Okhotsk Sea observed by GMS for 10 years. Kano, Y., et al, [1989, p.43-58, eng] 45-718  
Major features of ice conditions in the Bellingshausen Sea. Evseev, V.V., [1990, p.325-330, eng] 45-729  
Bacterioplankton in marginal ice zone of Weddell Sea. Cota, G.F., et al, [1990, p.1145-1167, eng] 45-882  
East Greenland ice extent 1982-86 and the occurrence of ice edge mesoscale features. Cowan, A.M., et al, [1987, 7p + appends., eng] 45-940  
MIZEX 83 data summary. Squire, V.A., et al, [1983, 154p., eng] 45-942  
Observations of wave/ice interactions and ambient noise generation in the Marginal Ice Zone. Rottier, P., [1989, 36 leaves, eng] 45-965  
Sea ice fluctuations in the western Labrador Sea (1963-1988). Peterson, I.K., et al, [1990, 130p., eng] 45-1287  
Predictions and studies with a one-dimensional ice-ocean model. Riedinger, S.H., et al, [1990, p.1545-1562, eng] 45-1386  
Spring bloom oceanographic interaction at the Bering Sea ice edge zone. Niebauer, H.J., et al, [1990, p.22,229-22,241, eng] 45-1413  
Ice-marginal depositional processes in a polar maritime environment, Vestfold Hills, Antarctica. Fitzsimons, S.J., [1990, p.279-286, eng] 45-1538  
Structure and dynamics of the Pacific ice massif. Krivoshein, V.K., [1990, p.165-174, rus] 45-1565  
Shear flow of sea ice in the marginal ice zone with collision rheology. Leppäranta, M., et al, [1990, p.57-74, eng] 45-1679  
Measurements of SAR backscatter signatures from sea ice. Livingstone, C.E., et al, [1991, p.29-41, eng] 45-1725  
Wave-induced drift force in the marginal ice zone. Masson, D., [1991, p.3-10, eng] 45-1806  
Nitrogen utilization in ice algal communities. Harrison, W.G., et al, [1990, p.275-283, eng] 45-2033  
Radiation budgets in the Fram Strait MIZ. Francis, J.A., et al, [1991, p.218-235, eng] 45-2106  
Outer Continental Shelf Environmental Assessment Program: Final reports of principal investigators, Vol.72. [1990, 634p., eng] 45-2155  
Seasonal ice zone studies. Sandven, S., et al, [1990, p.567-591, eng] 45-2391  
Maximum advance of the Scandinavian ice sheet onto the shelf of the Barents Sea in Valday time. Dunaev, N.N., et al, [1991, p.70-73, eng] 45-2478  
Strain in shore fast ice due to incoming ocean waves and swell. Fox, C., et al, [1991, p.4531-4547, eng] 45-2670  
Phytoplankton response during winter-spring transition in the Fram Strait. Smith, W.O., Jr., et al, [1991, p.4549-4554, eng] 45-2671  
Airborne radar altimeter observations of marginal sea ice. Drinkwater, M.R., [1991, p.4555-4572, eng] 45-2672  
Numerical study of interannual ocean forcing on arctic ice. Fleming, G.H., et al, [1991, p.4589-4603, eng] 45-2673  
Predictions of wave propagation in the marginal ice zone. Liu, A.K., et al, [1991, p.4605-4621, eng] 45-2674
- Coupled ice-ocean model studies. Piacek, S., et al, [1991, p.4631-4650, eng] 45-2676  
Ocean eddy-ocean jet interaction in a marginal ice zone. Smith, D.C., IV, et al, [1991, p.4675-4689, eng] 45-2679  
Aircraft observations of atmospheric flow parallel to the ice edge. Shaw, W.J., et al, [1991, p.4691-4708, eng] 45-2680  
Aerodynamic roughness of different types of sea ice. Guest, P.S., et al, [1991, p.4709-4721, eng] 45-2681  
Thermodynamic model for sea ice advance and retreat. Tang, C.L., [1991, p.4723-4737, eng] 45-2682  
Interannual variability of the spatial distribution of sea ice in the north polar region. Parkinson, C.L., [1991, p.4791-4801, eng] 45-2687  
Observation of wave refraction at an ice edge by synthetic aperture radar. Liu, A.K., et al, [1991, p.4803-4808, eng] 45-2688  
Wave structure in the seas off an ice edge. Squire, V.A., et al, [1990, p.21-32, eng] 45-2719  
Wave energy and floe collisions in marginal ice zones. McKenna, R.F., et al, [1990, p.33-45, eng] 45-2720  
Multi-national, interdisciplinary arctic experiments: planning, logistics and operations coordination. Horn, D.A., [1990, p.65-78, eng] 45-2722  
Model tests of a naval combatant in broken ice fields. Thomas, W.L., III, et al, [1990, p.155-165, eng] 45-2729  
Influence of sea ice on ocean ambient sound. Sagen, H., et al, [1990, p.415-426, eng] 45-2748  
Ice algae in the Davis Strait. Booth, J.A., [1984, p.234-243, eng] 45-3070  
Trophic relationships at high arctic ice edges. Bradstreet, M.S.W., et al, [1982, p.1-12, eng] 45-3072  
Birds, mammals, and fish at the Pond Inlet ice edge. Bradstreet, M.S.W., [1982, p.28-40, eng] 45-3073  
Safety measures for operations on antarctic fast ice. Grigor'ev, I.U.A., et al, [1990, p.44-51, rus] 45-3081  
Mathematical model of ice cover edge dynamics of power plant tail race. Belolipetskiĭ, V.M., et al, [1990, p.78-82, eng] 45-3268  
Ocean feature study using synthetic aperture radar. Ikeda, M., et al, [1991, p.10,593-10,602, eng] 45-3309  
Sea ice distribution in the Soviet arctic. Barnett, D., [1991, p.47-62, eng] 45-3326  
Acoustic propagation in the western Greenland Sea frontal zone. Mellberg, L.E., et al, [1991, p.2144-2156, eng] 45-3379  
Mathematical modelling of icebreaking pattern based on the elastic wave theory. Wang, S.L., et al, [1990, p.811-820, eng] 45-3631
- Ice elasticity**  
Elastic and rheological properties of sea ice and its texture. Hellmann, H., [1990, 99p., ger] 45-79  
Anelastic straining in polycrystalline ice. Cole, D.M., [1991, p.504-518, eng] 45-2362  
Observation and inversion of seismo-acoustic waves in a complex arctic ice environment. Miller, B.E., et al, [1991, p.1668-1685, eng] 45-2666  
Deformation of a floating drilling platform made of built-up ice. Derradji-Aouat, A., et al, [1991, p.1-8, eng] 45-3141  
Nonlinear analysis of stress distribution in an ice floe. Evgin, E., et al, [1991, p.55-62, eng] 45-3148  
Brittle to ductile transition during indentation of ice. Gold, L.W., [1991, p.182-190, eng] 45-3534  
Rheological model of polycrystalline ice. Ivchenko, A.B., [1990, p.230-237, eng] 45-3579
- Ice electrical properties**  
Effect of corona discharge on ice accretion. Teisseyre, Y., et al, [1988, p.310-313, eng] 45-1361  
Electro-physical and physical-mechanical properties of ice. Bogorodskii, V.V., ed, [1989, 256p., rus] 45-1483  
Applying r-f methods to oceanographic and glacial studies. Gavrilov, V.P., [1989, p.7-22, rus] 45-1484  
Electrical parameters of surface layers of shelf and continental glaciers. Bogorodskii, V.V., et al, [1989, p.23-31, rus] 45-1485  
Electro-physical characteristics of hummocks. Pasynkov, V.V., et al, [1989, p.32-35, rus] 45-1486  
Specific attenuation in the UHF range of sea ice in various regions. Pasynkov, V.V., et al, [1989, p.36-45, rus] 45-1487  
Measuring the velocity of electromagnetic wave propagation in a glacier. Sheremet'ev, A.N., [1989, p.59-64, rus] 45-1490  
Electromagnetic emission from dynamic processes in ice. Bogorodskii, V.V., et al, [1990, p.1357-1360, rus] 45-1858  
Dielectric observations of the transformation of single crystals of KOH-doped ice Ih to ice XI. Oguro, M., et al, [1991, p.401-403, eng] 45-1902  
Doped ice relaxation time related to metal ion activity. Abe, H., et al, [1991, p.617-621, eng] 45-2599  
Measurements of the DC resistivity of annual sea ice. Sackinger, W.M., et al, [1990, p.79-89, eng] 45-2723  
Model for the complex permittivity of ice at frequencies below 1 THz. Hufford, G., [1991, p.677-682, eng] 45-3381
- Ice erosion**  
Boulder-paved river channels: a case study of a fluvio-periglacial landform. Davies, D.A., et al, [1990, p.213-231, eng] 45-1389
- Ice evaporation**  
See *also*: Ice sublimation
- Ice floes**  
Spring surface circulation patterns detected using remote sensing of drifting ice floes in Hudson Bay, Canada. Larouche, P., [1989, p.780-782, eng] 45-251  
Automated tracking of arctic ice floes in multitemporal SAR imagery. McConnell, R., et al, [1989, p.1112-1116, eng] 45-255  
Automated analysis of polar satellite imagery. Banfield, J., et al, [1989, p.1117-1120, eng] 45-256  
Object-based feature-tracking algorithms for SAR images of the marginal ice zone. Daida, J., et al, [1989, p.1121-1124, eng] 45-257  
Evaluation of ice conditions in the Northumberland Strait using C and X band SAR imagery. Dechka, J.A., et al, [1989, p.1142-1146, eng] 45-262  
Role of ice properties in wave-ice interaction during LIMEX '1987. Winsor, W.D., et al, [1989, p.2350-2354, eng] 45-292  
Formation and growth of river ice. Santeford, H.S., [1990, p.469-483, eng] 45-418  
Algorithm for determining motion vectors in ice floe images. Manohar, M., et al, [1988, p.343-347, eng] 45-606  
Ice floes and glacier-dammed lakes of Altai during the Pleistocene. Rudolf, A.N., [1990, p.43-52, rus] 45-704  
Morphology of a multi-year ice ridge in the High Arctic. Connors, D.N., et al, [1989, p.1123-1128, eng] 45-901  
Dynamic interaction of ice floes with flexible vertical supports in the sea. Vershinin, S.A., et al, [1989, p.223-237, rus] 45-1508  
Determining bending moments. Maskevich, D.G., et al, [1988, p.140-146, rus] 45-1517  
Ice formations and their distribution functions. Zubakin, G.K., et al, [1989, p.109-116, rus] 45-1628  
Using a Kalman filter for calculating ice drift parameters. Lashov, E.S., et al, [1989, p.99-105, rus] 45-1659  
Shear flow of sea ice in the marginal ice zone with collision rheology. Leppäranta, M., et al, [1990, p.57-74, eng] 45-1679  
Wave-induced drift force in the marginal ice zone. Masson, D., [1991, p.3-10, eng] 45-1806  
Ice design criteria for wide arctic structures. Blanchet, D., [1990, p.701-725, eng] 45-1868  
Scheme of calculating single-layer overthrust of ice onto a shore slope. Kozitskiĭ, I.E., [1990, p.297-299, eng] 45-2164  
Modeling of floating ice sheets. Chilton, D.S., et al, [1991, p.628-637, eng] 45-2373  
Pack ice as a landscape. Griselein, M., [1990, p.27-32, fre] 45-2590  
Ocean eddy-ocean jet interaction in a marginal ice zone. Smith, D.C., IV, et al, [1991, p.4675-4689, eng] 45-2679  
On the numerical simulation of the sea ice ridging process. Hopkins, M.A., et al, [1991, p.4809-4820, eng] 45-2689  
Ice Technology for Polar Operations: proceedings of the 2nd international conference. [1990, 426p., eng] 45-2717  
Wave energy and floe collisions in marginal ice zones. McKenna, R.F., et al, [1990, p.33-45, eng] 45-2720  
Dynamic forces induced by buckling failure of moving ice. Vinogradov, O.G., et al, [1990, p.49-60, eng] 45-2721  
Dynamics, flexural response, and damage of ships in ice. Vaughan, H., et al, [1990, p.133-144, eng] 45-2727  
Interaction of arctic offshore structures with drifting ice islands and thick sea ice floes. Sackinger, W.M., et al, [1990, p.211-228, eng] 45-2733  
Multiyear floe and hummock field survey in the east Beaufort Sea. Hudson, R.D., et al, [1982, 15p. + appends., eng] 45-2851  
C-rich micrometeorites on the early Earth and icy planetary bodies. Maurette, M., et al, [1990, p.167-172, eng] 45-3014  
Nonlinear analysis of stress distribution in an ice floe. Evgin, E., et al, [1991, p.55-62, eng] 45-3148  
Effect of internal waves on sea ice drift. Bruno, M.S., [1991, p.137-141, eng] 45-3161  
Small-scale experiments on splitting of ice floes. Sodhi, D.S., [1991, p.171-175, eng] 45-3166  
Observations of short-period ice floe accelerations during leg II of the Polarbjörn drift. Martin, S., et al, [1991, p.10,567-10,580, eng] 45-3307  
Ice investigations for the proof of tidal power plant designs. Bernshtein, L.B., et al, [1990, p.136-142, eng] 45-3571  
Fractality of sea ice cover. Lensu, M., [1990, p.300-313, eng] 45-3583  
Hydraulic and morphological criteria of ice jamming at channel contractions. Mayer, I., et al, [1990, p.680-689, eng] 45-3618  
Unbalanced ice transportation at ice bar river reach. Ren, Z.W., [1990, p.719-725, eng] 45-3622

- Ice fog**  
Ice-rink roof structures and the "stalagmite" effect. Bloudek, K., (1989, p.151-153, eng) 45-3466
- Ice forecasting**  
Long term ice forecasting potential in East Greenland waters. Zorn, R., et al, (1990, p.300-309, eng) 45-142
- Arctic/cold weather operations symposium, 1989; proceedings, volume 1. (1989, 488p., eng) 45-532
- Meteorological and sea ice forecasts to arctic region military units. Cianflone, R.E., et al, (1989, p.223-243, eng) 45-540
- Topside icing prediction for design and operational support. Zahn, P.B., (1989, p.255-285, eng) 45-541
- Forecasting superstructure icing for Navy combatants. Ryerson, C.C., (1989, p.287-296, eng) 45-542
- On the improvement of warship capability under spray icing conditions. Zakrzewski, W.P., et al, (1989, p.467-477, eng) 45-549
- Users manual for the NASA Lewis ice accretion prediction code (LEWICE). Ruff, G.A., et al, (1990, 231p., eng) 45-598
- Influence of ice accretion physics on the forecasting of aircraft icing conditions. Hansman, R.J., Jr., (1990, p.63-67, eng) 45-602
- Runway and roadway frost: occurrence and prediction by use of an expert system. Takle, E.S., (1990, p.727-734, eng) 45-796
- Ice prediction systems prove their worth in winter cost savings. McDonald, A., et al, (1990, p.19-20, eng) 45-852
- Seasonal Ice Zone Experiment. Sandven, S., (1990, p.26-27, eng) 45-912
- Coupled sea ice model of interannual ice cover. Fleming, G.H., (1989, 224p., eng) 45-1133
- Method for predicting freezing in forced flow. Albert, M.R., et al, (1990, p.9-14, eng) 45-1163
- Probabilistic ice loads on transmission lines. Haldar, A., et al, (1988, p.19-23, eng) 45-1303
- Models of atmospheric icing of ships. Zakrzewski, W.P., et al, (1988, p.202-207, eng) 45-1339
- Computer assisted aircraft icing forecast. Fuchs, W., (1988, p.390-393, eng) 45-1378
- Detecting and predicting icing conditions on road, bridge, and runway surfaces. Kelley, J.R., et al, (1988, p.394-398, eng) 45-1379
- Ice calculations and forecasts in an automated information system. Gudkovich, Z.M., (1990, p.11-17, rus) 45-1632
- Remote sensor detection of aircraft icing conditions. Stankov, B.B., et al, (1990, 77p., eng) 45-1867
- Automated guidance for forecasting conditions conducive to aircraft icing. Schultz, P., et al, (1991, p.492-496, eng) 45-1919
- Aircraft icing as an applied winter storms problem. Politovich, M.K., (1991, p.235-240, eng) 45-1938
- Long-range forecasting of intensive ice drift on the Yenisey River. Efreмова, N.D., (1989, p.82-87, rus) 45-2276
- Zoning of Kazakhstan territory according to dates of river freezeup. Shmarova, I.N., (1989, p.93-102, rus) 45-2278
- Forecasting of ice cover breakup dates and ice removal from reservoirs. Poliakov, K.N., (1989, p.102-108, rus) 45-2279
- Calculating the breakup of ice cover on rivers and reservoirs. Borshch, S.V., et al, (1989, p.113-120, rus) 45-2281
- Appearance of ice on rivers in Siberia and European USSR, 1990. (1990, 3p., rus) 45-2307
- Appearance of ice on rivers in south, southwest, and west European USSR, 1990. (1990, 2p., rus) 45-2308
- Long range forecasting of ice conditions on non-arctic seas, USSR 1990/91. (1990, 9p., rus) 45-2309
- Numerical study of interannual ocean forcing on arctic ice. Fleming, G.H., et al, (1991, p.4589-4603, eng) 45-2673
- Ice Technology for Polar Operations: proceedings of the 2nd international conference. (1990, 426p., eng) 45-2717
- Design of a sea ice forecasting system for the Barents Sea. Preller, R., et al, (1990, p.379-393, eng) 45-2746
- Deployment strategy for satellite tracked drifters to support iceberg drift forecasting. El-Tahan, M., et al, (1990, p.395-411, eng) 45-2747
- Long-range prediction of regional sea ice anomalies in the Arctic. Chapman, W.L., et al, (1991, p.271-288, eng) 45-3236
- Prediction of conductor ice accretion and mitigation of its rotational effects. Skelton, P.L.I., et al, (1990, p.965-980, eng) 45-3400
- Remote monitoring of thermal structure and growth of shore-fast ice off the Labrador coast. Peterson, I., et al, (1991, p.123-130, eng) 45-3419
- Sensitivity of sea ice break-up to air temperatures. Etkin, D.A., (1991, p.21-34, eng) 45-3547
- Method of thermodynamic numerical sea ice forecast in the Bohai Sea. Chen, W.B., et al, (1990, p.143-152, eng) 45-3572
- Frazil ice problems at Stormorffors water power plant in the Ume River. Sahlberg, J., (1990, p.427-441, eng) 45-3596
- Prediction of maximum water stages due to ice jams. Karnovich, V.N., et al, (1990, p.674-679, eng) 45-3617
- Ice jam mitigation on the Tornelven River. Zachrisson, G., (1990, p.845-857, eng) 45-3634
- Prediction of the horizontal progressions of arctic ice by remote methods. Frankenstein, S., et al, (1990, p.1113-1121, eng) 45-3658
- Experiments on numerical sea ice forecasting in the Bohai Sea. Wu, H.D., et al, (1990, p.173-186, eng) 45-3675
- Interpretation of sea ice using NOAA-AVHRR data. Ahlnis, K., et al, (1990, 46p., eng) 45-3850
- Ice formation**  
Efficiency of ice-forming aerosol generators. Kim, N.S., et al, (1989, p.46-59, rus) 45-26
- Effect of halogens on the ice-forming activity of aerosols. Shilin, A.G., et al, (1989, p.59-64, rus) 45-27
- Analysis tools for high and low velocity ice indentation problems. Vivatrat, V., (1987, 119p., eng) 45-87
- Ice load measurements on board MS *Kemira*, winter 1989. Gylde, R., et al, (1989, 66p., eng) 45-93
- Bibliography on ice and fog: detection and warning systems. (1990, 95p., eng) 45-205
- SAR and passive microwave observations of the Odden during MIZEX'87. Sutherland, L.L., et al, (1989, p.1539-1544, eng) 45-278
- Ice balls for air conditioners. Gilmore, V.E., (1990, p.45-46, eng) 45-364
- Phase diagram for ammonia-water mixtures at high pressures: implications for icy satellites. Cynn, H.C., et al, (1989, p.433-441, eng) 45-396
- Formation and growth of lake ice. Nelson, W.G., (1990, p.459-467, eng) 45-417
- Formation and growth of river ice. Santeford, H.S., (1990, p.469-483, eng) 45-418
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- Time-dependent effects on ridge initiation in sea ice leads. Coon, M.D., et al, (1989, p.1298-1303, eng) 45-448
- Research on icing processes in the USSR. Sokolov, B.L., et al, (1989, p.233-251, eng) 45-473
- Effect of cooling rate on freezing temperature of supercooled water. Saito, A., et al, (1990, p.1697-1709, eng) 45-487
- Two-dimensional free drift model for river ice cover formation. Ho, C.F., (1990, 169p., eng) 45-506
- Advanced instrumentation for aircraft icing research. Bachalo, W.D., et al, (1990, 100p., eng) 45-597
- Recent advances in study of water freezing and ice melting problems. Fukusako, S., (1990, p.1-32, jpn) 45-696
- Heat transfer in shells and tubes during ice formation. Saito, A., et al, (1989, p.221-233, jpn) 45-698
- Freezing characteristics of layered air-water flow in a horizontal circular tube. Fukusako, S., et al, (1989, p.47-55, jpn) 45-701
- Double-diffusive underwater ice formation. Krylov, A.D., (1989, p.92-94, rus) 45-736
- Clustering of ice nucleation protein correlates with ice nucleation activity. Mueller, G.M., et al, (1990, p.416-422, eng) 45-820
- SO<sub>2</sub> infrared spectra of clathrate hydrate films. Fleyfel, F., et al, (1990, p.7032-7037, eng) 45-843
- Beryllium oxide: a frost-preventing insulator. Ribbing, C.G., (1990, p.882-884, eng) 45-899
- Studies of naleds and naled processes in the USSR. Sokolov, B.L., et al, (1989, p.3-15, rus) 45-1028
- Characteristics of ice formation on temperate glaciers. Bazhev, A.B., (1989, p.153-162, rus) 45-1052
- Low-mineralized massive ice in marine sediments. Ivanov, A.V., (1989, p.217-219, rus) 45-1065
- Fundamentals of phase change: freezing, melting, and sublimation. Bayazitoglu, Y., ed, (1990, 81p., eng) 45-1161
- Method for predicting freezing in forced flow. Albert, M.R., et al, (1990, p.9-14, eng) 45-1163
- Experimental study of formation and melting of ice about horizontal tubes. Torikoshi, K., et al, (1990, p.57-63, eng) 45-1165
- Forced convective heat transfer with freezing from tandem cylinders. Oosthuizen, P.H., et al, (1990, p.65-73, eng) 45-1166
- Controlling the crystallization of water in closed voids. Kuz'min, G.P., et al, (1990, p.92-95, rus) 45-1204
- Ice formation in water flow around cooled cylinders. Hirata, T., et al, (1990, p.707-713, eng) 45-1263
- Exploratory study of ice nucleation by soot aerosols. DeMott, P.J., (1990, p.1072-1079, eng) 45-1274
- Spearhead-shape ice formation. Brunet, L., et al, (1988, p.248-253, eng) 45-1348
- Thermal stresses induced by water solidification in a cylindrical tube. Lin, S., et al, (1990, p.1079-1082, eng) 45-1390
- Distribution of the volume of air and brine pockets in sea ice. Nazintsev, I.U.L., et al, (1989, p.109-123, rus) 45-1498
- Contact supercooling of water layers and bottom ice formations in the sea. Cherepanov, N.V., et al, (1989, p.124-134, rus) 45-1499
- Passive and active bottom ice formation. Tyshko, K.P., et al, (1989, p.135-143, rus) 45-1500
- Mechanism of frazil ice formation in the Antarctic. Korotkov, A.I., (1990, p.105-116, rus) 45-1562
- Variability of natural conditions in Alasheyev Bight. Korotkov, A.I., (1990, p.117-133, rus) 45-1563
- Large-scale features of ice cover formation in the Weddell gyre region. Bagriantsev, N.V., (1990, p.134-151, rus) 45-1564
- Fall phases of ice phenomena on the Barents Sea. Zubakin, G.K., (1989, p.102-109, rus) 45-1627
- Specific aspects of modelling the evolution of ice cover on arctic seas. Appel, I.L., (1990, p.62-70, rus) 45-1637
- Characteristics of ice processes in seas of the northern European basin. Zubakin, G.K., (1990, p.81-89, rus) 45-1639
- Calculating transfer processes in models of ice cover evolution. Appel, I.L., et al, (1990, p.130-141, rus) 45-1644
- Tube assembly heat exchange with solidification of the heat carrier. Semenov, V.I.U., et al, (1990, p.567-571, eng) 45-1683
- Glaciological investigations of the Amery Ice Shelf in 1987-1989. Raikovskii, I.U.V., et al, (1990, p.114, rus) 45-1748
- Moisture transfer and ice formation in freezing, water-saturated soil. Kazanskii, O.A., (1989, p.3-13, rus) 45-1824
- Formation of airmass and frontal ice-hoar frost deposits (Volga region). Maksimovich, S.N., (1989, p.138-143, rus) 45-1851
- Formation of light frost in the territory of the Turkmen SSR. Tumasova, V.V., (1989, p.143-151, rus) 45-1852
- Influence of iodine vapor on ice-forming activity of aerosols of various substances. Kim, N.S., et al, (1990, p.500-502, eng) 45-1927
- Strongly temperature dependent microphysical processes and winter storms. Stewart, R.E., et al, (1991, p.231-234, eng) 45-1937
- Ice formation in frequently transited navigation channels. Ettema, R., et al, (1990, 110p., eng) 45-1972
- Ice formation in saline soils. Konrad, J.M., (1989, 3 vols., eng) 45-2037
- Snow stratigraphy and ice formation on Nelson Ice Cap. Wang, X., et al, (1990, p.13-21, chi) 45-2169
- Observations on buried glacier ice and massive segregated ice, western arctic coast, Canada. French, H.M., et al, (1990, p.31-43, eng) 45-2232
- Evolution of ice cover roughness. Ashton, G.D., et al, (1991, p.294-305, eng) 45-2341
- Study of clathrate hydrates from vapour-deposited amorphous ice. Hallbrucker, A., et al, (1990, p.3785-3792, eng) 45-2415
- Estimation of supercooling temperature of water. Maliarenko, V.V., (1989, p.26-29, eng) 45-2481
- Determination of ice sublimation and sputtering yields by reflectance measurements. Spinella, F., et al, (1991, p.307-313, eng) 45-2484
- Recurrent infiltration ice on the northern shore of the Sea of Okhotsk. Meshkov, A.P., et al, (1989, p.132-136, rus) 45-2499
- Sea ice: its formation, distribution and properties. Squire, V.A., (1990, p.3-8, eng) 45-2537
- Experimental study of the production of ice crystals by a twin-turboprop aircraft. Kelly, R.D., et al, (1991, p.217-226, eng) 45-2554
- Evidence for stability enhancement of sea ice in the Greenland and Labrador Seas. Marsden, R.F., et al, (1991, p.4783-4789, eng) 45-2686
- Formation of ice in caves, abandoned mining excavations, and talus. Martin, V.L., (1990, p.16-17, rus) 45-2697
- Temperature anomalies and atmospheric ice in the Ural caves. Ryzhkov, A.F., et al, (1990, p.25-28, rus) 45-2699
- Formation, preservation and deterioration of ice-hoar frost deposits. Guliaev, I.U.N., (1989, p.141-145, rus) 45-2873
- Recent insights on the role of cryoprotective agents in vitrification. MacFarlane, D.R., et al, (1990, p.345-358, eng) 45-2961
- Intracellular ice formation during freezing of protoplasts. Pitt, R.E., et al, (1989, p.44-63, eng) 45-2965
- Frost growth parameters in a forced air stream. Ostin, R., et al, (1991, p.1009-1017, eng) 45-3022
- Alkylbenzylidimethylammonium salts as inhibitors for the ice nucleating activity of *Erwinia ananas*. Watanabe, M., et al, (1988, p.201-206, eng) 45-3048
- Texture analysis of radiometric signatures of new sea ice forming in arctic leads. Eppler, D.T., et al, (1991, p.233-241, eng) 45-3189
- Basis for ice formation design. LaFleur, R.S., (1990, p.393-401, eng) 45-3195
- Aircraft-produced ice particles in a highly supercooled altocumulus cloud. Sassen, K., (1991, p.765-775, eng) 45-3209
- Transport equations during ice segregation in a dispersed medium. Horiguchi, K., (1991, p.297-298, eng) 45-3210
- Performance of triangular spine fins under frosting conditions. Kondepudi, S.N., et al, (1988, p.1-7, eng) 45-3215

- Long term Lake Erie and Lake Superior ice cover variations. Assel, R.A., [1990, p.731-748, eng] **45-3238**
- Mathematical model of ice cover edge dynamics of power plant tail race. Belolipetski, V.M., et al, [1990, p.78-82, eng] **45-3268**
- Unsteady heat and mass transfer with phase changes in an insulation slab: frosting effects. Tao, Y.X., et al, [1991, p.1593-1603, eng] **45-3364**
- Mathematical model for river ice processes. Lal, A.M.W., et al, [1991, p.851-867, eng] **45-3382**
- Simplified analysis for cold storage in porous capsules with solidification. Chen, S.L., et al, [1991, p.108-116, eng] **45-3467**
- Ice particle concentrations and precipitation development in small polar maritime cumuloform clouds. Rangno, A.L., et al, [1991, p.207-241, eng] **45-3480**
- Ice formation and ice growth in the River Oulujoki. Forsius, J., [1990, p.183-195, eng] **45-3575**
- Modeling of the ice growth and melting in a lake. Kvon, V.I., et al, [1990, p.279-288, eng] **45-3583**
- River ice cover initiation due to the spreading of border ice. Matoušek, V., [1990, p.352-362, eng] **45-3589**
- Impact of dams on the ice regime of rivers. Michel, B., [1990, p.690-696, eng] **45-3619**
- Winter channel formation in sluiced disposal areas. Pantelev, V.G., et al, [1990, p.709-718, eng] **45-3621**
- Mathematical model for ice processes in river networks. Shen, H.T., et al, [1990, p.726-734, eng] **45-3623**
- Calculation of water level in a river reach with frazil ice jam. Sun, Z.C., et al, [1990, p.756-765, eng] **45-3626**
- Spongy saline ice formation in the vicinity of a stagnation point. Lock, G.S.H., [1990, p.999-1009, eng] **45-3648**
- Heat transfer in reservoirs during ice formation. Ivanov, A.V., [1990, p.143-148, eng] **45-3672**
- Experimental measurements of the effects of frost formation on heat exchanger performance. Emery, A.F., et al, [1990, p.1-7, eng] **45-3865**
- Semi-empirical transient method for modeling frost formation on a flat plate. Sherif, S.A., et al, [1990, p.15-23, eng] **45-3867**
- See *also*: Freezing; Icing; Sea water freezing; Spray freezing
- Ice formation indicators**
- Anomalous radar backscattering from ice particles in a cloud. Aivazian, G.M., [1989, p.51-56, eng] **45-856**
- Formation of ice in caves, abandoned mining excavations, and talus. Martin, V.I., [1990, p.16-17, rus] **45-2697**
- Ice free reaches**
- See *also*: Polynyas
- Ice friction**
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- Problems of ice friction and strength characteristics control. Igoshin, V.A., et al, [1990, p.468-477, eng] **45-151**
- Estimation of icebreaker powering and propulsion. Zahn, P.B., [1989, Var. p., eng] **45-556**
- Effect of fines in sand on friction on ice. Blaisdell, G.L., et al, [1990, 16p. + figs., eng] **45-1970**
- Friction and cohesion in ice rubble reviewed. Ettema, R., et al, [1991, p.316-325, eng] **45-2343**
- Shear cell experiments of snow and ice friction. Casassa, G., et al, [1991, p.3745-3756, eng] **45-2442**
- Estimation of ice worn action on hydraulic structures. Korzhavin, K.N., et al, [1990, p.995-998, eng] **45-3647**
- See *also*: Metal ice friction; Plastics ice friction; Rubber ice friction; Wood ice friction
- Ice gouging**
- See *also*: Ice scoring
- Ice growth**
- Two-dimensional spreading and thickening of afeis. Schohl, G.A., et al, [1990, p.169-178, eng] **45-59**
- Formation and growth of lake ice. Nelson, W.G., [1990, p.459-467, eng] **45-417**
- Formation and growth of river ice. Santeford, H.S., [1990, p.469-483, eng] **45-418**
- Observation of the boundary layer on the top of ice growing from melt. Krasinski, M.J., et al, [1990, p.625-632, eng] **45-614**
- Seasonal growth bands in pingo ice. Mackay, J.R., [1990, p.1115-1125, eng] **45-987**
- Effect of surface ice on solar pond performance. Atkinson, J.F., [1990, p.207-214, eng] **45-1018**
- Anatomy of a freezing lead. Gow, A.J., et al, [1990, p.18,221-18,232, eng] **45-1021**
- Kinetics of changes in configuration of cooled ice bodies in water. Kirov, M.V., et al, [1989, p.219-222, rus] **45-1066**
- Method for predicting freezing in forced flow. Albert, M.R., et al, [1990, p.9-14, eng] **45-1163**
- Growth of icicles. Makkonen, L., [1988, p.236-242, eng] **45-1346**
- Spearhead-shape ice formation. Brunet, L., et al, [1988, p.248-253, eng] **45-1348**
- O-18 concentrations in sea ice of the Weddell Sea, Antarctica. Lange, M.A., et al, [1990, p.315-323, eng] **45-1542**
- Self-organization in freezing soils: from microscopic ice lenses to patterned ground. Hallet, B., [1990, p.842-852, eng] **45-1553**
- Quasi-steady problems in freezing soils: II. Experiment on the steady growth of an ice layer. Takeda, K., et al, [1990, p.225-247, eng] **45-1616**
- On the growth of marine icicles. Chung, K.K., et al, [1990, p.393-408, eng] **45-1681**
- Production of Antarctic Bottom Water in the Weddell and Ross Seas. St. Pierre, D.B., [1989, 124p., eng] **45-2071**
- Growth and deformation of ice wedges. Mackay, J.R., [1990, p.15-29, eng] **45-2231**
- Relationship of ice cover growth on the Kuybyshev and Gor'kiy reservoirs to temperature anomalies of Atlantic waters. Podsechina, T.V., [1989, p.87-93, rus] **45-2277**
- On the numerical simulation of the sea ice ridging process. Hopkins, M.A., et al, [1991, p.4809-4820, eng] **45-2689**
- Role of large-scale under-ice topography in separating estuary and ocean on an arctic shelf. Macdonald, R.W., et al, [1991, p.37-53, eng] **45-2791**
- Water exchange under fast ice in Lützow-Holm Bay. Ohshima, K.I., et al, [1991, p.74-80, eng] **45-3065**
- Growth and decay of ice. Lock, G.S.H., [1990, 434p., eng] **45-3069**
- Comparison between different construction methods of ice islands. Szilder, K., et al, [1991, p.9-15, eng] **45-3142**
- Holographic interferometry experiments on the growth of ice from a horizontal pipe. Spatz, T.L., et al, [1991, p.1847-1859, eng] **45-3365**
- Simulations of continental ice sheet growth over the last glacial-interglacial cycle. Deblonde, G., et al, [1991, p.9189-9215, eng] **45-3413**
- Remote monitoring of thermal structure and growth of shore-fast ice off the Labrador coast. Peterson, I., et al, [1991, p.123-130, eng] **45-3419**
- Sea ice dynamics at Atka Iceport. Kipfstuhl, J., [1991, 88p., ger] **45-3521**
- Ice formation and ice growth in the River Oulujoki. Forsius, J., [1990, p.183-195, eng] **45-3575**
- Origin of spongy ice. Makkonen, L., [1990, p.1022-1030, eng] **45-3650**
- Prediction of the horizontal progressions of arctic ice by remote methods. Frankenstein, S., et al, [1990, p.1113-1121, eng] **45-3658**
- Mathematical description of ice segregation in freezing soils. Nakano, Y., et al, [1990, 14p., eng] **45-3770**
- Antarctic sea ice: a habitat for the foraminifer *Neoglobobulimina pachyderma*. Dieckmann, G.S., et al, [1991, p.182-189, eng] **45-3837**
- See *also*: Ice accretion; Icing rate
- Ice heat flux**
- Ice storages. Saastamoinen, J.J., [1989, 63p., eng] **45-566**
- Remote monitoring of thermal structure and growth of shore-fast ice off the Labrador coast. Peterson, I., et al, [1991, p.123-130, eng] **45-3419**
- Ice II-IX**
- See *also*: High pressure ice
- Ice islands**
- Ice island: a floating platform for valuable geophysical studies in the Arctic Ocean. Hobson, G., [1989, p.9-11, eng] **45-898**
- Activation energy for creep of spray ice. Chandler, N., et al, [1991, p.42-49, eng] **45-2419**
- Interaction of arctic offshore structures with drifting ice islands and thick sea ice floes. Sackinger, W.M., et al, [1990, p.211-228, eng] **45-2733**
- Analysis of ice island dynamics. Lu, M.C., et al, [1990, p.241-256, eng] **45-2735**
- Comparison between different construction methods of ice islands. Szilder, K., et al, [1991, p.9-15, eng] **45-3142**
- Spray ice islands for exploration in the Canadian Beaufort Sea. Weaver, J.S., et al, [1991, p.17-22, eng] **45-3143**
- Ice island simulator. Wang, A.T., et al, [1991, p.29-37, eng] **45-3145**
- Impact probabilities between large ice features and offshore structures. Morrison, T.B., et al, [1991, p.199-206, eng] **45-3170**
- Deformation of natural ice island ice under constant strain rate uniaxial compression. Jeffries, M.O., et al, [1990, p.238-251, eng] **45-3580**
- Rubble-spray ice islands. Gulati, K.C., et al, [1990, p.596-605, eng] **45-3610**
- Canadian Ice Island: environmental studies of the polar margin north of Canada's arctic islands. Mudie, P.J., et al, [1991, p.60-67, eng] **45-3858**
- Ice jams**
- Working group on river ice jams. Field studies and research needs. Beltaos, S., et al, [1990, 121p., eng] **45-97**
- Severe freezing periods and ice jams on the Salmon River. Bilello, M.A., [1990, p.235-244, eng] **45-137**
- Breakup jams. Beltaos, S., [1990, p.485-515, eng] **45-419**
- Calculating ice jam water levels. Buzin, V.A., [1989, p.79-84, eng] **45-662**
- Heat and mass balance of an ablating ice jam. Prowse, T.D., [1990, p.629-635, eng] **45-903**
- Model study of the Cazenovia Creek ice control structure. Gooch, G.E., et al, [1990, 31p., eng] **45-934**
- Longitudinal floating structures to control ice jams. Calkins, D.J., [1990, 9p., eng] **45-975**
- Ice jam mitigation. Belore, H.S., et al, [1990, p.675-685, eng] **45-1078**
- Ice jam analysis at Idaho Falls, Snake River, Idaho. Zufelt, J.E., et al, [1990, 18p., eng] **45-2035**
- Restigouche River Ice Project. Beltaos, S., et al, [1990, p.159-173, eng] **45-2196**
- Dynamic transport of river ice. Shen, H.T., et al, [1990, p.659-671, eng] **45-2251**
- Jam initiation in unobstructed channels: laboratory observations. Ettema, R., [1990, p.673-684, eng] **45-2252**
- Ice jams and flood control on the Berounka River. Matoušek, V., [1990, p.699-710, eng] **45-2254**
- On-line early warning system for ice jams and stoppages on the upper Niagara River. Crissman, R.D., [1990, p.719-736, eng] **45-2256**
- Ice jam configuration: second generation model. Beltaos, S., et al, [1991, p.306-315, eng] **45-2342**
- Particle beam simulation to model ice jamming and ridging. Hopkins, M.A., [1991, p.1274-1278, eng] **45-2829**
- Case histories of attempts to remove three small ice jams. Doyle, P.F., [1991, p.331-335, eng] **45-3536**
- Fracture and breakup of river ice cover: discussion and reply. Demuth, M.N., et al, [1991, p.336-339, eng] **45-3537**
- Model material for river ice breakup studies. Beltaos, S., et al, [1990, p.575-585, eng] **45-3608**
- Forecasting of river water level elevation due to ice jams. Havlik, A., [1990, p.606-615, eng] **45-3611**
- Prediction of maximum water stages due to ice jams. Karnovich, V.N., et al, [1990, p.674-679, eng] **45-3617**
- Hydraulic and morphological criteria of ice jamming at channel constrictions. Mayer, I., et al, [1990, p.680-689, eng] **45-3618**
- Unbalanced ice transportation at ice bar river reach. Ren, Z.W., [1990, p.719-725, eng] **45-3622**
- Calculation of water level in a river reach with frazil ice jam. Sun, Z.C., et al, [1990, p.756-765, eng] **45-3626**
- Ice jam mitigation on the Torneälven River. Zachrisson, G., [1990, p.845-857, eng] **45-3634**
- Stage distribution approach to estimating ice related flooding probabilities. Burn, D.H., [1989, p.953-960, eng] **45-3773**
- Interpreting passive and active microwave imagery over snow-covered lakes. Melloh, R.A., et al, [1990, p.259-278, eng] **45-3808**
- Ice lenses**
- Cryogenic precipitation of calcium carbonate: myth or reality. Van Vliet-Lanoë, B., et al, [1990, p.55-65, fre] **45-971**
- Quasi-steady problems in freezing soils: II. Experiment on the steady growth of an ice layer. Takeda, K., et al, [1990, p.225-247, eng] **45-1616**
- Frost lenses? Sure. But in concrete?. Perenchio, W.F., et al, [1990, p.51-53, eng] **45-2048**
- Frost activity indicators in Italian loess deposits. Cremaschi, M., et al, [1990, p.39-48, eng] **45-2076**
- Apparent hydraulic conductivities associated with thawing, frost-susceptible soils. Egginton, P.A., et al, [1990, p.69-77, eng] **45-2236**
- Ice load**
- Small scale field indentation tests on first year sea ice. Chin, S.N., et al, [1990, p.878-889, eng] **45-3637**
- Ice loads**
- Ice/structure interaction tests with ice containing flaws. Timco, G.W., [1987, p.186-194, eng] **45-14**
- Ice load measurements on board MS *Kemira*, winter 1989. Gylden, R., et al, [1989, 66p., eng] **45-93**
- Polartech conference 1990. [1990, 759p., eng] **45-121**
- Numerical simulation of ship manoeuvring motion in level ice. Lindström, C.A., [1990, p.198-208, eng] **45-134**
- Shutdown procedure for ice threatened floating oil rigs. Di Cocco, N.R., et al, [1990, p.257-269, eng] **45-139**
- Methods of ice design for offshore structures. Foroughi, A.R., [1990, p.405-427, eng] **45-147**
- Recent developments in structural concepts for Arctic Ocean platforms. Gerwick, B.C., Jr., [1990, p.428-441, eng] **45-148**
- Use of steel/concrete composite elements in arctic structures. Gowda, S.S., et al, [1990, p.442-455, eng] **45-149**
- Ice feature influence on wide constructions and islands. Mirzoev, D.A., [1990, p.515-525, eng] **45-155**
- Ice pressure measurements using PVDF-sensors. Muhonen, A., et al, [1990, p.526-538, eng] **45-156**
- Dynamic model of floating ice masses colliding with rigid structures. Piola, S., [1990, p.539-554, eng] **45-157**
- Ice propeller interaction forces. Keinonen, A.J., et al, [1990, 2 vols., eng] **45-185**
- Engineering analysis of ice/propeller interaction data. Summary 300 555p. Laskov, V., et al, [1986, 55p., eng] **45-186**

## Ice loads (cont.)

- Measurement of ice/propeller interaction parameters. Summary. Kirby, K., et al, [1986, 22p., eng] 45-187
- Engineering analysis of ice/propeller interaction data. Laskow, V., et al, [1986, 322p. + appends., eng] 45-188
- Measurement of ice/propeller interaction parameters. Laskow, V., et al, [1986, 156p. + appends., eng] 45-189
- Estimating ice sheet thickness from clay profiles. Schokking, F., [1990, p.305-312, eng] 45-357
- Model test of ice forces. Shi, Q.Z., et al, [1990, p.117-123, chj] 45-453
- Mechanics of creep brittle materials, I. Cocks, A.C.F., ed, [1989, 30p., eng] 45-514
- Ice loading on offshore structures. Mills, M.R., et al, [1989, p.152-167, eng] 45-515
- Ice forces on wide structures. Ponter, A.R.S., et al, [1989, p.168-187, eng] 45-516
- Model for the creep of ice including the effects of microcracking. Cocks, A.C.F., [1989, p.213-229, eng] 45-519
- Ship-ice impact load model correlated with full-scale impact data. St. John, J.W., et al, [1989, p.123-138, eng] 45-536
- Topside icing prediction for design and operational support. Zahn, P.B., [1989, p.255-285, eng] 45-541
- Evaluation of state-of-the-art drilling platform icing models. Brown, R.D., et al, [1989, 80p., eng] 45-654
- Dynamics of the elastic ice sheet. Kajaste-Rudnitski, J., [1990, 60p., eng] 45-827
- Deflection of floating ice in proximity of a slow-moving pressure field. Bukatov, A.E., et al, [1988, p.3-8, rus] 45-875
- Ice forces on flat, vertical indentors pushed through floating ice sheets. Nakazawa, N., et al, [1990, 62p., eng] 45-937
- Dangerous wind velocities and glaze icing in mountainous regions. Podrezov, O.A., [1990, 222p., rus] 45-983
- Wave-driven impact of icebergs with semi-submersible platforms. Lever, J.H., et al, [1990, p.313-322, eng] 45-998
- Reconstruction of the bedrock of Antarctica after deglaciation. Suetova, I.A., et al, [1989, p.127-131, rus] 45-1047
- Probabilistic ice loads on transmission lines. Haldar, A., et al, [1988, p.19-23, eng] 45-1303
- Probability based design approach to climatic loadings in Hungary. Krömer, I., [1988, p.30-33, eng] 45-1305
- Power line icing in Romania. Dragan, G., et al, [1988, p.34-38, eng] 45-1306
- Design and analysis of ice load on power lines in mountainous regions. Murooka, M., et al, [1988, p.65-69, eng] 45-1313
- Icing of transmission lines and telecommunication towers. Fikke, S.M., et al, [1988, p.76-78, eng] 45-1315
- Measurement of overhead power line icing in Czechoslovakia. Popolansky, F., et al, [1988, p.94-98, eng] 45-1319
- Ice depositions on transmission line conductors. Csomor, M., et al, [1988, p.104-108, eng] 45-1321
- Atmospheric-ice loading of power transmission cables: laboratory experiments. Chen, H.C., et al, [1988, p.170-174, eng] 45-1333
- Effect of surface roughness on ice loads during icing. Personne, P., et al, [1988, p.232-235, eng] 45-1345
- Growth of icicles. Makkonen, L., [1988, p.236-242, eng] 45-1346
- Determining the uniaxial compressive strength of sea ice. Zanegin, V.G., [1988, p.48-54, rus] 45-1515
- Determining bending moments. Matskevich, D.G., et al, [1988, p.140-146, rus] 45-1517
- Determining loads from adhered ice on a support column system. Shkhinek, K.N., et al, [1987, p.76-80, rus] 45-1566
- Allowing for ice conditions in designing offshore construction. Truskov, P.A., [1987, p.89-94, rus] 45-1568
- Rating ice-pressure resistant hydraulic structures. Liubimov, V.S., et al, [1987, p.102-107, rus] 45-1570
- Measurement of ice forces on small vessels—phase 3: detailed physical calibration. Final report. Glen, I.F., et al, [1990, 31p. + appends., eng] 45-1648
- Global ice forces and ship response to ice: a second season. Minnick, P.V., et al, [1990, 46p. + appends., eng] 45-1671
- Global ice forces and ship response to ice: analysis of ice ramming forces. Chen, Y.K., et al, [1990, 106p. + appends., eng] 45-1672
- Global ice forces and ship response to ice. Minnick, P.V., et al, [1990, 36p. + appends., eng] 45-1673
- Ice loads and ship response to ice: consolidation report. Daley, C., et al, [1990, 50p. + appends., eng] 45-1677
- Ice loads and ship response to ice: a second season. Daley, C., et al, [1990, 21p. + appends., eng] 45-1678
- Characteristics of the total drift of compacted ice in a coastal zone. Truskov, P.A., et al, [1990, p.110-114, rus] 45-1747
- Design and behavior of composite ice-resisting walls. Adams, P.F., et al, [1988, p.457-479, eng] 45-1816
- Ice design criteria for wide arctic structures. Blanchet, D., [1990, p.701-725, eng] 45-1868
- Design of marine pipelines in seabed vulnerable to ice scour. Palmer, A., [1990, p.167-178, eng] 45-1950
- Influence of burial trench conditions on offshore pipeline stability. Rogers, B.T., [1990, p.303-319, eng] 45-1955
- Ice engineering for rivers and lakes bibliography. Wortley, C.A., [1990, 158p., eng] 45-2311
- Laboratory observations of macroscopic failure modes in freshwater ice. Timco, G.W., [1991, p.605-614, eng] 45-2370
- Loads and vibration induced by compressive failure of ice. Jordaan, I.J., et al, [1991, p.638-649, eng] 45-2374
- Computer model to assess ice risk to offshore structures. Blanchet, D., [1991, p.650-665, eng] 45-2375
- Wang's equation for ice forces from a pressure ridge. Nevel, D.E., [1991, p.666-672, eng] 45-2376
- Ice forces on structures. Gerwick, B.C., Jr., [1990, p.1263-1301, eng] 45-2392
- Allowing for mechanical strength of ice deposits during calculation of overhead line wires. Krymskii, M.M., [1989, p.29-39, eng] 45-2558
- FE-modelling of ice failure load during ship bow indentation into multi-year ice. Liukkonen, S., et al, [1991, 40p. + appends., eng] 45-2691
- Practical scenarios and force determinations for iceberg impact on fixed structures. Gerwick, B.C., Jr., [1990, p.195-210, eng] 45-2732
- Design criteria for arctic offshore production structures. Computer programs. [1984, n.p., eng] 45-2847
- Ice forces on Hans Island. Proposal for 1983. [1983, n.p., eng] 45-2850
- Multi-year ice strength testing program. Bawden, W., et al, [1983, n.p., eng] 45-2852
- Data results, Tarsiut Gulf 1982-83. [1984, 395p., eng] 45-2856
- Instrumentation and equipment, Tarsiut Gulf 1982-83. [1984, 202p., eng] 45-2857
- 1983 Arco ice stress sensor program at Tarsiut Island. Final report. [1984, 77p. + appends., eng] 45-2858
- Gulf of Tarsiut Island Research Program. [1982, 17p. + appends., eng] 45-2859
- 1981/1982 ice rubble model tests. Final report. Wards, R.D., [1983, 363p. + appends., eng] 45-2860
- Ice dependencies Tarsiut Gulf 1982-83. [1984, Var. p., eng] 45-2862
- National Research Council Canada ice measurements at Tarsiut, 1983. Frederking, R., et al, [1984, 22p. + appends., eng] 45-2863
- Conference on offshore mechanics and arctic engineering, 10th, 1991. [1991, 287p., eng] 45-3140
- Deformation of a floating drilling platform made of built-up ice. Derradji-Aouat, A., et al, [1991, p.1-8, eng] 45-3141
- Frequency response of fluid-displacement urethane-button ice pressure panels. Spencer, P.A., [1991, p.71-74, eng] 45-3150
- Environmental conditions in the Southern Barents Sea. Kvitrud, A., et al, [1991, p.125-130, eng] 45-3159
- Brittle compressive failure of freshwater columnar ice under biaxial loading. Smith, T.R., et al, [1991, p.207-214, eng] 45-3171
- Crack opening and propagation in S2 freshwater ice. Weber, L.J., et al, [1991, p.245-252, eng] 45-3176
- Arctic slope protection methods. Leidersdorf, C.B., et al, [1991, p.1687-1701, eng] 45-3256
- Recent performance of linked concrete mat armor under wave and ice impact. Gadd, P.E., et al, [1991, p.2768-2781, eng] 45-3257
- Prediction of conductor ice accretion and mitigation of its rotational effects. Skelton, P.L.I., et al, [1990, p.965-980, eng] 45-3400
- Ship propulsion/ice interaction study; Robert Lemeur versus Jarvsaar comparison. Keinonen, A.J., et al, [1988, 123p., eng] 45-3454
- IAHR Symposium on Ice, 10th, 1990. [1990, 3 vols., eng] 45-3562
- Physical modelling of icebreaking ships in fine-grain model ice. Enkvist, E., [1990, p.15-42, eng] 45-3563
- Ice investigations for the proof of tidal power plant designs. Bernshtein, L.B., et al, [1990, p.136-142, eng] 45-3571
- Thermal response of ice rubble: predictions and observations. Crossdale, K.R., et al, [1990, p.153-167, eng] 45-3573
- Parametric expressions for ice compressive and flexural strength. Hirayama, K., et al, [1990, p.196-209, eng] 45-3576
- Characterization of the behaviour of ice masses in marine environments. Romagnoli, R., et al, [1990, p.405-416, eng] 45-3594
- Accumulation of ice on slopes of pumped storage plant basins. Shatalina, I.N., et al, [1990, p.442-448, eng] 45-3597
- Investigation of manoeuvring qualities of ships in ice conditions. Tronin, V.A., et al, [1990, p.788-799, eng] 45-3629
- Sources of uncertainties in methods of ice design for offshore structures. Foroughi, A.R., [1990, p.923-930, eng] 45-3641
- Stochastic approach to the ice-structure interaction. Kajaste-Rudnitski, J., [1990, p.961-973, eng] 45-3644
- Total ice force on cylindrical structures. Kato, K., [1990, p.977-983, eng] 45-3645
- Problems of ice force evaluation on offshore structures. Khrapatyi, N.G., et al, [1990, p.984-994, eng] 45-3646
- Effect of ice pile-up on the ice force of a conical structure. Mänttinen, M., et al, [1990, p.1010-1021, eng] 45-3649
- Experimental study on local ice pressures acting on structures. Tozawa, S., et al, [1990, p.1044-1055, eng] 45-3652
- Design optimization of jacket platforms for ice infested waters. Wang, L.Y., et al, [1990, p.1056-1070, eng] 45-3653
- Model test investigation of local ice pressure distribution at cylindrical structures. Wessels, E., [1990, p.1084-1096, eng] 45-3655
- Development of ice-oil platform interaction problem in USSR. Vershinin, S.A., [1990, p.59-72, eng] 45-3666
- Investigation of stress of ice cover under changes of temperature. Ivchenko, A.B., [1990, p.149-157, eng] 45-3673
- Ice force calculation with the creep damage and cracking model of ice. Pulkkinen, E., [1990, p.159-171, eng] 45-3674
- Damage and energy flow in the crushed layer during ice loading. McKenna, R.F., et al, [1990, p.231-246, eng] 45-3679
- Ice indentation tests using flexible and rigid indentors. Kärrnä, T., et al, [1990, p.261-275, eng] 45-3681
- Frequency of intermittent ice crushing during indentation tests. Sodhi, D.S., et al, [1990, p.277-289, eng] 45-3682
- Modelling the growth of saline spongy ice on small ship components. Zakrzewski, W.P., et al, [1990, p.291-300, eng] 45-3683
- Low-velocity rigid sphere vertical impact on a floating ice sheet. Zhao, Z.G., et al, [1990, p.301-312, eng] 45-3684
- Ice makers**
- Water-source and ice-maker heat pumps. Aceves-Saborio, S.M., [1989, 213p., eng] 45-507
- Ice-on-coil diurnal ice storage cooling system. Soha, C.W., et al, [1990, 49p., eng] 45-1551
- Development of improved ice-making techniques for storage heat pumps. Stewart, W.E., Jr., et al, [1988, p.419-431, eng] 45-2562
- Refrigeration systems based on short-term storage by means of ice banks. Bisio, G., et al, [1991, p.1-6, eng] 45-3029
- ISTORE—a model to simulate and optimise the operation of ice-storage air-conditioning systems. Musgrove, A.R., [1990, p.199-208, eng] 45-3055
- Experience with a chemically-doped fine-grained model ice. Jalonen, R., et al, [1990, p.639-651, eng] 45-3614
- Process to produce correct density (CD) model ice. Spencer, D.S., et al, [1990, p.745-755, eng] 45-3625
- Ice mechanics**
- Achievements of recent Australian studies in ice mechanics. Jacka, T.H., et al, [1988, p.234-241, chj] 45-50
- Elastic and rheological properties of sea ice and its texture. Hellmann, H., [1990, 99p., ger] 45-79
- Influence of grain size on compressive strength of polycrystalline ice. Cannon, N.P., [1985, 75p., eng] 45-183
- Effect of grain size on the tensile strength of ice at two strain-rates. Lee, R.W., [1985, 114p., eng] 45-492
- Mechanics of creep brittle materials, I. Cocks, A.C.F., ed, [1989, 309p., eng] 45-514
- Ice loading on offshore structures. Mills, M.R., et al, [1989, p.152-167, eng] 45-515
- Ice forces on wide structures. Ponter, A.R.S., et al, [1989, p.168-187, eng] 45-516
- Double torsion test applied to freshwater ice and sea ice. Parsons, B.L., et al, [1989, p.188-200, eng] 45-517
- Ice and steel—a comparison of creep and failure. Sinha, N.K., [1989, p.201-212, eng] 45-518
- Model for the creep of ice including the effects of microcracking. Cocks, A.C.F., [1989, p.213-229, eng] 45-519
- Dynamics of the elastic ice sheet. Kajaste-Rudnitski, J., [1990, 60p., eng] 45-827
- Deflection of floating ice in proximity of a slow-moving pressure field. Bukatov, A.E., et al, [1988, p.3-8, rus] 45-875
- Reaction of sea ice to aerosol pollution of the atmosphere. Savchenko, V.G., et al, [1989, p.85-90, eng] 45-878
- Sea ice modelling: a report on Hibler's dynamic thermodynamic sea ice model. Gray, N., [1989, 61p., eng] 45-1146
- Continued analysis of the ice sheet field data of Siple Coast. Bindschadler, R.A., et al, [1990, p.72-73, eng] 45-1158
- Differences between arctic and antarctic sea ice. Spindler, M., [1990, p.173-186, eng] 45-1267

- Electro-physical and physical-mechanical properties of ice. Bogorodskii, V.V., ed. [1989, 256p., rus] 45-1483
- Distribution of the volume of air and brine pockets in sea ice. Nazimov, I.U.L., et al. [1989, p.109-123, rus] 45-1498
- Creep and strength of ice cover subjected to loads and dies. Aleksandrov, V.M., et al. [1989, p.174-187, rus] 45-1504
- Long waves in an ice cover-fluid system, under ice compression. Gol'dshstein, R.V., et al. [1989, p.188-205, rus] 45-1505
- Ice deformation and breakup by the water stream from a propeller. Gavrilov, V.P., et al. [1989, p.206-213, rus] 45-1506
- Dynamic interaction of ice floes with flexible vertical supports in the sea. Vershinin, S.A., et al. [1989, p.223-237, rus] 45-1508
- Ice deformation by a ship-raising pontoon. Gavrilov, V.P., et al. [1989, p.238-243, rus] 45-1509
- Basic elements of the ice regime of the Barents Sea. Zubakin, G.K., et al. [1989, p.93-102, rus] 45-1626
- Modelling sea ice thermodynamics and dynamics in climate studies. Hibler, W.D., III, [1988, p.509-563, eng] 45-1646
- "Ice rivers" in arctic seas. Benzeman, V.I.U., [1989, p.91-98, rus] 45-1658
- Using a Kalman filter for calculating ice drift parameters. Lashov, E.S., et al. [1989, p.99-105, rus] 45-1659
- Ice physics. Petrenko, V.F., [1990, p.3-8, rus] 45-1728
- Problems of ice and snow deterioration. Epifanov, V.P., [1990, p.9-12, rus] 45-1729
- Thermomechanics of the East Antarctic Ice Sheet. Grigorian, S.S., et al. [1990, p.44-51, rus] 45-1735
- Characteristics of the total drift of compacted ice in a coastal zone. Tolstov, A.A., et al. [1990, p.110-114, rus] 45-1747
- Model tests of the grounding resistance of fresh and consolidated ice rubble. Sayed, M., et al. [1990, p.73-82, eng] 45-1768
- Interaction of a gold chloride complex with the surface of dispersed ice. Fedoseeva, V.I., et al. [1989, p.110-117, rus] 45-1832
- Push and tidal deformation of drifting ice. Legen'kov, A.P., [1988, 104p., rus] 45-1861
- AVHRR imagery reveals antarctic ice dynamics. Bindshadler, R.A., et al. [1990, p.741-742, eng] 45-2238
- Ice engineering for rivers and lakes bibliography. Wortley, C.A., [1990, 158p., eng] 45-2311
- Cold regions engineering. [1991, 790p., eng] 45-2316
- Behavior of single ice crystals due to dislocation. Brown, R.L., [1991, p.483-493, eng] 45-2360
- Visco-elasticity and the compressive failure of polycrystalline ice. Duval, P., et al. [1991, p.494-503, eng] 45-2361
- Anelastic straining in polycrystalline ice. Cole, D.M., [1991, p.504-518, eng] 45-2362
- Microstructure and mechanical behaviour of ice. Sinha, N.K., [1991, p.519-530, eng] 45-2363
- Ductile-brittle transition in ice & size effect. Schulson, E.M., et al. [1991, p.554-568, eng] 45-2366
- Modelling of floating ice sheets. Chilton, D.S., et al. [1991, p.628-637, eng] 45-2373
- Pack ice as a landscape. Griselin, M., [1990, p.27-32, fre] 45-2590
- Wave energy and floe collisions in marginal ice zones. McKenna, R.F., et al. [1990, p.33-45, eng] 45-2720
- Dynamic forces induced by buckling failure of moving ice. Vinogradov, O.G., et al. [1990, p.49-60, eng] 45-2721
- Modelling of ship penetration into a mush ice field. Shih, L.Y., [1991, p.293-300, eng] 45-2987
- Seasonal variability of physical-mechanical characteristics of sea ice. Gavrilov, V.P., et al. [1991, p.53-57, eng] 45-3013
- Conference on offshore mechanics and arctic engineering, 10th, 1991. [1991, 287p., eng] 45-3140
- Energy dissipation thru melting in multi-year sea ice. Gagnon, R.E., et al. [1991, p.157-161, eng] 45-3164
- Design of sealed fluid-filled in situ ice stress sensors. Spencer, P.A., et al. [1991, p.177-185, eng] 45-3167
- Brittle compressive failure of freshwater columnar ice under biaxial loading. Smith, T.R., et al. [1991, p.207-214, eng] 45-3171
- In situ multi-year sea ice strength using NRCC borehole indenter. Sinha, N.K., [1991, p.229-236, eng] 45-3174
- Review of ship-ice interaction mechanics. Daley, C., et al. [1991, 121p., eng] 45-3449
- Recent progress in snow and ice research. Richter-Menge, J.A., et al. [1991, p.218-226, eng] 45-3451
- Fracture and breakup of river ice cover: discussion and reply. Demuth, M.N., et al. [1991, p.336-339, eng] 45-3537
- Behaviour of broken ice as a geomaterial. Wong, T.T., et al. [1991, p.451-457, eng] 45-3539
- IAHR Symposium on Ice, 10th, 1990. [1990, 3 vols., eng] 45-3562
- Studies of the ice dynamics in the Arctic Basin over long-term periods. Appel, I.L., et al. [1990, p.111-123, eng] 45-3569
- Thermal response of ice rubble: predictions and observations. Croasdale, K.R., et al. [1990, p.153-167, eng] 45-3573
- Deformation of natural ice island ice under constant strain rate uniaxial compression. Jeffries, M.O., et al. [1990, p.238-251, eng] 45-3580
- Characterization of the behaviour of ice masses in marine environments. Romagnoli, R., et al. [1990, p.405-416, eng] 45-3594
- Mechanical properties of sea ice and adfreeze strength of sea ice and subsea soil. Sadovskii, A.V., et al. [1990, p.417-426, eng] 45-3595
- Effect of soil type on the bending strength of alluvium reinforced ice. Weber, L.J., et al. [1990, p.486-499, eng] 45-3601
- Experimental observations of shoving and thickening. Zufelt, J.E., [1990, p.500-510, eng] 45-3602
- Electrohydraulic and electrochemical phenomena during hull contact with ice. Androsenko, V., et al. [1990, p.531-541, eng] 45-3604
- Discrete element simulations of river ice transport. Babic, M., et al. [1990, p.564-574, eng] 45-3607
- Report of Working Group on Ice Modelling Materials. Timco, G.W., et al. [1990, p.81-98, eng] 45-3668
- Ice melting**
- Northstar 89 flight deck deicer and hot air wand evaluation on the U.S.S. America (CV66). Rippman, J.A., et al. [1989, p.397-407, eng] 45-547
- Bending of a conifer branch at subfreezing temperatures: implications for snow interception. Schmidt, R.A., et al. [1990, p.1250-1253, eng] 45-589
- Global warming—are we entering the greenhouse century. Schneider, S.H., [1989, 317p. (Pertinent p.162-165 and p.300-302), eng] 45-595
- Recent advances in study of water freezing and ice melting problems. Fukusako, S., [1990, p.1-32, jpn] 45-696
- Free convection heat transfer along a horizontal ice cylinder immersed in seawater. Fukusako, S., et al. [1990, p.57-64, jpn] 45-697
- Inventor of the ice generator. Konopleva, N., [1990, p.8-10, rus] 45-706
- Melting and mixing processes near icebergs and in ice covered regions. Gilmour, P., [1990, 34p., eng] 45-946
- Ice under pressure. Chang, R., et al. [1990, p.789-790, eng] 45-989
- Heating and melting of small icy satellites by the decay of Al-26. Prialnik, D., et al. [1990, p.281-286, eng] 45-1001
- Estimating subsurface melting of an ice layer. Volkov, V.E., et al. [1989, p.138-143, rus] 45-1050
- Production of phreatic explosions in the interaction of lava and ice. Vinogradov, V.N., et al. [1990, p.89-98, eng] 45-1076
- Fundamentals of phase change: freezing, melting, and sublimation. Bayazitoglu, Y., ed. [1990, 81p., eng] 45-1161
- Heat transfer analysis for ice objects melting in air. Janna, W.S., et al. [1990, p.1-8, eng] 45-1162
- Melting heat transfer from a horizontal ice cylinder in saline water. Fukusako, S., et al. [1990, p.15-23, eng] 45-1164
- Experimental study of formation and melting of ice about horizontal tubes. Torikoshi, K., et al. [1990, p.57-63, eng] 45-1165
- Hudson Bay and Ungava Bay ice-melt cycles for the period 1963-1983. Loucks, R.H., et al. [1989, 48p., eng] 45-1280
- Spring bloom oceanographic interaction at the Bering Sea ice edge zone. Niebauer, H.J., et al. [1990, p.22-29, eng] 45-1413
- Ice cover melting in the shallow arctic shelf. Sukhorukov, K.K., [1989, p.214-222, rus] 45-1507
- Quasistationary dimensionless model of arctic ice. Ivanov, B.V., et al. [1990, p.18-31, rus] 45-1633
- Specific aspects of modelling the evolution of ice cover on arctic seas. Appel, I.L., [1990, p.62-70, rus] 45-1637
- Melting rate of fresh ice in sea water and the temperature of the current. Bannov-Baikov, I.U.L., et al. [1989, p.106-113, rus] 45-1660
- Conditions for the occurrence of a melting ice layer in glaciers. Larina, T.B., [1990, p.40-44, rus] 45-1734
- Thermomechanics of the East Antarctic Ice Sheet. Grigorian, S.S., et al. [1990, p.44-51, rus] 45-1735
- Glaciological investigations of the Amery Ice Shelf in 1987-1989. Raikovskii, I.U.V., et al. [1990, p.114, rus] 45-1748
- Measurement of P-T coexistence curve for ice-water mixture. Nordell, B., [1990, p.83-88, eng] 45-1769
- Possible Martian brines: radar observations and models. Zent, A.P., et al. [1990, p.14,531-14,542, eng] 45-1840
- Melting of ice in a porous medium heated from below. Zhang, X., et al. [1991, p.389-405, eng] 45-1872
- Heated effluent effects on ice-covered rivers. Sarraf, S., [1990, p.161-178, eng] 45-1908
- Effect of melting in a Denver snow dump. Marwitz, J., et al. [1991, p.241-244, eng] 45-1939
- Ice-rich diamicton blocks in Quaternary outwash sediments in Austria. Krainer, K., et al. [1990, p.249-254, eng] 45-2027
- Deterioration of freshwater ice due to radiation decay. Prowse, T.D., et al. [1990, p.685-697, eng] 45-2253
- Long range forecasting of ice conditions on non-arctic seas. USSR 1990/91. [1990, 9p., rus] 45-2309
- Water level and ice melting observations on Beaver Lake. Pisiun, A.A., [1990, p.55-64, rus] 45-2570
- Application of the theory of dispersion forces to the surface melting of ice. Elbaum, M., et al. [1991, p.1713-1716, eng] 45-2589
- Salinity stratification below sea ice during melting season. Matsuda, O., et al. [1990, p.357-362, eng] 45-2596
- Thermodynamic model for sea ice advance and retreat. Tang, C.L., [1991, p.4723-4737, eng] 45-2682
- Study of frost melting on a heat pump heat exchanger. Sugawara, M., et al. [1990, p.570-583, eng] 45-2774
- Studies on, and underneath, the ice shelf Fimbulisen. Orheim, O., et al. [1990, p.59-73, eng] 45-2832
- Algorithm to estimate the heating budget from vertical hydrometeor profiles. Tao, W.K., et al. [1990, p.1232-1244, eng] 45-2985
- Fluid mixing during melting. Woods, A.W., [1991, p.1393-1404, eng] 45-3030
- Energy dissipation thru melting in multi-year sea ice. Gagnon, R.E., et al. [1991, p.157-161, eng] 45-3164
- Ice cover melting under turbulent flow conditions. Sarraf, S., et al. [1990, p.313-316, eng] 45-3194
- Fractionating of O-18 in the snow-ice cover of the central Arctic Basin. Mel'nikov, I.A., et al. [1985, p.237-241, rus] 45-3241
- Thermodynamic properties of ice, water, and a mixture of the two at high pressures. Nagornov, O.V., et al. [1990, p.378-385, eng] 45-3254
- Calculations of millimeter wave depolarization due to melting layer and rain. Zhang, W., et al. [1991, p.543-556, eng] 45-3445
- Sea-level changes: consequences for the Southern Hemisphere. Lutjeharms, J.R.E., et al. [1991, p.317-337, eng] 45-3472
- Modeling ice cover evolution in the arctic seas during the melt period. Appel, I.L., [1990, p.97-110, eng] 45-3568
- Potential effects of global warming on the primary productivity of a subalpine lake. Byron, E.R., et al. [1990, p.983-989, eng] 45-3695
- Heat transfer around an ice cylinder melting in saline water. Fukusako, S., et al. [1990, p.35-41, eng] 45-3869
- Ice metal friction**
- See also: Metal ice friction
- Ice microstructure**
- BHQ borehole ice core structure on Law Dome. Li, J., et al. [1988, p.119-131, chi] 45-41
- On the constitutive modeling of transient creep in polycrystalline ice. Shyam Sunder, S., et al. [1990, p.267-294, eng] 45-1618
- Reversed direct-stress testing of ice: initial experimental results and analysis. Cole, D.M., [1990, p.303-321, eng] 45-1620
- Microstructure and mechanical behaviour of ice. Sinha, N.K., [1991, p.519-530, eng] 45-2363
- In situ multi-year sea ice strength using NRCC borehole indenter. Sinha, N.K., [1991, p.229-236, eng] 45-3174
- 3-D transient heat and mass transport in microscopic ice lattices. Christon, M., et al. [1990, p.25-33, eng] 45-3868
- Ice models**
- Potential for basal melting under Summit, Greenland. Firestone, J., et al. [1990, p.163-168, eng] 45-58
- Theoretical determination of the characteristic equation of snow in the pendular regime. Morris, E.M., et al. [1990, p.179-187, eng] 45-60
- Energy balance model to calculate ice sheet ablation. Braithwaite, R.J., et al. [1990, p.222-228, eng] 45-65
- Dynamic coupling of sea ice and water for an ice field. Lepparanta, M., et al. [1990, p.482-495, eng] 45-78
- Evaluation of a simplified ridge modelling method. Comfort, G., et al. [1990, 2 vols., eng] 45-96
- Dynamic model of floating ice masses colliding with rigid structures. Piola, S., [1990, p.539-554, eng] 45-157
- Properties of water clusters and one-dimensional ice. Hagen, D.E., et al. [1990, p.1391-1396, eng] 45-226
- Millimeter wave radiative transfer studies for precipitation measurements. Vivekanandan, J., et al. [1989, p.1910-1913, eng] 45-282
- Estimation of the thickness of undeformed first year ice using radar backscatter. Soulis, E.D., et al. [1989, p.2366-2369, eng] 45-295
- Implications of ice conditions for hydrocarbon production. Hotzel, I.S., [1989, 139p., eng] 45-391
- Development of a comprehensive numerical river ice model. Petryk, S., et al. [1990, p.739-760, eng] 45-426
- Time-dependent effects on ridge initiation in sea ice leads. Coon, M.D., et al. [1989, p.1298-1303, eng] 45-448
- Model test of ice forces. Shi, Q.Z., et al. [1990, p.117-123, chi] 45-453
- Two-dimensional free drift model for river ice cover formation. Ho, C.F., [1990, 169p., eng] 45-506
- Forecasting superstructure icing for Navy combatants. Ryerson, C.C., [1989, p.287-296, eng] 45-542



## Ice models (cont.)

- Evaluation of state-of-the-art drilling platform icing models. Brown, R.D., et al, 1989, 80p., eng 45-654
- Simulation of a century of arctic ice cover variations. Häkkinen, S., et al, 1990, p.15,959-15,969, eng 45-711
- Modern sedimentary dynamics and Quaternary glacial history of Marguerite Bay, Antarctic Peninsula. Kennedy, D.S., 1988, 203p., eng 45-720
- Experiences with a coupled global model. Foreman, S.J., 1989, p.275-288, eng 45-794
- Determination of flexural strength in urea model ice. Borland, S.L., 1990, 9p., eng 45-840
- Model study of the Cazenovia Creek ice control structure. Gooch, G.E., et al, 1990, 31p., eng 45-934
- Heating and melting of small icy satellites by the decay of Al-26. Prainik, D., et al, 1990, p.281-286, eng 45-1001
- Estimating subsurface melting of an ice layer. Volkov, V.E., et al, 1989, p.138-143, rus 45-1050
- Volume and routing of late-glacial runoff from the southern Laurentide Ice Sheet. Teller, J.T., 1990, p.12-23, eng 45-1075
- Microfossil assemblages from Upstream B and ice-stream flow models. Scherer, R.P., 1990, p.54-55, eng 45-1085
- Sea ice modelling: a report on Hibler's dynamic thermodynamic sea ice model. Gray, N., 1989, 61p., eng 45-1146
- Heat transfer analysis for ice objects melting in air. Janna, W.S., et al, 1990, p.1-8, eng 45-1162
- Model calculations of accretion rates and ice thickness from age-depth profiles. Reeh, N., 1990, p.255-271, eng 45-1269
- Predictions and studies with a one-dimensional ice-ocean model. Riedlinger, S.H., et al, 1990, p.1545-1562, eng 45-1386
- Boudinage: a source of stratigraphic disturbance in glacial ice in central Greenland. Cunningham, J., et al, 1990, p.269-272, eng 45-1536
- Analysis of subsour stresses on buried submarine pipelines—Vol.4. Poorooshasb, F., 1990, 168p., eng 45-1559
- On the constitutive modeling of transient creep in polycrystalline ice. Shyam Sunder, S., et al, 1990, p.267-294, eng 45-1618
- Ice topography over subglacial lakes. Shoemaker, E.M., 1990, p.323-329, eng 45-1621
- Some problems in research and applied modelling of ice cover. Doronin, I.U.P., et al, 1990, p.5-10, rus 45-1631
- Quasistationary dimensionless model of arctic ice. Ivanov, B.V., et al, 1990, p.18-31, rus 45-1633
- Modelling of ice drift in the arctic basin. Kolesov, S.A., 1990, p.32-38, rus 45-1634
- Hydrodynamic model of steady-state ice drift. Ponomarev, V.I., 1990, p.39-52, rus 45-1635
- Modelling of fall-winter ice phenomena. Petrov, V.M., et al, 1990, p.53-61, rus 45-1636
- Specific aspects of modelling the evolution of ice cover on arctic seas. Appel, I.L., 1990, p.62-70, rus 45-1637
- Ice cover effects in models of sea level fluctuations and water circulation. Proshutinskiĭ, A.I.U., 1990, p.90-104, rus 45-1640
- Calculating the parameters of ice drift in the Greenland Sea. Zubakin, G.K., 1990, p.105-115, rus 45-1641
- Calculating pressure and drift in unbroken ice cover. Tsarev, V.A., 1990, p.125-129, rus 45-1643
- Calculating transfer processes in models of ice cover evolution. Appel, I.L., et al, 1990, p.130-141, rus 45-1644
- Modelling sea ice thermodynamics and dynamics in climate studies. Hibler, W.D., III, 1988, p.509-563, eng 45-1646
- On the growth of marine iceicles. Chung, K.K., et al, 1990, p.393-408, eng 45-1681
- Ice-ocean interaction on Ronne Ice Shelf, Antarctica. Jenkins, A., et al, 1991, p.791-813, eng 45-1718
- Thermodynamics of ice creep. Ivanov, A.I., 1990, p.165-169, rus 45-1756
- Studies of polycrystalline ice creep. Ivanov, A.I., 1990, p.184-188, rus 45-1760
- 3-D sensitivity model for the antarctic ice sheet. Huybrechts, P., 1990, p.79-92, eng 45-1798
- Model of late Pleistocene ice sheet growth. Deblonde, G., et al, 1990, p.103-110, eng 45-1800
- Evolution of the water regime of Phobos. Fanale, F.P., et al, 1990, p.380-395, eng 45-1921
- Observations of debris transport and discharge on K2 Glacier, West China. Drozdowski, E., 1989, p.31-47, eng 45-1988
- Climatic response to meridional sea-ice transport. T.S., 1991, p.147-163, eng 45-2105
- Radiation budgets in the Fram Strait MIZ. Francis, J.A., et al, 1991, p.218-235, eng 45-2106
- Mass and energy transport in sublimating cometary ice cracks. Kömle, N.I., et al, 1991, p.73-84, eng 45-2287
- Ice jam configuration: second generation model. Beltaos, S., et al, 1991, p.306-315, eng 45-2342
- Conceptual model for vertical frazil distribution in turbulent flows. Liou, C.P., et al, 1991, p.336-347, eng 45-2345
- Two-dimensional surface drift model for river ice. Shen, H.T., et al, 1991, p.355-362, eng 45-2347
- Modeling of floating ice sheets. Chilton, D.S., et al, 1991, p.628-637, eng 45-2373
- Flow model of Ross Ice Shelf and climatic warming. Lingle, C.S., et al, 1991, p.6849-6871, eng 45-2504
- Modelling of glacial transport of tills. Puranen, R., 1990, p.15-34, eng 45-2543
- Predictions of wave propagation in the marginal ice zone. Liu, A.K., et al, 1991, p.4605-4621, eng 45-2674
- Wind-induced mesoscale features in a coupled ice-ocean system. Ikeda, M., 1991, p.4623-4629, eng 45-2675
- Coupled ice-ocean model studies. Piasek, S., et al, 1991, p.4631-4650, eng 45-2676
- Thermodynamic model for sea ice advance and retreat. Tang, C.L., 1991, p.4723-4737, eng 45-2682
- On the numerical simulation of the sea ice ridging process. Hopkins, M.A., et al, 1991, p.4809-4820, eng 45-2689
- Design of a sea ice forecasting system for the Barents Sea. Preller, R., et al, 1990, p.379-393, eng 45-2746
- Model of the thermal conductivity of porous water ice at low gas pressures. Steiner, G., et al, 1991, p.507-513, eng 45-2793
- Predictability of seasonal ice cover variations in the southern ocean. Romanov, A.A., et al, 1990, p.82-86, rus 45-3083
- Model ice ridge forces on a downward breaking cone. Lau, M., et al, 1991, p.163-170, eng 45-3165
- Modeling of surface roughness effects on glaze ice accretion. Hansman, R.J., Jr., et al, 1991, p.54-60, eng 45-3235
- Long term Lake Erie and Lake Superior ice cover variations. Assel, R.A., 1990, p.731-748, eng 45-3238
- Dynamics of arctic ice in seasonal energy balance model of the climate with regional resolution. Kolomeev, M.P., et al, 1990, p.22-27, eng 45-3269
- Bio-optical model of antarctic sea ice. Arrigo, K.R., et al, 1991, p.10,581-10,592, eng 45-3308
- Ice motions forced by boundary layer turbulence. DiMarco, R.L., et al, 1991, p.10,617-10,624, eng 45-3311
- Equilibrium ice sheet profile in the Shirase Glacier drainage basin. Fujita, S., et al, 1991, p.12-29, eng 45-3392
- Simulations of continental ice sheet growth over the last glacial-interglacial cycle. Deblonde, G., et al, 1991, p.9189-9215, eng 45-3413
- Numerical modelling of ice shelf dynamics. Determann, J., 1991, p.187-195, eng 45-3459
- Numerical simulations for determining ice shelf flow. Determann, J., 1991, 82p., ger 45-3522
- IAHR Symposium on Ice, 10th, 1990. 1990, 3 vols., eng 45-3562
- Physical modelling of icebreaking ships in fine-grain model ice. Enkvist, E., 1990, p.15-42, eng 45-3563
- Method of thermodynamic numerical sea ice forecast in the Bohai Sea. Chen, W.B., et al, 1990, p.143-152, eng 45-3572
- Thermal response of ice rubble: predictions and observations. Croasdale, K.R., et al, 1990, p.153-167, eng 45-3573
- Ice formation and ice growth in the River Oulujoki. Forsius, J., 1990, p.183-195, eng 45-3575
- Ice cover simulation for arctic estuary. Ivanov, V.V., et al, 1990, p.210-218, eng 45-3577
- River frazil ice: a simplified theoretical model. Kolodko, J., 1990, p.252-260, eng 45-3581
- Summer sea ice simulation in the East Greenland area. Lu, Q.M., et al, 1990, p.337-351, eng 45-3588
- Frazil ice problems at Stornorrfors water power plant in the Ume River. Sahlborg, J., 1990, p.427-441, eng 45-3596
- Continuum damage modelling of polycrystalline ice. Sjöland, S.G., 1990, p.449-463, eng 45-3598
- Experimental observations of shoving and thickening. Zufelt, J.E., 1990, p.500-510, eng 45-3602
- Integral analysis of the initiation of river ice cover cracking. Abdel-Zaher, A.K., et al, 1990, p.511-530, eng 45-3603
- Model material for river ice breakup studies. Beltaos, S., et al, 1990, p.575-585, eng 45-3608
- Experience with a chemically-doped fine-grained model ice. Jalonen, R., et al, 1990, p.639-651, eng 45-3614
- Numerical modelling of mixed snow and sea spray icing. Horjen, I., 1990, p.945-960, eng 45-3643
- Total ice force on multi-legged structures. Kato, K., 1990, p.974-983, eng 45-3645
- Effect of ice pile-up on the ice force of a conical structure. Mänttinen, M., et al, 1990, p.1010-1021, eng 45-3649
- Report of Working Group on Ice Modelling Materials. Timco, G.W., et al, 1990, p.81-98, eng 45-3668
- Finnish River Ice Research Project—the numerical river ice model in use. Huokuna, M., 1990, p.215-230, eng 45-3678
- FGX model ice at the Masa-Yards Arctic Research Centre. Nortala-Hoikkanen, A., 1990, p.247-259, eng 45-3680
- Ice mounds  
See *also*: Frost mounds
- Ice movement poles  
See *also*: Markers
- Ice navigation  
Polartech conference 1990. 1990, 759p., eng 45-121  
Numerical simulation of ship manoeuvring motion in level ice. Lindström, C.A., 1990, p.198-208, eng 45-134  
Ice concentrations affecting navigation to Scoresby Sund in East Greenland. Christensen, F.T., et al, 1990, p.245-256, eng 45-138  
Feasibility study of an oil production ship concept for arctic conditions. Sandvik, P.C., 1990, p.590-600, eng 45-162  
Full-scale test results for the two latest polar icebreakers. Juurmaa, K., 1990, 21p., eng 45-177  
Imaging radiometer system for ice navigation. Healy, G., et al, 1989, p.277-280, eng 45-233  
Monitoring river ice with Landsat images. Gatto, L.W., 1990, p.1-16, eng 45-484  
Application of the Global Positioning System in Antarctica. Whillans, I.M., et al, 1990, p.6-19, eng 45-529  
Design criteria for oceanographic survey ships operated in the Marginal Ice Zone (MIZ). Stray, E.S., et al, 1989, p.69-98, eng 45-533  
Cold regions design limits for conventional surface ships. Schultz, L.A., 1989, p.99-111, eng 45-534  
Meteorological and sea ice forecasts to arctic region military units. Cianflone, R.E., et al, 1989, p.223-243, eng 45-540  
Estimation of icebreaker powering and propulsion. Zahn, P.B., 1989, Var. p., eng 45-556  
Arctic Marine Transportation Program, 1979 to 1986. Executive summary. Voelker, R.P., 1990, 91p. + appends., eng 45-813  
Way through the ice. 1990, p.37-38, 40, eng 45-913  
Functional specifications for second-generation ice navigation system. Final report. Gautier, C., et al, 1990, 100p. + appends., eng 45-930  
Compendium of environmental data collected during the Iceshelf-88 exercise. Bucca, P.J., 1990, n.p., eng 45-936
- Testing the propulsive performance of models of ice navigating ships. Tsou, L.G., et al, 1989, p.14-19, rus 45-1138
- Ice tests on an "Enthusiast" class harbor tug. Glebko, I.U.V., et al, 1989, p.26-28, rus 45-1139
- Additional hull reinforcements for ships used in the Arctic. Karavanov, S.B., et al, 1989, p.100-106, rus 45-1140
- Report on the 27th Soviet Antarctic Expedition. 1990, 177p., rus 45-1560
- Evaluating the economic effectiveness of extending arctic navigation. Arikainen, A.I., et al, 1989, 70p., rus 45-1714
- Development of the northwestern sea route. Arikainen, A.I., 1989, 206p., rus 45-1722
- Ice formation in frequently transited navigation channels. Ettema, R., et al, 1990, 110p., eng 45-1972
- Presence of Trident III on the antarctic continent. Dumas, B., 1986, p.223-237, fre 45-1989
- Report of the 26th Soviet Antarctic Expedition. 1988, 140p., rus 45-2018
- River Ice Management (RIM) Program. Carey, K.L., 1991, p.376-385, eng 45-2349
- Arctic navigation: problems of 2 sea passages. Young, O.R., 1990, p.35-39, rus 45-2388
- Formalization of ice data for computer processing. Likhachev, A.V., 1990, p.54-59, rus 45-2436
- Environmental effects information database report. 1989, Var. p., eng 45-2539
- Provision of meteorological information for safe navigation in the southern ocean. Lutsenko, E.I., 1990, p.35-40, rus 45-2569
- Ice condition features in antarctic waters in summer 1986-1987. Vanda, I.U.A., 1990, p.64-71, rus 45-2571
- Enhancements to the Shaft Modeling Tool Kit. Cowper, D.N.B., et al, 1990, 42p., eng 45-2646
- Ice conditions on inland waterways. Frankenstein, G.E., et al, 1990, p.61-65, eng 45-2647
- Ice Technology for Polar Operations: proceedings of the 2nd international conference. 1990, 426p., eng 45-2717
- Safe convoy of non-ice class ships along the Northern Sea Route. Arikainen, A.I., et al, 1990, p.259-267, eng 45-2736
- Polar ice-breaker caught in active shear ridge. Voelker, R.P., et al, 1990, p.269-281, eng 45-2737
- Probabilistic concept of safe speeds for arctic shipping. Tunik, A.L., et al, 1990, p.295-306, eng 45-2739
- Experience in using satellite radar images for ice navigation. Nikitin, P.A., et al, 1989, p.135-141, rus 45-2759
- Algorithms to enhance radar image. Kahloun, F., et al, 1991, 47p. + append., eng 45-2840
- Satellite information on ice conditions in the southern ocean and its scientific and operational application to navigation. Provorkin, A.V., et al, 1990, p.13-16, rus 45-3074

- Hydrometeorological conditions and characteristics of ship icing in antarctic waters. Panov, V.V., et al, 1990, p.17-20, rus) 45-3075
- Sea ice distribution and navigation difficulties. Buzuev, A.I.A., et al, 1990, p.20-25, rus) 45-3076
- Hydrometeorological information distribution to ships from Bellingshausen Station in 1986. Leont'ev, E.B., 1990, p.32-36, rus) 45-3078
- Hydrometeorological information distribution to SAE ships. Kornilov, N.A., et al, 1990, p.36-40, rus) 45-3079
- Safety measures for operations on antarctic fast ice. Grigor'ev, I.U.A., et al, 1990, p.44-51, rus) 45-3081
- Sea ice spatial-temporal variability and navigation conditions. Romanov, A.A., 1990, p.62-70, rus) 45-3082
- Trafficability study for the Soviet nuclear icebreaker *Rossia* voyage. Wells, D.G., 1991, 60p. + appends., eng) 45-3091
- Soviet maritime arctic. Brigham, L.W., ed, 1991, 336p., eng) 45-3323
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- Management of the Northern Sea Route. Arikainen, A.I., 1991, p.140-149, eng) 45-3330
- Northern Sea Route operations in the 1986-7 season. Armstrong, T., 1991, p.150-157, eng) 45-3331
- Technical aspects of ice navigation and port construction in Soviet arctic. Watson, G.G., 1991, p.158-176, eng) 45-3332
- Observations of ship performance and the structure of fast ice channels in the northern Baltic Sea. Veitch, B., et al, 1991, 35p., eng) 45-3448
- Review of ship-ice interaction mechanics. Daley, C., et al, 1991, 121p., eng) 45-3449
- Ship propulsion/ice interaction study; Robert Lemeur versus Jarvsaar comparison. Keinonen, A.J., et al, 1988, 123p., eng) 45-3454
- IAHR Symposium on Ice, 10th, 1990. 1990, 3 vols., eng) 45-3562
- Navigation in ice covered waters. Vesterinen, K., 1990, p.79-85, eng) 45-3566
- Investigation of manoeuvring qualities of ships in ice conditions. Tronin, V.A., et al, 1990, p.788-799, eng) 45-3629
- Can the Northern Sea Route have international significance. Arikainen, A.I., 1990, p.187-199, eng) 45-3676
- National economic basis for developing ice navigating transport ships. Arikainen, A.I., 1989, p.9-19, rus) 45-3835
- Ice nuclei**
- Efficiency of ice-forming aerosol generators. Kim, N.S., et al, 1989, p.46-59, rus) 45-26
- Ice-forming activity of the atmospheric aerosol. Khorguani, V.G., 1989, p.812-814, eng) 45-482
- 2M3 isothermal cloud chamber for the study of artificial ice nuclei. Feng, D., et al, 1990, p.494-502, eng) 45-1081
- Exploratory study of ice nucleation by soot aerosols. DeMott, P.J., 1990, p.1072-1079, eng) 45-1274
- Influence of iodine vapor on ice-forming activity of aerosols of various substances. Kim, N.S., et al, 1990, p.500-502, eng) 45-1927
- Mechanisms of heterogeneous ice nucleation onto mixed ice nuclei in the atmosphere. Smorodin, V.E., 1990, p.S249-S253, eng) 45-2217
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- Influence of lead iodide aerosol dispersion on its ice-forming activity. Baklanov, A.M., et al, 1991, p.9-14, eng) 45-2441
- Cloud condensation nuclei as a source of ice-forming nuclei in clouds. Rosinski, J., et al, 1991, p.123-133, eng) 45-3024
- Ice particle concentrations and precipitation development in small polar maritime cumuloniform clouds. Rangno, A.L., et al, 1991, p.207-241, eng) 45-3480
- Ice openings**
- Arctic leads. Inall, M.E., 1991, 31p., eng) 45-3110
- See also: Polynyas*
- Ice optics**
- Helicopter radar report. Final draft, Sept. 1990. Lowry, R.T., 1990, 44p., eng) 45-588
- Evolution of sea ice optical properties during fall freeze-up. Perovich, D.K., 1990, p.520-531, eng) 45-850
- Radiative thermodynamics of snow and ice. Krass, M.S., et al, 1990, 260p., rus) 45-1532
- Spectral properties of fog over the Malaspina Glacier. AK. Ormsby, J.P., et al, 1991, p.179-185, eng) 45-1720
- Deterioration of freshwater ice due to radiation decay. Prowse, T.D., et al, 1990, p.685-697, eng) 45-2253
- Bio-optical model of antarctic sea ice. Arrigo, K.R., et al, 1991, p.10,581-10,592, eng) 45-3308
- Ice override**
- Scheme of calculating single-layer overthrust of ice onto a shore slope. Kozitkii, I.E., 1990, p.297-299, eng) 45-2164
- Ice physics**
- Sea ice physical properties near Casey Station. Allison, I., et al, 1988, p.214-233, chi) 45-49
- Elastic and rheological properties of sea ice and its texture. Hellmann, H., 1990, 99p., ger) 45-79
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- Thermal radiation of ice cover on fresh-water bodies. Bordonskii, G.S., 1990, 100p., rus) 45-635
- Isotope analysis of the Shackleton Ice Shelf. Savatiugin, L., et al, 1990, p.291-298, eng) 45-725
- Sea ice as biotope. Hempel, G., 1990, p.367-374, ger) 45-732
- Double-diffusive underwater ice formation. Krylov, A.D., 1989, p.92-94, rus) 45-736
- Photodissociation of condensed layers of water, ammonia and methane. Menzel, D., et al, 1990, p.588-593, eng) 45-776
- Thermodynamics of the liquid-like layer on an ice sphere. Takagi, S., 1990, p.446-455, eng) 45-795
- Anomalous radar backscattering from ice particles in a cloud. Aviazian, G.M., 1989, p.51-56, eng) 45-856
- Equation of state and metallization of ice under very high pressure. Hama, J., et al, 1990, p.8107-8111, eng) 45-992
- Snow and ice cover physical characteristics at Law Dome. Xie, Z., et al, 1989, p.8-22, eng) 45-1004
- Volume- and surface-binding energies of ice systems containing CO<sub>2</sub>, CO, and H<sub>2</sub>O. Sandford, S.A., et al, 1990, p.188-192, eng) 45-1022
- Kinetics of changes in configuration of cooled ice bodies in water. Kirov, M.V., et al, 1989, p.219-222, rus) 45-1066
- Fundamentals of phase change: freezing, melting, and sublimation. Bayazitoglu, Y., ed, 1990, 81p., eng) 45-1161
- Heat transfer analysis for ice objects melting in air. Janna, W.S., et al, 1990, p.1-8, eng) 45-1162
- Method for predicting freezing in forced flow. Albert, M.R., et al, 1990, p.9-14, eng) 45-1163
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- Specific attenuation in the UHF range of sea ice in various regions. Pasyukov, V.V., et al, 1989, p.36-45, rus) 45-1487
- Measuring the velocity of electromagnetic wave propagation in a glacier. Sheremet'ev, A.N., 1989, p.59-64, rus) 45-1490
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- Effective areas of radiation of pressure ridges in fast ice. Kuznetsov, N.M., et al, 1989, p.106-108, rus) 45-1497
- Distribution of the volume of air and brine pockets in sea ice. Nazintsev, I.U.L., et al, 1989, p.109-123, rus) 45-1498
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- Structure and physical properties of ice. Tyahko, K.P., 1989, p.167-173, rus) 45-1503
- Ice cover melting in the shallow arctic shelf. Sukhorukov, K.K., 1989, p.214-222, rus) 45-1507
- Radiative thermodynamics of snow and ice. Krass, M.S., et al, 1990, 260p., rus) 45-1532
- Studying the equivalent cohesion of sea ice. Zanegin, V.G., 1987, p.94-101, rus) 45-1569
- Seismic studies RIGGS I and RIGGS II of the Ross Ice Shelf. Robertson, J.D., et al, 1990, p.55-86, eng) 45-1610
- Seismic studies RIGGS III and RIGGS IV of the Ross Ice Shelf. Albert, D.G., et al, 1990, p.87-108, eng) 45-1611
- Basic elements of the ice regime of the Barents Sea. Zubakin, G.K., et al, 1989, p.93-102, rus) 45-1626
- Some problems in research and applied modelling of ice cover. Doronin, I.U.P., et al, 1990, p.5-10, rus) 45-1631
- Quasistationary dimensionless model of arctic ice. Ivanov, B.V., et al, 1990, p.18-31, rus) 45-1633
- Melting rate of fresh ice in sea water and the temperature of the current. Bannov-Balkov, I.U.L., et al, 1989, p.106-113, rus) 45-1660
- Ice-ocean interaction on Ronne Ice Shelf, Antarctica. Jenkins, A., et al, 1991, p.791-813, eng) 45-1718
- Ice physics. Petrenko, V.F., 1990, p.3-8, rus) 45-1728
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- Studies of polycrystalline ice creep. Ivanov, A.I., 1990, p.184-188, rus) 45-1760
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- Electromagnetic emission from dynamic processes in ice. Bogorodskii, V.V., et al, 1990, p.1357-1360, rus) 45-1858
- Spectra of dangling OH groups at ice cluster surfaces and within pores of amorphous ice. Rowland, B., et al, 1991, p.812-813, eng) 45-1904
- Microwave and physical properties of sea ice in the winter MIZ. Tucker, W.B., et al, 1991, p.4573-4587, eng) 45-2084
- Spectra of OH bonds in amorphous ice. Buch, V., et al, 1991, p.4091-4092, eng) 45-2167
- Dielectric studies of the transition of ice Ih to ice XI. Zaretskii, A.V., et al, 1991, p.757-768, eng) 45-2485
- Sea ice: its formation, distribution and properties. Squire, V.A., 1990, p.3-8, eng) 45-2537
- Theory of ice crystal nucleation on substrates. Gorbunov, B.Z., 1991, p.564-570, eng) 45-2564
- Probability of heterogeneous nucleation on substrates. Gorbunov, B.Z., et al, 1991, p.570-574, eng) 45-2565
- Application of the theory of dispersion forces to the surface melting of ice. Elbaum, M., et al, 1991, p.1713-1716, eng) 45-2589
- Doped ice relaxation time related to metal ion activity. Abe, H., et al, 1991, p.617-621, eng) 45-2599
- Antarctic sea ice biota. Garrison, D.L., 1991, p.17-33, eng) 45-2621
- Regularities of spatial-temporal variability of antarctic stationary polynyas. Korotkov, A.I., 1990, p.25-32, rus) 45-3077
- Core processing, analysis and transportation, JAGE-89. Shoji, H., et al, 1991, p.129-141, jpn) 45-3398
- Ice pileup**
- Model tests of the grounding resistance of fresh and consolidated ice rubble. Sayed, M., et al, 1990, p.73-82, eng) 45-1768
- Effect of ice pile-up on the ice force of a conical structure. Mänttinen, M., et al, 1990, p.1010-1021, eng) 45-3649
- Ice plasticity**
- On the ductile to brittle transition in ice under compression: physical processes. Schulson, E.M., 1990, p.103-114, eng) 45-2725
- Ice pressure**
- Ice pressure measurements using PVDF-sensors. Muhonen, A., et al, 1990, p.526-538, eng) 45-156
- Harm of the ice pressure and its prevention measures. Pang, G.L., et al, 1990, p.727-733, eng) 45-174
- Compressive strength of natural fresh water ice. Shen, L.T., et al, 1990, p.141-146, chi) 45-454
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- Ice under pressure. Chang, R., et al, 1990, p.789-790, eng) 45-989
- Ice power. Scott, D., 1989, p.154, eng) 45-1554
- Analysis of subcor stresses on buried submarine pipelines—Vol.4. Poochooshab, F., 1990, 168p., eng) 45-1559
- Rating ice-pressure resistant hydraulic structures. Liubimov, V.S., et al, 1987, p.102-107, rus) 45-1570
- Measurement of ice forces on small vessels—phase 3: detailed physical calibration. Final report. Glen, I.F., et al, 1990, 31p. + appends., eng) 45-1648
- Global ice forces and ship response to ice: a second season. Minnick, P.V., et al, 1990, 46p. + appends., eng) 45-1671
- Global ice forces and ship response to ice: analysis of ice ramming forces. Chen, Y.K., et al, 1990, 106p. + appends., eng) 45-1672
- Global ice forces and ship response to ice. Minnick, P.V., et al, 1990, 36p. + appends., eng) 45-1673
- Ice loads and ship response to ice: consolidation report. Daley, C., et al, 1990, 50p. + appends., eng) 45-1677
- Ice loads and ship response to ice: a second season. Daley, C., et al, 1990, 21p. + appends., eng) 45-1678
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- Effective pressures measured during indentation tests in freshwater ice. Sodhi, D.S., 1991, p.619-627, eng) 45-2372
- Loads and vibration induced by compressive failure of ice. Jordaan, I.J., et al, 1991, p.638-649, eng) 45-2374
- Wang's equation for ice forces from a pressure ridge. Nevel, D.E., 1991, p.666-672, eng) 45-2376
- Field strength values of multi-year ice off Herschel Island. Iyer, S.H., et al, 1991, p.63-70, eng) 45-3149
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- Experimental study of ice expanding pressure. Li, H.S., et al, 1991, p.187-190, eng) 45-3168
- Role of thermal expansion of ice in forming lake shoreline profiles. Tesaker, E., 1990, p.464-473, eng) 45-3599

**Ice pressure (cont.)**

- Way of preventing structures from damage due to ice pressure. Ao, B.J., et al, (1990, p.858-863, eng) 45-3635
- Numerical simulation of dynamic ice structure interaction. Eranti, E., (1990, p.912-922, eng) 45-3640
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- Model test investigation of local ice pressure distribution at cylindrical structures. Wessels, E., (1990, p.1084-1096, eng) 45-3655
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- Ice indentation tests using flexible and rigid indentors. Kärnä, T., et al, (1990, p.261-275, eng) 45-3681
- Frequency of intermittent ice crushing during indentation tests. Sodhi, D.S., et al, (1990, p.277-289, eng) 45-3682
- See *also*: Ice push; Ice loads; Pressure ridges
- Ice prevention**
- Deicing techniques and equipment. Apr. 1983-Apr. 1990. (Bibliography). (1990, 90p., eng) 45-83
- Using lasers and infrared heaters as UNREP icing countermeasures. Schultz, L.A., et al, (1989, 267p., eng) 45-92
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- Beryllium oxide: a frost-preventing insulator. Ribbing, C.G., (1990, p.882-884, eng) 45-899
- Model study of the Cazenovia Creek ice control structure. Gooch, G.E., et al, (1990, 31p., eng) 45-934
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- See *also*: Chemical ice prevention; Ice control; Ice removal; Salting
- Ice push**
- Push and tidal deformation of drifting ice. Legen'kov, A.P., (1988, 104p., rus) 45-1861
- Ice rafting**
- Sea ice characteristics and sediment deposition in polar regions. Pfirman, S., et al, (1990, p.187-211, eng) 45-1268
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- Glacimarine environments: processes and sediments. Dowdeswell, J.A., ed, (1990, 423p., eng) 45-2778
- Rafting in glacimarine environments. Gilbert, R., (1990, p.105-120, eng) 45-2784
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- Ice reconnaissance**
- See *also*: Ice reporting; Ice conditions; Ice surveys
- Ice regime**
- See *also*: Ice conditions
- Ice relaxation**
- Anomalies in the viscosity of amorphous ice. Shavlov, A.V., (1989, p.1206-1207, eng) 45-1026
- Problems of ice and snow deterioration. Epifanov, V.P., (1990, p.9-12, rus) 45-1729
- Dielectric studies of the transition of ice Ih to ice XI. Zaretskii, A.V., et al, (1991, p.757-768, eng) 45-2485
- Doped ice relaxation time related to metal ion activity. Abe, H., et al, (1991, p.617-621, eng) 45-2599
- New approach to dynamic ice-flexible structure interaction. Vershinin, S.A., et al, (1990, p.73-80, eng) 45-3667

**Ice removal**

- Deicing techniques and equipment. Apr. 1983-Apr. 1990. (Bibliography). (1990, 90p., eng) 45-83
- Using lasers and infrared heaters as UNREP icing countermeasures. Schultz, L.A., et al, (1989, 267p., eng) 45-92
- Brine and immiscible liquids for spray ice removal. Sackinger, W.M., et al, (1990, p.575-581, eng) 45-160
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- Arctic/cold weather operations symposium, 1989; proceedings, volume 1. (1989, 488p., eng) 45-532
- Effectiveness of deicing chemicals in reducing ice adhesion to nonskid surfaces. Lever, J.H., et al, (1989, p.297-307, eng) 45-543
- Electro-expulsive ice removal application to vertical launch system hatch and to personnel access hatch. Embry, G.D., et al, (1989, p.307-325, eng) 45-544
- Ice removal using low-pressure flashing flow. Derbridge, T.C., et al, (1989, p.327-338, eng) 45-545
- Heat pipe application for naval vessel surface deicing. Beltran, M.R., et al, (1989, p.339-366, eng) 45-546
- Northstar 89 flight deck deicer and hot air wand evaluation on the U.S.S. America (CV66). Rippman, J.A., et al, (1989, p.397-407, eng) 45-547
- Northern latitude logistic support. Mackes, J., (1989, p.451-457, eng) 45-548
- On the improvement of warship capability under spray icing conditions. Zakrzewski, W.P., et al, (1989, p.467-477, eng) 45-549
- Roll-along de-icer. Scott, D., (1990, p.86, eng) 45-621
- Deicing of solids using radiant heating. Song, B., et al, (1990, p.311-317, eng) 45-667
- Electro-Impulse De-Icing (EID) of transmission line towers. Ross, R., (1988, p.381-385, eng) 45-1376
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- Finite element studies of the electro impulse de-icing systems. Scavuzzo, R.J., et al, (1990, p.757-763, eng) 45-1676
- Forecasting of ice cover breakup dates and ice removal from reservoirs. Poliakova, K.N., (1989, p.102-108, rus) 45-2279
- Future technology for disbonding snow and ice from pavements. Wuori, A.F., (1991, p.438-447, eng) 45-2355
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- Ice reporting**
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- Winter ice intensity of the Baltic coast of Schleswig-Holstein. Koslowski, G., (1989, p.61-80, ger) 45-616
- Functional specifications for second-generation ice navigation system. Final report. Gautier, C., et al, (1990, 100p. + appends., eng) 45-930
- Report of the International Ice Patrol in the North Atlantic. (1988, 118p., eng) 45-1864
- Digital transmission of satellite images to an icebreaker. Mäksäara, K., et al, (1990, 39p., fin) 45-3852
- See *also*: Ice surveys
- Ice ridges**
- See *also*: Pressure ridges
- Ice roads**
- Stochastic simulation of climate change impacts on ice road operations. Woo, M.K., et al, (1990, p.259-264, eng) 45-3300
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- See *also*: Rubber ice friction
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- See *also*: Striations
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## Ice shelves (cont.)

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See (also): Snow ice interface
- Ice solid interface**  
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- Determining loads from adhered ice on a support column system. Shkhubek, K.N., et al, [1987, p.76-80, rus] 45-1566
- Allowing for ice conditions in designing offshore construction. Truskov, P.A., [1987, p.89-94, rus] 45-1568
- Rating ice-pressure resistant hydraulic structures. Liubimov, V.S., et al, [1987, p.102-107, rus] 45-1570
- Characteristics of the total drift of compacted ice in a coastal zone. Truskov, P.A., et al, [1990, p.110-114, rus] 45-1747
- Design ice gouge depth computation through computer simulations. Wang, A.T., [1990, p.237-247, eng] 45-1953
- Development of improved ice-making techniques for storage heat pumps. Stewart, W.E., Jr., et al, [1988, p.419-431, eng] 45-2562
- Ice Technology for Polar Operations: proceedings of the 2nd international conference. [1990, 426p., eng] 45-2717
- Dynamic forces induced by buckling failure of moving ice. Vinogradov, O.G., et al, [1990, p.49-60, eng] 45-2721
- Dynamics, flexural response, and damage of ships in ice. Vaughan, H., et al, [1990, p.133-144, eng] 45-2727
- Mathematical model for predicting icebreaker performance. Carter, D., et al, [1990, p.177-192, eng] 45-2731
- Practical scenarios and force determinations for iceberg impact on fixed structures. Gerwick, B.C., Jr., [1990, p.195-210, eng] 45-2732
- Interaction of arctic offshore structures with drifting ice islands and thick sea ice floes. Sackinger, W.M., et al, [1990, p.211-228, eng] 45-2733
- Ramming icebreaking performance of the USCG polar class icebreakers. Minnick, P.V., et al, [1990, p.283-294, eng] 45-2738
- Modelling of ship penetration into a mush ice field. Shih, L.Y., [1991, p.293-300, eng] 45-2987

- Sound absorption and winter performance of porous asphalt pavement. Camomilla, G., et al, [1990, p.1-8, eng] 45-3058
- Conference on offshore mechanics and arctic engineering, 10th, 1991. [1991, 287p., eng] 45-3140
- Ice island simulator. Wang, A.T., et al, [1991, p.29-37, eng] 45-3145
- Field strength values of multi-year ice off Herschel Island. Iyer, S.H., et al, [1991, p.63-70, eng] 45-3149
- Frequency response of fluid-displacement urethane-button ice pressure panels. Spencer, P.A., [1991, p.71-74, eng] 45-3150
- Energy dissipation thru melting in multi-year sea ice. Gagnon, R.E., et al, [1991, p.157-161, eng] 45-3164
- Small-scale experiments on splitting of ice floes. Sodhi, D.S., [1991, p.171-175, eng] 45-3166
- Experimental study of ice expanding pressure. Li, H.S., et al, [1991, p.187-190, eng] 45-3168
- Impact probabilities between large ice features and offshore structures. Morrison, T.B., et al, [1991, p.199-206, eng] 45-3170
- Arctic slope protection methods. Leidersdorf, C.B., et al, [1991, p.1687-1701, eng] 45-3256
- Recent performance of linked concrete mat armor under wave and ice impact. Gadd, P.E., et al, [1991, p.2768-2781, eng] 45-3257
- Study of indenter friction against an ice sheet. Igoshin, V.A., et al, [1990, p.71-74, eng] 45-3265
- On the ski-snow sliding mechanism. Aparin, V.I., et al, [1990, p.57-59, eng] 45-3266
- Chaos in continuous-mode icebreaking. Ettema, R., et al, [1991, p.131-144, eng] 45-3420
- Review of ship-ice interaction mechanics. Daley, C., et al, [1991, 121p., eng] 45-3449
- IAPF Symposium on Ice, 10th, 1990. [1990, 3 vols., eng] 45-3562
- Physical modelling of icebreaking ships in fine-grain model ice. Enkvist, E., [1990, p.15-42, eng] 45-3563
- Thermal response of ice rubble: predictions and observations. Croasdale, K.R., et al, [1990, p.153-167, eng] 45-3573
- Results from in situ four point bending tests with Baltic Sea ice. Kujala, P., et al, [1990, p.261-278, eng] 45-3582
- Characterization of the behaviour of ice masses in marine environments. Romagnoli, R., et al, [1990, p.405-416, eng] 45-3594
- Electrohydraulic and electrochemical phenomena during hull contact with ice. Androsenko, V., et al, [1990, p.531-541, eng] 45-3604
- Ship model tests in ice with systematically varied ice parameters. Ilves, L., et al, [1990, p.616-626, eng] 45-3612
- Crystallography of impacted ice. Jones, S.J., et al, [1990, p.652-660, eng] 45-3615
- Effect of density on the trajectory of ice pieces around a ship's hull. Jones, S.J., et al, [1990, p.661-673, eng] 45-3616
- Model surface treatment for testing in ice. Tatinclaux, J.C., et al, [1990, p.766-775, eng] 45-3627
- Drop impact tests on freshwater ice: spherical head. Timco, G.W., et al, [1990, p.776-787, eng] 45-3628
- Investigation of manoeuvring qualities of ships in ice conditions. Tronin, V.A., et al, [1990, p.788-799, eng] 45-3629
- Way of preventing structures from damage due to ice pressure. Ao, B.J., et al, [1990, p.858-863, eng] 45-3635
- Small scale field indentation tests on first year sea ice. Chin, S.N., et al, [1990, p.878-889, eng] 45-3637
- Full scale iceberg impact: a pilot experiment in Antarctica. Duthinh, D., et al, [1990, p.890-901, eng] 45-3638
- Steel-ice friction coefficient under high contact pressure. Enoki, K., et al, [1990, p.902-911, eng] 45-3639
- Numerical simulation of dynamic ice structure interaction. Eranti, E., [1990, p.912-922, eng] 45-3640
- Sources of uncertainties in methods of ice design for offshore structures. Foroughi, A.R., [1990, p.923-930, eng] 45-3641
- Field tests of ice indentation. Frederking, R., et al, [1990, p.931-944, eng] 45-3642
- Stochastic approach to the ice-structure interaction. Kajaste-Rudnitski, J., [1990, p.961-973, eng] 45-3644
- Total ice force on multi-legged structures. Kato, K., [1990, p.974-983, eng] 45-3645
- Problems of ice force evaluation on offshore structures. Khrapatyi, N.G., et al, [1990, p.984-994, eng] 45-3646
- Estimation of ice work action on hydraulic structures. Korzhavin, K.N., et al, [1990, p.995-998, eng] 45-3647
- Spongy saline ice formation in the vicinity of a stagnation point. Lock, G.S.H., [1990, p.999-1009, eng] 45-3648
- Effect of ice pile-up on the ice force of a conical structure. Maattänen, M., et al, [1990, p.1010-1021, eng] 45-3649
- Ice sheet penetration by indenter pairs. Parsons, B.L., [1990, p.1031-1043, eng] 45-3651
- Experimental study on local ice pressures acting on structures. Tozawa, S., et al, [1990, p.1044-1055, eng] 45-3652

- Design optimization of jacket platforms for ice infested waters. Wang, L.Y., et al, [1990, p.1056-1070, eng] 45-3653
- Application of Maattänen model on multilegged structures. Wang, L.Y., et al, [1990, p.1071-1083, eng] 45-3654
- Model test investigation of local ice pressure distribution at cylindrical structures. Wessels, E., [1990, p.1084-1096, eng] 45-3655
- Contribution of damping in the Maattänen model. Xu, J.Z., et al, [1990, p.1097-1104, eng] 45-3656
- New approach to dynamic ice-flexible structure interaction. Vershinin, S.A., et al, [1990, p.73-80, eng] 45-3667
- Damage and energy flow in the crushed layer during ice loading. McKenna, R.F., et al, [1990, p.231-246, eng] 45-3679
- Ice indentation tests using flexible and rigid indentors. Kärrnä, T., et al, [1990, p.261-275, eng] 45-3681
- Frequency of intermittent ice crushing during indentation tests. Sodhi, D.S., et al, [1990, p.277-289, eng] 45-3682
- Semi-empirical transient method for modeling frost formation on a flat plate. Sherif, S.A., et al, [1990, p.15-23, eng] 45-3867
- Ice spectroscopy**  
2.5-5.0 micrometer spectra of ice: evidence for H<sub>2</sub>S and H<sub>2</sub>O frozen in SO<sub>2</sub>. Salama, F., et al, [1990, p.66-82, eng] 45-305
- Study of the frozen water-poly(vinyl alcohol) system by H-2 and C-13 NMR spectroscopy. Gusev, D.G., et al, [1990, p.651-655, eng] 45-958
- Physical and infrared spectral properties of CO<sub>2</sub> in astrophysical ice analogs. Sandford, S.A., et al, [1990, p.357-372, eng] 45-1002
- Infrared spectra of T<sub>2</sub>O ice. Kanesaka, I., et al, [1990, p.6113-6114, eng] 45-1088
- Evidence of carbonic acid in proton irradiated ices. Moore, M.H., et al, [1991, p.255-262, eng] 45-2467
- Probing ice cluster surfaces with dangling-OH-mode absorption. Rowland, B., et al, [1991, p.1378-1384, eng] 45-3820
- Ice storms**  
Transition of liquid to freezing precipitation. Low, T.B., et al, [1988, p.52-56, eng] 45-1310
- Management of devastating ice storms. Hesse, K.H., [1988, p.330-334, eng] 45-1365
- Preprint volume. [1991, 436p., eng] 45-1933
- Jet streak circulations and the Valentine's Day ice storm of 1990 in central Illinois. Skowronski, J., [1991, p.88-89, eng] 45-1934
- Evolution of a freezing rain storm, part 1: synoptic and mesoscale conditions. Zamora, R.J., et al, [1991, p.258-263, eng] 45-1941
- Evolution of a freezing rain storm, part 2: remote sensor observations. Martner, B.E., et al, [1991, p.264-269, eng] 45-1942
- St. Valentine's Day ice storm—an extreme freezing rain disaster. Rauber, R.M., et al, [1991, p.272-273, eng] 45-1943
- Small-scale meteorology of freezing precipitation. Hogan, A.W., [1991, p.454-462, eng] 45-2357
- Ice strength**  
Problems of ice friction and strength characteristics control. Igoshin, V.A., et al, [1990, p.468-477, eng] 45-151
- Compressive strength of natural fresh water ice. Shen, L.T., et al, [1990, p.141-146, chi] 45-454
- Equations for local ice energy dissipations during ship ramming. Blanchet, D., et al, [1990, p.101-115, eng] 45-494
- Ice loading on offshore structures. Mills, M.R., et al, [1989, p.152-167, eng] 45-515
- Double torsion test applied to freshwater ice and sea ice. Parsons, B.L., et al, [1989, p.188-200, eng] 45-517
- Arctic/cold weather operations symposium, 1989: proceedings, volume 1. [1989, 488p., eng] 45-532
- Determination of flexural strength in urea model ice. Borland, S.L., [1990, 9p., eng] 45-840
- Wing cracks and brittle compressive fracture. Cannon, N.F., et al, [1990, p.1955-1962, eng] 45-1168
- Brittle compressive fracture of ice. Schulson, E.M., [1990, p.1963-1976, eng] 45-1169
- Adhesive peel strength of artificial ice. Scavuzzo, R.J., et al, [1988, p.167-169, eng] 45-1332
- Tensile properties of impact ice. Chu, M.L., et al, [1988, p.254-258, eng] 45-1349
- Thermal stresses induced by water solidification in a cylindrical tube. Lin, S., et al, [1990, p.1079-1082, eng] 45-1390
- Structure and physical properties of ice. Tyahko, K.P., [1989, p.167-173, rus] 45-1503
- Ice deformation by a ship-raising pontoon. Gavrilov, V.P., et al, [1989, p.238-243, rus] 45-1509
- Reversed direct-stress testing of ice: equipment and example results. Cole, D.M., et al, [1990, p.295-302, eng] 45-1619
- Reversed direct-stress testing of ice: initial experimental results and analysis. Cole, D.M., [1990, p.303-321, eng] 45-1620
- Modified Nadreau yield function. Kormann, J.P., et al, [1990, p.89-92, eng] 45-1770
- Strain gradient influence on brittle failure of ice. Sayed, M., [1990, p.179-191, eng] 45-1909

- Behavior of laboratory-made spray ice in triaxial compression testing. Steel, A., et al, [1990, p.192-204, eng] 45-1910
- Cold regions engineering. [1991, 790p., eng] 45-2316
- Effect of loading rate on the bending strength of alluvium reinforced ice. Weber, L.J., et al, [1991, p.71-84, eng] 45-2323
- Ductile-brittle transition in ice & size effect. Schulson, E.M., et al, [1991, p.554-568, eng] 45-2366
- Preliminary results of direct tension tests on first-year sea ice samples. Richter-Menge, J.A., et al, [1991, p.569-578, eng] 45-2367
- Fracture resistance to cracking in ice: initiation and growth. Dempsey, J.P., et al, [1991, p.579-594, eng] 45-2368
- Size effects in the fracture of quasi-brittle materials. Bazant, Z.P., et al, [1991, p.595-604, eng] 45-2369
- Laboratory observations of macroscopic failure modes in freshwater ice. Timco, G.W., [1991, p.605-614, eng] 45-2370
- Some questions on fracture mechanics of ice and ice covers. Gol'dshteln, R.V., et al, [1991, p.615-618, eng] 45-2371
- Effective pressures measured during indentation tests in freshwater ice. Sodhi, D.S., [1991, p.619-627, eng] 45-2372
- Allowing for mechanical strength of ice deposits during calculation of overhead line wires. Krymskii, M.M., [1989, p.29-39, eng] 45-2558
- PEIST—an in situ ice strength testing device. Johnson, R.C., et al, [1991, p.23-28, eng] 45-3144
- New creep damage relationship for ice. Marcellus, R.W., et al, [1991, p.39-45, eng] 45-3146
- Field strength values of multi-year ice off Herschel Island. Iyer, S.H., et al, [1991, p.63-70, eng] 45-3149
- Brittle compressive failure of freshwater columnar ice under biaxial loading. Smith, T.R., et al, [1991, p.207-214, eng] 45-3171
- In situ multi-year sea ice strength using NRCC borehole indenter. Sinha, N.K., [1991, p.229-236, eng] 45-3174
- Measurement of volumetric strain in the triaxial testing of ice samples. Spencer, P.A., et al, [1991, p.237-244, eng] 45-3175
- Design of a high-pressure low-temperature triaxial deformation cell for ice. Sammonds, P.R., et al, [1991, p.177-188, eng] 45-3423
- Testing system for strain rate control of ice deformation. Riat, M.A., et al, [1991, p.189-200, eng] 45-3424
- Tensile strength of cracked ice by E.M. Schulson, S.G. Hoxie, W.A. Nixon. Parsons, B.L., [1991, p.221-222, eng] 45-3428
- Behaviour of broken ice as a geomaterial. Wong, T.T., et al, [1991, p.451-457, eng] 45-3539
- Parametric expressions for ice compressive and flexural strength. Hirayama, K., et al, [1990, p.196-209, eng] 45-3576
- Mechanical properties of sea ice and adfreeze strength of sea ice and subsea soil. Sadovskii, A.V., et al, [1990, p.417-426, eng] 45-3595
- Effect of soil type on the bending strength of alluvium reinforced ice. Weber, L.J., et al, [1990, p.486-499, eng] 45-3601
- Experience with a chemically-doped fine-grained model ice. Jalonen, R., et al, [1990, p.639-651, eng] 45-3614
- New approach to dynamic ice-flexible structure interaction. Vershinin, S.A., et al, [1990, p.73-80, eng] 45-3667
- Damage and energy flow in the crushed layer during ice loading. McKenna, R.F., et al, [1990, p.231-246, eng] 45-3679
- See *also*: Ice cover strength
- Ice structure**
- Structure, stratigraphy and bubble properties in ice core from Law Dome. Han, J.K., et al, [1988, p.153-163, chij] 45-44
- Elastic and rheological properties of sea ice and its texture. Hellmann, H., [1990, 99p., ger] 45-79
- Statistical descriptions of keel-related features in the under-ice draft distribution. Key, J., et al, [1989, p.2346-2349, eng] 45-291
- Analysis of the hydrogen bond in ice. White, J.C., et al, [1990, p.8029-8035, eng] 45-972
- Seasonal growth bands in pingo ice. Mackay, J.R., [1990, p.1115-1125, eng] 45-987
- Anatomy of a freezing lead. Gow, A.J., et al, [1990, p.18,221-18,232, eng] 45-1021
- Infrared spectra of T2O ice. Kanesaka, I., et al, [1990, p.6113-6114, eng] 45-1088
- Low-frequency ice radar studies on ice streams B and C, West Antarctica. Hodge, S.M., et al, [1990, p.79-81, eng] 45-1256
- Structure and physical properties of ice. Tyshko, K.P., [1989, p.167-173, rus] 45-1503
- On the growth of marine icicles. Chung, K.K., et al, [1990, p.393-408, eng] 45-1681
- Constructing large ice structures. Faiko, L.I., [1990, p.104-106, rus] 45-1745
- Experimental construction of ice moorings in Antarctica. Klokov, V.D., et al, [1990, p.106-110, rus] 45-1746
- Allowing for ice cover structure when calculating its thickness. Ponomarev, M.B., et al, [1989, p.108-112, rus] 45-22
- SPOT imagery and nature and structure of ice on Adélie Coast. Chotin, E., et al, [1991, p.827-834, fre] 45-3096
- Seasonal frost mounds. Pollard, W.H., [1991, p.214-218, eng] 45-3367
- Ice sublimation**
- Evolution of topography on comets II. Icy craters and trenches. Colwell, J.E., et al, [1990, p.205-215, eng] 45-847
- Ice sublimation and rheology: implications for the Martian polar layered deposits. Hofstadter, M.D., et al, [1990, p.352-361, eng] 45-895
- Influence of CO ice on the activity and near-surface differentiation of comet nuclei. Fanale, F.P., et al, [1990, p.403-413, eng] 45-897
- D/H on Mars: effects of floods, volcanism, impacts, and polar processes. Carr, M.H., [1990, p.210-227, eng] 45-1023
- Radiative thermophysics of snow and ice. Krass, M.S., et al, [1990, 260p., rus] 45-1532
- Thermal history models for KOSI sublimation experiments. Spohn, T., et al, [1990, p.358-371, eng] 45-1724
- Effect of sunlight penetration on the thermal regime of icy regoliths. Fanale, F.P., et al, [1990, p.193-204, eng] 45-1906
- Estimation of sublimation rate from ice disk on heating plate at low pressures. Tachiwaki, T., et al, [1990, p.2038-2040, eng] 45-2022
- Role of sublimation in particle supply for aeolian transport in cold environments. Neuman, C.M., [1990, p.329-335, eng] 45-2032
- Mass and energy transport in sublimating cometary ice cracks. Kömle, N.I., et al, [1991, p.73-84, eng] 45-2287
- Determination of ice sublimation and sputtering yields by reflectance measurements. Spinella, F., et al, [1991, p.307-313, eng] 45-2484
- Ice sublimation below artificial crusts: results from comet simulation experiments. Kömle, N.I., et al, [1991, p.515-524, eng] 45-2794
- Measuring the heat of sublimation of dry ice with a polystyrene foam cup calorimeter. Burgstahler, A.W., et al, [1991, p.332-333, eng] 45-3362
- Ice surface**
- LIMEX'87 ice surface characteristics and their effect upon C-band SAR signatures. Drinkwater, M.R., [1989, p.390-393, eng] 45-238
- Matched-filter technique for the enhancement of antarctic radar data. Raju, G., et al, [1989, p.2722-2725, eng] 45-298
- Studies of sea ice thickness from submarine and aircraft. [1989, 105p., eng] 45-562
- Concurrent remote sensing of arctic sea ice from submarine and aircraft. Wadhams, P., et al, [1989, 20p., eng] 45-563
- Top/bottom multisensor remote sensing of arctic sea ice. Comiso, J.C., et al, [1989, 56p., eng] 45-564
- Variability of thickness of ice and snow in arctic seas and its parameterization. Appel, I.L., [1989, p.66-72, eng] 45-660
- Deicing of solids using radiant heating. Song, B., et al, [1990, p.311-317, eng] 45-667
- Thermodynamics of the liquid-like layer on an ice sphere. Takagi, S., [1990, p.446-455, eng] 45-795
- Volume- and surface-binding energies of ice systems containing CO<sub>2</sub>, CO, and H<sub>2</sub>O. Sandford, S.A., et al, [1990, p.188-192, eng] 45-1022
- Image texture analysis of sea ice. Holyer, R.J., [1990, 264p., eng] 45-1134
- Laboratory investigation into microwave backscattering from sea ice. Bredow, J.W., [1989, 173p., eng] 45-1143
- Melting heat transfer from a horizontal ice cylinder in saline water. Fukusako, S., et al, [1990, p.15-23, eng] 45-1164
- Electrical parameters of surface layers of shelf and continental glaciers. Bogorodskii, V.V., et al, [1989, p.23-31, rus] 45-1485
- Specific attenuation in the UHF range of sea ice in various regions. Pasyukov, V.V., et al, [1989, p.36-45, rus] 45-1487
- Thickness and movement velocity of ice cover in the area of Dome B. Sheremet'ev, A.N., [1989, p.65-71, rus] 45-1491
- Radiation temperature of the surface of snow and ice cover. Darovskikh, A.N., et al, [1989, p.72-77, rus] 45-1492
- Questions on interpreting data from infrared-ice reconnaissance. Tarashevich, V.N., et al, [1989, p.88-91, rus] 45-1494
- Interaction of a gold chloride complex with the surface of dispersed ice. Fedoseeva, V.I., et al, [1989, p.110-117, rus] 45-1832
- Coherent backscatter and the radar characteristics of outer planet satellites. Hapke, B., [1990, p.407-417, eng] 45-1922
- Scattering properties of natural snow and frost: comparison with icy satellite photometry. Verbiscer, A.J., et al, [1990, p.418-428, eng] 45-1923
- Rheology of solid methane and nitrogen: applications to Triton. Eluzkiewicz, J., et al, [1990, p.1753-1756, eng] 45-2844
- o-yaanismsuuyav: the hypothesis of a perennially dichotomous Triton. Moore, J.M., et al, [1990, p.1757-1760, eng] 45-2845
- Spectra of OH bonds in amorphous ice. Buch, V., et al, [1991, p.4091-4092, eng] 45-2167
- Relation between water vapor saturation and temperature. Afinogenov, L.P., [1987, p.129-133, rus] 45-2300
- Interaction of sea ice, snow and glaciers with the atmosphere and ocean. Kotliakov, V.M., ed, [1990, p.155-248, eng] 45-2409
- Airborne radar altimeter observations of marginal sea ice. Drinkwater, M.R., [1991, p.4555-4572, eng] 45-2672
- Ice thickness distribution in the Arctic Ocean. Wadhams, P., [1990, p.3-20, eng] 45-2718
- Radio echo soundings in the Shirase Glacier and Princess Ragnhild Coast areas. Nishio, F., et al, [1991, p.93-102, eng] 45-3067
- SAE cargo operations using icebergs. Kornilov, N.A., et al, [1990, p.40-44, rus] 45-3080
- SPOT imagery and nature and structure of ice on Adélie Coast. Chotin, E., et al, [1991, p.827-834, fre] 45-3096
- Modeling of surface roughness effects on glaze ice accretion. Hasanman, R.J., Jr., et al, [1991, p.54-60, eng] 45-3235
- Effect of liquid water on thunderstorm charging. Saunders, C.P.R., et al, [1991, p.11,007-11,017, eng] 45-3378
- Sediment enrichment of coastal ice covers. Ackermann, N.L., et al, [1990, p.86-96, eng] 45-3567
- Diffraction of VLF radio waves by polar ice caps. Wait, J.R., [1991, p.1030-1032, eng] 45-3700
- Probing ice cluster surfaces with dangling-OH-mode absorption. Rowland, B., et al, [1991, p.1378-1384, eng] 45-3820
- See *also*: Glacier surfaces
- Ice surveys**
- Working group on river ice jams. Field studies and research needs. Beltsov, S., et al, [1990, 121p., eng] 45-97
- Ice concentrations on the north east Greenland shelf. Lintrup, M.J., et al, [1990, p.272-281, eng] 45-140
- Ice Data Acquisition Program in the Barents Sea. Spring, W., et al, [1990, p.283-298, eng] 45-141
- Coherent radar contour mapping of ice stream thickness. Davis, C.H., et al, [1989, p.2734-2737, eng] 45-301
- Statistical study on sea ice in the Okhotsk Sea observed by GMS for 10 years. Kano, Y., et al, [1989, p.43-58, eng] 45-718
- Effect of hydrometeors on radar images of sea ice. Aleksandrov, V.IU., [1987, p.255-264, eng] 45-863
- Morphology of a multi-year ice ridge in the High Arctic. Connors, D.N., et al, [1989, p.1123-1128, eng] 45-901
- Seasonal Ice Zone Experiment. Sandven, S., [1990, p.26-27, eng] 45-912
- MIZEX 83 data summary. Squire, V.A., et al, [1983, 154p., eng] 45-942
- Antarctic iceberg size distribution: icebergs produced by the Wordie Ice Shelf. Sykes, P., [1989, 18p. + fig., eng] 45-948
- Image texture analysis of sea ice. Holyer, R.J., [1990, 264p., eng] 45-1134
- Atlas of river ice in China. [1990, 141p., eng] 45-1264
- Sea ice fluctuations in the western Labrador Sea (1963-1988). Peterson, I.K., et al, [1990, 130p., eng] 45-1287
- Sea ice data for the Newfoundland Shelf, 1988-1989. Fissel, D.B., et al, [1989, 165p., eng] 45-1288
- Electro-physical and physical-mechanical properties of ice. Bogorodskii, V.V., ed, [1989, 256p., rus] 45-1483
- Applying r-f methods to oceanographic and glacial studies. Gavrilov, V.P., [1989, p.7-22, rus] 45-1484
- Questions on interpreting data from infrared-ice reconnaissance. Tarashevich, V.N., et al, [1989, p.88-91, rus] 45-1494
- Glaciological and geocryological investigations on Novolazarevskaya Station. Vtiurin, B.I., [1990, p.93-104, rus] 45-1561
- Structure and dynamics of the Pacific ice massif. Krivosheina, V.K., [1990, p.165-174, rus] 45-1565
- SPRI participation in the Winter Weddell Gyre Study 1989. Wadhams, P., et al, [1991, p.29-38, eng] 45-1615
- Ice calculations and forecasts in an automated information system. Gudkovich, Z.M., [1990, p.11-17, rus] 45-1632
- Ice-ocean interaction on Ronne Ice Shelf, Antarctica. Jenkins, A., et al, [1991, p.791-813, eng] 45-1718
- Recent glaciation of antarctic islands. Vinogradov, O.N., et al, [1990, p.117-126, rus] 45-1750
- River ice research in China. Sun, Z.C., et al, [1991, p.282-293, eng] 45-2340
- Formalization of ice data for computer processing. Likhachev, A.V., [1990, p.54-59, rus] 45-2436
- Ice condition features in antarctic waters in summer 1986-1987. Vanda, I.U.A., [1990, p.64-71, rus] 45-2571
- Ice thickness data, winter 1988-1989. [1991, 74p., eng] 45-2693

## Ice surveys (cont.)

- Ice conditions in the Barents Sea during SIZEX 89. Sandven, S., et al, [1990, p.309-320, eng] 45-2740
- Geophysical sea ice products at the Alaska SAR facility. Holt, B., et al, [1990, p.333-344, eng] 45-2742
- Surface radar investigations of an icing mound on the Sagavanirktok River, Alaska. Arcone, S.A., et al, [1990, p.353-363, eng] 45-2744
- Multi-frequency imaging radar polarimetry of sea ice. Drinkwater, M.R., [1990, p.365-376, eng] 45-2745
- Multiyear floe and hummock field survey in the east Beaufort Sea. Hudson, R.D., et al, [1982, 15p. + append., eng] 45-2851
- McMurdo SAR Facility; report of the ad hoc science working team. Jezek, K.C., ed, [1991, 32p., eng] 45-2916
- FINNARP 89 sea ice field report. Gray, N., et al, [1990, 26p., eng] 45-3111
- Occurrence and size of ice ridges in the Baltic Sea. Leppäranta, M., et al, [1990, p.314-323, eng] 45-3586
- Method of radar fresh-water ice measurements from a moving vehicle. Klein, G.S., et al, [1990, p.1144-1154, eng] 45-3661
- Helicopterborne remote sensing of antarctic sea ice. Granberg, H.B., et al, [1990, p.313-325, eng] 45-3685
- See *also*: Ice reporting
- Ice temperature**
- Transient temperature solution for bore-hole model testing. Hanson, B., et al, [1987, p.140-148, eng] 45-7
- Thermal regime of an arctic valley glacier. Blatter, H., [1987, p.200-211, eng] 45-16
- Temperature regime and thermal property of Law Dome active layer. Qin, D., et al, [1988, p.84-92, chi] 45-39
- Potential for basal melting under Summit, Greenland. Firestone, J., et al, [1990, p.163-168, eng] 45-58
- On the temperature distribution of glaciers in China. Huang, M., [1990, p.210-217, eng] 45-63
- Temperatures of glaciers in the Kunlun Mountains. Shao, W.Z., et al, [1990, p.87-91, eng] 45-201
- Measurement of the thermal regimes in perennial sea ice. Wettlaufer, J.S., et al, [1989, p.1282-1286, eng] 45-445
- Temperature distribution of Chongce Ice Cap, west Kunlun Mts. Zhou, T., et al, [1990, p.1024-1028, eng] 45-592
- Sea ice temperature vertical distribution near Showa Station, 1984-1985. Matsuda, O., et al, [1990, p.139-144, eng] 45-979
- Numerical experiments on the reconstruction of the paleoclimate. Barkov, N.I., et al, [1989, p.116-121, rus] 45-1045
- Melting heat transfer from a horizontal ice cylinder in saline water. Fukusako, S., et al, [1990, p.15-23, eng] 45-1164
- Electro-physical and physical-mechanical properties of ice. Bogorodskii, V.V., ed, [1989, 256p., rus] 45-1483
- Radiation temperature of the surface of snow and ice cover. Darovskikh, A.N., et al, [1989, p.72-77, rus] 45-1492
- Questions on interpreting data from infrared-ice reconnaissance. Ashkevich, V.N., et al, [1989, p.88-91, rus] 45-1494
- Distribution of the volume of air and brine pockets in sea ice. Nazintsev, I.U.L., et al, [1989, p.109-123, rus] 45-1498
- Structure and physical properties of ice. Tyshko, K.P., [1989, p.167-173, rus] 45-1503
- Conditions for the occurrence of a melting ice layer in glaciers. Larina, T.B., [1990, p.40-44, rus] 45-1734
- Thermomechanics of the East Antarctic Ice Sheet. Grigorian, S.S., et al, [1990, p.44-51, rus] 45-1735
- Glaciological investigations of the Amery Ice Shelf in 1987-1989. Raikovskii, I.U.V., et al, [1990, p.114, rus] 45-1748
- Hydrothermal regime of the ice-divide area of Austonna, Nordaustlandet. Zagorodnov, V.S., et al, [1990, p.133-141, rus] 45-1782
- Glacier temperature regime near the Great Wall Station. Ren, J., [1990, p.22-27, chi] 45-2170
- Determination of ice sublimation and sputtering yields by reflectance measurements. Spinella, F., et al, [1991, p.307-313, eng] 45-2484
- Ice sublimation below artificial crusts: results from comet simulation experiments. Kömle, N.I., et al, [1991, p.515-524, eng] 45-2794
- Progress in the studies on physics of glaciers in China in the last ten years. Huang, M.H., [1991, p.353-357, eng] 45-3097
- Experimental study of ice expanding pressure. Li, H.S., et al, [1991, p.187-190, eng] 45-3168
- Mechanical properties of sea ice and adfreeze strength of sea ice and subsea soil. Sadovskii, A.V., et al, [1990, p.417-426, eng] 45-3595
- Role of thermal expansion of ice in forming lake shoreline profiles. Tesaker, E., [1990, p.464-473, eng] 45-3599
- Ice thermal properties**
- Ice storages. Saastamoinen, J.J., [1989, 63p., eng] 45-566
- Thermal radiation of ice cover on fresh-water bodies. Bordonkii, G.S., [1990, 100p., rus] 45-635
- Quasistationary dimensionless model of arctic ice. Ivanov, B.V., et al, [1990, p.18-31, rus] 45-1633
- Thermomechanics of the East Antarctic Ice Sheet. Grigorian, S.S., et al, [1990, p.44-51, rus] 45-1735
- Model of the thermal conductivity of porous water ice at low gas pressures. Steiner, G., et al, [1991, p.507-513, eng] 45-2793
- Growth and decay of ice. Lock, G.S.H., [1990, 434p., eng] 45-3069
- IAHR Symposium on Ice, 10th, 1990. [1990, 3 vols., eng] 45-3562
- Method of thermodynamic numerical sea ice forecast in the Bohai Sea. Chen, W.B., et al, [1990, p.143-152, eng] 45-3572
- Thermal response of ice rubble: predictions and observations. Croasdale, K.R., et al, [1990, p.153-167, eng] 45-3573
- Ice thermal processes in the mouth areas of the Siberian rivers. Ivanov, V.V., et al, [1990, p.219-230, eng] 45-3578
- Thermal regime of reservoirs in tundra zone. Razgovorova, E.L., et al, [1990, p.396-404, eng] 45-3593
- Investigation of stress of ice cover under changes of temperature. Ivchenko, A.B., [1990, p.149-157, eng] 45-3673
- Ice thickness**
- See *also*: Glacier thickness; Ice cover thickness
- Ice tongues**
- See *also*: Glacier tongues
- Ice transported material
- See *also*: Ice rafting
- Ice underside**
- See *also*: Ice bottom surface
- Ice veins**
- Paleoclimates of the Late Pleistocene and the Holocene in northern Siberia. Danilov, I.D., [1989, p.167-172, rus] 45-3871
- See *also*: Ground ice; Ice wedges
- Ice volume**
- Slope correction by relocation for satellite radar altimetry. Cooper, A.P.R., [1989, p.2730-2733, eng] 45-300
- Research on icing processes in the USSR. Sokolov, B.L., et al, [1989, p.233-251, eng] 45-473
- Winter ice intensity of the Baltic coast of Schleswig-Holstein. Koslowski, G., [1989, p.61-80, ger] 45-616
- Thermal expansion coefficients for sea ice. Johnson, J.B., et al, [1990, p.343-349, eng] 45-1545
- 3-D sensitivity model for the antarctic ice sheet. Huybrechts, P., [1990, p.79-92, eng] 45-1798
- Workshop on antarctic meteorite stranding surfaces. Cassidy, W.A., ed, [1990, 103p., eng] 45-2426
- Fluctuations of sea ice extent in the Antarctic. Enomoto, H., et al, [1991, p.58-73, eng] 45-3064
- Late Quaternary glacial-interglacial fluctuation in the Ross Sea. Anderson, J.B., [1991, p.87-100, eng] 45-3281
- Ice water interface**
- Optical measurements of water lenses in ice. Walford, M.E.R., et al, [1987, p.159-161, eng] 45-9
- Analysis and modeling of melt-water refreezing in dry snow. Pfeffer, W.T., et al, [1990, p.238-246, eng] 45-67
- Dynamic coupling of sea ice and water for an ice field. Leppäranta, M., et al, [1990, p.482-495, eng] 45-78
- Role of ice properties in wave-ice interaction during LIMEX '1987. Winsor, W.D., et al, [1989, p.2350-2354, eng] 45-292
- Formation and growth of river ice. Santeford, H.S., [1990, p.469-483, eng] 45-418
- Breakup jams. Beltaos, S., [1990, p.485-515, eng] 45-419
- Role of irreversible thermodynamics and rheology in the regulation-flow phenomenon. Wood, J.A., [1990, p.133-145, eng] 45-496
- On the rate of heat transfer between a lake and an ice sheet. Hamblin, P.F., et al, [1990, p.173-182, eng] 45-499
- Arctic environmental drifting buoy, Aug. 1987-Apr. 1988. Honjo, S., et al, [1990, 128p., eng] 45-565
- Observation of the boundary layer on the top of ice growing from melt. Krasinski, M.J., et al, [1990, p.625-632, eng] 45-614
- Free convection heat transfer along a horizontal ice cylinder immersed in seawater. Fukusako, S., et al, [1990, p.57-64, jpn] 45-697
- Thermodynamics of the liquid-like layer on an ice sphere. Takagi, S., [1990, p.446-455, eng] 45-795
- Development of three-dimensional internal waves in a sea with ice cover. Bukatov, A.E., et al, [1986, p.3-9, rus] 45-867
- Circulation of the subarctic North Pacific: properties and variations of water masses. Ohtani, K., et al, [1990, p.169-173, jpn] 45-868
- Breaking of sea ice by ocean waves. Allan, A.J., [1975, 12p. + append., eng] 45-938
- Experimental study of wave-ice interaction and floe flexure in the pack ice of the Labrador current. Wadhams, P., et al, [1984, n.p., eng] 45-941
- Interaction between ocean waves and ice in the Bering Sea. Squire, V.A., [1979, 27p., eng] 45-943
- Melting and mixing processes near icebergs and in ice covered regions. Gilmour, P., [1990, 34p., eng] 45-946
- Temperature, salinity and sound-speed fields near ice faces. Sykes, P., [1989, 16p. + append., eng] 45-947
- Iceberg data report. Hirst, J.F., et al, [1989, 79p., eng] 45-949
- Measurements of strain in sea ice during FRAM 3. Williams, R.G., et al, [1989, 7p. + append., eng] 45-950
- Observations of wave/ice interactions and ambient noise generation in the Marginal Ice Zone. Rottier, P., [1989, 36 leaves, eng] 45-965
- International symposium on Ice and Climate. Glazovskii, A.F., [1989, p.236-246, rus] 45-1070
- Coupled sea ice model of interannual ice cover. Fleming, G.H., [1989, 224p., eng] 45-1133
- Fundamentals of phase change: freezing, melting, and sublimation. Bayazitoglu, Y., ed, [1990, 81p., eng] 45-1161
- Melting heat transfer from a horizontal ice cylinder in saline water. Fukusako, S., et al, [1990, p.15-23, eng] 45-1164
- Experimental study of formation and melting of ice about horizontal tubes. Torikoshi, K., et al, [1990, p.57-63, eng] 45-1165
- Coupled one-dimensional sea ice-ocean model applied to a semi-enclosed basin. Omstedt, A., [1990, p.568-582, eng] 45-1175
- Predictions and studies with a one-dimensional ice-ocean model. Riedinger, S.H., et al, [1990, p.1545-1562, eng] 45-1386
- Ice deformation and breakup by the water stream from a propeller. Gavrilov, V.P., et al, [1989, p.206-213, rus] 45-1506
- Structure and dynamics of the Arctic Ocean ice cover. Untersteiner, N., [1990, p.37-51, eng] 45-1689
- Ice-ocean interaction on Ronne Ice Shelf, Antarctica. Jenkins, A., et al, [1991, p.791-813, eng] 45-1718
- Problem of the thermal physics of snow-firm sequences. Bozhinskii, A.N., et al, [1990, p.35-39, rus] 45-1733
- Melting of ice in a porous medium heated from below. Zhang, X., et al, [1991, p.389-405, eng] 45-1872
- Numerical study of three-dimensional natural convection during freezing of water. Yeoh, G.H., et al, [1990, p.899-914, eng] 45-2176
- Natural convection heat transfer in water near its density maximum. Yen, Y.C., [1990, 92p., eng] 45-2237
- Coastal phenomena around Fildes Peninsula. Liu, G., et al, [1990, p.18-26, chi] 45-2270
- Analysis of waterbody surface heat exchange. Huang, N.C., et al, [1991, p.326-335, eng] 45-2344
- Heat exchange at the ice/water interface on flowing water. Hauser, R., et al, [1991, p.348-354, eng] 45-2346
- Comparisons between lakes and seas during the arctic winter. Welch, H., [1991, p.11-23, eng] 45-2468
- Tertiary ice sheet dynamics: the snow gun hypothesis. Prentice, M.L., et al, [1991, p.6811-6827, eng] 45-2502
- Heat flux at the ice-ocean interface. Wettlaufer, J.S., [1991, p.7215-7236, eng] 45-2560
- Pack ice as a landscape. Griselin, M., [1990, p.27-32, fre] 45-2590
- Arctic system science: ocean-atmosphere-ice interactions. Moritz, R.E., ed, [1990, 132p. + append., eng] 45-2645
- Wind-induced mesoscale features in a coupled ice-ocean system. Ikeda, M., [1991, p.4623-4629, eng] 45-2675
- Coupled ice-ocean model studies. Piacsek, S., et al, [1991, p.4631-4650, eng] 45-2676
- Thermodynamic model for sea ice advance and retreat. Tang, C.L., [1991, p.4723-4737, eng] 45-2682
- Glacimarine environments: processes and sediments. Dowdeswell, J.A., ed, [1990, 423p., eng] 45-2778
- Growth and decay of ice. Lock, G.S.H., [1990, 434p., eng] 45-3069
- Fine thermohaline structure of water near antarctic icebergs. Popov, I.K., et al, [1990, p.87-92, rus] 45-3084
- Effect of internal waves on sea ice drift. Bruno, M.S., [1991, p.137-141, eng] 45-3161
- Basis for ice formation design. LaFleur, R.S., [1990, p.393-401, eng] 45-3195
- Comparison of Laplace transform and finite difference solutions for an evolving permafrost region. Morland, L.W., et al, [1990, p.631-648, eng] 45-3208
- Physicochemical processes in the cryolithozone. Mel'nikov, P.I., et al, [1989, p.1-6, eng] 45-3264
- Sea level response to ice sheet evolution. Jacobs, S.S., [1991, p.23-47, eng] 45-3279
- Interactions between oceans and ice sheets in the marginal zones of continents. Glazovskii, A.F., [1990, p.127-146, eng] 45-3524
- Variation of upper layer dynamics during breakup of the seasonal ice cover in Hudson Bay. Lepage, S., et al, [1991, p.12,711-12,724, eng] 45-3558
- River frazil ice: a simplified theoretical model. Kolodko, J., [1990, p.252-260, eng] 45-3581
- Modelling the ice/water boundary layer. Omstedt, A., [1990, p.387-395, eng] 45-3592

- Experimental observations of shoving and thickening. Zufelt, J.E., (1990, p.500-510, eng) 45-3602
- Integral analysis of the initiation of river ice cover cracking. Abdel-Zaher, A.K., et al. (1990, p.511-530, eng) 45-3603
- Discrete element simulations of river ice transport. Babic, M., et al. (1990, p.564-574, eng) 45-3607
- Model material for river ice breakup studies. Beltaos, S., et al. (1990, p.575-585, eng) 45-3608
- Mathematical modelling of icebreaking pattern based on the elastic wave theory. Wang, S.L., et al. (1990, p.811-820, eng) 45-3631
- Origin of spongy ice. Makkonen, L., (1990, p.1022-1030, eng) 45-3650
- Heat transfer in reservoirs during ice formation. Ivanov, A.V., (1990, p.143-148, eng) 45-3672
- Sea ice response to global climatic change. Hibler, W.D., III, (1990, p.125-150, eng) 45-3822
- Heat transfer around an ice cylinder melting in saline water. Fukusako, S., et al. (1990, p.35-41, eng) 45-3869
- Ice (water storage)**
- Ice balls for air conditioners. Gilmore, V.E., (1990, p.45-46, eng) 45-364
- Ice-on-coil diurnal ice storage cooling system. Sohn, C.W., et al. (1990, 49p., eng) 45-1551
- Development of improved ice-making techniques for storage heat pumps. Stewart, W.E., Jr., et al. (1988, p.419-431, eng) 45-2562
- Thermal energy storage with encapsulated ice. Laybourn, D.R., (1988, p.1971-1988, eng) 45-2563
- Water thermal storage with solidification. Chen, S.L., et al. (1991, p.79-90, eng) 45-2762
- ISTORE—a model to simulate and optimise the operation of ice-storage air-conditioning systems. Musgrove, A.R., (1990, p.199-208, eng) 45-3055
- Ice wedges**
- Periglacial permafrost conditions in the Netherlands. Ran, E.T.H., et al. (1990, p.207-218, eng) 45-355
- Origin and age of the "icy complex" in the north of West Siberia. Danilov, I.D., et al. (1989, p.297-304, eng) 45-476
- Relict periglacial structures on a coastal plain in Sweden. Svensson, H., (1990, p.79-91, eng) 45-1190
- Ice-wedge chemistry on Seymour I. Kato, K., et al. (1990, p.181-190, eng) 45-1531
- Palaeoenvironmental implications of recent ice-wedge development. Burn, C.R., (1990, p.3-14, eng) 45-2230
- Growth and deformation of ice wedges. Mackay, J.R., (1990, p.15-29, eng) 45-2231
- Radar detection of ice wedges in Alaska. Arcone, S.A., et al. (1982, 15p., eng) 45-3021
- See *also*: Ground ice; Ice veins
- Ice wood friction**
- See *also*: Wood ice friction
- Iceberg towing**
- Antarctica, an ice territory. Risso Valle, H., (1990, p.11-19, spa) 45-53
- Resource potential of antarctic icebergs. Wadhams, P., (1990, p.203-215, eng) 45-2812
- Full scale iceberg impact: a pilot experiment in Antarctica. Duthinh, D., et al. (1990, p.890-901, eng) 45-3638
- Icebergs**
- Ice Data Acquisition Program in the Barents Sea. Spring, W., et al. (1990, p.283-298, eng) 45-141
- IGARSS '89 quantitative remote sensing: an economic tool for the nineties; Proceedings. (1989, 3001p. (5 vols.), eng) 45-227
- International Ice Patrol Side-Looking Airborne Radar (SLAR) experiment 1988. Osmer, S.R., et al. (1989, p.2193-2196, eng) 45-288
- Identification and volume estimation of icebergs by remote sensing in the Barents Sea. Vefsnmo, S., et al. (1989, p.2355-2358, eng) 45-293
- Implications of ice conditions for hydrocarbon production. Hotzel, I.S., (1989, 139p., eng) 45-391
- Calving and drift of iceberg B-9 in the Ross Sea. Keys, H.J.R., et al. (1990, p.243-257, eng) 45-469
- Icebergs as tracers of water movement in the Bransfield Strait. Madejski, P., et al. (1990, p.259-263, eng) 45-470
- Optimum drifter deployment for iceberg drift forecasting. Venkatesh, S., et al. (1990, p.117-131, eng) 45-495
- Iceberg wakes in Arctic sea ice. Nilsen, J.H., et al. (1990, p.81-86, eng) 45-523
- Real-time radar detection of iceberg shadows. Orlando, J.R., et al. (1990, p.112-118, eng) 45-615
- Influence of shape on iceberg wave-induced velocity statistics. Lever, J.H., et al. (1990, p.263-269, eng) 45-716
- Antarctic iceberg size distribution: icebergs produced by the Wordie Ice Shelf. Sykes, P., (1989, 18p. + figs., eng) 45-948
- Iceberg data report. Hirst, J.F., et al. (1989, 79p., eng) 45-949
- Wave-driven impact of icebergs with semi-submersible platforms. Lever, J.H., et al. (1990, p.313-322, eng) 45-998
- Green icebergs and remote sensing. Lee, R.L., Jr., (1990, p.1862-1874, eng) 45-1171
- Three-dimensional structure of iceberg tracks. Pisarevskaya, L.G., et al. (1989, p.140-144, rus) 45-1662
- Thermomechanics of the East Antarctic Ice Sheet. Grigorian, S.S., et al. (1990, p.44-51, rus) 45-1735
- Modelling of iceberg drift motions near a large offshore structure. Isaacson, M., et al. (1990, p.47-58, eng) 45-1766
- Character and distribution of sea-ice and iceberg scours. Lewis, C.F.M., et al. (1990, p.57-101, eng) 45-1946
- Observed deformation structures beneath relict iceberg scours. Woodworth-Lynas, C.M.T., (1990, p.103-125, eng) 45-1947
- Iceberg-calving rates reconstructed from paleo-sea levels. Lowell, T.V., (1991, p.155-158, eng) 45-2180
- Is Antarctica breaking apart. Hill, C., (1990, p.22-23, eng) 45-2240
- Role of icebergs in terrigenous sedimentation in the world ocean. Vasil'ev, V.P., (1990, p.113-119, rus) 45-2491
- Ice condition features in antarctic waters in summer 1986-1987. Vanda, I.U.A., (1990, p.64-71, rus) 45-2571
- Long-term iceberg collision-risk assessment methods for fixed offshore structures. Korsnes, R., (1989, p.203-214, eng) 45-2591
- Practical scenarios and force determinations for iceberg impact on fixed structures. Gerwick, B.C., Jr., (1990, p.195-210, eng) 45-2732
- Deployment strategy for satellite tracked drifters to support iceberg drift forecasting. El-Tahan, M., et al. (1990, p.395-411, eng) 45-2747
- Icebergs as oceanographic tracers (in the example of the Weddell Sea). Nazirov, M., (1989, p.142-148, rus) 45-2760
- Modelling rates of sedimentation from icebergs. Dowdeswell, J.A., et al. (1990, p.121-137, eng) 45-2785
- Iceberg scours in the geological record. Woodworth-Lynas, C.M.T., et al. (1990, p.217-233, eng) 45-2786
- Resource potential of antarctic icebergs. Wadhams, P., (1990, p.203-215, eng) 45-2812
- Sea ice observations from the Winter Weddell Gyre Study-'89. Meese, D.A., et al. (1991, 161p., eng) 45-2903
- SAE cargo operations using icebergs. Kornilov, N.A., et al. (1990, p.40-44, rus) 45-3080
- Fine thermohaline structure of water near antarctic icebergs. Popov, I.K., et al. (1990, p.87-92, rus) 45-3084
- Environmental conditions in the Southern Barents Sea. Kvitrud, A., et al. (1991, p.125-130, eng) 45-3159
- Icebergs in the Norwegian Continental Shelf in 1880-1881. Kvitrud, A., et al. (1991, p.131-136, eng) 45-3160
- Time-delayed reflections in L-band synthetic aperture radar imagery of icebergs. Gray, A.L., et al. (1991, p.284-291, eng) 45-3191
- Sea level response to ice sheet evolution. Jacobs, S.S., (1991, p.23-47, eng) 45-3279
- Polar ice and iceberg use: potential for water supply. Stablein, G., (1991, p.348-354, ger) 45-3555
- Hazards to antarctic exploration and production. Reid, D.E., et al. (1990, p.31-45, eng) 45-3756
- Icebound lakes**
- Formation and failure of natural dams. Costa, J.E., et al. (1987, 39p., eng) 45-530
- Ice floes and glacier-dammed lakes of Altai during the Pleistocene. Rudoi, A.N., (1990, p.43-52, rus) 45-704
- Ice-dammed lake drainage mechanisms in Greenland. Russell, A.J., et al. (1988, p.143-147, eng) 45-1094
- See *also*: Frozen lakes
- Icebreakers**
- Icebreakers and icebreaking. Jan. 1978-Dec. 1989. (Bibliography). (1990, 104p., eng) 45-82
- Evaluation of a simplified rigge modelling method. Comfort, G., et al. (1990, 2 vols., eng) 45-96
- Immersion tests of high-strength steels for icebreakers. Inoue, T., et al. (1990, p.178-187, eng) 45-132
- Corrosion of welds in high-strength steels for icebreakers. Inoue, T., et al. (1990, p.188-196, eng) 45-133
- Full-scale test results for the two latest polar icebreakers. Juurmaa, K., (1990, 21p., eng) 45-177
- Oden—Sweden's latest icebreaker built by GVA. (1989, p.24-25, eng) 45-368
- Equations for local ice energy dissipations during ship ramming. Blanchet, D., et al. (1990, p.101-115, eng) 45-494
- Estimation of icebreaker powering and propulsion. Zahn, P.B., (1989, Var. p., eng) 45-556
- Arctic Marine Transportation Program, 1979 to 1986. Executive summary. Voelker, R.P., (1990, 91p. + append., eng) 45-813
- Shipping in ice. (1990, p.41-43, eng) 45-914
- Corrosion of the underwater portion of hulls of icebreakers. Markovich, R.A., (1989, p.113-126, rus) 45-1120
- Testing the propulsive performance of models of ice navigating ships. Tsol, L.G., et al. (1989, p.14-19, rus) 45-1138
- Results of comparative model tests with a conceptual hull form and the original R-class icebreaker. Carter, D., (1990, 21p. + append., eng) 45-1177
- Global ice forces and ship response to ice: a second season. Minnick, P.V., et al. (1990, 46p. + append., eng) 45-1671
- Global ice forces and ship response to ice: analysis of ice ramming forces. Chen, Y.K., et al. (1990, 106p. + append., eng) 45-1672
- Global ice forces and ship response to ice. Minnick, P.V., et al. (1990, 36p. + append., eng) 45-1673
- Ice loads and ship response to ice: consolidation report. Daley, C., et al. (1990, 50p. + append., eng) 45-1677
- Ice loads and ship response to ice: a second season. Daley, C., et al. (1990, 21p. + append., eng) 45-1678
- Development of the northwestern sea route. Arikainen, A.I., (1989, 206p., rus) 45-1722
- Shallow-draft icebreaker for the upper Niagara River. Crissman, R.D., et al. (1991, p.396-405, eng) 45-2351
- Ice Technology for Polar Operations: proceedings of the 2nd international conference. (1990, 426p., eng) 45-2717
- Icebreaker manoeuvrability. Peirce, T.H., et al. (1990, p.145-154, eng) 45-2728
- Design features and operation capability of the new US antarctic research vessel. Kennedy, H., et al. (1990, p.167-176, eng) 45-2730
- Mathematical model for predicting icebreaker performance. Carter, D., et al. (1990, p.177-192, eng) 45-2731
- Safe convoy of non-ice class ships along the Northern Sea Route. Arikainen, A.I., et al. (1990, p.259-267, eng) 45-2736
- Polar ice-breaker caught in active shear ridge. Voelker, R.P., et al. (1990, p.269-281, eng) 45-2737
- Ramming icebreaking performance of the USCG polar class icebreakers. Minnick, P.V., et al. (1990, p.283-294, eng) 45-2738
- Polar class icebreaker oceanographic mission upgrade. Tilyou, M., et al. (1991, p.218-230, eng) 45-3053
- Trafficability study for the Soviet nuclear icebreaker *Rossia* voyage. Wells, D.G., (1991, 60p. + append., eng) 45-3091
- Taymyr: a new nuclear icebreaker for the Soviet Union. (1989, p.E314-E315, eng) 45-3103
- Ice tank tests on circular and sidewall air cushion icebreaker bows. Hinchey, M.J., et al. (1991, p.149-156, eng) 45-3163
- 1987 expedition of the icebreaker *Sibir'* to the North Pole. Frolov, I., (1991, p.33-44, eng) 45-3325
- Technical developments and the future of Soviet arctic marine transportation. Brigham, L.W., (1991, p.125-139, eng) 45-3329
- Technical aspects of ice navigation and port construction in Soviet arctic. Watson, G.G., (1991, p.158-176, eng) 45-3332
- Chaos in continuous-mode icebreaking. Ettema, R., et al. (1991, p.131-144, eng) 45-3420
- Review of ship-ice interaction mechanics. Daley, C., et al. (1991, 121p., eng) 45-3449
- IAHR Symposium on Ice, 10th, 1990. (1990, 3 vols., eng) 45-3562
- Physical modelling of icebreaking ships in fine-grain model ice. Enkvist, E., (1990, p.15-42, eng) 45-3563
- Navigation in ice covered waters. Vesterinen, K., (1990, p.79-85, eng) 45-3566
- Electrohydraulic and electrochemical phenomena during hull contact with ice. Androsenko, V., et al. (1990, p.531-541, eng) 45-3604
- Economic efficiency of icebreakers of different models and capacities. Arikainen, A.I., (1990, p.542-553, eng) 45-3605
- Effect of density on the trajectory of ice pieces around a ship's hull. Jones, S.J., et al. (1990, p.661-673, eng) 45-3616
- Mathematical modelling of icebreaking pattern based on the elastic wave theory. Wang, S.L., et al. (1990, p.811-820, eng) 45-3631
- National economic basis for developing ice navigating transport ships. Arikainen, A.I., (1989, p.9-19, rus) 45-3835
- Digital transmission of satellite images to an icebreaker. Mäkitara, K., et al. (1990, 39p., fin) 45-3852
- See *also*: Ice breaking
- Icefalls**
- Ice avalanches and overflows of glacial lakes. Röthlisberger, H., (1978, p.170-212, ger) 45-77
- Iceland**
- Comparative digital analysis of Seasat-SAR and Landsat-TM data for Iceland. Rast, M., et al. (1991, p.527-544, eng) 45-2223
- Icequakes**
- Seismic telemetry network at Showa Station. 2. Akamatsu, J., et al. (1990, p.90-99, eng) 45-1530
- Seismological observation at the Great Wall Station during austral winter of 1986. Jia, G., (1990, p.81-85, chi) 45-2171
- Icing**
- Flowing artesian wells in permafrost regions. Wheaton, S.R., (1990, p.721-737, eng) 45-425
- Search and rescue target detection experiment. Canso Bank, 1988. Dawe, B.R., et al. (1989, Var. p., eng) 45-550



**Iceing (cont.)**

- Dangerous wind velocities and glaze icing in mountainous regions. Podrezov, O.A., [1990, 222p., rus] 45-983
- Studies of nales and naled processes in the USSR. Sokolov, B.L., et al, [1989, p.3-15, rus] 45-1028
- Fourth International Conference on Atmospheric Icing of Structures. [1988, 414p., eng] 45-1299
- Atmospheric icing: a review. Lozowski, E.P., et al, [1988, p.1-6, eng] 45-1300
- Cloud physics of atmospheric icing. Finstad, K.J., et al, [1988, p.61-64, eng] 45-1312
- Atmospheric icing with elevation on New England mountains. Ryerson, C.C., [1988, p.89-93, eng] 45-1318
- Studies of icing and ice-snow accretion in Mt. Zao. Yano, K., [1988, p.109-113, eng] 45-1322
- Density of natural ice accretions. Jones, K.F., [1988, p.114-118, eng] 45-1323
- Convective heat transfer coefficient for icing of cylinders. Szilder, K., et al, [1988, p.147-151, eng] 45-1329
- Evaluation of state-of-the-art drilling platform ice accretion models. Brown, R.D., et al, [1988, p.208-213, eng] 45-1340
- Effect of surface roughness on ice loads during icing. Personne, P., et al, [1988, p.232-235, eng] 45-1345
- Growth of icicles. Makkonen, L., [1988, p.236-242, eng] 45-1346
- Simulation of some rime characteristics by using an aggregate model. Personne, P., et al, [1988, p.243-247, eng] 45-1347
- Spearhead-shape ice formation. Brunet, L., et al, [1988, p.248-253, eng] 45-1348
- New experimental and theoretical studies of ice crystals growth. Wang, A.S., [1988, p.259-262, eng] 45-1350
- Measuring the size of water droplets on slides. Laforte, J.L., et al, [1988, p.263-267, eng] 45-1351
- Studies on atmospheric icing in Finland. Lehtonen, P., et al, [1988, p.338-343, eng] 45-1367
- ISO-Working Group No. 6, "Atmospheric icing of structures". Støttrup-Andersen, U., [1988, p.344-346, eng] 45-1368
- Electro-Impulse De-Icing (EIDI) of transmission line towers. Ross, R., [1988, p.381-385, eng] 45-1376
- Observations of icing on marine hydraulic structures. Demin, I.U.A., [1988, p.54-61, rus] 45-1516
- Development of a freezing rain sensor for automated surface observing systems. Starr, K.M., et al, [1991, p.338-343, eng] 45-1595
- Icing affects fall discharge characteristics of a rangeland stream. Sturges, D.L., [1990, p.164-167, eng] 45-2138
- Forecasters handbook for the arctic. Sechrist, F.S., et al, [1989, 364p., eng] 45-3092
- See *also*: Aircraft icing; Glaze; Ice loads; Power line icing; Road icing; Ship icing
- Icing detection**  
See *also*: Ice detection
- Icing rate**  
Icing rate measurements for different cable configurations. Druetz, J., et al, [1988, p.125-128, eng] 45-1325
- Ship spraying/icing model to estimate icing rate. Zakrzewski, W.P., et al, [1988, p.399-404, eng] 45-1380
- Comparative study of icing rates in the White Mountains of New Hampshire. Govoni, J.W., [1990, 5p., eng] 45-3745
- See *also*: Ice accretion
- Illumination**  
See *also*: Sunlight
- Image processing**  
IHS transform for the integration of radar imagery with other remotely sensed data. Harris, J.R., et al, [1990, p.1631-1641, eng] 45-2946
- SAR sea ice discrimination using texture statistics: a multivariate approach. Barber, D.G., et al, [1991, p.385-395, eng] 45-2947
- Construction of sea ice maps from satellite data. Nikitin, P.A., et al, [1990, p.926-936, eng] 45-2970
- Detection of waves in frazil ice in synthetic aperture radar imagery. Wadhams, P., et al, [1991, p.8835-8852, eng] 45-3019
- Satellite information on ice conditions in the southern ocean and its scientific and operational application to navigation. Provorkin, A.V., et al, [1990, p.13-16, rus] 45-3074
- SPOT imagery and nature and structure of ice on Adélie Coast. Chotin, E., et al, [1991, p.827-834, fre] 45-3096
- Modified beta density function as a model for synthetic aperture radar clutter statistics. Maffett, A.L., et al, [1991, p.277-283, eng] 45-3190
- Evaluation of second-order texture parameters for sea ice classification from radar images. Shokr, M.E., [1991, p.10,625-10,640, eng] 45-3312
- Airborne remote sensing of river ice slush transport. Dobrowolaki, A., et al, [1990, p.1105-1112, eng] 45-3637
- Albedo measurements from snow—image processing of LANDSAT-5 TM data. Winther, J.G., et al, [1990, p.195-201, eng] 45-3795
- Imaging**  
Marine Observation Satellite 1 data at Showa Station. Yamanouchi, T., et al, [1991, p.22-30, eng] 45-3062
- Texture analysis of radiometric signatures of new sea ice forming in arctic leads. Eppler, D.T., et al, [1991, p.233-241, eng] 45-3189
- Time-delayed reflections in L-band synthetic aperture radar imagery of icebergs. Gray, A.L., et al, [1991, p.284-291, eng] 45-3191
- Impact**  
Influence of shape on iceberg wave-induced velocity statistics. Lever, J.H., et al, [1990, p.263-269, eng] 45-716
- Long-term iceberg collision-risk assessment methods for fixed offshore structures. Korsnes, R., [1989, p.203-214, eng] 45-2591
- Probabilistic concept of safe speeds for arctic shipping. Tunik, A.L., et al, [1990, p.295-306, eng] 45-2739
- Application of Maattanen model on multilegged structures. Wang, L.Y., et al, [1990, p.1071-1083, eng] 45-3654
- Impact strength**  
Engineering analysis of ice/propeller interaction data. Summary 300 \$55p. Laskow, V., et al, [1986, 55p., eng] 45-186
- Measurement of ice/propeller interaction parameters. Summary. Kirby, K., et al, [1986, 22p., eng] 45-187
- Engineering analysis of ice/propeller interaction data. Laskow, V., et al, [1986, 322p. + appends., eng] 45-188
- Measurement of ice/propeller interaction parameters. Laskow, V., et al, [1986, 156p. + appends., eng] 45-189
- Global ice forces and ship response to ice: a second season. Minnick, P.V., et al, [1990, 46p. + appends., eng] 45-1671
- Global ice forces and ship response to ice: analysis of ice ramming forces. Chen, Y.K., et al, [1990, 106p. + appends., eng] 45-1672
- Global ice forces and ship response to ice. Minnick, P.V., et al, [1990, 36p. + appends., eng] 45-1673
- Ice loads and ship response to ice: consolidation report. Daley, C., et al, [1990, 50p. + appends., eng] 45-1677
- Ice loads and ship response to ice: a second season. Daley, C., et al, [1990, 21p. + appends., eng] 45-1678
- Computer model to assess ice risk to offshore structures. Blanchet, D., [1991, p.650-665, eng] 45-2375
- Wave energy and floe collisions in marginal ice zones. McKenna, R.F., et al, [1990, p.33-45, eng] 45-2720
- Dynamics, flexural response, and damage of ships in ice. Vaughan, H., et al, [1990, p.133-144, eng] 45-2727
- Model tests of a naval combatant in broken ice fields. Thomas, W.L., III, et al, [1990, p.155-165, eng] 45-2729
- Practical scenarios and force determinations for iceberg impact on fixed structures. Gerwick, B.C., Jr., [1990, p.195-210, eng] 45-2732
- Evaluation of an impact test for measuring ice adhesion strength. Andersson, L.O., et al, [1991, p.215-220, eng] 45-3172
- IAHR Symposium on Ice, 10th, 1990. [1990, 3 vols., eng] 45-3562
- Drop impact tests on freshwater ice: spherical head. Timco, G.W., et al, [1990, p.776-787, eng] 45-3628
- Small scale field indentation tests on first year sea ice. Chin, S.N., et al, [1990, p.878-889, eng] 45-3637
- Full scale iceberg impact: a pilot experiment in Antarctica. Duthinh, D., et al, [1990, p.890-901, eng] 45-3638
- Stochastic approach to the ice-structure interaction. Kajaste-Rudnitski, J., [1990, p.961-973, eng] 45-3644
- Ice sheet penetration by indenter pairs. Parsons, B.L., [1990, p.1031-1043, eng] 45-3651
- Low-velocity rigid sphere vertical impact on a floating ice sheet. Zhao, Z.G., et al, [1990, p.301-312, eng] 45-3684
- Impact tests**  
Interpretation of snow shock impact using embedded stress gauges. Johnson, J.B., et al, [1990, p.117-120, eng] 45-400
- Equations for local ice energy dissipations during ship ramming. Blanchet, D., et al, [1990, p.101-115, eng] 45-494
- Preliminary results of model tests of the DD-963 in broken ice fields. Thomas, W.L., III, et al, [1989, p.113-121, eng] 45-535
- Ship-ice impact load model correlated with full-scale impact data. St. John, J.W., et al, [1989, p.123-138, eng] 45-536
- Wave-driven impact of icebergs with semi-submersible platforms. Lever, J.H., et al, [1990, p.313-322, eng] 45-998
- Effective pressures measured during indentation tests in freshwater ice. Sodhi, D.S., [1991, p.619-627, eng] 45-2372
- Hail resistance of plastic components of the building shell. Flüeler, P., [1990, p.88-95, eng] 45-2556
- Ramming icebreaking performance of the USCGC polar class icebreakers. Minnick, P.V., et al, [1990, p.283-294, eng] 45-2738
- Evaluation of an impact test for measuring ice adhesion strength. Andersson, L.O., et al, [1991, p.215-220, eng] 45-3172
- Crystallography of impacted ice. Jones, S.J., et al, [1990, p.652-660, eng] 45-3615
- Drop impact tests on freshwater ice: spherical head. Timco, G.W., et al, [1990, p.776-787, eng] 45-3628
- Full scale iceberg impact: a pilot experiment in Antarctica. Duthinh, D., et al, [1990, p.890-901, eng] 45-3638
- Numerical simulation of dynamic ice structure interaction. Eranti, E., [1990, p.912-922, eng] 45-3640
- Field tests of ice indentation. Frederking, R., et al, [1990, p.931-944, eng] 45-3642
- Impurities**  
Trace elements in BHQ ice core from Law Dome. Zhang, Y., et al, [1988, p.164-172, chi] 45-45
- Composition of particles in firm and ice cores from Greenland. Kumai, M., et al, [1990, p.1-18, eng] 45-194
- SEM observations of microparticles in antarctic ice cores. Higashi, A., et al, [1990, p.31-53, eng] 45-197
- Natural remanent magnetization of dirt-ice layers from East Antarctica. Funaki, M., [1990, p.131-138, eng] 45-978
- Oil contamination of antarctic ice. Ventajas, L., et al, [1990, 23p., spa] 45-1000
- Trace element analysis of antarctic ice cores. Boutron, C.F., et al, [1989, p.182-197, eng] 45-1472
- Problems in background monitoring of natural environments in the Far North. Evseev, A.V., et al, [1990, p.46-58, rus] 45-1965
- Organic compounds in antarctic matrices: sea water, particulate, pack and sediments. Desideri, P., et al, [1990, p.63-70, eng] 45-3198
- Longitudinal and seasonal water chemistry variations in a northern Appalachian stream. Phillips, R.A., et al, [1990, p.489-498, eng] 45-3697
- Simultaneous interaction with ice and agent persistence estimation for cold regions. Leggett, D.C., [1988, p.237-247, eng] 45-3741
- See *also*: Gas inclusions; Snow impurities
- India**  
Himalayan glaciers as a sustainable water resource. Hasnain, S.I., [1989, p.106-112, eng] 45-1674
- Himalayas  
Satellite mapping of alpine pastures in the Himalayas. Lal, J.B., et al, [1991, p.435-443, eng] 45-2222
- Indicating instruments**  
Development of a freezing rain sensor for automated surface observing systems. Starr, K.M., et al, [1991, p.338-343, eng] 45-1595
- Field test results on a precipitation occurrence and identification sensor. Wiggins, W.L., et al, [1991, p.348-351, eng] 45-1596
- Piezoelectric ice sensor for aviation applications. Floyd, M.D., [1990, p.13-24, eng] 45-1924
- Detection of objects buried in wet snowpack by an FM-CW radar. Yamaguchi, Y., et al, [1991, p.201-208, eng] 45-3188
- See *also*: Monitors; Thermostats
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See *also*: Permafrost indicators
- Indonesia**  
—Irian Jaya  
Glaciers of Irian Jaya, Indonesia. Allison, I., et al, [1989, p.1-20, eng] 45-818
- Indoor climates**  
Ice-rink roof structures and the "stalagmite" effect. Bloudek, K., [1989, p.151-153, eng] 45-3466
- Finnish cold climate building technology and community development, part 9. Nyman, M., ed, [1990, 70p., fin] 45-3879
- Indus River**  
Hazards to water resources development in mountain regions. Hewitt, K., [1989, p.794-812, eng] 45-2772
- Industrial development**  
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- Infrared equipment**  
Using lasers and infrared heaters as UNREP icing countermeasures. Schultz, L.A., et al, [1989, 267p., eng] 45-92
- Northern latitude logistic support. Mackes, J., [1989, p.451-457, eng] 45-548
- Infrared photography**  
One-dimensional temperature modeling techniques: review and recommendations. Balick, L.K., et al, [1990, 17p., eng] 45-1698
- Applications and development of IR techniques for building research in Finland. Kaasinen, H., et al, [1991, p.90-98, eng] 45-2924
- Infrared thermographic analysis of snow ski tracks. Roberts, C.C., Jr., [1991, p.207-218, eng] 45-2925
- Portable thermal reference for winter field studies. Lacombe, J., [1990, p.48-54, eng] 45-3769
- Infrared radiation**  
Microwave and infrared emissions from an ice sheet, dry snow, and sea ice. Khapin, I.U.B., [1990, p.148-157, rus] 45-2208

- Infrared extinction properties of clouds in polar regions.** Prabhakara, C., et al, 1990, p.1313-1329, eng 45-2986
- Infrared transmission through cirrus clouds: a radiative model for target detection.** Liou, K.N., et al, 1990, p.1886-1896, eng 45-3366
- Crystallization of supercooled water drops, induced by infrared radiation at the resonant frequency of ice.** Dubrovich, N.A., 1991, p.38-39, eng 45-3474
- Infrared reconnaissance**  
 Questions on interpreting data from infrared-ice reconnaissance. Tarashkevich, V.N., et al, 1989, p.88-91, rus 45-1494
- Infrared spectroscopy**  
 Physical and infrared spectral properties of CO<sub>2</sub> in astrophysical ice analogs. Sandford, S.A., et al, 1990, p.357-372, eng 45-1002
- Infrared spectra of T<sub>2</sub>O ice.** Kanesaka, I., et al, 1990, p.6113-6114, eng 45-1088
- Evidence of carbonic acid in proton irradiated ices.** Moore, M.H., et al, 1991, p.255-262, eng 45-2467
- Insolation**  
 Effect of sunlight penetration on the thermal regime of icy regoliths. Fanale, F.P., et al, 1990, p.193-204, eng 45-1906
- Evolution of the water regime of Phobos.** Fanale, F.P., et al, 1990, p.380-395, eng 45-1921
- Anomalous temperature and oxygen gradients under the ice of a high-plains lake in Wyoming.** Rahel, F.J., 1990, p.751-755, eng 45-2020
- Nitrogen frost migration on Triton: a historical model.** Spencer, J.R., 1990, p.1769-1772, eng 45-2046
- See also:* Solar radiation
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*See also:* Accuracy
- Instruments**  
 Polar research from satellites. Thomas, R.H., 1991, 91p., eng 45-2406
- See also:* Borehole instruments; Indicating instruments; Measuring instruments; Recording instruments
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 Temperature effect on R-value of foam insulation. Bomberg, M.T., et al, 1991, p.241-267, eng 45-2582
- Unsteady heat and mass transfer with phase changes in an insulation slab: frosting effects.** Tao, Y.X., et al, 1991, p.1593-1603, eng 45-3364
- See also:* Electrical insulation; Pipeline insulation; Thermal insulation
- Intake systems**  
*See also:* Water intakes
- Interfaces**  
 Hydrographic observations of an arctic front in the Greenland Sea. van Aken, H.M., et al, 1991, p.4739-4750, eng 45-2683
- See also:* Air water interactions; Ice air interface; Ice solid interface; Ice vapor interface; Ice water interface; Liquid solid interfaces; Snow air interface; Snow ice interface
- Internal friction**  
 Mechanism of self-regulation and attenuation in glacier catastrophe. Kazanskii, A.B., et al, 1990, p.156-164, rus 45-1755
- International cooperation**  
 Discussion of pressing arctic problems. Kotliakov, V.M., et al, 1989, p.122-125, rus 45-3
- Alaska's mineral industry, 1989.** Bundtzen, T.K., et al, 1989, 100p., eng 45-491
- Security co-operation in the Arctic: a Canadian response to Murmansk.** Cox, D., et al, 1989, 28p., eng 45-675
- Arctic research in the United States, Vol.4.** 1990, 106p., eng 45-1398
- SPRI participation in the Winter Weddell Gyre Study 1989.** Wadhams, P., et al, 1991, p.29-38, eng 45-1615
- Problems of military security in the Arctic.** Arikainen, A.I., et al, 1990, 92p., rus 45-1715
- Plying the Northern Sea Route.** Brigham, L.W., 1991, p.10-11, eng 45-1721
- Arctic navigation: problems of 2 sea passages.** Young, O.R., 1990, p.35-39, rus 45-2388
- Multi-national, interdisciplinary arctic experiments: planning, logistics and operations coordination.** Horn, D.A., 1990, p.65-78, eng 45-2722
- Convention on the Regulation of Antarctic Mineral Resource Activities.** Auburn, F., 1990, p.259-271, eng 45-2816
- Special report on the Antarctic Minerals Convention.** Kimball, L.A., 1990, p.273-310, eng 45-2817
- Arctic environmental cooperation: prospects and possibilities.** Roginko, A.I.U., 1990, p.85-113, eng 45-3090
- Soviet maritime arctic.** Brigham, L.W., ed, 1991, 336p., eng 45-3323
- Environmental protection in the Soviet arctic seas.** Roginko, A., 1991, p.63-82, eng 45-3327
- Canada-USSR Arctic Science Exchange Programme.** Slipchenko, W., 1991, p.235-257, eng 45-3336
- International cooperation in the Arctic: Soviet attitudes and actions.** Young, O.R., et al, 1991, p.258-283, eng 45-3337
- Svalbard contribution to global studies of arctic hydrology and sediment transfer.** Clark, M.J., 1990, p.75-83, eng 45-3784
- Interstitial ice**  
 Characteristics of simultaneous thawing and erosion of frozen sand. Medvedskii, R.I., 1990, p.667-671, eng 45-1684
- Inversions**  
*See also:* Temperature inversions
- Ion diffusion**  
 Cryogenic migration of ions and bound moisture in ice-saturated disperse rocks. Lebedenko, I.U.P., 1989, p.1-9, eng 45-645
- Ionic tracer movement through a Wyoming snowpack.** Bales, R.C., et al, 1990, p.2749-2758, eng 45-1176
- Doped ice relaxation time related to metal ion activity.** Abe, H., et al, 1991, p.617-621, eng 45-2599
- Ionization**  
 Cation exchange with clay minerals in atmospheric precipitation. Sequeira, R., 1991, p.487-490, eng 45-3554
- Middle atmosphere and solar proton events.** Reid, G.C., et al, 1991, p.1019-1022, eng 45-3759
- Ions**  
 Controlling the crystallization of water in closed voids. Kuz'min, G.P., et al, 1990, p.92-95, rus 45-1204
- Chemical phenomena in the process of cryogenic erosion of andesite.** Gurevich, V.M., et al, 1989, p.56-67, rus 45-1828
- Gas-hydrogeochemical variations in the active layer in northeast USSR.** Glotov, V.E., 1989, p.33-46, rus 45-2627
- Islands**  
*See also:* Artificial islands; Ice islands
- Isostasy**  
 Tectonic structures in the relief of the marginal belt of the Valdai glaciation. Iurenkov, G.I., 1989, p.49-54, rus 45-702
- Reconstruction of the bedrock of Antarctica after deglaciation.** Suetova, I.A., et al, 1989, p.127-131, rus 45-1047
- Submerged shoreline on the inner continental shelf of Maine.** Shipp, R.C., et al, 1989, p.11-28, eng 45-2056
- Pleistocene deglaciation model based upon predictions of sea level change.** Tushingham, A.M., et al, 1991, p.4497-4523, eng 45-2229
- Effect of sedimentary changes on glacial marine facies architecture.** Boulton, G.S., 1990, p.15-52, eng 45-2780
- Isotope analysis**  
 Isotopic analyses from BHQ ice core on Law Dome. Jiang, G., et al, 1988, p.173-178, chj 45-46
- Geology and geochemistry of Transantarctic Mountains and Ross I.** 1989, 321p., chj 45-208
- Isotope variations in the temperate glaciers of the Eurasian Arctic.** Valkmae, R.A., 1990, p.45-55, eng 45-373
- Hydroxyl-bearing minerals related to the isotopes in an ice sheet.** Souchez, R., et al, 1990, p.244-246, eng 45-528
- Isotope study of natural water and ice of western Siberia.** Kritisuk, L.N., et al, 1989, p.48-64, eng 45-649
- Soviet-French cooperation in isotopic research of ice cores.** Lorius, C., et al, 1990, p.287-289, eng 45-724
- Isotope analysis of the Shackleton Ice Shelf.** Savatugin, L., et al, 1990, p.291-298, eng 45-725
- Ice sheet volume in Queen Maud Land during cold stages.** Hermichen, W.D., et al, 1990, p.301-306, eng 45-726
- Technogenic gamma-emitting radionuclides in antarctic snow samples.** Adjarova, L., et al, 1990, p.45-48, eng 45-826
- Isotopes in glacial deposits at Beardmore Glacier.** Hagen, E.H., et al, 1990, p.67-68, eng 45-1155
- 104-m oxygen-isotope record at J-9 on Ross Ice Shelf.** Grootes, P.M., et al, 1990, p.95-96, eng 45-1395
- Environmental isotope studies of storm and snowmelt runoff generation.** Sklash, M.G., 1990, p.401-435, eng 45-1482
- Decline of Pb-210 fallout on Greenland in the last century.** Nijampurkar, V.N., et al, 1990, p.100-102, eng 45-1905
- 400 years isotope record of the Antarctic Peninsula climate.** Aristarain, A.J., et al, 1990, p.2369-2372, eng 45-1990
- Deuterium excess in recent antarctic snow.** Petit, J.R., et al, 1991, p.5113-5122, eng 45-2283
- Use of uranium-isotope information for modeling water inflow in fractured rocks under permafrost conditions.** Chalov, P.I., et al, 1991, p.166-174, eng 45-2439
- Variations of water isotope content with altitude in a mountain environment.** Holdsworth, G., et al, 1991, p.7483-7494, eng 45-2800
- Recharge processes during snowmelt: an isotopic and hydrometric investigation.** Buttle, J.M., et al, 1990, p.343-360, eng 45-3464
- Isotopes**  
*See also:* Carbon isotopes; Oxygen isotopes; Radioactive isotopes
- Italy**  
 Breonic, Aurine and Pusteresi alpine glaciers through the 7 September 1985 Landsat TM image. Attardo, C., et al, 1989, p.3-19, ita 45-359
- Determination of surface velocity on the Val Piarella eastern rock glacier (upper Valtellina, central Alps).** Smiraglia, C., 1989, p.41-44, ita 45-360
- Frost activity indicators in Italian loess deposits.** Cremaschi, M., et al, 1990, p.39-48, eng 45-2076
- Japan**  
 First discovery of fossil ice of 1000-1700 year B.P. in Japan. Yoshida, M., et al, 1990, p.258-259, eng 45-70
- Airborne trace metals in snow on the Japan Sea side of Japan.** Ecker, F.J., et al, 1990, p.2593-2600, eng 45-954
- Highway snow control research in Japan.** Itagaki, K., 1990, 60p., eng 45-999
- Determination of alkaline earth metals in Japanese rain and snow by ICP emission spectrometry.** Dokiya, Y., et al, 1988, p.145-165, eng 45-1013
- Alluvial fans in Japan and South Korea.** Ono, Y., 1990, p.91-107, eng 45-1577
- Hokkaido**  
 Paleoclimatology and altitude of vegetation zones in Hokkaido. Ohmori, H., et al, 1989, p.1-18, jpn 45-629
- Topographic effects on precipitating snow clouds in Japan.** Kikuchi, K., et al, 1987, p.109-128, eng 45-905
- Photosynthetic productivity of ice algae in Hokkaido.** Satoh, H., et al, 1989, p.274-278, eng 45-3313
- Observation of the plankton in drift ice.** Tamura, T., 1991, p.134-138, jpn 45-3316
- Grazing by a choanoflagellate from sea ice in Hokkaido.** Marchant, H.J., 1990, p.1-7, eng 45-3341
- Variability in sterol flux in the ice-covered lagoon Saroma Ko, Hokkaido, Japan.** Sasaki, H., et al, 1990, p.8-15, eng 45-3342
- Photosynthesis and primary production of ice algae in Hokkaido.** Satoh, H., et al, 1989, p.1-8, eng 45-3343
- Phytoplankton bloom under sea ice in Hokkaido.** Fukuchi, M., et al, 1989, p.9-15, eng 45-3344
- Zooplankton abundance under sea ice in Hokkaido.** Nishiyama, T., et al, 1987, p.123-137, eng 45-3345
- Abundance of *Parasagitta elegans* under sea ice in Hokkaido.** Kotori, M., et al, 1987, p.138-144, eng 45-3346
- Sapporo**  
 Snow Sapporo 21st Century Project. Sugawara, T., 1990, p.1-20, eng 45-3527
- Saroma, Lake**  
 Environmental protection of Lake Saroma, Hokkaido. Takeuchi, T., et al, 1988, p.65-70, jpn 45-2507
- Jet engines**  
 Thermal analysis of engine inlet anti-icing systems. Al-Khalil, K.M., et al, 1990, p.628-634, eng 45-1015
- Jets**  
*See also:* Hydraulic jets
- Joints (junctions)**  
 Fracturing in earth dams with zones of frozen ground in shore-junctions. Belan, V.I., 1990, p.79-83, rus 45-521
- Improving thermal insulation of external wall panel joints.** Zheleznyy, V.I., 1985, p.27-38, rus 45-633
- Karst**  
 Karst drainage in a permafrost setting: the case of Akpatok Island, Northwest Territories, Canada. Lauriol, B., et al, 1990, p.129-144, eng 45-1294
- Permafrost and thermokarst.** Higgins, C.G., et al, 1990, p.211-218, eng 45-2593
- Problems in geometeorology and the accumulation of winter cold.** Koval'chuk, A.I., ed, 1990, 119p., rus 45-2695
- Thermal regime of karst caves and tunnels in the Central Volga region.** Stankevich, E.F., et al, 1990, p.38-41, rus 45-2702
- Microclimate of small karst forms in the foothills of the Crimean mountains.** Dushkevskii, V.P., 1990, p.45-46, rus 45-2704
- Microclimatic characteristics of karst caves in Pamir-Alai.** Sultanov, E.S., et al, 1990, p.61-63, rus 45-2708
- Exogenous geological processes in areas affected by the Bratak reservoir.** Litvin, V.M., et al, 1990, p.99-106, rus 45-2869
- Groundwater in cold climates: interaction between glacier and karst aquifers.** Lauritzen, S.E., 1990, p.139-146, eng 45-3790
- See also:* Thermokarst
- Kashmir**  
**Karakoram Mountains**  
 Quaternary alluvial fans in the Karakoram Mountains. Derbyshire, E., et al, 1990, p.27-53, eng 45-1575
- Kenya**  
**Kenya, Mount**  
 Ice on the equator: Quaternary geology of Mount Kenya, East Africa. Mahaney, W.C., 1990, 386p. + 7 plates, eng 45-2393
- Labor costs**  
*See also:* Work time standards

## Laboratories

Laboratory on Avalanches and Mudflows of Moscow State University. Laptev, M.N., et al, 1989, p.131-132, rusj 45-1048

## Laboratory techniques

Collection of intact cores from a rocky desert and a glacial till soil. Lewis, T.E., et al, 1990, p.938-940, engj 45-225

Gas pressure calibration using mercury melting curve with ice-salt mixtures. Lusk, J., 1990, p.852-856, engj 45-712

2M3 isothermal cloud chamber for the study of artificial ice nuclei. Feng, D., et al, 1990, p.494-502, engj 45-1081

Stars of snow. Delly, J.G., 1990, p.223-232, engj 45-1647

Recovery and dating of carbon dioxide in polar ice cores. Wilson, A.T., et al, 1989, p.579-584, engj 45-1845

Nonevaporative preconcentration technique for volatile and semivolatile solutes in certain polar solvents. Jenkins, T.F., et al, 1991, p.1341-1343, engj 45-3447

Absorption coefficients of ice from 250 to 400 nm. Perovich, D.K., et al, 1991, p.1233-1235, engj 45-3761

## Labrador Sea

LIMEX'87 ice surface characteristics and their effect upon C-band SAR signatures. Drinkwater, M.R., 1989, p.390-393, engj 45-238

Labrador ice margin experiment LIMEX'89; an overview. Raney, R.K., et al, 1989, p.1517-1519, engj 45-272

Wave evolution in the marginal ice zone. Liu, A.K., et al, 1989, p.1520-1523, engj 45-273

LIMEX'89: active/passive microwave signatures of Newfoundland pack ice. Livingstone, C.E., et al, 1989, p.1524-1527, engj 45-274

Observations of sea ice drift off Newfoundland using satellite imagery and ice beacons. Peterson, I.K., et al, 1989, p.2359-2362, engj 45-294

Sea ice fluctuations in the western Labrador Sea (1963-1988). Peterson, I.K., et al, 1990, 130p., engj 45-1287

## Lacustrine deposits

Sub-glacial sediment deformation model. Schokking, F., 1990, p.291-304, engj 45-356

Estimating ice sheet thickness from clay profiles. Schokking, F., 1990, p.305-312, engj 45-357

Origin of sediments in lakes on the Greenland ice sheet. Olinger, C.T., et al, 1990, p.77-93, engj 45-1145

Problems of agroindustrial use of lacustrine thermokarst. Tishin, M.I., ed, 1990, 116p., rusj 45-3031

Formation of the alassy complex of deposits in the Mayn River basin. Kotov, A.N., 1990, p.59-64, rusj 45-3035

Forecasting lacustrine thermokarst in the Chukotskiy Peninsula. Tishin, M.I., 1990, p.96-99, rusj 45-3040

Study of humic components of soils and sediments from Antarctica. Campanella, L., et al, 1990, p.89-93, engj 45-3199

Sedimentation at Lake Hoare. Squyres, S.W., et al, 1991, p.363-379, engj 45-3457

## Lake bursts

Formation and failure of natural dams. Costa, J.E., et al, 1987, 39p., engj 45-530

Ice-dammed lake drainage mechanisms in Greenland. Russell, A.J., et al, 1988, p.143-147, engj 45-1094

Simulation of flood waves from outburst of glacier-dammed lake. Fernández, P.C., et al, 1991, p.42-53, engj 45-1655

Researches of glacier lake outburst floods of the Yarkant River in Xinjiang. Zhang, X.S., et al, 1990, p.1014-1024, engj 45-2178

Non-meteorological flood disasters in Chile. Peña, H., et al, 1989, p.243-258, engj 45-2770

Glaciofluvial sediment transport and erosion. Tomasson, H., 1990, p.27-36, engj 45-3779

## Lake effects

Lake-effect snowstorms over Lake Michigan. Hjelmfelt, M.R., 1990, p.138-150, engj 45-307

Wind profiler and RASS measurements in the vicinity of lake-effect snowbands: some preliminary findings. Penc, R.S., et al, 1991, p.69-72, engj 45-1591

Use of mobile radiosonde systems to observe the environments of Lake Ontario winter storms. Byrd, G.P., et al, 1991, p.1142-1145, engj 45-1600

Preprint volume. 1991, 436p., engj 45-1933

Lake-effect storms east of Lake Ontario. Penc, R.S., et al, 1991, p.252-257, engj 45-1940

Proceedings of the 47th annual Eastern Snow Conference, Bangor, ME, June 7-8, 1990, 250p., engj 45-2181

Objective guidance for 1- and 2-day mesoscale forecasts of lake-effect snow. Burrows, W.A., 1990, p.121-134, engj 45-2192

Lake Ontario winter storms (LOWS) project. Niziol, T.A., et al, 1990, p.175-187, engj 45-2197

Regional snowfall intensity and the Great Lakes anomaly. Ryerson, C.C., et al, 1990, p.189-199, engj 45-2198

Lake Ontario and lake effect snow in New York. Ferlito, J.J., et al, 1990, p.219-224, engj 45-2201

Problems of agroindustrial use of lacustrine thermokarst. Tishin, M.I., ed, 1990, 116p., rusj 45-3031

Development of thermokarst lakes in the Arctic. Shumilov, I.U.V., 1990, p.20-26, rusj 45-3032

Forecasting midyear temperatures of coarsely dispersed soils. Stepanova, I.V., et al, 1990, p.112-115, rusj 45-3042

## Lake ice

Ice interaction with a rubble mound breakerwater: a case study. MacIntosh, K.J., 1985, 121p., engj 45-182

Hydrology of floating ice. Gerard, R., 1990, p.103-134, engj 45-216

Surface water supplies. Ryan, W.L., 1990, p.301-316, engj 45-411

Formation and growth of lake ice. Nelson, W.G., 1990, p.459-467, engj 45-417

On the rate of heat transfer between a lake and an ice sheet. Hamblin, P.F., et al, 1990, p.173-182, engj 45-499

Origin and development of some lakes in the Anadyr Plain. Liubomirov, A.S., 1987, p.89-99, rusj 45-578

Formation of the chemical composition of ice in Siberia and the Far East. Ivanov, A.V., 1989, p.62-67, rusj 45-1036

Glaciological and geocryological investigations on Novolazarevskaya Station. Vtiurin, B.I., 1990, p.93-104, rusj 45-1561

Computer graphics of the Great Lakes ice cycle. Assel, R.A., et al, 1991, p.331-335, engj 45-1917

Temperature of water masses and the surface of bottom sediments of Lake Krugloye. Kotlov, S.B., et al, 1989, p.102-110, rusj 45-2015

Relationship of ice cover growth on the Kuybyshev and Gor'kiy reservoirs to temperature anomalies of Atlantic waters. Podsechina, T.V., 1989, p.87-93, rusj 45-2277

Forecasting of ice cover breakup dates and ice removal from reservoirs. Poliakov, K.N., 1989, p.102-108, rusj 45-2279

Calculating the breakup of ice cover on rivers and reservoirs. Borshch, S.V., et al, 1989, p.113-120, rusj 45-2281

Ice engineering for rivers and lakes bibliography. Wortley, C.A., 1990, 158p., engj 45-2311

Designing for control of ice conditions in marinas. Wortley, C.A., 1991, p.386-395, engj 45-2350

Water level and ice melting observations on Beaver Lake. Piskun, A.A., 1990, p.55-64, rusj 45-2570

Results of isotope hydrochemical testing of Beaver and Radok Lakes. Vand, U., et al, 1990, p.90-95, rusj 45-2573

Field studies of algal metabolism in ice-covered lakes in Alaska. Alexander, V., et al, 1970, p.31-52, engj 45-3114

Long term Lake Erie and Lake Superior ice cover variations. Assel, R.A., 1990, p.731-748, engj 45-3238

Sedimentation at Lake Hoare. Squyres, S.W., et al, 1991, p.363-379, engj 45-3457

Abiotic dynamics of Lake Kitezh, Antarctica. Contreras, M., et al, 1991, p.9-32, spaj 45-3552

Modeling of the ice growth and melting in a lake. Kvon, V.I., et al, 1990, p.279-288, engj 45-3583

Role of thermal expansion of ice in forming lake shoreline profiles. Tesaker, E., 1990, p.464-473, engj 45-3599

Classification system of winter conditions of small-craft harbor design for the Great Lakes. Wortley, C.A., 1990, p.821-834, engj 45-3632

Method of radar fresh-water ice measurements from a moving vehicle. Klein, G.S., et al, 1990, p.1144-1154, engj 45-3661

River and lake ice conditions as determined from AIRSAR imagery. Melloh, R.A., et al, 1990, p.37-42, engj 45-3755

Interpreting passive and active microwave imagery over snow-covered lakes. Melloh, R.A., et al, 1990, p.259-278, engj 45-3808

Ecological aspects of lake regulation in northern Finland; part 2. Hellsten, S., et al, 1989, 131p. + append., finj 45-3845

## Lake water

Episodic acidification of Adirondack lakes during snowmelt. Schaefer, D.A., et al, 1990, p.1639-1647, engj 45-224

Year-round temperature simulation of cold climate lakes. Gu, R., et al, 1990, p.147-160, engj 45-497

On the rate of heat transfer between a lake and an ice sheet. Hamblin, P.F., et al, 1990, p.173-182, engj 45-499

Subice layering and origin of acidic waters in a small boreal lake during spring runoff. Roberge, J., et al, 1991, p.479-492, engj 45-3105

Hydrogeography of the Schirmacher Hills region. Richter, W., 1991, p.367-373, gerj 45-3556

Potential effects of global warming on the primary productivity of a subalpine lake. Byron, E.R., et al, 1990, p.983-989, engj 45-3695

## Lakes

Surface water supplies. Ryan, W.L., 1990, p.301-316, engj 45-411

Year-round temperature simulation of cold climate lakes. Gu, R., et al, 1990, p.147-160, engj 45-497

Origin and development of some lakes in the Anadyr Plain. Liubomirov, A.S., 1987, p.89-99, rusj 45-578

Phytoplankton dynamics in three Rocky Mountain lakes, Colorado, U.S.A. McKnight, D.M., et al, 1990, p.264-274, engj 45-889

Photoheterotrophy and dark heterotrophy in ice-covered Lake St. Clair. Wallen, D.G., 1990, p.339-345, engj 45-1388

Tundra lakes and streams as gas conduits to the atmosphere. Kling, G.W., et al, 1991, p.298-301, engj 45-1474

Radiative thermophysics of snow and ice. Krass, M.S., et al, 1990, 260p., rusj 45-1532

Temperature of water masses and the surface of bottom sediments of Lake Krugloye. Kotlov, S.B., et al, 1989, p.102-110, rusj 45-2015

Consequences of an avalanche striking an ice-covered lake. Williams, M.W., et al, 1990, p.51-60, engj 45-2121

Hydrology of lakes and wetlands. Winter, T.C., et al, 1990, p.159-187, engj 45-2150

Winter sewer construction in Campbell Lake. Corwin, B.J., et al, 1991, p.126-135, engj 45-2328

Some aspects of iron cycling in maritime antarctic lakes. Ellis-Evans, J.C., et al, 1989, p.149-164, engj 45-2613

Nitrogen cycling in arctic lakes and ponds. Alexander, V., et al, 1989, p.165-172, engj 45-2614

Energy storage in copepods from antarctic lakes. Clarke, A., et al, 1989, p.183-191, engj 45-2616

Biogeochemical study of organic substances in antarctic lakes. Matsumoto, G.I., 1989, p.265-289, engj 45-2619

Exogenous processes in the southern Lake Baykal area. Imetkhenov, A.B., 1990, p.111-114, rusj 45-2871

Duration of liquid water habitats on early Mars. McKay, C.P., et al, 1991, p.214-221, engj 45-3192

Nitrogen, phosphorus, and organic carbon cycling in an arctic lake. Whalen, S.C., et al, 1985, p.797-808, engj 45-3244

Ecological aspects of lake regulation in northern Finland; part 1. General results. Alasaarela, E., et al, 1989, 56p., finj 45-3844

Ecological aspects of lake regulation in northern Finland; part 2. Hellsten, S., et al, 1989, 131p. + append., finj 45-3845

Ecological aspects of lake regulation in northern Finland; part 3. Tikkanen, P., et al, 1989, 105p. + append., finj 45-3846

Ecological aspects of lake regulation in northern Finland; part 5. Alasaarela, E., et al, 1989, 49p., finj 45-3847

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## Laminar flow

Method for predicting freezing in forced flow. Albert, M.R., et al, 1990, p.9-14, engj 45-1163

Effect of orientation on solidification for mixed-convection flow in a rectangular channel. Incropera, F.P., et al, 1990, p.377-396, engj 45-1925

Unsteady free convective flow in an enclosure containing water near its density maximum. Oosthuizen, P.H., et al, 1990, p.83-91, engj 45-3098

## Land development

Geocryology of the USSR. Mountainous regions of southern USSR. Ershov, E.D., ed, 1989, 358p., rusj 45-430

Coal resources of the Susitna lowland, Alaska. Merritt, R.D., 1990, 181p. + append., engj 45-489

Snowmelt in converting mountain land into farmland (Part 3). Sawada, N., et al, 1988, p.837-842, jpnj 45-2520

## Land ice

Ice thickness data, winter 1987-1988. 1990, 70p., engj 45-552

Radar sounding of the surface of the Earth from space. Nazirov, M., et al, 1990, 200p., rusj 45-986

Role of land ice in present and future sea-level change. Meier, M.F., 1990, p.171-184, engj 45-1656

Radar detection of ice wedges in Alaska. Arcone, S.A., et al, 1982, 15p., engj 45-3021

## Land reclamation

Reclamation challenges at Usibelli Coal Mine in Healy, Alaska. Jackson, L.P., 1989, p.167-170, engj 45-344

Fungi in reclamation of cold climate mining wastes. Veith, D.L., et al, 1989, p.177-188, engj 45-346

Wetland creation and restoration: the status of the science. Kusler, J.A., ed, 1990, 594p., engj 45-1406

Creation of wetlands in the northeastern United States. Lowry, D.J., 1990, p.267-280, engj 45-1407

Regional analysis of the creation and restoration of kettle and pothole wetlands. Hollands, G.G., 1990, p.281-298, engj 45-1408

Regional analysis of fringe wetlands in the Midwest: creation and restoration. Levine, D.A., et al, 1990, p.299-325, engj 45-1409

Creation and restoration of riparian wetlands in the agricultural Midwest. Willard, D.E., et al, 1990, p.327-350, engj 45-1410

Arctic tundra rehabilitation: observations of progress and benefits to Alaska. McKendrick, J.D., 1991, p.29-40, engj 45-2649

Strip mine reclamation and Alaska's big game wildlife. Elliott, C.L., et al, [1991, p.41-44, eng] 45-2450

From boreal forest to reclaimed site: revegetation at the Jäsbjelli Coal Mine. Helm, D.J., [1991, p.45-50, eng] 45-2451

Effect of neotectonics on water and salt regimes in land reclamation areas. Borisenko, I.M., et al, [1990, p.122-128, rus] 45-2824

Geocryological investigations in meliorative and agricultural land development. Krivoshechekov, V.S., [1990, p.51-58, rus] 45-3034

See *also*: Revegetation

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See *also*: Terrain identification

**Landforms**  
Retrospective thaw slumps. Burn, C.R., et al, [1990, p.273-276, eng] 45-631

Correlating marine, loess, and glacial-flatland formations. Zubakov, V.A., [1989, p.21-24, rus] 45-789

Periglacial landforms of Vestfold Hills and Fildes Peninsula. Zhang, Q., [1989, p.74-81, eng] 45-1010

Boulder fields of Mt. Fulufjället, west-central Sweden. Kleman, J., et al, [1990, p.63-78, eng] 45-1189

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Cryoplanation terraces, northern Yukon. Lauriol, B., [1990, p.347-351, eng] 45-1424

Quaternary alluvial fans in the Karakoram Mountains. Derbyshire, E., et al, [1990, p.27-53, eng] 45-1575

Ice marginal ramps and alluvial fans in semiarid mountains. Kühle, M., [1990, p.55-68, eng] 45-1576

Alluvial fans in Japan and South Korea. Ono, Y., [1990, p.91-107, eng] 45-1577

Evolution of the alluvial fans of the Alfvöld. Borsy, Z., [1990, p.229-246, eng] 45-1578

Leba River alluvial fan and its palaeogeomorphological significance. Rachocki, A.H., [1990, p.305-317, eng] 45-1579

Ice-lobe contact sedimentary scarps. Kasprzak, L., et al, [1989, p.69-81, eng] 45-2001

Medium scale landforms of glacial erosion in South Greenland: process and form. Glasser, N.F., et al, [1990, p.211-215, eng] 45-2024

Fluid volcanism on Miranda and Ariel: flow morphology and composition. Schenk, P.M., [1991, p.1887-1906, eng] 45-2166

High Arctic thrust block moraines. Evans, D.J.A., et al, [1991, p.93-97, eng] 45-2174

Comparative digital analysis of Seasat-SAR and Landsat-TM data for Iceland. Rast, M., et al, [1991, p.527-544, eng] 45-2223

Development of the Earth's surface in Finland. Aartolahti, T., [1990, p.203-219, fin] 45-2421

Glacial morphology as an indicator of the direction of glacial transport. Lundqvist, J., [1990, p.61-70, eng] 45-2545

Glacial flow indicators in air photographs. Kujansuu, R., [1990, p.71-86, eng] 45-2546

Compositional variability of till in marginal areas of continental glaciers. Stewart, R.A., et al, [1990, p.123-149, eng] 45-2549

Permafrost and thermokarst. Higgins, C.G., et al, [1990, p.211-218, eng] 45-2593

Geomorphic controls of groundwater hydrology. Coates, D.R., [1990, p.341-356, eng] 45-2594

Problem of cryoplanation terraces. Czudek, T., [1990, p.225-238, ger] 45-3054

Forecasters handbook for the arctic. Sechrist, F.S., et al, [1989, 364p., eng] 45-3092

Seasonal frost mounds. Pollard, W.H., [1991, p.214-218, eng] 45-3367

See *also*: Offshore landforms

**Landing strips**  
See *also*: Aircraft landing areas; Ice runways; Runways

**LANDSAT**  
Breonie, Aurine and Pustersee alpine glaciers through the 7 September 1985 Landsat TM image. Attardo, C., et al, [1989, p.3-19, ita] 45-359

Monitoring river ice with Landsat images. Gatto, L.W., [1990, p.1-16, eng] 45-484

Spectral properties of fog over the Malaspina Glacier, AK. Ormsby, J.P., et al, [1991, p.179-185, eng] 45-1720

Spaceborne remote sensing of the earth. Volkov, A.M., et al, [1990, p.5-20, rus] 45-2207

Landsat mapping of surface albedo of the Colorado Front Range. Duguay, C.R., et al, [1991, p.213-223, eng] 45-3486

Albedo measurements from snow—image processing of LANDSAT-5 TM data. Winther, J.G., et al, [1990, p.195-201, eng] 45-3795

Snowmelt stages on LANDSAT images. Fuller, G.A., et al, [1990, p.375-377, eng] 45-3815

**Landscape development**  
Dynamics of wetland landscapes and reliably predicting their development. Aavikko, K.D., et al, [1989, p.221-226, eng] 45-857

Boulder fields of Mt. Fulufjället, west-central Sweden. Kleman, J., et al, [1990, p.63-78, eng] 45-1189

Dune development in an Alaskan subarctic environment. Dijkmans, J.W.A., et al, [1990, p.93-109, eng] 45-1191

Landscape changes due to geological-prospecting operations, IAmal Peninsula. Grigor'ev, N.F., et al, [1990, p.4-8, rus] 45-1195

Development of thermokarst lakes during the Holocene at sites near Mayo, Yukon Territory. Burn, C.R., et al, [1990, p.161-176, eng] 45-1296

Minimum altitudes for former periglacial landforms in Colorado and New Mexico. Marker, M.E., [1990, p.366-374, eng] 45-1418

History of the development of the relief of northern Chukotka. Glushkova, S.I.U., et al, [1989, p.73-88, rus] 45-2495

Using satellite photography for investigating Late Pleistocene glaciation areas. Glushkova, O.I.U., [1989, p.89-101, rus] 45-2496

Effects of suburbanization upon snowmelt runoff. Buttle, J.M., [1990, p.285-302, eng] 45-2995

Analyzing landscape change in arctic ecosystems. Walker, D.A., et al, [1991, p.244-276, eng] 45-3187

**Landscape types**  
Frozen types of landscape structures in northwest Komsomolets I. Smirnov, I.P., [1989, p.388-393, rus] 45-493

Experiment in cryogenic-landscape mapping of southern Yakutia. Shats, M.M., et al, [1987, p.49-55, rus] 45-574

Dynamics of wetland landscapes and reliably predicting their development. Aavikko, K.D., et al, [1989, p.221-226, eng] 45-857

Ecosystems of landscapes in the western central taiga (structure, dynamics). Lopatin, V.D., ed, [1990, 284p., rus] 45-1119

Geocryological studies of northern Western Siberia. Konstantinov, I.P., ed, [1990, 117p., rus] 45-1194

Landscape changes due to geological-prospecting operations, IAmal Peninsula. Grigor'ev, N.F., et al, [1990, p.4-8, rus] 45-1195

Distribution of surface radiation balance in northeastern Western Siberia. Skriabin, P.N., et al, [1990, p.28-33, rus] 45-1198

Regional ecological-geochemical analysis of landscapes. Kasimov, N.S., et al, [1990, p.59-74, rus] 45-1966

Landscape indication of Quaternary deposits and soils in the Pripet Marshes. Obukhovskii, I.U.M., [1990, 192p., rus] 45-2211

See *also*: Alpine landscapes; Arctic landscapes; Deserts; Environments; Forest land; Forest tundra; Karst; Littoral zone; Ocean environments; Polar regions; Steppes; Subarctic landscapes; Subpolar regions; Taiga; Tundra

**Landslides**  
Landslides as a possible trigger of glacier surge. Gardner, J.S., et al, [1990, p.159-162, eng] 45-57

Formation and failure of natural dams. Costa, J.E., et al, [1987, 39p., eng] 45-530

Landslides of cryogenic origin in the Tien Shan highlands. Tarakanov, A.G., [1989, p.54-59, rus] 45-703

Dynamics of granular motion. Locat, J., et al, [1990, p.2/42-2/48, fre] 45-1790

Mobility of rock avalanches. Hungr, O., [1990, p.11-20, eng] 45-2301

Prediction of slope failure time by reciprocal of mean velocity. Fukuzono, T., [1990, p.45-81, jpn] 45-2302

See *also*: Mudflows

**Large unit construction**  
See *also*: Modular construction

**Lasers**  
Using lasers and infrared heaters as UNREP icing countermeasures. Schultz, L.A., et al, [1989, 267p., eng] 45-92

Northern latitude logistic support. Mackes, J., [1989, p.451-457, eng] 45-548

Climate measurements by the EOS Geoscience Laser Ranging System. Spinhrne, J.D., et al, [1991, p.17-22, eng] 45-1512

Laser spectroscopy of snow and ice cover. Zalikhanov, M.Ch., et al, [1989, p.43-47, eng] 45-2107

Determination of ice sublimation and sputtering yields by reflectance measurements. Spinella, F., et al, [1991, p.307-313, eng] 45-2484

**Latent heat**  
Zero-curtain effect: heat and mass transfer across an isothermal region in freezing soil. Outcalt, S.I., et al, [1990, p.1509-1516, eng] 45-222

Microcomputer simulation of phase change heat transfer. Farag, I.H., et al, [1990, p.43-65, eng] 45-1432

**Laws**  
See *also*: Legislation

**Layers**  
Seasonally thawing and freezing layers of the Lena-Aldan interfluv. Vasil'ev, I.S., [1987, p.65-77, rus] 45-576

Sludge freezing in shallow layers. Vesilind, P.A., et al, [1990, p.646-650, eng] 45-844

Identification of annual layers in superimposed ice from Storöyönkuilen in northeastern Svalbard. Jonsson, S., et al, [1990, p.41-54, eng] 45-1187

See *also*: Stratification

**Lead iodide**  
Influence of lead iodide aerosol dispersy on its ice-forming activity. Baklanov, A.M., et al, [1991, p.9-14, eng] 45-2441

**Leakage**  
Hydraulic seals in arctic conditions. Soudunsaari, R., et al, [1989, p.77-84, eng] 45-1218

See *also*: Air leakage

**Legislation**  
Snow sensors in wilderness areas. Brandow, C.A., [1990, p.145-149, eng] 45-2133

Arctic navigation: problems of 2 sea passages. Young, O.R., [1990, p.35-39, rus] 45-2388

Soviet maritime arctic. Brigham, L.W., ed, [1991, 336p., eng] 45-3323

Environmental protection in the Soviet arctic seas. Roginko, A., [1991, p.63-82, eng] 45-3327

Legal regime of Soviet arctic marine areas. Butler, W.E., [1991, p.215-234, eng] 45-3335

Comparison of Soviet arctic and antarctic policies. Joyner, C.C., [1991, p.284-299, eng] 45-3338

Arctic research of the United States, Vol.5. [1991, 99p., eng] 45-3544

**Level**  
See *also*: Altitude; Sea level; Water level

**Lichens**  
Experiments on lichen growth. I. Seasonal patterns and environmental controls. Benedict, J.B., [1990, p.244-254, eng] 45-887

Oscillations of glaciers in the interior of Tien Shan. Solomina, O.N., [1990, p.142-149, rus] 45-1753

Climate change and glacier fluctuation during the last 1,000 years. Kotliakov, V.M., et al, [1991, p.1-12, eng] 45-2434

Experiments on lichen growth 2. Effects of a seasonal snow cover. Benedict, J.B., [1991, p.189-199, eng] 45-3483

**Lidar**  
Lidar observations of the horizontal orientation of ice crystals in cirrus clouds. Thomas, L., et al, [1990, p.211-216, eng] 45-1384

Ozone and aerosol distributions measured by airborne lidar during the 1988 Arctic Boundary Layer Experiment. Browell, E.V., et al, [1991, p.J242-J243, eng] 45-1601

Aircraft observations of atmospheric flow parallel to the ice edge. Shaw, W.J., et al, [1991, p.4691-4708, eng] 45-2680

**Life (durability)**  
Fatigue characterization of Alaska paving materials (final report). Coetzee, N.F., et al, [1988, 126p., eng] 45-311

**Light effects**  
Development of ice periphyton of the Amur River under different light conditions. Iur'ev, D.N., et al, [1988, p.1546-1551, rus] 45-3369

Morphogenesis of the brown alga *Desmarestia antarctica*—seasonal variations. Wiencke, C., et al, [1991, p.65-78, eng] 45-3553

**Light scattering**  
Radiative thermophysics of snow and ice. Krass, M.S., et al, [1990, 260p., rus] 45-1532

Determination of ice sublimation and sputtering yields by reflectance measurements. Spinella, F., et al, [1991, p.307-313, eng] 45-2484

Springtime visibility in the Arctic. Meyer, F.G., et al, [1991, p.342-357, eng] 45-3017

**Light transmission**  
Anomalies in the viscosity of amorphous ice. Shavlov, A.V., [1989, p.1206-1207, eng] 45-1026

Infrared transmission through cirrus clouds: a radiative model for target detection. Liou, K.N., et al, [1990, p.1886-1896, eng] 45-3366

Catalog of smoke/obscurant characterization instruments. O'Brien, H.W., ed, [1984, 184p., eng] 45-3476

**Light (visible radiation)**  
Abiotic dynamics of Lake Kitezh, Antarctica. Contreras, M., et al, [1991, p.9-32, spa] 45-3552

**Lighting**  
See *also*: Illuminating

**Lightning**  
Radar detection of lightning and electric fields. Metcalf, J.I., [1989, 34p., eng] 45-89

**Lightweight concretes**  
Frost resistance of lightweight concrete. Uozumi, K., et al, [1988, p.83-86, jpn] 45-2509

Deterioration of lightweight fly ash concrete due to gradual cryogenic frost cycles. Khayat, K.H., [1991, p.233-239, eng] 45-3828

**Limnology**  
Water-quality research. Gregor, D.J., [1990, p.163-186, eng] 45-218

Water level and ice melting observations on Beaver Lake. Piskun, A.A., [1990, p.55-64, rus] 45-2570

Results of isotope hydrochemical testing of Beaver and Radok Lakes. Vand, U., et al, [1990, p.90-95, rus] 45-2573

High latitude limnology. Vincent, W.F., ed, [1989, 323p., eng] 45-2602

Comments on the so-called salt lakes of Greenland. Williams, W.D., [1991, p.67-74, eng] 45-2943

**Limnology (cont.)**

- Antarctic saline lake zooplankton changes due to seawater incursions. Eslake, D., et al, [1991, p.93-99, eng] 45-2944
- Vernal stratification in a saline lake: causes and biological significance. Northcote, T.G., et al, [1990, p.105-114, eng] 45-2945
- Abiotic dynamics of Lake Kitezh, Antarctica. Contreras, M., et al, [1991, p.9-32, spa] 45-3552
- Potential effects of global warming on the primary productivity of a subalpine lake. Byron, E.R., et al, [1990, p.983-989, eng] 45-3695

**See also: Lakes****Liquefied gases**

- Properties of concrete mixed with sand frozen by liquid nitrogen. Negami, Y., et al, [1990, p.79-87, jpn] 45-874

**Liquid cooling**

- Solidification of an alloy cooled from above: Part 1. Equilibrium growth. Kerr, R.C., et al, [1990, p.323-342, eng] 45-970
- Boundary integral approach to unstable solidification. Strain, J., [1989, p.342-389, eng] 45-973
- Solidification of an alloy cooled from above: Part 2. Non-equilibrium interfacial kinetics. Kerr, R.C., et al, [1990, p.331-348, eng] 45-1087
- Tiny tubes prevent liquids from freezing. [1991, p.27, eng] 45-2221
- Planetary applications of slurry rheology. Kargel, J.S., et al, [1991, p.93-112, eng] 45-2288
- Characterization of polymer networks by measurements of the freezing point depression. Arndt, K.F., et al, [1990, p.806-813, eng] 45-2312
- Water thermal storage with solidification. Chen, S.L., et al, [1991, p.79-90, eng] 45-2762
- Four-photon polarization spectroscopy of a Rayleigh line wing in liquid water near 0 deg C. Bunkin, A.F., et al, [1990, p.29-31, eng] 45-2930
- Inward solidification of a superheated liquid in a cooled horizontal tube. Viskanta, R., et al, [1982, p.39-46, eng] 45-2933

**Liquid phases**

- Solidification of an alloy in a cavity cooled through its top surface. Cao, W.Z., et al, [1990, p.427-434, eng] 45-772
- When the melting and freezing points are not the same. Berry, R.S., [1990, p.68-74, eng] 45-966
- Boundary integral approach to unstable solidification. Strain, J., [1989, p.342-389, eng] 45-973
- Characterization of polymer networks by measurements of the freezing point depression. Arndt, K.F., et al, [1990, p.806-813, eng] 45-2312

**Liquid solid interfaces**

- Solution for solidification by convective and radiative cooling. Parang, M., et al, [1990, p.142-148, eng] 45-221
- Boundary integral approach to unstable solidification. Strain, J., [1989, p.342-389, eng] 45-973
- High speed numerical technique to solve coupled moving boundary value heat problems. Sharma, R.K., et al, [1990, p.1-8, eng] 45-1080
- Solidification of an alloy cooled from above: Part 2. Non-equilibrium interfacial kinetics. Kerr, R.C., et al, [1990, p.331-348, eng] 45-1087
- Numerical method for phase-change problems. Kim, C.J., et al, [1990, p.2721-2734, eng] 45-1871
- Description of freezing front progression in a slab. Guiffant, G., et al, [1991, p.11-17, eng] 45-1907
- Conservative algorithm for multidimensional conduction phase change. Comini, G., et al, [1990, p.697-709, eng] 45-2175
- Heat transfer with freezing and thawing. Lunardini, V.J., [1991, 437p., eng] 45-2390
- Inward solidification of a superheated liquid in a cooled horizontal tube. Viskanta, R., et al, [1982, p.39-46, eng] 45-2933
- Enthalpy formulation for phase change problems. Lee, S.L., et al, [1991, p.1491-1502, eng] 45-3023
- Fluid mixing during melting. Woods, A.W., [1991, p.1393-1404, eng] 45-3030
- Holographic interferometry experiments on the growth of ice from a horizontal pipe. Spatz, T.L., et al, [1991, p.1847-1859, eng] 45-3365
- Moving and deforming finite-element simulation of two-dimensional Stefan problems. Zabarav, N., et al, [1990, p.495-506, eng] 45-3699

**Liquids****See also: Frozen liquids****Lithology**

- Cryolithology of loose deposits in the Kenkeme River valley. Botulu, T.A., [1987, p.138-141, rus] 45-584
- Formation conditions of the ice-mineral complex of Ice Mountain. Kuznetsova, T.P., et al, [1989, 172p., rus] 45-1116
- Reconstructed ice-flow patterns and ice limits using drift pebble lithology. Bell, T., et al, [1989, p.577-590, eng] 45-1613
- Reconstructed ice-flow patterns and ice limits using drift pebble lithology, outer Nachvak Fjord, northern Labrador: discussion and reply. Clark, P.U., et al, [1990, p.1002-1011, eng] 45-1685

- Primary geochemical aureoles of kimberlites in the cryolithozone. Agayshv, B.S., [1989, p.142-153, rus] 45-1835
- Paleogeographical regularities of glacial lithogenesis. Sudakova, N.G., [1990, 158p., rus] 45-1865
- Cryolithology of the lower course of the Lena River. Kunitskil, V.V., [1989, 162p., rus] 45-2424
- Deposits of the glacial paleoshelf in the Bol'shezemel'skaya tundra. Lavrushin, I.U.A., et al, [1989, p.3-51, rus] 45-2445
- Glacial indicator tracing. Kujansuu, R., ed, [1990, p.252p., eng] 45-2541
- Compositional variability of till in marginal areas of continental glaciers. Stewart, R.A., et al, [1990, p.123-149, eng] 45-2549
- Lithology and transport distance of glaciofluvial material. Lilliesköld, M., [1990, p.151-164, eng] 45-2550
- Classifying lithological complexes of seasonally-saturated deposits. Ivanova, L.D., et al, [1989, p.13-22, rus] 45-2625
- Relict cryolithozone in the Timan-Pechora petroleum province. Oberman, N.G., [1989, p.88-96, rus] 45-2633
- Dufek intrusion of Antarctica. Ford, A.B., [1990, p.15-32, eng] 45-2802
- Geology around the Norwegian antarctic station 'Troll', Jutulessen, Dronning Maud land. Dallmann, W.K., et al, [1990, 39p., eng] 45-3881

**Littoral zone**

- Geomorphology of the Onega Cliffs littoral zone of the White Sea. Matoshko, A.V., et al, [1988, p.62-69, rus] 45-682
- Ultramicroscopic forms in the Barents Sea littoral mud. Mishustina, I.E., et al, [1973, p.138-140, rus] 45-3232
- Engineering geology of eroding coastlines. Kurfurst, P.J., et al, [1991, p.179-188, eng] 45-3270
- Thermoluminescence properties of fiord sediments from Spitsbergen. Forman, S.L., [1990, p.377-384, eng] 45-3292
- Effect of ice on habitat conditions in the littoral zone of the White Sea. Savos'kin, I.U.M., [1967, p.197-202, rus] 45-3352
- Ecological aspects of lake regulation in northern Finland; part 2. Hellsten, S., et al, [1989, 131p. + append., fin] 45-3845

**Loading**

- Heavy trucks, climate and pavement damage. [1988, 175p., eng] 45-1479
- Reversed direct-stress testing of ice: initial experimental results and analysis. Cole, D.M., [1990, p.303-321, eng] 45-1620
- Low temperature brittle fracture behavior of steel in mixed modes I and II. Macagno, T.M., et al, [1991, p.111-128, eng] 45-2294
- Design of a high-pressure low-temperature triaxial deformation cell for ice. Sammonds, P.R., et al, [1991, p.177-188, eng] 45-3423
- Thirty-five years of sea-ice runway operation—McMurdo Station, Antarctica. Barthelemy, J.L., [1990, p.864-877, eng] 45-3636
- Steel-ice friction coefficient under high contact pressure. Enoki, K., et al, [1990, p.902-911, eng] 45-3639
- Threshold pavement thickness to survive spring thaw. White, T.D., et al, [1990, p.41-51, eng] 45-3690
- Loading type effect on pavement deflection. Wiman, L.G., et al, [1990, p.829-839, eng] 45-3693
- Norwegian model for prediction of pavement deterioration (7). Bertelsen, D., [1990, p.875-886, eng] 45-3694
- Transient creep of an ice sheet lying on a hydraulic base under a concentrated load. Aleksandrov, V.M., et al, [1991, p.793-799, eng] 45-3774

**See also: Unloading****Loads (forces)**

- Ice load measurements on board MS *Kemira*, winter 1989. Gylden, R., et al, [1989, 66p., eng] 45-93
- Studying ice cover creep under loads distributed along a strip. Kreichman, M.M., et al, [1987, p.81-89, rus] 45-1567
- Effect of snow and constant loads on the flexural strength of wooden structures. Denesh, N.D., [1990, p.16-20, rus] 45-1587
- Frost heave forces on H and pipe piles embedded in Fairbanks silt. Johnson, J.B., et al, [1988, 83p., eng] 45-1649
- Model tests of the grounding resistance of fresh and consolidated ice rubble. Sayed, M., et al, [1990, p.73-82, eng] 45-1768
- Strength of frozen saline soils in the Yamal Peninsula. Brushkov, A.V., et al, [1990, p.115-120, rus] 45-2899
- Two and three dimensional response of nonlinear soil under gravity structures. Prasad, K.S.R., et al, [1991, p.253-260, eng] 45-3177
- See also: Dynamic loads; Ice loads; Ice pressure; Pile load tests; Snow loads; Soil pressure; Static loads; Water pressure; Wind pressure**

**Loams**

- Cryolithology of loose deposits in the Kenkeme River valley. Botulu, T.A., [1987, p.138-141, rus] 45-584
- Origin of the ice in the outcrop "Ledyanaya Gora". Karpov, E.G., [1987, p.142-146, rus] 45-585

- Saline frozen soils as a foundation for structures; collected scientific papers. Vialov, S.S., ed, [1990, 143p., rus] 45-2882
- Effect of saline solutions on frozen soils and mortars. Gaidenko, E.I., [1990, p.62-70, rus] 45-2891
- Forecasting long-term deformation of frozen saline soils. Roman, L.T., et al, [1990, p.73-83, rus] 45-2893
- Determining the creep properties of saline frozen soils. Brushkov, A.V., et al, [1990, p.83-90, rus] 45-2894
- Estimating strength and rheological properties of saline frozen soils. Mirenburg, I.U.S., et al, [1990, p.90-98, rus] 45-2895
- Effect of salinity on strength and rheological properties of frozen soils. [Arkin, A.N., [1990, p.103-107, rus] 45-2897
- Method of determining the equivalent cohesion of saline frozen soils. Aksenov, V.I., [1990, p.107-115, rus] 45-2898
- Strength of frozen saline soils in the Yamal Peninsula. Brushkov, A.V., et al, [1990, p.115-120, rus] 45-2899
- Determining long-term equivalent cohesion of frozen soils. Vorob'evskii, B.E., [1990, p.121-123, rus] 45-2900
- Electrical and acoustic properties of saline frozen soils. Zikov, I.U.D., et al, [1990, p.128-136, rus] 45-2902
- Freeze/thaw effect on soil aggregate stability. Edwards, L.M., [1991, p.193-204, eng] 45-3193

**Loess**

- Freezing point of loess in Lanzhou, China. Qiu, G.Q., et al, [1990, p.105-115, chi] 45-452
- Using loess-soil formation to correlate glacial, periglacial, and coastal zones. Velichko, A.A., et al, [1989, p.14-21, rus] 45-788
- Correlating marine, loess, and glacial-flatland formations. Zubakov, V.A., [1989, p.21-24, rus] 45-789
- Ecosystems of landscapes in the western central taiga (structure, dynamics). Lopatin, V.D., ed, [1990, 284p., rus] 45-1119
- Evolution and differentiation of Earth's natural environment. Gerasimov, I.P., [1990, 311p., rus] 45-2839

**Logging**

- See also: Electrical logging; Radioactive logging; Recording; Well logging**

**Logistics**

- Italian research program. Cervellati, R., [1990, p.137-150, eng] 45-128
- Antarctic testbed for extraterrestrial operation and technology. Bell, L., et al, [1990, p.1188-1197, eng] 45-375
- How to achieve cold weather underway replenishment capability. Miller, M.O., et al, [1989, p.193-206, eng] 45-537
- First large balloon launch from Antarctica. Ground, J., et al, [1988, 108p., eng] 45-644
- Oil spill response guide. [1989, 314p., eng] 45-1478
- Antarctic logistic support for the earth sciences. Turner, M.D., et al, [1990, p.223-235, eng] 45-2814
- Scientific plan for deep ice drilling on Law Dome. Etheridge, D.M., [1990, 41p., eng] 45-3533

**Long range forecasting**

- Long range regional forecasting of avalanches and mudflows. Berri, B.L., et al, [1990, p.46-52, rus] 45-677
- Dynamics of wetland landscapes and reliably predicting their development. Aaviksoo, K.D., et al, [1989, p.221-226, eng] 45-857
- Long range forecasting of runoff from the Murgab and Tedzhen Rivers. Shentsia, I.D., et al, [1990, p.129-144, rus] 45-997
- Forecasting the time distribution of water inflow into a reservoir. Komarov, V.D., [1989, p.3-10, rus] 45-2274
- Calculating the effect of water reserves and depth of soil freezing. Komarov, V.D., [1989, p.21-29, rus] 45-2275

**Long-range forecasting of intensive ice drift on the Yenisey River.**

- Efremova, N.D., [1989, p.82-87, rus] 45-2276
- Forecasting of ice cover breakup dates and ice removal from reservoirs. Poliakov, K.N., [1989, p.102-108, rus] 45-2279
- Long range forecasting of ice conditions on non-arctic seas, USSR 1990/91. [1990, 9p., rus] 45-2309
- Forecasting long-term deformation of frozen saline soils. Roman, L.T., et al, [1990, p.73-83, rus] 45-2893

**Low temperature research**

- Stability of gas hydrates. Rodger, P.M., [1990, p.6080-6089, eng] 45-713
- Identification of two distinct structural and dynamical domains in an amorphous water cluster. Buch, V., [1990, p.2631-2639, eng] 45-805
- Australian studies in antarctic weather and climate. Stretten, N.A., [1989, p.411-417, eng] 45-1012
- Low temperature pumpability studies in a heavy-duty diesel engine, part II. Machleder, W.H., et al, [1989, p.439-453, eng] 45-1253
- CRREL research on materials in cold environments. Dutta, P.K., [1990, 20p., eng] 45-2002
- Frost resistance of elastomers. Bukhina, M.F., et al, [1989, 176p., rus] 45-2204

- Further inquiry into the cryobehavior of aqueous solutions of glycerol. Chang, Z.H., et al, [1991, p.268-278, eng] **45-3100**
- Low-temperature decontamination with DS2. Parker, L.V., et al, [1991, 23p, eng] **45-3260**
- West Antarctic Ice Sheet Initiative. Discipline reviews. Bindschadler, R.A., ed, [1991, 143p, eng] **45-3277**
- C-14 lipid distribution in psychrophilic marine diatom. Katahira, R., et al, [1991, p.9-16, eng] **45-3461**
- Scientific plan for deep ice drilling on Law Dome. Etheridge, D.M., [1990, 41p, eng] **45-3533**
- Low temperature tests**
- Wear and tightness of moving seals. Popov, S.N., et al, [1990, p.614-623, eng] **45-164**
- Proton irradiation of ice mixtures. Nuth, J.A., et al, [1989, p.565-569, eng] **45-397**
- Effect of temperature and galvanization on the compressive strength of cold-formed angles. Polyzois, D., et al, [1990, p.440-451, eng] **45-398**
- Research on low temperature properties of asphalts. Moriyoshi, A., et al, [1989, p.131-138, jpn] **45-872**
- Elastic properties of a tungsten monocarbide-based metaloceramic at low temperatures. Ulianov, V.L., et al, [1990, p.93-95, eng] **45-993**
- Subzero Engineering Conference proceedings, [1989, 470p., eng] **45-1209**
- Automotive exhaust emissions at low ambient temperature. Laurikko, J.K., [1989, p.35-46, eng] **45-1212**
- Performance of thermoplastic elastomers (TPEs) at subzero temperatures. Brugada, R., [1989, p.67-73, eng] **45-1216**
- Hydraulic seals in arctic conditions. Soudunsaari, R., et al, [1989, p.77-84, eng] **45-1218**
- Engine testing at low temperatures. Nylund, N.O., [1989, p.85-92, eng] **45-1219**
- Influence of diesel fuel properties and ambient temperature on engines. Juva, A., et al, [1989, p.101-111, eng] **45-1221**
- Scania battery heater for heavy trucks. Friedel, G., [1989, p.113-118, eng] **45-1222**
- Field testing in cold climate—a decade of experience. Lindwall, O., [1989, p.133-138, eng] **45-1225**
- Behaviour of metal supported catalysts in subzero conditions. Aitta, E., et al, [1989, p.165-169, eng] **45-1230**
- Engine lubrication in cold start-up. Kytö, M., [1989, p.251-256, eng] **45-1238**
- Heater/defroster testing in the real world. Leier, T.E., et al, [1989, p.405-411, eng] **45-1250**
- Compressibility of diesel and methanol fuels at low temperatures. Varde, K.S., [1989, p.455-459, eng] **45-1254**
- Low-temperature performance of elastomeric bearings. Roeder, C.W., et al, [1990, p.113-132, eng] **45-1522**
- Critical assessment of low temperature properties of multi-grade SAE 10W-30 engine oils. Deysarkar, A.K., et al, [1990, p.502-507, eng] **45-1525**
- Fraass breaking point test: automatic testing and an examination of asphalt quality. Sasaki, K., et al, [1990, p.10-17, jpn] **45-1666**
- Strength of cryogenic engineering alloys under electromagnetic loads. Strizhalo, V.A., et al, [1990, 154p., rus] **45-1856**
- CRREL research on materials in cold environments. Dutta, P.K., [1990, 20p., eng] **45-2002**
- Low temperature brittle fracture behavior of steel in mixed modes I and II. Maccagno, T.M., et al, [1991, p.111-128, eng] **45-2294**
- Rock characteristics under very low temperatures. Aoki, K., et al, [1990, p.319-325, eng] **45-2295**
- Lubricants at low temperatures. Diemand, D., [1990, 24p., eng] **45-2487**
- Lipid composition of *Mycobacterium mucosum* oxidizing hydrocarbons. Koronelli, T.V., et al, [1977, p.1070-1073, rus] **45-3137**
- Autumn freeze testing of one-year reciprocal families of *Pinus sylvestris* (L.). Nilsson, J.E., et al, [1990, p.501-511, eng] **45-3206**
- Design of a high-pressure low-temperature triaxial deformation cell for ice. Sammonds, P.R., et al, [1991, p.177-188, eng] **45-3423**
- Lubricants**
- Present and future fuels and lubricants in cold climate operation. Haahela, O., et al, [1989, p.239-250, eng] **45-1237**
- Engine lubrication in cold start-up. Kytö, M., [1989, p.251-256, eng] **45-1238**
- Refinery/additive technologies and low temperature engine oil pumpability. Rossi, A., [1989, p.257-267, eng] **45-1239**
- Lubricant low temperature pumpability studies. May, C.J., et al, [1989, p.277-286, eng] **45-1240**
- Synthetic automotive lubricants for superior low-temperature operation. Aho, E., et al, [1989, p.421-437, eng] **45-1252**
- Low temperature pumpability studies in a heavy-duty diesel engine, part II. Machleder, W.H., et al, [1989, p.439-453, eng] **45-1253**
- Synthetic products as basic components of low-pour motor oils. Tsvetkov, O.N., et al, [1990, p.189-192, eng] **45-1385**
- Critical assessment of low temperature properties of multi-grade SAE 10W-30 engine oils. Deysarkar, A.K., et al, [1990, p.502-507, eng] **45-1525**
- Lubricants at low temperatures. Diemand, D., [1990, 24p., eng] **45-2487**
- Luminance**
- Specific luminance of dry road markings during different seasons. Lundkvist, S.O., [1990, 21p., swe] **45-209**
- Luminescence**
- Luminescence spectrum of irradiated deuterium oxide ice. Vernon, C.F., et al, [1990, p.529-531, eng] **45-590**
- Thermoluminescence properties of fiord sediments from Spitsbergen. Forman, S.L., [1990, p.377-384, eng] **45-3292**
- See *also*: Thermoluminescence
- Machinery**
- Ice removal using a rotating working device. Sabatanskene, V.A., et al, [1989, p.403-408, eng] **45-2927**
- Macquarie Island**
- Holocene climates of the Vestfold Hills, Antarctica, and Macquarie Island. Pickard, J., et al, [1984, p.173-182, eng] **45-2983**
- Magma**
- Fluid mixing during melting. Woods, A.W., [1991, p.1393-1404, eng] **45-3030**
- Magnetic properties**
- Frost action of soil revealed by magnetic susceptibility anisotropy. Warburton, J., [1990, p.507-510, eng] **45-2214**
- Magnetic resonance**
- See *also*: Nuclear magnetic resonance
- Magnetic surveys**
- Presence of Trident III on the antarctic continent. Dumas, B., [1986, p.223-237, fre] **45-1989**
- Magnetism**
- See *also*: Geomagnetism
- Maintenance**
- Antarctic automatic weather stations: austral summer 1988-1989. Stearns, C.R., et al, [1990, p.242-243, eng] **45-1440**
- Operations and maintenance of a northern pipeline. Sangster, R.H.B., [1990, p.377-384, eng] **45-1960**
- Integrity monitoring criteria and methods for ice scour problems. Price, P.St.J., et al, [1990, p.419-444, eng] **45-1963**
- Finnish building technique in cold regions, part 10. Kkriäinen, H., et al, [1990, 58p., fin] **45-3880**
- See *also*: Road maintenance; Subgrade maintenance; Winter maintenance
- Manuals**
- Airborne cryogenic frost-point hygrometer: user's guide. Spyers-Duran, P.A., [1990, 41p., eng] **45-204**
- Handbook on climate of the USSR. [1989, 268p., eng] **45-309**
- Humidity of air, atmospheric precipitation, snow cover in the USSR. [1989, 288p., eng] **45-310**
- Millimeter-wave radar scattering from terrain: data handbook. Haddock, T.F., et al, [1990, 133p., eng] **45-313**
- Portland cement concrete materials manual. [1989, 208p., eng] **45-317**
- Trends '90: a compendium of data on global change. Boden, T.A., et al, [1990, 257p. + appends., eng] **45-1089**
- Rock blasting in seasonally freezing ground. Reference manual. Frash, G.B., [1990, 110p., rus] **45-1703**
- Cost estimation in construction; for northern regions. Handbook. Liberman, I.A., [1990, 224p., rus] **45-1866**
- Manufacturing**
- Winter channel formation in sluiced disposal areas. Pantelev, V.G., et al, [1990, p.709-719, eng] **45-3621**
- Mapping**
- Experiment in cryogenic-landscape mapping of southern Yakutia. Shats, M.M., et al, [1987, p.49-55, rus] **45-574**
- Complex glaciological mapping. Khodakov, V.G., et al, [1989, p.17-24, rus] **45-1029**
- Cartographic analysis of the interrelations in glacier systems. Glebova, L.N., et al, [1989, p.24-29, rus] **45-1030**
- Mapping snow cover in the mountains of Afghanistan by means of space photography. Kravtsova, V.I., [1989, p.44-49, rus] **45-1033**
- Methods of mapping snowmelt and glacier runoff in mountainous countries. Ananicheva, M.D., et al, [1989, p.49-55, rus] **45-1034**
- Airborne topographic mapping of glacier fluctuations. Kuz'michenok, V.A., [1989, p.80-87, rus] **45-1039**
- Method of computer mapping the exposure and slope of an area. Isaev, A.A., et al, [1990, p.81-84, rus] **45-1108**
- Status of the national wetlands inventory in Alaska. Hall, J.V., [1989, p.853-859, eng] **45-1404**
- Snow cover mapping of Afghanistan's mountains with space imagery. Kravtsova, V.I., [1990, p.295-302, eng] **45-1526**
- Experiment in composing a geobotanical map of the Noril'sk city region. Moskalenko, N.G., [1972, p.54-63 + map, rus] **45-1716**
- Mapping glacial-nival phenomena and human activity. Osokin, N.I., et al, [1990, p.177-181, rus] **45-1758**
- Prospecting for man-induced cryopegs using transient processes. Nim, I.U.A., [1989, p.117-130, rus] **45-1833**
- Seasonal and inter-annual variations in antarctic sea ice extent as mapped by radar altimetry. Laxon, S., [1990, p.1553-1556, eng] **45-1979**
- Polar research. Molnia, B.F., [1990, p.59-60, eng] **45-2243**
- Polar research from satellites. Thomas, R.H., [1991, 91p., eng] **45-2406**
- Creating a computer radar map of Antarctica. Spiridonov, I.U.G., et al, [1989, p.126-134, rus] **45-2758**
- Geodetic measurements in Dronning Maud Land. Eiken, T., et al, [1990, p.101-111, eng] **45-2836**
- Construction of sea ice maps from satellite data. Nikitin, P.A., et al, [1990, p.926-936, eng] **45-2970**
- Satellite information on ice conditions in the southern ocean and its scientific and operational application to navigation. Provorkin, A.V., et al, [1990, p.13-16, rus] **45-3074**
- SPOT imagery and nature and structure of ice on Adélie Coast. Choim, E., et al, [1991, p.827-834, fre] **45-3096**
- Radar altimeter ground truth measurements in Antarctica. [1989, p.1-3, eng] **45-3258**
- Terrestrial geophysics in the SeaRISE Project. Bentley, C.R., [1991, p.49-54, eng] **45-3280**
- Topographic and gravity anomaly maps near Mizuho Plateau. Nagao, T., et al, [1991, p.56-69, jpn] **45-3396**
- Determination of snow water equivalent on the Canadian prairies. Goodison, B.E., et al, [1990, p.297-316, eng] **45-3809**
- See *also*: Infrared mapping; Sensor mapping; Soil mapping; Stereomapping
- Maps**
- Arctic region temperature mapping by integration of automated station data. Jacobs, J.D., [1990, p.84-96, eng] **45-362**
- Geocryological subdivision map of the Baykal-Amur region. Fotiev, S.M., et al, [1987, p.25-38, rus] **45-572**
- Bering, Chukchi, and Beaufort Seas coastal and ocean zones. [1988, 128 leaves, eng] **45-807**
- Creating a computer radar map of Antarctica. Spiridonov, I.U.G., et al, [1989, p.126-134, rus] **45-2758**
- Sea ice observations from the Winter Weddell Gyre Study-'89. Meese, D.A., et al, [1991, 161p., eng] **45-2903**
- Operational maps of soil moisture of areas with and without snow cover. Nazirov, M., [1990, p.411-424, eng] **45-2912**
- Glacier atlas of Canada. Ommanney, C.S.L., [1989, 54 leaves, eng] **45-3261**
- National atlas; Mongolian People's Republic. Sodnom, N., ed, [1990, 144p., rus] **45-3764**
- See *also*: Charts; Geological maps; Meteorological charts; Topographic maps
- Marginal ice zone**
- See *also*: Ice edge
- Marine atmospheres**
- Air-sea exchange of organic air pollutants in arctic oceans. Hinckley, D.A., et al, [1991, p.7201-7213, eng] **45-2559**
- Marine biology**
- Bering, Chukchi, and Beaufort Seas coastal and ocean zones. [1988, 128 leaves, eng] **45-807**
- Outer Continental Shelf Environmental Assessment Program: Final reports of principal investigators, Vol.71. [1990, 472p., eng] **45-2154**
- Gulf of Alaska, Cook Inlet, and North Aleutian environmental assessment. Jarvela, L.E., ed, [1989, 179p., eng] **45-2156**
- Marine biology of the Weddell Sea. Gulliksen, B., et al, [1990, p.131-138, eng] **45-2838**
- General ecology and paleogeography of the polar oceans. Matishov, G.G., et al, [1990, 223p., rus] **45-2881**
- Ultrastructural organization of yeast isolated from an antarctic glacier. Abyzov, S.S., et al, [1983, p.914-922, rus] **45-2984**
- Biological interactions. Schell, D., [1980, p.336-341, eng] **45-3046**
- Sea ice fauna of Frobisher Bay, arctic Canada. Grainger, E.H., et al, [1985, p.23-30, eng] **45-3059**
- Phytoplankton in coastal waters of the Arctic Ocean at Point Barrow, Alaska. Bursa, A., [1963, p.239-262, eng] **45-3071**
- Trophic relationships at high arctic ice edges. Bradstreet, M.S.W., et al, [1982, p.1-12, eng] **45-3072**
- Birds, mammals, and fish at the Pond Inlet ice edge. Bradstreet, M.S.W., [1982, p.28-40, eng] **45-3073**
- Diversity of bacterial populations in the Beaufort Sea. Kaneko, T., et al, [1977, p.596-599, eng] **45-3095**
- Marine ecology study in Frobisher Bay, arctic Canada. Grainger, E.H., [1975, p.261-266, eng] **45-3112**
- Metabolic activities of phytoplankton associated with arctic sea ice. Allen, M.B., [1970, p.1-17, eng] **45-3113**
- Arctic sea-ice biota. Horner, R.A., [1989, p.123-146, eng] **45-3115**

## Marine biology (cont.)

- Arctic Ocean phytoplankton. Heimdal, B.R., [1989, p.193-222, eng] 45-3116
- Foraminifera and pteropoda beneath the arctic sea ice: new distributions. Herman, Y., et al, [1989, p.223-234, eng] 45-3117
- Ecology of Arctic Ocean cryopelagic fauna. Mel'nikov, I.A., [1989, p.235-255, eng] 45-3118
- Influence of ice on the primary productivity of the Bering Sea. McRoy, C.P., et al, [1974, p.403-421, eng] 45-3120
- Marine metabolism at Resolute Bay, Northwest Territories. Welch, H.E., et al, [1975, p.11/69-11/75, eng] 45-3121
- Phytoplankton periodicity in antarctic surface waters. Hart, T.J., [1942, p.261-356, eng] 45-3122
- Plankton diatoms of the southern seas. Hendey, N.I., [1937, p.151-364, eng] 45-3123
- Algal populations in arctic sea ice: an investigation of heterotrophy. Horner, R., et al, [1972, p.454-458, eng] 45-3124
- Physical control of phytoplankton production under sea ice (Manitounuk Sound, Hudson Bay). Legendre, L., et al, [1981, p.1385-1392, eng] 45-3126
- On the phytoplankton of the south-west Atlantic and the Bellingshausen Sea, 1929-31. Hart, T.J., [1934, p.1-268, eng] 45-3128
- Physico-chemical and biological oceanography of Hudson Bay. Roff, J.C., et al, [1986, p.265-291, eng] 45-3129
- Observations on marine life beneath sea ice, Resolute Bay, N.W.T. Green, J.M., et al, [1975, p.11/77-11/86, eng] 45-3130
- Life history of an amphipod species in the Beaufort Sea. Boudrias, M.A., et al, [1988, p.249-257, eng] 45-3133
- Chlorophyll and photosynthesis in sea ice microalgae. Legendre, L., et al, [1987, p.199-203, eng] 45-3134
- Arctic sea ice faunal assemblage: meiofauna. Carey, A.G., Jr., et al, [1982, p.1-8, eng] 45-3135
- Oxidation of oil hydrocarbons by arctic pigmented *Mycobacterium* species. Koronelli, T.V., et al, [1981, p.167-170, rus] 45-3136
- Lipid composition of *Mycobacterium mucosum* oxidizing hydrocarbons. Koronelli, T.V., et al, [1977, p.1070-1073, rus] 45-3137
- Activity of microorganisms oxidizing hydrocarbons assayed in natural waters. Il'inskii, V.V., et al, [1989, p.658-662, rus] 45-3138
- Microorganisms of the eastern part of the Arctic Ocean. Kriss, A.E., [1945, p.268-276, rus] 45-3139
- Distribution of heterotrophic bacteria in the Atlantic Ocean. Kriss, A.E., [1970, p.362-371, rus] 45-3181
- Hydrobiological studies in the Arctic Ocean (SP-22, Dec. 1979-Apr. 1980). Mel'nikov, I.A., [1981, p.397, rus] 45-3182
- Hydrobiological studies at SP-22 in the Arctic Ocean (Spring 1981). Mel'nikov, I.A., [1982, p.158, rus] 45-3183
- Hydrobiological studies in the central part of the Arctic Ocean (Spring 1976). Mel'nikov, I.A., [1976, p.11/4-11/35, rus] 45-3184
- Hydrobiological studies in the central part of the Arctic Ocean. Mel'nikov, I.A., [1976, p.547-550, rus] 45-3185
- Cryobiological observations in the central Arctic Basin. Mel'nikov, I.A., [1979, p.150-155, rus] 45-3186
- Fermentative activity of microbial-antagonists. Trunova, O.N., [1977, p.91-97, rus] 45-3212
- Faunal assemblage inhabiting seasonal sea ice. Kern, J.C., et al, [1983, p.159-167, eng] 45-3217
- Convenient apparatus for *in situ* primary production studies. Watt, W., [1965, p.298-300, eng] 45-3218
- Present and planned marine ecological activities in Greenland. Petersen, G.H., [1975, p.11/1-11/12, eng] 45-3220
- Origin and evolution of the arctic marine ecosystems. Menzies, R.J., [1975, p.11/13-11/26, eng] 45-3221
- Marine ecology in arctic Canada. Mansfield, A.W., [1975, p.11/27-11/47, eng] 45-3222
- Ecology of the marine fishes of arctic Canada. McAllister, D.E., [1975, p.11/49-11/65, eng] 45-3223
- Arctic marine ecosystems and oil pollution. Percy, J.A., [1975, p.11/87-11/98, eng] 45-3224
- Projected ecosystem consequences arising from the discharge of mine-tailing to the sea. Ellis, D.V., et al, [1975, p.11/99-11/107, eng] 45-3225
- Problems in management oriented studies of birds and mammals in European high Arctic. Larsen, T., [1975, p.11/109-11/117, eng] 45-3226
- Interrelationships of Arctic Ocean mammals in the sea ice habitat. Stirling, I., et al, [1975, p.11/129-11/136, eng] 45-3227
- Role of marine mammals in the arctic ecosystems: research objectives, needs and direction. Smith, T.G., et al, [1975, p.11/137-11/145, eng] 45-3228
- Primary production in Frobisher Bay, arctic Canada. Grainger, E.H., [1979, p.9-30, eng] 45-3230
- Biological production in the Gulf of St. Lawrence. Dunbar, M.J., [1979, p.151-171, eng] 45-3231
- Studies of primary production in the eastern Bering Sea. McRoy, C.P., et al, [1972, p.199-216, eng] 45-3233
- Distribution of heterotrophic microorganisms in the Greenland Sea. Mishustina, I.E., et al, [1963, p.914-921, rus] 45-3240
- Photosynthesis and pigments of sea ice microalgae. Rochet, M., et al, [1986, p.211-226, eng] 45-3242
- Responses of sea ice microalgae to climate and tides. Gosselin, M., et al, [1985, p.999-1006, eng] 45-3243
- Hydrobiological studies in the Arctic Ocean at SP-23 (May-October 1977). Mel'nikov, I.A., et al, [1978, p.378-379, rus] 45-3249
- Numbers and production of bacterioplankton in the Barents Sea. Rossova, E.I.A., [1977, p.878-882, rus] 45-3250
- Hydrobiological studies in the central Arctic Basin (Spring 1978). Mel'nikov, I.A., [1978, p.1132, rus] 45-3255
- Life histories of copepods in high latitudes. Conover, R.J., [1988, p.127-142, eng] 45-3262
- Osmotic responses of amphipods in arctic waters. Aarset, A.V., et al, [1987, p.189-193, eng] 45-3286
- Feeding ecology of under-ice amphipods. Carey, A.G., Jr., et al, [1987, p.29-33, eng] 45-3287
- Adaptations to low temperature and brine exposure in amphipods. Aarset, A.V., et al, [1987, p.129-133, eng] 45-3288
- Effects of temperature on metabolic rates of copepods. Tande, K.S., [1988, p.457-461, eng] 45-3289
- Oil-oxidizing and heterotrophic microflora on the Eastern Murman coast. Dermicheva, S.G., [1985, p.139-143, eng] 45-3290
- Size, age and diet of polar cod, *Boreogadus saida* (Lepechin 1773), in ice covered waters. Lønne, O.J., et al, [1989, p.187-191, eng] 45-3317
- Effects of environmental variation on sinking rates of marine phytoplankton. Culver, M.E., et al, [1989, p.262-270, eng] 45-3318
- Copepods in arctic sea ice. Grainger, E.H., et al, [1986, p.303-310, eng] 45-3322
- Low temperature tolerance and osmotic regulation in amphipods. Aarset, A.V., et al, [1988, p.35-41, eng] 45-3339
- Diver-operated electric suction sampler for sympagic (=under-ice). Lønne, O.J., [1988, p.135-136, eng] 45-3340
- Ecology of sea colony birds of the Barents Sea. Belopol'skii, L.O., [1961, 346p., eng] 45-3349
- Botanical results from the voyage of the *Erma* to the Arctic Ocean, summer 1901. IV. Microflora of the Barents Sea and its ice. 1. Historical review of the microflora in the Barents Sea and adjacent seas. Palibin, I.V., [1904, p.71-80, rus] 45-3351
- Fishes of the northern seas of the U.S.S.R. Andriushev, A.P., [1964, 617p., eng] 45-3354
- Heterotrophic microorganisms in the Indian Ocean and adjacent antarctic seas. Lebedeva, M.N., [1958, p.557-560, rus] 45-3355
- Salinity tolerance of arctic marine amphipods. Shea, J.R., et al, [1990, p.275-281, eng] 45-3357
- Trophic relationships of the sea ice meiofauna in Frobisher Bay, arctic Canada. Grainger, E.H., et al, [1990, p.283-292, eng] 45-3358
- Development of ice periphyton of the Amur River under different light conditions. Iur'ev, D.N., et al, [1988, p.1546-1551, rus] 45-3369
- Distribution of a microbial population in the world ocean. Kriss, A.E., [1960, p.34-41, eng] 45-3370
- Biological seasons in the plankton of different seas. Bogorov, B.G., [1941, p.404-407, eng] 45-3371
- Ice-nucleating pseudomonads. Fall, R., et al, [1985, p.257-265, eng] 45-3385
- Exchange of energy in a near-shore ecosystem. Propp, M.V., [1977, p.598-610, eng] 45-3387
- Ecosystems of continental shelves. Golikov, A.N., et al, [1973, p.219-234, eng] 45-3389
- Marine diatoms from East Greenland. Østrup, E., [1900, p.395-476, dan] 45-3404
- Benthic marine diatoms. Round, F.E., [1971, p.83-139, eng] 45-3405
- Arctic diatom in Danish waters. Grøntved, J., [1950, 19p., eng] 45-3406
- Observation on young specimens of *Ammodytes dubius*. Holmquist, C., [1958, p.10-14, eng] 45-3407
- On the food of seals in the Canadian eastern Arctic. Dunbar, M.J., [1941, p.150-155, eng] 45-3408
- Living ice. Mel'nikov, I.A., [1984, p.68-77, rus] 45-3429
- Polar cod *Boreogadus saida* (Leresen.) and its importance in the Arctic. Klumov, S.K., [1937, p.175-188, rus] 45-3430
- Microorganisms as indicators of hydrological phenomena in seas and oceans. Kriss, A.E., et al, [1958, p.397-413, rus] 45-3431
- Ice algae in the East Siberian Sea in May 1987. Okolodkov, I.U.B., [1989, p.36-41, rus] 45-3434
- Ecological role of bacteria in detritus and aggregates in the Pacific Ocean. Sazhin, A.F., et al, [1989, p.682-692, rus] 45-3450
- Antarctic sea ice: a habitat for the foraminifer *Neogloboquadrina pachyderma*. Dieckmann, G.S., et al, [1991, p.182-189, eng] 45-3837
- Ecological aspects of lake regulation in northern Finland; part 3. Tikkanen, P., et al, [1989, 105p. + appends., fin] 45-3846
- Marine deposits**
- Low-mineralized massive ice in marine sediments. Ivanov, A.V., [1989, p.217-219, rus] 45-1065
- Paleoenvironmental significance of glaciomarine biofacies in the Gulf of Alaska. Lagoe, M.B., et al, [1989, p.194-209, eng] 45-1183
- Sea-level change and glacier oscillation indicators on Melville Moraine, Northwest Territories. Dredge, L.A., [1990, p.1215-1224, eng] 45-1272
- Late Mesozoic and Cenozoic paleoceanography of the northern polar oceans. Thiede, J., et al, [1990, p.427-458, eng] 45-1692
- Application of C-14 AMS dating to Holocene glacier fluctuation chronology. Blake, W., Jr., [1989, p.570-578, eng] 45-1844
- Deposition of the glaciomarine mud in the Gulf of Maine. Oldale, R.N., [1989, p.1-10, eng] 45-2055
- Late Wisconsinan glacial and glaciomarine sediments in Maine. Retelle, M.J., et al, [1989, p.33-51, eng] 45-2064
- Cryogenic diagenesis as the cause of ice deposits in arctic marine sediments. Danilov, I.D., [1991, p.78-80, eng] 45-2479
- Glaciomarine environments: processes and sediments. Dowdeswell, J.A., ed, [1990, 423p., eng] 45-2778
- On the description and modelling of glaciomarine sediments and sedimentation. Dowdeswell, J.A., et al, [1990, p.1-13, eng] 45-2779
- Effect of sedimentary changes on glaciomarine facies architecture. Boulton, G.S., [1990, p.15-52, eng] 45-2780
- Glaciomarine processes at grounding-line fans and their growth to ice-contact deltas. Powell, R.D., [1990, p.53-73, eng] 45-2781
- Sediment transport and deposition in a glacial fjord. Cowan, E.A., et al, [1990, p.75-89, eng] 45-2782
- Role of subglacial and marine processes in the production of laminated sediments. Domack, E.W., [1990, p.91-103, eng] 45-2783
- Rafting in glaciomarine environments. Gilbert, R., [1990, p.105-120, eng] 45-2784
- Modelling rates of sedimentation from icebergs. Dowdeswell, J.A., et al, [1990, p.121-137, eng] 45-2785
- Recent sedimentation processes on World Ocean shelves. Albulatov, N.A., ed, [1990, 207p., rus] 45-2874
- Quantitative distribution and the dynamics of sediments in the Kara Sea. Medvedev, V.S., et al, [1990, p.110-120, rus] 45-2879
- Study of humic components of soils and sediments from Antarctica. Campanella, L., et al, [1990, p.89-93, eng] 45-3199
- Thermoluminescence properties of fjord sediments from Spitsbergen. Forman, S.L., [1990, p.377-384, eng] 45-3292
- Sediment enrichment of coastal ice covers. Ackermann, N.L., et al, [1990, p.86-96, eng] 45-3567
- See also: Sediments**
- Marine geology**
- Modern structure of the arctic continental border of Eurasia. Senin, B.V., [1988, p.5-10, rus] 45-679
- Engineering geology of the USSR: shelves of the USSR. Dzhandzhgava, K.I., ed, [1990, 239p., rus] 45-1534
- Analysis of subsour stresses on buried submarine pipelines—summary report. Comfort, G., et al, [1990, 30p., eng] 45-1555
- Analysis of subsour stresses on buried submarine pipelines—vol.1A and 1B. Comfort, G., et al, [1990, 106p. + 324p., eng] 45-1556
- Arctic Ocean region. Grantz, A., ed, [1990, 644p. + 11 maps and charts in a separate case, eng] 45-1688
- Presence of glacial deposits in the central basin of the Barents Sea. Gataullin, V.N., et al, [1990, p.1463-1467, rus] 45-1860
- Case study analysis of the probability of ice scour-induced damage for submarine pipelines. Comfort, G., [1990, p.145-164, eng] 45-1949
- Studies in Maine geology. Tucker, R.D., ed, [1989, 6 vols., eng] 45-2054
- Late Quaternary geologic history of the Maine coast. Belknap, D.F., et al, [1989, p.29-46, eng] 45-2057
- Geomorphology and late Quaternary evolution of the Saco Bay region. Kelley, J.T., et al, [1989, p.47-65, eng] 45-2058
- Morphodynamics of tidal inlet systems in Maine. FitzGerald, D.M., et al, [1989, p.67-96, eng] 45-2059
- Late Wisconsinan deglaciation of coastal Maine. Smith, G.W., et al, [1989, p.13-32, eng] 45-2063
- Late Wisconsinan glacial geology of the eastern portion of Mount Desert Island. Lowell, T.V., [1989, p.103-118, eng] 45-2068
- Maximum advance of the Scandinavian ice sheet onto the shelf of the Barents Sea in Valday time. Dunsev, N.N., et al, [1991, p.70-73, eng] 45-2478
- Glaciomarine environments: processes and sediments. Dowdeswell, J.A., ed, [1990, 423p., eng] 45-2778
- On the description and modelling of glaciomarine sediments and sedimentation. Dowdeswell, J.A., et al, [1990, p.1-13, eng] 45-2779
- Effect of sedimentary changes on glaciomarine facies architecture. Boulton, G.S., [1990, p.15-52, eng] 45-2780

- Glacimarine processes at grounding-line fans and their growth to ice-contact deltas. Powell, R.D., (1990, p.53-73, eng) 45-2781
- Sediment transport and deposition in a glacial fjord. Cowan, E.A., et al, (1990, p.75-89, eng) 45-2782
- Role of subglacial and marine processes in the production of laminated sediments. Domack, E.W., (1990, p.91-103, eng) 45-2783
- Rafting in glacimarine environments. Gilbert, R., (1990, p.105-120, eng) 45-2784
- Modelling rates of sedimentation from icebergs. Dowdeswell, J.A., et al, (1990, p.121-137, eng) 45-2785
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- Latest Cretaceous to Cenozoic climate and oceanography of the Weddell Sea. Kennett, J.P., et al, (1990, p.937-960, eng) 45-3531
- Marine meteorology**
- Meteorological and sea ice forecasts to arctic region military units. Cianflone, R.E., et al, (1989, p.223-243, eng) 45-540
- CEAREX/Haakon Mosby meteorology atlas. Frederickson, P.A., et al, (1990, 57p., eng) 45-3853
- Marine transportation**
- Mountain glaciers—an overview with emphasis on Alaska. Coffin, J.H., et al, (1990, p.177-258, eng) 45-409
- Arctic Marine Transportation Program, 1979 to 1986. Executive summary. Voelker, R.P., (1990, 91p. + appends., eng) 45-813
- Evaluating the economic effectiveness of extending arctic navigation. Arikainen, A.I., et al, (1989, 70p., rus) 45-1714
- Plying the Northern Sea Route. Brigham, L.W., (1991, p.10-11, eng) 45-1721
- Development of the northwestern sea route. Arikainen, A.I., (1989, 206p., rus) 45-1722
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- Ice Technology for Polar Operations: proceedings of the 2nd international conference. (1990, 426p., eng) 45-2717
- Safe convoy of non-ice class ships along the Northern Sea Route. Arikainen, A.I., et al, (1990, p.259-267, eng) 45-2736
- Hydrometeorological information distribution to SAE ships. Kornilov, N.A., et al, (1990, p.36-40, rus) 45-3079
- Soviet maritime arctic. Brigham, L.W., ed, (1991, 336p., eng) 45-3323
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- Management of the Northern Sea Route. Arikainen, A.I., (1991, p.140-149, eng) 45-3330
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- Discrete element simulations of river ice transport. Babić, M., et al, (1990, p.564-574, eng) 45-3607
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- National economic basis for developing ice navigating transport ships. Arikainen, A.I., (1989, p.9-19, rus) 45-3835
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- See *also*: Glacier mass balance
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- See *also*: Permafrost mass transfer
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- Purity determination of standard analytical reference materials. Black, P.B., et al, (1990, 6p., eng) 45-90
- Performance of thermoplastic elastomers (TPEs) at subzero temperatures. Brugada, R., (1989, p.67-73, eng) 45-1216
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- See *also*: Analysis (mathematics)
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- Ice flow over an undulating base. Reeh, N., (1987, p.177-185, eng) 45-13
- Spatial distribution of glacier annual mass balance. Konovalov, V.G., (1987, p.212-217, eng) 45-17
- Theoretical determination of the characteristic equation of snow in the pendular regime. Morris, E.M., et al, (1990, p.179-187, eng) 45-60
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- Numerical simulation of ship manoeuvring motion in level ice. Lindström, C.A., (1990, p.198-208, eng) 45-134
- Dynamic model of floating ice masses colliding with rigid structures. Piola, S., (1990, p.539-554, eng) 45-157
- Evaporation and spread of chemicals on snow and ice. Kawamura, P.I., et al, (1987, p.53-76, eng) 45-180
- Lake-effect snowstorms over Lake Michigan. Hjelmfelt, M.R., (1990, p.138-150, eng) 45-307
- Interaction between permafrost and a deposit of natural gas hydrates. Tipenko, G.S., et al, (1990, p.73-84, rus) 45-322
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- Low-frequency acoustic wave-scattering phenomena under ice cover. Kuo, E.Y.T., (1990, p.361-372, eng) 45-366
- Spatial analysis of snowpack data. Burn, D.H., et al, (1989, p.475-483, eng) 45-399
- Viscoelastoplastic model of frozen soil. Cai, Z.M., et al, (1990, p.31-40, chi) 45-459
- Calculating formula of time-dependent temperature regime of frozen soil. Wang, J.F., (1990, p.128-133, eng) 45-485
- Mathematical model of glacier percolation zone. Cai, B.L., et al, (1990, p.223-226, eng) 45-486
- Model of a convective cloud with the microstructure of water and ice phases. Kogteva, E.A., et al, (1989, p.41-55, rus) 45-490
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- Variability of thickness of ice and snow in arctic seas and its parameterization. Appel, I.L., (1989, p.66-72, eng) 45-660
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- Constitutive model for frozen sand. Adachi, T., et al, (1990, p.208-212, eng) 45-851
- Similarity solutions for a Voellmy model of snow avalanches with finite mass. Hutter, K., et al, (1990, p.99-127, eng) 45-1024
- Davydov Glacier reaction to man-made destruction of its terminus. Alzin, V.B., et al, (1989, p.202-206, rus) 45-1061
- Transform equations of long flexural-gravity waves in an ice-covered sea. Iakovlev, V.V., (1990, p.107-113, rus) 45-1121
- Cylindrical flexural-gravity waves in an ice-covered sea. Tkachenko, V.A., et al, (1990, p.114-120, rus) 45-1122
- Modelling the behaviour of oil spills in ice-infested waters. Venkatesh, S., et al, (1990, p.303-329, eng) 45-1151
- Coupled one-dimensional sea ice-ocean model applied to a semi-enclosed basin. Omstedt, A., (1990, p.568-582, eng) 45-1175
- Tire force generation on ice. Hayhoe, G.F., et al, (1989, p.199-207, eng) 45-1233
- Mathematical modeling and analysis of heat pipe start-up from the frozen state. Jiang, J.H., et al, (1990, p.586-594, eng) 45-1262
- Theoretical model for rime ice accretion on conductors. Skelton, P.L.I., et al, (1988, p.214-218, eng) 45-1341
- Theoretical model of ice accretion on overhead line conductors. Poots, G., et al, (1988, p.219-223, eng) 45-1342
- Model for ice accretion on overhead transmission lines. Skelton, P.L.I., et al, (1988, p.224-226, eng) 45-1343
- Ship spraying/icing model to estimate icing rate. Zakrzewski, W.P., et al, (1988, p.399-404, eng) 45-1380
- Ballistic accretion on a point seed. Rambaldi, S., et al, (1988, p.411-414, eng) 45-1381
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- Modelling temperature distribution in water-bearing formations, especially by freezing. Marcak, H., et al, (1988, p.310-313, ger) 45-1477
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- Vapor-pressure dependence on temperature in models of snow metamorphism. Colbeck, S.C., (1990, p.351-352, eng) 45-1547
- Analysis of subsour stresses on buried submarine pipeline—Vol.3. Murray, A., et al, (1990, 45p. + appends., eng) 45-1558
- Investigating the interrelationship between climate and permafrost. Anisimov, O.A., et al, (1990, p.13-20, rus) 45-1630
- Some problems in research and applied modelling of ice cover. Doronin, I.U.P., et al, (1990, p.5-10, rus) 45-1631
- Quasistationary dimensionless model of arctic ice. Ivanov, B.V., et al, (1990, p.18-31, rus) 45-1633
- Modelling of ice drift in the arctic basin. Kolesov, S.A., (1990, p.32-38, rus) 45-1634
- Hydrodynamic model of steady-state ice drift. Ponomarev, V.I., (1990, p.39-52, rus) 45-1635
- Modelling of fall-winter ice phenomena. Petrov, V.M., et al, (1990, p.53-61, rus) 45-1636
- Specific aspects of modelling the evolution of ice cover on arctic seas. Appel, I.L., (1990, p.62-70, rus) 45-1637



## Mathematical models (cont.)

- Ice cover effects in models of sea level fluctuations and water circulation. Proshutinskiĭ, A.I.U., [1990, p.90-104, rus] 45-1640
- Calculating the parameters of ice drift in the Greenland Sea. Zubakin, G.K., [1990, p.105-115, rus] 45-1641
- Calculating pressure and drift in unbroken ice cover. Tsarev, V.A., [1990, p.125-129, rus] 45-1643
- Calculating transfer processes in models of ice cover evolution. Appel', I.L., et al, [1990, p.130-141, rus] 45-1644
- Mass balance and thermal regime of a crater glacier at Ushkovskii Volcano. Murav'ev, I.A.D., et al, [1990, p.411-424, eng] 45-1705
- Mathematical model of the properties and formation of snow cover structure. Guseva, E.V., et al, [1990, p.18-25, rus] 45-1731
- Problem of the thermal physics of snow-firn sequences. Bozhinskiĭ, A.N., et al, [1990, p.35-39, rus] 45-1733
- Thermomechanics of the East Antarctic Ice Sheet. Grigorian, S.S., et al, [1990, p.44-51, rus] 45-1735
- Model studies of the "atmosphere-snow-sea ice" system in an annual cycle. Oreshko, A.P., et al, [1990, p.51-57, rus] 45-1736
- Thermodynamics of ice creep. Ivanov, A.I., [1990, p.165-169, rus] 45-1756
- Studies of polycrystalline ice creep. Ivanov, A.I., [1990, p.184-188, rus] 45-1760
- Nonlinear formulation of snow creep. Olagne, X., et al, [1990, p.1-18, eng] 45-1763
- Modelling of iceberg drift motions near a large offshore structure. Isaacson, M., et al, [1990, p.47-58, eng] 45-1766
- Numerical models of wind. Solignac, C., [1990, p.119-126, frej] 45-1779
- Saint-Venant model for studying snow avalanches. Martinet, G., [1990, p.2168-2175, frej] 45-1792
- Numerical modeling of ocean circulation and ice cover over the continental shelf. Ikeda, M., [1991, p.97-117, eng] 45-1807
- Heat-moisture-salt regime of frozen ground during fall watering. Ivanov, V.A., et al, [1989, p.24-36, rus] 45-1826
- Mathematical model of periodically stabilizing phase front variations. Tetel'baum, A.S., et al, [1989, p.96-99, rus] 45-1831
- Prospecting for man-induced cryopegs using transient processes. Nim, I.U.A., [1989, p.117-130, rus] 45-1833
- Numerical study on freezing heat transfer in water-saturated porous media. Sasaki, A., et al, [1990, p.17-32, eng] 45-1926
- Modeling snowmelt runoff processes in temperate and arctic environments. Sand, K., [1990, 176p., eng] 45-1977
- Methods for stochastic modelling of temperature fields in the cryolithozone. Sagaidachnyi, I.U.A., et al, [1989, p.31-43, rus] 45-2006
- Model of ground freezing-thawing under complex boundary conditions. Abdushev, I.N., [1989, p.73-79, rus] 45-2011
- Two-layer wind-driven coastal circulation model. Poon, Y.K., et al, [1991, p.2535-2548, eng] 45-2041
- Periodic-stochastic modeling of separation of precipitation into rainfall and snowfall. Yevjevich, V., et al, [1990, p.2613-2623, eng] 45-2077
- Solute rejection in freezing soils. Panday, S., et al, [1991, p.99-108, eng] 45-2090
- Numerical simulation of over water heave motion of a two-dimensional hovercraft. Hinchey, M.J., [1989, p.25-38, eng] 45-2101
- Stochastic simulation of rain-on-snowmelt events. Brunengo, M.J., [1990, p.110-121, eng] 45-2128
- Local advection processes in the surface layer of the marginal ice zone. Claussen, M., [1991, p.1-27, eng] 45-2163
- Conservative algorithm for multidimensional conduction phase change. Comini, G., et al, [1990, p.697-709, eng] 45-2175
- Numerical study of three-dimensional natural convection during freezing of water. Yeoh, G.H., et al, [1990, p.899-914, eng] 45-2176
- Numerical investigation of border ice failure. Abdel-Zaher, A.K., [1990, p.13-25, eng] 45-2183
- Model for prediction of snow cover distribution. Sambles, K.M., et al, [1990, p.109-119, eng] 45-2191
- Pleistocene deglaciation model based upon predictions of sea level change. Tushingham, A.M., et al, [1991, p.4497-4523, eng] 45-2229
- Variability of the climate system and detection of the greenhouse effect. Wigley, T.M.L., et al, [1990, p.324-327, eng] 45-2239
- Dynamic transport of river ice. Shen, H.T., et al, [1990, p.659-671, eng] 45-2251
- MUTID: User-friendly one-dimensional thermal model. Braley, W.A., et al, [1991, p.1-10, eng] 45-2317
- Numerical analysis of frost shields. Coustermarsh, B.A., et al, [1991, p.178-190, eng] 45-2332
- Modeling the acoustic scattering by under-ice-ridge keels. Rubenstein, D., et al, [1991, p.666-672, eng] 45-2401
- Synergetics of ocean processes. Seidov, D.G., [1989, 287p., rus] 45-2407
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- Net radiation model for calculating daily snowmelt in open environments. Granger, R.J., et al, [1990, p.217-234, eng] 45-2524
- Long-term iceberg collision-risk assessment methods for fixed offshore structures. Korsnes, R., [1989, p.203-214, eng] 45-2591
- FE-modelling of ice failure load during ship bow indentation into multi-year ice. Liukkonen, S., et al, [1991, 40p. + appends., eng] 45-2691
- Mathematical model for predicting icebreaker performance. Carter, D., et al, [1990, p.177-192, eng] 45-2731
- Ice pattern recognition on space photos including drift. Bashun, V.V., et al, [1990, p.386-391, eng] 45-2911
- Model of transition processes in the tundra-taiga system. Bogatyrev, B.G., [1991, p.508-511, rus] 45-2936
- Algorithm to estimate the heating budget from vertical hydrometeor profiles. Tao, W.K., et al, [1990, p.1232-1244, eng] 45-2985
- Modelling of ship penetration into a mush ice field. Shih, L.Y., [1991, p.293-300, eng] 45-2987
- Dynamic-stochastic models of rainfall and snowmelt runoff formation. Kuchment, L.S., et al, [1991, p.153-169, eng] 45-2990
- Mathematical models for the prediction of river runoff. Shentzia, I.D., [1990, p.487-500, eng] 45-2991
- Model for description of seasonal mountainous snowmelt. Babiaková, G., et al, [1990, p.383-393, eng] 45-2994
- Analysis and prognosis of low temperatures adverse to plants using Markov chains. Liakatas, A., et al, [1990, p.381-384, eng] 45-3049
- Unsteady free convective flow in an enclosure containing water near its density maximum. Oosthuizen, P.H., et al, [1990, p.83-91, eng] 45-3098
- Deformation of a floating drilling platform made of built-up ice. Derradji-Aouat, A., et al, [1991, p.1-8, eng] 45-3141
- Comparison between different construction methods of ice islands. Szilder, K., et al, [1991, p.9-15, eng] 45-3142
- New creep damage relationship for ice. Marcellus, R.W., et al, [1991, p.39-45, eng] 45-3146
- Appraisal of a multisurface plasticity model for soils. Derradji-Aouat, A., et al, [1991, p.75-82, eng] 45-3151
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- Transport equations during ice segregation in a dispersed medium. Horiguchi, K., [1991, p.297-298, eng] 45-3210
- Mathematical model of ice cover edge dynamics of power plant tail race. Belolipetskiĭ, V.M., et al, [1990, p.78-82, eng] 45-3268
- Ozone trend in the Northern Hemisphere: a numerical study. Pitari, G., et al, [1991, p.10,931-10,940, eng] 45-3377
- Mathematical model for river ice processes. Lal, A.M.W., et al, [1991, p.851-867, eng] 45-3382
- Simulations of continental ice sheet growth over the last glacial-interglacial cycle. Deblonde, G., et al, [1991, p.9189-9215, eng] 45-3413
- Chaos in continuous-mode icebreaking. Ettema, R., et al, [1991, p.131-144, eng] 45-3420
- Model for attenuating creep of frozen sand. Domaschuk, L., et al, [1991, p.145-161, eng] 45-3421
- On the shear strength of geophysical scale ice rubble. Hopkins, M.A., et al, [1991, p.201-212, eng] 45-3425
- New model of frost heave prediction for clayey soils. Chen, X.B., et al, [1991, p.213-214, eng] 45-3426
- Influence of atmospheric pressure gradient variations on polar atmosphere simulation. Simmons, A.J., et al, [1991, p.29-58, eng] 45-3478
- Modeling the runoff of small rivers. Kovalev, S.N., [1991, p.708-714, eng] 45-3545
- CLASS—a Canadian land surface scheme for GCMS. I. Soil model. Verseghy, D.L., [1991, p.111-133, eng] 45-3548
- Searching for chaotic dynamics in snowmelt runoff. Wilcox, B.P., et al, [1991, p.1005-1010, eng] 45-3549
- Modeling ice cover evolution in the arctic seas during the melt period. Appel', I.L., [1990, p.97-110, eng] 45-3568
- Studies of the ice dynamics in the Arctic Basin over long-term periods. Appel', I.L., et al, [1990, p.111-123, eng] 45-3569
- Method of thermodynamic numerical sea ice forecast in the Bohai Sea. Chen, W.B., et al, [1990, p.143-152, eng] 45-3572
- Ice cover simulation for arctic estuary. Ivanov, V.V., et al, [1990, p.210-218, eng] 45-3577
- Rheological model of polycrystalline ice. Ivchenko, A.B., [1990, p.230-237, eng] 45-3579
- River frazil ice: a simplified theoretical model. Kolodko, J., [1990, p.252-260, eng] 45-3581
- Modeling of the ice growth and melting in a lake. Kvon, V.I., et al, [1990, p.279-288, eng] 45-3583
- Modelling the ice/water boundary layer. Omstedt, A., [1990, p.387-395, eng] 45-3592
- Mathematical model for ice processes in river networks. Shen, H.T., et al, [1990, p.726-734, eng] 45-3623
- Mathematical description of ice segregation in freezing soils. Nakano, Y., et al, [1990, 14p., eng] 45-3770
- Updating hydrological model forecasts. Assaf, H., et al, [1990, p.149-175, eng] 45-3804
- Dynamics of thermal energy in the snow-soil-regolith system during phase transformations. Mezherovskii, A.P., [1991, p.90-98, rus] 45-3839
- Time and space distribution of water reserves in snow in field and forest catchment areas. Sokolova, N.V., [1991, p.105-110, rus] 45-3840
- See also: Computerized simulation
- Meadow soils
- Microelements in Siberian soils. Senichkina, M.G., et al, [1986, p.115-131, rus] 45-608
- Phosphorus in frozen meadow-chernozem soils in the Amga River valley. Antipina, D.K., [1988, p.35-38, rus] 45-640
- Potassium in frozen meadow-chernozem soils. Antipina, D.K., [1990, p.74-78, rus] 45-641
- Snowpack and the subnivean environment for an open meadow. Auerbach, N.A., et al, [1991, p.41-44, eng] 45-2471
- Problems of agroindustrial use of lacustrine thermokarst. Tishin, M.I., ed, [1990, 116p., rus] 45-3031
- Hydro-thermobalanced and microclimatic investigations of a meadow-improving plot. Gavrilova, M.K., [1990, p.36-45, rus] 45-3033
- Agroclimatic and geothermophysical characteristics of northern meadows. Krivoshechekov, V.S., et al, [1990, p.78-87, rus] 45-3038
- Productivity of agrophytocenes in the eastern European tundra. Archegova, I.B., ed, [1991, 152p., rus] 45-3391
- Measurement
- Potential of radar echoes from ice sheets for wind measurement. Remy, F., et al, [1990, p.133-142, eng] 45-54
- Thermistor-based thermal conductivity measurement system. Atkins, R.T., et al, [1990, 11p., eng] 45-190
- Complex formation between dimethyl methylphosphonate and hexafluoroisopropanol. Leggett, D.C., [1990, 3p., eng] 45-191
- Airborne cryogenic frost-point hygrometer: user's guide. Spyers-Duran, P.A., [1990, 41p., eng] 45-204
- Cold regions hydrology and hydraulics. Ryan, W.L., ed, [1990, 827p., eng] 45-404
- Measurement and evaluation of winter precipitation. Tabler, R.D., et al, [1990, p.9-38, eng] 45-405
- Measurement and evaluation of snowpacks. Trabant, D.C., et al, [1990, p.39-93, eng] 45-406
- Measurement and interpretation of streamflow data. Santeford, H.S., [1990, p.401-431, eng] 45-415
- Evaluation of precipitation measurements in the Arctic. Clagett, G.P., [1990, p.617-639, eng] 45-422
- Measurement of the liquid water fraction of snow. Boyne, H.S., et al, [1990, 8p., eng] 45-560
- Glaciers of the Austrian Alps 1986/87. Patzelt, G., [1988, p.177-192, ger] 45-1097
- Measurement within the snow cover. Coleou, C., [1990, p.16-18, frej] 45-1128
- Small glaciers as sensitive indicators of climatic fluctuations. Grudd, H., [1990, p.119-123, eng] 45-1193
- Simple method of measuring the thickness of ice in freshwater reservoirs. Pasyukov, V.V., et al, [1989, p.92-98, rus] 45-1495
- Determining loads from adhered ice on a support column system. Shkhinek, K.N., et al, [1987, p.76-80, rus] 45-1566
- Measuring path-averaged heat fluxes in free convection. Andreas, E.L., [1991, p.167-182, eng] 45-1585
- Radon measurements as indicators of permafrost distribution. Sellmann, P.V., et al, [1990, p.331-336, eng] 45-1622
- Critique of the climatic record of snow water equivalent. Schmidlin, T.W., [1990, p.1136-1141, eng] 45-1652
- Preliminary results of solid precipitation measurement tests. Günther, T., [1990, p.224-226, eng] 45-1682
- Mass balance of the Taku Glacier, Alaska from 1946 to 1986. Peltó, M.S., et al, [1990, p.121-130, eng] 45-1773
- Measuring water flow using ultrasound. Zatylnikov, A.I., [1988, p.13-19, rus] 45-1857
- Ice design criteria for wide arctic structures. Blanchet, D., [1990, p.701-725, eng] 45-1868
- Automated snow depth and snowpack temperature measurements. Tanner, B.D., et al, [1990, p.73-78, eng] 45-2123
- Accuracy of soil property measurement by gamma beams. Miyazaki, T., et al, [1991, p.127-137, eng] 45-2271
- Method of radar fresh-water ice measurements from a moving vehicle. Klein, G.S., et al, [1990, p.1144-1154, eng] 45-3661
- Predicting pavement thaw weakening with a deflectometer. Janoo, V.C., et al, [1990, p.31-40, eng] 45-3689
- Hydrometric investigations in Svalbard 1989-1990. Pettersson, L.E., [1990, p.133-138, eng] 45-3789

- See *also*: Acoustic measurement; Electrical measurement; Flow measurement; Geothermometry; Height finding; Photogrammetry; Photometry; Radiometry; Sampling; Sounding; Spectroscopy; Temperature measurement; Underwater geothermal measurement; Velocity measurement; Well logging
- Measuring instruments**
- Ice acoustics from BHQ on Law Dome. Zhang, J., et al, [1988, p.132-140, chij] 45-42
- Ice pressure measurements using PVDF-sensors. Muhonen, A., et al, [1990, p.526-538, eng] 45-156
- Thermistor-based thermal conductivity measurement system. Atkins, R.T., et al, [1990, 11p., eng] 45-190
- Airborne cryogenic frost-point hygrometer: user's guide. Spyers-Duran, P.A., [1990, 41p., eng] 45-204
- Measuring blowing snow with a photo-electric particle counter at Pole Station, Antarctica. Wendler, G., [1989, p.9-16, eng] 45-393
- Cold regions hydrology and hydraulics. Ryan, W.L., ed, [1990, 827p., eng] 45-404
- Measurement and evaluation of winter precipitation. Tabler, R.D., et al, [1990, p.9-38, eng] 45-405
- Measurement and interpretation of streamflow data. Santeford, H.S., [1990, p.401-431, eng] 45-415
- Evaluation of precipitation measurements in the Arctic. Clagett, G.P., [1990, p.617-639, eng] 45-422
- Noise Package: an autonomous ambient noise measurement system. Spychalski, S.E., et al, [1989, p.1255-1257, eng] 45-440
- Advanced instrumentation for aircraft icing research. Bachalo, W.D., et al, [1990, 100p., eng] 45-597
- International Ice Patrol's air-deployed bathythermograph system. Alfutis, M.A., [1989, p.1652-1657, eng] 45-723
- Measuring electrical characteristics of dielectric materials. Trepov, G.V., [1989, p.46-52, rus] 45-1488
- Simple method of measuring the thickness of ice in freshwater reservoirs. Pasyukov, V.V., et al, [1989, p.92-98, rus] 45-1495
- Climate measurements by the EOS Geoscience Laser Ranging System. Spinhirne, J.D., et al, [1991, p.17-22, eng] 45-1512
- Performance of instruments and the success of monitoring programs in the offshore environment. DiBiagio, E., [1990, p.395-417, eng] 45-1962
- Top/bottom multisensor remote sensing of arctic sea ice. Comiso, J.C., et al, [1991, p.2693-2709, eng] 45-2042
- Measurement of cloud liquid water content and droplet size. Howe, J.B., [1991, 18p., eng] 45-2642
- Radio-echo investigations in Dronning Maud Land. Kennett, M., [1990, p.75-79, eng] 45-2833
- Glaciological and meteorological measurements in Dronning Maud Land. Winther, J.G., [1990, p.81-86, eng] 45-2834
- Dielectric profiling in ice core studies. Moore, J., et al, [1991, p.81-92, eng] 45-3066
- PEIST—an in situ ice strength testing device. Johnson, R.C., et al, [1991, p.23-28, eng] 45-3144
- Remote monitoring of thermal structure and growth of shore-fast ice off the Labrador coast. Peterson, I., et al, [1991, p.123-130, eng] 45-3419
- Recent variations in arctic and antarctic sea-ice covers. Gloersen, P., et al, [1991, p.33-36, eng] 45-3489
- Total ozone trends from TOMS. Stolarski, R.S., et al, [1991, p.1015-1018, eng] 45-3758
- See *also*: Airborne radar; Barometers; Borehole instruments; Calorimeters; Cloud height indicators; Dynamometers; Evaporimeters; Frigorimeters; Hygrometers; Magnetometers; Meteorological instruments; Moisture meters; Nucleus counters; Penetrometers; Photometers; Precipitation gages; Probes; Psychrometers; Radiation measuring instruments; Snow pillows; Snow survey tools; Strain measuring instruments; Thermistors; Thermocouples; Thickness gages
- Mechanical ice prevention**
- See *also*: Ice removal
- Mechanical properties**
- Condensed silica fume in concrete. Malhotra, V.M., et al, [1987, 221p., eng] 45-323
- Variations in mechanical properties within a multi-year ice floe. Tucker, W.B., et al, [1989, p.1287-1291, eng] 45-446
- Examination of ice deformation by acoustic emission measurement. Rist, M.A., et al, [1990, p.91-102, eng] 45-2724
- See *also*: Avalanche mechanics; Ice mechanics; Rock mechanics; Snow mechanics; Soil mechanics
- Mechanical tests**
- Bending and compression properties of young sea ice. Lau, P.A., et al, [1989, p.1292-1297, eng] 45-447
- Results of comparative model tests with a conceptual hull form and the original R-class icebreaker. Carter, D., [1990, 21p. + append., eng] 45-1177
- Analysis of subsour stresses on buried submarine pipelines—Vol.4. Poorooshasb, F., [1990, 168p., eng] 45-1559
- Reversed direct-stress testing of ice: equipment and example results. Cole, D.M., et al, [1990, p.295-302, eng] 45-1619
- Reversed direct-stress testing of ice: initial experimental results and analysis. Cole, D.M., [1990, p.303-321, eng] 45-1620
- Finite element studies of the electro impulse de-icing systems. Scavuzzo, R.J., et al, [1990, p.757-763, eng] 45-1676
- Performance of an omnidirectional wheel on snow and ice. Blaisdell, G.L., [1991, p.34-41, eng] 45-2227
- Studies on the fluidized snow dynamics. Nishimura, K., [1990, 55p., eng] 45-2284
- Experimental study of the mechanism of skiing turns. 2. Measurement of edging angles. Sahaishi, T., et al, [1990, p.1203-1208, eng] 45-2410
- Flexural strength of sand-reinforced ice. Nixon, W.A., et al, [1991, p.14-27, eng] 45-2417
- Shear cell experiments of snow and ice friction. Casassa, G., et al, [1991, p.3745-3756, eng] 45-2442
- Chaos in continuous-mode icebreaking. Ettema, R., et al, [1991, p.131-144, eng] 45-3420
- Testing system for strain rate control of ice deformation. Rist, M.A., et al, [1991, p.189-200, eng] 45-3424
- U.S. Army wheeled versus tracked vehicle mobility performance test program—report 2: mobility in shallow snow. Green, C.E., et al, [1991, 48p. + append., eng] 45-3446
- IAHR Symposium on Ice, 10th, 1990. [1990, 3 vols., eng] 45-3562
- Full scale iceberg impact: a pilot experiment in Antarctica. Duthinh, D., et al, [1990, p.890-901, eng] 45-3638
- Steel-ice friction coefficient under high contact pressure. Enoki, K., et al, [1990, p.902-911, eng] 45-3639
- Meetings**
- Discussion of pressing arctic problems. Kotliakov, V.M., et al, [1989, p.122-125, rus] 45-3
- Collection of antarctic scientific explorations, No.5. Studies on glaciology. [1988, 278p., chij] 45-34
- Annual report of the Norwegian Polar Research Institute. [1989, 61p., eng] 45-210
- VIII International PIARC Winter Service Congress at Tromsø. Durth, W., et al, [1990, p.200-204, ger] 45-555
- Proceedings of the International Symposium on Antarctic Research. Guo, K., ed, [1989, 540p., eng] 45-1003
- International conference on mountain ecology in Tsakhkadzor. Ananicheva, M.D., [1989, p.184, rus] 45-1056
- Third All-Union Conference on the problems of naled formation. Alekseev, V.R., [1989, p.223-227, rus] 45-1067
- Terskol workshop on geoinformation systems of mountain territories. Kravtsova, V.I., [1989, p.228-232, rus] 45-1068
- International Association of Hydrological Sciences, Baltimore, May 1989. Krenke, A.N., [1989, p.232-236, rus] 45-1069
- International symposium on Ice and Climate. Glazovskii, A.F., [1989, p.236-246, rus] 45-1070
- Meeting of the office of the International Commission on Snow and Ice. Kotliakov, V.M., [1989, p.246-249, rus] 45-1071
- Workshop on glaciology (Institute of Geography, USSR Academy of Sciences). Psareva, T.V., [1989, p.250, rus] 45-1073
- Geological history of the polar oceans: Arctic versus Antarctic. Bleil, U., ed, [1990, 823p., eng] 45-1265
- Arctic research in the United States, Vol.4. [1990, 106p., eng] 45-1398
- Workshop on antarctic meteorite stranding surfaces. Cassidy, W.A., ed, [1990, 103p., eng] 45-2426
- Building a worldwide roofing community. [1991, 536p., eng] 45-2452
- Ice Technology for Polar Operations: proceedings of the 2nd international conference. [1990, 426p., eng] 45-2717
- Dynamics, transport and photochemistry in the middle atmosphere of the Southern Hemisphere. Proceedings. O'Neill, A., ed, [1989, 257p., eng] 45-2971
- Proceedings of the NIPR Symposium on Polar Meteorology and Glaciology, No.4. Kawaguchi, S., ed, [1991, 143p., eng] 45-3060
- Twenty years of ice symposia. Frankenstein, G.E., [1990, p.43-65, eng] 45-3564
- Hydrology of Svalbard—hydrological problems in cold climate. Proceedings. [1990, 224p., eng] 45-3776
- Melting**
- Melting, freezing and other peculiarities in small systems. Berry, R.S., [1990, p.259-270, eng] 45-401
- New perspectives on freezing and melting. Oxtoby, D.W., [1990, p.725-730, eng] 45-825
- Microcomputer simulation of phase change heat transfer. Farag, I.H., et al, [1990, p.43-65, eng] 45-1432
- Microphysical characteristics through the melting region of a midlatitude winter storm. Raga, G.B., et al, [1991, p.843-855, eng] 45-2663
- Fluid mixing during melting. Woods, A.W., [1991, p.1393-1404, eng] 45-3030
- See *also*: Artificial melting; Defrosting; Glacier melting; Ice melting; Snow melting; Thawing
- Melting points**
- Freeze and thaw point of wet clay and its determination. Liu, Z.C., [1990, p.183-189, eng] 45-500
- Freezing point of load-bearing moist soil and its determination. Liu, Z.C., et al, [1990, 493-497, eng] 45-593
- When the melting and freezing points are not the same. Berry, R.S., [1990, p.68-74, eng] 45-966
- Ice under pressure. Chang, R., et al, [1990, p.789-790, eng] 45-989
- Measurement of P-T coexistence curve for ice-water mixture. Nordell, B., [1990, p.83-88, eng] 45-1769
- Meltwater**
- Analysis and modeling of melt-water refreezing in dry snow. Pfeffer, W.T., et al, [1990, p.238-246, eng] 45-67
- Northern hydrology: Canadian perspectives. Prowse, T.D., ed, [1990, 308p., eng] 45-211
- Episodic acidification of Adirondack lakes during snowmelt. Schaefer, D.A., et al, [1990, p.1639-1647, eng] 45-224
- Ice-marginal thrusting of drift and bedrock: thermal regime, subglacial aquifers, and glacial surges. Mooers, H.D., [1990, p.849-862, eng] 45-381
- Ferromanganese rock varnish in North Norway: a subglacial origin. Whalley, W.B., et al, [1990, p.265-275, eng] 45-432
- Forecasting of glacier meltwater runoff by time series analysis. Song, Q., et al, [1990, p.161-165, chij] 45-456
- Runoff from Heigou Glacier on Bogeda Mountain. Hu, X.G., et al, [1990, p.71-82, chij] 45-464
- Comment and reply on "Drumlins, subglacial meltwater floods, and ocean responses". Forsström, L., et al, [1990, p.804-805, eng] 45-618
- Influence of Hudson Bay runoff and ice-melt on the salinity of the inner Newfoundland Shelf. Myers, R.A., et al, [1990, p.241-256, eng] 45-657
- Glacial meltwater runoff and paleogeographic reconstructions. Bol'shianov, D.I.U., et al, [1990, p.58-64, rus] 45-705
- Meltwater genesis and distribution. Loopmann, A., [1990, p.341-344, eng] 45-731
- Melting and mixing processes near icebergs and in ice covered regions. Gilmour, P., [1990, 34p., eng] 45-946
- Salinity history of the northern Atlantic during the last deglaciation. Broecker, W.S., [1990, p.459-467, eng] 45-951
- Solar heating of a stratified ocean in the presence of a static ice cover. Perovich, D.K., et al, [1990, p.18,233-18,245, eng] 45-1020
- Ice-dammed lake drainage mechanisms in Greenland. Russell, A.J., et al, [1988, p.143-147, eng] 45-1094
- Ionic tracer movement through a Wyoming snowpack. Bales, R.C., et al, [1990, p.2749-2758, eng] 45-1176
- Hudson Bay and Ungava Bay ice-melt cycles for the period 1963-1983. Loucks, R.H., et al, [1989, 46p., eng] 45-1280
- Niveo-scolian sedimentation in Greenland. Dijkman, J.W.A., [1990, p.83-96, eng] 45-1291
- Karst drainage in a permafrost setting: the case of Akpatok Island, Northwest Territories, Canada. Lauriol, B., et al, [1990, p.129-144, eng] 45-1294
- Methods of evaluating the hydrological role of snow management. Shutoy, V.A., [1990, p.15-23, eng] 45-1387
- Problem of the thermal physics of snow-firn sequences. Bozhinskii, A.N., et al, [1990, p.35-39, rus] 45-1733
- Hydrothermal regime of the ice-divide area of Austfonna, Nordaustlandet. Zagorodnov, V.S., et al, [1990, p.133-141, rus] 45-1752
- Formation of the chemical composition of meltwater. Ivanov, A.V., [1989, p.67-83, rus] 45-1829
- Behavior of a glacier-derived suspended sediment plume in a small arctic inlet. Dowdeswell, J.A., et al, [1991, p.111-123, eng] 45-2021
- Geochemistry of Alph River and tributaries in Walcott Bay. De Mora, S.J., et al, [1991, p.73-86, eng] 45-2072
- Hydrologic flow path definition and partitioning of spring meltwater. Maulé, C.P., et al, [1990, p.2959-2970, eng] 45-2078
- Dispersion of Chernobyl fallout by meltwater in an alpine glacier. Ambach, W., et al, [1989, p.151-153, eng] 45-2086
- Proceedings of the 47th annual Eastern Snow Conference, Bangor, ME, June 7-8, 1990. [1990, 250p., eng] 45-2181
- Annual balance of North Cascade glaciers. Peito, M.S., [1990, p.201-212, eng] 45-2199
- Meltwater discharge from a debris-free and a debris-covered glacier. Mattson, L.E., [1990, p.237-242, eng] 45-2203
- Calculating the effect of water reserves and depth of soil freezing. Komarov, V.D., [1989, p.21-29, rus] 45-2275
- Glacial waters, solid transport and decantation in hydroelectrical systems. Bezinge, A., et al, [1989, p.247-256, fre] 45-2286
- Microbial communities in antarctic streams; photosynthesis. Howard-Williams, C., et al, [1989, p.27-38, eng] 45-2605
- Microbial communities in antarctic streams; low temperature effects. Vincent, W.F., et al, [1989, p.39-49, eng] 45-2606
- Nitrogen dynamics in two antarctic streams. Howard-Williams, C., et al, [1989, p.51-61, eng] 45-2607

**Meltwater (cont.)**

- Geochemical processes in the Lake Fryxell Basin (Victoria Land, Antarctica). Green, W.J., et al, 1989, p.129-148, eng **45-2612**
- Glaciomarine environments: processes and sediments. Dowdeswell, J.A., ed, 1990, 423p., eng **45-2778**
- Glaciomarine processes at grounding-line fans and their growth to ice-contact deltas. Powell, R.D., 1990, p.53-73, eng **45-2781**
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- Role of subglacial and marine processes in the production of laminated sediments. Domack, E.W., 1990, p.91-103, eng **45-2783**
- Variations of water isotope content with altitude in a mountain environment. Holdsworth, G., et al, 1991, p.7483-7494, eng **45-2800**
- Fine thermohaline structure of water near antarctic icebergs. Popov, I.K., et al, 1990, p.87-92, rus **45-3084**
- Subice layering and origin of acidic waters in a small boreal lake during spring runoff. Roberge, J., et al, 1991, p.479-492, eng **45-3105**
- Organic compounds in antarctic matrices: sea water, particulate, pack and sediments. Desideri, P., et al, 1990, p.63-70, eng **45-3198**
- Water and ice resources of the Issyk Kul-Chu region, their current and future state. Dikikh, A.N., et al, 1991, p.390-396, eng **45-3237**
- Recharge processes during snowmelt: an isotopic and hydrometric investigation. Buttle, J.M., et al, 1990, p.343-360, eng **45-3464**
- Hydrogeography of the Schirmacher Hills region. Richter, W., 1991, p.367-373, ger **45-3556**
- See *also*: Snowmelt
- Metal ice friction**
- Study of adhesion and friction of fluoroplast coating in contact with ice. Igoshin, V.A., et al, 1989, p.83-87, eng **45-664**
- Study of indenter friction against an ice sheet. Igoshin, V.A., et al, 1990, p.71-74, eng **45-3265**
- Electrohydraulic and electrochemical phenomena during hull contact with ice. Androsenko, V., et al, 1990, p.531-541, eng **45-3604**
- Model surface treatment for testing in ice. Tatinclaux, J.C., et al, 1990, p.766-775, eng **45-3627**
- Steel-ice friction coefficient under high contact pressure. Enoki, K., et al, 1990, p.902-911, eng **45-3639**
- Metals**
- Alaska's mineral industry, 1989. Bunützen, T.K., et al, 1989, 100p., eng **45-491**
- New perspectives on freezing and melting. Oxtoby, D.W., 1990, p.725-730, eng **45-825**
- Airborne trace metals in snow on the Japan Sea side of Japan. Ecker, F.J., et al, 1990, p.2593-2600, eng **45-954**
- Avacha fumarolic trace elements: distribution in snow and surface waters. Alekseev, V.A., et al, 1990, p.325-336, eng **45-1704**
- Strength of cryogenic engineering alloys under electromagnetic loads. Strizhalo, V.A., et al, 1990, 154p., rus **45-1856**
- See *also*: Aluminum; Gold; Steels
- Metamorphism (snow)**
- Vapor-pressure dependence on temperature in models of snow metamorphism. Colbeck, S.C., 1990, p.351-352, eng **45-1547**
- 2-D microscopic simulation of heat and mass transport in dry snow. Christon, M., et al, 1990, p.87-105, eng **45-2168**
- Snowpack structure and avalanching, Craigieburn Range, New Zealand. McGregor, G.R., 1990, p.405-417, eng **45-2213**
- Effect of abiotic factors on vole winter survival. Courtin, G.M., et al, 1991, p.45-52, eng **45-2472**
- Snow as a field-teaching medium for earth science. Custer, S.G., 1991, p.34-43, eng **45-2790**
- Layered character of snow covers. Colbeck, S.C., 1991, p.81-96, eng **45-2828**
- Physical properties of deposited snow: metamorphosis of snow crystals and thermal conductivity of snow. Yoshida, J., 1986, p.270-288, eng **45-3719**
- 3-D transient heat and mass transport in microscopic ice lattices. Christon, M., et al, 1990, p.25-33, eng **45-3868**
- See *also*: Snow recrystallization
- Meteorological charts**
- Interaction of sea ice, snow, and glaciers with the atmosphere and ocean. Kotliakov, V.M., ed, 1990, 74p., eng **45-1261**
- Variation in surface aerosol concentration at the South Pole. Samson, J.A., et al, 1990, p.385-396, eng **45-1429**
- CEAREX/Haakon Mosby meteorology atlas. Frederickson, P.A., et al, 1990, 57p., eng **45-3853**
- Meteorological data**
- Automatic meteorological station in the Kunlun Mountains. Ohata, T., et al, 1990, p.73-85, eng **45-200**
- Handbook on climate of the USSR, 1989, 268p., eng **45-309**

- Colorado climate: temperature, precipitation, frost and growth data. 1989, 290p., eng **45-488**
- Climates of Canada. Phillips, D., 1990, 176p., eng **45-554**
- Antarctic automatic weather station data for the calendar year 1989. Keller, L.M., et al, 1990, 354p., eng **45-939**
- Glaciological field party in the Sør Rondane Mountains, 1989-1990. Motoyama, H., et al, 1990, p.225-234, jpn **45-982**
- Snow survey of Great Britain 1989/90. 1990, 22p., eng **45-1178**
- Climatological analysis of snowfall on the Qinghai-Xizang Plateau. Zou, J., et al, 1989, p.411-422, eng **45-1185**
- Heavy snowfall within a mesoscale convergence zone. Sanderson, R.M., et al, 1990, p.41-52, eng **45-1519**
- Snow and avalanches in the Swiss Alps, winter 1988/89. 1991, 155p., ger **45-1650**
- Preprints. 1991, 517p., eng **45-1913**
- Reviewing meteorological data on the DARE-II workstation. Smart, J.R., et al, 1991, p.157-163, eng **45-1915**
- Climate information needs in the Midwest. Kunkel, K.E., et al, 1991, p.265-267, eng **45-1916**
- Lake-effect storms east of Lake Ontario. Penc, R.S., et al, 1991, p.252-257, eng **45-1940**
- Reports on the Glaciological Survey of 1988. Armando, E., et al, 1989, p.155-204, ita **45-2087**
- Study of the cold wave phenomenon in Quebec as a natural catastrophe. Lacroix, J., et al, 1990, p.138-157, fre **45-2754**
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- On data sources and quality for the Southern Hemisphere stratosphere. Karoly, D.J., et al, 1989, p.19-32, eng **45-2973**
- Marine Observation Satellite 1 data at Showa Station. Yamanouchi, T., et al, 1991, p.22-30, eng **45-3062**
- Hydrometeorological information distribution to ships from Bellingshausen Station in 1986. Leont'ev, E.B., 1990, p.32-36, rus **45-3078**
- Meteorological data at King Sejong Station, 1990. Lee, B.Y., et al, 1990, p.75, eng **45-3204**
- Catalog of smoke/obscurant characterization instruments. O'Brien, H.W., ed, 1984, 184p., eng **45-3476**
- Climatic time series of the Norwegian arctic meteorological stations—temperature and precipitation. Nordli, P.O., 1990, p.85-98, eng **45-3785**
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- Climatological analysis of snowfall on the Qinghai-Xizang Plateau. Zou, J., et al, 1989, p.411-422, eng **45-1185**
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- Formation of light frost in the territory of the Turkmen SSR. Tumasova, V.V., 1989, p.143-151, rus **45-1852**
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- Comparative snowmelt models applied to a balsam fir forest. Prévost, M., et al, 1991, p.1-10, eng **45-2109**
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- Meteorological instruments**
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- Variation in surface aerosol concentration at the South Pole. Samson, J.A., et al, 1990, p.385-396, eng **45-1429**
- Recommended cold regions meteorological instrumentation. Bates, R.E., 1991, p.772-783, eng **45-2387**
- Marine Observation Satellite 1 data at Showa Station. Yamanouchi, T., et al, 1991, p.22-30, eng **45-3062**
- See *also*: Barometers; Cloud height indicators; Evaporimeters; Frigorimeters; Hygrometers; Nucleus counters; Precipitation gauges; Psychrometers; Radiation measuring instruments; Snow pillows; Snow survey tools; Thermistors; Thermocouples
- Meteorological observations**
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- Meteorology**
- Meteorology source book. Parker, S.P., ed, 1988, 304p., eng **45-527**
- Variation in surface aerosol concentration at the South Pole. Samson, J.A., et al, 1990, p.385-396, eng **45-1429**
- Seasonal variation of some constituents of antarctic tropospheric air. Hogan, A.W., et al, 1990, p.2365-2368, eng **45-1514**
- See *also*: Atmospheric physics; Glacial meteorology; Marine meteorology; Synoptic meteorology; Weather
- Microanalysis**
- Microscopic observations of snow deformation. Shoop, S.A., et al, 1990, p.27-38, eng **45-2184**
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- Oxidation of oil hydrocarbons by arctic pigmented *Mycobacterium* species. Koronelli, T.V., et al, 1981, p.167-170, rus **45-3136**
- Lipid composition of *Mycobacterium mucosum* oxidizing hydrocarbons. Koronelli, T.V., et al, 1977, p.1070-1073, rus **45-3137**
- Activity of microorganisms oxidizing hydrocarbons assayed in natural waters. Il'inskiĭ, V.V., et al, 1989, p.658-662, rus **45-3138**
- Microorganisms of the eastern part of the Arctic Ocean. Kriss, A.E., 1945, p.268-276, rus **45-3139**
- Distribution of heterotrophic bacteria in the Atlantic Ocean. Kriss, A.E., 1970, p.362-371, rus **45-3181**
- Fermentative activity of microbial-antagonists. Trunova, O.N., 1977, p.91-97, rus **45-3212**
- Dissolved and suspended organic carbon in ice of the arctic basin. Mel'nikov, I.A., 1985, p.86-89, rus **45-3213**
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- Ultramicroscopic forms in the Barents Sea littoral mud. Mishustina, I.E., et al, 1973, p.138-140, rus **45-3232**

- Distribution of heterotrophic microorganisms in the Greenland Sea. Mishustina, I.E., et al, [1963, p.914-921, rus] **45-3240**
- Numbers and production of bacterioplankton in the Barents Sea. Rossova, E.I.A., [1977, p.878-882, rus] **45-3250**
- Oil-oxidizing and heterotrophic microflora on the Eastern Murman coast. Dermicheva, S.G., [1985, p.139-143, eng] **45-3290**
- Microbiological investigations in the Central Arctic in 1956. Kriss, A.E., [1957, p.199-202, rus] **45-3350**
- Botanical results from the voyage of the *Ermak* to the Arctic Ocean, summer 1901. IV. Microflora of the Barents Sea and its ice. 1. Historical review of the microflora in the Barents Sea and adjacent seas. Palibin, I.V., [1904, p.71-80, rus] **45-3351**
- Heterotrophic microorganisms in the Indian Ocean and adjacent antarctic seas. Lebedeva, M.N., [1958, p.557-560, rus] **45-3355**
- Development of ice periphyton of the Amur River under different light conditions. Iur'ev, D.N., et al, [1988, p.1546-1551, rus] **45-3369**
- Distribution of a microbial population in the world ocean. Kriss, A.E., et al, [1960, p.34-41, eng] **45-3370**
- Microorganisms as indicators of hydrological phenomena in seas and oceans. Kriss, A.E., et al, [1958, p.397-413, rus] **45-3431**
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- See *also*: Bacteria; Cryobiology; Soil microbiology
- Microclimatology**
- Optimization of the microclimate of bog geosystems. Kovrigo, P.A., et al, [1988, p.22-29, eng] **45-763**
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- See *also*: Indoor climates
- Microelement content**
- Microelements in Siberian soils. Senichkina, M.G., et al, [1986, p.115-117, rus] **45-608**
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- Mineral composition of Late Pleistocene cryolithogenic deposits. Kouznetsov, A.N., et al, [1989, p.152-156, rus] **45-2500**
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- Microscope slides**
- See *also*: Thin sections
- Microscopy**
- See *also*: Electron microscopy; Scanning electron microscopy
- Microstructure**
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- Real permittivity of snow at 1 MHz and 0°C. Perla, R., [1991, p.215-219, eng] **45-3427**
- Microwaves**
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- Microwave satellite forecasting of snowmelt runoff. Wankiewicz, A., [1989, p.1235-1238, eng] **45-266**
- Determination of areal snow water equivalent on the Canadian prairies using passive microwave satellite data. Goodison, B.E., [1989, p.1243-1246, eng] **45-260**
- Experimental study of microwave transmission in snowpack. Abe, T., et al, [1990, p.915-921, eng] **45-369**
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- Effect of freezing and thawing on the microwave signatures of bare soil. Wegmüller, U., [1990, p.123-135, eng] **45-1727**
- Passive microwave remote sensing contribution to hydrological variables. Choudhury, B.J., [1991, p.63-84, eng] **45-1797**
- Microwave and physical properties of sea ice in the winter MIZ. Tucker, W.B., et al, [1991, p.4573-4587, eng] **45-2084**
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- Surface emissivity at below-zero temperatures. Kondrat'ev, K.I.A., et al, [1991, p.7-9, eng] **45-2477**
- Microwave remote sensing in ice engineering. Swift, C.T., [1990, p.66-78, eng] **45-3565**
- Proceedings of the Workshop on Applications of Remote Sensing in Hydrology. [1990, 386p., eng] **45-3797**
- Interpreting passive and active microwave imagery over snow-covered lakes. Mellor, R.A., et al, [1990, p.259-278, eng] **45-3808**
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- Average areal snow water equivalent determination in a mountain basin. Rangó, A., [1990, p.317-318, eng] **45-3810**
- Analysis of MOS-1 microwave scanning radiometer data for Canadian prairie snow cover. Walker, A.E., et al, [1990, p.319-329, eng] **45-3811**
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- Classification of snow and frozen ground surfaces with SSM/I signatures. Neale, C.M.U., et al, [1990, p.345-355, eng] **45-3813**
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- Arctic/cold weather operations symposium, 1989; proceedings, volume 1. [1989, 488p., eng] **45-532**
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- Arctic/cold weather operations symposium, 1989; proceedings, volume 1. [1989, 488p., eng] **45-532**
- Liquid chromatographic separation of 2,4,6-trinitrotoluene. Walsh, M.E., et al, [1990, p.313-315, eng] **45-1431**
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- U.S. Army wheeled versus tracked vehicle mobility performance test program—report 2: mobility in shallow snow. Green, C.E., et al, [1991, 48p. + appenda., eng] **45-3446**
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- Military supplies**
- See *also*: Logistics
- Mine shafts**
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- Calculating thermal economy in horizontal mine shafts. Iurganov, M.M., et al, [1990, p.88-89, rus] **45-2712**
- See *also*: Shaft sinking
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- Offshore hard minerals. Hale, P.B., [1990, p.551-565, eng] **45-1695**
- Occurrence of zinc in antarctic ancient ice and recent snow. Boutron, C.F., et al, [1990, p.248-259, eng] **45-1847**
- 1990 annual report on Alaska's mineral resources. Schneider, J.L., ed, [1990, 67p., eng] **45-2038**
- Supergene corundum in the Quaternary permafrost of Yakutia. Zigert, Kh., et al, [1990, p.155-159, eng] **45-2476**
- Mineral composition of Late Pleistocene cryolithogenic deposits. Kotov, A.N., et al, [1989, p.152-156, rus] **45-2500**
- Heavy minerals in glacial material. Peuraniemi, V., [1990, p.165-185, eng] **45-2551**
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**Minerals (cont.)**

Role of freezing in comminution of primary minerals of podzolic soils. Leporski, O.R., et al, 1991, p.107-111, eng 45-3816

See *also*: Clay minerals

**Mines (minance)**

Testing of the M138 auxiliary mine dispenser (FLIPPER). O'Bryon, M.K., 1990, 32p. + appends, eng 45-551

Environmental influences on mine detection. Hogan, A.W., et al, 1990, 6p., eng 45-933

**Mining**

Polartech conference 1990. 1990, 759p., eng 45-121

Environmental impact of gold mining in East Greenland. Brooks, C.K., 1990, p.624-634, eng 45-165

Environmental protection and mining in Greenland. Hansen, M.M., 1990, p.684-698, eng 45-170

Using glacier ice to support mine walls. Fangel, H., 1990, p.720-726, eng 45-173

Design engineering problems of surface coal mines in arctic Alaska. Sengupta, M., 1990, p.735-743, eng 45-175

Closure of the Black Angel zinc and lead mine in Greenland. Asmund, G., et al, 1990, p.744-759, eng 45-176

Mining in the Arctic. Bandopadhyay, S., ed, 1989, 244p., eng 45-325

Overview of coal mining in Alaska. Sims, J.F.M., 1989, p.3-8, eng 45-326

Mining in Canada's north—a technical overview. Udd, J.E., 1989, p.15-25, eng 45-328

Exploitation of mineral resources in the north. Proskuriakov, N.M., et al, 1989, p.27-32, eng 45-329

Achievements and future of mining above Arctic Circle. Zou, Z.H., 1989, p.43-46, eng 45-331

Mining machines. Alimov, O.D., 1989, p.59-61, eng 45-332

Coal mining in and below permafrost on Svalbard. Brugmans, P.J., 1989, p.87-93, eng 45-335

Rock mechanics investigations in the Svea Coal Mine, Svalbard. Myrvang, A.M., et al, 1989, p.95-103, eng 45-336

Diamond core drilling through continental ice and permafrost. With, E., 1989, p.107-111, eng 45-337

Tube drilling system in underground drilling. Soikkeli, T., 1989, p.123-125, eng 45-339

Tailings management program—an operating success, Echo Bay's Lupin Mine. Wilson, H.R., 1989, p.135-144, eng 45-341

Reclamation challenges at Usibelli Coal Mine in Healy, Alaska. Jackson, L.P., 1989, p.167-170, eng 45-344

Fungi in reclamation of cold climate mining wastes. Veith, D.L., et al, 1989, p.177-188, eng 45-346

Mineral exploration and development in AK. Green, C.B., et al, 1989, p.205-209, eng 45-347

Drift mining at Tenderfoot Creek. Groppe, C., et al, 1989, p.211-215, eng 45-348

Some aspects of mining in high mountain area above snow line in China. Li, D.Q., et al, 1989, p.217-225, eng 45-349

Fire and frost prevention in a coal mine. Wan, C.H., et al, 1989, p.237-239, eng 45-351

Alaska's mineral industry, 1989. Bundtzen, T.K., et al, 1989, 100p., eng 45-491

Borehole hydraulic mining of frozen rock in Yakutia. Kuz'min, G.P., et al, 1987, p.113-117, rus 45-580

Geochemistry of the snow cover around coal mines. Makarov, V.N., 1990, p.37-44, rus 45-671

Soil formation in mining areas along the arctic coast of northeastern USSR. Andreev, D.P., et al, 1989, p.99-103, rus 45-740

Alaska's high-rank coals. 1990, 36p., eng 45-931

Controlling the frozen regime of bearing ground of structures over mines. Gurianov, I.E., 1990, p.77-92, rus 45-1203

Slope stability in arctic surface mines. Sengupta, M., et al, 1990, p.154-159, eng 45-1524

Thermodynamic processes management in a mining operations area. El'chaninov, E.A., 1989, 236p., rus 45-1668

Offshore hard minerals. Hale, P.B., 1990, p.551-565, eng 45-1695

Drilling in the permafrost. Kudriashov, B.B., et al, 1990, 318p., eng 45-1854

Constructed wetlands for wastewater treatment: municipal, industrial, and agricultural. 1989, 831p., eng 45-1873

Use of wetlands for treatment of mining wastes. Wildeman, T.R., et al, 1989, p.221-231, eng 45-1879

Sulfate reduction in wetlands to treat mine drainage. Hedin, R.S., et al, 1989, p.508-514, eng 45-1887

Bacterial treatment of mine drainage in a wetland. Batal, W., et al, 1989, p.550-557, eng 45-1888

Biology and chemistry of generation, prevention and abatement of acid mine drainage. Silver, M., 1989, p.753-760, eng 45-1891

Research site for passive mine drainage treatment. Howard, E.A., et al, 1989, p.761-764, eng 45-1892

Manganese and iron encrustation on green algae living in acid mine drainage. Stevens, S.E., Jr., et al, 1989, p.765-773, eng 45-1893

Using forest products in the treatment of acid mine drainage. Howard, E.A., et al, 1989, p.774-779, eng 45-1894

Use of wetlands to remove nickel and copper from mine drainage. Eger, P., et al, 1989, p.780-787, eng 45-1895

Windsor Coal Company wetland: an overview. Kolbash, R.L., et al, 1989, p.788-792, eng 45-1896

Wetland treatment of coal mine drainage: controlled studies of iron retention in model wetland systems. Henrot, J., et al, 1989, p.793-800, eng 45-1897

OCS Mining Program: Norton Sound Lease Sale. Final environmental impact statement. 1991, Var. p., eng 45-2160

OCS Mining Program: Norton Sound Lease Sale. Second draft environmental impact statement. 1990, Var. p., eng 45-2161

Economic evaluation of platinum mining in Antarctica. Beike, D., 1990, p.53-67, eng 45-2804

See *also*: Mine shafts; Placer mining; Quarries; Shaft sinking

Models

New generation of spill model. Mackay, D., et al, 1987, p.149-163, eng 45-181

Snowline depression in Chile during the Pleistocene. Cavedes, C.N., 1990, p.99-114, eng 45-363

Carbon cycle instability as a cause of ice age oscillations. Saltzman, B., et al, 1988, p.177-185, eng 45-367

Interpretation of snow shock impact using embedded stress gauges. Johnson, J.B., et al, 1990, p.117-120, eng 45-400

Rheological fundamentals of soil mechanics. Vialov, S.S., 1986, 564p., eng 45-612

Nonlinear seasonal energy balance model for polar continentality and climate study. Hyde, W.T., et al, 1990, p.18,653-18,668, eng 45-883

Ice-stream basal modeling: progress report. Alley, R.B., 1990, p.74, eng 45-1159

Model test of CCN-cloud albedo climate forcing. Ghan, S.J., et al, 1990, p.607-610, eng 45-1173

Results of comparative model tests with a conceptual hull form and the original R-class icebreaker. Carter, D., 1990, 21p. + appends., eng 45-1177

Snowmobile suspension system design under university-industry collaboration. Sankar, S., et al, 1989, p.183-191, eng 45-1232

Katabatic winds at Terra Nova Bay. Parish, T.R., et al, 1990, p.221-223, eng 45-1437

Model for aerosol components over the Antarctic Peninsula. Dick, A.L., 1990, p.179-196, eng 45-1441

Validation study of the CRREL shallow snow mobility model. Blaisdell, G.L., et al, 1990, 72p., eng 45-1510

Sensitivity of glaciation to initial snow cover. Oglesby, R.J., 1990, p.219-235, eng 45-1521

Digital terrain models as a tool for glacier studies. Rentsch, H., et al, 1990, p.273-278, eng 45-1537

Water circulation in the Barents Sea. Potanin, V.A., et al, 1989, p.110-117, rus 45-1657

Finite element studies of the electro impulse de-icing systems. Scavuzzo, R.J., et al, 1990, p.757-763, eng 45-1676

Problems and prospects of studies on the physical processes of snow cover. Golubev, V.N., et al, 1990, p.26-35, rus 45-1732

Causes of glaciation. Chernosvitov, P.I.U., 1990, p.169-174, rus 45-1757

Turbulent transfer over snow and ice. Morris, E.M., 1989, p.205-223, eng 45-1809

On small scale ice scour modelling. Poorooshasb, F., et al, 1990, p.193-235, eng 45-1952

Stability of nitrogen on Triton. Stansberry, J.A., et al, 1990, p.1773-1776, eng 45-2047

Hydraulic properties in an operational model of frozen soil. Lundin, L.-C., 1990, p.289-310, eng 45-2089

Second validation study of the CRREL shallow snow mobility model. Richmond, P.W., et al, 1990, 39p., eng 45-2094

Froude number paradoxes in modeling of snowdrift. Anno, Y., 1990, p.889-891, eng 45-2095

Comparative snowmelt models applied to a balsam fir forest. Prevost, M., et al, 1991, p.1-10, eng 45-2109

Snow fencing near pit reservoirs to improve water supplies. Jairell, R.L., et al, 1990, p.156-159, eng 45-2136

1948 flood on the Columbia River. Speers, D.D., et al, 1990, p.160-163, eng 45-2137

Revised projection of future greenhouse warming. Schlesinger, M.E., et al, 1991, p.219-221, eng 45-2263

Modeling winter grain crop survival in a zone with stable snow cover. Bogomolova, N.A., et al, 1990, p.113-118, rus 45-2272

Modelling the accumulation of winter cold in rocks. Ezhov, I.U.A., 1990, p.79-87, rus 45-2711

On the description and modeling of glacialine sediments and sedimentation. Dowdeswell, J.A., et al, 1990, p.1-13, eng 45-2779

Modelling rates of sedimentation from icebergs. Dowdeswell, J.A., et al, 1990, p.121-137, eng 45-2785

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Modeling the reflectance spectrum of Callisto at 0.25 to 4.1 millimicrons. Calvin, W.M., et al, 1991, p.305-317, eng 45-2939

Middle atmospheric dynamics and transport. McIntyre, M.E., 1989, p.1-18, eng 45-2972

On data sources and quality for the Southern Hemisphere stratosphere. Karoly, D.J., et al, 1989, p.19-32, eng 45-2973

Detection of waves in frazil ice in synthetic aperture radar imagery. Wadhams, P., et al, 1991, p.8835-8852, eng 45-3019

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Bearing capacity of shallow foundation on layered clay. Das, B.M., 1991, p.119-124, eng 45-3158

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Interpretation of pile load tests at the Haga site. Whittle, A.J., 1991, p.267-274, eng 45-3179

Results from a 2xCO2 simulation with a general circulation model. Boer, G.J., 1990, p.45-49, eng 45-3295

U.S. Army wheeled versus tracked vehicle mobility performance test program—report 2: mobility in shallow snow. Green, C.E., et al, 1991, 48p. + appends., eng 45-3446

Qualitative models of Pleistocene glaciation, oceans, and climates. Grosswald, M.G., 1990, p.100-126, eng 45-3541

Frazil ice problems at Stornorrforrs water power plant in the Ume River. Sahlgren, J., 1990, p.427-441, eng 45-3596

Model surface treatment for testing in ice. Tatinclaux, J.C., et al, 1990, p.766-775, eng 45-3627

Norwegian model for prediction of pavement deterioration (7). Bertelsen, D., 1990, p.875-886, eng 45-3694

Total ozone trends from TOMS. Stolarski, R.S., et al, 1991, p.1015-1018, eng 45-3758

Proceedings of the Workshop on Applications of Remote Sensing in Hydrology. 1990, 386p., eng 45-3797

Effective use of satellite-observed snow cover data in the snowmelt-runoff model (SRM). Rango, A., 1990, p.19-31, eng 45-3798

Application of remotely sensed data in a distributed-parameter watershed model. Leavesley, G.H., et al, 1990, p.47-68, eng 45-3799

Determination of characteristics for hydrological modelling using remote sensing. Whiting, J., 1990, p.79-92, eng 45-3801

Surface hydrology in climate models: the role of remote sensing. Thomas, G., 1990, p.109-122, eng 45-3802

HYDROTEL, a hydrological model designed to make use of remotely sensed and GIS data. Fortin, J.P., et al, 1990, p.177-185, eng 45-3805

Qualitative evaluation of data networks for streamflow simulation in Manitoba. Warkentin, A.A., 1990, p.215-223, eng 45-3806

Ecological aspects of lake regulation in northern Finland; part 2. Hellsten, S., et al, 1989, 131p. + appends., fin 45-3845

See *also*: Avalanche modeling; Ice models; Lattice models; Mathematical models; Simulation

Moisture

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Freeze-thaw testing of bituminous concrete moisture susceptibility. Bolzán, P.E., 1989, p.9-16, eng 45-1152

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Climate change moisture stresses on northern coniferous forests. Wein, R.W., et al, 1990, p.285-289, eng 45-3301

See *also*: Humidity; Soil water; Water content

Moisture detection

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Moisture transfer

Methods of calculating moisture migration in seasonal freezing and thawing of soils. Anitskii, P.A., 1989, p.36-44, eng 45-651

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General geocryology. Ershov, E.D., 1990, 558p., rus 45-1473

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Moisture transfer and ice formation in freezing, water-saturated soil. Kazanskii, O.A., 1989, p.3-13, rus 45-1824

- Heat-moisture-salt regime of frozen ground during fall watering.** Ivanov, V.A., et al, [1989, p.24-36, rus] **45-1826**
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- See *also*: Soil water migration**
- Molecular energy levels**
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- Spectra of dangling OH groups at ice cluster surfaces and within pores of amorphous ice.** Rowland, B., et al, [1991, p.812-813, eng] **45-1904**
- Spectra of OH bonds in amorphous ice.** Buch, V., et al, [1991, p.4091-4092, eng] **45-2167**
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- Moutmorillonite**
- See *also*: Clay minerals**
- Mooring**
- Severe Environment Surface Mooring (SESMOOR).** Kery, S.M., [1989, p.1398-1405, eng] **45-450**
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- Moraine lakes**
- See *also*: Glacial lakes**
- Moraines**
- Moraine formed by ice sheet near Casey Station.** Xie, Y., et al, [1988, p.179-192, chi] **45-47**
- Weathering processes near Casey Station.** Xie, Y., et al, [1988, p.193-213, chi] **45-48**
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- Morphogenesis**
- See *also*: Geomorphology**
- Morphology**
- See *also*: Geomorphology; Snow morphology**
- Mortars**
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- Corrosion protection of car bodies in Finland.** Rönholm, M., [1989, p.75-76, eng] **45-1217**
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- Heavy trucks, climate and pavement damage.** [1988, 175p., eng] **45-1479**
- Validation study of the CRREL shallow snow mobility model.** Blaisdell, G.L., et al, [1990, 72p., eng] **45-1510**
- Tests on the safety and efficiency of operation of sidewings for snow removal trucks.** Nakajima, J., et al, [1988, p.1055-1060, jpn] **45-2522**
- Tests on the efficiency of snow removal equipment for snow removal trucks.** Tsuchigata, K., et al, [1988, p.1061-1064, jpn] **45-2523**
- Automotive and construction equipment for arctic use; heating and cold starting.** Diemand, D., [1991, 28p., eng] **45-2919**
- See *also*: All terrain vehicles; Amphibious vehicles; Snow vehicles; Tank trucks; Tracked vehicles; Tractors**
- Motors**
- See *also*: Engines**
- Mountain glaciers**
- Integration of digital elevation model parameters with mountain radar imagery.** Gratton, D.J., et al, [1989, p.60-62, eng] **45-229**
- Mountain glaciers—an overview with emphasis on Alaska.** Coffin, J.H., et al, [1990, p.177-258, eng] **45-409**
- Satellite image atlas of glaciers of the world.** Williams, R.S., Jr., ed, [1989, 48p., eng] **45-817**
- Glaciers of Irian Jaya, Indonesia.** Allison, I., et al, [1989, p.1-20, eng] **45-818**
- Glaciers of New Zealand.** Chinn, T.J.H., [1989, p.21-48, eng] **45-819**

- Mountain glaciers (cont.)**
- Loss of mass in a mountain glacier. Merkushev, A.S., (1990, p.106-108, rus) 45-1111
- Interaction of sea ice, snow, and glaciers with the atmosphere and ocean. Kotliakov, V.M., ed, (1990, 74p., eng) 45-1261
- Problem of the thermal physics of snow-firn sequences. Bozhinskiĭ, A.N., et al, (1990, p.35-39, rus) 45-1733
- Possibilities of aerotopographic monitoring of surging glaciers. Osipova, G.B., et al, (1990, p.149-156, rus) 45-1754
- Mechanism of self-regulation and attenuation in glacier catastrophe. Kazanskiĭ, A.B., et al, (1990, p.156-164, rus) 45-1755
- Reports on the Glaciological Survey of 1988. Armando, E., et al, (1989, p.155-204, ita) 45-2087
- Glacial waters, solid transport and decantation in hydroelectrical systems. Bezinge, A., et al, (1989, p.247-256, fre) 45-2286
- Interaction of sea ice, snow and glaciers with the atmosphere and ocean. Kotliakov, V.M., ed, (1990, p.155-248, eng) 45-2409
- Two types of catastrophic glacial advance. Kazanskiĭ, A.B., (1991, p.193-195, eng) 45-2480
- Glacial and volcanic geomorphology of the Chimborazo—Carihuairazo Massif, Ecuadorian Andes. Clapperton, C.M., (1990, p.91-116, eng) 45-2789
- Freed from a glacier after 25 years—glacial and meteorological aspects. Ambach, W., et al, (1990, p.183-188, ger) 45-3763
- Mountain soils**
- Classification and diagnostics of soils in the subarctic Kola Peninsula. Nikonov, V.V., et al, (1989, p.4-18, rus) 45-1118
- Geomorphic processes above timberline in the Spanish Pyrenees. Garcia-Ruiz, J.M., et al, (1990, p.201-214, eng) 45-1808
- Problems of soil science in Siberia: collected scientific papers. Gadzhiev, I.M., ed, (1990, 183p., rus) 45-2904
- Soil cover of Siberia: formation and use. Volkovitsker, V.I., et al, (1990, p.143-151, rus) 45-2909
- Taiga soils in the northwestern part of the Yenisey mountain ridge. Korsunov, V.M., et al, (1990, p.152-163, rus) 45-2910
- Origin of silt-enriched alpine surface mantles in Indian Basin, Wyoming. Munn, L.C., et al, (1990, p.1670-1677, eng) 45-3863
- Mountain tundra**
- See *also*: Alpine tundra
- Mountains**
- Drifting snow hazard and its control in the Tian Shan Mountains. Wei, W., (1989, p.53-58, eng) 45-402
- Changes in mountain climate and glacio-hydrological responses. Barry, R.G., (1990, p.161-170, eng) 45-619
- Climate change and erosion processes in mountain regions of western Canada. Slaymaker, O., (1990, p.171-182, eng) 45-620
- International conference on mountain ecology in Tsakhkadzor. Ananicheva, M.D., (1989, p.184, rus) 45-1056
- Alpine debris flows and their sedimentary properties. A case study from the French Alps. Nieuwenhuijzen, M.E., et al, (1990, p.111-128, eng) 45-1293
- Geological prospecting of rocks for deep-freezing shafts. Lamparski, H., (1988, p.307-308, ger) 45-1475
- Sloping land with snow and ice. Lang, H., (1989, p.146-162, eng) 45-2749
- Saharan dust deposition over Mont Blanc (French Alps) during the last 30 years. De Angelis, M., et al, (1991, p.61-75, eng) 45-3020
- Landsat mapping of surface albedo of the Colorado Front Range. Duguay, C.R., et al, (1991, p.213-223, eng) 45-3486
- Mitigation of vehicle storage and traffic control problems during avalanche control. Morrall, J., (1991, p.191-200, eng) 45-3535
- Properties of snow deposited on mountains. Takahashi, K., (1986, p.439-447, eng) 45-3727
- Water and sediment yields into the Sutej River from the High Himalaya. Sharma, P.D., et al, (1991, p.87-100, eng) 45-3885
- Mud**
- Deposition of the glaciomarine mud in the Gulf of Maine. Oldale, R.N., (1989, p.1-10, eng) 45-2055
- Ultramicroscopic forms in the Barents Sea littoral mud. Mishustina, I.E., et al, (1973, p.138-140, rus) 45-3232
- Mud circulation**
- See *also*: Drilling fluids
- Mudflows**
- Long range regional forecasting of avalanches and mudflows. Berri, B.L., et al, (1990, p.46-52, rus) 45-677
- Laboratory on Avalanches and Mudflows of Moscow State University. Laptev, M.N., et al, (1989, p.131-132, rus) 45-1048
- Debris flows 1987 in Switzerland: modelling and fluvial sediment transport. Rickenmann, D., (1990, p.371-378, eng) 45-1974
- Investigation of 1987 debris flows in the Swiss Alps. Haeblerli, W., et al, (1990, p.303-310, eng) 45-1975
- Flood of Aug. 1987 in Switzerland. Naef, F., et al, (1990, p.222-227, ger) 45-1985
- Elsevier's dictionary of glaciology in four languages. Kotliakov, V.M., ed, (1990, 336p., eng) 45-2091
- Cryogenic processes in moraines of the Zailiyskiy Alatau. Kan, M.S., et al, (1990, p.167-173, rus) 45-2408
- Past and present changes of mudflow intensity in the Central Caucasus. Seinova, I.B., (1991, p.13-17, eng) 45-2435
- Hazardous hydrologic consequences of volcanic eruptions. Pierson, T.C., (1989, p.220-236, eng) 45-2769
- Exogenous processes in the southern Lake Baykal area. Imetkhenov, A.B., (1990, p.111-114, rus) 45-2871
- Municipal engineering**
- Finnish building; construction technology developed for cold climates. (1991, 219p., eng) 45-3453
- Naleds**
- Two-dimensional spreading and thickening of afeis. Schohl, G.A., et al, (1990, p.169-178, eng) 45-59
- Afeis formation and prevention. Slaughter, C.W., (1990, p.433-458, eng) 45-416
- Study of naleds—a top priority in geographical studies. Alekseev, V.R., (1989, p.29-34, rus) 45-642
- Studies of naleds and naled processes in the USSR. Sokolov, B.L., et al, (1989, p.3-15, rus) 45-1028
- Formation of the chemical composition of ice in Siberia and the Far East. Ivanov, A.V., (1989, p.62-67, rus) 45-1036
- Third All-Union Conference on the problems of naled formation. Alekseev, V.R., (1989, p.223-227, rus) 45-1067
- Geochemistry of cryogenic salts in eastern Yakutia.** Makarov, V.N., (1989, p.47-61, rus) 45-2628
- Natural gas**
- Interaction between permafrost and a deposit of natural gas hydrates. Tipenko, G.S., et al, (1990, p.73-84, rus) 45-322
- Gas hydrates of the Arctic Ocean region. Kvenvolden, K.A., et al, (1990, p.539-549, eng) 45-1694
- Natural resources**
- Conference on ecological impact of oil and gas industry, 1988. (1989, 235p., rus) 45-99
- Typification of engineering effects in permafrost regions using numerical criteria. Popkov, O.N., et al, (1989, p.65-69, rus) 45-107
- Mineral resource development. Westermeyer, W.E., et al, (1990, p.92-100, eng) 45-123
- Minerals other than gold in Alaska. Foley, J.Y., (1989, p.9-13, eng) 45-327
- Mining in Canada's north—a technical overview. Udd, J.E., (1989, p.15-25, eng) 45-328
- Mineral and hydroelectric resources in Greenland. Taagholt, J., (1989, p.33-41, eng) 45-330
- Achievements and future of mining above Arctic Circle. Zou, Z.H., (1989, p.43-46, eng) 45-331
- Geography of the USSR. Mountainous regions of southern USSR. Ershov, E.D., ed, (1989, 358p., rus) 45-430
- Coal resources of the Susitna lowland, Alaska. Merritt, R.D., (1990, 181p. + appends., eng) 45-489
- Alaska's mineral industry, 1989. Buntzen, T.K., et al, (1989, 100p., eng) 45-491
- Cry for help. Kanevskii, Z., (1990, p.34-40, 62-63, rus) 45-630
- Alaska's high-rank coals. (1990, 36p., eng) 45-931
- Sedimentary basins and petroleum resource potential of the Arctic Ocean region. Haimila, N.E., et al, (1990, p.503-538, eng) 45-1693
- Gas hydrates of the Arctic Ocean region. Kvenvolden, K.A., et al, (1990, p.539-549, eng) 45-1694
- Offshore hard minerals. Hale, P.B., (1990, p.551-565, eng) 45-1695
- 1990 annual report on Alaska's mineral resources. Schneider, J.L., ed, (1990, 67p., eng) 45-2038
- Peat and its occurrence as a resource in Maine. Cameron, C.C., (1989, p.125-146, eng) 45-2061
- Goals, objectives and priorities to guide United States arctic research. (1991, 39p., eng) 45-2394
- Report of the U.S. Arctic Research Commission, 1989-1990. (1991, 36p., eng) 45-2395
- Mineral resources potential of Antarctica. Spletstoesser, J.F., ed, (1990, 310p., eng) 45-2801
- Dufek intrusion of Antarctica. Ford, A.B., (1990, p.15-32, eng) 45-2802
- Economic potential of the Dufek Complex. De Wit, M.J., et al, (1990, p.33-52, eng) 45-2803
- Economic evaluation of platinum mining in Antarctica. Beike, D., (1990, p.53-67, eng) 45-2804
- Mineralization in the northern Antarctic Peninsula area. Pride, D.E., et al, (1990, p.69-94, eng) 45-2805
- Uranium resource evaluation in Antarctica. Zeller, E.J., et al, (1990, p.95-116, eng) 45-2806
- Banded iron formations in East Antarctica. Tingey, R.J., (1990, p.125-131, eng) 45-2808
- Coal geology and coal resources of the Transantarctic Mountains. Coates, D.A., et al, (1990, p.133-172, eng) 45-2809
- Assessment of petroleum resources in Antarctica. Behrendt, J.C., (1990, p.163-174, eng) 45-2810
- Geology and hydrocarbon potential of the antarctic continental margin. Anderson, J.B., (1990, p.175-201, eng) 45-2811
- Resource potential of antarctic icebergs. Wadhams, P., (1990, p.203-215, eng) 45-2812
- Manganese nodule provinces of the southern ocean. Frakes, L.A., et al, (1990, p.217-221, eng) 45-2813
- Environmental impact of natural resource exploitation in Antarctica. Parker, B.C., et al, (1990, p.237-258, eng) 45-2815
- Convention on the Regulation of Antarctic Mineral Resource Activities. Auburn, F., (1990, p.259-271, eng) 45-2816
- Special report on the Antarctic Minerals Convention. Kimball, L.A., (1990, p.273-310, eng) 45-2817
- Oil and gas resources in the offshore Soviet arctic. Clarke, J.W., (1991, p.108-122, eng) 45-3328
- Comparison of Soviet arctic and antarctic policies. Joyner, C.C., (1991, p.284-299, eng) 45-3338
- Ecological aspects of developing oil and gas resources in non-Soviet arctic regions. Epifanov, A.A., et al, (1990, p.150-160, rus) 45-3411
- National atlas; Mongolian People's Republic. Sodnom, N., ed, (1990, 144p., rus) 45-3764
- Navigation**
- See *also*: Ice navigation; Subglacial navigation
- Needle ice**
- See *also*: Ice needles
- Neutron activation analysis**
- Trace metal and rare earth content of black precipitation events. Landsberger, S., et al, (1990, p.363-369, eng) 45-1899
- Neutron probes**
- Neutron scattering study of high pressure ice. Li, J.-C., et al, (1991, p.6770-6775, eng) 45-2775
- Neutron scattering**
- Neutron scattering study of high pressure ice. Li, J.-C., et al, (1991, p.6770-6775, eng) 45-2775
- New Zealand**
- Glaciers of New Zealand. Chinn, T.J.H., (1989, p.21-48, eng) 45-819
- Periglacial phenomena in New Zealand. Soons, J.M., et al, (1990, p.145-159, eng) 45-1295
- Snowpack structure and avalanching, Craigieburn Range, New Zealand. McGregor, G.R., (1990, p.405-417, eng) 45-2213
- Nitrogen cycle**
- See *also*: Nutrient cycle
- Nival relief**
- Geomorphology and paleogeography of the Malvi Naryn River basin. Sydykov, Dz., (1989, 167p., rus) 45-735
- Nivation**
- Complex glaciological mapping. Khodakov, V.G., et al, (1989, p.17-24, rus) 45-1029
- Mapping glacial-nival phenomena and human activity. Osokin, N.I., et al, (1990, p.177-181, rus) 45-1758
- Comment on "Enhanced boulder weathering under late-lying snow patches". McCarroll, D., (1990, p.467-469, eng) 45-2258
- Use of the Schmidt test hammer to detect enhanced boulder weathering under late-lying snowpatches. Ballantyne, C.K., et al, (1990, p.471-474, eng) 45-2259
- Cryolithology of the lower course of the Lena River. Kunitskiĭ, V.V., (1989, 162p., rus) 45-2424
- Problem of cryoplanation terraces. Czudek, T., (1990, p.225-238, ger) 45-3054
- Noise (sound)**
- Acoustic and seismic signals from snow avalanches. Firsov, P.P., et al, (1990, p.67-71, rus) 45-321
- Noise immunity of towed receiving devices in marine seismic prospecting. Buravtsev, V.I.U., et al, (1988, p.34-42, rus) 45-681
- Method to reduce traffic noise by making use of a snow surface. Hasebe, M., et al, (1990, p.533-538, eng) 45-1912
- Sea ice noise-generating processes. Pritchard, R.S., (1990, p.2830-2842, eng) 45-2291
- Directionality of ice cracking events. Zakarasukas, P., et al, (1991, p.722-734, eng) 45-2402
- Sound absorption and winter performance of porous asphalt pavement. Camomilla, G., et al, (1990, p.1-8, eng) 45-3058
- Nomenclature**
- See *also*: Terminology
- Nomographs**
- Factors in the stability of glacier systems. Lebedeva, I.M., (1990, p.64-75, rus) 45-1738
- Graphical method simplifies diesel cloud point determinations. Khan, H.U., et al, (1990, p.98-101, eng) 45-3101
- Noncohesive soils**
- Freeze/thaw effect on soil aggregate stability. Edwards, L.M., (1991, p.193-204, eng) 45-1933
- North Atlantic Ocean**
- Hydrographic measurements from C.S.S. Hudson Cruise 82-002. Hendry, R.M., (1989, 112p., eng) 45-1281

**Northern Sea Route**

- Evaluating the economic effectiveness of extending arctic navigation. Arikainen, A.I., et al, [1989, 70p., rus] **45-1714**
- Plying the Northern Sea Route. Brigham, L.W., [1991, p.10-11, eng] **45-1721**
- Soviet maritime arctic. Brigham, L.W., ed, [1991, 336p., eng] **45-3323**
- Management of the Northern Sea Route. Arikainen, A.I., [1991, p.140-149, eng] **45-3330**
- Northern Sea Route operations in the 1986-7 season. Armstrong, T., [1991, p.150-157, eng] **45-3331**

**Northwest Passage**

- Development of the northwestern sea route. Arikainen, A.I., [1989, 206p., rus] **45-1722**

**Norway**

- Ferromanganese rock varnish in North Norway: a subglacial origin. Whalley, W.B., et al, [1990, p.265-275, eng] **45-432**
- Chemical compositions of aerosol particles and snowfalls in Alta, northern Norway. Lee, D.-I., et al, [1989, p.169-178, eng] **45-829**
- Holocene glacier variations in Norway. Nesje, A., et al, [1991, p.25-40, eng] **45-2314**
- Mass balance measurements on Norwegian glaciers in 1988 and 1989. Ostrem, G., et al, [1991, 78p., nor] **45-3856**

**Nordauslandet**

- Impact of climate on the temperature distribution of ice in the ice divide of the Austfonna (Nordauslandet). Larina, T.B., et al, [1989, p.185-190, rus] **45-1057**

**Spitsbergen**

- Geomorphic impact of spring avalanches in northwest Spitsbergen (79N). André, M.F., [1990, p.97-110, eng] **45-1292**
- Comments on "6000-year climate records in an ice core from the Høghetta ice dome in northern Spitsbergen". Dowdeswell, J.A., et al, [1990, p.353-356, eng] **45-1549**

**Svalbard**

- Ice core analysis of Svalbard and Severnaya Zemlya ice sheets. Zagorodnov, V.S., et al, [1990, p.19-28, eng] **45-195**
- Coal mining in and below permafrost on Svalbard. Brugmans, P.J., [1989, p.87-93, eng] **45-335**
- Rock mechanics investigations in the Svea Coal Mine, Svalbard. Myrvang, A.M., et al, [1989, p.95-103, eng] **45-336**
- Fast-flowing outlet glaciers on Svalbard ice caps. Dowdeswell, J.A., et al, [1990, p.778-781, eng] **45-617**
- Svalbard radiocarbon date list 1. Forman, S.L., et al, [1990, 48p., eng] **45-1180**
- Identification of annual layers in superimposed ice from Storöykjulen in northeastern Svalbard. Jonsson, S., et al, [1990, p.41-54, eng] **45-1187**
- Hydrothermal regime of the ice-divide area of Austfonna, Nordauslandet. Zagorodnov, V.S., et al, [1990, p.133-141, rus] **45-1752**
- Glaciation and shore displacement on Svalbard. Osterholm, H., [1990, p.301-317, eng] **45-2031**
- Air temperature and precipitation variations at Svalbard. Brázdil, R., [1988, p.53-68, eng] **45-3027**
- Hydrology of Svalbard—hydrological problems in cold climate. Proceedings. [1990, 224p., eng] **45-3776**
- CEAREX/Haakon Mosby meteorology atlas. Fredrickson, P.A., et al, [1990, 57p., eng] **45-3853**
- Geomorphological results of the Japanese expedition to Svalbard, 1988-1989. Ono, Y., et al, [1991, p.259-269, eng] **45-3859**
- Tertiary history and tectonics of the Forlandsundet Basin. Lepvrier, C., [1990, 16p., eng] **45-3882**

**Norwegian Sea**

- USNS *Bartlett* cruise to the Greenland Sea in September 1989. Data report. Bourke, R.H., et al, [1990, 122p., eng] **45-451**
- Thermohaline structure and dynamics of water masses. Jankowski, A., et al, [1990, p.3-16, eng] **45-2428**
- Icebergs in the Norwegian Continental Shelf in 1880-1881. Kvitrud, A., et al, [1991, p.131-136, eng] **45-3160**

**Nuclear magnetic resonance**

- Spin-lattice relaxation and molecular dynamics of supercooled water. Zavadovskii, A.G., [1989, p.1170-1172, eng] **45-1025**
- Frozen-liquid PMR spectra and interactions of water with spherical carbon adsorbents. Turov, V.V., et al, [1990, p.102-105, eng] **45-2285**
- Cryogenic properties of soils and rocks: 1. Anomalous behaviour of water. Quinn, F.X., et al, [1991, p.195-209, eng] **45-3401**

**Nuclear power**

- Environmental threats of military presence in the arctic. Heininen, L., [1990, p.42-69, eng] **45-3088**
- Taymyr: a new nuclear icebreaker for the Soviet Union. [1989, p.E314-E315, eng] **45-3103**

**Nuclear wastes**

See *also*: Radioactive wastes

**Nucleating agents**

See *also*: Dry ice (trademark), Lead iodide, Silver iodide

**Nucleation**

- Ice nucleation by alcohols layered in water. Gavish, M., et al, [1990, p.973-975, eng] **45-917**
- Crack nucleation due to elastic anisotropy in porous ice. Shyam Sunder, S., et al, [1990, p.249-265, eng] **45-1617**
- Use of genetically altered bacteria to achieve plant frost control. Lindow, S.E., [1990, p.85-110, eng] **45-1980**
- Parameterization of the accretion process between different precipitation elements. Mizuno, H., [1990, p.395-398, eng] **45-2533**
- See *also*: Artificial nucleation; Heterogeneous nucleation; Homogeneous nucleation; Two dimensional nucleation

**Nucleation rate**

- Exploratory study of ice nucleation by soot aerosols. DeMott, P.J., [1990, p.1072-1079, eng] **45-1274**

**Nuclei**

See *also*: Condensation nuclei; Freezing nuclei; Hygroscopic nuclei; Ice crystal nuclei; Ice nuclei; Organic nuclei; Snow crystal nuclei

**Numerical analysis**

See *also*: Analysis (mathematics)

**Numerical models**

See *also*: Mathematical models

**Nunataks**

- Note on biological weathering on nunataks of the Juneau Icefield, Alaska. Hall, K., et al, [1990, p.189-196, eng] **45-1298**

**Nutrient cycle**

- Nitrogen and phosphorus dynamics and the fate of agricultural runoff. Neely, R.K., et al, [1989, p.92-131, eng] **45-834**
- Dinitrogen fixation in primary succession in Canada. Blundon, D.J., et al, [1990, p.255-263, eng] **45-888**
- Phosphatase enzyme activity at subzero temperatures in arctic tundra soils. Neal, J.L., [1990, p.883-884, eng] **45-1019**

- Fate of N-15-labelled fertilizer applied on snow at two forest sites in British Columbia. Preston, C.M., et al, [1990, p.1583-1592, eng] **45-1027**

- Denitrification in artificial wetlands. Stengel, E., et al, [1989, p.484-492, eng] **45-1886**

- Nitrogen utilization in ice algal communities. Harrison, W.G., et al, [1990, p.275-283, eng] **45-2033**

- Nitrogen dynamics in two antarctic streams. Howard-Williams, C., et al, [1989, p.51-61, eng] **45-2607**

- Nitrogen cycling in arctic lakes and ponds. Alexander, V., et al, [1989, p.165-172, eng] **45-2614**

- Nitrogen transport by phytoplankton in ice-covered lakes. Priscu, J.C., [1989, p.173-182, eng] **45-2615**

- Seasonal variations in chlorophyll and nutrients in a Canadian arctic estuary. Grainger, E.H., et al, [1982, p.294-301, eng] **45-3127**

- Nitrogen, phosphorus, and organic carbon cycling in an arctic lake. Whalen, S.C., et al, [1985, p.797-808, eng] **45-3244**

- Nitrogenous nutrition of sea-ice microalgae. Demers, S., et al, [1989, p.377-383, eng] **45-3285**

- Response of an Alaskan wetland to nutrient enrichment. Sanville, W., [1988, p.231-243, eng] **45-3383**

- Exchange of energy in a near-shore ecosystem. Propp, M.V., [1977, p.598-610, eng] **45-3387**

- Ammonium uptake by *Eriophorum vaginatum* roots. Marion, G.M., et al, [1990, p.50-55, eng] **45-3767**

**Ocean atmosphere interactions**

See *also*: Air water interactions

**Ocean bottom**

- Gas hydrate and acoustically laminated sediments. Max, M.D., [1990, 72p., eng] **45-314**
- Dynamics of the Laurentide Ice Sheet in Hudson Bay, Canada. Josenhans, H.W., et al, [1990, p.1-26, eng] **45-1552**
- Analysis of subscour stresses on buried submarine pipelines—summary report. Comfort, G., et al, [1990, 30p., eng] **45-1555**
- Analysis of subscour stresses on buried submarine pipelines—vol. 1A and 1B. Comfort, G., et al, [1990, 106p., 324p., eng] **45-1556**
- Arctic Ocean region. Grantz, A., ed, [1990, 644p., + 11 maps and charts in a separate case, eng] **45-1688**
- Proceedings. [1990, 499p., eng] **45-1945**
- Character and distribution of sea-ice and iceberg scours. Lewis, C.F.M., et al, [1990, p.57-101, eng] **45-1946**
- Scour shape and sub-scour disturbance studies from the Canadian Beaufort Sea. Gilbert, G.R., [1990, p.127-144, eng] **45-1948**
- Mechanisms of failure and soil deformation during scouring. Been, K., [1990, p.179-191, eng] **45-1951**
- On small scale ice scour modelling. Poorooshasb, F., et al, [1990, p.193-235, eng] **45-1952**
- Design ice gouge depth computation through computer simulations. Wang, A.T., [1990, p.237-247, eng] **45-1953**

- Manganese nodule provinces of the southern ocean. Frakes, L.A., et al, [1990, p.217-221, eng] **45-2813**
- Mechanical properties of sea ice and adfreeze strength of sea ice and subsea soil. Sadovskii, A.V., et al, [1990, p.417-426, eng] **45-3595**

See *also*: Bottom sediment

**Ocean currents**

- Spring surface circulation patterns detected using remote sensing of drifting ice floes in Hudson Bay, Canada. Larouche, P., [1989, p.780-782, eng] **45-251**
- Boundary element analysis for the flow around a submerged ice floe. Rahman, M., et al, [1990, p.69-72, eng] **45-365**
- USNS *Bartlett* cruise to the Greenland Sea in September 1989. Data report. Bourke, R.H., et al, [1990, 122p., eng] **45-451**
- Icebergs as tracers of water movement in the Bransfield Strait. Madejski, P., et al, [1990, p.259-263, eng] **45-470**
- Weddell gyre: temperature maximum stratum. Bagriantsev, N.V., et al, [1989, p.8331-8334, eng] **45-471**
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- Water masses and fronts, and their geographical position off Newfoundland. Nowak, W.S.W., [1990, 24p., eng] **45-553**
- Arctic environmental drifting buoy, Aug. 1987-Apr. 1988. Honjo, S., et al, [1990, 128p., eng] **45-565**
- Subarctic frontal zone in the northern Pacific Ocean in autumn. Kil'matov, T.R., [1989, p.62-64, rus] **45-738**
- Concerning the near-surface circulation in the subarctic frontal zone. Ginzburg, A.I., et al, [1986, p.6-12, eng] **45-861**
- Divergent redistribution of ice in the Northern Arctic Ocean. Nazirov, M., [1987, p.244-254, eng] **45-862**
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- Interannual variability of cold water at the bottom of the continental shelf of the southeastern Bering Sea. Ohtani, K., et al, [1990, p.230-235, jpn] **45-869**
- Distinguishing the Pacific subarctic front. Kuz'min, V.A., [1988, p.60-62, rus] **45-876**
- Data report on the Weddell Ice Dynamics Experiment. Crane, D.R., et al, [1990, n.p., eng] **45-944**
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- Currents and temperature data from southwestern Baffin Bay, Oct. 1984-Oct. 1985. Ross, C.K., [1990, 180p., eng] **45-1286**
- Sea ice data for the Newfoundland Shelf, 1988-1989. Fissel, D.B., et al, [1989, 165p., eng] **45-1288**
- Weddell-Scotia confluence in midwinter. Muench, R.D., et al, [1990, p.18, 177-18, 190, eng] **45-1608**
- Ice cover effects in models of sea level fluctuations and water circulation. Proshutinskii, A.I.U., [1990, p.90-104, rus] **45-1640**
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- Outer Continental Shelf Environmental Assessment Program: Final reports of principal investigators, Vol. 70. [1990, 652p., eng] **45-2153**
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**Ocean currents (cont.)**

- Vertical fine structure of temperature profile in the subarctic front zone. Navrotskiĭ, V.V., et al, [1991, p.468-474, rus] 45-2935
- Distribution of heterotrophic bacteria in the Atlantic Ocean. Kriss, A.E., [1970, p.362-371, rus] 45-3181
- Ocean feature study using synthetic aperture radar. Ikeda, M., et al, [1991, p.10,593-10,602, eng] 45-3309
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**See (also):** Tidal currents**Ocean environments**

- Arctic acoustics and experiments in the Marginal Ice Zone. Meredith, R.W., et al, [1989, 75p., eng] 45-3112
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- OCS Mining Program: Norton Sound Lease Sale. Final environmental impact statement. [1991, Var. p., eng] 45-2160
- OCS Mining Program: Norton Sound Lease Sale. Second draft environmental impact statement. [1990, Var. p., eng] 45-2161
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- Chukchi Sea Oil and Gas Lease Sale 126. Final environmental impact statement. [1991, 2 vols., eng] 45-2173
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- Canadian Ice Island: environmental studies of the polar margin north of Canada's arctic islands. Mudie, P.J., et al, [1991, p.60-67, eng] 45-3858

**Ocean waves**

- Frequency spectra of ocean internal waves under an ice cover. Pisarev, S.V., [1989, p.577-580, eng] 45-91
- Wave evolution in the marginal ice zone. Liu, A.K., et al, [1989, p.1520-1523, eng] 45-273
- Role of ice properties in wave-ice interaction during LIMEX '1987. Winsor, W.D., et al, [1989, p.2350-2354, eng] 45-292

- Environmental signatures in arctic ambient noise. Gough, E.C., Jr., [1989, p.1225-1230, eng] 45-437
- Breaking of sea ice by ocean waves. Allan, A.J., [1975, 12p. + appendix, eng] 45-938
- Experimental study of wave-ice interaction and floe flexure in the pack ice of the Labrador current. Wadhams, P., et al, [1984, n.p., eng] 45-941
- Interaction between ocean waves and ice in the Bering Sea. Squire, V.A., [1979, 27p., eng] 45-943
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- Long waves in an ice cover-fluid system, under ice compression. Gol'dshteyn, R.V., et al, [1989, p.188-205, rus] 45-1505
- Coastal zone oil spill model: performance test of wave propagation components. Reed, M., [1989, p.151-159, eng] 45-2157
- Strain in shore fast ice due to incoming ocean waves and swell. Fox, C., et al, [1991, p.4531-4547, eng] 45-2670
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- Design criteria for arctic offshore production structures. Computer programs. [1984, n.p., eng] 45-2847
- Beaufort Sea hindcast study 1970 to 1982. Final report. [1983, 41p., eng] 45-2848
- Beaufort Sea hindcast update. Interim report. [1983, 289p., eng] 45-2849
- Detection of waves in frazil ice in synthetic aperture radar imagery. Wadhams, P., et al, [1991, p.8835-8852, eng] 45-3019
- Oceanographic ships**
- Scientific drilling in high latitudes. Grout, R.M., et al, [1990, p.338-350, eng] 45-143
- Oceanographic surveys**
- Design criteria for oceanographic survey ships operated in the Marginal Ice Zone (MIZ). Strasel, E.S., et al, [1989, p.69-98, eng] 45-533
- Compendium of environmental data collected during the Iceshelf-88 exercise. Bucca, P.J., [1990, n.p., eng] 45-936
- MIZEX '83 data summary. Squire, V.A., et al, [1983, 154p., eng] 45-942
- Iceberg data report. Hirst, J.F., et al, [1989, 79p., eng] 45-949
- Long-term temperature monitoring program, 1987: Scotia-Fundy, Gulf of St. Lawrence, and Newfoundland. Gregory, D.N., et al, [1988, 491p., eng] 45-1275
- Current meter, CTD and meteorological observations on the northern Grand Banks for Apr.-Oct. 1986. DeYoung, B., et al, [1988, 94p., eng] 45-1276
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- Long-term temperature monitoring program, 1989: Scotia-Fundy and the Gulf of St. Lawrence. Gregory, D.N., et al, [1990, 175p., eng] 45-1278
- Long-term temperature monitoring program, 1988: Scotia-Fundy and Gulf of St. Lawrence. Gregory, D.N., et al, [1989, 233p., eng] 45-1279
- Hydrographic measurements from C.S.S. Hudson Cruise 82-002. Hendry, R.M., [1989, 112p., eng] 45-1281
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- Oceanographic observations off Prince Edward I., Canada. Drinkwater, K.F., et al, [1988, 37p., eng] 45-1283
- Monthly means of temperature, salinity and sigma-t for the Gulf of St. Lawrence. Petrie, B., [1990, 137p., eng] 45-1284
- Currents and temperature data from northwestern Baffin Bay, Sep. 1983-Sep. 1984. Ross, C.K., [1990, 227p., eng] 45-1285
- Currents and temperature data from southwestern Baffin Bay, Oct. 1984-Oct. 1985. Ross, C.K., [1990, 180p., eng] 45-1286
- Sea ice data for the Newfoundland Shelf, 1988-1989. Fissel, D.B., et al, [1989, 165p., eng] 45-1288
- Spring bloom oceanographic interaction at the Bering Sea ice edge zone. Niebauer, P.J., et al, [1990, p.22,229-22,241, eng] 45-1413
- Mid-winter physical oceanography in Scotia Sea. Muench, R.D., et al, [1990, p.148-150, eng] 45-1423
- Applying r-f methods to oceanographic and glacial studies. Gavrilov, V.P., [1989, p.7-22, rus] 45-1484
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- Water exchange under fast ice in Lützow-Holm Bay, Ohshima, K.I., et al, [1991, p.74-80, eng] 45-3065
- Oceanography**
- Labrador ice margin experiment LIMEX'89: an overview. Raney, R.K., et al, [1989, p.1517-1519, eng] 45-272
- Portable ARGOS data link. Bader, C.M., et al, [1989, p.1272-1275, eng] 45-443

- Preliminary study of an advanced automatic station for marine data acquisition in Antarctica. Gasparoni, F., et al, [1989, p.1646-1651, eng] 45-722
- Temperature-salinity-density ratio near the Pacific subarctic front. Kuz'min, V.A., [1989, p.58-61, rus] 45-737
- Subarctic frontal zone in the northern Pacific Ocean in autumn. Kif'matov, T.R., [1989, p.62-64, rus] 45-738
- Correlating marine, loess, and glacial-flatland formations. Zubakov, V.A., [1989, p.21-24, rus] 45-789
- Bering, Chukchi, and Beaufort Seas coastal and ocean zones. [1988, 128 leaves, eng] 45-807
- Ice island: a floating platform for valuable geophysical studies in the Arctic Ocean. Hobson, G., [1989, p.9-11, eng] 45-898
- Applying r-f methods to oceanographic and glacial studies. Gavrilov, V.P., [1989, p.7-22, rus] 45-1484
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- Heat flux at the ice-ocean interface. Wettlaufer, J.S., [1991, p.7215-7236, eng] 45-2560
- Multi-national, interdisciplinary arctic experiments: planning, logistics and operations coordination. Horn, D.A., [1990, p.65-78, eng] 45-2722
- Design features and operation capability of the new US antarctic research vessel. Kennedy, H., et al, [1990, p.167-176, eng] 45-2730
- Ice conditions in the Barents Sea during SIZEX 89. Sandven, S., et al, [1990, p.309-320, eng] 45-2740
- Icebergs as oceanographic tracers (in the example of the Weddell Sea). Nazirov, M., [1989, p.142-148, rus] 45-2760
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- Western Novaya Zemlya bays in relation to Late Valdeia glaciation. Dunaev, N.N., et al, [1990, p.94-103, rus] 45-2877
- Transfer of terrigenous suspended material to the Barents Sea by glaciers. Medvedev, V.S., et al, [1990, p.103-110, rus] 45-2878
- Quantitative distribution and the dynamics of sediments in the Kara Sea. Medvedev, V.S., et al, [1990, p.110-120, rus] 45-2879
- Vertical fine structure of temperature profile in the subarctic front zone. Navrotskiĭ, V.V., et al, [1991, p.468-474, rus] 45-2935
- Polar class icebreaker oceanographic mission upgrade. Tilyou, M., et al, [1991, p.218-230, eng] 45-3053
- Oceans**
- Computer-controlled yo-yo CTD system for the Arctic. Andersen, R., et al, [1989, p.1263-1266, eng] 45-442
- International Ice Patrol's air-deployed bathythermograph system. Alfultis, M.A., [1989, p.1652-1657, eng] 45-723
- Mean annual cycle in global ocean wind stress. Trenberth, K.E., et al, [1990, p.1742-1760, eng] 45-1259
- Arctic hurricane over the Bering Sea. Businger, S., et al, [1991, p.321-324, eng] 45-1944
- Comparisons between lakes and seas during the arctic winter. Welch, H., [1991, p.11-23, eng] 45-2468
- Snow cover effect on oceanic moisture distribution in the Southern Hemisphere. Kotliakov, V.M., et al, [1989, p.242-246, eng] 45-2598
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- Exploration activity heats up in the Alaskan offshore. [1990, p.34-35, eng] 45-2555
- Ocean drilling program proposal for arctic ocean drilling. Mudie, P.J., et al, [1988, 20p. + appends., eng] 45-2600
- Multi-year ice strength testing program. Bawden, W., et al, [1983, n.p., eng] 45-2852
- 1983 Arco ice stress sensor program at Tarsiut Island. Final report. [1984, 77p. + appends., eng] 45-2858
- Gulf et al Tarsiut Island Research Program. [1982, 17p. + appends., eng] 45-2859
- Conference on offshore mechanics and arctic engineering, 10th, 1991. [1991, 287p., eng] 45-3140
- Comparison between different construction methods of ice islands. Szlizer, K., et al, [1991, p.9-15, eng] 45-3142
- Spray ice lands for exploration in the Canadian Beaufort Sea. Weaver, J.S., et al, [1991, p.17-22, eng] 45-3143
- Development of ice-oil platform interaction problem in USSR. Vershinin, S.A., [1990, p.59-72, eng] 45-3666
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- Recent developments in structural concepts for Arctic Ocean platforms. Gerwick, B.C., Jr., [1990, p.428-441, eng] 45-148
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- Ice loading on offshore structures. Mills, M.R., et al, [1989, p.152-167, eng] 45-515
- Evaluation of state-of-the-art drilling platform icing models. Brown, R.D., et al, [1989, 80p., eng] 45-654
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- Evaluation of state-of-the-art drilling platform ice accretion models. Brown, R.D., et al, [1988, p.208-213, eng] 45-1340
- Analysis of subscour stresses on buried submarine pipelines—summary report. Comfort, G., et al, [1990, 30p., eng] 45-1555
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- Analysis of subscour stresses on buried submarine pipelines—Vol.2. Been, K., et al, [1990, 204p., eng] 45-1557
- Analysis of subscour stresses on buried submarine pipelines—Vol.3. Murray, A., et al, [1990, 45p. + appends., eng] 45-1558
- Allowing for ice conditions in designing offshore construction. Truskov, P.A., [1987, p.89-94, rus] 45-1568
- Characteristics of the total drift of compacted ice in a coastal zone. Truskov, P.A., et al, [1988, p.110-114, rus] 45-1747
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- Ice design criteria for wide arctic structures. Blanchet, D., [1990, p.701-725, eng] 45-1868
- Proceedings. [1990, 499p., eng] 45-1945
- Character and distribution of sea-ice and iceberg scours. Lewis, C.F.M., et al, [1990, p.57-101, eng] 45-1946
- Case study analysis of the probability of ice scour-induced damage for submarine pipelines. Comfort, G., [1990, p.145-164, eng] 45-1949
- Design of marine pipelines in seabed vulnerable to ice scour. Palmer, A., [1990, p.167-178, eng] 45-1950
- Thaw subsidence effects on offshore pipelines and wells. Nixon, J.F., [1990, p.273-287, eng] 45-1954
- Influence of burial trench conditions on offshore pipeline stability. Rogers, B.T., [1990, p.303-319, eng] 45-1955
- First arctic pipeline and later developments. Brown, R.J., [1990, p.323-334, eng] 45-1956
- Construction strategies for arctic offshore pipelines. McKeehan, D.S., [1990, p.335-345, eng] 45-1957
- Vessel requirements for arctic pipeline trenching and installation. Jolles, W.H., [1990, p.347-364, eng] 45-1958
- Application of Voker Stevin's experience to arctic offshore pipeline installation. [1990, p.365-373, eng] 45-1959
- Geotechnical monitoring for an arctic offshore pipeline. Hanna, A.J., et al, [1990, p.385-394, eng] 45-1961
- Performance of instruments and the success of monitoring programs in the offshore environment. DiBiagio, E., [1990, p.395-417, eng] 45-1962
- Integrity monitoring criteria and methods for ice scour problems. Price, P.St.J., et al, [1990, p.419-444, eng] 45-1963
- Examination of potential pipeline monitoring techniques. Witney, K.C., [1990, p.445-453, eng] 45-1964
- Final supplemental environmental impact statement: Kodiak Harbor, Alaska. [1991, 86p. + appends., eng] 45-2051
- Computer model to assess ice risk to offshore structures. Blanchet, D., [1991, p.650-665, eng] 45-2375
- Ice forces on structures. Gerwick, B.C., Jr., [1990, p.1263-1301, eng] 45-2392
- Thaw-subside effects on offshore pipelines. Nixon, J.F., [1991, p.28-39, eng] 45-2418
- Long-term iceberg collision-risk assessment methods for fixed offshore structures. Koranes, R., [1989, p.203-214, eng] 45-2591
- Practical scenarios and force determinations for iceberg impact on fixed structures. Gerwick, B.C., Jr., [1990, p.195-210, eng] 45-2732
- Interaction of arctic offshore structures with drifting ice islands and thick sea ice floes. Sackinger, W.M., et al, [1990, p.211-228, eng] 45-2733
- Cathodic protection in Cook Inlet arctic waters. Hedborg, C.E., [1991, p.24-28, eng] 45-3025
- Conference on offshore mechanics and arctic engineering, 10th, 1991. [1991, 287p., eng] 45-3140
- Deformation of a floating drilling platform made of built-up ice. Derradji-Aouat, A., et al, [1991, p.1-8, eng] 45-3141
- Spray ice lands for exploration in the Canadian Beaufort Sea. Weaver, J.S., et al, [1991, p.17-22, eng] 45-3143
- PEIST—an in situ ice strength testing device. Johnson, R.C., et al, [1991, p.23-28, eng] 45-3144
- Ice island simulator. Wang, A.T., et al, [1991, p.29-37, eng] 45-3145
- Frequency response of fluid-displacement urethane-button ice pressure panels. Spencer, P.A., [1991, p.71-74, eng] 45-3150
- Bearing capacity of shallow foundation on layered clay. Das, B.M., [1991, p.119-124, eng] 45-3158
- Environmental conditions in the Southern Barents Sea. Kvitrud, A., et al, [1991, p.125-130, eng] 45-3159
- Impact probabilities between large ice features and offshore structures. Morrison, T.B., et al, [1991, p.199-206, eng] 45-3170
- Two and three dimensional response of nonlinear soil under gravity structures. Prasad, K.S.R., et al, [1991, p.253-260, eng] 45-3171
- Interpretation of pile load tests at the Haga site. Whittle, A.J., [1991, p.267-274, eng] 45-3179
- Significance of a cap yield surface in earth pressure calculations. Evgin, E., et al, [1991, p.275-281, eng] 45-3180
- Remote monitoring of thermal structure and growth of shore-fast ice off the Labrador coast. Peterson, I., et al, [1991, p.123-130, eng] 45-3419
- IHR Symposium on Ice, 10th, 1990. [1990, 3 vols., eng] 45-3562
- Characterization of the behaviour of ice masses in marine environments. Romagnoli, R., et al, [1990, p.405-416, eng] 45-3594
- Rubble-spray ice islands. Gulati, K.C., et al, [1990, p.596-605, eng] 45-3610
- Sources of uncertainties in methods of ice design for offshore structures. Foroughi, A.R., [1990, p.923-930, eng] 45-3641
- Numerical modelling of mixed snow and sea spray icing. Horjen, I., [1990, p.945-960, eng] 45-3643
- Stochastic approach to the ice-structure interaction. Kajaste-Rudnitski, J., [1990, p.961-973, eng] 45-3644
- Total ice force on multi-legged structures. Kato, K., [1990, p.974-983, eng] 45-3645
- Problems of ice force evaluation on offshore structures. Khrapaty, N.G., et al, [1990, p.984-994, eng] 45-3646
- Spongy saline ice formation in the vicinity of a stagnation point. Lock, G.S.H., [1990, p.999-1009, eng] 45-3648
- Effect of ice pile-up on the ice force of a conical structure. Mänttinen, M., et al, [1990, p.1010-1021, eng] 45-3649
- Design optimization of jacket platforms for ice infested waters. Wang, L.Y., et al, [1990, p.1056-1070, eng] 45-3653
- Application of Maattanen model on multilegged structures. Wang, L.Y., et al, [1990, p.1071-1083, eng] 45-3654
- Model test investigation of local ice pressure distribution at cylindrical structures. Wessels, E., [1990, p.1084-1096, eng] 45-3655
- Contribution of damping in the Maattanen model. Xu, J.Z., et al, [1990, p.1097-1104, eng] 45-3656
- Development of ice-oil platform interaction problem in USSR. Vershinin, S.A., [1990, p.59-72, eng] 45-3666
- See *also*: Floating structures; Hydraulic structures
- Oil**
- See *also*: Crude oil
- Oil industry**
- See *also*: Petroleum industry
- Oil products**
- See *also*: Petroleum products
- Oil recovery**
- Analysis tools for high and low velocity ice indentation problems. Vivatrat, V., [1987, 119p., eng] 45-87
- Oil spill response guide. [1989, 314p., eng] 45-1478
- Proceedings of an oil spill workshop. Ross, S.L., et al, [1990, 48p. + append., eng] 45-1774
- Lancaster Sound region: a coastal atlas for environmental protection. Dickens, D., et al, [1990, Var. p., eng] 45-2103
- Alaska oil dispersant-use guidelines. Whitney, J.W., et al, [1989, p.161-170, eng] 45-2158
- Lori ice cleaner. Korppoo, S., [1990, p.341-342, eng] 45-3688
- Oil spills**
- Alaskan oil spill bioremediation project. [1989, 16p., eng] 45-80
- New generation of spill model. Mackay, D., et al, [1987, p.149-163, eng] 45-181
- Oil contamination of antarctic ice. Ventajas, L., et al, [1990, 23p., spa] 45-1000
- Effect of hydrometeorological factors on spreading of oil products in reservoirs. Al'khimenko, A.I., [1989, p.199-204, eng] 45-1079
- Modelling the behaviour of oil spills in ice-infested waters. Venkatesh, S., et al, [1990, p.303-329, eng] 45-1151
- Spreading of oil spilled under ice. Yapa, P.D., et al, [1990, p.1468-1483, eng] 45-1289
- Oil spill response guide. [1989, 314p., eng] 45-1478
- Proceedings of an oil spill workshop. Ross, S.L., et al, [1990, 48p. + append., eng] 45-1774
- Gulf of Alaska, Cook Inlet, and North Aleutian environmental assessment. Jarvela, L.E., ed, [1989, 179p., eng] 45-2156
- Coastal zone oil spill model: performance test of wave propagation components. Reed, M., [1989, p.151-159, eng] 45-2157
- Alaska oil dispersant-use guidelines. Whitney, J.W., et al, [1989, p.161-170, eng] 45-2158
- Marine accident report on the Exxon Valdez oil spill of Mar. 1989. [1990, 255p., eng] 45-2644
- Arctic marine ecosystems and oil pollution. Percy, J.A., [1975, p.II/87-II/98, eng] 45-3224
- Oil-oxidizing and heterotrophic microflora on the Eastern Murman coast. Dermicheva, S.G., [1985, p.139-143, eng] 45-3290
- Bioremediation of petroleum spills in arctic and subarctic environments. Travis, M.D., [1990, p.4-12, eng] 45-3465
- Simulation studies help predict oil impact in Alaska offshore areas. Signorini, S., et al, [1990, p.41-44, eng] 45-3546
- Oil spill in the Gulf of Finland in 1987. Hirvi, J.P., [1990, p.127-141, eng] 45-3671
- Brine-induced advection of dissolved aromatic hydrocarbons to arctic bottom waters. Payne, J.R., et al, [1991, p.940-951, eng] 45-3818
- Plutonium and Pb-210 activities in two cores from Prince William Sound. Bothner, M.H., et al, [1990, 10p., eng] 45-3831
- Conclusions and recommendations regarding Prince William Sound oil spill. Reimnitz, E., et al, [1990, 3p., eng] 45-3832
- Oil transportation**
- See *also*: Petroleum transportation
- Oil wells**
- Use of water of taliks above permafrost for water supply to oil fields. Burchak, T.V., et al, [1989, p.15-24, eng] 45-647
- Sedimentary basins and petroleum resource potential of the Arctic Ocean region. Haimila, N.E., et al, [1990, p.503-538, eng] 45-1693
- Prevention of oil well collapse in permafrost. Medvedakii, R.I., et al, [1989, p.74-82, eng] 45-2585

- Oil wells (cont.)**  
Environmental aspects of the exploitation of arctic oil and gas reserves. Jumpanen, P., 1990, p.70-84, eng 45-3089
- Okhotsk Sea**  
Statistical study on sea ice in the Okhotsk Sea observed by GMS for 10 years. Kano, Y., et al, 1989, p.43-58, eng 45-718
- Ontario, Lake**  
Lake Ontario winter storms (LOWS) project. Nizio, T.A., et al, 1990, p.175-187, eng 45-2197
- Operating costs**  
See *also*: Cost analysis
- Optical phenomena**  
Green icebergs and remote sensing. Lee, R.L., Jr., 1990, p.1862-1874, eng 45-1171
- Optical properties**  
Effect of aerosols on radiation transfer in the Arctic. Ivanov, V.A., et al, 1989, p.47-54, rus 45-609  
Green icebergs and remote sensing. Lee, R.L., Jr., 1990, p.1862-1874, eng 45-1171  
See *also*: Albedo; Atmospheric attenuation; Attenuation; Ice crystal optics; Ice optics; Light transmission; Reflectivity; Snow optics; Transmissivity
- Organic nuclei**  
Clustering of ice nucleation protein correlates with ice nucleation activity. Mueller, G.M., et al, 1990, p.416-422, eng 45-820  
Exploratory study of ice nucleation by soot aerosols. DeMott, P.J., 1990, p.1072-1079, eng 45-1274  
Use of genetically altered bacteria to achieve plant frost control. Lindow, S.E., 1990, p.85-110, eng 45-1980
- Diffraction studies of phase changes in supercooled molecular clusters. Bartell, L.S., et al, 1991, p.1159-1167, eng 45-2777  
Ice nuclei produced by laboratory cultured marine phytoplankton. Schnell, R.C., 1975, p.500-502, eng 45-3125  
Ice-nucleating pseudomonad. Fall, R., et al, 1985, p.257-265, eng 45-3385
- Organic soils**  
Phosphatase enzyme activity at subzero temperatures in arctic tundra soils. Neal, J.L., 1990, p.883-884, eng 45-1019  
Hydrologic and thermal properties of the active layer in the Alaskan Arctic. Hinzman, L.D., et al, 1991, p.95-110, eng 45-3417
- Organizations**  
Engineering, technology, and logistics in the Arctic. Myers, C.E., 1990, p.163-170, eng 45-130  
Annual report of the Norwegian Polar Research Institute. 1989, 61p., eng 45-210  
Snow and avalanches in Switzerland. Jaccard, C., 1990, p.11-12, fre 45-1126  
Laboratoire de Glaciologie et de Géophysique de l'Environnement. Forget, C., 1990, p.13-15, fre 45-1127  
Arctic research in the United States, Vol.4. 1990, 106p., eng 45-1398  
Multi-national, interdisciplinary arctic experiments: planning, logistics and operations coordination. Horn, D.A., 1990, p.65-78, eng 45-2722
- Orientation**  
Lidar observations of the horizontal orientation of ice crystals in cirrus clouds. Thomas, L., et al, 1990, p.211-216, eng 45-1384  
Effect of orientation on solidification for mixed-convection flow in a rectangular channel. Incropera, F.P., et al, 1990, p.377-396, eng 45-1925  
See *also*: Slope orientation
- Origins**  
Landslides of cryogenic origin in the Tien Shan highlands. Tarakanov, A.G., 1989, p.54-59, rus 45-703  
Engineering geology of the USSR: Western Siberian and Turan plates. Trofimov, V.T., ed, 1990, 664p., rus 45-1571  
Causes of glaciation. Chernosvitov, P.J.U., 1990, p.169-174, rus 45-1757  
Neptune's Triton: a moon rich in dry ice and carbon. Prentice, A.J.R., 1990, p.264-367, eng 45-2083  
Observations on buried glacier ice and massive segregated ice, western arctic coast, Canada. French, H.M., et al, 1990, p.31-43, eng 45-2232
- Orographic effects**  
See *also*: Topographic effects
- Oscillations**  
See *also*: Glacier oscillation; Vibration
- Outwash**  
Ice-rich diamicton blocks in Quaternary outwash sediments in Austria. Krainer, K., et al, 1990, p.249-254, eng 45-2027  
High Arctic thrust block moraines. Evans, D.J.A., et al, 1991, p.93-97, eng 45-2174  
Glacimarine processes at grounding-line fans and their growth to ice-contact deltas. Powell, R.D., 1990, p.53-73, eng 45-2781
- Oxygen**  
Freeze-thaw effects on oxygen photosynthesis in phosphatidylglycerol vesicles. Nénéoné, E.K., et al, 1990, p.615-620, eng 45-969
- Oxygen isotopes**  
Snowfalls and oxygen isotope variations off Ellesmere I. Jeffries, M.O., et al, 1987, p.195-199, eng 45-15  
Oxygen-18 thermometer from snow of Queen Maud Land. Hermichen, W.D., et al, 1990, p.307-311, eng 45-727  
104-m oxygen-isotope record at J-9 on Ross Ice Shelf. Grootes, P.M., et al, 1990, p.95-96, eng 45-1395  
O-18 concentrations in sea ice of the Weddell Sea, Antarctica. Lange, M.A., et al, 1990, p.315-323, eng 45-1542  
Isotopic-oxygen composition of structure-forming ice of the active layer. Mikhalev, D.V., 1989, p.162-169, rus 45-1837  
Oligocene-Miocene oxygen isotopes, eustasy and margin erosion. Miller, K.G., et al, 1991, p.6829-6848, eng 45-2503  
Fractionating of O-18 in the snow-ice cover of the central Arctic Basin. Mel'nikov, I.A., et al, 1985, p.237-241, rus 45-3241  
Freezing-point of mixtures of H<sub>2</sub>O-16 and H<sub>2</sub>O-18. Kiyosawa, K., 1991, p.583-588, eng 45-3305  
Oxygen isotope profiles of deposited snow in different environments. Ageta, Y., et al, 1991, p.39-46, jpn 45-3394
- Ozone**  
Arctic ozone crater in 1989. Evans, W.F.J., et al, 1990, p.1113-1121, eng 45-1428  
Ultraviolet radiation environment of the Antarctic Peninsula. Lubin, D., 1989, 134p., eng 45-2830  
Potential for ozone depletion in the arctic polar stratosphere. Brune, W.H., et al, 1991, p.1260-1266, eng 45-2831  
Effect of cloud cover on UV radiation over the Antarctic Peninsula. Lubin, D., et al, 1991, p.478-493, eng 45-2841  
Vernal atmospheric mixing in the Antarctic. Murphy, B.B., et al, 1991, p.494-507, eng 45-2842  
Pre-conference abstracts. 1991, 66p., eng 45-2918  
Dynamics, transport and photochemistry in the middle atmosphere of the Southern Hemisphere. Proceedings. O'Neill, A., ed, 1989, 257p., eng 45-2971  
Middle atmospheric dynamics and transport. McIntyre, M.E., 1989, p.1-18, eng 45-2972  
Final warming of the stratosphere. Mechoso, C.R., 1989, p.55-69, eng 45-2975  
Comparison of the Southern Hemisphere springs of 1988 and 1987. Newman, P.A., et al, 1989, p.71-89, eng 45-2976  
Traveling planetary waves in the middle atmosphere. Hirota, I., 1989, p.111-116, eng 45-2977  
Dynamical properties of the antarctic circumpolar vortex inferred from aircraft observations. Hartmann, D.L., 1989, p.117-134, eng 45-2978  
Stratospheric sudden warming in late winter and shallow ozone hole in 1988. Kanazawa, H., et al, 1989, p.135-148, eng 45-2979  
Nitrogen chemistry in Antarctica: a brief review. Solomon, S., 1989, p.191-201, eng 45-2980  
HOx and ClOx interactions in the ozone hole photochemistry. Crutzen, P.J., et al, 1989, p.203-212, eng 45-2981  
Antarctic ozone depletion and potential effects on the global ozone budget. Grose, W.L., et al, 1989, p.237-251, eng 45-2982  
Proceedings of the NIPR Symposium on Polar Meteorology and Glaciology, No.4. Kawaguchi, S., ed, 1991, 143p., eng 45-3060  
Potential effects of global climate change on the United States. Smith, J.B., 1990, p.79-123, eng 45-3296  
Model simulation of chemical depletion of arctic ozone during the winter of 1989. McConnell, J.C., et al, 1991, p.10,923-10,930, eng 45-3376  
Ozone trend in the Northern Hemisphere: a numerical study. Pitari, G., et al, 1991, p.10,931-10,940, eng 45-3377  
Ozone column abundances during northern and southern springs. Hou, A.Y., et al, 1991, p.547-556, eng 45-3487  
Water vapor and ozone in polar stratospheres. Hofmann, D.J., et al, 1991, p.1011-1014, eng 45-3757  
Total ozone trends from TOMS. Stolarski, R.S., et al, 1991, p.1015-1018, eng 45-3758  
Middle atmosphere and solar proton events. Reid, G.C., et al, 1991, p.1019-1022, eng 45-3759
- Pacific Ocean**  
Distinguishing the Pacific subarctic front. Kuz'min, V.A., 1988, p.60-62, rus 45-876
- Pack ice**  
Hough transform technique for extracting lead features from sea ice imagery. Fetterer, F.M., et al, 1989, p.1125-1128, eng 45-258  
Preliminary observations of Labrador Sea marginal ice zone rheology using C-band SAR. Drinkwater, M.R., et al, 1989, p.1138-1141, eng 45-261  
Determination of ice displacements from sequential SAR imagery. Oliphant, K.D., et al, 1989, p.1152-1155, eng 45-264  
LIMEX'89: active/passive microwave signatures of Newfoundland pack ice. Livingstone, C.E., et al, 1989, p.1524-1527, eng 45-274
- SIBEX Physical Oceanography Workshop, Cambridge, U.K., Mar. 9-27, 1987. 1990, 38p., eng 45-304  
Apparent coherent energy loss of ice-reflected, high-frequency LFM pulses. Posey, J.W., et al, 1989, p.1240-1245, eng 45-438  
Persistent accumulations of ice in the ocean. Smirnov, V.I., 1989, p.271-278, eng 45-474  
Sea ice concentrations in the Canada Basin during 1988. Serreze, M.C., et al, 1990, p.22,253-22,267, eng 45-1414  
Measurements of SAR backscatter signatures from sea ice. Livingstone, C.E., et al, 1991, p.29-41, eng 45-1725  
Is Antarctica breaking apart. Hill, C., 1990, p.22-23, eng 45-2240  
Pack ice as a landscape. Griselin, M., 1990, p.27-32, fre 45-2590  
Radar detection of a calving event at the Milne Ice Shelf, N.W.T. Jeffries, M.O., et al, 1990, p.321-331, eng 45-2741  
Photosynthesis-irradiance in pack ice microalgae. Lizotte, M.P., et al, 1991, p.175-184, eng 45-3015  
Nonlinear analysis of stress distribution in an ice floe. Evgin, E., et al, 1991, p.55-62, eng 45-3148  
Field observations of stresses in young ice. Perovich, D.K., et al, 1991, p.191-198, eng 45-3169  
On the shear strength of geophysical scale ice rubble. Hopkins, M.A., et al, 1991, p.201-212, eng 45-3425  
Modeling ice cover evolution in the arctic seas during the melt period. Appel, I.L., 1990, p.97-110, eng 45-3568  
Studies of the ice dynamics in the Arctic Basin over long-term periods. Appel, I.L., et al, 1990, p.111-123, eng 45-3569  
Fractality of sea ice cover. Lensu, M., 1990, p.300-313, eng 45-3585
- Paints**  
See *also*: Protective coatings
- Pakistan**  
—Himalaya Mountains  
Ablation of avalanched and undisturbed snow. Himalaya Mountains, Pakistan. De Scally, F.A., et al, 1990, p.2757-2767, eng 45-2113  
—Karakoram Range  
Landslide, as a possible trigger of glacier surge. Gardner, J.S., et al, 1990, p.159-162, eng 45-57  
—Punjab Himalaya  
Estimate of snow avalanche debris transport. Kaghan Valley, Himalaya, Pakistan. Bell, I., et al, 1990, p.317-321, eng 45-893
- Paleobotany**  
Coal resources of the Susitna lowland, Alaska. Merritt, R.D., 1990, 181p. + appends., eng 45-489  
Quaternary geology of Canada and Greenland. Fulton, R.J., ed, 1989, 839p. + suppl., e-ig 45-610
- Paleoclimatology**  
Climatic changes in the last glacial-interglacial cycle. Kotliakov, V.M., et al, 1989, p.5-16, rus 45-5  
Isotopic analyses from BHQ ice core on Law Dome. Jiang, G., et al, 1988, p.173-178, chi 45-46  
Potential for basal melting under Summit, Greenland. Firestone, J., et al, 1990, p.163-168, eng 45-58  
Permafrost and paleoclimatology of the Mackenzie Delta. Allen, D.M., 1988, 154p., eng 45-179  
Quaternary glaciers in the West Kunlun Mountains. Zheng, B.X., et al, 1990, p.61-72, eng 45-199  
Dynamics of altitudinal tree-limits in Sweden: a review. Kullman, L., 1990, p.103-116, eng 45-308  
Köppen classification of glacial and interglacial climate simulations. Guetter, P.J., et al, 1990, p.193-215, eng 45-361  
Snowline depression in Chile during the Pleistocene. Caviedes, C.N., 1990, p.99-114, eng 45-363  
Isotope variations in the temperate glaciers of the Eurasian Arctic. Valkmiae, R.A., 1990, p.45-55, eng 45-373  
Climatic variations in Late Miocene and Pliocene. Borzenkova, I.I., et al, 1985, p.93-118, rus 45-379  
Last glaciation and maximum glaciation in the Qinghai-Xizang Plateau. Shi, Y.F., et al, 1990, p.1-16, chi 45-458  
Sea ice and climate in the North Atlantic since the Pliocene. Raymo, M.E., 1989, 182p., eng 45-504  
Polar ice core and palaeo-environment. Fujii, Y., 1989, p.335-361, jpn 45-622  
Paleoclimatology and altitude of vegetation zones in Hokkaido. Ohmori, H., et al, 1989, p.1-18, jpn 45-629  
Holocene ice margin recession in West Greenland. Weidick, A., et al, 1990, p.389-399, eng 45-714  
Sedimentation and glacial history in Gerlache Strait. Griffith, T.W., 1988, 449p., eng 45-719  
Soviet-French cooperation in isotopic research of ice cores. Lorius, C., et al, 1990, p.287-289, eng 45-724  
Isotope analysis of the Shackleton Ice Shelf. Savatugin, L., et al, 1990, p.291-298, eng 45-725  
Oxygen-18 thermometer from snow of Queen Maud Land. Hermichen, W.D., et al, 1990, p.307-311, eng 45-727  
Using loess-soil formation to correlate glacial, periglacial, and coastal zones. Velichko, A.A., et al, 1989, p.14-21, rus 45-788

- Correlating marine, loess, and glacial-flatland formations. Zubakov, V.A., [1989, p.21-24, rus] **45-789**
- Global climatic events of the Neogene. Zubakov, V.A., [1990, 222p., rus] **45-842**
- Antarctic ice sheet during the Late Neogene. Mercer, J.H., [1987, p.21-33, eng] **45-884**
- Periglacial processes of subantarctic and antarctic islands. Hall, K., [1987, p.383-392, eng] **45-885**
- Salinity history of the northern Atlantic during the last deglaciation. Broecker, W.S., [1990, p.459-467, eng] **45-951**
- Salt oscillator in the glacial Atlantic? I. The concept. Broecker, W.S., et al., [1990, p.469-477, eng] **45-952**
- Diatom sediments and Holocene paleotemperature variations. Koc Karpuz, N., et al., [1990, p.557-580, eng] **45-953**
- Endogenic model of permanent variations in the climate of the Earth. Kovalenko, V.D., et al., [1990, p.111-124, rus] **45-996**
- Numerical experiments on the reconstruction of the paleoclimate. Barkov, N.I., et al., [1989, p.116-121, rus] **45-1045**
- New approach to solving thermophysical problems of paleoglaciology. Fafko, L.I., [1989, p.133-138, rus] **45-1049**
- International symposium on Ice and Climate. Glazovskii, A.F., [1989, p.236-246, rus] **45-1070**
- Palynology and glacial theory. Volkova, V.S., [1989, p.40-48, rus] **45-1136**
- Pleistocene periglacial eolian deposits in Alaska. Lea, P.D., [1990, p.582-591, eng] **45-1412**
- Quaternary glaciations in the subantarctic and the Antarctic Peninsula area. Clapperton, C.M., [1990, p.229-252, eng] **45-1442**
- Late Cenozoic glacial history of Ross Embayment. Clapperton, C.M., et al., [1990, p.253-272, eng] **45-1443**
- Quaternary glaciations in the Southern Hemisphere. Clapperton, C.M., [1990, p.299-304, eng] **45-1444**
- Comments on "6000-year climate records in an ice core from the Høghetta ice dome in northern Spitsbergen". Dowdeswell, J.A., et al., [1990, p.353-356, eng] **45-1549**
- Alluvial fans in Japan and South Korea. Ono, Y., [1990, p.91-107, eng] **45-1577**
- Leba River alluvial fan and its paleogeomorphological significance. Rachocki, A.H., [1990, p.305-317, eng] **45-1579**
- Arctic Ocean ice cover: geologic history and climatic significance. Clark, D.L., [1990, p.53-62, eng] **45-1690**
- Late Mesozoic and Cenozoic paleoceanography of the northern polar oceans. Thiede, J., et al., [1990, p.427-458, eng] **45-1692**
- Ozone depletion, greenhouse gases, and climate change. [1989, 122p., eng] **45-1712**
- Traces of continental glaciation in the area of Tiksi. Grosval'd, M.G., et al., [1990, p.115-116, rus] **45-1749**
- Causes of glaciation. Chernosvitov, P.I.U., [1990, p.169-174, rus] **45-1757**
- Model of late Pleistocene ice sheet growth. Deblonde, G., et al., [1990, p.103-110, eng] **45-1800**
- Prospects for future climate. MacCracken, M.C., ed., [1990, 270p., eng] **45-1853**
- Paleogeographical regularities of glacial lithogenesis. Sudakova, N.G., [1990, 158p., rus] **45-1865**
- Ice-lobe contact sedimentary scarps. Kasprzak, L., et al., [1989, p.69-81, eng] **45-2001**
- Holocene paleoclimatology of the Queen Elizabeth Islands, Canadian High Arctic. Bradley, R.S., [1990, p.365-384, eng] **45-2074**
- Iceberg-calving rates reconstructed from paleo-sea levels. Lowell, T.V., [1991, p.155-158, eng] **45-2180**
- Variations in permafrost thickness in response to changes in paleoclimate. Osterkamp, T.E., et al., [1991, p.4423-4434, eng] **45-2228**
- Pleistocene deglaciation model based upon predictions of sea level change. Tushingham, A.M., et al., [1991, p.4497-4523, eng] **45-2229**
- Palaeoenvironmental implications of recent ice-wedge development. Burn, C.R., [1990, p.3-14, eng] **45-2230**
- Deuterium excess in recent antarctic snow. Petit, J.R., et al., [1991, p.5113-5122, eng] **45-2283**
- Holocene glacier variations in Norway. Nesje, A., et al., [1991, p.25-40, eng] **45-2314**
- Interaction of sea ice, snow and glaciers with the atmosphere and ocean. Kotliakov, V.M., ed., [1990, p.155-248, eng] **45-2409**
- Paleoclimatic implications of an early Holocene glacier advance on Disko Island, West Greenland. Ingólfsson, O., et al., [1990, p.297-311, eng] **45-2412**
- Soil wedge polygons in northern Quebec: description and paleoclimatic significance. Jetchick, E., et al., [1990, p.353-367, eng] **45-2414**
- Changing climate. Eronen, M., [1990, p.220-238, fin] **45-2422**
- Antarctic ice cover dynamic activity zones in the Vostok Station region. Blinov, K.V., et al., [1990, p.79-89, rus] **45-2490**
- Tertiary ice sheet dynamics: the snow gun hypothesis. Prentice, M.L., et al., [1991, p.6811-6827, eng] **45-2502**
- Evolution and differentiation of Earth's natural environment. Gerasimov, I.P., [1990, 311p., rus] **45-2839**
- Current problems in Quaternary geology of the Barents Sea. Pavlidis, I.U.A., et al., [1990, p.76-93, rus] **45-2876**
- General ecology and paleogeography of the polar oceans. Matishov, G.G., et al., [1990, 223p., rus] **45-2881**
- Holocene climates of the Vestfold Hills, Antarctica, and Macquarie Island. Pickard, J., et al., [1984, p.173-182, eng] **45-2983**
- Arctic oceanic climate in late Cenozoic time. Herman, Y., et al., [1980, p.557-562, eng] **45-3094**
- Diatoms as hydrographic tracers: example from Bering Sea sediments. Sancetta, C., [1981, p.279-281, eng] **45-3219**
- Climate model comparison of Gondwanan and Laurentide glaciations. Crowley, T.J., et al., [1991, p.9217-9226, eng] **45-3414**
- Problems in Pleistocene paleogeography of the Great Kurie ridge. Bulgakov, R.F., [1990, p.31-40, rus] **45-3435**
- Pleistocene mictines in the paleoglacial zone of northern Western Siberia. Zol'nikov, I.D., [1991, p.167-173, rus] **45-3442**
- Antarctica and global change. Budd, W.F., [1991, p.271-299, eng] **45-3471**
- Late Pliocene-Pleistocene paleoclimate in the Jane Basin region. ODP Site 697. Burckle, L.H., et al., [1990, p.803-809, eng] **45-3529**
- Latest Cretaceous to Cenozoic climate and oceanography of the Weddell Sea. Kennett, J.P., et al., [1990, p.937-960, eng] **45-3531**
- Scientific plan for deep ice drilling on Law Dome. Etheridge, D.M., [1990, 41p., eng] **45-3533**
- Paleogene and neogene of northeastern USSR. Baranova, I.U.P., ed., [1989, 181p., rus] **45-3834**
- Study of ancient glacial deposits; a practical guide. Chumakov, N.M., [1990, 93p., rus] **45-3836**
- Development of river valleys in Pleistocene glaciation regions (Kolyma). Rudnev, A.V., [1989, p.127-137, rus] **45-3838**
- Morphogenesis in stratified plains and reconstruction of paleoclimates. Il'larionov, A.G., [1989, p.162-167, rus] **45-3870**
- Paleoclimates of the Late Pleistocene and the Holocene in northern Siberia. Danilov, I.D., [1989, p.167-172, rus] **45-3871**
- Paleoecology**
- Pleniglacial permafrost conditions in the Netherlands. Ran, E.T.H., et al., [1990, p.207-218, eng] **45-355**
- Fens on a high arctic fault block. LaFarge-England, C., et al., [1991, p.80-98, eng] **45-2473**
- General ecology and paleogeography of the polar oceans. Matishov, G.G., et al., [1990, 223p., rus] **45-2881**
- Origin and evolution of the arctic marine ecosystems. Menzies, R.J., [1975, p.11/13-11/26, eng] **45-3221**
- Latest Cretaceous to Cenozoic climate and oceanography of the Weddell Sea. Kennett, J.P., et al., [1990, p.937-960, eng] **45-3531**
- Palsen**
- See *falsoy*: Frost mounds
- Paludification**
- Development of bogs in western Siberia. Orlov, V.I., et al., [1989, p.70-77, rus] **45-643**
- Characteristics of the formation of alassy peat bogs in northern Yakutia. Vasil'ev, I.S., [1989, p.82-87, rus] **45-670**
- Palynology**
- Coal resources of the Susitna lowland, Alaska. Merritt, R.D., [1990, 181p. + appends., eng] **45-489**
- Palynology and glacial theory. Volkova, V.S., [1989, p.40-48, rus] **45-1136**
- Pollen variations in ice cap snow. Bourgeois, J.C., [1990, p.313-322, eng] **45-2413**
- See *falsoy*: Pollen
- Panel heating**
- See *falsoy*: Radiant heating
- Panels**
- See *falsoy*: Large panel buildings
- Particle collision**
- See *falsoy*: Ice crystal collision
- Particle size distribution**
- Effects of numbers, sizes and crystal structures on measurements of ice hydrometeors. Berthel, R.O., [1990, 21p., eng] **45-824**
- Measuring the size of water droplets on slides. Laforte, J.L., et al., [1988, p.263-267, eng] **45-1351**
- Calibration of probes for cloud droplet measurements. Gayet, J.F., et al., [1988, p.268-271, eng] **45-1352**
- Modelling of particle distribution in the melting layer. De Wolf, D.A., et al., [1990, p.389-395, eng] **45-1427**
- On the size distribution of rimed snowflakes. Ito, K., et al., [1986, p.25-35, eng] **45-3704**
- Particles**
- Radar scattering from wet snow and ice droplets. De Wolf, D.A., et al., [1990, p.1317-1325, eng] **45-655**
- Parameterization of the accretion process between different precipitation elements. Mizuno, H., [1990, p.395-398, eng] **45-2533**
- See *falsoy*: Aerosols
- Patterned ground**
- Periglacial processes of subantarctic and antarctic islands. Hall, K., [1987, p.383-392, eng] **45-885**
- Relict periglacial structures on a coastal plain in Sweden. Svensson, H., [1990, p.79-91, eng] **45-1190**
- Process study of sorted patterns in arctic soils. Final report. Hallet, B., [1991, 20p., eng] **45-2140**
- Soil wedge polygons in northern Quebec: description and paleoclimatic significance. Jetchick, E., et al., [1990, p.353-367, eng] **45-2414**
- Development of soil structure in some turbic cryosols in the Canadian low Arctic. Smith, C.A.S., et al., [1991, p.11-29, eng] **45-2664**
- Tundra polygons in Quebec. Gray, J.T., et al., [1991, p.111-117, eng] **45-2997**
- See *falsoy*: Polygonal topography; Soil patterns
- Pavement heaving**
- See *falsoy*: Frost heave
- Pavement icing**
- See *falsoy*: Road icing
- Pavements**
- Transverse cracks in highways of Northeast China. Wang, B.C., et al., [1990, p.126-135, eng] **45-127**
- Sealing cracks in flexible pavements in cold regions. Chong, G.J., et al., [1988, p.12-19, eng] **45-525**
- Pavement response and load restrictions on spring thaw-weakened flexible pavements. Rutherford, M.S., [1989, p.1-12, eng] **45-806**
- Investigating the use of geotextiles to mitigate frost heave. Henry, K.S., [1990, 28p., eng] **45-841**
- Research on low temperature properties of asphalts. Moriyoishi, A., et al., [1989, p.131-138, jpn] **45-872**
- Freeze thaw tests of surface layers of pavements. Tsukahara, K., et al., [1988, p.24-31, jpn] **45-911**
- Reflection cracking studies at Thule Air Base, Greenland using AC 2.5 and fabrics. Eaton, R.A., et al., [1980, p.381-396, eng] **45-995**
- Effect of frost heave deformations on airport pavement. Dolinchenko, V.A., et al., [1990, p.12-13, eng] **45-1014**
- Evaluation of effects of deicing additives on properties of asphalt mixtures. Mogawer, W.S., et al., [1989, p.41-53, eng] **45-1153**
- Heavy trucks, climate and pavement damage. [1988, 175p., eng] **45-1479**
- Fraass breaking point test: automatic testing and an examination of asphalt quality. Sasaki, K., et al., [1990, p.10-17, jpn] **45-1666**
- Cost-effectiveness of geotextiles; review of performance in Alaskan roads. Reckard, M., [1991, 50p., eng] **45-2000**
- Mechanistic approach to pavement design for Nome Airport. Vinson, T.S., et al., [1991, p.416-427, eng] **45-2353**
- Use of rigid insulation below grade for roadways and parking areas. Larsen, L.A., et al., [1991, p.428-437, eng] **45-2354**
- Minnesota Road Research Project—an overview. Newcomb, D.E., et al., [1991, p.463-471, eng] **45-2358**
- Work report on special pavements; status of paved road surfaces in winter. Nakamura, T., et al., [1988, p.149-154, jpn] **45-2510**
- Treatment of cracks in paved road surfaces. Ueno, M., et al., [1988, p.155-158, jpn] **45-2511**
- Effect of freeze thaw action on wear-resistant asphalt pavements. Tsukahara, K., et al., [1988, p.159-164, jpn] **45-2512**
- Predicting the durability of paving bricks. Winslow, D., [1991, p.29-33, eng] **45-2761**
- Sound absorption and winter performance of porous asphalt pavement. Camomilla, G., et al., [1990, p.1-8, eng] **45-3058**
- Surface cracking in asphalt layers. Kunst, P.A.J.C., et al., [1990, 199p., eng] **45-3108**
- Proceedings. [1990, 2 vols., eng] **45-3490**
- Evaluation of some polymer modified asphalts in Alberta. Anderson, K.O., et al., [1990, p.3-40, eng] **45-3491**
- Investigative study on production of modified asphalts in Japan. Himeno, K., et al., [1990, p.43-67, eng] **45-3492**
- Cold temperature properties of polymer-modified asphalt mixtures. Ali, N., et al., [1990, p.71-94, eng] **45-3493**
- Thermal stresses development in pavements during wintertime. Laforte, M.A., [1990, p.149-179, eng] **45-3496**
- Low temperature fracture mechanics of viscoelastic pavement structures. Selvadurai, A.P.S., et al., [1990, p.183-212, eng] **45-3497**
- St. Anne Test Road revisited twenty years later. Deme, J.J., et al., [1990, p.215-233, eng] **45-3498**
- Softening point and brittle point of asphalt mixtures. Yamada, M., [1990, p.237-253, eng] **45-3499**
- Test methods to characterize low temperature cracking. Janoo, V.C., et al., [1990, p.257-287, eng] **45-3500**
- Estimation of road wear using spike ravelling test. Itoh, M., et al., [1990, p.291-316, eng] **45-3501**

**Pavements (cont.)**

- Survey of measures against pavement rutting in cold regions. Sawada, S., et al, [1990, p.341-359, eng] 45-3503
- Asphalt pavement rutting experience in Canada. Emery, J., [1990, p.373-383, eng] 45-3504
- Rutting of pavements in cold areas in Japan. Kaneda, K., et al, [1990, p.387-416, eng] 45-3505
- Comparative study on performances of asphalt pavements in cold area. Wen, Z.M., et al, [1990, p.3-16, eng] 45-3506
- Design of asphalt concrete mixtures in cold climates using soft asphalts. Paisat, D.P., et al, [1990, p.19-49, eng] 45-3507
- Damage to expressway pavement in Hokkaido and solutions required. Ogawa, Y., et al, [1990, p.53-73, eng] 45-3508
- Asphalt technology for hot in-place surface recycling. Emery, J., et al, [1990, p.77-104, eng] 45-3509
- Stripping of asphalt pavement in cold areas. Abd El Halim, A.O., et al, [1990, p.107-131, eng] 45-3510
- Rapid monitoring of flexible pavement deflections, moduli and roughness. Hein, D., et al, [1990, p.261-277, eng] 45-3516
- Seasonal variations in bearing capacity of asphalt pavements. Kasahara, A., et al, [1990, p.281-298, eng] 45-3517
- Saskatchewan's Pavement Management Information System. Heiman, G.H., et al, [1990, p.301-319, eng] 45-3518
- Evaluation of the performance of asphalt pavement in consideration of reliability. Takeyama, Y., et al, [1990, p.323-337, eng] 45-3519
- Generic framework for pavement management and staging modules for implementation. Haas, R., [1990, p.341-366, eng] 45-3520
- Investigative study on use of modified asphalts in Japan. Himeno, K., et al, [1990, p.419-437, eng] 45-3526
- Recycling of pavement materials in cold areas. Matsumura, S., [1990, p.21-38, eng] 45-3528
- Predicting pavement thaw weakening with a deflectometer. Janoo, V.C., et al, [1990, p.31-40, eng] 45-3689
- Threshold pavement thickness to survive spring thaw. White, T.D., et al, [1990, p.41-51, eng] 45-3690
- Temperature regime of road pavements in Czechoslovakia. Poliček, I., et al, [1990, p.53-63, eng] 45-3691
- Guidelines on application of seasonal load restrictions. Mahoney, J.P., et al, [1990, p.75-84, eng] 45-3692
- Loading type effect on pavement deflection. Wiman, L.G., et al, [1990, p.829-839, eng] 45-3693
- Norwegian model for prediction of pavement deterioration (7). Bertelsen, D., [1990, p.875-886, eng] 45-3694
- Thaw weakening of pavement structures in seasonal frost areas. Janoo, V.C., et al, [1990, p.217-233, eng] 45-3747
- Prediction of damage to flexible pavements in seasonal frost areas. Allen, W.L., et al, [1990, p.234-247, eng] 45-3748
- Flexible pavement thawing and timing of spring load restrictions. Rutherford, M.S., [1990, p.248-258, eng] 45-3749
- Computer model of moisture and temperature effects beneath pavements. Pufahl, D.E., et al, [1990, p.259-269, eng] 45-3750
- See also:* Concrete pavements
- Peat**
- Origin and age of the "icy complex" in the north of West Siberia. Danilov, I.D., et al, [1989, p.297-304, eng] 45-476
- Characteristics of the formation of alassy peat bogs in northern Yakutia. Vasil'ev, I.S., [1989, p.82-87, rus] 45-670
- Proceedings. Vol.2, [1988, 105p., eng] 45-759
- Properties, geomorphology and classification of peatlands. Maltby, E., [1988, p.5-13, eng] 45-760
- Water and energy regime of peat bogs in West Siberia. Moskvina, I.U.P., [1988, p.18-21, eng] 45-762
- Optimization of the microclimate of bog geosystems. Kovriga, P.A., et al, [1988, p.22-29, eng] 45-763
- Water table of drained peatlands in Ontario. Berry, G.J., et al, [1988, p.72-79, eng] 45-768
- Water quality of peatlands and man's influence on it. Sallantausta, T., [1988, p.80-98, eng] 45-769
- First radiocesium profile and snow cover mass measurements. Kasi, S.S.H., [1988, p.101-105, eng] 45-770
- Evaluating engineering-geological conditions of lake-bog flatlands. Svitnev, A.I., [1987, p.517-528, eng] 45-865
- Biogeomorphology and spatial structure of northern patterned peatlands.** Madsen, B.J., [1989, p.235-247, eng] 45-1401
- Ground water input in kettle hole peatlands. Kratz, T.K., et al, [1989, p.1141-1151, eng] 45-1405
- Peat and its occurrence as a resource in Maine. Cameron, C.C., [1989, p.125-146, eng] 45-2061
- Influence of humidity and temperature upon the rate of soil metabolism. Fischer, Z., [1990, p.17-24, eng] 45-2429
- Fens on a high arctic fault block. LaFarge-England, C., et al, [1991, p.80-98, eng] 45-2473
- Recurrent infiltration ice on the northern shore of the Sea of Okhotsk. Meshkov, A.P., et al, [1989, p.132-136, rus] 45-2499
- Investigation of heat and mass transport during freezing in peat soils. Gamaiunov, N.I., et al, [1990, p.88-97, eng] 45-3051
- Pedogenesis**  
*See also:* Soil formation
- Pedology**  
*See also:* Soil science
- Pellets**  
*See also:* Snow pellets
- Penetration**  
*See also:* Projectile penetration
- Penetration tests**
- Cone penetrometer tests in permafrost—the Fox Tunnel, Alaska. Ladanyi, B., et al, [1989, p.75-82, eng] 45-334
- Cone penetrometer and pressuremeter tests in permafrost: the Fox Tunnel, Alaska. Huneault, P., et al, [1989, 123p. + appends., eng] 45-2052
- Antarctic penetrator program, No.1, 1989. Shibuya, K., et al, [1991, p.92-117, jpn] 45-3397
- Small scale field indentation tests on first year sea ice. Chin, S.N., et al, [1990, p.878-889, eng] 45-3637
- Ice sheet penetration by incenter pairs. Parsons, B.L., [1990, p.1031-1043, eng] 45-3651
- Experimental study on local ice pressures acting on structures. Tozawa, S., et al, [1990, p.1044-1055, eng] 45-3652
- Model test investigation of local ice pressure distribution at cylindrical structures. Wessels, E., [1990, p.1084-1096, eng] 45-3655
- Ice indentation tests using flexible and rigid indentors. Kärnäs, T., et al, [1990, p.261-275, eng] 45-3681
- Frequency of intermittent ice crushing during indentation tests. Sodhi, D.S., et al, [1990, p.277-289, eng] 45-3682
- Penetration of snow into the ceiling structures; tests using marked material. Kärriäinen, H., et al, [1989, 55p. + appends., fin] 45-3848
- Penetrometers**
- New instrument for determining physical-mechanical properties of snow. Epifanov, V.P., [1990, p.188-192, rus] 45-1761
- Performance**
- Effect of winter heat loss on treatment plant efficiency. Wells, S.A., [1990, p.34-39, eng] 45-306
- Oden—Sweden's latest icebreaker built by GVA. [1989, p.24-25, eng] 45-368
- Airfoil performance degradation due to ice accretion. Potapczuk, M.G., et al, [1990, p.679-691, eng] 45-372
- Design criteria for oceanographic survey ships operated in the Marginal Ice Zone (MIZ). Strassel, E.S., et al, [1989, p.69-98, eng] 45-533
- Preliminary results of model tests of the DD-963 in broken ice fields. Thomas, W.L., III, et al, [1989, p.113-121, eng] 45-535
- Evaluation of effects of deicing additives on properties of asphalt mixtures. Mogawer, W.S., et al, [1989, p.41-53, eng] 45-1153
- Results of comparative model tests with a conceptual hull form and the original R-class icebreaker. Carter, D., [1990, 21p. + appends., eng] 45-1177
- Low-temperature performance of elastomeric bearings. Roeder, C.W., et al, [1990, p.113-132, eng] 45-1522
- Design and operational characteristics of a heated radome for air motion measurement. Brown, E.N., [1991, p.134-139, eng] 45-1592
- Piezoelectric ice sensor for aviation applications. Floyd, M.D., [1990, p.13-24, eng] 45-1924
- Top/bottom multisensor remote sensing of arctic sea ice. Comiso, J.C., et al, [1991, p.2693-2709, eng] 45-2042
- Rime and reason. Manningham, D., [1991, p.82-85, eng] 45-2179
- Performance of an omnidirectional wheel on snow and ice. Blaisdel, G.L., [1991, p.34-41, eng] 45-2227
- Steep climbs for Scania-powered snow groomers. Brebeck, J., [1990, p.36-38, eng] 45-2290
- Icebreaker manoeuvrability. Peirce, T.H., et al, [1990, p.145-154, eng] 45-2778
- Model tests of a naval combatant in broken ice fields. Thomas, W.L., III, et al, [1990, p.155-165, eng] 45-2729
- Design features and operation capability of the new US antarctic research vessel. Kennedy, H., et al, [1990, p.167-176, eng] 45-2730
- Mathematical model for predicting icebreaker performance. Carter, D., et al, [1990, p.177-192, eng] 45-2731
- Ramming icebreaking performance of the USCGC polar class icebreakers. Minnick, P.V., et al, [1990, p.283-294, eng] 45-2738
- Treatment of wastewater in polar environments—status and future trends in Scandinavia. Rusten, B., et al, [1990, p.99-106, eng] 45-3028
- Refrigeration systems based on short-term storage by means of ice banks. Bisio, G., et al, [1991, p.1-6, eng] 45-3029
- ISTORE—a model to simulate and optimise the operation of ice-storage air-conditioning systems. Musgrove, A.R., [1990, p.199-208, eng] 45-3055
- Laboratory tests with a hybrid thermosyphon. Haynes, F.D., et al, [1991, p.93-99, eng] 45-3154
- Tire snow traction performance. Ohoyama, K., et al, [1990, p.86-88, eng] 45-3205
- Performance of triangular spine fins under frosting conditions. Kondepudi, S.N., et al, [1988, p.1-7, eng] 45-3215
- Testing system for strain rate control of ice deformation. Rist, M.A., et al, [1991, p.189-200, eng] 45-3424
- U.S. Army wheeled versus tracked vehicle mobility performance test program—report 2: mobility in shallow snow. Green, C.E., et al, [1991, 48p. + appends., eng] 45-3446
- Observations of ship performance and the structure of fast ice channels in the northern Baltic Sea. Veitch, B., et al, [1991, 35p., eng] 45-3448
- Ice-rink roof structures and the "stalagmite" effect. Bloudek, K., [1989, p.151-153, eng] 45-3466
- Simplified analysis for cold storage in porous capsules with solidification. Chen, S.L., et al, [1991, p.108-116, eng] 45-3467
- Withstand voltage characteristics of insulator string covered with snow or ice. Matsuda, H., et al, [1990, p.1243-1250, eng] 45-3468
- Ship model tests in ice with systematically varied ice parameters. Ilves, L., et al, [1990, p.616-626, eng] 45-3612
- Investigation of manoeuvring qualities of ships in ice conditions. Tronin, V.A., et al, [1990, p.788-799, eng] 45-3629
- Development of seawater batteries as a long-term arctic power source. Hammond, R., et al, [1990, p.1122-1129, eng] 45-3659
- Threshold pavement thickness to survive spring thaw. White, T.D., et al, [1990, p.41-51, eng] 45-3690
- Experimental measurements of the effects of frost formation on heat exchange performance. Emery, A.F., et al, [1990, p.1-7, eng] 45-3865
- See also:* Cold weather performance
- Periglacial processes**
- Structure and dynamics of cryogenic systems of oil and gas deposits. Zaikanov, V.G., et al, [1989, p.22-27, rus] 45-102
- Geotechnical systems of gas fields in the Tyumen North. Kravtsov, I.U.V., et al, [1989, p.32-36, rus] 45-103
- Periglacial permafrost conditions in the Netherlands. Ran, E.T.H., et al, [1990, p.207-218, eng] 45-355
- Periglacial geomorphology of the Qinghai-Xizang Plateau. Bian, C.Y., et al, [1990, p.147-153, chi] 45-455
- Age factor in the soils of end-moraine landscapes of the Valdai glaciation. Iurenkov, G.I., [1990, p.93-99, rus] 45-673
- Tectonic structures in the relief of the marginal belt of the Valdai glaciation. Iurenkov, G.I., [1989, p.49-54, rus] 45-702
- Paleoglacial information from periglacial data. Bardin, V.I., [1990, p.313-324, eng] 45-728
- Great periglacial runoff system in northern Eurasia. Grosval'd, M.G., et al, [1989, p.5-13, rus] 45-787
- Middle Pleistocene glacial and periglacial formations in the Russian Plain. Udartsev, V.P., et al, [1989, p.193-200, rus] 45-790
- Clast-fabric strength in periglacial slope deposits as a function of clast size and shape. Yamamoto, K., [1989, p.187-197, eng] 45-830
- Periglacial processes of subantarctic and antarctic islands. Hall, K., [1987, p.383-392, eng] 45-885
- Periglacial landforms of Vestfold Hills and Fildes Peninsula. Zhang, Q., [1989, p.74-81, eng] 45-1010
- Formation mechanism of sorted circles on Fildes Peninsula. Cui, Z., et al, [1989, p.82-90, eng] 45-1011
- Ice sheet glaciation of the Western Siberian shelf in the Late Pleistocene. Grosval'd, M.G., [1989, p.48-57, rus] 45-1137
- Boulder fields of Mt. Fulufjället, west-central Sweden. Kleman, J., et al, [1990, p.63-78, eng] 45-1189
- Relict periglacial structures on a coastal plain in Sweden. Svensson, H., [1990, p.79-91, eng] 45-1190
- Alpine debris flows and their sedimentary properties. A case study from the French Alps. Nieuwenhuijzen, M.E., et al, [1990, p.111-128, eng] 45-1293
- Periglacial phenomena in New Zealand. Soons, J.M., et al, [1990, p.145-159, eng] 45-1295
- Soil and rock temperatures in discontinuous permafrost. King, L., [1990, p.177-188, eng] 45-1297
- Boulder-paved river channels: a case study of a fluvio-periglacial landform. Davies, D.A., et al, [1990, p.213-231, eng] 45-1389
- Pleistocene periglacial eolian deposits in Alaska. Lea, P.D., [1990, p.582-591, eng] 45-1412
- Minimum altitudes for former periglacial landforms in Colorado and New Mexico. Marker, M.E., [1990, p.366-374, eng] 45-1418
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- Ground temperature regimes and periglacial processes in the Sor Rondane Mountains. Matsuoka, N., et al, [1990, p.55-66, eng] 45-1529
- Features of turbulent exchange in the periglacial layer of air. Moskalenko, I.G., et al, [1990, p.57-64, rus] 45-1737

- Geomorphic processes above timberline in the Spanish Pyrenees. Garcia-Ruiz, J.M., et al, (1990, p.201-214, eng) **45-1808**
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- See *also*: Glacial deposits
- Periodic variations**
- Mass balance of Rhonegletscher during 1882/83-1986/87. Chen, J., et al, (1990, p.199-209, eng) **45-62**
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- See *also*: Permafrost beneath structures
- Permafrost beneath oceans**
- See *also*: Subsea permafrost
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- See *also*: Permafrost preservation
- Permafrost dating**
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- Permafrost depth**
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- Geophysics in the study of permafrost. Scott, W.J., et al, (1990, p.355-384, eng) **45-668**
- Permafrost distribution**
- Characteristics of perennially frozen rocks in Baykal type depressions. An, V.V., (1989, p.96-100, rus) **45-2**
- Permafrost and terrain research and monitoring: Norman Wells pipeline—Volume I: environmental and engineering considerations. MacInnes, K.L., et al, (1989, 132p., eng) **45-32**
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- Permafrost and paleoclimatology of the Mackenzie Delta. Allen, D.M., (1988, 154p., eng) **45-179**

**Permafrost distribution (cont.)**

- Northern hydrology: an overview. Prowse, T.D., (1990, p.1-36, eng) 45-212
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Investigating the interrelationship between climate and permafrost. Anisimov, O.A., et al, (1990, p.13-20, rus) 45-1630
- Permafrost formation**  
*See (also):* Permafrost origin
- Permafrost heat balance**  
Fluctuating movement of the permafrost boundary. Mel'nikov, P.I., et al, (1989, p.50-52, eng) 45-2597
- Permafrost heat transfer**  
Role of heat exchange in the formation of the temperature conditions of permafrost rocks. Bryksin, V.N., (1989, p.10-14, eng) 45-646
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Using monitors in permafrost with oil and gas deposits. Popkov, O.N., et al, (1989, p.58-65, rus) 45-106
- Structures for measuring runoff in permafrost zones. Skretteberg, R., (1990, p.699-708, eng) 45-171
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- Hydrology of Svalbard—hydrological problems in cold climate. Proceedings (1990, 224p., eng) 45-3776
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Pleniglacial permafrost conditions in the Netherlands. Ran, E.T.H., et al, (1990, p.207-218, eng) 45-355
- Past and present permafrost distribution in the Turmanantal, Wallis, Swiss Alps. Van Tatenhove, F., et al, (1990, p.302-316, eng) 45-892
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- Permafrost origin**  
Geocryology of the USSR. Mountainous regions of southern USSR. Ershov, E.D., ed, (1989, 358p., rus) 45-3030
- Origin of the ice in the outcrop "Ledyanaya Gora". Karpov, E.G., (1987, p.142-146, rus) 45-585
- Permafrost. Péwé, T.L., (1991, p.277-298, eng) 45-3093
- Geomorphological results of the Japanese expedition to Svalbard, 1988-1989. Ono, Y., et al, (1991, p.259-269, eng) 45-3859
- Permafrost physics**  
Interaction between permafrost and a deposit of natural gas hydrates. Tipenko, G.S., et al, (1990, p.73-84, rus) 45-322
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- Investigations of saline permafrost on the arctic shore (review). Velli, I.U.I.A., (1990, p.9-20, rus) 45-2884
- Pressuremeter stress relaxation testing in a permafrost tunnel. Ladanyi, B., et al, (1991, p.213-224, eng) 45-3830
- Permafrost preservation**  
Conference on ecological impact of oil and gas industry, 1988. (1989, 235p., rus) 45-99
- Environmental protection of gas- and oil-production areas in the Arctic. Romanovskaia, N.V., et al, (1989, p.107-112, rus) 45-108
- Gas pipelining in permafrost. Antonov-Druzhinin, V.P., (1990, p.392-404, eng) 45-146
- Reclamation challenges at Ushbelli Coal Mine in Healy, Alaska. Jackson, L.P., (1989, p.167-170, eng) 45-344
- See (also):* Permafrost control
- Permafrost samplers**  
Analysis of Norman Wells core samples. Final report. Patterson, D.E., et al, (1987, 60p. + appends., eng) 45-384
- Permafrost structure**  
Geophysics in the study of permafrost. Scott, W.J., et al, (1990, p.355-384, eng) 45-668
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- Permafrost thermal properties**  
Thermal characteristics of the permafrost within a rock glacier. Mühl, D.V., et al, (1990, p.151-158, eng) 45-56
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- Permafrost thickness**  
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- Variations in permafrost thickness in response to changes in paleoclimate. Osterkamp, T.E., et al, (1991, p.4423-4434, eng) 45-2228
- Permafrost. Péwé, T.L., (1991, p.277-298, eng) 45-3093
- Permafrost transformation**  
Geocryological changes in hydroelectric station reservoir basins. Kudoiarov, L.I., et al, (1990, p.55-60, eng) 45-854
- Permafrost response to surface temperature change. Harrison, W.D., (1991, p.683-695, eng) 45-1527
- Growth and deformation of ice wedges. Mackay, J.R., (1990, p.15-29, eng) 45-2231
- Soil wedge polygons in northern Quebec: description and paleoclimatic significance. Jetchick, E., et al, (1990, p.353-367, eng) 45-2414
- Prevention of oil well collapse in permafrost. Medvedskii, R.I., et al, (1989, p.74-82, eng) 45-2585
- Comparison of Laplace transform and finite difference solutions for an evolving permafrost region. Morland, L.W., et al, (1990, p.631-648, eng) 45-3208
- Thermal response of the active layer to climatic warming in a permafrost environment. Kane, D.L., et al, (1991, p.111-122, eng) 45-3418
- Permafrost weathering**  
Supergene corundum in the Quaternary permafrost of Yakutia. Zigert, Kh., et al, (1991, p.155-159, eng) 45-2476
- Permeability**  
Impermeability of closed-system frozen walls. Tobe, N., (1989, p.137-146, jpn) 45-871
- Apparent hydraulic conductivities associated with thawing, frost-susceptible soils. Egginton, P.A., et al, (1990, p.69-77, eng) 45-2236
- Freeze-thaw effects on clay covers and liners. Chamberlain, E.J., et al, (1991, p.136-151, eng) 45-2329
- Classifying lithological complexes of seasonally-saturated deposits. Ivanova, L.D., et al, (1989, p.13-22, rus) 45-2625
- See (also):* Seepage; Snow permeability
- Petroleum**  
*See (also):* Crude oil
- Petroleum industry**  
Environmental protection of West Siberian oil-bearing areas. Abzalov, R.Z., et al, (1989, p.128-135, rus) 45-109
- Barents Sea: petroleum resources and technological challenges. Overli, J.M., (1990, p.1-11, eng) 45-122
- Onshore oil field development in East Greenland. Mai, H., et al, (1990, p.504-514, eng) 45-154
- Environmental monitoring of oil and gas production. Pushko, G.I., (1990, p.584-589, eng) 45-161
- Ecological monitoring of oil-gas construction in the cryolithozone. Antonov-Druzhinin, V.P., et al, (1990, p.21-23, rus) 45-383
- Sedimentary basins and petroleum resource potential of the Arctic Ocean region. Haimila, N.E., et al, (1990, p.503-538, eng) 45-1693
- Drilling in the permafrost. Kudriashov, B.B., et al, (1990, 318p., eng) 45-1854
- Wetlands for wastewater treatment at oil refinery. Litchfield, D.K., et al, (1989, p.233-237, eng) 45-1880
- Chukchi Sea Oil and Gas Lease Sale 126. Draft environmental impact statement. (1990, 2 vols., eng) 45-2159
- Beaufort Sea Planning Area Oil and Gas Lease Sale 124. Draft environmental impact statement. (1990, 2 vols., eng) 45-2162
- Navarin Basin Oil and Gas Lease Sale 107. Final environmental impact statement. (1991, Var. p., eng) 45-2172
- Chukchi Sea Oil and Gas Lease Sale 126. Final environmental impact statement. (1991, 2 vols., eng) 45-2173
- Challenge of arctic shipping: science, environmental assessment, and human values. VanderZwaag, D.L., ed, (1990, 282p., eng) 45-2404
- Exploration activity heats up in the Alaskan offshore. (1990, p.34-35, eng) 45-2555
- Environmental aspects on the development of hydrocarbon resources in the arctic seas. Jumppanen, P., (1990, p.117-130, eng) 45-2726
- Geology and hydrocarbon potential of the antarctic continental margin. Anderson, J.B., (1990, p.175-201, eng) 45-2811
- Ecological aspects of developing oil and gas resources in non-Soviet arctic regions. Epifanov, A.A., et al, (1990, p.150-160, rus) 45-3411
- Petroleum products**  
Change in concentration of petroleum products at low temperatures. Nemirovskaia, I.A., (1989, p.273-280, eng) 45-771
- Petroleum transportation**  
Onshore oil field development in East Greenland. Mai, H., et al, (1990, p.504-514, eng) 45-154
- Phase transformations**  
Melting, freezing and other peculiarities in small systems. Berry, R.S., (1990, p.259-270, eng) 45-401
- Theory of charge-transfer spectra in frozen media. Marcus, R.A., (1990, p.4963-4966, eng) 45-433
- Observation of the boundary layer on the top of ice growing from melt. Krasinski, M.J., et al, (1990, p.625-632, eng) 45-614
- Dependence of phase composition of water in freezing and frozen soils on external pressure. Kondakov, V.V., et al, (1989, p.17-23, eng) 45-650
- Phase changes in water with coiled copper wires. Hirasawa, Y., et al, (1989, p.161-166, jpn) 45-699
- Phase transitions of water in brick during cooling. Nakamura, M., et al, (1985, p.1567-1570, eng) 45-777

- Phase transition of water in brick during cooling 2: effects of cooling rate. Nakamura, M., et al, 1987, p.1116-1119, eng 45-778
- X-ray study of high-density amorphous water. Bosio, L., et al, 1986, p.460-463, eng 45-779
- Equation of state and metallization of ice under very high pressure. Hama, J., et al, 1990, p.8107-8111, eng 45-992
- High speed numerical technique to solve coupled moving boundary value heat problems. Sharma, R.K., et al, 1990, p.1-8, eng 45-1080
- Fundamentals of phase change: freezing, melting, and sublimation. Bayazitoglu, Y., ed, 1990, 81p., eng 45-1161
- Heat transfer analysis for ice objects melting in air. Janna, W.S., et al, 1990, p.i-8, eng 45-1162
- Method for predicting freezing in forced flow. Albert, M.R., et al, 1990, p.9-14, eng 45-1163
- Melting heat transfer from a horizontal ice cylinder in saline water. Fukusako, S., et al, 1990, p.15-23, eng 45-1164
- Experimental study of formation and melting of ice about horizontal tubes. Torikoshi, K., et al, 1990, p.57-63, eng 45-1165
- Forced convective heat transfer with freezing from tandem cylinders. Oosthuizen, P.H., et al, 1990, p.65-73, eng 45-1166
- Mathematical modeling and analysis of heat pipe start-up from the frozen state. Jang, J.H., et al, 1990, p.586-594, eng 45-1262
- Void formation in unidirectional solidification. Tagavi, K., et al, 1990, p.239-255, eng 45-1422
- Microcomputer simulation of phase change heat transfer. Farag, I.H., et al, 1990, p.43-65, eng 45-1432
- Calculating transfer processes in models of ice cover evolution. Appel, I.L., et al, 1990, p.130-141, rus 45-1644
- Solving the Stefan problem for saline soils at subzero temperatures. Tettelbaum, A.S., 1989, p.13-24, rus 45-1825
- Mathematical model of periodically stabilizing phase front variations. Tettelbaum, A.S., et al, 1989, p.96-99, rus 45-1831
- Isotopic-oxygen composition of structure-forming ice of the active layer. Mikhailov, D.V., 1989, p.162-169, rus 45-1837
- Numerical method for phase-change problems. Kim, C.J., et al, 1990, p.2721-2734, eng 45-1871
- Dielectric observations of the transformation of single crystals of KOH-doped ice Ih to ice XI. Oguro, M., et al, 1991, p.401-403, eng 45-1902
- Pressure-induced phase transitions in clathrate hydrates. Handa, Y.P., et al, 1991, p.623-627, eng 45-1903
- Description of freezing front progression in a slab. Guiffant, G., et al, 1991, p.11-17, eng 45-1907
- Conservative algorithm for multidimensional conduction phase change. Comini, G., et al, 1990, p.697-709, eng 45-2175
- Numerical study of three-dimensional natural convection during freezing of water. Yeoh, G.H., et al, 1990, p.899-914, eng 45-2176
- Natural convection heat transfer in water near its density maximum. Yen, Y.C., 1990, 92p., eng 45-2237
- Heat transfer with freezing and thawing. Lunardini, V.J., 1991, 437p., eng 45-2390
- Estimation of supercooling temperature of water. Maliarenko, V.V., 1989, p.26-29, eng 45-2481
- Dielectric studies of the transition of ice Ih to ice XI. Zaretskii, A.V., et al, 1991, p.757-768, eng 45-2485
- Linear problem of water-ice phase transitions in unsaturated soils. Tsytkin, G.G., 1990, p.384-389, eng 45-2561
- Microphysical characteristics through the melting region of a midlatitude winter storm. Raga, G.B., et al, 1991, p.843-855, eng 45-2663
- Diffraction studies of phase changes in supercooled molecular clusters. Bartell, L.S., et al, 1991, p.1159-1167, eng 45-2777
- Synchronous content of unfrozen water in saline soils. Bronfenbrener, L.E., 1990, p.34-38, rus 45-2887
- Determining the phase composition of saline frozen soils. Petrukhin, I.I.S., 1990, p.38-45, rus 45-2888
- Ecological soil petrography and mineralogy. Gradusov, B.P., et al, 1990, p.13-34, rus 45-2906
- Phase-change numerical heat transfer analysis with applications to frost shielding. Farag, I.H., et al, 1991, p.29-36, eng 45-2915
- Inward solidification of a superheated liquid in a cooled horizontal tube. Viskanta, R., et al, 1982, p.39-46, eng 45-2933
- Glass transition of the amorphous phase in frozen aqueous systems. Blond, G., et al, 1991, p.239-247, eng 45-2937
- Gas release from comets. Notesco, G., et al, 1991, p.411-413, eng 45-2941
- Using wastes from soda production for lowering the freezing temperature. Tseitlin, N.A., et al, 1990, p.55-64, rus 45-3002
- Enthalpy formulation for phase change problems. Lee, S.L., et al, 1991, p.1491-1502, eng 45-3023
- Fluid mixing during melting. Woods, A.W., 1991, p.1393-1404, eng 45-3030
- Iterative solution of a nonlinear system arising in phase-change problems. Williams, M.A., et al, 1990, p.1087-1101, eng 45-3056
- Estimated solutions of the one-dimensional Stefan problem. Aksenov, B.G., 1990, p.710-716, eng 45-3057
- Further inquiry into the cryobehavior of aqueous solutions of glycerol. Chang, Z.H., et al, 1991, p.268-278, eng 45-3100
- Influence of first phase change on the rheological behavior of clay between 0 and -5 C. Thimus, J.F., et al, 1991, p.107-111, eng 45-3156
- Freezing of a binary alloy saturating a packed bed of spheres. Cao, W.Z., et al, 1991, p.46-53, eng 45-3234
- Thermodynamic properties of ice, water, and a mixture of the two at high pressures. Nagornov, O.V., et al, 1990, p.378-385, eng 45-3254
- Physicochemical processes in the cryolithozone. Mel'nikov, P.I., et al, 1989, p.1-6, eng 45-3264
- Unsteady heat and mass transfer with phase changes in an insulation slab: frosting effects. Tao, Y.X., et al, 1991, p.1593-1603, eng 45-3364
- Simplified analysis for cold storage in porous capsules with solidification. Chen, S.L., et al, 1991, p.108-116, eng 45-3467
- Moving and deforming finite-element simulation of two-dimensional Stefan problems. Zabarav, N., et al, 1990, p.495-506, eng 45-3699
- Phase change heat transfer analysis with applications to frost shielding. Farag, I.H., et al, 1990, p.9-13, eng 45-3739
- Dynamics of thermal energy in the snow-soil-regolith system during phase transformations. Mezherovskii, A.P., 1991, p.90-98, rus 45-3839
- See also:* Solid phases
- Phosphorus cycle**  
*See also:* Nutrient cycle
- Photochemical reactions**  
Ultraviolet radiation environment of the Antarctic Peninsula. Lubin, D., 1989, 134p., eng 45-2830  
HOx and ClOx interactions in the ozone hole photochemistry. Crutzen, P.J., et al, 1989, p.203-212, eng 45-2981
- Photogrammetric surveys**  
Cathedral Massif Glacier map 1:5000. Slupetzky, H., et al, 1988, p.125-136, ger 45-1093  
Antarctic glacier velocities from Landsat images. Lucchitta, B.K., et al, 1990, p.106-107, eng 45-1397  
Yearly dynamics of the front zone of the Hansa Glacier (1987-1988). Dabrowski, S., et al, 1990, p.109-130, pol 45-2581
- Photogrammetry**  
Photogrammetry using color slides from Greenland. Dueholm, K.S., et al, 1990, p.151-160, eng 45-129  
Study of ice streams B and C. Whillans, I.M., 1990, p.78-79, eng 45-1255  
Digital terrain models as a tool for glacier studies. Rentsch, H., et al, 1990, p.273-278, eng 45-1537  
Comparative digital analysis of Seasat-SAR and Landsat-TM data for Iceland. Rast, M., et al, 1991, p.527-544, eng 45-2223
- Photographic equipment**  
*See also:* Stereoscopic cameras
- Photographic techniques**  
Wild ice: Antarctic journeys. Naveen, R., et al, 1990, 222p., eng 45-1149
- Photography**  
Wild ice: Antarctic journeys. Naveen, R., et al, 1990, 222p., eng 45-1149  
*See also:* Infrared photography; Oblique photography; Radar photography; Spaceborne photography; Stereophotography
- Photointerpretation**  
Ice kinematic measurements from aerial photography. Brown, T.G., et al, 1989, p.1148-1151, eng 45-263  
Monitoring river ice with Landsat images. Gatto, L.W., 1990, p.1-16, eng 45-484  
Divergent redistribution of ice in the Northern Arctic Ocean. Nazirov, M., 1987, p.244-254, eng 45-862  
Effect of hydrometeors on radar images of sea ice. Aleksandrov, V.I.U., 1987, p.255-264, eng 45-863  
Identification of regional features of the marshes of western Siberia. Gorozhankina, S.M., 1986, p.358-372, eng 45-864  
Evaluating engineering-geological conditions of lake-bog flatlands. Svitnev, A.I., 1987, p.517-528, eng 45-865
- Evolution of glacier surge as analyzed through satellite images. Espizua, I.E., et al, 1990, p.255-259, eng 45-2028
- Airborne remote sensing of river ice slush transport. Dobrowolski, A., et al, 1990, p.1105-1112, eng 45-3657
- Interpretation of sea ice using NOAA-AVHRR data. Ahlins, K., et al, 1990, 46p., eng 45-3850
- See also:* Geobotanical interpretation
- Photometry**  
Green icebergs and remote sensing. Lee, R.L., Jr., 1990, p.1862-1874, eng 45-1171
- Measurements of arctic total ozone during the polar winter. Kerr, J.B., et al, 1990, p.383-392, eng 45-1680
- Scattering properties of natural snow and frost: comparison with icy satellite photometry. Verbercer, A.J., et al, 1990, p.418-428, eng 45-1923
- Photosynthesis**  
Freeze-thaw effects on oxygen photosynthesis in phosphatidylglycerol vesicles. Nénoné, E.K., et al, 1990, p.615-620, eng 45-969  
Photoheterotrophy and dark heterotrophy in ice-covered Lake St. Clair. Wallen, D.G., 1990, p.339-345, eng 45-1388
- Microbial communities in antarctic streams; photosynthesis. Howard-Williams, C., et al, 1989, p.27-38, eng 45-2605
- Microbial communities in antarctic streams; low temperature effects. Vincent, W.F., et al, 1989, p.39-49, eng 45-2606
- Nitrogen transport by phytoplankton in ice-covered lakes. Prisco, J.C., 1989, p.173-182, eng 45-2615
- Photosynthesis and nitrogen uptake by sea ice microalgae. Prisco, J.C., et al, 1991, p.201-210, eng 45-2669
- Phytoplankton response during winter-spring transition in the Fram Strait. Smith, W.O., Jr., et al, 1991, p.4549-4554, eng 45-2671
- Photosynthesis-irradiance in pack ice microalgae. Lizotte, M.P., et al, 1991, p.175-184, eng 45-3015
- Photosynthesis and pigments of sea ice microalgae. Rochet, M., et al, 1986, p.211-226, eng 45-3242
- Small volume, short-incubation time method for measurement of photosynthesis as a function of incident irradiance. Lewis, M.R., et al, 1983, p.99-102, eng 45-3248
- Productivity of phytocenes in mountain tundra of the Khibini Mountains. Luk'ianova, L.M., et al, 1991, p.181-187, eng 45-3263
- Photosynthetic productivity of ice algae in Hokkaido. Satoh, H., et al, 1989, p.274-278, eng 45-3313
- Photosynthesis of arctic ice algae and salinity. Bates, S.S., et al, 1986, p.421-429, eng 45-3319
- Rates of photoadaptation in sea ice diatoms from McMurdo Sound, Antarctica. Lizotte, M.P., et al, 1991, p.367-373, eng 45-3347
- Light and nutrient limitation of sea-ice microalgae (Hudson Bay, Canadian Arctic). Gosselin, M., et al, 1990, p.220-232, eng 45-3348
- Dark survival of autotrophic, planktonic marine diatoms. Smayda, T.J., et al, 1974, p.195-202, eng 45-3433
- Abiotic dynamics of Lake Kitezh, Antarctica. Contreras, M., et al, 1991, p.9-32, spa 45-3552
- Physical properties**  
Physical and thermal properties of core specimens. Norman Wells Pipeline. Patterson, D.E., et al, 1989, 23p. + append., eng 45-385
- Physical and thermal properties of Norman Wells-Zama Pipeline core specimens. Patterson, D.E., et al, 1988, 59p. + append., eng 45-387
- Influence of shape on iceberg wave-induced velocity statistics. Lever, J.H., et al, 1990, p.263-269, eng 45-716
- International classification for seasonal snow on the ground. Colbeck, S.C., et al, 1990, 23p., eng 45-1174
- Top/bottom multisensor remote sensing of arctic sea ice. Comiso, J.C., et al, 1991, p.2693-2709, eng 45-2042
- Comparison of latex-modified portland cement mortars. Walters, D.G., 1990, p.371-377, eng 45-2073
- Freeze-thaw durability of shotcrete. Morgan, D.R., 1989, p.86-93, eng 45-2082
- Durability of dry-mix shotcrete. Seegebrecht, G.W., et al, 1989, p.47-50, eng 45-2110
- Spatial variability of sea-ice properties in the northwestern Weddell Sea. Eicken, H., et al, 1991, p.10,603-10,515, eng 45-3310
- Experimental study on local ice pressures acting on structures. Tozawa, S., et al, 1990, p.1044-1055, eng 45-3652
- See also:* Atmospheric physics; Frozen ground physics; Ice physics; Permafrost physics; Snow physics; Soil physics
- Physiological effects**  
Cold: an operational hazard. Lewis, S.B., et al, 1989, p.217-221, eng 45-539
- C-14 lipid distribution in psychrophilic marine diatom. Katahira, R., et al, 1991, p.9-16, eng 45-3461
- Physiology**  
*See also:* Plant physiology
- Piers**  
Observations of icing on marine hydraulic structures. Demin, I.U.A., 1988, p.54-61, rus 45-1516
- See also:* Docks; Wharves
- Pile load tests**  
Cyclic load effects on model pile behavior in frozen sand. Stelzer, D.L., 1989, 349p., eng 45-480
- Improved methods of testing piles in frozen soils. Vialov, S.S., et al, 1991, p.155-161, eng 45-2398
- Model pile-settlement behavior in frozen sand. Stelzer, D.L., et al, 1991, p.1-13, eng 45-2416
- Interpretation of pile load tests at the Haga site. Whittle, A.J., 1991, p.267-274, eng 45-3179



**Pile structures**

- Determining loads from adhered ice on a support column system. Shkhinek, K.N., et al, [1987, p.76-80, rus] 45-1566
- Laying pile foundations in northern regions. Zavizion, V.G., et al, [1991, p.20-22, rus] 45-2952

**Piles**

- Characteristics of foundation work on permafrost. Galdaenko, E.I., et al, [1990, p.95-104, rus] 45-1205
- Determining loads from adhered ice on a support column system. Shkhinek, K.N., et al, [1987, p.76-80, rus] 45-1566
- Frost heave forces on H and pipe piles embedded in Fairbanks silt. Johnson, J.B., et al, [1988, 83p., eng] 45-1649
- Single pile and pile group in permafrost. Vialov, S.S., et al, [1991, p.44-53, eng] 45-2321
- See *also*: Concrete piles

**Pingos**

- Seasonal growth bands in pingo ice. Mackay, J.R., [1990, p.1115-1125, eng] 45-987
- Pingo slope steppe vegetation on an arctic plain. Walker, M.D., et al, [1991, p.170-188, eng] 45-3482
- Geomorphological results of the Japanese expedition to Svalbard, 1988-1989. Ono, Y., et al, [1991, p.259-269, eng] 45-3859
- See *also*: Frost mounds; Hummocks

**Pipe laying**

- Artificial improvement of soils in pipeline construction. Babin, L.A., et al, [1990, 152p., rus] 45-29
- Permafrost and terrain research and monitoring: Norman Wells pipeline—Volume 1: environmental and engineering considerations. MacInnes, K.L., et al, [1989, 132p., eng] 45-32
- Prospects of installation techniques for arctic marine pipelines. Kamyshev, M.A., [1990, p.478-490, eng] 45-152
- Technology of pipeline construction on the Yamburg gas condensate field. Kurbatov, N.I., et al, [1990, p.492-502, eng] 45-153
- Proceedings. [1990, 499p., eng] 45-1945
- First arctic pipeline and later developments. Brown, R.J., [1990, p.323-334, eng] 45-1956
- Construction strategies for arctic offshore pipelines. McKeehan, D.S., [1990, p.335-345, eng] 45-1957
- Vessel requirements for arctic pipeline trenching and installation. Jolles, W.H., [1990, p.347-364, eng] 45-1958
- Application of Voker Stevin's experience to arctic offshore pipeline installation. [1990, p.365-373, eng] 45-1959

**Pipeline heating**

- Meter/gate station design improvements: phase 1. Final report. [1988, 58p., eng] 45-318

**Pipeline insulation**

- Corrosion protection of gas pipelines buried in permafrost. Sackinger, W.M., [1990, p.565-574, eng] 45-159

**Pipelines**

- Artificial improvement of soils in pipeline construction. Babin, L.A., et al, [1990, 152p., rus] 45-29
- Polartech conference 1990. [1990, 759p., eng] 45-121
- Marine oil pipeline from Jameson Land, East Greenland. Gravesen, H., [1990, p.456-467, eng] 45-150
- Prospects of installation techniques for arctic marine pipelines. Kamyshev, M.A., [1990, p.478-490, eng] 45-152
- Strength and deformability of plastic pipe in cold climate. Riabets, I.U.S., et al, [1989, p.132-135, eng] 45-2584
- Tazlina River meander loop—a case history. Swanson, J.E., [1983, p.231-239, eng] 45-2959
- Effects of river migration on pipelines in western Canada. Demlow, T.C., et al, [1983, p.240-249, eng] 45-2960
- Permafrost. Péwé, T.L., [1991, p.277-298, eng] 45-3093
- See *also*: Gas pipelines; Hot oil lines; Suspended pipelines; Underground pipelines; Water pipelines

**Pipes (tubes)**

- Fluid-elastic stability threshold in the presence of turbulence. Lever, J.H., et al, [1989, p.407-419, eng] 45-968
- Thermal stresses induced by water solidification in a cylindrical tube. Lin, S., et al, [1990, p.1079-1082, eng] 45-1390
- Tube assembly heat exchange with solidification of the heat carrier. Semenov, V.I.U., et al, [1990, p.567-571, eng] 45-1683
- Tiny tubes prevent liquids from freezing. [1991, p.27, eng] 45-2221
- Heat transfer under frosting conditions to plain and thick-finned tubes. Al-Sahaf, J., et al, [1991, p.1-17, eng] 45-2566
- Strength and deformability of plastic pipe in cold climate. Riabets, I.U.S., et al, [1989, p.132-135, eng] 45-2584
- Laboratory tests with a hybrid thermosyphon. Haynes, F.D., et al, [1991, p.93-99, eng] 45-3154
- Numerical study of the right angled thermosyphon. Lock, G.S.H., et al, [1991, p.113-117, eng] 45-3157
- Heat transfer in a right-angled thermosyphon. Lock, G.S.H., et al, [1991, p.261-265, eng] 45-3178
- Holographic interferometry experiments on the growth of ice from a horizontal pipe. Spatz, T.L., et al, [1991, p.1847-1859, eng] 45-3365

- Finnish cold climate building technology and community development, part 9. Nyman, M., ed, [1990, 70p., fin] 45-3879
- See *also*: Heat pipes; Water pipes

**Piston corers**

- See *also*: Core samplers

**Place names**

- See *also*: Gazetteers

**Placer mining**

- Hydrologic aspects of trining at Valdez Creek Project. Jackson, L.S., [1989, p.171-175, eng] 45-345
- Slope optimization at the Valdez Creek placer mine. Martin, P.L., [1989, p.227-236, eng] 45-350
- Underground mining of frozen placer deposits in USSR. Esviovich, A.S., et al, [1989, p.241-244, eng] 45-352
- Glaciation and gold-placer formation in AK. Reger, R.D., et al, [1990, 30p., eng] 45-653
- Roof bolting parameters in placer mines. Kychkin, N.L., et al, [1990, p.569-572, eng] 45-2932
- Improving the underground development of thawed and frozen placers. Sherstov, V.A., et al, [1989, 162p., rus] 45-3000
- Shore-marine tin placers in the arctic part of Asia. Kashcheev, L.P., et al, [1990, 45p., rus] 45-3001
- Tailings management in the Canadian Arctic: Echo Bay's Lupin Mine. Wilson, H.R., [1991, p.213-214, eng] 45-3363

**Plains**

- Middle Pleistocene glacial and periglacial formations in the Russian Plain. Udartsev, V.P., et al, [1989, p.193-200, rus] 45-790
- Northern prairie wetlands. Van der Valk, A.G., ed, [1989, 400p., eng] 45-831
- Hydrologic studies of wetlands in the northern prairie. Winter, T.C., [1989, p.16-54, eng] 45-832
- Chemical characteristics of water in northern prairie wetlands. LaBaugh, J.W., [1989, p.56-90, eng] 45-833
- Nitrogen and phosphorus dynamics and the fate of agricultural runoff. Neely, R.K., et al, [1989, p.92-131, eng] 45-834
- Vegetation of wetlands of the prairie pothole region. Kantrud, H.A., et al, [1989, p.132-187, eng] 45-835
- Water and wetland resources of the Nebraska sandhills. Novacek, J.M., [1989, p.340-384, eng] 45-836
- Prairie wetlands: characteristics, importance to waterfowl, and status. Krapu, G.L., et al, [1989, p.811-828, eng] 45-1402
- Perspectives on the status of Canadian prairie wetlands. Millar, J.B., [1989, p.829-852, eng] 45-1403
- Soil formation on the yedomas of the Kolyma Lowland. Mazhitova, G.G., [1990, p.12-23, eng] 45-1708
- Spatial and temporal influence of soil frost on infiltration and erosion of sagebrush rangelands. Blackburn, W.H., et al, [1990, p.991-997, eng] 45-3696
- See *also*: Floodplains

**Planetary environments**

- Structure of the planets. Elder, J.W., [1987, 210p. (Pertinent p.100-105, 151-156), eng] 45-2922
- See *also*: Mars (planet); Venus (planet)

**Plankton**

- Water masses and fronts, and their geographical position off Newfoundland. Nowak, W.S.W., [1990, 24p., eng] 45-353
- Polar zooplankton. Smith, S.L., et al, [1990, p.527-598, eng] 45-690
- Phytoplankton dynamics in three Rocky Mountain lakes, Colorado, U.S.A. McKnight, D.M., et al, [1990, p.264-274, eng] 45-889
- Diatom sediments and Holocene paleotemperature variations. Koc Karpuz, N., et al, [1990, p.557-580, eng] 45-953
- Photoheterotrophy and dark heterotrophy in ice-covered Lake St. Clair. Wallen, D.G., [1990, p.339-345, eng] 45-1388
- Spring bloom oceanographic interaction at the Bering Sea ice edge zone. Niebauer, H.J., et al, [1990, p.22, 229-22, 241, eng] 45-1413
- Outer Continental Shelf Environmental Assessment Program: Final reports of principal investigators, Vol.71. [1990, 472p., eng] 45-2154
- Nitrogen transport by phytoplankton in ice-covered lakes. Priscu, J.C., [1989, p.173-182, eng] 45-2615
- Vertical distributions of a planktonic harpacticoid and a calanoid (Copepoda) in a meromictic antarctic lake. Bayly, I.A.E., et al, [1989, p.207-214, eng] 45-2617
- Phytoplankton response during winter-spring transition in the Fram Strait. Smith, W.O., Jr., et al, [1991, p.4549-4554, eng] 45-2671
- Antarctic saline lake zooplankton changes due to seawater incursions. Eslake, D., et al, [1991, p.93-99, eng] 45-2944
- Phytoplankton in coastal waters of the Arctic Ocean at Point Barrow, Alaska. Bursa, A., [1963, p.239-262, eng] 45-3071
- Metabolic activities of phytoplankton associated with arctic sea ice. Allen, M.B., [1970, p.1-17, eng] 45-3113
- Arctic Ocean phytoplankton. Heimdal, B.R., [1989, p.193-222, eng] 45-3116
- Foraminifera and pteropoda beneath the arctic sea ice: new distributions. Herman, Y., et al, [1989, p.223-234, eng] 45-3117
- Phytoplankton periodicity in antarctic surface waters. Hart, T.J., [1942, p.261-356, eng] 45-3122
- Plankton diatoms of the southern seas. Hendeny, N.I., [1937, p.151-364, eng] 45-3123
- Ice nuclei produced by laboratory cultured marine phytoplankton. Schnell, R.C., [1975, p.500-502, eng] 45-3125
- Physical control of phytoplankton production under sea ice (Mantounek Sound, Hudson Bay). Legendre, L., et al, [1981, p.1385-1392, eng] 45-3126
- On the phytoplankton of the south-west Atlantic and the Bellingshausen Sea, 1929-31. Hart, T.J., [1934, p.1-268, eng] 45-3128
- Diatoms as hydrographic tracers: example from Bering Sea sediments. Sancetta, C., [1981, p.279-281, eng] 45-3219
- Primary production of phytoplankton in Baffin Bay. Harrison, W.G., et al, [1982, p.335-345, eng] 45-3246
- Numbers and production of bacterioplankton in the Barents Sea. Rossova, E.I.A., [1977, p.878-882, rus] 45-3250
- Phytoplankton communities in seasonally ice covered areas. Saito, K., et al, [1978, p.27-35, eng] 45-3284
- Observation of the plankton in drift ice. Tamura, T., [1951, p.134-138, jpn] 45-3316
- Effects of environmental variation on sinking rates of marine phytoplankton. Culver, M.E., et al, [1989, p.262-270, eng] 45-3318
- Exploratory studies on the physiology and ecology of a psychrophilic marine diatom. Bunt, J.S., et al, [1966, p.96-100, eng] 45-3321
- Copepods in arctic sea ice. Grainger, E.H., et al, [1986, p.303-310, eng] 45-3322
- Grazing by a choanoflagellate from sea ice in Hokkaido. Marchant, H.J., [1990, p.1-7, eng] 45-3341
- Phytoplankton bloom under sea ice in Hokkaido. Fukuchi, M., et al, [1989, p.9-15, eng] 45-3344
- Zooplankton abundance under sea ice in Hokkaido. Nishiyama, T., et al, [1987, p.123-137, eng] 45-3345
- Abundance of *Parasagitta elegans* under sea ice in Hokkaido. Kotori, M., et al, [1987, p.138-144, eng] 45-3346
- Biological seasons in the plankton of different seas. Bogorov, B.G., [1941, p.404-407, eng] 45-3371
- High-latitude phytoplankton. Allen, M.B., [1971, p.261-276, eng] 45-3386
- Plankton under the ice in the Baltic Sea. Hickel, W., [1969, p.318-331, ger] 45-3388
- Can plankton production proceed during winter darkness in subarctic lakes. Rodhe, W., [1955, p.117-122, eng] 45-3390
- Ecological role of bacteria in detritus and aggregates in the Pacific Ocean. Sazhin, A.F., et al, [1989, p.682-692, rus] 45-3450
- Food webs and primary production in the Barents Sea. Sakshaug, E., [1991, p.1-8, eng] 45-3460

**Plant ecology**

- Vegetation of wetlands of the prairie pothole region. Kantrud, H.A., et al, [1989, p.132-187, eng] 45-835
- Wetland vegetation. Guntenspergen, G.R., et al, [1989, p.73-88, eng] 45-1877
- Use of artificial cattail marshes to treat sewage. Miller, G., [1989, p.636-642, eng] 45-1890
- Ecology and modeling post-fire larch fall and regeneration on permafrost. Matveev, P.M., et al, [1990, p.14-21, rus] 45-2420
- Distribution of aquatic and terrestrial vegetation in Antarctica. Broady, P.A., [1989, p.77-95, eng] 45-2609
- Model of transition processes in the tundra-taiga system. Bogatyrev, B.G., [1991, p.508-511, rus] 45-2936
- Survey of mycorrhizal plants on Truelove Lowland, Devon Island, N.W.T., Canada. Bledsoe, C., et al, [1990, p.1848-1856, eng] 45-3106
- Analyzing landscape change in arctic ecosystems. Walker, D.A., et al, [1991, p.244-276, eng] 45-3187
- Response of an Alaskan wetland to nutrient enrichment. Sanville, W., [1988, p.231-243, eng] 45-3383
- Productivity of agrophytocenoses in the eastern European tundra. Archegova, I.B., ed, [1991, 152p., rus] 45-3391
- Pingo slope steppe vegetation on an arctic plain. Walker, M.D., et al, [1991, p.170-188, eng] 45-3482
- Ammonium uptake by *Eriophorum vaginatum* roots. Marion, G.M., et al, [1990, p.50-55, eng] 45-3767
- Structure and productivity of high-altitude plant communities of the southern Urals. Andreiashkina, N.I., [1991, p.326-331, eng] 45-3862
- See *also*: Forest ecosystems
- Plant introduction**
- See *also*: Introduced plants
- Plant location**
- See *also*: Site surveys
- Plant physiology**
- Freeze-thaw effects on oxygen photosynthesis in phosphatidylglycerol vesicles. Néméné, E.K., et al, [1990, p.615-620, eng] 45-969
- Wetland vegetation. Guntenspergen, G.R., et al, [1989, p.73-88, eng] 45-1877
- Root-zone system: Mannersdorf - new results. Haberl, R., et al, [1989, p.606-621, eng] 45-1889

- Use of genetically altered bacteria to achieve plant frost control. Lindow, S.E., (1990, p.85-110, eng) 45-1980
- Ammonium uptake by *Eriophorum vaginatum* roots. Marion, G.M., et al, (1990, p.50-55, eng) 45-3767
- Plant tissues**
- Plant cold hardiness. Calkins, J.B., et al, (1990, p.194-211, eng) 45-2964
- Estimation of standard error of impedance-estimated frost resistance. Repo, T., et al, (1989, p.67-74, eng) 45-3251
- Electron microscope observation of freezing stress response in plant tissues. Malone, S.R., et al, (1991, p.871-881, eng) 45-3275
- Plants**
- Alkylbenzylidimethylammonium salts as inhibitors for the ice nucleating activity of *Erwinia ananas*. Watanabe, M., et al, (1988, p.201-206, eng) 45-3048
- Analysis and prognosis of low temperatures adverse to plants using Markov chains. Liakatas, A., et al, (1990, p.381-384, eng) 45-3049
- Plants (botany)**
- Dinitrogen fixation in primary succession in Canada. Blundon, D.J., et al, (1990, p.255-263, eng) 45-888
- Cold tolerance of plants used for cold-regions revegetation. Reid, W.H., et al, (1990, 15p., eng) 45-1433
- Freezing resistance of arctic tundra plants on Svalbard. Odasz, A.M., (1990, p.1-8, eng) 45-2115
- Modeling winter grain crop survival in a zone with stable snow cover. Bogomolova, N.A., et al, (1990, p.113-118, rus) 45-2272
- Rate of cellulose decomposition in soils of Spitsbergen tundra. Bienkowski, P., (1990, p.39-45, eng) 45-2431
- Survey of mycorrhizal plants on Truelove Lowland, Devon Island, N.W.T., Canada. Bledsoe, C., et al, (1990, p.1848-1856, eng) 45-3106
- Estimation of standard error of impedance-estimated frost resistance. Repo, T., et al, (1989, p.67-74, eng) 45-3251
- Botanical results from the voyage of the *Ernak* to the Arctic Ocean, summer 1901. IV. Microflora of the Barents Sea and its ice. I. Historical review of the microflora in the Barents Sea and adjacent seas. Palibin, I.V., (1904, p.71-80, rus) 45-3351
- Tundra plant communities near Vårsløkk, Spitsbergen. Moraczewski, I.R., (1990, p.47-68, eng) 45-3557
- See (also): Algae; Grasses; Introduced plants; Lichens; Mosses; Trees (plants); Vegetation
- Plants (industries)**
- See (also): Industrial buildings
- Plastic coatings**
- See (also): Protective coatings
- Plastic deformation**
- Rheological fundamentals of soil mechanics. Vialov, S.S., (1986, 564p., eng) 45-612
- Behaviour of broken ice as a geomaterial. Wong, T.T., et al, (1991, p.451-457, eng) 45-3539
- Plastic properties**
- See (also): Ice plasticity; Snow plasticity
- Plasticity tests**
- Appraisal of a multisurface plasticity model for soils. Derradji-Aouat, A., et al, (1991, p.75-82, eng) 45-3151
- Plastics**
- Hydraulic seals in arctic conditions. Soudunsaari, R., et al, (1989, p.77-84, eng) 45-1218
- Frost resistance of elastomers. Bukhina, M.F., et al, (1989, 176p., rus) 45-2204
- Hail resistance of plastic components of the building shell. Flueter, P., (1990, p.88-95, eng) 45-2556
- Strength and deformability of plastic pipe in cold climate. Riabets, I.U.S., et al, (1989, p.132-135, eng) 45-2584
- Plastic highway bridges. Plecnik, J., et al, (1991, p.64-65, eng) 45-3477
- See (also): Cellular plastics
- Plastics snow friction**
- Characteristics of nonmetallic tire chains in Hokkaido. Hattori, K., et al, (1987, p.13-20, jpn) 45-920
- On the ski-snow sliding mechanism. Aparin, V.I., et al, (1990, p.57-59, eng) 45-3266
- Plates**
- Engineering geology of the USSR: Western Siberian and Turan plates. Trofimov, V.T., ed, (1990, 664p., rus) 45-1571
- Pleistocene**
- Ice-marginal thrusting of drift and bedrock: thermal regime, subglacial aquifers, and glacial surges. Mooers, H.D., (1990, p.849-862, eng) 45-381
- Reconstruction of ice dome dynamics in the Finger Lakes region, NY. Ridky, R.W., et al, (1990, p.1055-1064, eng) 45-403
- Styles of subglacial glaciotectionic deformation within the context of the Anglian ice-sheet. Hart, J.K., et al, (1990, p.227-241, eng) 45-431
- Dynamics of the Pleistocene climate: observation and theory. Maasch, K.A., (1989, 159p., eng) 45-513
- Ice flows and glacier-dammed lakes of Altai during the Pleistocene. Rudolf, A.N., (1990, p.43-52, rus) 45-704
- Glacial meltwater runoff and paleogeographic reconstructions. Bol'shiyanov, D.I.U., et al, (1990, p.58-64, rus) 45-705
- Quaternary age: paleogeography and lithology. Ianshin, A.L., ed, (1989, 251p., rus) 45-786
- Correlating marine, loess, and glacial-flatland formations. Zubakov, V.A., (1989, p.21-24, rus) 45-789
- Middle Pleistocene glacial and periglacial formations in the Russian Plain. Udartsev, V.F., et al, (1989, p.193-200, rus) 45-790
- Paleogeography and chronostratigraphy of the Pleistocene in Siberia. Arkhipov, S.A., (1989, p.201-214, rus) 45-791
- Evolution of the antarctic ice sheet since Late Pleistocene. Zhang, Q., (1989, p.67-73, eng) 45-1009
- Volume and routing of late-glacial runoff from the southern Laurentide Ice Sheet. Teller, J.T., (1990, p.12-23, eng) 45-1075
- Chrono-stratigraphic scale of the Pleistocene glacial epoch in Siberia. Arkhipov, S.A., (1989, p.20-30, rus) 45-1135
- Ice sheet glaciation of the Western Siberian shelf in the Late Pleistocene. Grosval'd, M.G., (1989, p.48-57, rus) 45-1137
- Paleoenvironmental significance of glaciomarine biofacies in the Gulf of Alaska. Lagoe, M.B., et al, (1989, p.194-209, eng) 45-1183
- Relict periglacial structures on a coastal plain in Sweden. Svensson, H., (1990, p.79-91, eng) 45-1190
- Pleistocene periglacial eolian deposits in Alaska. Lea, P.D., (1990, p.582-591, eng) 45-1412
- Evolution of the alluvial fans of the Aliföld. Borsy, Z., (1990, p.229-246, eng) 45-1578
- Paleogeographical regularities of glacial lithogenesis. Sudakova, N.G., (1990, 158p., rus) 45-1865
- Observed deformation structures beneath relict iceberg scours. Woodworth-Lynas, C.M.T., (1990, p.103-125, eng) 45-1947
- Frost activity indicators in Italian loess deposits. Cremaschi, M., et al, (1990, p.39-48, eng) 45-2076
- Pleistocene deglaciation model based upon predictions of sea level change. Tushingham, A.M., et al, (1991, p.4497-4523, eng) 45-2229
- Interaction of sea ice, snow and glaciers with the atmosphere and ocean. Kotliakov, V.M., ed, (1990, p.155-248, eng) 45-2409
- Maximum advance of the Scandinavian ice sheet onto the shelf of the Barents Sea in Valdai time. Dunaeu, N.N., et al, (1991, p.70-73, eng) 45-2478
- Moraine formation as a product of subglacial sedimentation. Sharpe, D.R., et al, (1990, p.1478-1486, eng) 45-2482
- Formation of relief, correlated deposits and placers in northeast USSR. Ivanov, V.F., et al, (1989, 156p., rus) 45-2493
- Vegetation and climate of the Malyy-Siyenak region in the Pleistocene. Prkhorova, T.P., (1989, p.10-20, rus) 45-2494
- Using satellite photography for investigating Late Pleistocene glaciation areas. Glushkova, O.I.U., (1989, p.89-101, rus) 45-2496
- Pleistocene glaciations of the Cherskiy mountain system. Krutous, V.I., et al, (1989, p.102-112, rus) 45-2497
- Mineral composition of Late Pleistocene cryolithogenic deposits. Kotov, A.N., et al, (1989, p.152-156, rus) 45-2500
- Iceberg scours in the geological record. Woodworth-Lynas, C.M.T., et al, (1990, p.217-233, eng) 45-2786
- Evolution and differentiation of Earth's natural environment. Gerasimov, I.P., (1990, 311p., rus) 45-2839
- Western Novaya Zemlya bays in relation to Late Valdai glaciation. Dunaeu, N.N., et al, (1990, p.94-103, rus) 45-2877
- Simulations of continental ice sheet growth over the last glacial-interglacial cycle. Deblonde, G., et al, (1991, p.9189-9215, eng) 45-3413
- Problems in Pleistocene paleogeography of the Great Kurile ridge. Bulgakov, R.F., (1990, p.31-40, rus) 45-3435
- Stratigraphy and correlation of Quaternary deposits in Asia and the Pacific. Khudiakov, G.I., ed, (1991, 208p., rus) 45-3436
- History of the Darkhat paleolake. Lukina, N.V., (1991, p.85-90, rus) 45-3438
- Pleistocene micrites in the paleoglacial zone of northern Western Siberia. Zol'nikov, I.D., (1991, p.167-173, rus) 45-3442
- Late Pliocene-Pleistocene paleoclimate in the Jane Basin region: ODP Site 697. Burckle, L.H., et al, (1990, p.803-809, eng) 45-3529
- Qualitative models of Pleistocene glaciation, oceans, and climates. Grosval'd, M.G., (1990, p.100-126, eng) 45-3541
- Development of river valleys in Pleistocene glaciation regions (Kolyma). Rudnev, A.V., (1989, p.127-137, rus) 45-3838
- Morphogenesis in stratified plains and reconstruction of paleoclimates. Illarionov, A.G., (1989, p.162-167, rus) 45-3870
- Paleoclimates of the Late Pleistocene and the Holocene in northern Siberia. Danilov, I.D., (1989, p.167-172, rus) 45-3871
- See (also): Ice age theory
- Podsol**
- Ecosystems of landscapes in the western central taiga (structure, dynamics). Lopatin, V.D., ed, (1990, 284p., rus) 45-1119
- Role of freezing in comminution of primary minerals of podzolic soils. Leporskii, O.R., et al, (1991, p.107-111, eng) 45-3816
- Poland**
- Leba River
- Leba River alluvial fan and its paleogeomorphological significance. Rachocki, A.H., (1990, p.305-317, eng) 45-1579
- Polar atmospheres**
- Arctic ozone crater in 1989. Evans, W.F.J., et al, (1990, p.1113-1121, eng) 45-1428
- Model for aerosol components over the Antarctic Peninsula. Dick, A.L., (1990, p.179-196, eng) 45-1441
- Ozone and aerosol distributions measured by airborne lidar during the 1988 Arctic Boundary Layer Experiment. Browell, E.V., et al, (1991, p.J242-J243, eng) 45-1601
- Measurements of arctic total ozone during the polar winter. Kerr, J.B., et al, (1990, p.383-392, eng) 45-1680
- Concentration of atmospheric carbon dioxide at the Japanese antarctic station, Syowa. Nakazawa, T., et al, (1991, p.126-135, eng) 45-2588
- Arctic hurricanes. Businger, S., (1991, p.18-33, eng) 45-2788
- Infrared extinction properties of clouds in polar regions. Prabhakara, C., et al, (1990, p.1313-1329, eng) 45-2986
- Springtime visibility in the Arctic. Meyer, F.G., et al, (1991, p.342-357, eng) 45-3017
- Chemical components of arctic tropospheric aerosols. Barrie, L.A., et al, (1990, p.211-226, eng) 45-3047
- Occurrence and characteristics of lower tropospheric ice crystals in the Arctic. Curry, J.A., et al, (1990, p.749-764, eng) 45-3239
- Polar stratospheric clouds and ozone depletion. Toon, O.B., et al, (1991, p.68-74, eng) 45-3252
- Polycyclic aromatic and organochlorine compounds in the atmosphere of northern Ellesmere Island, Canada. Patton, G.W., et al, (1991, p.10,867-10,877, eng) 45-3375
- Model simulation of chemical depletion of arctic ozone during the winter of 1989. McConnell, J.C., et al, (1991, p.10,923-10,930, eng) 45-3376
- Ozone trend in the Northern Hemisphere: a numerical study. Pitari, G., et al, (1991, p.10,931-10,940, eng) 45-3377
- Influence of atmospheric pressure gradient variations on polar atmosphere simulation. Simmons, A.J., et al, (1991, p.29-58, eng) 45-3478
- Structural and measurement problems of arctic atmospheric water balance. Lenart, W., (1990, p.37-45, eng) 45-3780
- Climatic time series of the Norwegian arctic meteorological stations—temperature and precipitation. Nordli, P.O., (1990, p.85-98, eng) 45-3785
- Comments on atmospheric feedbacks. Blanchet, J.P., (1990, p.41-53, eng) 45-3821
- Polar regions**
- Difficult years for arctic geography. Kanevskii, Z.M., (1989, p.115-125, rus) 45-4
- Arctic research in the United States, Vol.4. (1990, 106p., eng) 45-1398
- Atmospheric processes and weather forecasting in the Arctic. Dmitriev, A.A., et al, (1989, 253p., rus) 45-1573
- Five-year plan for U.S. scientific research in the arctic. Kossov, O.A., et al, (1989, 39p., rus) 45-1713
- Problems of military security in the Arctic. Arikainen, A.I., et al, (1990, 92p., rus) 45-1715
- Warming in the Arctic. Quadfasel, D., et al, (1991, p.385, eng) 45-2262
- Revised projection of future greenhouse warming. Schlesinger, M.E., et al, (1991, p.219-221, eng) 45-2263
- See (also): Arctic landscapes
- Polarization (charge separation)**
- Physicochemical processes in the cryolithozone. Mel'nikov, P.I., et al, (1989, p.1-6, eng) 45-3264
- Polarization (waves)**
- Multi-frequency imaging radar polarimetry of sea ice. Drinkwater, M.R., (1990, p.365-376, eng) 45-2745
- Prediction of depolarization distributions on earth-space paths. Fukuchi, H., (1990, p.325-330, eng) 45-2763
- Calculations of millimeter wave depolarization due to melting layer and rain. Zhang, W., et al, (1991, p.543-556, eng) 45-3445
- Pollen**
- Degradation of glaciers of the northern Tien Shan during the Holocene. Mel'nikova, A.P., et al, (1989, p.91-97, rus) 45-1041
- Modern pollen spectrum from Dye 3, south Greenland ice sheet. Bourgeois, J.C., (1990, p.340-342, eng) 45-1544
- Physico-chemical and pollen composition of the Canadian arctic ice cap. Bourgeois, J.C., et al, (1990, p.3/15-3/21, fre) 45-1994

**Pollen (cont.)**

Pollen variations in ice cap snow. Bourgeois, J.C., (1990, p.313-322, eng) **45-2413**

See *also*: Palynology

**Pollution**

Evaporation and spread of chemicals on snow and ice. Kawamura, P.I., et al., (1987, p.53-76, eng) **45-180**

Chemical composition of snow cover as an indicator of gas and dust emissions. Shul'kin, V.M., (1981, p.101-109, rus) **45-207**

Release of heavy metals from snowpacks on the Japan Sea side of Japan. Ecker, F.J., et al., (1990, p.141-153, eng) **45-596**

Nitrogen and phosphorus dynamics and the fate of agricultural runoff. Neely, R.K., et al., (1989, p.92-131, eng) **45-834**

PCB and PCT contamination in Winter Quarters Bay. Risebrough, R.W., et al., (1990, p.523-529, eng) **45-1645**

Study on snow chemistry in Canada: research in progress and prospects. Jones, H.G., (1990, p.3/5-3/12, fre) **45-1793**

Problems in background monitoring of natural environments in the Far North. Evseev, A.V., et al., (1990, p.46-58, rus) **45-1965**

Cold region environmental concerns. Alter, A.J., (1990, p.257-298, eng) **45-2092**

White phosphorous linked as cause of waterfowl deaths at Alaskan firing range. (1991, p.5, eng) **45-3455**

Scientists solve mystery of duck deaths. (1991, p.511, eng) **45-3734**

Estimation of detection capability for toxic wastes. Grant, C.L., et al., (1991, p.15-33, eng) **45-3735**

Solvent-water partitioning and extraction of phosphonates. Leggett, D.C., (1990, p.889-895, eng) **45-3740**

Simultaneous interaction with ice and agent persistence estimation for cold regions. Leggett, D.C., (1988, p.237-247, eng) **45-3741**

Canadian Ice Island: environmental studies of the polar margin north of Canada's arctic islands. Mudie, P.J., et al., (1991, p.60-67, eng) **45-3858**

See *also*: Air pollution; Fallout; Impurities; Oil spills; Soil pollution; Thermal pollution; Water pollution

**Polynomial topography**

Tundra polygons in Quebec. Gray, J.T., et al., (1991, p.111-117, eng) **45-2997**

See *also*: Patterned ground

**Polymers**

Effect of cold climate on polymers. Cherskii, I.N., (1990, p.603-613, eng) **45-163**

Refinery/additive technologies and low temperature engine oil pumpability. Rossi, A., (1989, p.257-267, eng) **45-1239**

Frost resistance of elastomers. Bukhina, M.F., et al., (1989, 176p., rus) **45-2204**

Characterization of polymer networks by measurements of the freezing point depression. Arndt, K.F., et al., (1990, p.806-813, eng) **45-2312**

Calculating dielectric response function of cubic ice. Zaider, M., et al., (1990, p.25-39, eng) **45-2948**

Effect of gelatin on hydrolysis in frozen aqueous solutions. Sergeev, B.M., et al., (1991, p.978-983, eng) **45-3775**

**Polynyas**

Synthetic aperture radar imaging of polynyas. Lyden, J.D., et al., (1987, p.243-245, eng) **45-21**

Azimuth dependence in SAR-imaging of open water leads in ice infested areas. Askne, J., et al., (1989, p.1532-1534, eng) **45-276**

Surface heat budget of a polynya off Queen Maud Land. Ramesh Kumar, M.R., et al., (1989, p.1063-1070, eng) **45-522**

Major features of ice conditions in the Bellingshausen Sea. Evseev, V.V., (1990, p.325-330, eng) **45-729**

Atlantic ice massif—cycle and isolation processes. Kozlovskii, A.M., (1990, p.331-339, eng) **45-730**

Sea ice observations and oceanic processes on the antarctic continental shelf. Jacobs, S.S., et al., (1990, p.135-136, eng) **45-1415**

Variability of natural conditions in Alashevye Bight. Korotkov, A.I., (1990, p.117-133, rus) **45-1563**

Large-scale features of ice cover formation in the Weddell gyre region. Bagriantsev, N.V., (1990, p.134-151, rus) **45-1564**

Dynamics of ice conditions in the coastal zone of Antarctica. Korotkov, A.I., et al., (1990, p.126-133, rus) **45-1751**

Regularity of spatial-temporal variability of antarctic stationary polynyas. Korotkov, A.I., (1990, p.25-32, rus) **45-3077**

Arctic leads. Inall, M.E., (1991, 31p., eng) **45-3110**

Dynamics of ice conditions in the coastal zone of Antarctica. Korotkov, A.I., et al., (1990, p.261-270, eng) **45-3132**

See *also*: Ice openings

**Ponds**

Effect of surface ice on solar pond performance. Atkinson, J.F., (1990, p.207-214, eng) **45-1018**

Snow fencing near pit reservoirs to improve water supplies. Jairell, R.L., et al., (1990, p.156-159, eng) **45-2136**

PS 5 sewage lagoon embankment stabilization. Mobley, K., et al., (1991, p.116-125, eng) **45-2327**

Nitrogen cycling in arctic lakes and ponds. Alexander, V., et al., (1989, p.165-172, eng) **45-2614**

**Porosity**

Elastic and rheological properties of sea ice and its texture. Hellmann, H., (1990, 99p., ger) **45-79**

Mass and energy transport in sublimating cometary ice cracks. Kömle, N.I., et al., (1991, p.73-84, eng) **45-2287**

Predicting the durability of paving bricks. Winslow, D., (1991, p.29-33, eng) **45-2761**

Model of the thermal conductivity of porous water ice at low gas pressures. Steiner, G., et al., (1991, p.507-513, eng) **45-2793**

**Porous materials**

Forced convective heat transfer with freezing from tandem cylinders. Oosthuizen, P.H., et al., (1990, p.65-73, eng) **45-1166**

Numerical study on freezing heat transfer in water-saturated porous media. Sasaki, A., et al., (1990, p.17-32, eng) **45-1926**

Ice sublimation below artificial crusts: results from comet simulation experiments. Kömle, N.I., et al., (1991, p.515-524, eng) **45-2794**

Freezing of a binary alloy saturating a packed bed of spheres. Cao, W.Z., et al., (1991, p.46-53, eng) **45-3234**

Unsteady heat and mass transfer with phase changes in an insulation slab: frosting effects. Tao, Y.X., et al., (1991, p.1593-1603, eng) **45-3364**

Simplified analysis for cold storage in porous capsules with solidification. Chen, S.L., et al., (1991, p.108-116, eng) **45-3467**

**Portable equipment**

PC-based portable ice-radar receiver. Hammond, W.R., et al., (1990, p.255-257, eng) **45-69**

Portable ARGOS data link. Bader, C.M., et al., (1989, p.1272-1275, eng) **45-443**

Microwave snow sounding for trafficability analysis. Alalämmäki, J., et al., (1989, p.145-150, eng) **45-1227**

Very short pulse C-band radar for crevasse detection. Sultz, T., et al., (1991, p.103-107, eng) **45-3068**

Development of seawater batteries as a long-term arctic power source. Hammond, R., et al., (1990, p.1122-1129, eng) **45-3659**

**Portable shelters**

Test plan for transportable maintenance shelter qualification test. Rhodes, D.A., (1990, 16p. + appends., eng) **45-1208**

**Ports**

Study on freezing in harbors. Hirasawa, M., et al., (1990, p.299-304, jpn) **45-757**

Draft supplemental environmental impact statement; Kodiak Harbor, Alaska. (1990, 86p. + appends., eng) **45-1147**

Final supplemental environmental impact statement; Kodiak Harbor, Alaska. (1991, 86p. + appends., eng) **45-2051**

Designing for control of ice conditions in marinas. Wortley, C.A., (1991, p.386-395, eng) **45-2350**

Technical aspects of ice navigation and port construction in Soviet arctic. Watson, G.G., (1991, p.158-176, eng) **45-3332**

Study on ice control at fishing harbor by air-bubble method. Mizuno, Y., et al., (1990, p.697-708, eng) **45-3620**

Classification system of winter conditions of small-craft harbor design for the Great Lakes. Wortley, C.A., (1990, p.821-834, eng) **45-3632**

**Power line icing**

Fourth International Conference on Atmospheric Icing of Structures. (1988, 414p., eng) **45-1299**

Wet snow on overhead lines: state-of-art. Admirat, P., et al., (1988, p.7-13, eng) **45-1301**

Space-time model of a wet snowstorm. Maccagnan, M., et al., (1988, p.14-18, eng) **45-1302**

Probabilistic ice loads on transmission lines. Haldar, A., et al., (1988, p.19-23, eng) **45-1303**

Risk of wet snow sticking on power lines. Admirat, P., et al., (1988, p.24-29, eng) **45-1304**

Probability based design approach to climatic loadings in Hungary. Krömer, I., (1988, p.30-33, eng) **45-1305**

Power line icing in Romania. Dragan, G., et al., (1988, p.34-38, eng) **45-1306**

Power failures from wet snow. Baldit, M., et al., (1988, p.39-43, eng) **45-1307**

Design and analysis of ice load on power lines in mountainous regions. Murooka, M., et al., (1988, p.65-69, eng) **45-1313**

Power line icing in freezing rain and fog. Melo, O.T., et al., (1988, p.70-75, eng) **45-1314**

Icing of transmission lines and telecommunication towers. Fikke, S.M., et al., (1988, p.76-78, eng) **45-1315**

Observation of natural wet snow accretion. Sakamoto, Y., et al., (1988, p.79-83, eng) **45-1316**

Observation of ice accretion on power transmission lines. Takagi, Y., et al., (1988, p.84-88, eng) **45-1317**

Ice depositions on transmission line conductors. Csomor, M., et al., (1988, p.104-108, eng) **45-1321**

Freezing rain in Quebec. Felin, B., (1988, p.119-123, eng) **45-1324**

Icing rate measurements for different cable configurations. Druez, J., et al., (1988, p.125-128, eng) **45-1325**

Calibration of a snow accumulation model. Admirat, P., et al., (1988, p.129-133, eng) **45-1326**

Atmospheric-ice loading of power transmission cables: laboratory experiments. Chen, H.C., et al., (1988, p.170-174, eng) **45-1333**

Accretion of wet snow on power lines. Tachizaki, S., et al., (1988, p.175-179, eng) **45-1334**

Thermodynamic simulation of wet snow accretion under wind-tunnel conditions. Sakamoto, Y., et al., (1988, p.180-185, eng) **45-1335**

Theoretical model for rime ice accretion on conductors. Skelton, P.L.L., et al., (1988, p.214-218, eng) **45-1341**

Theoretical model of ice accretion on overhead line conductors. Poots, G., et al., (1988, p.219-223, eng) **45-1342**

Model for ice accretion on overhead transmission lines. Skelton, P.L.L., et al., (1988, p.224-226, eng) **45-1343**

Model for transmission line icing. Finstad, K.J., et al., (1988, p.227-231, eng) **45-1344**

Computerized camera monitors of snow on power lines. Eeles, W.T., et al., (1988, p.282-286, eng) **45-1355**

Leakage current depending on the insulator shapes and their ice accreted conditions. Sugawara, N., et al., (1988, p.291-295, eng) **45-1357**

Effects of ice coating on the dielectric strength of high-voltage insulators. Kannus, K., et al., (1988, p.296-300, eng) **45-1358**

Ice accumulation on DC power transmission line insulators. Farzaneh, M., et al., (1988, p.301-304, eng) **45-1359**

Failures of overhead transmission lines due to polluted ice accretions on insulator strings. Vuckovic, Z., et al., (1988, p.305-309, eng) **45-1360**

Effect of corona discharge on ice accretion. Teisseyre, Y., et al., (1988, p.310-313, eng) **45-1361**

Galloping conductor control—status 1988. Havard, D.G., et al., (1988, p.314-318, eng) **45-1362**

On the state of galloping conductor technology. Rawlins, C.B., et al., (1988, p.319-323, eng) **45-1363**

Torsion of cables from snow accretion. Admirat, P., et al., (1988, p.324-329, eng) **45-1364**

Management of devastating ice storms. Hesse, K.H., (1988, p.330-334, eng) **45-1365**

Crossing of HV and MV electric lines in areas with icing risks. Savary, P., (1988, p.335-337, eng) **45-1366**

Natural winter risks and overhead distribution networks. Billot, P., et al., (1988, p.347-353, eng) **45-1369**

Icing on overhead transmission lines at high altitude. Su, F.H., et al., (1988, p.354-357, eng) **45-1370**

Overhead electric line design for improved reliability. May, H.S., (1988, p.358-362, eng) **45-1371**

Countermeasures for snow accretion on conductors. Saotome, H., et al., (1988, p.363-366, eng) **45-1372**

Liquid water content of snow accreted on conductors. Admirat, P., et al., (1988, p.367-371, eng) **45-1373**

Research to develop conductor deicing compounds. Baum, B., et al., (1988, p.372-375, eng) **45-1374**

Wet snow accretion and galloping on transmission lines. Yamaoka, M., et al., (1988, p.376-380, eng) **45-1375**

De-icing of microwave dishes and power lines by electromagnetic impulse. Zumwalt, G.W., et al., (1988, p.386-389, eng) **45-1377**

Ice detector measurements of atmospheric icing on a cable. McComber, P., et al., (1990, p.51-64, eng) **45-2186**

Cable rime accretion measurements on a Laurentian mountain. McComber, P., et al., (1990, p.1022-1032, eng) **45-2443**

Allowing for mechanical strength of ice deposits during calculation of overhead line wires. Krymskii, M.M., (1989, p.29-39, eng) **45-2558**

Requirements for protection of DC ice melting units on overhead lines. Molodtsov, B.S., et al., (1989, p.40-44, eng) **45-2567**

Communications channel serviceability during power line icing. Golov, P.I.A., et al., (1988, p.36-42, eng) **45-2568**

Computer model of atmospheric ice accretion on transmission lines. Jones, K.F., et al., (1991, 24p., eng) **45-2641**

Withstand voltage characteristics of insulator string covered with snow or ice. Matsumoto, H., et al., (1991, p.1243-1250, eng) **45-3468**

Studies on snow and ice: to improve power generation. Kuroiwa, D., ed., (1986, 524p., eng) **45-3701**

Study on ice accretion. Imai, I., (1986, p.68-87, eng) **45-3707**

Icing on overhead electric transmission lines. Oguchi, H., (1986, p.88-101, eng) **45-3708**

Studies on snow accretion. Shoda, M., (1986, p.102-150, eng) **45-3709**

Observations of snow accretion on electric transmission lines. Hayashi, K., et al., (1986, p.151-169, eng) **45-3710**

Studies on sleet jump. Kito, S., (1986, p.196-210, eng) **45-3713**

- Sleet jump of overhead transmission wires due to falling of accreted snow and ice. Shoda, M., (1986, p.211-225, eng) 45-3714
- Snow deposition on the arms of an electric pole: model test. Takahashi, T., (1986, p.240-251, eng) 45-3716
- Study on the effects of the settling force of snow on electric poles, stays and transmission towers. Shoda, K., (1986, p.289-326, eng) 45-3720
- Power line supports**
- Studies on the settling force of snow on the legs of iron transmission towers. Hayashi, K., et al., (1986, p.384-403, eng) 45-3723
- Power lines**
- Railway electrification and snow. Seki, S., (1986, p.12-24, eng) 45-3703
- See *also*: Transmission lines
- Power supply**
- See *also*: Electric power; Nuclear power; Wind power generation
- Precast concretes**
- Finnish cold climate construction technology, part 5. Punakallio, E., ed., (1991, 68p. + appends., fin) 45-3877
- Precipitation gages**
- Impact of sampling protocols on winter storm estimates of wet deposition. Lynch, J.A., et al., (1990, 33p., eng) 45-206
- Investigative report on improving the accuracy of radar rain and snow gages. Iwami, Y., et al., (1990, p.107-112, jpn) 45-747
- Preliminary results of solid precipitation measurement tests. Günther, T., (1990, p.224-226, eng) 45-1682
- Investigative report on the observation characteristics of radar rain and snow gages. Takahashi, T., et al., (1988, p.53-58, jpn) 45-2506
- Measuring blowing snow by visibility meters. Nohara, T., et al., (1988, p.189-192, jpn) 45-2514
- Measuring the efficiency of snow fences by vehicle-mounted blowing-snow counters. Ishimoto, K., et al., (1988, p.193-196, jpn) 45-2515
- Precipitation (meteorology)**
- Yukon territory snow survey bulletin and water supply forecast—May. (1990, 24p., eng) 45-73
- Yukon territory snow survey bulletin and water supply forecast—May. (1990, 24p., eng) 45-74
- Yukon territory snow survey bulletin and water supply forecast—April. (1990, 24p., eng) 45-75
- Yukon territory snow survey bulletin and water supply forecast—March. (1990, 25p., eng) 45-76
- Diurnal variation of precipitation in Langtang Valley, Nepal Himalayas. Ueno, K., et al., (1990, p.93-101, eng) 45-202
- Impact of sampling protocols on winter storm estimates of wet deposition. Lynch, J.A., et al., (1990, 33p., eng) 45-206
- Millimeter wave radiative transfer studies for precipitation measurements. Vivekanandan, J., et al., (1989, p.1910-1913, eng) 45-282
- Humidity of air, atmospheric precipitation, snow cover in the USSR. (1989, 288p., eng) 45-310
- NWS verification of precipitation type and snow amount forecasts. (1990, 33p., eng) 45-315
- Isotope variations in the temperate glaciers of the Eurasian Arctic. Vaikmae, R.A., (1990, p.45-55, eng) 45-373
- Cold regions hydrology and hydraulics. Ryan, W.L., ed., (1990, 827p., eng) 45-404
- Measurement and evaluation of winter precipitation. Tabler, R.D., et al., (1990, p.9-38, eng) 45-405
- Incident of clear air precipitation. Fisher, G.W., et al., (1989, p.155-159, eng) 45-472
- Colorado climate: temperature, precipitation, frost and growth data. (1989, 290p., eng) 45-488
- Climates of Canada. Phillips, D., (1990, 176p., eng) 45-534
- Variations in natural and climatic conditions in Yakutia. Gavrilova, M.K., (1987, p.146-159, rus) 45-586
- Radar scattering from wet snow and ice droplets. De Wolf, D.A., et al., (1990, p.1317-1325, eng) 45-655
- Climatological study on the mechanism of graupel formation. Hanmaya, T., (1990, p.437-447, eng) 45-785
- Effects of numbers, sizes and crystal structures on measurements of ice hydrometeors. Berthel, R.O., (1990, 21p., eng) 45-824
- Effect of hydrometeors on radar images of sea ice. Aleksandrov, V.I.U., (1987, p.255-264, eng) 45-863
- Observations on falling motion of natural ice crystals. Ferrari, A., et al., (1989, p.137-146, ita) 45-991
- Determination of alkaline earth metals in Japanese rain and snow by ICP emission spectrometry. Dokiya, Y., et al., (1988, p.145-165, eng) 45-1013
- Radar reflections from wet snow at weather radar wavelengths. De Wolf, D.A., et al., (1990, p.1843-1847, eng) 45-1016
- Constituents of the mass balance of a glacier. Uvarov, V.N., (1989, p.206-209, rus) 45-1062
- Radiometeorological studies in marine conditions. Mikhailov, N.F., et al., (1990, 206p., rus) 45-1090
- Transition of liquid to freezing precipitation. Low, T.B., et al., (1988, p.52-56, eng) 45-1310
- Use of polarization to characterize precipitation and discriminate large hail. Balakrishnan, N., et al., (1990, p.1525-1540, eng) 45-1382
- Hailstone formation in a Montana hailstorm. Miller, L.J., et al., (1990, p.1619-1646, eng) 45-1383
- Modelling of particle distribution in the melting layer. De Wolf, D.A., et al., (1990, p.389-395, eng) 45-1427
- Integrating radar-rainfall data into the hydrologic modeling process. Engdahl, T.L., et al., (1990, p.69-73, eng) 45-1430
- Geography of surface runoff: some lessons for research. Church, M., et al., (1990, p.299-325, eng) 45-1481
- Environmental isotope studies of storm and snowmelt runoff generation. Sklash, M.G., (1990, p.401-435, eng) 45-1482
- Supercooled liquid water development in a winter mountain storm. Sassen, K., et al., (1990, p.1323-1350, eng) 45-1580
- Climatic characteristics of the taiga in interior Alaska. Slaughter, C.W., et al., (1986, p.9-21, eng) 45-1589
- Field test results on a precipitation occurrence and identification sensor. Wiggins, W.L., et al., (1991, p.348-351, eng) 45-1596
- Preliminary results of solid precipitation measurement tests. Günther, T., (1990, p.224-226, eng) 45-1682
- Characteristics of heavy and very heavy precipitation during the winter. Lapcheva, V.F., (1989, p.122-132, rus) 45-1849
- Forecasting the amount of winter precipitation. Litvin, N.N., (1989, p.132-138, rus) 45-1850
- Trace metal and rare earth content of black precipitation events. Landsberger, S., et al., (1990, p.363-369, eng) 45-1899
- Preprint volume. (1991, 436p., eng) 45-1933
- Strongly temperature dependent microphysical processes and winter storms. Stewart, R.E., et al., (1991, p.231-234, eng) 45-1937
- Aircraft icing as an applied winter storms problem. Politovich, M.K., (1991, p.235-240, eng) 45-1938
- Periodic-stochastic modeling of separation of precipitation into rainfall and snowfall. Yevjevich, V., et al., (1990, p.2613-2623, eng) 45-2077
- Western Snow Conference, 58th, 1990. (1990, 170p. + appends., eng) 45-2114
- Method of narrowing the water supply forecast range. Stein, R.E., (1990, p.92-98, eng) 45-2126
- Stochastic simulation of rain-on-snowmelt events. Brunengo, M.J., (1990, p.110-121, eng) 45-2128
- Precipitation extremes at the Central Sierra Snow Laboratory, California. Azuma, D., et al., (1990, p.141-144, eng) 45-2132
- 1948 flood on the Columbia River. Speers, D.D., et al., (1990, p.160-163, eng) 45-2137
- Mechanisms of heterogeneous ice nucleation onto mixed ice nuclei in the atmosphere. Smorodin, V.E., (1990, p.S249-S253, eng) 45-2217
- Impact of fluctuations in mean precipitation and temperature on runoff. Karl, T.R., et al., (1989, p.423-447, eng) 45-2249
- Small-scale meteorology of freezing precipitation. Hogan, A.W., (1991, p.454-462, eng) 45-2357
- Storm and cloud dynamics. Cotton, W.R., et al., (1989, 883p., eng) 45-2427
- Runoff variation forecasts related to climatic changes. Kuznetsova, L.P., et al., (1991, p.126-132, eng) 45-2438
- Deducing precipitation chemistry changes from snow cores. Metcalf, R.C., et al., (1990, p.299-316, eng) 45-2529
- Morphological structure of snowburst in the winter monsoon surges. Shirooka, R., et al., (1990, p.677-686, eng) 45-2532
- Parameterization of the accretion process between different precipitation elements. Mizuno, H., (1990, p.395-398, eng) 45-2533
- Snow cover effect on oceanic moisture distribution in the Southern Hemisphere. Kotliakov, V.M., et al., (1989, p.242-246, eng) 45-2598
- Microphysical characteristics through the melting region of a midlatitude winter storm. Raga, G.B., et al., (1991, p.843-855, eng) 45-2663
- Prediction of depolarisation distributions on earth-space paths. Fukuchi, H., (1990, p.325-330, eng) 45-2763
- Classification of snow cover and precipitation using the special sensor microwave imager. Grody, N.C., (1991, p.7423-7435, eng) 45-2798
- Algorithm to estimate the heating budget from vertical hydrometeor profiles. Tao, W.K., et al., (1990, p.1232-1244, eng) 45-2985
- Dynamic-stochastic models of rainfall and snowmelt runoff formation. Kuchment, L.S., et al., (1991, p.153-169, eng) 45-2990
- Water yield models for snow-covered Iranian watersheds. Moussavi, M., et al., (1990, p.535-546, eng) 45-2993
- Data obtained from snow cover and atmospheric precipitation in mountains. Popova, L.V., ed., (1990, 110p., rus) 45-2999
- Microphysical and radiative characteristics of convective clouds during COHMEX. Fulton, R., et al., (1991, p.98-116, eng) 45-3016
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- Formation of the chemical composition of surface waters. Brazhnik, S.N., (1990, p.73-77, rus) 45-3037
- Regional climate change impacts: 1. Impacts on water resources. Mimikou, M.A., et al., (1991, p.247-258, eng) 45-3444
- Calculations of millimeter wave depolarization due to melting layer and rain. Zhang, W., et al., (1991, p.543-556, eng) 45-3445
- Cation exchange with clay minerals in atmospheric precipitation. Sequeira, R., (1991, p.487-490, eng) 45-3554
- Longitudinal and seasonal water chemistry variations in a northern Appalachian stream. Phillips, R.A., et al., (1990, p.489-498, eng) 45-3697
- Arctic hydrology in Greenland—permafrost hydrology and data technology. Thomsen, T., (1990, p.9-26, eng) 45-3778
- Structural and measurement problems of arctic atmospheric water balance. Lenart, W., (1990, p.37-45, eng) 45-3780
- Physical factors influencing winter precipitation chemistry. Collett, J.S., Jr., et al., (1991, p.782-788, eng) 45-3819
- Role of atmospheric precipitation in the formation of the chemical content of surface water. Brazhnik, S.N., (1990, p.73-77, rus) 45-3866
- See *also*: Hail; Rain; Snowfall
- Prefabrication**
- Finnish construction technology in a cold climate, part 8. Nykänen, V., et al., (1990, 83p. + appends., fin) 45-3878
- Preserving**
- Critical cooling rates to avoid ice crystallization in solutions of cryoprotective agents. Sutton, R.L., (1991, p.101-105, eng) 45-2261
- See *also*: Storage
- Pressure**
- Gas pressure calibration using mercury melting curve with ice-salt mixtures. Lusk, J., (1990, p.852-856, eng) 45-712
- Lubricant low temperature pumpability studies. May, C.J., et al., (1989, p.277-286, eng) 45-1240
- See *also*: Atmospheric pressure; Ice pressure; Soil pressure; Vapor pressure; Water pressure; Wind pressure
- Pressure ridges**
- Evaluation of a simplified ridge modelling method. Comfort, G., et al., (1990, 2 vols., eng) 45-96
- Detection and characterization of ice ridges in the Baltic Sea using CV-580 SAR imagery. Johansson, R., (1989, p.386-389, eng) 45-237
- Extraction of ridge feature characteristics from SAR images of sea ice. Vesecy, J.F., et al., (1989, p.1129-1132, eng) 45-259
- Time-dependent effects on ridge initiation in sea ice leads. Coon, M.D., et al., (1989, p.1298-1303, eng) 45-448
- Effective areas of radiation of pressure ridges in fast ice. Kuznetsov, N.M., et al., (1989, p.106-108, rus) 45-1497
- Calculating pressure and drift in unbroken ice cover. Tsarev, V.A., (1990, p.123-129, rus) 45-1643
- Wang's equation for ice forces from a pressure ridge. Nevel, D.E., (1991, p.666-672, eng) 45-2376
- On the numerical simulation of the sea ice ridging process. Hopkins, M.A., et al., (1991, p.4809-4820, eng) 45-2689
- Polar ice-breaker caught in active shear ridge. Voelker, R.P., et al., (1990, p.269-281, eng) 45-2737
- Role of large-scale under-ice topography in separating estuary and ocean on an arctic shelf. Macdonald, R.W., et al., (1991, p.37-53, eng) 45-2791
- Particle beam simulation to model ice jamming and ridging. Hopkins, M.A., (1991, p.1274-1278, eng) 45-2829
- Model ice ridge forces on a downward breaking cone. Lau, M., et al., (1991, p.163-170, eng) 45-3165
- Observations of short-period ice floe accelerations during leg II of the *Polarbjörn* drift. Martin, S., et al., (1991, p.10,567-10,580, eng) 45-3307
- On the shear strength of geophysical scale ice rubble. Hopkins, M.A., et al., (1991, p.201-212, eng) 45-3425
- Occurrence and size of ice ridges in the Baltic Sea. Leppäranta, M., et al., (1990, p.314-323, eng) 45-3586
- Comparative ground truth and remotely sensed measurements of Baltic Sea ice ridges. Kankaanpää, P., et al., (1990, p.1130-1143, eng) 45-3660
- Prestressed concretes**
- Durability of prestressed concrete tanks. Schupack, M., et al., (1989, p.51-55, 58, eng) 45-2111
- Prevention**
- See *also*: Countermeasures
- Primary productivity**
- Comments on the so-called salt lakes of Greenland. Williams, W.D., (1991, p.67-74, eng) 45-2943
- Vernal stratification in a saline lake: causes and biological significance. Northcote, T.G., et al., (1990, p.105-114, eng) 45-2945
- Productivity of phytocoenoses in mountain tundra of the Khibini Mountains. Luk'ianova, L.M., et al., (1991, p.181-187, eng) 45-3263
- Bio-optical model of antarctic sea ice. Arngo, K.R., et al., (1991, p.10,581-10,592, eng) 45-3308

**Primary productivity (cont.)**

- Spatial variability of sea-ice properties in the northwestern Weddell Sea. Eicken, H., et al. [1991, p.10,603-10,615, eng] 45-3310
- Potential effects of global warming on the primary productivity of a subalpine lake. Byron, E.R., et al. [1990, p.983-989, eng] 45-3695
- See *also*: Biomass
- Probes**
- Sampling of saturated and unsaturated sands by freezing. Konrad, J.M., [1990, p.88-96, eng] 45-354
- Measurement of the thermal regimes in perennial sea ice. Wettlaufer, J.S., et al. [1989, p.1282-1286, eng] 45-445
- New method for assessment of air voids in plastic concrete. Ansari, F., [1990, p.901-909, eng] 45-2313

**Production**

See *also*: Manufacturing

**Profiles**

See *also*: Soil profiles; Stratigraphy

**Projects**

See *also*: Research projects

**Propagation**

See *also*: Wave propagation

**Propellers**

- Ice propeller interaction forces. Keinonen, A.J., et al. [1990, 2 vols., eng] 45-185
- Engineering analysis of ice/propeller interaction data. Summary 300 \$55p. Laskow, V., et al. [1986, 55p., eng] 45-186
- Measurement of ice/propeller interaction parameters. Summary. Kirby, K., et al. [1986, 22p., eng] 45-187
- Engineering analysis of ice/propeller interaction data. Laskow, V., et al. [1986, 322p. + appends., eng] 45-188
- Measurement of ice/propeller interaction parameters. Laskow, V., et al. [1986, 156p. + appends., eng] 45-189
- Ice tests on an "Enthusiast" class harbor tug. Glebko, I.U.V., et al. [1989, p.26-28, rus] 45-1139
- Ice deformation and breakup by the water stream from a propeller. Gavrilov, V.P., et al. [1989, p.206-213, rus] 45-1506
- Enhancements to the Shaft Modeling Tool Kit. Cowper, D.N.B., et al. [1990, 42p., eng] 45-2646
- Ship propulsion/ice interaction study: Robert Lemeur versus Jarvsaar comparison. Keinonen, A.J., et al. [1988, 123p., eng] 45-3454
- Ice clearance using air-lifted propeller streams. Järvi, A., [1990, p.627-638, eng] 45-3613

**Prospecting**

See *also*: Electromagnetic prospecting; Exploration; Geothermal prospecting; Gravimetric prospecting; Seismic surveys; Surveys

**Protection**

- New cold weather clothing system for armed forces application. Farnworth, B., [1989, p.207-215, eng] 45-538
- Character and distribution of sea-ice and iceberg scours. Lewis, C.F.M., et al. [1990, p.57-101, eng] 45-1946
- Integrity monitoring criteria and methods for ice scour problems. Price, P.St.J., et al. [1990, p.419-444, eng] 45-1963
- Requirements for protection of DC ice melting units on overhead lines. Molodtsov, B.S., et al. [1989, p.40-44, eng] 45-2567
- Cathodic protection in Cook Inlet arctic waters. Hedborg, C.E., [1991, p.24-28, eng] 45-3025
- See *also*: Bank protection (waterways); Countermeasures; Environmental protection; Frost protection; Slope protection; Soil stabilization

**Protective coatings**

- Effect of temperature and galvanization on the compressive strength of cold-formed angles. Polyzois, D., et al. [1990, p.440-451, eng] 45-398
- Study of adhesion and friction of fluoroplast coating in contact with ice. Igoshin, V.A., et al. [1989, p.83-87, eng] 45-664
- "Sever" fireproof coatings. Sorin, V.S., et al. [1988, p.29-30, rus] 45-799
- Anti-icing chitin coating system development. Bowers-Irons, G.L.A., et al. [1990, 16p., eng] 45-821
- Corrosion of the underwater portion of hulls of icebreakers. Markovich, R.A., [1989, p.113-126, rus] 45-1120
- Corrosion protection of car bodies in Finland. Rönholm, M., [1989, p.75-76, eng] 45-1217
- Electrohydraulic and electrochemical phenomena during hull contact with ice. Androsenko, V., et al. [1990, p.531-541, eng] 45-3604
- See *also*: Surfactants

**Protective vegetation**

See *also*: Forest strips; Snow hedges

**Quaternary deposits**

- Quaternary glaciers in the West Kunlun Mountains. Zheng, B.X., et al. [1990, p.61-72, eng] 45-199
- Quaternary geology of Canada and Greenland. Fulton, R.J., ed. [1989, 839p. + suppl., eng] 45-610

- Geomorphology and paleogeography of the Malyi Naryn River basin. Sydykov, Dz., [1989, 167p., rus] 45-735
- Quaternary age: paleogeography and lithology. IAnshin, A.L., ed. [1989, 251p., rus] 45-786
- Svalbard radiocarbon date list I. Forman, S.L., et al. [1990, 48p., eng] 45-1180
- Engineering geology of the USSR: shelves of the USSR. Dzhandzhgava, K.I., ed. [1990, 239p., rus] 45-1534
- Engineering geology of the USSR: Western Siberian and Turan plates. Trofimov, V.T., ed. [1990, 664p., rus] 45-1571
- Quaternary alluvial fans in the Karakoram Mountains. Derbyshire, E., et al. [1990, p.27-53, eng] 45-1575
- Evolution of the alluvial fans of the Alfold. Borsy, Z., [1990, p.229-246, eng] 45-1578
- Reconstructed ice-flow patterns and ice limits using drift pebble lithology, outer Nachvak Fjord, northern Labrador: discussion and reply. Clark, P.U., et al. [1990, p.1002-1011, eng] 45-1685
- Prospecting for man-induced cryopegs using transient processes. Nim, I.U.A., [1989, p.117-130, rus] 45-1833
- Late Quaternary geologic history of the Maine coast. Belknap, D.F., et al. [1989, p.29-46, eng] 45-2057
- Geomorphology and late Quaternary evolution of the Saco Bay region. Kelley, J.T., et al. [1989, p.47-65, eng] 45-2058
- Changing perspectives of the Quaternary surficial geology of Maine. Borns, H.W., Jr., [1989, p.1-11, eng] 45-2062
- Late Quaternary glacial history of Mt. Katahdin and the nunatak hypothesis. Davis, P.T., [1989, p.119-134, eng] 45-2069
- Landscape indication of Quaternary deposits and soils in the Pripet Marshes. Obukhovskii, I.U.M., [1990, 192p., rus] 45-2211
- Holocene glacier variations in Norway. Nesje, A., et al. [1991, p.25-40, eng] 45-2314
- Cambridge Fjord basin evolution during Baffin I. deglaciation. Stravers, J.A., et al. [1991, p.72-90, eng] 45-2315
- Ice on the equator: Quaternary geology of Mount Kenya, East Africa. Mahaney, W.C., [1990, 386p. + 7 plates, eng] 45-2393
- Development of the Earth's surface in Finland. Aartolahti, T., [1990, p.203-219, fin] 45-2421
- Supergene corundum in the Quaternary permafrost of Yakutia. Zigert, Kh., et al. [1990, p.155-159, eng] 45-2476
- Permafrost conditions during the formation of Upper Quaternary deposits. Kotov, A.N., et al. [1989, p.117-131, rus] 45-2498
- Bibliography of Quaternary geology of the Copper River, AK. Ferrians, O.J., Jr., [1991, 20p., eng] 45-2692
- Iceberg scours in the geological record. Woodworth-Lynas, C.M.T., et al. [1990, p.217-233, eng] 45-2786
- River valleys in the area of the main watershed in Asia. Endrikhinskii, A.S., [1990, p.90-96, rus] 45-2823
- Current problems in Quaternary geology of the Barents Sea. Pavlidis, I.U.A., et al. [1990, p.76-93, rus] 45-2876
- Problems in Pleistocene paleogeography of the Great Kurile ridge. Bulgakov, R.F., [1990, p.31-40, rus] 45-3435
- Stratigraphy and correlation of Quaternary deposits in Asia and the Pacific. Khudiakov, G.I., ed. [1991, 208p., rus] 45-3436
- Quaternary glaciation in the Yenisey region in Siberia. Sukhorukova, S.S., [1991, p.80-84, rus] 45-3437
- Principles for correlating Quaternary events in southern USSR. Sgibnev, V.V., et al. [1991, p.96-100, rus] 45-3439
- Paleoreconstruction of major Quaternary events (northern Pacific region). Gilichinskii, D.A., et al. [1991, p.112-116, rus] 45-3441
- Pleistocene mictites in the paleogeologic zone of northern Western Siberia. Zol'niko, I.D., [1991, p.167-173, rus] 45-3442
- Glaciectonic deformation in sediment and bedrock, Hat Creek, British Columbia. Broster, B.E., [1991, p.5-20, eng] 45-3824
- Radar**
- Design and performance of the antarctic radar depth sounder. Raju, G., et al. [1990, p.247-254, eng] 45-68
- PC-based portable ice-radar receiver. Hammond, W.R., et al. [1990, p.255-257, eng] 45-69
- Texture segmentation using localized spatial filtering. Final report. Du, L.J., [1990, 46p., eng] 45-88
- Millimeter-wave radar scattering from terrain: data handbook. Haddock, T.F., et al. [1990, 133p., eng] 45-313
- Radar sounder (final report Aug. 1987-Sep. 1988). Nathanson, F.E., et al. [1988, 139p., eng] 45-316
- Search and rescue target detection experiment. Canso Bank, 1988. Dawe, B.R., et al. [1989, Var. p., eng] 45-550
- Helicopter radar report. Final draft, Sept. 1990. Lowry, R.T., [1990, 44p., eng] 45-588
- Investigative report on improving the accuracy of radar rain and snow gages. Iwami, Y., et al. [1990, p.107-112, jpn] 45-747

Integrating radar-rainfall data into the hydrologic modeling process. Engdahl, T.L., et al. [1990, p.69-73, eng] 45-1430

Field test results on a precipitation occurrence and identification sensor. Wiggins, W.L., et al. [1991, p.348-351, eng] 45-1596

Microwave and physical properties of sea ice in the winter MIZ. Tucker, W.B., et al. [1991, p.4573-4587, eng] 45-2084

Algorithms to enhance radar image. Kahloun, F., et al. [1991, 47p. + append., eng] 45-2840

Impulse radar bathymetric profiling in weed-infested fresh water. Kovacs, A., [1991, 19p., eng] 45-2955

Radar detection of ice wedges in Alaska. Arcone, S.A., et al. [1982, 15p., eng] 45-3021

See *also*: Airborne radar; Side looking radar

**Radar echoes**

Potential of radar echoes from ice sheets for wind measurement. Remy, F., et al. [1990, p.133-142, eng] 45-54

Radar detection of lightning and electric fields. Metcalf, J.I., [1989, 34p., eng] 45-89

Combined active/passive microwave classification of sea ice. Livingstone, C.E., [1989, p.376-380, eng] 45-235

Discrimination of sea ice types using SAR backscatter statistics. Shuchman, R.A., et al. [1989, p.381-385, eng] 45-236

Detection and characterization of ice ridges in the Baltic Sea using CV-580 SAR imagery. Johansson, R., [1989, p.386-389, eng] 45-237

LIMEX'87 ice surface characteristics and their effect upon C-band SAR signatures. Drinkwater, M.R., [1989, p.390-393, eng] 45-238

Radar polarimeter measurements of snow. Hallikainen, M., et al. [1989, p.1829-1831, eng] 45-280

Millimeter wave radiative transfer studies for precipitation measurements. Vivekanandan, J., et al. [1989, p.1910-1913, eng] 45-282

Polarimetric radar measurements of artificial sea ice. Onstott, R.G., et al. [1989, p.1938-1941, eng] 45-283

Polarimetric scattering measurements on artificially grown sea ice. Gogineni, S.P., et al. [1989, p.1942-1944, eng] 45-284

Radar studies of low-salinity sea ice. Hallikainen, M., et al. [1989, p.1945-1948, eng] 45-285

Ice-type classifications from airborne radar waveform characteristics. Fedor, L.S., et al. [1989, p.1949-1952, eng] 45-286

Comparison of measurement and theory for backscatter from thick salinated and desalinated ice. Bredow, J.W., et al. [1989, p.1953-1956, eng] 45-287

Matched-filter technique for the enhancement of antarctic radar data. Raju, G., et al. [1989, p.2722-2725, eng] 45-298

Bottom characteristics of the antarctic ice sheet from radar. Moore, R.K., et al. [1989, p.2727-2729, eng] 45-299

Slope correction by relocation for satellite radar altimetry. Cooper, A.P.R., [1989, p.2730-2733, eng] 45-300

Coherent radar contour mapping of ice stream thickness. Davis, C.H., et al. [1989, p.2734-2737, eng] 45-301

Millimeter-wave radar scattering from terrain: data handbook. Haddock, T.F., et al. [1990, 133p., eng] 45-313

Antarctic ice sheet measurements using airborne radio echo sounder. Uratsuka, S., et al. [1989, p.297-306, jpn] 45-376

Real-time radar detection of iceberg shadows. Orlando, J.R., et al. [1990, p.112-118, eng] 45-615

Radar scattering from wet snow and ice droplets. De Wolf, D.A., et al. [1990, p.1317-1325, eng] 45-655

Radar reflections from water injected into an antarctic glacier. Davis, C.H., et al. [1990, p.723-726, eng] 45-721

Radar reflectivity-ice water content relationships for use above the melting level in hurricanes. Black, R.A., [1990, p.955-961, eng] 45-774

Implications of dielectric properties of icy satellites for radar sounding. Thompson, W.R., et al. [1990, p.336-354, eng] 45-848

Topographic effects on precipitating snow clouds in Japan. Kikuchi, K., et al. [1987, p.109-128, eng] 45-905

Radar sounding of the surface of the Earth from space. Nazirov, M., et al. [1990, 200p., rus] 45-986

Radar reflections from wet snow at weather radar wavelengths. De Wolf, D.A., et al. [1990, p.1843-1847, eng] 45-1016

Analyses of radio-echo data from Antarctica. Herzfeld, U.C., et al. [1988, p.95-110, eng] 45-1091

Low-frequency ice radar studies on ice streams B and C, West Antarctica. Hodge, S.M., et al. [1990, p.79-81, eng] 45-1256

Use of polarization to characterize precipitation and discriminate large hail. Balakrishnan, N., et al. [1990, p.1525-1540, eng] 45-1382

Hailstone formation in a Montana hailstorm. Miller, L.J., et al. [1990, p.1619-1646, eng] 45-1383

Radar depth sounding near Upstream B camp-- December 1988. Moore, R.K., et al. [1990, p.85-86, eng] 45-1391

- Winter short-pulse radar studies on the Tanana River, Alaska. Delaney, A.J., et al, 1990, p.244-250, eng 45-1421
- Modelling of particle distribution in the melting layer. De Wolf, D.A., et al, 1990, p.389-395, eng 45-1427
- Attenuation of 3-cm band radar signals by snow cover in the Antarctic. Trepov, G.V., 1989, p.53-58, rus 45-1489
- Thickness and movement velocity of ice cover in the area of Dome B. Sheremet'ev, A.N., 1989, p.65-71, rus 45-1491
- Cepstrum analysis of signals reflected from sea ice. Oganessian, A.G., et al, 1989, p.99-105, rus 45-1496
- Measurements of SAR backscatter signatures from sea ice. Livingstone, C.E., et al, 1991, p.29-41, eng 45-1725
- Coherent backscatter and the radar characteristics of outer planet satellites. Hapke, B., 1990, p.407-417, eng 45-1922
- St. Valentine's Day ice storm—an extreme freezing rain disaster. Rauber, R.M., et al, 1991, p.272-273, eng 45-1943
- Satellite radar altimeter capability for ice sheet surface change measurement. Partington, K.C., et al, 1991, p.585-609, eng 45-2225
- Investigative report on the observation characteristics of radar rain and snow gauges. Takahashi, T., et al, 1988, p.53-58, jpn 45-2506
- Surface radar investigations of an icing mound on the Sagavanirktok River, Alaska. Arcone, S.A., et al, 1990, p.353-363, eng 45-2744
- Multi-frequency imaging radar polarimetry of sea ice. Drinkwater, M.R., 1990, p.365-376, eng 45-2745
- Characteristics of external calibration of the Kosmos-1500 satellite side-look radar. Bukharov, M.V., et al, 1989, p.114-125, rus 45-2757
- Ice measurements by GEOSAT radar altimetry. Zwally, H.J., et al, 1987, p.251-254, eng 45-2764
- Chemical and glaciological studies. Corr, H., 1990, p.87-89, eng 45-2835
- Microphysical and radiative characteristics of convective clouds during COHMEX. Fulton, R., et al, 1991, p.98-116, eng 45-3016
- Millimeter-wave radar scattering from snow: 1. Radiative transfer model. Kuga, Y., et al, 1991, p.329-341, eng 45-3044
- Millimeter-wave radar scattering from snow: 2. Comparison of theory with experimental observations. Ulaby, F.T., et al, 1991, p.343-351, eng 45-3045
- Very short pulse C-band radar for crevasse detection. Sultz, T., et al, 1991, p.103-107, eng 45-3068
- Utilization of ground penetrating radar to conduct sediment surveys of frozen reservoirs. Iivari, T.A., et al, 1988, p.1055-1061, eng 45-3099
- Detection of objects buried in wet snowpack by an FM-CW radar. Yamaguchi, Y., et al, 1991, p.201-208, eng 45-3188
- Time-delayed reflections in L-band synthetic aperture radar imagery of icebergs. Gray, A.L., et al, 1991, p.284-291, eng 45-3191
- Radar altimeter ground truth measurements in Antarctica. 1989, p.1-3, eng 45-3258
- Terrestrial geophysics in the SearISE Project. Bentley, C.R., 1991, p.49-54, eng 45-3280
- Radar measurements of winter storm turbulence. Campitron, B., et al, 1991, p.1306-1318, eng 45-3373
- Method of radar fresh-water ice measurements from a moving vehicle. Klein, G.S., et al, 1990, p.1144-1154, eng 45-3661
- Abnormal radar backscattering of submillimeter waves from cloud ice particles. Ajvazian, H.M., 1991, p.919-944, eng 45-3886
- Scattering of cloud-reflected radar echoes. Ajvazian, H.M., 1991, p.945-978, eng 45-3887
- Radar photography**
- IGARSS '89 quantitative remote sensing: an economic tool for the nineties; Proceedings. 1989, 3001p. (5 vols.), eng 45-227
- Sea ice classification using synthetic aperture radar. Winebrenner, D.P., et al, 1989, p.34-36, eng 45-228
- Extraction of sea ice information from SAR imagery. Olafsson, T.I., et al, 1989, p.394-399, eng 45-239
- Study of textural and tonal information for classifying sea ice from SAR imagery. Hirose, T.K., et al, 1989, p.747-750, eng 45-243
- Ice classification algorithm development using aircraft imagery. Holt, B., et al, 1989, p.751-754, eng 45-244
- Classification of SAR images from sea ice. Holback-Hansen, E., et al, 1989, p.755-758, eng 45-245
- Multivariate analysis of texture statistics for SAR sea ice discrimination. Barber, D.G., et al, 1989, p.759-762, eng 45-246
- Texture measures for sea-ice classification from radar images. Shokr, M.E., 1989, p.763-768, eng 45-247
- Utilization of local texture transformers for adaptive filtering of SAR sea ice imagery. Salter, D.F., et al, 1989, p.777-779, eng 45-250
- Knowledge based system for the interpretation of SAR images of sea ice. McAvoy, J.G., et al, 1989, p.844-847, eng 45-252
- Simulation of sub-pixel terrain effects on radar backscattering of snow. Shi, J., et al, 1989, p.1009-1011, eng 45-254
- Automated tracking of arctic ice floes in multitemporal SAR imagery. McConnell, R., et al, 1989, p.1112-1116, eng 45-255
- Automated analysis of polar satellite imagery. Banfield, J., et al, 1989, p.1117-1120, eng 45-256
- Object-based feature-tracking algorithms for SAR images of the marginal ice zone. Daida, J., et al, 1989, p.1121-1124, eng 45-257
- Extraction of ridge feature characteristics from SAR images of sea ice. Vesceky, J.F., et al, 1989, p.1129-1132, eng 45-259
- Preliminary observations of Labrador Sea marginal ice zone rheology using C-band SAR. Drinkwater, M.R., et al, 1989, p.1138-1141, eng 45-261
- Evaluation of ice conditions in the Northumberland Strait using C and X band SAR imagery. Dechka, J.A., et al, 1989, p.1142-1146, eng 45-262
- Determination of ice displacements from sequential SAR imagery. Oliphant, K.D., et al, 1989, p.1152-1155, eng 45-264
- Labrador ice margin experiment LIMEX'89; an overview. Raney, R.K., et al, 1989, p.1517-1519, eng 45-272
- LIMEX'89: active/passive microwave signatures of Newfoundland pack ice. Livingstone, C.E., et al, 1989, p.1524-1527, eng 45-274
- Absolute calibration of the CCRS C-band SAR during BEPERS-88. Ulander, L., 1989, p.1528-1531, eng 45-275
- Azimuth dependence in SAR-imaging of open water leads in ice infested areas. Askne, J., et al, 1989, p.1532-1534, eng 45-276
- Ice edge motion during MIZEX'87. Sandven, S., et al, 1989, p.1535-1538, eng 45-277
- High performance inexpensive polarimetric radar for *in-situ* measurements. Hoover, F.A., et al, 1989, p.1820-1822, eng 45-279
- Helicopter radar simulations from fine resolution airborne SAR imagery. Lowry, R.T., et al, 1989, p.2209-2212, eng 45-289
- Estimation of the thickness of undeformed first year ice using radar backscatter. Soulis, E.D., et al, 1989, p.2366-2369, eng 45-295
- Airborne radar characteristics of sea ice types. Jeffries, M.O., et al, 1989, p.2715-2718, eng 45-296
- Studies of ice sheet hydrology using SAR. Bindschadler, R.A., et al, 1989, p.2719-2721, eng 45-297
- Effect of hydrometeors on radar images of sea ice. Aleksandrov, V.I.U., 1987, p.255-264, eng 45-863
- Radar sounding of the surface of the Earth from space. Nazirov, M., et al, 1990, 200p., rus 45-986
- Possible Martian brines: radar observations and models. Zent, A.P., et al, 1990, p.14,531-14,542, eng 45-1840
- Satellite radar altimetry of ice sheets and ice shelves. Rapley, C.G., et al, 1989, p.43-50, eng 45-1863
- Methods for obtaining data on natural resources and environments. Goncharov, A.K., ed, 1990, 200p., rus 45-2206
- Determining the condition of sea ice in the fall. Bukharov, M.V., et al, 1990, p.175-185, rus 45-2209
- Comparative digital analysis of Seasat-SAR and Landsat-TM data for Iceland. Rast, M., et al, 1991, p.527-544, eng 45-2223
- Comparison of altimeter and radar measurements over Greenland pack ice. Fetterer, F.M., et al, 1991, p.569-583, eng 45-2224
- Observation of wave refraction at an ice edge by synthetic aperture radar. Liu, A.K., et al, 1991, p.4803-4808, eng 45-2688
- Ice Technology for Polar Operations: proceedings of the 2nd international conference. 1990, 426p., eng 45-2717
- Radar detection of a calving event at the Milne Ice Shelf, N.W.T. Jeffries, M.O., et al, 1990, p.321-331, eng 45-2741
- Geophysical sea ice products at the Alaska SAR facility. Holt, B., et al, 1990, p.333-344, eng 45-2742
- Multi-frequency imaging radar polarimetry of sea ice. Drinkwater, M.R., 1990, p.365-376, eng 45-2745
- Creating a computer radar map of Antarctica. Spiridonov, I.U.G., et al, 1989, p.126-134, rus 45-2758
- Experience in using satellite radar images for ice navigation. Nikitin, P.A., et al, 1989, p.135-141, rus 45-2759
- Operational maps of soil moisture of areas with and without snow cover. Nazirov, M., 1990, p.411-424, eng 45-2912
- IHS transform for the integration of radar imagery with other remotely sensed data. Harris, J.R., et al, 1990, p.1631-1641, eng 45-2946
- SAR sea ice discrimination using texture statistics: a multivariate approach. Barber, D.G., et al, 1991, p.385-395, eng 45-2947
- Ocean feature study using synthetic aperture radar. Ikeda, M., et al, 1991, p.10,593-10,602, eng 45-3309
- Evaluation of second-order texture parameters for sea ice classification from radar images. Shokr, M.E., 1991, p.10,625-10,640, eng 45-3312
- Comparative ground truth and remotely sensed measurements of Baltic Sea ice ridges. Kankaanpää, P., et al, 1990, p.1130-1143, eng 45-3660
- Interpretation of synthetic aperture radar imagery of snow-covered river ice. Melloh, R.A., et al, 1990, 13p., eng 45-3766
- Digital transmission of satellite images to an icebreaker. Mäkitara, K., et al, 1990, 39p., fin 45-3852
- Radar tracking**
- Automated ice motion tracking at the Alaska SAR facility. Kwok, R., 1989, p.608-611, eng 45-241
- Automated tracking of arctic ice floes in multitemporal SAR imagery. McConnell, R., et al, 1989, p.1112-1116, eng 45-255
- Object-based feature-tracking algorithms for SAR images of the marginal ice zone. Daida, J., et al, 1989, p.1121-1124, eng 45-257
- Microwave radar target acquisition in snow. Kohler, C.R., et al, 1990, 21p., eng 45-559
- Satellite radar altimetry of ice sheets and ice shelves. Rapley, C.G., et al, 1989, p.43-50, eng 45-1863
- Radar monitoring of ice on the upper Niagara River. Crissman, R.D., et al, 1991, p.406-415, eng 45-2352
- Geophysical sea ice products at the Alaska SAR facility. Holt, B., et al, 1990, p.333-344, eng 45-2742
- Radiance**
- Converting digital microwave radiances to units of brightness temperatures. Farmer, L.D., et al, 1990, 16p., eng 45-932
- Bio-optical model of antarctic sea ice. Arrigo, K.R., et al, 1991, p.10,581-10,592, eng 45-3308
- Infrared transmission through cirrus clouds: a radiative model for target detection. Liou, K.N., et al, 1990, p.1886-1896, eng 45-3366
- Radiant heating**
- Deicing of solids using radiant heating. Song, B., et al, 1990, p.311-317, eng 45-667
- Radiation**
- Effect of aerosols on radiation transfer in the Arctic. Ivanov, V.A., et al, 1989, p.47-54, rus 45-609
- Effective areas of radiation of pressure ridges in fast ice. Kuznetsov, N.M., et al, 1989, p.106-108, rus 45-1497
- Changes in global climate. Kondrat'ev, K.I.A., 1985, 280p., eng 45-1710
- Seasonal cycle of the polar stratosphere in the two hemispheres. O'Neill, A., et al, 1989, p.33-54, eng 45-2974
- See *also*: Gamma irradiation; Infrared radiation; Light (visible radiation); Microwaves; Neutron irradiation; Radio waves; Solar radiation; Thermal radiation; Ultraviolet radiation
- Radiation absorption**
- Results from ground-based radiometry of snow. Hallikainen, M., et al, 1989, p.1231-1234, eng 45-265
- 2.5-5.0 micrometer spectra of ice: evidence for H2S and H2O frozen in SO2. Salama, F., et al, 1990, p.66-82, eng 45-305
- Proton irradiation of ice mixtures. Nuth, J.A., et al, 1989, p.565-569, eng 45-397
- Luminescence spectrum of irradiated deuterium oxide ice. Vernon, C.F., et al, 1990, p.529-531, eng 45-590
- Photodissociation of condensed layers of water, ammonia and methane. Menzel, D., et al, 1990, p.588-593, eng 45-776
- Evolution of topography on comets II. Icy craters and trenches. Colwell, J.E., et al, 1990, p.205-215, eng 45-847
- Surface energy balance of a perennial snowbank, Melville Island, Northwest Territories, Canada. Young, K.L., et al, 1990, p.290-301, eng 45-891
- Solar heating of a stratified ocean in the presence of a static ice cover. Perovich, D.K., et al, 1990, p.18,233-18,245, eng 45-1020
- Formation of ice on roads beneath bridges. Barker, H.W., et al, 1990, p.1180-1184, eng 45-1653
- Absorption coefficients of CO2 ice on the Martian south polar cap. Calvin, W.M., 1990, p.14,743-14,750, eng 45-1843
- Comparative snowmelt models applied to a balsam fir forest. Prévost, M., et al, 1991, p.1-10, eng 45-2109
- Deterioration of freshwater ice due to radiation decay. Prowse, T.D., et al, 1990, p.685-697, eng 45-2253
- Effect of abiotic factors on vole winter survival. Courtin, G.M., et al, 1991, p.45-52, eng 45-2472
- Changes in the flexural strength of ice under radiation decay. Prowse, T.D., et al, 1990, p.341-354, eng 45-2531
- Parameterization of broad band radiative transfer properties of water, ice and mixed clouds. Rockel, B., et al, 1991, p.1-13, eng 45-3267
- Bio-optical model of antarctic sea ice. Arrigo, K.R., et al, 1991, p.10,581-10,592, eng 45-3308
- Model for the complex permittivity of ice at frequencies below 1 THz. Hufford, G., 1991, p.677-682, eng 45-3381
- Crystallization of supercooled water drops, induced by infrared radiation at the resonant frequency of ice. Dubrovich, N.A., 1991, p.38-39, eng 45-3474

- Radiation absorption (cont.)**  
 Probing ice cluster surfaces with dangling-OH-mode absorption. Rowland, B., et al, [1991, p.1378-1384, eng] **45-3820**  
 Scattering of cloud-reflected radar echoes. Ajvazian, H.M., [1991, p.945-978, eng] **45-3887**
- Radiation balance**  
 Radiation and cloud observations on a high arctic plateau ice cap. Serreze, M.C., et al, [1987, p.162-168, eng] **45-10**  
 Regional energy balance. Rouse, W.R., [1990, p.187-206, eng] **45-219**  
 Distribution of surface radiation balance in northeastern Western Siberia. Skriabin, P.N., et al, [1990, p.28-33, rus] **45-1198**  
 Radiation budgets in the Fram Strait MIZ. Francis, J.A., et al, [1991, p.218-235, eng] **45-2106**  
 Net radiation model for calculating daily snowmelt in open environments. Granger, R.J., et al, [1990, p.217-234, eng] **45-2524**  
 Occurrence and characteristics of lower tropospheric ice crystals in the Arctic. Curry, J.A., et al, [1990, p.749-764, eng] **45-3239**  
 Scene identification and its effect on cloud radiative forcing in the Arctic. Li, Z.Q., et al, [1991, p.9175-9188, eng] **45-3469**  
 Landsat mapping of surface albedo of the Colorado Front Range. Duguay, C.R., et al, [1991, p.213-223, eng] **45-3486**  
 Glacio-climatology of Antarctica. Aver'ianov, V.G., [1990, 198p., rus] **45-3532**  
 Comments on atmospheric feedbacks. Blanchet, J.P., [1990, p.41-53, eng] **45-3821**  
 Commentary on sea ice feedback. Moritz, R.E., [1991, p.151-163, eng] **45-3823**
- Radiation measurement**  
 See *also*: Radiometry
- Radiation measuring instruments**  
 Catalog of smoke/obscurant characterization instruments. O'Brien, H.W., ed., [1984, 184p., eng] **45-3476**
- Radio communication**  
 Prediction of depolarisation distributions on earth-space paths. Fukuchi, H., [1990, p.325-330, eng] **45-2763**
- Radio echo soundings**  
 Radio and electrical measurements on glacial streams. Walford, M.E.R., [1987, p.239-242, eng] **45-20**  
 Antarctic ice sheet measurements using airborne radio echo sounder. Uratsuka, S., et al, [1989, p.297-306, jpn] **45-376**  
 Thickness of the Nelson I. ice sheet. Qian, S., et al, [1989, p.28-32, eng] **45-1005**  
 Radio-echo sounding survey across the Allan Hills Icefield. Delisle, G., et al, [1990, p.50-52, eng] **45-1084**  
 Applying r-f methods to oceanographic and glacial studies. Gavrilov, V.P., [1989, p.7-22, rus] **45-1484**  
 Use of mobile radiosonde systems to observe the environments of Lake Ontario winter storms. Byrd, G.P., et al, [1991, p.1142-1145, eng] **45-1600**  
 Radio scattering characteristics of the Roi Baudouin ice shelf, East Antarctica. Uratsuka, S., et al, [1990, p.345-351, eng] **45-2743**  
 Radio-echo investigations in Dronning Maud Land. Kennett, M., [1990, p.75-79, eng] **45-2833**  
 Radar detection of ice wedges in Alaska. Arcone, S.A., et al, [1982, 15p., eng] **45-3021**  
 Radio echo soundings in the Shirase Glacier and Princess Ragnhild Coast areas. Nishio, F., et al, [1991, p.93-102, eng] **45-3067**  
 Radar altimeter ground truth measurements in Antarctica. [1989, p.1-3, eng] **45-3258**  
 Telemetry channel of the radio echo sounding system "Meteorit-2-MARZ". Gorbatov, E.S., et al, [1990, p.42-48, rus] **45-3443**
- Radio waves**  
 Generation of electromagnetic fields by fracture of the ice cover of marine areas. Kachurn, L.G., et al, [1989, p.815-817, eng] **45-483**  
 Radiometeorological studies in marine conditions. Mikhailov, N.F., et al, [1990, 206p., rus] **45-1090**  
 Specific attenuation in the UHF range of sea ice in various regions. Pasyukov, V.V., et al, [1989, p.36-45, rus] **45-1487**  
 Prediction of depolarisation distributions on earth-space paths. Fukuchi, H., [1990, p.325-330, eng] **45-2763**  
 Radar altimeter ground truth measurements in Antarctica. [1989, p.1-3, eng] **45-3258**  
 Model for the complex permittivity of ice at frequencies below 1 THz. Hufford, G., [1991, p.677-682, eng] **45-3381**  
 Calculations of millimeter wave depolarization due to melting layer and rain. Zhang, W., et al, [1991, p.543-556, eng] **45-3445**  
 Diffraction of VLF radio waves by polar ice caps. Wait, J.R., [1991, p.1030-1032, eng] **45-3700**  
 See *also*: Microwaves
- Radioactive age determination**  
 Holocene ice margin recession in West Greenland. Weidick, A., et al, [1990, p.389-399, eng] **45-714**  
 On determining ice accumulation rates in the past 40,000 years using *in situ* cosmogenic C-14. Lal, D., et al, [1990, p.1303-1306, eng] **45-994**  
 Degradation of glaciers of the northern Tien Shan during the Holocene. Mel'nikova, A.P., et al, [1989, p.91-97, rus] **45-1041**  
 Using CO<sub>2</sub> samples in determining the absolute age of ice sequences. Zemtsov, A.A., et al, [1989, p.122-126, rus] **45-1046**  
 Svalbard radiocarbon date list 1. Forman, S.L., et al, [1990, 48p., eng] **45-1180**  
 Sea-level change and glacier oscillation indicators on Melville Moraine, Northwest Territories. Dredge, L.A., [1990, p.1215-1224, eng] **45-1272**  
 Dating snow accumulation on glaciers by Chernobyl fallout. Pourchet, M., et al, [1990, p.3/22-3/27, fre] **45-1795**  
 Application of C-14 AMS dating to Holocene glacier fluctuation chronology. Blake, W., Jr., [1989, p.570-578, eng] **45-1844**  
 Recovery and dating of carbon dioxide in polar ice cores. Wilson, A.T., et al, [1989, p.579-584, eng] **45-1845**  
 Cl-36 profile in Greenland ice from AD 1265 to 1865. Conard, N.J., et al, [1989, p.585-591, eng] **45-1846**  
 Decline of Pb-210 fallout on Greenland in the last century. Nijampurkar, V.N., et al, [1990, p.100-102, eng] **45-1905**  
 Holocene glacier variations in Norway. Nesje, A., et al, [1991, p.25-40, eng] **45-2314**  
 Fens on a high arctic fault block. LaFarge-England, C., et al, [1991, p.80-98, eng] **45-2473**  
 Borehole gas sampler operation control and methods of gas sampling in ice sheets. Zemtsov, A.A., et al, [1990, p.73-79, rus] **45-2489**  
 Development of an Alaskan radiocarbon data base as a subset of the IRDB. Galloway, J.P., et al, [1989, p.83-87, eng] **45-3751**
- Radioactive fallout**  
 See *also*: Fallout
- Radioactive isotopes**  
 Radioactivity profiles of the Chernobyl fallout on Tyrolean glaciers. Ambach, W., et al, [1989, p.5-8, ger] **45-392**  
 Technogeneous gamma-emitting radionuclides in antarctic snow samples. Adjarova, L., et al, [1990, p.45-48, eng] **45-826**  
 Heating and melting of small icy satellites by the decay of Al-26. Priamid, D., et al, [1990, p.281-286, eng] **45-1001**  
 Stratification of ice cores from Spitsbergen. Valkmaie, R.A., et al, [1989, p.97-103, rus] **45-1042**  
 Dispersion of Chernobyl fallout by meltwater in an alpine glacier. Ambach, W., et al, [1989, p.151-153, eng] **45-2086**  
 Plutonium and Pb-210 activities in two cores from Prince William Sound. Bothner, M.H., et al, [1990, 10p., eng] **45-3831**
- Radioactive labeling**  
 See *also*: Isotopic labeling
- Radioactivity**  
 Technogeneous gamma-emitting radionuclides in antarctic snow samples. Adjarova, L., et al, [1990, p.45-48, eng] **45-826**  
 Radon measurements as indicators of permafrost distribution. Sellmann, P.V., et al, [1990, p.331-336, eng] **45-1622**  
 Radionuclide analysis in antarctic coastal samples: methods and procedures. Battiston, G., et al, [1990, p.143-147, eng] **45-3201**
- Radiocarbon dating**  
 See *also*: Radioactive age determination
- Radiometers**  
 See *also*: Radiation measuring instruments
- Radiometry**  
 Adaptation of the ISCCP cloud detection algorithm to combined AVHRR and SMMR arctic data. Key, J., et al, [1989, p.188-191, eng] **45-232**  
 Imaging radiometer system for ice navigation. Healy, G., et al, [1989, p.277-280, eng] **45-233**  
 Combined active/passive microwave classification of sea ice. Livingstone, C.E., [1989, p.376-380, eng] **45-235**  
 Comparison of remotely sensed sea ice parameters. Schweiger, A.J., et al, [1989, p.769-772, eng] **45-248**  
 Sensitivity of sea ice algorithms to the point selection. Steffen, K., et al, [1989, p.773-776, eng] **45-249**  
 Study on sea ice monitoring using MOS-1/MSR. Cho, K., et al, [1989, p.991-994, eng] **45-253**  
 Results from ground-based radiometry of snow. Hallikainen, M., et al, [1989, p.1231-1234, eng] **45-265**  
 Correlation of radiometry observations with Colorado River basin snowpack properties. Josberger, E.G., et al, [1989, p.1239-1242, eng] **45-267**  
 Determination of areal snow water equivalent on the Canadian prairies using passive microwave satellite data. Goodison, B.E., [1989, p.1243-1246, eng] **45-268**  
 Monitoring snow cover with synthetic aperture radar. Bernier, M., et al, [1989, p.1251-1255, fre] **45-270**  
 LIMEX'89: active/passive microwave signatures of Newfoundland pack ice. Livingstone, C.E., et al, [1989, p.1524-1527, eng] **45-274**  
 SAR and passive microwave observations of the Odden during MIZEX'87. Sutherland, L.L., et al, [1989, p.1539-1544, eng] **45-278**  
 Radiobrightness of freezing terrain. Zuerndorfer, B., et al, [1989, p.2748-2751, eng] **45-302**  
 Passive microwave observations of Weddell Sea ice cover. Grenfell, T.C., [1989, p.141-148, eng] **45-709**  
 Snow observation by satellite: a review. Lucas, R.M., et al, [1990, p.285-348, eng] **45-773**  
 Passive microwave radiometry over Antarctica. Kidd, C., et al, [1990, p.1969-1973, eng] **45-916**  
 Converting digital microwave radiances to units of brightness temperatures. Farmer, L.D., et al, [1990, 16p., eng] **45-932**  
 Radiometry of precipitable water over high latitude regions. Wang, J.R., et al, [1991, p.179-184, eng] **45-1598**  
 Effect of freezing and thawing on the microwave signatures of bare soil. Wegmüller, U., [1990, p.123-135, eng] **45-1727**  
 Passive microwave remote sensing contribution to hydrological variables. Choudhury, B.J., [1991, p.63-84, eng] **45-1797**  
 Seasonal and inter-annual variations in antarctic sea ice extent as mapped by radar altimetry. Laxon, S., [1990, p.1553-1556, eng] **45-1979**  
 Top/bottom multisensor remote sensing of arctic sea ice. Comiso, J.C., et al, [1991, p.2693-2709, eng] **45-2042**  
 Microwave and physical properties of sea ice in the winter MIZ. Tucker, W.B., et al, [1991, p.4573-4587, eng] **45-2084**  
 Refinements in the remote sensing of snow-covered area. Holroyd, E.W., III, et al, [1990, p.79-86, eng] **45-2124**  
 Methods for obtaining data on natural resources and environments. Goncharov, A.K., ed, [1990, 200p., rus] **45-2206**  
 Microwave and infrared emissions from an ice sheet, dry snow, and sea ice. Kchapin, I.U.B., [1990, p.148-157, rus] **45-2208**  
 Determining the condition of sea ice in the fall. Bukharov, M.V., et al, [1990, p.175-185, rus] **45-2209**  
 AVHRR imagery reveals antarctic ice dynamics. Bindschadler, R.A., et al, [1990, p.741-742, eng] **45-2238**  
 Polar research from satellites. Thomas, R.H., [1991, 91p., eng] **45-2406**  
 Date of snowmelt at Barrow, Alaska, U.S.A. Dutton, E.G., et al, [1991, p.115-119, eng] **45-2475**  
 Operational remote sensing of snow cover in the U.S. and Canada. Carroll, T.R., et al, [1990, p.286-291, eng] **45-2667**  
 Aircraft observations of atmospheric flow parallel to the ice edge. Shaw, W.J., et al, [1991, p.4691-4708, eng] **45-2680**  
 Fram Strait satellite image-derived ice motions. Emery, W.J., et al, [1991, p.4751-4768, eng] **45-2684**  
 Interannual variability of the spatial distribution of sea ice in the north polar region. Parkinson, C.L., [1991, p.4791-4801, eng] **45-2687**  
 Classification of snow cover and precipitation using the special sensor microwave imager. Grody, N.C., [1991, p.7423-7435, eng] **45-2798**  
 Uranium resource evaluation in Antarctica. Zeller, E.J., et al, [1990, p.95-116, eng] **45-2806**  
 Construction of sea ice maps from satellite data. Nikitin, P.A., et al, [1990, p.926-936, eng] **45-2970**  
 Microphysical and radiative characteristics of convective clouds during COHMEX. Fulton, R., et al, [1991, p.98-116, eng] **45-3016**  
 Snow depth required to mask the underlying surface. Baker, D.G., et al, [1991, p.387-392, eng] **45-3018**  
 SPOT imagery and nature and structure of ice on Adélie Coast. Chotin, E., et al, [1991, p.827-834, fre] **45-3096**  
 Texture analysis of radiometric signatures of new sea ice forming in arctic leads. Eppler, D.T., et al, [1991, p.233-241, eng] **45-3189**  
 Scene identification and its effect on cloud radiative forcing in the Arctic. Li, Z.Q., et al, [1991, p.9175-9188, eng] **45-3469**  
 Recent variations in arctic and antarctic sea-ice covers. Gloersen, P., et al, [1991, p.33-36, eng] **45-3489**  
 Microwave remote sensing in ice engineering. Swift, C.T., [1990, p.66-78, eng] **45-3565**  
 Prediction of the horizontal progressions of arctic ice by remote methods. Frankenstein, S., et al, [1990, p.1113-1121, eng] **45-3658**  
 Comparison of active and passive microwave signatures of arctic sea ice. Drinkwater, M.R., et al, [1990, p.29-36, eng] **45-3754**  
 Observing snow melting in southern Norway from satellite passive microwave. Faanes, T., [1990, p.187-194, eng] **45-3794**  
 Albedo measurements from snow—image processing of LANDSAT-5 TM data. Winther, J.G., et al, [1990, p.195-201, eng] **45-3795**  
 Proceedings of the Workshop on Applications of Remote Sensing in Hydrology. [1990, 386p., eng] **45-3797**  
 Interpreting passive and active microwave imagery over snow-covered lakes. Melloh, R.A., et al, [1990, p.259-278, eng] **45-3808**  
 Determination of snow water equivalent on the Canadian prairies. Goodison, B.E., et al, [1990, p.297-316, eng] **45-3809**

- Average areal snow water equivalent determination in a mountain basin. Rango, A., [1990, p.317-318, eng] 45-3810
- Analysis of MOS-1 microwave scanning radiometer data for Canadian prairie snow cover. Walker, A.E., et al, [1990, p.319-329, eng] 45-3811
- Microwave satellite spring runoff correlations. Wankiewicz, A., [1990, p.331-344, eng] 45-3812
- Classification of snow and frozen ground surfaces with SSM/I signatures. Neale, C.M.U., et al, [1990, p.345-355, eng] 45-3813
- Interpretation of sea ice using NOAA-AVHRR data. Ahinis, K., et al, [1990, 46p., eng] 45-3850
- Radomes**  
Design and operational characteristics of a heated radome for air motion measurement. Brown, E.N., [1991, p.134-139, eng] 45-1592
- Rafting**  
See *also*: ice rafting
- Railroad equipment**  
Using electric heating to protect railroad switches from snowdrifts. Kvon, I.A.D., et al, [1990, p.31-36, rus] 45-3007
- Railroad tracks**  
Frost resistant mortars for railroad slab tracks. Watanabe, K., et al, [1989, p.205-214, jpn] 45-873
- Railroad tunnels**  
Snowsheds on the Baykal-Amur mainline. Iadrosnikov, V.I., [1991, p.4-6, rus] 45-2950
- Railroads**  
Frost protection on the Baykal-Amur mainline. Kondrat'ev, V.G., et al, [1991, p.6-7, rus] 45-2951  
Optimum repair and maintenance of railroads in Siberia and the Far East. Diunin, A.K., ed, [1990, 78p., rus] 45-3004  
Using lightweight avalanche protection walls for railroad lines. Vetoshkina, N.A., et al, [1990, p.41-46, rus] 45-3009  
Descent of a catastrophic avalanche on the western part of BAM. Kozlov, I.U.V., [1990, p.52-59, rus] 45-3011  
Railway electrification and snow. Seki, S., [1986, p.12-24, eng] 45-3703  
See *also*: Baykal Amur railroad; Cable railways
- Rain**  
Data processing of depolarization due to rain and ice crystals. van de Kamp, M.M.J.L., [1989, 92p., eng] 45-85  
Ice, snow and rain chemistry at the Great Wall Station in summer 1985. Li, H.Z., et al, [1989, p.107-112, chj] 45-685  
Precipitation chemistry at the Great Wall Station, winter 1985. Li, H., [1989, p.126-129, chj] 45-686  
Power line icing in freezing rain and fog. Melo, O.T., et al, [1988, p.70-75, eng] 45-1314  
Freezing rain in Quebec. Felin, B., [1988, p.119-123, eng] 45-1324  
Integrating radar-rainfall data into the hydrologic modeling process. Engdahl, T.L., et al, [1990, p.69-73, eng] 45-1430  
Development of a freezing rain sensor for automated surface observing systems. Starr, K.M., et al, [1991, p.338-343, eng] 45-1595  
Evolution of a freezing rain storm, part 1: synoptic and mesoscale conditions. Zamora, R.J., et al, [1991, p.258-263, eng] 45-1941  
Evolution of a freezing rain storm, part 2: remote sensor observations. Martner, B.E., et al, [1991, p.264-269, eng] 45-1942  
St. Valentine's Day ice storm—an extreme freezing rain disaster. Rauber, R.M., et al, [1991, p.272-273, eng] 45-1943  
Flood of Aug. 1987 in Switzerland. Naef, F., et al, [1990, p.222-227, ger] 45-1985  
Periodic-stochastic modeling of separation of precipitation into rainfall and snowfall. Yezvich, V., et al, [1990, p.2613-2623, eng] 45-207  
Method of narrowing the water supply forecast range. Stein, R.E., [1990, p.92-98, eng] 45-2126  
Stochastic simulation of rain-on-snowmelt events. Brunengo, M.J., [1990, p.110-121, eng] 45-2128  
Exodynamic processes of the Angara River. Laperdin, V.K., [1990, p.106-111, rus] 45-2870
- Raindrops**  
Least-squares polynomial technique for discriminating between drops and graupel in 2D image records. Czys, R.R., et al, [1991, p.151-155, eng] 45-1597  
See *also*: Gullies
- Reactions**  
See *also*: Photochemical reactions
- Reclamation**  
See *also*: Land reclamation
- Reconnaissance**  
See *also*: Aerial surveys; Infrared reconnaissance; Photographic reconnaissance
- Recording instruments**  
Compact acoustic recorder. Stein, R., [1989, p.1258-1262, eng] 45-441  
Computer-controlled yo-yo CTD system for the Arctic. Andersen, R., et al, [1989, p.1263-1266, eng] 45-442
- Radar depth sounding near Upstream B camp—December 1988. Moore, R.K., et al, [1990, p.85-86, eng] 45-1391
- New hydrologic instrumentation in the U.S. Geological Survey. Latkovich, V.J., et al, [1991, p.739-747, eng] 45-2383
- USACRREL underwater frazil ice detector. Daly, S.F., et al, [1991, p.758-764, eng] 45-2385
- Catalog of smoke/obscurant characterization instruments. O'Brien, H.W., ed, [1984, 184p., eng] 45-3476
- Records (extremes)**  
Record snowfall in Issyk-Kul' in October 1982. Solodkov, P.A., et al, [1990, p.35-41, rus] 45-1102  
December to remember. Heim, R., et al, [1990, p.329-332, eng] 45-2049  
Jacksonville's White Christmas. Winterling, G., [1990, p.334-335, eng] 45-2050  
Use of state-of-the-art systems for optimum water management. Horciza, E.E., [1990, p.87-91, eng] 45-2125  
Precipitation extremes at the Central Sierra Snow Laboratory, California. Azuma, D., et al, [1990, p.141-144, eng] 45-2132  
Impacts of heavy snowfall during December 1989 in the Lake Erie snowbelt. Schmidlin, T.W., [1990, p.135-142, eng] 45-2193  
Study of the cold wave phenomenon in Quebec as a natural catastrophe. Lacroix, J., et al, [1990, p.138-157, fre] 45-2754
- Recrystallization**  
BHQ borehole ice core structure on Law Dome. Li, J., et al, [1988, p.119-131, chj] 45-41  
Ice formation and temperature regime on Nelson and King George Is. Ren, J., [1988, p.248-255, chj] 45-52  
Inhibition of ice recrystallization by insect thermal hysteresis proteins. Knight, C.A., et al, [1986, p.256-262, eng] 45-2966  
Ice recrystallization in a model system and in frozen muscle tissue. Martino, M.N., et al, [1989, p.138-148, eng] 45-2967  
See *also*: Snow recrystallization
- Recycling**  
See *also*: Heat recovery; Oil recovery; Sewage treatment; Waste treatment
- Reflection**  
Cepstrum analysis of signals reflected from sea ice. Oganessian, A.G., et al, [1989, p.99-105, rus] 45-1496  
Wave structure in the seas off an ice edge. Squire, V.A., et al, [1990, p.21-32, eng] 45-2719  
See *also*: Seismic reflection; Specular reflection
- Reflectivity**  
Helicopter radar report. Final draft, Sept. 1990. Lowry, R.T., [1990, 44p., eng] 45-588  
Radar reflectivity-ice water content relationships for use above the melting level in hurricanes. Black, R.A., [1990, p.955-961, eng] 45-774  
Radar reflections from wet snow at weather radar wavelengths. De Wolf, D.A., et al, [1990, p.1843-1847, eng] 45-1016  
Use of polarization to characterize precipitation and discriminate large hail. Balakrishnan, N., et al, [1990, p.1525-1540, eng] 45-1382  
Spectral properties of fog over the Malaspina Glacier, AK. Ormsby, J.P., et al, [1991, p.179-185, eng] 45-1720  
Satellite-derived reflectance of snow-covered surfaces in northern Minnesota. Hall, D.K., et al, [1990, p.87-96, eng] 45-1726  
Factors in the stability of glacier systems. Lebedeva, I.M., [1990, p.64-75, rus] 45-1738  
Radar detection of ice wedges in Alaska. Arcone, S.A., et al, [1982, 15p., eng] 45-3021  
Radar altimeter ground truth measurements in Antarctica. [1989, p.1-3, eng] 45-3258  
Scene identification and its effect on cloud radiative forcing in the Arctic. Li, Z.Q., et al, [1991, p.9175-9188, eng] 45-3469  
Using GOES visible data to extend snow course data in southern Ontario. Donald, J.R., et al, [1990, p.69-78, eng] 45-3800  
See *also*: Albedo; Brightness
- Reforestation**  
See *also*: Forestry; Revegetation
- Refraction**  
Radiometeorological studies in marine conditions. Mikhailov, N.F., et al, [1990, 206p., rus] 45-1090  
Observation of wave refraction at an ice edge by synthetic aperture radar. Liu, A.K., et al, [1991, p.4803-4808, eng] 45-2688  
See *also*: Seismic refraction
- Refrigeration**  
Refrigeration systems based on short-term storage by means of ice banks. Bisio, G., et al, [1991, p.1-6, eng] 45-3029  
See *also*: Cooling systems; Ice refrigeration
- Refuse**  
See *also*: Wastes
- Regulation**  
Role of irreversible thermodynamics and rheology in the regulation-flow phenomenon. Wood, J.A., [1990, p.133-145, eng] 45-496
- Subglacial boundary-layer regelation mechanism. Shoemaker, E.M., [1990, p.263-268, eng] 45-1535
- Regional planning**  
Lancaster Sound in the year 2000 (regional planning in the Canadian Arctic). Bondarenko, V.S., [1990, p.99-107, rus] 45-674
- Regolith**  
Modeling the reflectance spectrum of Callisto at 0.25 to 4.1 millimicrons. Calvin, W.M., et al, [1991, p.305-317, eng] 45-2939  
Dark-floor craters on Ganymede. Schenk, P.M., et al, [1991, p.318-346, eng] 45-2940  
Dynamics of thermal energy in the snow-soil-regolith system during phase transformations. Mezherovskii, A.P., [1991, p.90-98, rus] 45-3839
- Reinforced concretes**  
Use of steel/concrete composite elements in arctic structures. Gowda, S.S., et al, [1990, p.442-455, eng] 45-149  
Concrete structures with nonmetallic reinforcements. Saliia, G.Sh., et al, [1990, 143p. (Pertinent p.88-96), rus] 45-984  
Steel fiber reinforced concrete jackets for repairing concrete piles. Khanm\* J., et al, [1988, p.227-252, eng] 45-1814
- Relaxation (mechanics)**  
See *also*: Ice relaxation
- Relief**  
See *also*: Microrelief; Topographic features
- Remanent magnetism**  
Natural remanent magnetization of dirt-ice layers from East Antarctica. Funaki, M., [1990, p.131-138, eng] 45-978  
See *also*: Rock magnetism
- Remote sensing**  
Synthetic aperture radar imaging of polynyas. Lyden, J.D., et al, [1987, p.243-245, eng] 45-21  
Bibliography on ice and fog: detection and warning systems. [1990, 95p., eng] 45-205  
IGARSS '89 quantitative remote sensing: an economic tool for the nineties; Proceedings. [1989, 3001p. (5 vols.), eng] 45-227  
Geomorphic patterns produced by the last Canadian ice sheet. Clark, C.D., et al, [1989, p.97-100, eng] 45-230  
Comparison of remotely sensed sea ice parameters. Schweiger, A.J., et al, [1989, p.769-772, eng] 45-248  
Sensitivity of sea ice algorithms to tie point selection. Steffen, K., et al, [1989, p.773-776, eng] 45-249  
Microwave satellite forecasting of snowmelt runoff. Wankiewicz, A., [1989, p.1235-1238, eng] 45-266  
Correlation of radiometry observations with Colorado River basin snowpack properties. Josberger, E.G., et al, [1989, p.1239-1242, eng] 45-267  
Determination of areal snow water equivalent on the Canadian prairies using passive microwave satellite data. Goodison, B.E., [1989, p.1243-1246, eng] 45-268  
Operational mapping of snow cover in the United States and Canada using airborne and satellite data. Carroll, T.R., et al, [1989, p.1257-1259, eng] 45-271  
Textural characteristics of cloud- and ice-covered surfaces in polar regions. Welch, R.M., et al, [1989, p.2773-2776, eng] 45-303  
Principles and methods of geosystem monitoring. Grin, A.M., ed, [1989, 168p., rus] 45-429  
KRMS GEOSAT-LIMEX '87 data products. Eppler, D.T., et al, [1988, 42p., eng] 45-561  
Helicopter radar report. Final draft, Sept. 1990. Lowry, R.T., [1990, 44p., eng] 45-588  
Fast-flowing outlet glaciers on Svalbard ice caps. Dowdeswell, J.A., et al, [1990, p.778-781, eng] 45-617  
First large balloon launch from Antarctica. Ground, J., et al, [1988, 108p., eng] 45-644  
Sea-ice kinematics as determined by remotely-sensed ice drift. Lewis, J.K., et al, [1989, p.1113-1121, eng] 45-900  
Passive microwave radiometry over Antarctica. Kidd, C., et al, [1990, p.1969-1973, eng] 45-916  
Radar sounding of the surface of the Earth from space. Nazirov, M., et al, [1990, 200p., rus] 45-986  
Remote sensing of sea ice. Kong, J.A., et al, [1990, p.208-211, eng] 45-1132  
Laboratory investigation into microwave backscattering from sea ice. Bredow, J.W., [1989, 173p., eng] 45-1143  
Green icebergs and remote sensing. Lee, R.L., Jr., [1990, p.1362-1374, eng] 45-1171  
Snow/cloud discrimination with multispectral satellite measurements. Allen, R.C., Jr., et al, [1990, p.994-1004, eng] 45-1273  
Electro-physical and physical-mechanical properties of ice. Bogorodskii, V.V., ed, [1989, 256p., rus] 45-1483  
Applying r-f methods to oceanographic and glacial studies. Gavrilo, V.P., [1989, p.7-22, rus] 45-1484  
Questions on interpreting data from infrared-ice reconnaissance. Tarashkevich, V.N., et al, [1989, p.88-91, rus] 45-1494  
Climate measurements by the EOS Geoscience Laser Ranging System. Spinhrne, J.D., et al, [1991, p.17-22, eng] 45-1512



## Remote sensing (cont.)

- Heavy snowfall within a mesoscale convergence zone. Sanderson, R.M., et al, 1990, p.41-52, eng 45-1519
- Supercool liquid water development in a winter mountain storm. Sassen, K., et al, 1990, p.1323-1350, eng 45-1580
- Wind profiler and RASS measurements in the vicinity of lake-effect snowbands: some preliminary findings. Penc, R.S., et al, 1991, p.69-72, eng 45-1591
- Sea ice concentration estimated from Geosat waveforms. Chase, J.R., et al, 1990, p.18,015-18,025, eng 45-1607
- Spectral properties of fog over the Malaspina Glacier. Ormsby, J.P., et al, 1991, p.179-185, eng 45-1720
- Satellite-derived reflectance of snow-covered surfaces in northern Minnesota. Hall, D.K., et al, 1990, p.87-96, eng 45-1726
- Effect of freezing and thawing on the microwave signatures of bare soil. Wegmüller, U., 1990, p.123-135, eng 45-1727
- Problems and prospects of studies on the physical processes of snow cover. Golubev, V.N., et al, 1990, p.26-35, rus 45-1732
- Passive microwave remote sensing contribution to hydrological variables. Choudhury, B.J., 1991, p.63-84, eng 45-1797
- Remote sensor detection of aircraft icing conditions. Stankov, B.Z., et al, 1990, 77p., eng 45-1867
- Seasonal Sea Ice Monitoring Site (SIMS). Barber, D., 1991, p.8-9, eng 45-1911
- Preprints. 1991, 517p., eng 45-1913
- U.S. civilian environmental satellite program. Koffler, R., et al, 1991, p.336-343, eng 45-1918
- Preprint volume. 1991, 436p., eng 45-1933
- Lake-effect storms east of Lake Ontario. Penc, R.S., et al, 1991, p.252-257, eng 45-1940
- Evolution of a freezing rain storm, part 2: remote sensor observations. Martner, B.E., et al, 1991, p.264-269, eng 45-1942
- Top/bottom multisensor remote sensing of arctic sea ice. Comiso, J.C., et al, 1991, p.2693-2709, eng 45-2042
- Laser spectroscopy of snow and ice cover. Zalikhonov, M.Ch., et al, 1989, p.43-47, eng 45-2107
- Refinements in the remote sensing of snow-covered area. Holroyd, E.W., III, et al, 1990, p.79-86, eng 45-2124
- Monitoring of snow water equivalent by synthetic aperture radar. Leconte, R., et al, 1990, p.73-86, eng 45-2188
- Airborne and satellite snow cover data. Carroll, T.R., 1990, p.87-98, eng 45-2189
- Methods for obtaining data on natural resources and environments. Goncharov, A.K., ed, 1990, 200p., rus 45-2206
- Spaceborne remote sensing of the earth. Volkov, A.M., et al, 1990, p.5-20, rus 45-2207
- Microwave and infrared emissions from an ice sheet, dry snow, and sea ice. Khapin, I.U.B., 1990, p.148-157, rus 45-2208
- Determining the condition of sea ice in the fall. Bukharov, M.V., et al, 1990, p.175-185, rus 45-2209
- Satellite-image-derived velocity field of an antarctic ice stream. Bindschadler, R.A., et al, 1991, p.242-246, eng 45-2267
- Radiogrammetric image processing. Leberl, F.W., 1990, 595p. (pertinent p.499-525), eng 45-2601
- Operational remote sensing of snow cover in the U.S. and Canada. Carroll, T.R., et al, 1990, p.286-291, eng 45-2667
- Interannual variability of the spatial distribution of sea ice in the north polar region. Parkinson, C.L., 1991, p.4791-4801, eng 45-2687
- Ice Technology for Polar Operations: proceedings of the 2nd international conference. 1990, 426p., eng 45-2717
- Ice conditions in the Barents Sea during SIZEX 89. Sandven, S., et al, 1990, p.309-320, eng 45-2740
- Deployment strategy for satellite tracked drifters to support iceberg drift forecasting. El-Tahan, M., et al, 1990, p.395-411, eng 45-2747
- Use of satellite data for water resources modelling—a Canadian example. Kite, G.W., 1991, p.21-29, eng 45-2796
- Classification of snow cover and precipitation using the special sensor microwave imager. Grody, N.C., 1991, p.7423-7435, eng 45-2798
- McMurdo SAR Facility: report of the ad hoc science working team. Jezek, K.C., ed, 1991, 32p., eng 45-2916
- IHS transform for the integration of radar imagery with other remotely sensed data. Harris, J.R., et al, 1990, p.1631-1641, eng 45-2946
- Remote sensing of snow covers using the gamma-ray technique. Offenbacher, E.L., et al, 1991, 19p., eng 45-3259
- Infrared transmission through cirrus clouds: a radiative model for target detection. Liou, K.N., et al, 1990, p.1886-1896, eng 45-3366
- Scene identification and its effect on cloud radiative forcing in the Arctic. Li, Z.Q., et al, 1991, p.9175-9188, eng 45-3469
- Microwave remote sensing in ice engineering. Swift, C.T., 1990, p.66-78, eng 45-3565
- Airborne remote sensing of river ice slush transport. Dobrowolski, A., et al, 1990, p.1105-1112, eng 45-3657
- Comparative ground truth and remotely sensed measurements of Baltic Sea ice ridges. Kankaanpää, P., et al, 1990, p.1130-1143, eng 45-3660
- Method of radar fresh-water ice measurements from a moving vehicle. Klein, G.S., et al, 1990, p.1144-1154, eng 45-3661
- Proceedings of the 2nd Synthetic Aperture Radar Workshop, Jun 1990. Kobrick, M., ed, 1990, 57p. + appends., eng 45-3752
- Synthetic aperture radar observations of the Greenland Ice Sheet. Jezek, K.C., et al, 1990, p.21 28, eng 45-3753
- Comparison of active and passive microwave signatures of arctic sea ice. Drinkwater, M.R., et al, 1990, p.29-36, eng 45-3754
- River and lake ice conditions as determined from AIRSAR imagery. Melloh, R.A., et al, 1990, p.37-42, eng 45-3755
- Absorption coefficients of ice from 250 to 400 nm. Perovich, D.K., et al, 1991, p.1233-1235, eng 45-3761
- Hydrology of Svalbard—hydrological problems in cold climate. Proceedings. 1990, 224p., eng 45-3776
- Proceedings of the Workshop on Applications of Remote Sensing in Hydrology. 1990, 386p., eng 45-3797
- Effective use of satellite-observed snow cover data in the snowmelt-runoff model (SRM). Rango, A., 1990, p.19-31, eng 45-3798
- Application of remotely sensed data in a distributed-parameter watershed model. Leavesley, G.H., et al, 1990, p.47-68, eng 45-3799
- Using GOES visible data to extend snow course data in southern Ontario. Donald, J.R., et al, 1990, p.69-78, eng 45-3800
- Determination of characteristics for hydrological modelling using remote sensing. Whiting, J., 1990, p.79-92, eng 45-3801
- Surface hydrology in climate models: the role of remote sensing. Thomas, G., 1990, p.109-122, eng 45-3802
- Modelling the Kootenay watershed with satellite data. Kite, G.W., 1990, p.123-134, eng 45-3803
- HYDROTEL, a hydrological model designed to make use of remotely sensed and GIS data. Fortin, J.P., et al, 1990, p.177-185, eng 45-3805
- Utilization of SAR data in the monitoring of snowpucks and wetlands. Leconte, R., et al, 1990, p.233-258, eng 45-3807
- Interpreting passive and active microwave imagery over snow-covered lakes. Melloh, R.A., et al, 1990, p.259-278, eng 45-3808
- Determination of snow water equivalent on the Canadian prairies. Goodison, B.E., et al, 1990, p.297-316, eng 45-3809
- Analysis of MOS-1 microwave scanning radiometer data for Canadian prairie snow cover. Walker, A.E., et al, 1990, p.319-329, eng 45-3811
- Opportunities for remote sensing initiatives within a Canadian GEWEX program. Lawford, R.G., 1990, p.365-372, eng 45-3814
- Snowmelt stages on LANDSAT images. Fuller, G.A., et al, 1990, p.375-377, eng 45-3815
- Replicas
- Stars of snow. Delly, J.G., 1990, p.223-232, eng 45-1647
- See *also*: Ice crystal replicas
- Reporting
- See *also*: Ice reporting
- Rescue equipment
- Search and rescue target detection experiment. Canso Bank, 1988. Dawe, B.R., et al, 1989, Var. p., eng 45-550
- Rescue operations
- Search and rescue target detection experiment. Canso Bank, 1988. Dawe, B.R., et al, 1989, Var. p., eng 45-550
- Polar ice-breaker caught in active shear ridge. Voelker, R.P., et al, 1990, p.269-281, eng 45-2737
- Research institutions
- See *also*: Laboratories
- Research projects
- Permafrost and terrain research and monitoring: Norman Wells pipeline—Volume 1: environmental and engineering considerations. MacInnes, K.L., et al, 1989, 132p., eng 45-32
- Arctic investigations. 1990, n.p., eng 45-71
- Fiscal year 1988 program report: Alaska Water Research Center. Kane, D.L., 1990, 65p., eng 45-95
- Working group on river ice jams. Field studies and research needs. Beltaos, S., et al, 1990, 121p., eng 45-97
- Italian research program. Cervellati, R., 1990, p.137-150, eng 45-128
- Engineering, technology, and logistics in the Arctic. Myers, C.E., 1990, p.163-170, eng 45-130
- Deep ice core drilling in Greenland. Proenza, L.M., et al, 1990, p.1 eng 45-131
- Telecommunications for the Italian research program. Biasi, L., et al, 1990, p.213-224, eng 45-135
- Antarctica: exploration, environment, research, and policy and issues. Weller, G., 1990, p.3-30, eng 45-178
- Annual report of the Norwegian Polar Research Institute. 1989, 61p., eng 45-210
- Labrador ice margin experiment LIMEX'89: an overview. Raney, R.K., et al, 1989, p.1517-1519, eng 45-272
- Research on icing processes in the USSR. Sokolov, B.L., et al, 1989, p.233-251, eng 45-473
- Study of naldes—a top priority in geographical studies. Alekseev, V.R., 1989, p.29-34, rus 45-642
- Ice island: a floating platform for valuable geophysical studies in the Arctic Ocean. Hobson, G., 1989, p.9-11, eng 45-898
- Proceedings of the International Symposium on Antarctic Research. Guo, K., ed, 1989, 540p., eng 45-1003
- Australian studies in antarctic weather and climate. Stretten, N.A., 1989, p.411-417, eng 45-1012
- Meeting of the office of the International Commission on Snow and Ice. Kotliakov, V.M., 1989, p.246-249, rus 45-1071
- Snow and avalanches in Switzerland. Jaccard, C., 1990, p.11-12, fre 45-1126
- Laboratoire de Glaciologie et de Géophysique de l'Environnement. Forget, C., 1990, p.13-15, fre 45-1127
- Cooperative climatological-glaciological program in the Antarctic Peninsula. Thompson, L.G., et al, 1990, p.69-70, eng 45-1156
- Overview of icing research at ONERA. Guffond, D., et al, 1988, p.186-191, eng 45-1336
- Arctic research in the United States, Vol.4. 1990, 106p., eng 45-1398
- In-Pouse Laboratory Independent Research Program—FY88. Diemand, D., ed, 1990, 18p., eng 45-1399
- Five-year plan for U.S. scientific research in the arctic. Kossow, O.A., et al, 1989, 39p., rus 45-1713
- Problems and prospects of studies on the physical processes of snow cover. Golubev, V.N., et al, 1990, p.26-35, rus 45-1732
- 1989-90 Australian Antarctic Research Program. Initial summary research activity. 1990, 152p., eng 45-1810
- BAS proposed construction of an airstrip at Rothera Point. 1989, 56p., eng 45-1898
- Seasonal Sea Ice Monitoring Site (SIMS). Barber, D., 1991, p.8-9, eng 45-1911
- 1990-91 Australian Antarctic Research Program. Antarctic Treaty exchange information: Supplement A to particulars for Australian National Antarctic Research Expeditions. 1990, 262p., eng 45-1920
- Cold region environmental concerns. Alter, A.J., 1990, p.257-298, eng 45-2092
- Glaciology. Barry, R.G., et al, 1990, p.58-59, eng 45-2242
- Polar research. Molnia, B.F., 1990, p.59-60, eng 45-2243
- Environment One: plan for a new research station at the South Pole. Osgood, S.G., et al, 1991, p.250-271, eng 45-2338
- Cold climate building research at Wasa Base, Antarctica. Haugun, D., 1991, p.272-281, eng 45-2339
- Goals, objectives and priorities to guide United States arctic research. 1991, 39p., eng 45-2394
- Report of the U.S. Arctic Research Commission, 1989-1990. 1991, 36p., eng 45-2395
- Logistic support of United States research in Greenland: current situation and prospects. 1990, 20p., eng 45-2486
- Cold regions engineering, a research agenda. Carlson, R.F., 1990, p.1060-1065, eng 45-2579
- In search of library excellence in cold regions research. Liston, N.C., 1990, p.1066-1069, eng 45-2580
- Multi-national, interdisciplinary arctic experiments: planning, logistics and operations coordination. Horn, D.A., 1990, p.65-78, eng 45-2722
- Relationships between weather and road safety: past and future research directions. Andrey, J., et al, 1990, p.123-137, eng 45-2753
- Annual report 1990. 1991, 17p., eng 45-2765
- Antarctic logistic support for the earth sciences. Turner, M.D., et al, 1990, p.223-235, eng 45-2814
- Polar class icebreaker oceanographic mission upgrade. Tilyou, M., et al, 1991, p.218-230, eng 45-3053
- Canada-USSR Arctic Science Exchange Programme. Slipchenko, W., 1991, p.235-257, eng 45-3336
- Comparison of Soviet arctic and antarctic policies. Joyner, C.C., 1991, p.284-299, eng 45-3338
- Arctic research of the United States, Vol.5. 1991, 99p., eng 45-3544
- Svalbard contribution to global studies of arctic hydrology and sediment transfer. Clark, M.J., 1990, p.75-83, eng 45-3784
- Climate related research in Svalbard. Sand, K., et al, 1990, p.203-217, eng 45-3796
- Opportunities for remote sensing initiatives within a Canadian GEWEX program. Lawford, R.G., 1990, p.365-372, eng 45-3814
- See *also*: Military research
- Research vessels
- See *also*: Oceanographic ships

## River flow (cont.)

- Measurements of flow velocity under the ice cover. Yamaguchi, H., et al, 1990, p.1155-1170, eng 45-3662
- River ice hydraulics. Majewski, W., 1990, p.29-47, eng 45-3664
- Ice cover and flow in reservoirs. Bagińska, M., et al, 1990, p.99-111, eng 45-3669
- On the motion of river ice near a breaking front. Ferrick, M.G., et al, 1990, p.201-213, eng 45-3677
- Finnish River Ice Research Project—the numerical river ice model in use. Huokuna, M., 1990, p.215-230, eng 45-3678
- Stage distribution approach to estimating ice related flooding probabilities. Burn, D.H., 1989, p.953-960, eng 45-3773
- Studies of the arctic water resources: state-of-the-art and future plans. Ivanov, V.V., 1990, p.63-74, eng 45-3783
- Erosion and sediment transport in Svalbard. Bogen, J., 1990, p.147-158, eng 45-3791
- Dynamics of thermal energy in the snow-soil-regolith system during phase transformations. Mezherovskii, A.P., 1991, p.90-98, rus 45-3839
- Time and space distribution of water reserves in snow in field and forest catchment areas. Sokolova, N.V., 1991, p.105-110, rus 45-3840
- See *also*: Runoff; Stream flow
- River ice**
- Passage of ice through hydroelectric structures. Korzhavin, K.N., ed, 1990, 182p., rus 45-28
- Working group on river ice jams. Field studies and research needs. Beltaos, S., et al, 1990, 121p., eng 45-97
- Hydrology of floating ice. Gerard, R., 1990, p.103-134, eng 45-216
- Surface water supplies. Ryan, W.L., 1990, p.301-316, eng 45-411
- Formation and growth of river ice. Santeford, H.S., 1990, p.469-483, eng 45-418
- Breakup jams. Beltaos, S., 1990, p.485-515, eng 45-419
- Development of a comprehensive numerical river ice model. Petryk, S., et al, 1990, p.739-760, eng 45-426
- Research on icing processes in the USSR. Sokolov, B.L., et al, 1989, p.233-251, eng 45-473
- Monitoring river ice with Landsat images. Gatto, L.W., 1990, p.1-16, eng 45-484
- Two-dimensional free drift model for river ice cover formation. Ho, C.F., 1990, 169p., eng 45-506
- Calculating ice jam water levels. Buzin, V.A., 1989, p.79-84, eng 45-662
- Development of water level observation systems for winter. Nagasaka, T., et al, 1990, p.185-190, jpn 45-745
- Computer simulation of ice control with thermal-bubble plumes—line source configuration. Baddour, R.E., 1990, p.509-513, eng 45-902
- Heat and mass balance of an ablating ice jam. Prowse, T.D., 1990, p.629-635, eng 45-903
- Longitudinal floating structures to control ice jams. Calkins, D.J., 1990, 9p., eng 45-975
- Dividing Kazakhstan according to the development of river ice. Bellinson, M.M., 1989, p.56-61, rus 45-1035
- Formation of the chemical composition of ice in Siberia and the Far East. Ivanov, A.V., 1989, p.62-67, rus 45-1036
- Ice jam mitigation. Belore, H.S., et al, 1990, p.675-685, eng 45-1078
- Atlas of river ice in China. 1990, 141p., eng 45-1264
- Winter short-pulse radar studies on the Tanana River, Alaska. Delaney, A.J., et al, 1990, p.244-250, eng 45-1421
- Laboratory and field tests of a wire mesh frazil collector. Foltyn, E.P., 1990, 10p., eng 45-1511
- Analyzing the mineralization of ice cover on rivers and reservoirs. Ergin, V.P., 1990, p.89-100, rus 45-1624
- Heated effluent effects on ice-covered rivers. Sarraf, S., 1990, p.161-178, eng 45-1908
- Ice formation in frequently transited navigation channels. Ettema, R., et al, 1990, 110p., eng 45-1972
- Winter environment of the Ohio River valley. Daly, S.F., et al, 1990, 57p., eng 45-1999
- Riverscape. Wolman, M.G., et al, 1990, p.281-328, eng 45-2152
- Regulation of the temperature regime of lower pools of high-head hydro developments. Liapin, V.E., 1990, p.329-335, eng 45-2165
- Proceedings of the 47th annual Eastern Snow Conference, Bangor, ME, June 7-8, 1990. 1990, 250p., eng 45-2181
- Numerical investigation of border ice failure. Abdel-Zaher, A.K., 1990, p.13-25, eng 45-2183
- Restigouche River Ice Project. Beltaos, S., et al, 1990, p.159-173, eng 45-2196
- Role of natural flaws in river ice breakup. Demuth, M.N., et al, 1990, p.213-218, eng 45-2200
- Dynamic transport of river ice. Shen, H.T., et al, 1990, p.659-671, eng 45-2251
- Jam initiation in unobstructed channels: laboratory observations. Ettema, R., 1990, p.673-684, eng 45-2252
- Deterioration of freshwater ice due to radiation decay. Prowse, T.D., et al, 1990, p.685-697, eng 45-2253
- Ice jams and flood control on the Berounka River. Matoušek, V., 1990, p.699-710, eng 45-2254
- Effect of river barrages on ice regime. Starosolszky, O., 1990, p.711-718, eng 45-2255
- On-line early warning system for ice jams and stoppages on the upper Niagara River. Crissman, R.D., 1990, p.719-736, eng 45-2256
- Long-range forecasting of intensive ice drift on the Yenisey River. Eremfom, N.D., 1989, p.82-87, rus 45-2276
- Zoning of Kazakhstan territory according to dates of river freezeup. Shmarova, I.N., 1989, p.93-102, rus 45-2278
- Calculating the breakup of ice cover on rivers and reservoirs. Borshch, S.V., et al, 1989, p.113-120, rus 45-2281
- Appearance of ice on rivers in Siberia and European USSR, 1990. 1990, 3p., rus 45-2307
- Appearance of ice on rivers in south, southwest, and west European USSR, 1990. 1990, 2p., rus 45-2308
- Ice engineering for rivers and lakes bibliography. Wortley, C.A., 1990, 158p., eng 45-2311
- Cold regions engineering. 1991, 790p., eng 45-2316
- River ice research in China. Sun, Z.C., et al, 1991, p.282-293, eng 45-2340
- Evolution of ice cover roughness. Ashton, G.D., et al, 1991, p.294-305, eng 45-2341
- Ice jam configuration: second generation model. Beltaos, S., et al, 1991, p.306-315, eng 45-2342
- Two-dimensional surface drift model for river ice. Shen, H.T., et al, 1991, p.355-362, eng 45-2347
- River ice cover cracking for various boundary conditions. Abdel-Zaher, A.K., et al, 1991, p.363-375, eng 45-2348
- River Ice Management (RIM) Program. Carey, K.L., 1991, p.376-385, eng 45-2349
- Shallow-draft icebreaker for the upper Niagara River. Crissman, R.D., et al, 1991, p.396-405, eng 45-2351
- Radar monitoring of ice on the upper Niagara River. Crissman, R.D., et al, 1991, p.406-415, eng 45-2352
- Surface emissivity at below-zero temperatures. Kondrat'ev, K.I.A., et al, 1991, p.7-9, eng 45-2477
- Changes in the flexural strength of ice under radiation decay. Prowse, T.D., et al, 1990, p.341-354, eng 45-2531
- Ice conditions on inland waterways. Frankenstein, G.E., et al, 1990, p.61-65, eng 45-2647
- Surface radar investigations of an icing mound on the Sagavanirktok River, Alaska. Arcone, S.A., et al, 1990, p.353-363, eng 45-2744
- Accuracy of selected techniques for estimating ice-affected streamflow. Walker, J.F., 1991, p.697-712, eng 45-2969
- Danube ice floods during the last millenary. Déri, J., 1989, p.151-158, hun 45-3102
- Ice cover melting under turbulent flow conditions. Sarraf, S., et al, 1990, p.313-316, eng 45-3194
- Stochastic simulation of climate change impacts on ice road operations. Woo, M.K., et al, 1990, p.259-264, eng 45-3300
- Siberian river as a transport system. North, R.N., 1991, p.177-197, eng 45-3333
- Development of ice periphyton of the Amur River under different light conditions. Iur'ev, D.N., et al, 1988, p.1546-1551, rus 45-3369
- Mathematical model for river ice processes. Lal, A.M.W., et al, 1991, p.851-867, eng 45-3382
- Case histories of attempts to remove three small ice jams. Doyle, P.F., 1991, p.331-335, eng 45-3536
- Fracture and breakup of river ice cover: discussion and reply. Demuth, M.N., et al, 1991, p.336-339, eng 45-3537
- Optimum operation of hydro-electric plants during the ice regime of rivers. Foulds, D., ed, 1991, 81p., eng 45-3542
- IAHR Symposium on Ice, 10th, 1990. 1990, 3 vols., eng 45-3562
- Ice formation and ice growth in the River Oulujoki. Forsius, J., 1990, p.183-195, eng 45-3575
- Ice thermal processes in the mouth areas of the Siberian rivers. Ivanov, V.V., et al, 1990, p.219-230, eng 45-3578
- River frazil ice: a simplified theoretical model. Kolodko, J., 1990, p.252-260, eng 45-3581
- River ice cover initiation due to the spreading of border ice. Matoušek, V., 1990, p.352-362, eng 45-3589
- River surface temperature determination in calm weather. Matoušek, V., 1990, p.363-371, eng 45-3590
- Effects of water transfer on temperature and ice regime. Tesaker, E., 1990, p.474-485, eng 45-3600
- Integral analysis of the initiation of river ice cover cracking. Abdel-Zaher, A.K., et al, 1990, p.511-530, eng 45-3603
- Influence on ice conditions of variations in winter discharge from power plants. Asvall, R.P., 1990, p.554-574, eng 45-3606
- Discrete element simulations of river ice transport. Babic, M., et al, 1990, p.564-574, eng 45-3607
- Model material for river ice breakup studies. Beltaos, S., et al, 1990, p.575-585, eng 45-3608
- Forecasting of river water level elevation due to ice jams. Havlik, A., 1990, p.606-615, eng 45-3611
- Prediction of maximum water stages due to ice jams. Karnovich, V.N., et al, 1990, p.674-679, eng 45-3617
- Impact of dams on the ice regime of rivers. Michel, B., 1990, p.690-696, eng 45-3619
- Unbalanced ice transportation at ice bar river reach. Ren, Z.W., 1990, p.719-725, eng 45-3622
- Mathematical model for ice processes in river networks. Shen, H.T., et al, 1990, p.726-734, eng 45-3623
- Calculation of water level in a river reach with frazil ice jam. Sun, Z.C., et al, 1990, p.756-765, eng 45-3626
- Influence of ice cover on transverse bed slopes in a curved alluvial channel. Tsai, W.F., et al, 1990, p.800-810, eng 45-3630
- Traffic and transport on ice cover in Nenjiang River. Xu, B.M., et al, 1990, p.835-844, eng 45-3633
- Ice jam mitigation on the Torneälven River. Zachrisson, G., 1990, p.845-857, eng 45-3634
- Airborne remote sensing of river ice slush transport. Dobrowolski, A., et al, 1990, p.1105-1112, eng 45-3657
- Method of radar fresh-water ice measurements from a moving vehicle. Klein, G.S., et al, 1990, p.1144-1154, eng 45-3661
- Measurements of flow velocity under the ice cover. Yamaguchi, H., et al, 1990, p.1155-1170, eng 45-3662
- River ice hydraulics. Majewski, W., 1990, p.29-47, eng 45-3664
- Ice cover and flow in reservoirs. Bagińska, M., et al, 1990, p.99-111, eng 45-3669
- Winter habitats of salmon and trout. Calkins, D.J., 1990, p.113-126, eng 45-3670
- On the motion of river ice near a breaking front. Ferrick, M.G., et al, 1990, p.201-213, eng 45-3677
- Finnish River Ice Research Project—the numerical river ice model in use. Huokuna, M., 1990, p.215-230, eng 45-3678
- River and lake ice conditions as determined from AIRSAR imagery. Melloh, R.A., et al, 1990, p.37-42, eng 45-3755
- Interpretation of synthetic aperture radar imagery of snow-covered river ice. Melloh, R.A., et al, 1990, 13p., eng 45-3766
- Stage distribution approach to estimating ice related flooding probabilities. Burn, D.H., 1989, p.953-960, eng 45-3773
- Interpreting passive and active microwave imagery over snow-covered lakes. Melloh, R.A., et al, 1990, p.259-278, eng 45-3808
- Rivers**
- Surface water supplies. Ryan, W.L., 1990, p.301-316, eng 45-411
- Indications of an ancient glaciation in the lower course of the Lena River. Kunitkii, V.V., et al, 1987, p.99-113, rus 45-579
- Glacial meltwater runoff and paleogeographic reconstructions. Bol'shianov, D.I.U., et al, 1990, p.58-64, rus 45-705
- Change in concentration of petroleum products at low temperatures. Nemirovskaja, I.A., 1989, p.273-280, eng 45-771
- Long range forecasting of runoff from the Murgab and Tedzhen Rivers. Shentsis, I.D., et al, 1990, p.129-144, rus 45-997
- Leba River alluvial fan and its palaeogeomorphological significance. Rachocki, A.H., 1990, p.305-317, eng 45-1579
- Ice and thermal conditions of small flatland reservoirs. Emelianov, I.U.N., et al, 1990, p.101-104, rus 45-1744
- Riverscape. Wolman, M.G., et al, 1990, p.281-328, eng 45-2152
- Appearance of ice on rivers in Siberia and European USSR, 1990. 1990, 3p., rus 45-2307
- Appearance of ice on rivers in south, southwest, and west European USSR, 1990. 1990, 2p., rus 45-2308
- Bank recession and channel changes near dikes on the Tanana River, AK. Gatto, L.W., 1983, p.4.2-4.21, eng 45-2492
- Formation of the chemical composition of water in Kolyma Bay. Razumov, S.O., 1989, p.78-87, rus 45-2632
- Exodynamic processes of the Angara River. Laperdin, V.K., 1990, p.106-111, rus 45-2870
- Effects of river migration on pipelines in western Canada. Demlow, T.C., et al, 1983, p.240-249, eng 45-2960
- Siberian river as a transport system. North, R.N., 1991, p.177-197, eng 45-3333
- See *also*: Glacial rivers; Icebound rivers; Streams
- Road icing**
- Road conditions and accidents in winter. Hagiwara, T., et al, 1990, p.442-453, eng 45-324

- Bridge and roadway frost: occurrence and prediction by use of an expert system. Takle, E.S., [1990, p.727-734, eng] 45-796
- Ice prediction systems prove their worth in winter cost savings. McDonald, A., et al, [1990, p.19-20, eng] 45-852
- Detecting and predicting icing conditions on road, bridge, and runway surfaces. Kelley, J.R., et al, [1988, p.394-398, eng] 45-1379
- Formation of ice on roads beneath bridges. Barker, H.W., et al, [1990, p.1180-1184, eng] 45-1653
- Road weather information systems: a strategy and guideline. Doore, G.S., [1991, p.15-22, eng] 45-1914
- Future technology for disbonding snow and ice from pavements. Wuori, A.F., [1991, p.438-447, eng] 45-2355
- Ice removal using a rotating working device. Sabatauskene, V.A., et al, [1989, p.403-408, eng] 45-2927
- Snow and ice detection by a dielectric pavement freezing-detector (DPF). Takeichi, K., et al, [1990, p.319-337, eng] 45-3502
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- Road maintenance**
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- Road conditions and accidents in winter. Hagiwara, T., et al, [1990, p.442-453, eng] 45-324
- Sealing cracks in flexible pavements in cold regions. Chong, G.J., et al, [1988, p.12-19, eng] 45-525
- VIII International PIARC Winter Service Congress at Tromsø. Durth, W., et al, [1990, p.200-204, ger] 45-555
- Use of thermistors for spring road management. Barcomb, J., [1989, p.12-20, eng] 45-659
- Study on snow melting methods for roads in Hokkaido. Minagawa, K., et al, [1990, p.87-92, jpn] 45-744
- Tests on road snow removal (update): tests on urban snow removal. [1990, p.171-188, jpn] 45-748
- Wind tunnel tests on highway parking shelter snowbreaks. Takabe, N., et al, [1990, p.221-226, jpn] 45-752
- Pavement response and load restrictions on spring thaw-weakened flexible pavements. Rutherford, M.S., [1989, p.1-12, eng] 45-806
- Evaluation of South Dakota Deicer No.2 and calcium magnesium acetate by shear testing. Ashworth, T., et al, [1989, p.1-8, eng] 45-808
- Sodium chloride and magnesium chloride road deicers. Goyal, G., et al, [1989, p.9-17, eng] 45-809
- Calcium magnesium acetate and rock salt road deicers. Manning, D.G., et al, [1989, p.18-26, eng] 45-810
- 1987-1988 City of Ottawa, Ontario, Canada deicer field trials. Hamilton, G.B., et al, [1989, p.27-38, eng] 45-811
- Calcium magnesium acetate and salt road deicers. Smith, R.L., Jr., [1989, p.39-48, eng] 45-812
- Highway snow control research in Japan. Itagaki, K., [1990, 60p., eng] 45-999
- Frost depth and load restrictions on roads during spring thaw. Madden, D.A., et al, [1990, 33p., eng] 45-1670
- Protection of alpine highways from snowdrifts. Hertig, J.A., [1990, p.1/50-1/64, fre] 45-1783
- Method to reduce traffic noise by making use of a snow surface. Hasebe, M., et al, [1990, p.533-538, eng] 45-1912
- Treatment of unstable foundation areas in Alaska's pavement management system. Johnson, E.G., [1991, p.448-453, eng] 45-2356
- Minnesota Road Research Project—an overview. Newcomb, D.E., et al, [1991, p.463-471, eng] 45-2358
- Research study of highway snowdrifting in Canada. Baker, H.A., et al, [1991, p.719-728, eng] 45-2381
- Work report on special pavements; status of paved road surfaces in winter. Nakamura, T., et al, [1988, p.149-154, jpn] 45-2510
- Treatment of cracks in paved road surfaces. Ueno, M., et al, [1988, p.155-158, jpn] 45-2511
- Countermeasures against frost heave on national highways. Saito, T., et al, [1988, p.171-176, jpn] 45-2513
- Winter maintenance. Pearson, D., [1990, p.337-379, eng] 45-3470
- Proceedings. [1990, 2 vols., eng] 45-3490
- Estimation of road wear using spike ravelling test. M., et al, [1990, p.291-316, eng] 45-3501
- Survey of measures against pavement rutting in cold regions. Sawada, S., et al, [1990, p.341-349, eng] 45-3503
- Asphalt pavement rutting experience in Canada. Emery, J., [1990, p.373-383, eng] 45-3504
- Rutting of pavements in cold areas in Japan. Kaneda, K., et al, [1990, p.387-416, eng] 45-3505
- Comparative study on performances of asphalt pavements in cold area. Wen, Z.M., et al, [1990, p.3-16, eng] 45-3506
- Damage to expressway pavement in Hokkaido and solutions required. Ogawa, Y., et al, [1990, p.53-73, eng] 45-3508
- Asphalt technology for hot-in-place surface recycling. Emery, J., et al, [1990, p.77-104, eng] 45-3509
- Stripping of asphalt pavement in cold areas. Abd El Halim, A.O., et al, [1990, p.107-131, eng] 45-3510
- Applicability of RCCP in cold areas. Hagiwara, T., et al, [1990, p.135-154, eng] 45-3511
- Present status and subject of roller compacted concrete pavement in Japan. Tada, H., et al, [1990, p.157-175, eng] 45-3512
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- Concrete pavement rehabilitation and overlay: Ontario's experience. Kazmierowski, T.J., et al, [1990, p.205-230, eng] 45-3514
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- Saskatchewan's Pavement Management Information System. Heiman, G.H., et al, [1990, p.301-319, eng] 45-3518
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- Generic framework for pavement management and staging modules for implementation. Haas, R., [1990, p.341-366, eng] 45-3520
- Investigative study on use of modified asphalts in Japan. Himeno, K., et al, [1990, p.419-437, eng] 45-3526
- Recycling of pavement materials in cold areas. Matsumura, S., [1990, p.21-38, eng] 45-3528
- Traffic and transport on ice cover in Nenjiang River. Xu, B.M., et al, [1990, p.835-844, eng] 45-3633
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- Roads**
- Selecting antiskid materials applied to ice- and snow-covered roadways. [1990, 135p., eng] 45-319
- VIII International PIARC Winter Service Congress at Tromsø. Durth, W., et al, [1990, p.200-204, ger] 45-555
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- Cost-effectiveness of geotextiles; review of performance in Alaskan roads. Reckard, M., [1991, 50p., eng] 45-2000
- Width of planned snow-retention afforestation roads. Kclomiet, V.A., [1990, p.93-94, rus] 45-2247
- Relationships between weather and road safety: past and future research directions. Andrey, J., et al, [1990, p.123-137, eng] 45-2753
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- Optimum repair and maintenance of railroads in Siberia and the Far East. Diunin, A.K., ed, [1990, 78p., rus] 45-3004
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- Protecting mountainous sections of the Frunze-Osh highway from snowdrifts. Avdeev, L.M., et al, [1990, p.60-63, rus] 45-3012
- Repair of frost damages on main road 21 in Tulli, Kilpisjärvi. Saarelainen, S., [1990, 54p. + appendix, fin] 45-3841
- Prevention of snow drifting with the help of road levelling and design. Saarelainen, S., et al, [1990, 36p., fin] 45-3842
- Repair structures of frost damages on main road 21 in Peera, Finland. Saarelainen, S., [1990, 62p. + appendix, fin] 45-3843
- Repair of a road built on permafrost; dimensioning, building, monitoring. Kivikoski, H., [1989, 46p. + appendix, fin] 45-3849
- Improvement of icing on main road 21; construction and monitoring. Lehtonen, J., [1990, 60p., fin] 45-3873
- Finnish cold climate construction. Part 3. Traffic and arteries. Laukkanen, K., et al, [1990, 58p. + appendix, fin] 45-3875
- See *also*: Ice roads; Snow roads; Streets
- Rock creep**
- See *also*: Talus
- Rock drilling**
- Tube drilling system in underground drilling. Soikkeli, T., [1989, p.123-125, eng] 45-339
- Drilling of ice and rock by means of melting. Litvinenko, V.S., [1989, p.127-131, eng] 45-340
- Drilling exploratory wells with pneumatic drills. Kudriashov, B.B., et al, [1990, 263p., rus] 45-634
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- Heat transfer when drilling in permafrost. Sedov, V.T., [1990, 126p., rus] 45-1533
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- Improving borehole and blasthole drilling in frozen conglomerate. Panasenko, N.N., et al, [1990, p.58-61, rus] 45-2246
- High-temperature penetrometer for boring ice and rocks by melting. Kudriashov, B.B., et al, [1990, p.66-73, rus] 45-2488
- Rock excavation**
- Thermal fracturing of rock. Dmitriev, A.P., et al, [1990, 254p., rus] 45-636
- Blast-excavating frozen ground using slit and borehole charges. Iurko, A.A., [1988, p.12-13, rus] 45-798
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- Rock fills**
- Initial period of operation of the channel dam of the Kureika hydroelectric station. Miznikov, I.U.N., et al, [1990, p.578-583, eng] 45-2293
- See *also*: Earth fills; Hydraulic fills
- Rock glaciers**
- Thermal characteristics of the permafrost within a rock glacier. Mühll, D.V., et al, [1990, p.151-158, eng] 45-56
- Determination of surface velocity on the Val Pisella eastern rock glacier (upper Valtellina, central Alps). Smiraglia, C., [1989, p.41-44, ita] 45-360
- Rock glaciers in the mountains of Central Asia. Gorbunov, A.P., et al, [1989, 164p., rus] 45-613
- Past and present permafrost distribution in the Turtmannal, Wallis, Swiss Alps. Van Tatenhove, F., et al, [1990, p.302-316, eng] 45-892
- Alimentation of rock glaciers of Tien Shan. Tarakanov, A.G., [1989, p.175-183, rus] 45-1055
- Talus rock glacier in the Venezuelan Andes. Pérez, F.L., [1988, p.149-159, eng] 45-1095
- Morphology of a rock glacier in Ireland. Wilson, P., [1990, p.237-247, eng] 45-2026
- Rock magnetism**
- High-resolution magnetostratigraphy of late-Quaternary arctic marine sediments. Nowaczyk, N.R., [1991, 187p., ger] 45-3458
- See *also*: Remanent magnetism
- Rock mechanics**
- Mechanical characteristics of rocks at low temperatures. Inada, Y., et al, [1980, p.1221-1227, jpn] 45-118
- Mechanical characteristics of rocks related to cooling. Inada, Y., et al, [1979, p.979-985, jpn] 45-120
- Areas of gravitational spreading of ridges. Varnes, D.J., et al, [1989, 36p., eng] 45-320
- Rock mechanics investigations in the Svea Coal Mine, Svalbard. Myrvang, A.M., et al, [1989, p.95-103, eng] 45-336
- Determination of surface velocity on the Val Pisella eastern rock glacier (upper Valtellina, central Alps). Smiraglia, C., [1989, p.41-44, ita] 45-360
- Chemical phenomena in the process of cryogenic erosion of andesite. Gurevich, V.M., et al, [1989, p.56-67, rus] 45-1828
- Deterioration of ice and frozen rock monoliths by brines. Laboratornyye issledovaniya razrusheniya l'da i ledoporodnykh monolitov rassolami, [1989, p.83-95, rus] 45-1830
- Structure and properties of rocks in the Udokan cryolithozone. Shesternev, D.M., et al, [1990, 124p., rus] 45-2034
- Analysis of the segmentation in the profile of alpine talus slopes. Francou, B., et al, [1990, p.53-60, eng] 45-2234
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- Boulder transport in shield areas. Bouchard, M., et al, [1990, p.87-107, eng] 45-2547
- Rocks—accumulators of cold. Kostarev, V.P., et al, [1990, p.11-15, rus] 45-2696
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- Rock properties**
- Thermal fracturing of rock. Dmitriev, A.P., et al, [1990, 254p., rus] 45-636
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- Zonality of the distribution of chemical elements in terrigenous rocks. Tumanov, V.R., [1989, p.130-141, rus] 45-1834

**Rock properties (cont.)**

- Characteristics of restoring the temperature field disturbed by drilling. Berkovchenko, S.A., [1989, p.43-47, rus] **45-2007**
- Structure and properties of rocks in the Udokan cryolithozone. Shesternev, D.M., et al, [1990, 124p, rus] **45-2034**
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- Rock temperature**  
See *also*: Frozen rock temperature
- Rocks**
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- Problems in geometeorology and the accumulation of winter cold. Koval'chuk, A.I., ed, [1990, 119p, rus] **45-2695**
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- See *also*: Frozen rocks; Lithology
- Romania**  
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- Recent and glacial snowline in the southern Carpathian Mountains. Horedt, H., [1988, p.167-176, ger] **45-1096**
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- Fatigue endurance program for classification of built-up roofing. Bonafont, R.L., [1991, p.26-32, eng] **45-2454**
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- Field experience versus standards and designs. Booth, R.J., et al, [1991, p.351-355, eng] **45-2459**
- Outdoor construction test facility, Saskatoon, Canada. Hedlin, C.P., [1991, p.377-381, eng] **45-2460**
- New wetting curves for common roof insulations. Tobiasson, W., et al, [1991, p.383-390, eng] **45-2461**
- Attic testing at the Roof Research Center—initial results. Wilkes, K.E., et al, [1991, p.391-400, eng] **45-2462**
- Analysis of modified bitumen roofing materials using the stiffness modulus. Norris, R.E., et al, [1991, p.401-417, eng] **45-2463**
- Cold weather roofing application. Stoll, J.W., [1991, p.418-422, eng] **45-2464**

- Glass transition temperatures of polymeric roofing membranes. Dutt, O., et al, [1991, p.495-501, eng] **45-2465**
- Thermal analysis of polymer roofing membranes. Gaddy, G.D., et al, [1991, p.502-507, eng] **45-2466**
- Condensation of humidity onto a snow covered roof. Nordell, B., [1990, p.287-298, eng] **45-2528**
- Hail resistance of plastic components of the building shell. Flueler, P., [1990, p.88-95, eng] **45-2556**
- Using parameter estimation to analyze building envelope thermal performance. Beck, J.V., et al, [1991, p.161-191, eng] **45-2658**
- Roof bolting parameters in placer mines. Kychkin, N.L., et al, [1990, p.569-572, eng] **45-2932**
- Ice-rink roof structures and the "stalagmite" effect. Bloudek, K., [1989, p.151-153, eng] **45-3466**
- Penetration of snow into the ceiling structures; tests using marked material. Kääriäinen, H., et al, [1989, 55p. + appendix, fin] **45-3848**
- Roughness coefficient**
- Effect of internal waves on sea ice drift. Bruno, M.S., [1991, p.137-141, eng] **45-3161**
- See *also*: Surface roughness
- Route surveys**
- Plying the Northern Sea Route. Brigham, L.W., [1991, p.10-11, eng] **45-1721**
- Mitigation of vehicle storage and traffic control problems during avalanche control. Morrall, J., [1991, p.191-200, eng] **45-3535**
- Rubber**
- Performance of thermoplastic elastomers (TPEs) at subzero temperatures. Brugada, R., [1989, p.67-73, eng] **45-1216**
- Hydraulic seals in arctic conditions. Soudunsaari, R., et al, [1989, p.77-84, eng] **45-1218**
- Frost resistance of elastomers. Bukhina, I.F., et al, [1989, 176p, rus] **45-2204**
- Rubber ice friction**
- Friction measurements of aircraft on wet and icy runways. Yager, T.J., et al, [1990, 297p, eng] **45-558**
- Braking and starting performance with winter tires (2nd report). Ninagawa, K., et al, [1989, p.11-16, jpn] **45-908**
- Friction measurements under winter runway conditions. Yager, T.J., [1990, p.32-35, eng] **45-1184**
- Tire force generation on ice. Hayhoe, G.F., et al, [1989, p.199-207, eng] **45-1233**
- Studded tires use in Japan. Horiuchi, K., [1989, p.209-215, eng] **45-1234**
- Road grip of winter tires on ice. Nordström, O., et al, [1990, 79p. + appendix, swe] **45-2036**
- Field test of studded and non-studded winter tires; subjective rating. Samuelsson, E., [1990, 17p. + appendix, swe] **45-2040**
- Rubber snow friction**
- Friction measurements of aircraft on wet and icy runways. Yager, T.J., et al, [1990, 297p, eng] **45-558**
- Tire snow traction performance. Ohoyama, K., et al, [1990, p.86-88, eng] **45-3205**
- Runoff**
- Hydrological role of forest geosystems. Snytko, V.A., ed, [1989, 165p, rus] **45-33**
- Diagnostic-feasibility study of Lake Riley. Final report. Osgood, R.A., [1983, 47p, eng] **45-84**
- Structures for measuring runoff in permafrost zones. Skretteberg, R., [1990, p.699-708, eng] **45-171**
- Environmental effects of snow dumping: a literature review. Scott, W.S., et al, [1980, p.219-240, eng] **45-184**
- Climate change effects on the snowmelt hydrology of western North American mountain basins. Rango, A., et al, [1989, p.181-183, eng] **45-231**
- Summer 1987 flooding in glacial basins of the Pennine Alps. Rey, Y., et al, [1990, p.115-124, fre] **45-370**
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- Snow avalanches. Trabant, D.C., et al, [1990, p.147-176, eng] **45-408**
- Water from the alpine: Colorado. Berg, N.H., [1990, p.641-667, eng] **45-423**
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- Changes in mountain climate and glacio-hydrological responses. Barry, R.G., [1990, p.161-170, eng] **45-619**
- Influence of Hudson Bay runoff and ice-melt on the salinity of the inner Newfoundland Shelf. Myers, R.A., et al, [1990, p.241-256, eng] **45-657**
- Runoff from hummocky marshes of western Siberia. Moskvina, I.U.P., [1989, p.73-78, eng] **45-661**
- Glacial meltwater runoff and paleogeographic reconstructions. Bol'shiyanov, D.I.U., et al, [1990, p.58-64, rus] **45-705**
- Great periglacial runoff system in northern Eurasia. Grosvold, M.G., et al, [1989, p.5-13, rus] **45-787**
- Groundwater flow simulation considering snowmelt. Watanabe, K., et al, [1987, p.25-43, jpn] **45-924**
- Long range forecasting of runoff from the Murgab and Tedzhen Rivers. Shentsis, I.D., et al, [1990, p.129-144, rus] **45-997**

- Methods of mapping snowmelt and glacier runoff in mountainous countries. Ananicheva, M.D., et al, [1989, p.49-55, rus] **45-1034**
- Volume and routing of late-glacial runoff from the southern Laurentide Ice Sheet. Teller, J.T., [1990, p.12-23, eng] **45-1075**
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- Hydrogeochemistry of snow and snowmelt in catchment hydrology. Jones, H.G., et al, [1990, p.255-297, eng] **45-1480**
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- Extraordinary melt-water run-off near Söndre Strömfjord, West Greenland. Russell, A.J., [1990, p.353, eng] **45-1548**
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- Transport of suspended materials in Swedish rivers. Brandt, M., [1990, p.273-283, eng] **45-2030**
- Ablation of avalanche and undisturbed snow, Himalaya Mountains, Pakistan. De Scally, F.A., et al, [1990, p.2757-2767, eng] **45-2113**
- Western Snow Conference, 58th, 1990. [1990, 170p. + appendix, eng] **45-2114**
- Snow hydrology of an alpine basin in the Sierra Nevada. Kattelmann, R., [1990, p.41-50, eng] **45-2120**
- Use of state-of-the-art systems for optimum water management. Horciza, E.E., [1990, p.87-91, eng] **45-2125**
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- Effects of suburbanization upon snowmelt runoff. Buttle, J.M., [1990, p.285-302, eng] **45-2995**
- Subice layering and origin of acidic waters in a small boreal lake during spring runoff. Roberge, J., et al, [1991, p.479-492, eng] **45-3105**
- Runoff sediment concentration under varying soil and freezing regimes. Edwards, L.M., et al, [1991, p.403-407, eng] **45-3211**
- Snow hydrology of a headwater arctic basin. I. Physical measurements and process studies. Kane, D.L., et al, [1991, p.1099-1109, eng] **45-3550**
- Hydrometric investigations in Svalbard 1989-1990. Pettersson, L.E., [1990, p.133-138, eng] **45-3789**
- See *also*: Stream flow
- Runoff forecasting**
- Yukon territory snow survey bulletin and water supply forecast—May. [1990, 24p., eng] **45-73**
- Yukon territory snow survey bulletin and water supply forecast—May. [1990, 24p., eng] **45-74**
- Yukon territory snow survey bulletin and water supply forecast—April. [1990, 24p., eng] **45-75**
- Microwave satellite forecasting of snowmelt runoff. Wankiewicz, A., [1989, p.1235-1238, eng] **45-266**
- Spatial analysis of snowpack data. Burn, D.H., et al, [1989, p.475-483, eng] **45-399**
- Forecasting of glacier meltwater runoff by time series analysis. Song, Q., et al, [1990, p.161-165, chi] **45-456**
- Runoff from Heigou Glacier on Bogeda Mountain. Hu, X.G., et al, [1990, p.71-82, chi] **45-464**
- Snow model for stream flow forecasting. Day, G.N., [1990, 181p., eng] **45-509**
- Forecasting runoff from mountain rivers using mathematical models. Shentsis, I.D., [1990, p.96-100, rus] **45-1743**
- Modeling snowmelt runoff processes in temperate and arctic environments. Sand, K., [1990, 176p., eng] **45-1977**
- Periodic-stochastic modeling of separation of precipitation into rainfall and snowfall. Levjeychik, V., et al, [1990, p.2613-2623, eng] **45-2077**
- Yukon Territory snow survey bulletin: Mar 1991. [1991, 25p., eng] **45-2093**
- Snowmelt runoff modeling in an Adirondack watershed. Mellander, M.K., et al, [1990, p.65-72, eng] **45-2187**

- Model for prediction of snow cover distribution. Sambles, K.M., et al, 1990, p.109-119, eng 45-2191
- Annual balance of North Cascade glaciers. Pelto, M.S., 1990, p.201-212, eng 45-2199
- Impact of fluctuations in mean precipitation and temperature on runoff. Karl, T.R., et al, 1989, p.423-447, eng 45-2249
- Modeling runoff in semiarid rangeland watersheds. Heydarpour, J., 1989, p.210-215, eng 45-2403
- Two packages for meteorological data processing and runoff simulation for personal computers. Gandolfi, C., et al, 1987, p.192-198, eng 45-2437
- Runoff variation forecasts related to climatic changes. Kuznetsova, L.P., et al, 1991, p.126-132, eng 45-2438
- Snowmelt runoff forecasting system for the Rumoi River. Hata, T., et al, 1988, p.395-398, jpn 45-2518
- Evaporation and snowmelt estimates from satellite data. Miller, W., 1990, p.298-303, eng 45-2668
- Yukon Territory snow survey bulletin and water supply forecast, April 1, 1991. 1991, 26p., eng 45-2846
- Comparison of parametric and non-parametric methods for runoff forecasting. Galeati, G., 1990, p.79-94, eng 45-2988
- Dynamic-stochastic models of rainfall and snowmelt runoff formation. Kuchment, L.S., et al, 1991, p.153-169, eng 45-2990
- Mathematical models for the prediction of river runoff. Shentzits, I.D., 1990, p.487-500, eng 45-2991
- Water yield models for snow-covered Iranian watersheds. Moussavi, M., et al, 1990, p.535-546, eng 45-2993
- Model for description of seasonal mountainous snowmelt. Babiková, G., et al, 1990, p.383-393, eng 45-2994
- Water and ice resources of the Issyk-Kul-Chu region, their current and future state. Dikikh, A.N., et al, 1991, p.390-396, eng 45-3237
- Regional climate change impacts: 1. Impacts on water resources. Mimikou, M.A., et al, 1991, p.247-258, eng 45-3444
- Modeling the runoff of small rivers. Kovalev, S.N., 1991, p.708-714, eng 45-3545
- Searching for chaotic dynamics in snowmelt runoff. Wilcox, B.P., et al, 1991, p.1005-1010, eng 45-3549
- Snow hydrology of a headwater arctic basin. 2. Conceptual analysis and computer modeling. Hinzman, L.D., et al, 1991, p.1111-1121, eng 45-3551
- Snow cover formation and melting in field catchments. Shutov, V.A., 1990, p.327-337, eng 45-3686
- Estimated runoff from man-made snow. Eisel, L.M., et al, 1990, p.519-526, eng 45-3698
- Studies of the arctic water resources: state-of-the-art and future plans. Ivanov, V.V., 1990, p.63-74, eng 45-3783
- Proceedings of the Workshop on Applications of Remote Sensing in Hydrology. 1990, 386p., eng 45-3797
- Effective use of satellite-observed snow cover data in the snowmelt-runoff model (SRM). Rango, A., 1990, p.19-31, eng 45-3798
- Microwave satellite spring runoff correlations. Wankiewicz, A., 1990, p.331-344, eng 45-3812
- Using spreadsheet software in water-balance modeling. Dexter, L.R., et al, 1991, p.527-536, eng 45-3817
- Water and sediment yields into the Sutlej River from the High Himalaya. Sharma, P.D., et al, 1991, p.87-100, eng 45-3885
- Runways**
- Dumont d'Urville aerodrome, Terre Adélie, Antarctica. Engler, M., et al, 1990, p.191-213, eng 45-501
- Friction measurements of aircraft on wet and icy runways. Yager, T.J., et al, 1990, 297p., eng 45-558
- Reflection cracking studies at Thule Air Base, Greenland using AC 2.5 and fabrics. Eaton, R.A., et al, 1980, p.381-396, eng 45-995
- Effect of frost heave deformations on airport pavement. Dolinchenko, V.A., et al, 1990, p.12-13, eng 45-1014
- Friction measurements under winter runway conditions. Yager, T.J., 1990, p.32-35, eng 45-1184
- "IMAG" apparatus: a new automatic skid-resistance tester. Nègre, J.P., 1990, p.22-24, eng 45-1696
- Snow roads and runways. Abele, G., 1990, 100p., eng 45-1971
- Thermal regime surrounding a longitudinal edge drain. Allen, W.L., 1991, p.164-177, eng 45-2331
- Mechanistic approach to pavement design for Nome Airport. Vinson, T.S., et al, 1991, p.416-427, eng 45-2353
- Use of insulation for frost prevention: Jackman Airport, Maine, 1986-1987 winter. Kestler, M.A., et al, 1991, 45p., eng 45-2643
- Asphalt concrete airport pavements during thaw weakening. Janoo, V.C., et al, 1991, 68p., eng 45-2956
- Evaluation system of airport concrete pavements. Hachiya, Y., et al, 1990, p.233-258, eng 45-3515
- See *also*: Aircraft landing areas; Ice runways
- Safety**
- Shutdown procedure for ice threatened floating oil rigs. Di Cocco, N.R., et al, 1990, p.257-269, eng 45-139
- Road conditions and accidents in winter. Hagiwara, T., et al, 1990, p.442-453, eng 45-324
- VIII International PIARC Winter Service Congress at Tromsø. Durth, W., et al, 1990, p.200-204, ger 45-555
- Safe vehicle speed on winter roads in blowing snow. Fukuzawa, Y., et al, 1990, p.171-178, jpn 45-780
- Prevention of snow accretion on traffic signs. Takeuchi, M., et al, 1986, p.37-39, jpn 45-926
- Snow and avalanches in Switzerland. Jaccard, C., 1990, p.11-12, fre 45-1126
- Snow avalanche hazards and mitigation in the United States 1990, 84p., eng 45-1182
- Safe winter driving. Craellus, K., 1989, p.61-66, eng 45-1215
- Studless tires use in Japan. Horiuchi, K., 1989, p.209-215, eng 45-1234
- Decreasing of wearing effect of studded tires on road pavements. Sistonen, M., 1989, p.217-221, eng 45-1235
- Electronic wheel slip control systems for commercial vehicles. Göhring, E., 1989, p.287-299, eng 45-1241
- Safety aspects while operating in winter. Salusjärvi, M., 1989, p.317-320, eng 45-1243
- Computer model to assess ice risk to offshore structures. Blanchet, D., 1991, p.650-665, eng 45-2375
- Ice Technology for Polar Operations: proceedings of the 2nd international conference. 1990, 426p., eng 45-2717
- Safe convoy of non-ice class ships along the Northern Sea Route. Arikainen, A.I., et al, 1990, p.259-267, eng 45-2736
- Probabilistic concept of safe speeds for arctic shipping. Tunk, A.L., et al, 1990, p.295-306, eng 45-2739
- Relationships between weather and road safety: past and future research directions. Andrey, J., et al, 1990, p.123-137, eng 45-2753
- See *also*: Accidents
- Saline ice**
- See *also*: Salt ice
- Saline soils**
- Building foundation in saline permafrost. Uhre, N., et al, 1990, p.117-125, eng 45-126
- Solving the Stefan problem for saline soils at subzero temperatures. Tetelbaum, A.S., 1989, p.13-24, rus 45-1825
- Heat-moisture-salt regime of frozen ground during fall watering. Ivanov, V.A., et al, 1989, p.24-36, rus 45-1826
- Solute partitioning in freezing soils. Konrad, J.M., et al, 1990, p.726-736, eng 45-1869
- Ice formation in saline soils. Konrad, J.M., 1989, 3 vols., eng 45-2037
- Solute rejection in freezing soils. Panday, S., et al, 1991, p.99-108, eng 45-2090
- Low density frozen saline soils for strength tests. Ayorinde, O.A., 1991, p.32-43, eng 45-2320
- Effect of saline soil cements on frozen rocks and construction materials. Galdsenko, E.I., 1989, p.114-123, rus 45-2636
- Effect of neotectonics on water and salt regimes in land reclamation areas. Borisenko, I.M., et al, 1990, p.122-128, rus 45-2824
- Saline frozen soils as a foundation for structures; collected scientific papers. Vialov, S.S., ed, 1990, 143p., rus 45-2882
- Saline frozen soils and their distribution over USSR territory. Dubikov, G.I., et al, 1990, p.3-9, rus 45-2883
- Investigations of saline permafrost on the arctic shore (review). Velli, I.U.I.A., 1990, p.9-20, rus 45-2884
- Features of thermophysical properties of saline frozen soils. Shefkin, I.V., 1990, p.20-24, rus 45-2885
- Effect of salinity on hydro- and thermophysical properties of soils. Loseva, S.G., et al, 1990, p.24-33, rus 45-2886
- Synchronous content of unfrozen water in saline soils. Bronfenbrener, L.E., 1990, p.34-38, rus 45-2887
- Determining the phase composition of saline frozen soils. Petrukhin, I.U.S., 1990, p.38-45, rus 45-2888
- Transfer of salt in frozen dispersed soils. Ostroumov, V.E., 1990, p.45-55, rus 45-2889
- Effect of salinity on the cryogenic structure of frozen soils. Khimenkov, A.N., et al, 1990, p.55-62, rus 45-2890
- Classifying frozen soils according to salinity. Panchenko, V.I., et al, 1990, p.70-73, rus 45-2892
- Forecasting long-term deformation of frozen saline soils. Roman, L.T., et al, 1990, p.73-83, rus 45-2893
- Determining the creep properties of saline frozen soils. Brushkov, A.V., et al, 1990, p.83-90, rus 45-2894
- Estimating strength and rheological properties of saline frozen soils. Mirenburg, I.U.S., et al, 1990, p.90-98, rus 45-2895
- Effect of testing methods on the measured strength properties of saline frozen soils. Grishin, P.A., 1990, p.99-103, rus 45-2896
- Effect of salinity on strength and rheological properties of frozen soils. Iarkin, A.N., 1990, p.103-107, rus 45-2897
- Method of determining the equivalent cohesion of saline frozen soils. Aksenov, V.I., 1990, p.107-115, rus 45-2898
- Strength of frozen saline soils in the Yamal Peninsula. Brushkov, A.V., et al, 1990, p.115-120, rus 45-2899
- Determining long-term equivalent cohesion of frozen soils. Vorob'evskii, B.E., 1990, p.121-123, rus 45-2900
- Effect of the cryogenic structure of saline frozen soils on their strength. Minaev, A.N., 1990, p.124-128, rus 45-2901
- Electrical and acoustic properties of saline frozen soils. Zykov, I.U.D., et al, 1990, p.128-136, rus 45-2902
- Salinity**
- USNS *Bartlett* cruise to the Greenland Sea in September 1989. Data report. Bourke, R.H., et al, 1990, 122p., eng 45-451
- Origin of the properties of the halocline north of Ellesmere I. Jones, E.P., et al, 1990, p.485-498, eng 45-524
- Influence of Hudson Bay runoff and ice-melt on the salinity of the inner Newfoundland Shelf. Myers, R.A., et al, 1990, p.241-256, eng 45-637
- Temperature-salinity-density ratio near the Pacific subarctic front. Kuz'min, V.A., 1989, p.58-61, rus 45-737
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- Salinity history of the northern Atlantic during the last deglaciation. Broecker, W.S., 1990, p.459-467, eng 45-951
- Salt oscillator in the glacial Atlantic? 1. The concept. Broecker, W.S., et al, 1990, p.469-477, eng 45-952
- Melting heat transfer from a horizontal ice cylinder in saline water. Fukusako, S., et al, 1990, p.15-23, eng 45-1164
- Variations in the salinity of seasonally and perennially frozen soils. Anisimova, N.P., 1990, p.40-46, rus 45-1199
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- Contact supercooling of water layers and bottom ice formations in the sea. Cherepanov, N.V., et al, 1989, p.124-134, rus 45-1499
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- Relation of periodic Greenland Sea sea-ice anomalies to climatic cycles. Mysak, L.A., et al, 1990, p.111-133, eng 45-1801
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- Hydrographic observations of an arctic front in the Greenland Sea. van Aken, H.M., et al, 1991, p.4739-4750, eng 45-2683
- Evidence for stability enhancement of sea ice in the Greenland and Labrador Seas. Marsden, R.F., et al, 1991, p.4783-4789, eng 45-2686
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- Ice shelf water at the Weddell Sea shelf break. Foldvik, A., et al, 1990, p.125-130, eng 45-2837
- Saline frozen soils as a foundation for structures; collected scientific papers. Vialov, S.S., ed, 1990, 143p., rus 45-2882
- Effect of salinity on hydro- and thermophysical properties of soils. Loseva, S.G., et al, 1990, p.24-33, rus 45-2886
- Synchronous content of unfrozen water in saline soils. Bronfenbrener, L.E., 1990, p.34-38, rus 45-2887
- Determining the phase composition of saline frozen soils. Petrukhin, I.U.S., 1990, p.38-45, rus 45-2888
- Transfer of salt in frozen dispersed soils. Ostroumov, V.E., 1990, p.45-55, rus 45-2889
- Effect of salinity on the cryogenic structure of frozen soils. Khimenkov, A.N., et al, 1990, p.55-62, rus 45-2890
- Classifying frozen soils according to salinity. Panchenko, V.I., et al, 1990, p.70-73, rus 45-2892
- Forecasting long-term deformation of frozen saline soils. Roman, L.T., et al, 1990, p.73-83, rus 45-2893
- Determining the creep properties of saline frozen soils. Brushkov, A.V., et al, 1990, p.83-90, rus 45-2894
- Estimating strength and rheological properties of saline frozen soils. Mirenburg, I.U.S., et al, 1990, p.90-98, rus 45-2895
- Effect of testing methods on the measured strength properties of saline frozen soils. Grishin, P.A., 1990, p.99-103, rus 45-2896
- Effect of salinity on strength and rheological properties of frozen soils. Iarkin, A.N., 1990, p.103-107, rus 45-2897
- Method of determining the equivalent cohesion of saline frozen soils. Aksenov, V.I., 1990, p.107-115, rus 45-2898
- Determining long-term equivalent cohesion of frozen soils. Vorob'evskii, B.E., 1990, p.121-123, rus 45-2900

**Salinity (cont.)**

- Effect of the cryogenic structure of saline frozen soils on their strength. Minaev, A.N., [1990, p.124-128, rus] 45-2901
- Comments on the so-called salt lakes of Greenland. Williams, W.D., [1991, p.67-74, eng] 45-2943
- Field investigation of ice in the Barents Sea. Hoseth, K.A., et al, [1991, p.143-148, eng] 45-3162
- See *also*: Ice salinity
- Salt extraction**  
See *also*: Desalting
- Salt ice**  
Effect of sea salts on anion distribution in ice core from Fildes Peninsula. Han, M.W., et al, [1990, p.17-23, kor] 45-3202
- Salt lakes**  
Environmental protection of Lake Saroma, Hokkaido. Takeuchi, T., et al, [1988, p.65-70, jpn] 45-2507
- Antarctic fjords as precursors to meromictic lakes. Gallagher, J.B., et al, [1989, p.235-254, eng] 45-2618
- Evaporation and snowmelt estimates from satellite data. Miller, W., [1990, p.298-303, eng] 45-2668
- Comments on the so-called salt lakes of Greenland. Williams, W.D., [1991, p.67-74, eng] 45-2943
- Antarctic saline lake zooplankton changes due to seawater incursions. Eslake, D., et al, [1991, p.93-99, eng] 45-2944
- Vernal stratification in a saline lake: causes and biological significance. Northcote, T.G., et al, [1990, p.105-114, eng] 45-2945
- Salt spray**  
See *also*: Sea spray
- Salt water**  
Nonevaporative preconcentration technique for volatile and semivolatile solutes in certain polar solvents. Jenkins, T.F., et al, [1991, p.1341-1343, eng] 45-3447
- Heat transfer around an ice cylinder melting in saline water. Fukusako, S., et al, [1990, p.35-41, eng] 45-3869
- See *also*: Sea water
- Saltng**  
Sodium chloride and magnesium chloride road deicers. Goyal, G., et al, [1989, p.9-17, eng] 45-809
- Calcium magnesium acetate and rock salt road deicers. Manning, D.G., et al, [1989, p.18-26, eng] 45-810
- Calcium magnesium acetate and salt road deicers. Smith, R.L., Jr., [1989, p.39-48, eng] 45-812
- Using wastes from soda production for lowering the freezing temperature. Tseitlin, N.A., et al, [1990, p.55-64, rus] 45-3002
- Highway deicing salts and the mobilization of selected heavy metals from stream sediments. Cole, H.D., [1990, 126p., eng] 45-3353
- Samplers**  
Methane emission measurements from subarctic fens. Moore, T.R., et al, [1991, p.102-109, eng] 45-2792
- See *also*: Core samplers; Permafrost samplers; Snow samplers
- Sampling**  
Sampling of saturated and unsaturated sands by freezing. Konrad, J.M., [1990, p.88-96, eng] 45-354
- Scientists discover problems using Chernobyl fallout for dating the Greenland ice sheet. Dibb, J.E., [1989, p.8-9, eng] 45-959
- Determination of alkaline earth metals in Japanese rain and snow by ICP emission spectrometry. Dokiya, Y., et al, [1988, p.145-165, eng] 45-1013
- Thermophilic bacteria among arctic, subarctic, and alpine habitats. Boyd, W.L., et al, [1990, p.401-411, eng] 45-1419
- Modern pollen spectrum from Dye 3, south Greenland ice sheet. Bourgeois, J.C., [1990, p.340-342, eng] 45-1544
- Scavenging ratios of acid related compounds during winter. Cadle, S.H., et al, [1990, p.2981-2989, eng] 45-1771
- Ice particle development in cumulus clouds. Hobbs, P.V., et al, [1990, p.2710-2722, eng] 45-1802
- Aerosol collection efficiency indicated by disks modelling snowflakes. Sparmacher, H., et al, [1990, p.S209-S212, eng] 45-2216
- Aerosol measurement at high alpine stations. Schiwikowski, M., et al, [1990, p.S321-S324, eng] 45-2220
- Formation mechanisms of twelve-branched snow crystals. Uyeda, H., et al, [1990, p.549-555, eng] 45-2411
- Cellular slime molds in soils of Alaskan tundra, U.S.A. Stephenson, S.L., et al, [1991, p.104-107, eng] 45-2474
- Snow as a field-teaching medium for earth science. Custer, S.G., [1991, p.34-43, eng] 45-2790
- Air pollution measurements at Barrow, AK. Jaffe, D.A., et al, [1991, p.7395-7405, eng] 45-2797
- Hydrologic processes in a southern Ontario wetland. Gehrels, J., et al, [1990, p.221-234, eng] 45-2942
- Brown snow: a long-range transport event in the Canadian Arctic. Welch, H.E., et al, [1991, p.280-286, eng] 45-3026
- Productivity of phytozooses in mountain tundra of the Khibini Mountains. Luk'ianova, L.M., et al, [1991, p.181-187, eng] 45-3263

- Polycyclic aromatic and organochlorine compounds in the atmosphere of northern Ellesmere Island, Canada. Patton, G.W., et al, [1991, p.10,867-10,877, eng] 45-3375
- Nonevaporative preconcentration technique for volatile and semivolatile solutes in certain polar solvents. Jenkins, T.F., et al, [1991, p.1341-1343, eng] 45-3447
- Experiments on lichen growth 2. Effects of a seasonal snow cover. Benedict, J.B., [1991, p.189-199, eng] 45-3483
- Ice cover strength decay using borehole indenter. Sinha, N.K., [1990, p.735-744, eng] 45-3624
- See *also*: Ice sampling
- Sanding**  
Effect of fines in sand on friction on ice. Blaisdell, G.L., et al, [1990, 16p. + figs., eng] 45-1970
- Sands**  
Sampling of saturated and unsaturated sands by freezing. Konrad, J.M., [1990, p.88-96, eng] 45-354
- Frozen types of landscape structures in northwest Komsomolets I. Smirnov, I.P., [1989, p.388-393, rus] 45-493
- Constitutive model for frozen sand. Adachi, T., et al, [1990, p.208-212, eng] 45-851
- Dune development in an Alaskan subarctic environment. Dijkmans, J.W.A., et al, [1990, p.93-109, eng] 45-1191
- Niveo-aeolian sedimentation in Greenland. Dijkmans, J.W.A., [1990, p.83-96, eng] 45-1291
- Mechanics of aeolian transport of snow and sand. Kind, R.J., [1990, p.855-866, eng] 45-2097
- Saline frozen soils as a foundation for structures; collected scientific papers. Vialov, S.S., ed, [1990, 143p., rus] 45-2882
- Effect of saline solutions on frozen soils and mortars. Galdaenko, E.I., [1990, p.62-70, rus] 45-2891
- Estimating strength and rheological properties of saline frozen soils. Mirenburg, I.U.S., et al, [1990, p.90-98, rus] 45-2895
- Effect of salinity on strength and rheological properties of frozen soils. Iarkin, A.N., [1990, p.103-107, rus] 45-2897
- Determining long-term equivalent cohesion of frozen soils. Vorob'evskii, B.E., [1990, p.121-123, rus] 45-2900
- Electrical and acoustic properties of saline frozen soils. Zykov, I.U.D., et al, [1990, p.128-136, rus] 45-2902
- Model for attenuating creep of frozen sand. Domaschuk, L., et al, [1991, p.145-161, eng] 45-3421
- Sanitary engineering**  
Water conservation at the antarctic Wasa Base—results 1989-90. Marklund, S., [1991, p.85-94, eng] 45-2324
- Satellites**  
See *also*: Spacecraft
- Satellites (natural)**  
Structure of the planets. Elder, J.W., [1987, 210p. (Pertinent p.100-105, 151-156), eng] 45-2922
- Modeling the reflectance spectrum of Callisto at 0.25 to 4.1 millimicrons. Calvin, W.M., et al, [1991, p.305-317, eng] 45-2939
- Dark-floor craters on Ganymede. Schenk, P.M., et al, [1991, p.318-346, eng] 45-2940
- Saturation**  
Numerical study on freezing heat transfer in water-saturated porous media. Sasaki, A., et al, [1990, p.17-32, eng] 45-1926
- Solute rejection in freezing soils. Panday, S., et al, [1991, p.99-108, eng] 45-2090
- Classifying lithological complexes of seasonally-saturated deposits. Ivanova, L.D., et al, [1989, p.13-22, rus] 45-2625
- See *also*: Supersaturation
- Scandinavia**  
Major element chemistry,  $\delta^{18}O$ ,  $\delta^{13}C$  and Sr-87/Sr-86 in a snow profile across central Scandinavia. Andersson, P., et al, [1990, p.2601-2608, eng] 45-955
- Scanning electron microscopy**  
SEM observations of microparticles in antarctic ice cores. Higashi, A., et al, [1990, p.31-53, eng] 45-197
- Electron microscope observation of freezing stress response in plant tissues. Malone, S.R., et al, [1991, p.871-881, eng] 45-3275
- Scattering**  
Combined active/passive microwave classification of sea ice. Livingstone, C.E., [1989, p.376-380, eng] 45-233
- LIMEX'89: active/passive microwave signatures of Newfoundland pack ice. Livingstone, C.E., et al, [1989, p.1524-1527, eng] 45-274
- High performance inexpensive polarimetric radar for *in-situ* measurements. Hoover, F.A., et al, [1989, p.1870-1822, eng] 45-279
- Millimeter wave radiative transfer studies for precipitation measurements. Vivekanandan, J., et al, [1989, p.1910-1913, eng] 45-282
- Matched-filter technique for the enhancement of antarctic radar data. Raju, G., et al, [1989, p.722-727, eng] 45-298
- Low-frequency acoustic wave-scattering phenomena under ice cover. Kuo, E.Y.T., [1990, p.361-372, eng] 45-366

- Radar scattering from wet snow and ice droplets. De Wolf, D.A., et al, [1990, p.1317-1325, eng] 45-655
- Radiometry of precipitable water over high latitude regions. Wang, J.R., et al, [1991, p.J79-184, eng] 45-1598
- Scattering properties of natural snow and frost: comparison with icy satellite photometry. Verisic, A.J., et al, [1990, p.418-428, eng] 45-1923
- Under-ice ocean seismic energy scattering. Keenan, R.E., et al, [1991, p.1128-1133, eng] 45-2292
- Modeling the acoustic scattering by under-ice-ridge keels. Rubenstein, D., et al, [1991, p.666-672, eng] 45-2401
- Radio scattering characteristics of the Roi Baudouin ice shelf, East Antarctica. Uratsuka, S., et al, [1990, p.345-351, eng] 45-2743
- Determining the specific active area of scattering of a probed surface. Milekhin, O.E., et al, [1989, p.104-113, rus] 45-2756
- Classification of snow cover and precipitation using the special sensor microwave imager. Grody, N.C., [1991, p.7423-7435, eng] 45-2798
- Time-delayed reflections in L-band synthetic aperture radar imagery of icebergs. Gray, A.L., et al, [1991, p.284-291, eng] 45-3191
- Parameterization of broad band radiative transfer properties of water, ice and mixed clouds. Rockel, B., et al, [1991, p.1-13, eng] 45-3267
- Catalog of smoke/obscuration characterization instruments. O'Brien, H.W., ed, [1984, 184p., eng] 45-3476
- Scattering of cloud-reflected radar echoes. Avjanzian, H.M., [1991, p.945-978, eng] 45-3887
- See *also*: Backscattering; Light scattering; Neutron scattering
- Scavenging**  
Laboratory study on the scavenging of SO<sub>2</sub> by snow crystals. Mitra, S.K., et al, [1990, p.2307-2312, eng] 45-845
- Scavenging ratios of acid related compounds during winter. Cadle, S.H., et al, [1990, p.2981-2989, eng] 45-1771
- Aerosol collection efficiency indicated by disks modelling snowflakes. Sparmacher, H., et al, [1990, p.S209-S212, eng] 45-2216
- Scavenging of soot particles by ice crystals. Oraltay, R.G., et al, [1990, p.S263-S266, eng] 45-2219
- Physical factors influencing winter precipitation chemistry. Collett, J.S., Jr., et al, [1991, p.782-788, eng] 45-3819
- Scintillation**  
Path-averaged turbulent heat fluxes from scintillation measurements at two wavelengths. Andreas, E.L., [1990, p.93-105, eng] 45-804
- Measuring path-averaged heat fluxes in free convection. Andreas, E.L., [1991, p.167-182, eng] 45-1585
- Scotia Sea**  
Mid-winter physical oceanography in Scotia Sea. Muench, R.D., et al, [1990, p.148-150, eng] 45-1423
- Sea air interaction**  
See *also*: Air water interactions
- Sea currents**  
See *also*: Ocean currents
- Sea floor**  
See *also*: Ocean bottom
- Sea ice**  
Antarctica, an ice territory. Risso Valle, H., [1990, p.11-19, spa] 45-53
- Dynamic coupling of sea ice and water for an ice field. Leppäranta, M., et al, [1990, p.482-495, eng] 45-78
- Elastic and rheological properties of sea ice and its texture. Hellmann, H., [1990, 99p., ger] 45-79
- Sea ice properties studied from the icebreaker *Tor* during BEPER-88. Fransson, E., et al, [1990, 86p., eng] 45-94
- Antarctica: exploration, environment, research, and policy and issues. Weller, G., [1990, p.3-30, eng] 45-178
- Bibliography on ice and fog: detection and warning systems, [1990, 95p., eng] 45-205
- Sea ice classification using synthetic aperture radar. Winebrenner, D.P., et al, [1989, p.34-36, eng] 45-228
- Imaging radiometer system for ice navigation. Healy, G., et al, [1989, p.277-280, eng] 45-233
- Active microwave classification of sea ice. Onstott, R.G., [1989, p.369-374, eng] 45-234
- Combined active/passive microwave classification of sea ice. Livingstone, C.E., [1989, p.376-380, eng] 45-235
- Discrimination of sea ice types using SAR backscatter statistics. Shuchman, R.A., et al, [1989, p.381-385, eng] 45-236
- Detection and characterization of ice ridges in the Baltic Sea using CV-580 SAR imagery. Johansson, R., [1989, p.386-389, eng] 45-237
- LIMEX'87 ice surface characteristics and their effect upon C-band SAR signatures. Drinkwater, M.R., [1989, p.390-393, eng] 45-238
- Extraction of sea ice information from SAR imagery. Olausson, T.I., et al, [1989, p.394-399, eng] 45-239
- Study of textural and tonal information for classifying sea ice from SAR imagery. Hirose, T.K., et al, [1989, p.747-750, eng] 45-243
- Ice classification algorithm development using aircraft imagery. Holt, B., et al, [1989, p.751-754, eng] 45-244

- Classification of SAR images from sea ice. Holbaek-Hanssen, E., et al, (1989, p.755-758, eng) 45-245
- Multivariate analysis of texture statistics for SAR sea ice discrimination. Barber, D.G., et al, (1989, p.759-762, eng) 45-246
- Texture measures for sea-ice classification from radar images. Shokr, M.E., (1989, p.763-768, eng) 45-247
- Utilization of local texture transforms for adaptive filtering of SAR sea ice imagery. Salter, D.F., et al, (1989, p.777-779, eng) 45-250
- Spring surface circulation patterns detected using remote sensing of drifting ice floes in Hudson Bay, Canada. Larouche, P., (1989, p.780-782, eng) 45-251
- Knowledge based system for the interpretation of SAR images of sea ice. McAvoy, J.G., et al, (1989, p.844-847, eng) 45-252
- Study on sea ice monitoring using MOS-1/MSR. Cho, K., et al, (1989, p.991-994, eng) 45-253
- Automated tracking of arctic ice floes in multitemporal SAR imagery. McConnell, R., et al, (1989, p.1112-1116, eng) 45-255
- Automated analysis of polar satellite imagery. Banfield, J., et al, (1989, p.1117-1120, eng) 45-256
- Object-based feature-tracking algorithms for SAR images of the marginal ice zone. Daida, J., et al, (1989, p.1121-1124, eng) 45-257
- Hough transform technique for extracting lead features from sea ice imagery. Fetterer, F.M., et al, (1989, p.1125-1128, eng) 45-258
- Extraction of ridge feature characteristics from SAR images of sea ice. Vesecky, J.F., et al, (1989, p.1129-1132, eng) 45-259
- Preliminary observations of Labrador Sea marginal ice zone rheology using C-band SAR. Drinkwater, M.R., et al, (1989, p.1138-1141, eng) 45-261
- Evaluation of ice conditions in the Northumberland Strait using C and X band SAR imagery. Dechka, J.A., et al, (1989, p.1142-1146, eng) 45-262
- Ice kinematic measurements from aerial photography. Brown, T.G., et al, (1989, p.1148-1151, eng) 45-263
- Determination of ice displacements from sequential SAR imagery. Oliphant, K.D., et al, (1989, p.1152-1155, eng) 45-264
- Labrador ice margin experiment LIMEX'89; an overview. Raney, R.K., et al, (1989, p.1517-1519, eng) 45-272
- Wave evolution in the marginal ice zone. Liu, A.K., et al, (1989, p.1520-1523, eng) 45-273
- LIMEX'89: active/passive microwave signatures of Newfoundland pack ice. Livingstone, C.E., et al, (1989, p.1524-1527, eng) 45-274
- Absolute calibration of the CCRS C-band SAR during BEPERS-88. Ulander, L., (1989, p.1528-1531, eng) 45-275
- Ice edge motion during MIZEX'87. Sandven, S., et al, (1989, p.1535-1538, eng) 45-277
- SAR and passive microwave observations of the Odden during MIZEX'87. Sutherland, L.L., et al, (1989, p.1539-1544, eng) 45-278
- High performance inexpensive polarimetric radar for *in-situ* measurements. Hoover, F.A., et al, (1989, p.1820-1822, eng) 45-279
- Helicopter-borne 8-channel FFT scatterometer. Hallikainen, M., et al, (1989, p.1832-1835, eng) 45-281
- Polarimetric radar measurements of artificial sea ice. Onstott, R.G., et al, (1989, p.1938-1941, eng) 45-283
- Polarimetric scattering measurements on artificially grown sea ice. Gogineni, S.P., et al, (1989, p.1942-1944, eng) 45-284
- Radar studies of low-salinity sea ice. Hallikainen, M., et al, (1989, p.1945-1948, eng) 45-285
- Ice-type classifications from airborne radar waveform characteristics. Fedor, L.S., et al, (1989, p.1949-1952, eng) 45-286
- Comparison of measurement and theory for backscatter from thick salinated and desalinated ice. Bredow, J.W., et al, (1989, p.1953-1956, eng) 45-287
- International Ice Patrol Side-Looking Airborne Radar (SLAR) experiment 1988. Osmer, S.R., et al, (1989, p.2193-2196, eng) 45-288
- Helicopter radar simulations from fine resolution airborne SAR imagery. Lowry, R.T., et al, (1989, p.2209-2212, eng) 45-289
- Integrated ice surveillance system for support of offshore oil and gas exploration. Rudkin, P., et al, (1989, p.2229-2231, eng) 45-290
- Statistical descriptions of keel-related features in the under-ice draft distribution. Key, J., et al, (1989, p.2346-2349, eng) 45-291
- Role of ice properties in wave-ice interaction during LIMEX'1987. Winsor, W.D., et al, (1989, p.2350-2354, eng) 45-292
- Identification and volume estimation of icebergs by remote sensing in the Barents Sea. Vefsnmo, S., et al, (1989, p.2355-2358, eng) 45-293
- Observations of sea ice drift off Newfoundland using satellite imagery and ice beacons. Peterson, I.K., et al, (1989, p.2359-2362, eng) 45-294
- Estimation of the thickness of undeformed first year ice using radar backscatter. Soulis, E.D., et al, (1989, p.2366-2369, eng) 45-295
- Airborne radar characteristics of sea ice types. Jeffries, M.O., et al, (1989, p.2715-2718, eng) 45-296
- Arctic acoustics and experiments in the Marginal Ice Zone. Meredith, R.W., et al, (1989, 75p., eng) 45-312
- Radar sounder (final report Aug. 1987-Sep. 1988). Nathanson, F.E., et al, (1988, 139p., eng) 45-316
- Sea ice velocity measurements by upward-looking Doppler current profilers. Belliveau, D.J., et al, (1990, p.596-602, eng) 45-353
- Low-frequency acoustic wave-scattering phenomena under ice cover. Kuo, E.Y.T., (1990, p.361-372, eng) 45-366
- Climate and CO2 in a coupled atmosphere/ocean GCM. Washington, W.M., et al, (1989, p.1-38, eng) 45-380
- Vertical fine structure of particulate matter and nutrients in sea ice of the high Arctic. Smith, R.E.H., et al, (1990, p.1348-1355, eng) 45-434
- Ice algae impact on sea ice during spring. Cota, G.F., et al, (1990, p.1402-1415, eng) 45-435
- Environmental signatures in arctic ambient noise. Gough, E.C., Jr., (1989, p.1225-1230, eng) 45-437
- Apparent coherent energy loss of ice-reflected, high-frequency LFM pulses. Posey, J.W., et al, (1989, p.1240-1245, eng) 45-438
- Eastern Arctic ambient noise. Pritchard, R.S., (1989, p.1246-1251, eng) 45-439
- Noise Package: an autonomous ambient noise measurement system. Spychalski, S.E., et al, (1989, p.1255-1257, eng) 45-440
- Measurement of the thermal regimes in perennial sea ice. Wettlaufer, J.S., et al, (1989, p.1282-1286, eng) 45-445
- Variations in mechanical properties within a multi-year ice floe. Tucker, W.B., et al, (1989, p.1287-1291, eng) 45-446
- Bending and compression properties of young sea ice. Lau, P.A., et al, (1989, p.1292-1297, eng) 45-447
- Time-dependent effects on ridge initiation in sea ice leads. Coon, M.D., et al, (1989, p.1298-1303, eng) 45-448
- Sea-ice velocity measurement verification of an acoustic current profiler. Melrose, S.K., et al, (1989, p.1304-1307, eng) 45-449
- Persistent accumulations of ice in the ocean. Smirnov, V.I., (1989, p.271-278, eng) 45-474
- Generation of electromagnetic fields by fracture of the ice cover of marine areas. Kachurin, L.G., et al, (1989, p.815-817, eng) 45-483
- Sea ice and climate in the North Atlantic since the Pliocene. Raymo, M.E., (1989, 182p., eng) 45-504
- Double torsion test applied to freshwater ice and sea ice. Parsons, B.L., et al, (1989, p.188-200, eng) 45-517
- Iceberg wakes in Arctic sea ice. Nilsen, J.H., et al, (1990, p.81-86, eng) 45-523
- Studies of sea ice thickness from submarine and aircraft. (1989, 105p., eng) 45-562
- Concurrent remote sensing of arctic sea ice from submarine and aircraft. Wadhams, P., et al, (1989, 20p., eng) 45-563
- Top/bottom multisensor remote sensing of arctic sea ice. Comiso, J.C., et al, (1989, 56p., eng) 45-564
- Measurements of under-ice broadband coherence. Meredith, R.W., (1990, p.1003-1010, eng) 45-656
- Influence of Hudson Bay runoff and ice-melt on the salinity of the inner Newfoundland Shelf. Myers, R.A., et al, (1990, p.241-256, eng) 45-657
- Variability of thickness of ice and snow in arctic seas and its parameterization. Appel, I.L., (1989, p.66-72, eng) 45-660
- Noise immunity of towed receiving devices in marine seismic prospecting. Buravtsev, V.I.U., et al, (1988, p.34-42, rus) 45-681
- Chemical oceanography. Jones, E.P., et al, (1990, p.407-476, eng) 45-688
- Polar phytoplankton. Smith, W.O., Jr., et al, (1990, p.477-525, eng) 45-689
- Passive microwave observations of Weddell Sea ice cover. Grenfell, T.C., (1989, p.141-148, eng) 45-709
- Sea ice as biotope. Hempel, G., (1990, p.367-374, ger) 45-732
- Experiences with a coupled global model. Foreman, S.J., (1989, p.275-288, eng) 45-794
- Bering, Chukchi, and Beaufort Seas coastal and ocean zones. (1988, 128 leaves, eng) 45-807
- Sea-ice thickness measurement using an electromagnetic sounding system. Kovacs, A., et al, (1990, p.1327-1337, eng) 45-837
- Influence of environmental conditions on acoustical properties of sea ice. Jezek, K.C., et al, (1990, p.1903-1912, eng) 45-838
- Evolution of sea ice optical properties during fall freeze-up. Perovich, D.K., (1990, p.520-531, eng) 45-850
- Deflection of floating ice in proximity of a slow-moving pressure field. Bukatov, A.E., et al, (1988, p.3-8, rus) 45-875
- Reaction of sea ice to aerosol pollution of the atmosphere. Savchenko, V.G., et al, (1989, p.85-90, eng) 45-878
- Passive microwave radiometry over Antarctica. Kidd, C., et al, (1990, p.1969-1973, eng) 45-916
- Converting digital microwave radiances to units of brightness temperatures. Farmer, L.D., et al, (1990, 16p., eng) 45-932
- Observations of wave/ice interactions and ambient noise generation in the Marginal Ice Zone. Rottier, P., (1989, 36 leaves, eng) 45-965
- Sea ice temperature vertical distribution near Showa Station, 1984-1985. Matsuda, O., et al, (1990, p.139-144, eng) 45-979
- Radar sounding of the surface of the Earth from space. Nazirov, M., et al, (1990, 200p., rus) 45-986
- Oil contamination of antarctic ice. Ventajas, L., et al, (1990, 23p., spa) 45-1000
- Solar heating of a stratified ocean in the presence of a static ice cover. Perovich, D.K., et al, (1990, p.18,233-18,245, eng) 45-1020
- International symposium on Ice and Climate. Glazovskii, A.F., (1989, p.236-246, rus) 45-1070
- Radiometeorological studies in marine conditions. Mikhailov, N.F., et al, (1990, 206p., rus) 45-1090
- Transform equations of long flexural-gravity waves in an ice-covered sea. Iakovlev, V.V., (1990, p.107-113, rus) 45-1121
- Cylindrical flexural-gravity waves in an ice-covered sea. Tkachenko, V.A., et al, (1990, p.114-120, rus) 45-1122
- Remote sensing of sea ice. Kong, J.A., et al, (1990, p.208-211, eng) 45-1132
- Laboratory investigation into microwave backscattering from sea ice. Bredow, J.W., (1989, 173p., eng) 45-1143
- Sea ice modelling: a report on Hibler's dynamic thermodynamic sea ice model. Gray, N., (1989, 61p., eng) 45-1146
- Geological history of the polar oceans: Arctic versus Antarctic. Bleil, U., ed, (1990, 823p., eng) 45-1265
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- Analysis of subseafloor stresses on buried submarine pipelines -Vol.3. Murray, A., et al, (1990, 45p. + appenda., eng) 45-1558
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## Sea ice (cont.)

- Ice formations and their distribution functions. Zubakin, G.K., et al, (1989, p.109-116, rus) 45-1628
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- Calculating transfer processes in models of ice cover evolution. Appel, I.L., et al, (1990, p.130-141, rus) 45-1644
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- Numerical simulations for rare ice gouge depths. Wang, A.T., (1990, p.19-32, eng) 45-1764
- Push and tidal deformation of drifting ice. Legen'kov, A.P., (1988, 104p., rus) 45-1861
- Seasonal Sea Ice Monitoring Site (SIMS). Barber, D., (1991, p.8-9, eng) 45-1911
- Research agenda for a possible CO<sub>2</sub>-induced climate change. (1980, 122p., eng) 45-1929
- Potential response of antarctic sea ice to climatic change induced by atmospheric CO<sub>2</sub> increases. Ackley, S.F., (1981, 17p. + 3p. refs., eng) 45-1930
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- Influence of burial trench conditions on offshore pipeline stability. Rogers, B.T., (1990, p.303-319, eng) 45-1955
- First arctic pipeline and later developments. Brown, R.J., (1990, p.323-334, eng) 45-1956
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- Microwave and physical properties of sea ice in the winter MIZ. Tucker, W.B., et al, (1991, p.4573-4587, eng) 45-2084
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- Radiation budgets in the Fram Strait MIZ. Francis, J.A., et al, (1991, p.218-235, eng) 45-2106
- Outer Continental Shelf Environmental Assessment Program: Final reports of principal investigators, Vol.72. (1990, 634p., eng) 45-2155
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- Sea ice thickness distribution in the northwestern Weddell Sea. Lange, M.A., et al, (1991, p.4821-4837, eng) 45-2690
- Ice Technology for Polar Operations: proceedings of the 2nd international conference. (1990, 426p., eng) 45-2717
- Ice thickness distribution in the Arctic Ocean. Wadhams, P., (1990, p.3-20, eng) 45-2718
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- Radio scattering characteristics of the Roi Baudouin ice shelf, East Antarctica. Uratuka, S., et al, (1990, p.345-351, eng) 45-2743
- Multi-frequency imaging radar polarimetry of sea ice. Drinkwater, M.R., (1990, p.365-376, eng) 45-2745
- Influence of sea ice on ocean ambient sound. Sagen, H., et al, (1990, p.415-426, eng) 45-2748
- Determining the specific active area of scattering of a probed surface. Milekhin, O.E., et al, (1989, p.104-113, rus) 45-2756
- Characteristics of external calibration of the Kosmos-1500 satellite side-look radar. Bukharov, M.V., et al, (1989, p.114-125, rus) 45-2757
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- IHS transform for the integration of radar imagery with other remotely sensed data. Harria, J.R., et al, (1990, p.1631-1641, eng) 45-2946
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- Seasonal variability of physical-mechanical characteristics of sea ice. Gavrilov, V.P., et al, (1991, p.53-57, eng) 45-3013
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- Biological interactions. Schell, D., (1980, p.336-341, eng) 45-3046
- Sea ice fauna of Frobisher Bay, arctic Canada. Grainger, E.H., et al, (1985, p.23-30, eng) 45-3059
- Proceedings of the NIPR Symposium on Polar Meteorology and Glaciology, No.4. Kawaguchi, S., ed, (1991, 143p., eng) 45-3060
- Regularities of spatial-temporal variability of antarctic stationary polynyas. Korotkov, A.I., (1990, p.25-32, rus) 45-3077
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- FINNARP 89 sea ice field report. Gray, N., et al, (1990, 26p., eng) 45-3111
- Arctic sea-ice biota. Horner, R.A., (1989, p.123-146, eng) 45-3115
- Role of ice in the ecology of marine mammals of the Bering Sea. Fay, F.H., (1974, p.383-399, eng) 45-3119
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- Observations of short-period ice floe accelerations during leg II of the *Polarbjorn* drift. Martin, S., et al, (1991, p.10,567-10,580, eng) 45-3307
- Bio-optical model of antarctic sea ice. Arrigo, K.R., et al, (1991, p.10,581-10,592, eng) 45-3308



- Spatial variability of sea-ice properties in the northwestern Weddell Sea. Eicken, H., et al, [1991, p.10,603-10,615, eng] 45-3310
- Ice motions forced by boundary layer turbulence. DiMarco, R.L., et al, [1991, p.10,617-10,624, eng] 45-3311
- Evaluation of second-order texture parameters for sea ice classification from radar images. Shokr, M.E., [1991, p.10,625-10,640, eng] 45-3312
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- Late Pliocene-Pleistocene paleoclimate in the Jane Basin region: ODP Site 697. Burckle, L.H., et al, [1990, p.803-809, eng] 45-3529
- Latest Cretaceous to Cenozoic climate and oceanography of the Weddell Sea. Kennett, J.P., et al, [1990, p.937-960, eng] 45-3531
- Internal waves and velocity fine structure in the Arctic Ocean. D'Asaro, E.A., et al, [1991, p.12,725-12,738, eng] 45-3559
- IAHR Symposium on Ice, 10th, 1990. [1990, 3 vols., eng] 45-3562
- Microwave remote sensing in ice engineering. Swift, C.T., [1990, p.66-78, eng] 45-3565
- Method of thermodynamic numerical sea ice forecast in the Bohai Sea. Chen, W.B., et al, [1990, p.143-152, eng] 45-3572
- Results from in situ four point bending tests with Baltic Sea ice. Kujala, P., et al, [1990, p.261-278, eng] 45-3582
- Properties of sea ice in the Weddell Sea, Antarctica. Lange, M.A., [1990, p.289-299, eng] 45-3584
- Fractality of sea ice cover. Lensu, M., [1990, p.300-313, eng] 45-3585
- Occurrence and size of ice ridges in the Baltic Sea. Leppitranta, M., et al, [1990, p.314-323, eng] 45-3586
- Summer sea ice simulation in the East Greenland area. Lu, Q.M., et al, [1990, p.337-351, eng] 45-3588
- Mechanical properties of sea ice and adfreeze strength of sea ice and subsea soil. Sadvokil, A.V., et al, [1990, p.417-426, eng] 45-3595
- Ship model tests in ice with systematically varied ice parameters. Iives, L., et al, [1990, p.616-626, eng] 45-3612
- Experience with a chemically-doped fine-grained model ice. Jalonen, R., et al, [1990, p.639-651, eng] 45-3614
- Study on ice control at fishing harbor by air-bubble method. Mizuno, Y., et al, [1990, p.697-708, eng] 45-3620
- Ice cover strength decay using borehole indenter. Sinha, N.K., [1990, p.735-744, eng] 45-3624
- Small scale field indentation tests on first year sea ice. Chin, S.N., et al, [1990, p.878-889, eng] 45-3637
- Field tests of ice indentation. Frederking, R., et al, [1990, p.931-944, eng] 45-3642
- Stochastic approach to the ice-structure interaction. Kajaste-Rudnitski, J., [1990, p.961-973, eng] 45-3644
- Total ice force on multi-legged structures. Kato, K., [1990, p.974-983, eng] 45-3645
- Problems of ice force evaluation on offshore structures. Khrapaty, N.G., et al, [1990, p.984-994, eng] 45-3646
- Spongy saline ice formation in the vicinity of a stagnation point. Lock, G.S.H., [1990, p.999-1009, eng] 45-3648
- Effect of ice pile-up on the ice force of a conical structure. Maattanen, M., et al, [1990, p.1010-1021, eng] 45-3649
- Origin of spongy ice. Makkonen, L., [1990, p.1022-1030, eng] 45-3650
- Design optimization of jacket platforms for ice infested waters. Wang, L.Y., et al, [1990, p.1056-1070, eng] 45-3653
- Application of Maattanen model on multilegged structures. Wang, L.Y., et al, [1990, p.1071-1083, eng] 45-3654
- Model test investigation of local ice pressure distribution at cylindrical structures. Wessels, E., [1990, p.1084-1096, eng] 45-3655
- Contribution of damping in the Maattanen model. Xu, J.Z., et al, [1990, p.1097-1104, eng] 45-3656
- Comparative ground truth and remotely sensed measurements of Baltic Sea ice ridges. Kankaanpää, P., et al, [1990, p.1130-1143, eng] 45-3660
- Proceedings of the 2nd Synthetic Aperture Radar Workshop, Jun 1990. Kobrick, M., ed, [1990, 57p. + appends., eng] 45-3752
- Synthetic aperture radar observations of the Greenland Ice Sheet. Jezek, K.C., et al, [1990, p.21-28, eng] 45-3753
- Comparison of active and passive microwave signatures of arctic sea ice. Drinkwater, M.R., et al, [1990, p.29-36, eng] 45-3754
- Hazards to antarctic exploration and production. Reid, D.E., et al, [1990, p.31-45, eng] 45-3756
- Antarctic sea ice: a habitat for the foraminifer *Neoglobobulimina pachyderma*. Dieckmann, G.S., et al, [1991, p.182-189, eng] 45-3837
- Interpretation of sea ice using NOAA-AVHRR data. Ahlås, K., et al, [1990, 46p., eng] 45-3850
- Digital transmission of satellite images to an icebreaker. Mäkitara, K., et al, [1990, 39p., fin] 45-3852
- Sea ice distribution**
- Arctic sea ice and atmospheric circulation. Wendler, G., et al, [1987, p.173-176, eng] 45-12
- Synthetic aperture radar imaging of polynyas. Lyden, J.D., et al, [1987, p.243-245, eng] 45-21
- Sea ice physical properties near Casey Station. Allison, I., et al, [1988, p.214-233, chi] 45-49
- Ice concentrations affecting navigation to Scoresby Sund in East Greenland. Christensen, F.T., et al, [1990, p.245-256, eng] 45-138
- Ice concentrations on the north east Greenland shelf. Lintrup, M.J., et al, [1990, p.272-281, eng] 45-140
- Ice Data Acquisition Program in the Barents Sea. Spring, W., et al, [1990, p.283-298, eng] 45-141
- Long term ice forecasting potential in East Greenland waters. Zorn, R., et al, [1990, p.300-309, eng] 45-142
- IGARSS '89 quantitative remote sensing: an economic tool for the nineties; Proceedings. [1989, 3001p. (5 vols.), eng] 45-227
- Automated ice motion tracking at the Alaska SAR facility. Kwok, R., [1989, p.608-611, eng] 45-241
- Comparison of remotely sensed sea ice parameters. Schweiger, A.J., et al, [1989, p.769-772, eng] 45-248
- Sensitivity of sea ice algorithms to the point selection. Steffen, K., et al, [1989, p.773-776, eng] 45-249
- Automatic estimation of ice kinematics using remote sensing data. Flesche, H., et al, [1989, p.1133-1136, eng] 45-260
- Azimuth dependence in SAR-imaging of open water leads in ice infested areas. Askne, J., et al, [1989, p.1532-1534, eng] 45-276
- SIBEX Physical Oceanography Workshop, Cambridge, U.K., Mar. 9-27, 1987. [1990, 38p., eng] 45-304
- Sea ice drift and deformation in the western Arctic. Pease, C.H., et al, [1989, p.1276-1281, eng] 45-444
- Weddell gyre: temperature maximum stratum. Bagriantsev, N.V., et al, [1989, p.8331-8334, eng] 45-471
- Meteorological and sea ice forecasts to arctic region military units. Cianflone, R.E., et al, [1989, p.223-243, eng] 45-540
- KRMS GEOSAT-LIMEX '87 data products. Eppler, D.T., et al, [1988, 42p., eng] 45-561
- Arctic environmental drifting buoy, Aug. 1987-Apr. 1988. Honjo, S., et al, [1990, 128p., eng] 45-565
- Winter ice intensity of the Baltic coast of Schleswig-Holstein. Koslowski, G., [1989, p.61-80, ger] 45-616
- Study on the polar ocean and the Sea of Okhotsk. Aota, M., et al, [1989, p.600-612, jpn] 45-625
- Sea ice characteristics and relationship with typhoons and subtropical high. Bian, L., [1989, p.45-54, chi] 45-684
- Polar oceanography. Part B: chemistry, biology, and geology. Smith, W.O., Jr., ed, [1990, p.407-760, eng] 45-687
- Polar zooplankton. Smith, S.L., et al, [1990, p.527-598, eng] 45-690
- Simulation of a century of arctic ice cover variations. Hakkinen, S., et al, [1990, p.15,959-15,969, eng] 45-711
- Winter atmosphere over sea ice. Kottmeier, C., et al, [1990, p.16,551-16,560, eng] 45-717
- Statistical study on sea ice in the Okhotsk Sea observed by GMS for 10 years. Kano, Y., et al, [1989, p.43-58, eng] 45-718
- Major features of ice conditions in the Bellinghousen Sea. Evseev, V.V., [1990, p.325-330, eng] 45-729
- Atlantic ice massif-cycle and isolation processes. Kozlovskii, A.M., [1990, p.331-339, eng] 45-730
- Divergent redistribution of ice in the Northern Arctic Ocean. Nazirov, M., [1987, p.244-254, eng] 45-862
- Effect of hydrometeors on radar images of sea ice. Aleksandrov, V.I.U., [1987, p.255-264, eng] 45-863
- Nonlinear seasonal energy balance model for polar continentality and climate study. Hyde, W.T., et al, [1990, p.18,653-18,668, eng] 45-883
- Sea-ice kinematics as determined by remotely-sensed ice drift. Lewis, J.K., et al, [1989, p.1113-1121, eng] 45-900
- Seasonal Ice Zone Experiment. Sandven, S., [1990, p.26-27, eng] 45-912
- Role of Antarctica in Southern Hemisphere climate. Satyamurti, P., et al, [1986, p.39-50, eng] 45-915
- East Greenland ice extent 1982-86 and the occurrence of ice edge mesoscale features. Cowan, A.M., et al, [1987, 7p. + appends., eng] 45-940
- MIZEX 83 data summary. Squire, V.A., et al, [1983, 154p., eng] 45-942
- Coupled sea ice model of interannual ice cover. Fleming, G.H., [1989, 224p., eng] 45-1133
- Image texture analysis of sea ice. Holyer, R.J., [1990, 264p., eng] 45-1134
- Effect of the arctic sea ice in January on the Asia-Western Pacific circulation in June. Fang, Z., [1990, p.113-119, eng] 45-1170
- Coupled one-dimensional sea ice-ocean model applied to a semi-enclosed basin. Omstedt, A., [1990, p.568-582, eng] 45-1175
- Interaction of sea ice, snow, and glaciers with the atmosphere and ocean. Kotliakov, V.M., ed, [1990, 74p., eng] 45-1261
- Sea ice fluctuations in the western Labrador Sea (1963-1988). Peterson, I.K., et al, [1990, 130p., eng] 45-1287
- Sea ice data for the Newfoundland Shelf, 1988-1989. Fissel, D.B., et al, [1989, 165p., eng] 45-1288
- Predictions and studies with a one-dimensional ice-ocean model. Riedlinger, S.H., et al, [1990, p.1545-1562, eng] 45-1386
- Spring bloom oceanographic interaction at the Bering Sea ice edge zone. Niebauer, H.J., et al, [1990, p.22,229-22,241, eng] 45-1413
- Sea ice concentrations in the Canada Basin during 1988. Serreze, M.C., et al, [1990, p.22,253-22,267, eng] 45-1414
- Sea ice observations and oceanic processes on the antarctic continental shelf. Jacobs, S.S., et al, [1990, p.135-136, eng] 45-1415
- Role of the oceans in climatic variability and climatic change. Mysak, L.A., et al, [1990, p.352-369, eng] 45-1425
- Oriented growth of ice crystals in moving water streams. Cherepanov, N.V., et al, [1989, p.144-153, rus] 45-1501
- O-18 concentrations in sea ice of the Weddell Sea, Antarctica. Lange, M.A., et al, [1990, p.315-323, eng] 45-1542
- Large-scale features of ice cover formation in the Weddell gyre region. Bagriantsev, N.V., [1990, p.134-151, rus] 45-1564
- Structure and dynamics of the Pacific ice massif. Krivosheina, V.K., [1990, p.165-174, rus] 45-1565
- Sea ice concentration estimated from Geosat waveforms. Chase, J.R., et al, [1990, p.18,015-18,025, eng] 45-1607
- SPRI participation in the Winter Weddell Gyre Study 1989. Wadhama, P., et al, [1991, p.29-38, eng] 45-1615
- "Ice rivers" in arctic seas. Benzeman, V.I.U., [1989, p.91-98, rus] 45-1658
- Using a Kalman filter for calculating ice drift parameters. Lashov, E.S., et al, [1989, p.99-105, rus] 45-1659
- Shear flow of sea ice in the marginal ice zone with collision rheology. Leppitranta, M., et al, [1990, p.57-74, eng] 45-1679
- Relation of periodic Greenland Sea sea-ice anomalies to climatic cycles. Mysak, L.A., et al, [1990, p.111-133, eng] 45-1801
- Numerical modeling of ocean circulation and ice cover over the continental shelf. Ikeda, M., [1991, p.97-117, eng] 45-1807
- Report of the International Ice Patrol in the North Atlantic. [1988, 118p., eng] 45-1864
- Character and distribution of sea-ice and iceberg scour. Lewis, C.F.M., et al, [1990, p.57-101, eng] 45-1946
- Seasonal and inter-annual variations in antarctic sea ice extent as mapped by radar altimetry. Laxon, S., [1990, p.1553-1556, eng] 45-1979
- Production of Antarctic Bottom Water in the Weddell and Ross Seas. St. Pierre, D.B., [1989, 124p., eng] 45-2071
- Arctic contribution to upper-ocean variability in the North Atlantic. Walsh, J.E., et al, [1990, p.1462-1473, eng] 45-2212
- Seasonal ice zone studies. Sandven, S., et al, [1990, p.567-591, eng] 45-2391
- Interaction of sea ice, snow and glaciers with the atmosphere and ocean. Kotliakov, V.M., ed, [1990, p.155-248, eng] 45-2409
- Impacts of Hudson Bay on the terrestrial climate of the Hudson Bay Lowlands. Rouse, W.R., [1991, p.24-30, eng] 45-2469
- Sea ice: its formation, distribution and properties. Squire, V.A., [1990, p.3-8, eng] 45-2537
- Heat flux at the ice-ocean interface. Wettlaufer, J.S., [1991, p.7215-7236, eng] 45-2540
- Provision of meteorological information for safe navigation in the southern ocean. Lutsenko, E.I., [1990, p.35-40, rus] 45-2549

**sea ice distribution (cont.)**

- Ice condition features in antarctic waters in summer 1986-1987. Vanda, I.U.A., [1990, p.64-71, rus] 45-2571
- Radiogrammetric image processing. Leberl, F.W., [1990, 595p. (pertinent p.499-525), eng] 45-2601
- Airborne radar altimeter observations of marginal sea ice. Drinkwater, M.R., [1991, p.4555-4572, eng] 45-2672
- Numerical study of interannual ocean forcing on arctic ice. Fleming, G.H., et al. [1991, p.4589-4603, eng] 45-2673
- Wind-induced mesoscale features in a coupled ice-ocean system. Ikeda, M., [1991, p.4623-4629, eng] 45-2675
- Coupled ice-ocean model studies. Piacek, S., et al. [1991, p.4631-4650, eng] 45-2676
- Ocean eddy-ocean jet interaction in a marginal ice zone. Smith, D.C., IV, et al. [1991, p.4675-4689, eng] 45-2679
- Thermodynamic model for sea ice advance and retreat. Tang, C.L., [1991, p.4723-4737, eng] 45-2682
- Fram Strait satellite image-derived ice motions. Emery, W.J., et al. [1991, p.4751-4768, eng] 45-2684
- Evidence for stability enhancement of sea ice in the Greenland and Labrador Seas. Marsden, R.F., et al. [1991, p.4783-4789, eng] 45-2686
- Interannual variability of the spatial distribution of sea ice in the north polar region. Parkinson, C.L., [1991, p.4791-4801, eng] 45-2687
- Design of a sea ice forecasting system for the Barents Sea. Preller, R., et al. [1990, p.379-393, eng] 45-2746
- Deployment strategy for satellite tracked drifters to support iceberg drift forecasting. El-Tahan, M., et al. [1990, p.395-411, eng] 45-2747
- Multiyear floe and hummock field survey in the east Beaufort Sea. Hudson, R.D., et al. [1982, 15p. + appends., eng] 45-2851
- Multi-year ice thickness distribution in the Beaufort Sea. Dickins, D.F., [1983, 35p. + appends., eng] 45-2853
- Construction of sea ice maps from satellite data. Nikitin, P.A., et al. [1990, p.926-936, eng] 45-2970
- Fluctuations of sea ice extent in the Antarctic. Enomoto, H., et al. [1991, p.58-73, eng] 45-3064
- Water exchange under fast ice in Lützw-Holm Bay. Ohshima, K.I., et al. [1991, p.74-80, eng] 45-3065
- Satellite information on ice conditions in the southern ocean and its scientific and operational application to navigation. Provorkin, A.V., et al. [1990, p.13-16, rus] 45-3074
- Hydro-meteorological conditions and characteristics of ship icing in antarctic waters. Panov, V.V., et al. [1990, p.17-20, rus] 45-3075
- Sea ice distribution and navigation difficulties. Buzuev, A.I.A., et al. [1990, p.20-25, rus] 45-3076
- Hydro-meteorological information distribution to SAE ships. Kornilov, N.A., et al. [1990, p.36-40, rus] 45-3079
- Sea ice spatial-temporal variability and navigation conditions. Romanov, A.A., [1990, p.62-70, rus] 45-3082
- Predictability of seasonal ice cover variations in the southern ocean. Romanov, A.A., et al. [1990, p.82-86, rus] 45-3083
- Forecasters handbook for the arctic. Sechrist, F.S., et al. [1989, 364p., eng] 45-3092
- Long-range prediction of regional sea ice anomalies in the Arctic. Chapman, W.L., et al. [1991, p.271-288, eng] 45-3236
- Dynamics of arctic ice in seasonal energy balance model of the climate with regional resolution. Kolomeev, M.P., et al. [1990, p.22-27, eng] 45-3269
- Ocean feature study using synthetic aperture radar. Ikeda, M., et al. [1991, p.10,593-10,602, eng] 45-3309
- Sea ice distribution in the Soviet arctic. Barnett, D., [1991, p.47-62, eng] 45-3326
- Late spring diatom distribution between New Zealand and the Ross Ice Shelf. Burckle, L.H., et al. [1987, p.74-81, eng] 45-3372
- Simulations of continental ice sheet growth over the last glacial-interglacial cycle. Deblonde, G., et al. [1991, p.9189-9215, eng] 45-3413
- Scene identification and its effect on cloud radiative forcing in the Arctic. Li, Z.Q., et al. [1991, p.9175-9188, eng] 45-3469
- Recent variations in arctic and antarctic sea-ice covers. Gloersen, P., et al. [1991, p.33-36, eng] 45-3489
- Quantification of chlorophyll and salinity distributions in sea ice. Eicken, H., [1991, 105p., ger] 45-3523
- Sea ice and climate. Zakharov, V.F., [1990, p.75-99, eng] 45-3540
- Qualitative models of Pleistocene glaciation, oceans, and climates. Grosswald, M.G., [1990, p.100-126, eng] 45-3541
- Sensitivity of sea ice break-up to air temperatures. Etkin, D.A., [1991, p.21-34, eng] 45-3547
- Variation of upper layer dynamics during breakup of the seasonal ice cover in Hudson Bay. Lepage, S., et al. [1991, p.12,711-12,724, eng] 45-3558
- Microwave remote sensing in ice engineering. Swift, C.T., [1990, p.66-78, eng] 45-3565
- Prediction of the horizontal progressions of arctic ice by remote methods. Frankenstein, S., et al. [1990, p.1113-1121, eng] 45-3658
- Helicopterborne remote sensing of antarctic sea ice. Granberg, H.B., et al. [1990, p.313-325, eng] 45-3685
- Sea ice response to global climatic change. Hibler, W.D., III, [1990, p.125-150, eng] 45-3822
- Commentary on sea ice feedback. Moritz, R.E., [1991, p.151-163, eng] 45-3823
- Sea level**
- Global warming—are we entering the greenhouse century. Schneider, S.H., [1989, 317p. (Pertinent p.162-165 and p.300-302), eng] 45-595
- Deterioration of antarctic ice sheet and sea-level rise. Nakawo, M., [1989, p.562-575, jpn] 45-623
- Svalbard radiocarbon date list I. Forman, S.L., et al. [1990, 48p., eng] 45-1180
- Paleoenvironmental significance of glaciomarine biofacies in the Gulf of Alaska. Lagoe, M.B., et al. [1989, p.194-209, eng] 45-1183
- Sea-level change and glacier oscillation indicators on Melville Moraine, Northwest Territories. Dredge, L.A., [1990, p.1215-1224, eng] 45-1272
- Currents and sea level off Nova Scotia. Lively, R.R., [1989, 304p., eng] 45-1282
- Ice cover effects in models of sea level fluctuations and water circulation. Proshutinskii, A.I.U., [1990, p.90-104, rus] 45-1640
- Role of land ice in present and future sea-level change. Meier, M.F., [1990, p.171-184, eng] 45-1656
- Response of the antarctic ice sheet to future greenhouse warming. Huybrechts, P., et al. [1990, p.93-102, eng] 45-1799
- Submerged shoreline on the inner continental shelf of Maine. Shipp, R.C., et al. [1989, p.11-28, eng] 45-2056
- Late Quaternary geologic history of the Maine coast. Belknap, D.F., et al. [1989, p.29-46, eng] 45-2057
- Geomorphology and late Quaternary evolution of the Saco Bay region. Kelley, J.T., et al. [1989, p.47-65, eng] 45-2058
- Pleistocene deglaciation model based upon predictions of sea level change. Tushingham, A.M., et al. [1991, p.4497-4523, eng] 45-2229
- Breakup of antarctic ice. Zwally, H.J., [1991, p.274, eng] 45-2265
- Interaction of sea ice, snow and glaciers with the atmosphere and ocean. Kotliakov, V.M., ed. [1990, p.155-248, eng] 45-2409
- Paleoclimatic implications of an early Holocene glacier advance on Disko Island, West Greenland. Ingólfsson, O., et al. [1990, p.297-311, eng] 45-2412
- Oligocene-Miocene oxygen isotopes, eustasy and margin erosion. Miller, K.G., et al. [1991, p.6829-6848, eng] 45-2503
- Marine transgression, shoreline emergence: sea level changes. Taylor, A.E., [1991, p.6893-6909, eng] 45-2505
- Effect of sedimentary changes on glaciomarine facies architecture. Boulton, G.S., [1990, p.15-52, eng] 45-2780
- West Antarctic Ice Sheet Initiative. Vol.1: implementation. Bindshadler, R.A., ed. [1991, 53p., eng] 45-2880
- West Antarctic Ice Sheet Initiative. Discipline reviews. Bindshadler, R.A., ed. [1991, 143p., eng] 45-3277
- Sea level response to ice sheet evolution. Jacobs, S.S., [1991, p.23-47, eng] 45-3279
- Late Quaternary glacial-interglacial fluctuation in the Ross Sea. Anderson, J.B., [1991, p.87-100, eng] 45-3281
- Glacial dynamics (glaciology). Whillans, I., [1991, p.131-143, eng] 45-3283
- Greenland ice sheet and greenhouse warming. Huybrechts, P., et al. [1991, p.399-412, eng] 45-3291
- Antarctica and global change. Budd, W.F., [1991, p.271-299, eng] 45-3471
- Sea-level changes: consequences for the Southern Hemisphere. Lutjeharms, J.R.E., et al. [1991, p.317-337, eng] 45-3472
- Orbital forcing of low-frequency glacioeustasy. Matthews, R.K., et al. [1991, p.6797-6803, eng] 45-3473
- Sea spray**
- Brine and immiscible liquids for spray ice removal. Sackinger, W.M., et al. [1990, p.575-581, eng] 45-160
- Laboratory test for measurement of adhesion strength of spray ice to coated flat plates. Mulherin, N.D., et al. [1990, 44p., eng] 45-976
- Ship spraying/icing model to estimate icing rate. Zakrzewski, W.P., et al. [1988, p.399-404, eng] 45-1380
- Spray and ice measurement instrumentation for ships. Ryerson, C.C., et al. [1991, p.748-757, eng] 45-2384
- Numerical modeling of mixed snow and sea spray icing. Horjen, I., [1990, p.945-960, eng] 45-3643
- Spongy saline ice formation in the vicinity of a stagnation point. Lock, G.S.H., [1990, p.999-1009, eng] 45-3648
- Sea transportation**
- See *also*: Marine transportation
- Sea water**
- Low-temperature effects on the microstructure of cement paste exposed to seawater. Ramachandran, V.S., et al. [1990, p.340-347, eng] 45-358
- Ice algae impact on sea ice during spring. Cota, G.F., et al. [1990, p.1402-1415, eng] 45-435
- Surface heat budget of a polynya off Queen Maud Land. Ramesh Kumar, M.R., et al. [1989, p.1063-1070, eng] 45-522
- Origin of the properties of the halocline north of Ellesmere I. Jones, E.P., et al. [1990, p.485-498, eng] 45-524
- Influence of Hudson Bay runoff and ice-melt on the salinity of the inner Newfoundland Shelf. Myers, R.A., et al. [1990, p.241-256, eng] 45-657
- Melting and mixing processes near icebergs and in ice covered regions. Gilmour, P., [1990, 34p., eng] 45-946
- Solar heating of a stratified ocean in the presence of a static ice cover. Perovich, D.K., et al. [1990, p.18,233-18,245, eng] 45-1020
- Winter sea-ice cover and ocean processes. Gordon, A.L., et al. [1990, p.140-142, eng] 45-1416
- Relation of periodic Greenland Sea sea-ice anomalies to climatic cycles. Mysak, L.A., et al. [1990, p.1111-1133, eng] 45-1801
- Heat transfer from Atlantic waters to Arctic Ocean sea ice. Moore, R.M., et al. [1990, p.2149-2152, eng] 45-1993
- Ice core record of oceanic emissions of dimethylsulphide. Legrand, M., et al. [1991, p.144-146, eng] 45-2019
- Behavior of a glacier-derived suspended sediment plume in a small arctic inlet. Dowdeswell, J.A., et al. [1991, p.111-123, eng] 45-2021
- Warming in the Arctic. Quadfasel, D., et al. [1991, p.385, eng] 45-2262
- Salinity stratification below sea ice during melting season. Matsuda, O., et al. [1990, p.357-362, eng] 45-2596
- Ice shelf water at the Weddell Sea shelf break. Foldvik, A., et al. [1990, p.125-130, eng] 45-2837
- Antarctic saline lake zooplankton changes due to seawater incursions. Eslake, D., et al. [1991, p.93-99, eng] 45-2944
- Fine thermohaline structure of water near antarctic icebergs. Popov, I.K., et al. [1990, p.87-92, rus] 45-3084
- Determination of some heavy metals in antarctic snow and coastal sea water. Saini, G., et al. [1990, p.27-30, eng] 45-3196
- Air water interface in coastal surface waters. Loglio, G., et al. [1990, p.95-102, eng] 45-3200
- Development of seawater batteries as a long-term arctic power source. Hammond, R., et al. [1990, p.1122-1129, eng] 45-3659
- Sea water freezing**
- Study on freezing in harbors. Hirasawa, M., et al. [1990, p.299-304, jpn] 45-757
- Evolution of sea ice optical properties during fall freeze-up. Perovich, D.K., [1990, p.520-531, eng] 45-850
- Anatomy of a freezing lead. Gow, A.J., et al. [1990, p.18,221-18,232, eng] 45-1021
- Sea ice modelling: a report on Hibler's dynamic thermodynamic sea ice model. Gray, N., [1989, 61p., eng] 45-1146
- On the growth of marine icicles. Chung, K.K., et al. [1990, p.393-408, eng] 45-1681
- Structure and dynamics of the Arctic Ocean ice cover. Untersteiner, N., [1990, p.37-51, eng] 45-1689
- Sea ice and climate. Zakharov, V.F., [1990, p.75-99, eng] 45-3540
- Brine-induced advection of dissolved aromatic hydrocarbons to arctic bottom waters. Payne, J.R., et al. [1991, p.940-951, eng] 45-3818
- Sea waves**
- See *also*: Ocean waves
- Sealing**
- Wear and tightness of moving seals. Popov, S.N., et al. [1990, p.614-623, eng] 45-164
- Sealing cracks in flexible pavements in cold regions. Chong, G.J., et al. [1988, p.12-19, eng] 45-525
- Hydraulic seals in arctic conditions. Soudunsaari, R., et al. [1989, p.77-84, eng] 45-1218
- Search and rescue**
- See *also*: First aid
- Seasonal ablation**
- Thermic and humidity relations of chosen Spitsbergen soils. Angiel, M., [1990, p.25-37, eng] 45-2430
- Seasonal freeze thaw**
- Geocryology of the USSR. Mountainous regions of southern USSR. Ershov, E.D., ed. [1989, 358p., rus] 45-430
- Seasonal frost mounds at the head of the Urumqi River. Zhu, C., et al. [1990, p.55-62, chi] 45-462
- Natural conditions in developed regions of Siberia. Klimovskii, I.V., ed. [1987, 172p., rus] 45-568
- Seasonally thawing and freezing layers of the Lena-Aldan interfluve. Vasil'ev, I.S., [1987, p.65-77, rus] 45-576
- Variations in geocryological conditions of gas pipeline routes in Yakutia. Konstantinov, I.P., et al. [1987, p.126-134, rus] 45-582
- Methods of calculating moisture migration in seasonal freezing and thawing of soils. Ianitkii, P.A., [1989, p.36-44, eng] 45-651
- Engineering geology of the USSR: Western Siberian and Turan plates. Trofimov, V.T., ed. [1990, 664p., rus] 45-1571
- Rock blasting in seasonally freezing ground. Reference manual. Frash, G.B., [1990, 110p., rus] 45-1703

- Hydrothermal regime of the ice-divide area of Austfonna, Nordaustlandet. Zagorodnov, V.S., et al, (1990, p.133-141, rus) 45-1752
- Evaluating bearing ground stability of gas fields in the cryolithozone. Ivlev, A.I.U., (1989, p.66-73, rus) 45-2010
- Temperature and moisture content of soils in Western Yamal. Sautkin, E.V., et al, (1989, p.111-119, rus) 45-2016
- Thermal regime surrounding a longitudinal edge drain. Allen, W.L., (1991, p.164-177, eng) 45-2331
- Development of the cryolithozone of Transbaikalia. Aleksandrov, A.S., et al, (1990, 105p., rus) 45-2425
- Structure and regime of swamps in the permafrost zone of Western Siberia. Novikov, S.M., (1989, p.80-89, rus) 45-2446
- Engineering-geodynamic conditions of the Middle Yenisey reservoir. Bazhenova, N.N., et al, (1990, p.93-98, rus) 45-2868
- See *also*: Freeze thaw cycles
- Seasonal thaw layer  
See *also*: Active layer; Thaw depth
- Seasonal variations
- Summer 1987 flooding in glacial basins of the Pennine Alps. Rey, Y., et al, (1990, p.115-124, fre) 45-370
- Persistent accumulations of ice in the ocean. Smirnov, V.I., (1989, p.271-278, eng) 45-474
- Winter ice intensity of the Baltic coast of Schleswig-Holstein. Koslowski, G., (1989, p.61-80, ger) 45-616
- Simulation of a century of arctic ice cover variations. Häkkinen, S., et al, (1990, p.15,959-15,969, eng) 45-711
- Climate studies with a coupled atmosphere-upper-ocean-ice-sheet model. Fichetef, T., et al, (1989, p.249-261, eng) 45-793
- Experiments on lichen growth. I. Seasonal patterns and environmental controls. Benedict, J.B., (1990, p.244-254, eng) 45-887
- Phytoplankton dynamics in three Rocky Mountain lakes, Colorado, U.S.A. McKnight, D.M., et al, (1990, p.264-274, eng) 45-889
- Sea-ice kinematics as determined by remotely-sensed ice drift. Lewis, J.K., et al, (1989, p.1113-1121, eng) 45-900
- Seasonal growth bands in pingo ice. Mackay, J.R., (1990, p.1115-1125, eng) 45-987
- Formation of extremely large avalanches in the Elbrus area, 1967-1987. Troshkina, E.S., et al, (1989, p.213-217, rus) 45-1064
- Glaciers of the Austrian Alps 1986/87. Patzelt, G., (1988, p.177-192, ger) 45-1097
- Climatological analysis of snowfall on the Qinghai-Xizang Plateau. Zou, J., et al, (1989, p.411-422, eng) 45-1185
- Variations in the salinity of seasonally and perennially frozen soils. Anisimova, N.P., (1990, p.40-46, rus) 45-1199
- Analysis of winter low-flow rates in New Hampshire streams. Melloh, R.A., (1990, 12p., eng) 45-1260
- Distribution of the volume of air and brine pockets in sea ice. Nazintsev, I.U.L., et al, (1989, p.109-123, rus) 45-1498
- Seasonal variation of some constituents of antarctic tropospheric air. Hogan, A.W., et al, (1990, p.2365-2368, eng) 45-1514
- Snow cover mapping of Afghanistan's mountains with space imagery. Kravtsova, V.I., (1990, p.295-302, eng) 45-1526
- Fall phases of ice phenomena on the Barents Sea. Zubakin, G.K., (1989, p.102-109, rus) 45-1627
- Modelling of fall-winter ice phenomena. Petrov, V.M., et al, (1990, p.53-61, rus) 45-1636
- Space-time variations in characteristics of ice cover. Makhtas, A.P., et al, (1990, p.71-80, rus) 45-1638
- Simulation of seasonal snowcover based on air temperature and precipitation. Motoyama, H., (1990, p.1104-1110, eng) 45-1651
- Impact of fluctuations in mean precipitation and temperature on runoff. Karl, T.R., et al, (1989, p.423-447, eng) 45-2249
- Seasonal ice zone studies. Sandven, S., et al, (1990, p.567-571, eng) 45-2391
- Classifying lithological complexes of seasonally-saturated deposits. Ivanova, L.D., et al, (1989, p.13-22, rus) 45-2625
- Air temperature, rocks, and ground water in the Kungur cave. Dorofeev, E.P., (1990, p.29-34, rus) 45-2700
- Change in frost season characteristics in Winnipeg, 1872-1988. Rannie, W.F., (1990, p.168-177, eng) 45-2755
- Seasonal variability of physical-mechanical characteristics of sea ice. Gavrilov, V.P., et al, (1991, p.53-57, eng) 45-3013
- Chemical components of arctic tropospheric aerosols. Barrie, L.A., et al, (1990, p.211-226, eng) 45-3047
- Fluctuations of sea ice extent in the Antarctic. Enomoto, H., et al, (1991, p.58-73, eng) 45-3064
- Predictability of seasonal ice cover variations in the southern ocean. Romanov, A.A., et al, (1990, p.82-86, rus) 45-3083
- Long-range prediction of regional sea ice anomalies in the Arctic. Chapman, W.L., et al, (1991, p.271-288, eng) 45-3236
- Overwinter soil temperature patterns under six tillage-residue combinations. Benoit, G.R., et al, (1991, p.86-90, eng) 45-3306
- Food webs and primary production in the Barents Sea. Sakshaug, E., (1991, p.1-8, eng) 45-3460
- Antarctica and global change. Budd, W.F., (1991, p.271-299, eng) 45-3471
- Morphogenesis of the brown algae *Desmarestia antarctica*-seasonal variations. Wiencke, C., et al, (1991, p.65-78, eng) 45-3553
- Variation of upper layer dynamics during breakup of the seasonal ice cover in Hudson Bay. Lepage, S., et al, (1991, p.12,711-12,724, eng) 45-3558
- Sediment transport
- Predicting sediment concentrations for subarctic creeks. Wilbur, S., (1989, p.145-156, eng) 45-342
- Clast-fabric strength in periglacial slope deposits as a function of clast size and shape. Yamamoto, K., (1989, p.187-197, eng) 45-830
- Estimate of snow avalanche debris transport, Kaghan Valley, Himalaya, Pakistan. Bell, I., et al, (1990, p.317-321, eng) 45-893
- Geomorphic impact of spring avalanches in northwest Spitsbergen (79N). André, M.F., (1990, p.97-110, eng) 45-1292
- Alpine debris flows and their sedimentary properties. A case study from the French Alps. Nieuwenhuijzen, M.E., et al, (1990, p.111-128, eng) 45-1293
- Ice-marginal depositional processes in a polar maritime environment, Vestfold Hills, Antarctica. Fitzsimons, S.J., (1990, p.279-286, eng) 45-1538
- Debris flows 1987 in Switzerland: modelling and fluvial sediment transport. Rickenmann, D., (1990, p.371-378, eng) 45-1974
- Investigation of 1987 debris flows in the Swiss Alps. Haeblerli, W., et al, (1990, p.303-310, eng) 45-1975
- Flood of Aug. 1987 in Switzerland. Naef, F., et al, (1990, p.222-227, ger) 45-1985
- Observations of debris transport and discharge on K2 Glacier, West China. Drozdowski, E., (1989, p.31-47, eng) 45-1988
- Morphology of a rock glacier in Ireland. Wilson, P., (1990, p.237-247, eng) 45-2026
- Alpine proglacial fluvial sediment budget. Warburton, J., (1990, p.261-272, eng) 45-2029
- Transport of suspended materials in Swedish rivers. Brandt, M., (1990, p.273-283, eng) 45-2030
- Role of sublimation in particle supply for aeolian transport in cold environments. Neuman, C.M., (1990, p.329-335, eng) 45-2032
- Mechanics of aeolian transport of snow and sand. Kind, R.J., (1990, p.855-866, eng) 45-2097
- Detection of coarse sediment movement using radio transmitters. Chacho, E.F., Jr., et al, (1990, p.5-9, eng) 45-2099
- Movement and storage of sediment in rivers of the United States and Canada. Meade, R.H., et al, (1990, p.255-280, eng) 45-2151
- High Arctic thrust block moraines. Evans, D.J.A., et al, (1991, p.93-97, eng) 45-2174
- Glacial waters, solid transport and decantation in hydroelectrical systems. Bezinge, A., et al, (1989, p.247-256, fre) 45-2286
- Ice rafting of sedimentary material in the Azov Sea. Aibulatov, N.A., et al, (1991, p.179-187, eng) 45-2440
- Glacimarine environments: processes and sediments. Dowdeswell, J.A., ed, (1990, 423p., eng) 45-2778
- On the description and modelling of glacimarine sediments and sedimentation. Dowdeswell, J.A., et al, (1990, p.1-13, eng) 45-2779
- Effect of sedimentary changes on glacimarine facies architecture. Boulton, G.S., (1990, p.15-52, eng) 45-2780
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- Recent sedimentation processes on World Ocean shelves. Aibulatov, N.A., ed, (1990, 207p., rus) 45-2874
- Transfer of terrigenous suspended material to the Barents Sea by glaciers. Medvedev, V.S., et al, (1990, p.103-110, rus) 45-2878
- Quantitative distribution and the dynamics of sediments in the Kara Sea. Medvedev, V.S., et al, (1990, p.110-120, rus) 45-2879
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- Influence of ice cover on transverse bed slopes in a curved alluvial channel. Tsai, W.F., et al, (1990, p.800-810, eng) 45-3630
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- Erosion and sediment transport in Svalbard. Bogen, J., (1990, p.147-158, eng) 45-3791
- Glacial and glaciofluvial material transport in subpolar glaciers; examples from Svalbard. Solli, J.L., et al, (1990, p.159-165, eng) 45-3792
- Water and sediment yields into the Sutlej River from the High Himalaya. Sharma, P.D., et al, (1991, p.87-100, eng) 45-3885
- Sedimentation
- Design of urban sedimentation basins in Anchorage. Jokela, J.B., et al, (1990, p.761-789, eng) 45-427
- Effects of glacial surging on sedimentation in a modern ice-contact lake, Alaska. Smith, N.D., (1990, p.1393-1403, eng) 45-894
- Niveo-aeolian sedimentation in Greenland. Dijkman, J.W.A., (1990, p.83-96, eng) 45-1291
- Deposition of the glaciomarine mud in the Gulf of Maine. Oldale, R.N., (1989, p.1-10, eng) 45-2055
- Continuum mixture theory with application to turbulent snow. Decker, R., (1990, p.877-887, eng) 45-2096
- Holocene glacier variations in Norway. Nesje, A., et al, (1991, p.25-40, eng) 45-2314
- Cambridge Fjord basin evolution during Baffin I. deglaciation. Stravers, J.A., et al, (1991, p.72-90, eng) 45-2315
- Development of the Earth's surface in Finland. Aartolahti, T., (1990, p.203-219, fin) 45-2421
- Moraine formation as a product of subglacial sedimentation. Sharpe, D.R., et al, (1990, p.1478-1486, eng) 45-2482
- Glacimarine environments: processes and sediments. Dowdeswell, J.A., ed, (1990, 423p., eng) 45-2778
- On the description and modelling of glacimarine sediments and sedimentation. Dowdeswell, J.A., et al, (1990, p.1-13, eng) 45-2779
- Effect of sedimentary changes on glacimarine facies architecture. Boulton, G.S., (1990, p.15-52, eng) 45-2780
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- Rafting in glacimarine environments. Gilbert, R., (1990, p.105-120, eng) 45-2784
- Modelling rates of sedimentation from icebergs. Dowdeswell, J.A., et al, (1990, p.121-137, eng) 45-2785
- Recent sedimentation processes on World Ocean shelves. Aibulatov, N.A., ed, (1990, 207p., rus) 45-2874
- Quantitative distribution and the dynamics of sediments in the Kara Sea. Medvedev, V.S., et al, (1990, p.110-120, rus) 45-2879
- Thermoluminescence properties of fiord sediments from Spitsbergen. Forman, S.L., (1990, p.377-384, eng) 45-3292
- Sedimentation at Lake Hoare. Squires, S.W., et al, (1991, p.363-379, eng) 45-3457
- Sediments
- Late Cenozoic geologic controls on placer-gold distribution. Kaufman, D.S., et al, (1989, p.26-45, eng) 45-193
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- Origin and age of the "icy complex" in the north of West Siberia. Danilov, I.D., et al, (1989, p.297-304, eng) 45-476
- Origin of sediments in lakes on the Greenland ice sheet. Olinger, C.T., et al, (1990, p.77-93, eng) 45-1145
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- Sediment patterns in the southern Weddell Sea. Futterer, D.K., et al, (1990, p.381-401, eng) 45-1270
- Pleistocene periglacial eolian deposits in Alaska. Lea, P.D., (1990, p.582-591, eng) 45-1412
- General geocryology. Ershov, E.D., (1990, 558p., rus) 45-1473
- Quaternary alluvial fans in the Karakoram Mountains. Derbyshire, E., et al, (1990, p.27-53, eng) 45-1575
- Evolution of the alluvial fans of the Aliföld. Borsy, Z., (1990, p.229-246, eng) 45-1578
- Leba River alluvial fan and its palaeogeomorphological significance. Rachocki, A.H., (1990, p.305-317, eng) 45-1579
- Ice cover, ice-rafted material, and sedimentation in Fram Strait. Hebbeln, D., et al, (1991, p.409-411, eng) 45-2282
- Ice rafting of sedimentary material in the Azov Sea. Aibulatov, N.A., et al, (1991, p.179-187, eng) 45-2440
- Thermal regime and cryogenic structure of coarse clastic deposits. Gorbunov, A.P., et al, (1990, p.54-58, rus) 45-2706
- High-resolution magnetostratigraphy of late-Quaternary arctic marine sediments. Nowaczyk, N.R., (1991, 187p., ger) 45-3458
- Neogene paleoclimate development of the antarctic Weddell Sea region: organic geochemistry. Macko, S.A., et al, (1990, p.881-897, eng) 45-3530
- Latest Cretaceous to Cenozoic climate and oceanography of the Weddell Sea. Kennett, J.P., et al, (1990, p.937-960, eng) 45-3531

**Sediments (cont.)**

- Sediment enrichment of coastal ice covers. Ackermann, N.L., et al, 1990, p.86-96, eng 45-3567
- Paleogene and neogene of northeastern USSR. Baranova, I.U.P., ed, 1989, 181p., rus 45-3834
- Ecological aspects of lake regulation in northern Finland; part 2. Hellsten, S., et al, 1989, 131p. + append., fin 45-3845
- See *also*: Bottom sediment; Glacial deposits; Lacustrine deposits; Marine deposits; Quaternary deposits; Suspended sediments
- Seepage**
- Analysis and modeling of melt-water refreezing in dry snow. Pfeffer, W.T., et al, 1990, p.238-246, eng 45-67
- Frozen ground effects on infiltration and runoff. Kane, D.L., et al, 1990, p.259-300, eng 45-410
- Methods of evaluating the hydrological role of snow management. Shutov, V.A., 1990, p.15-23, eng 45-1387
- Recharge processes during snowmelt: an isotopic and hydrometric investigation. Buttle, J.M., et al, 1990, p.343-360, eng 45-3464
- Spatial and temporal influence of soil frost on infiltration and erosion of sagebrush rangelands. Blackburn, W.H., et al, 1990, p.991-997, eng 45-3696
- See *also*: Permeability
- Seismic reflection**
- Seismic reflection and refraction survey on Ross Ice Shelf. Ten Brink, U., et al, 1990, p.87-88, eng 45-1392
- Seismological observation at the Great Wall Station during austral winter of 1986. Jia, G., 1990, p.81-85, chi 45-2171
- Under-ice ocean seismic energy scattering. Keenan, R.E., et al, 1991, p.1128-1133, eng 45-2292
- Seismic refraction**
- Seismic reflection and refraction survey on Ross Ice Shelf. Ten Brink, U., et al, 1990, p.87-88, eng 45-1392
- Seismic studies RIGGS III and RIGGS IV of the Ross Ice Shelf. Albert, D.G., et al, 1990, p.87-108, eng 45-1611
- RIGGS III: seismic short-refraction studies using an analytical curve-fitting technique. Kirchner, J.F., et al, 1990, p.109-126, eng 45-1612
- Seismic surveys**
- Acoustic and seismic signals from snow avalanches. Firstov, P.P., et al, 1990, p.67-71, rus 45-321
- Noise immunity of towed receiving devices in marine seismic prospecting. Buravtsev, V.I.U., et al, 1988, p.34-42, rus 45-681
- Geophysical studies at and around Upstream C camp, Siple Coast, 1988-1989. Bentley, C.R., et al, 1990, p.75-77, eng 45-1160
- Seismic telemetry network at Showa Station. 2. Akamatsu, J., et al, 1990, p.90-99, eng 45-1536
- Dynamics of the Laurentide Ice Sheet in Hudson Bay, Canada. Josenhans, H.W., et al, 1990, p.1-26, eng 45-1552
- Ross Ice Shelf: glaciology and geophysics. Bentley, C.R., ed, 1990, 126p., eng 45-1609
- Seismic studies RIGGS I and RIGGS II of the Ross Ice Shelf. Robertson, J.D., et al, 1990, p.55-86, eng 45-1610
- Seismic studies RIGGS III and RIGGS IV of the Ross Ice Shelf. Albert, D.G., et al, 1990, p.87-108, eng 45-1611
- Terrestrial geophysics in the SeaRISE Project. Bentley, C.R., 1991, p.49-54, eng 45-3280
- Antarctic penetrator program, No.1, 1989. Shibuya, K., et al, 1991, p.92-117, jpn 45-3397
- Seismic velocity**
- RIGGS III: seismic short-refraction studies using an analytical curve-fitting technique. Kirchner, J.F., et al, 1990, p.109-126, eng 45-1612
- Seismology**
- Causes of the aseismicity of Antarctica. Sadvoskii, M.A., et al, 1990, p.1369-1374, rus 45-1859
- See *also*: Earthquakes
- Sensor mapping**
- Integration of digital elevation model parameters with mountain radar imagery. Gratton, D.J., et al, 1989, p.60-62, eng 45-229
- Residual snow patch mapping in arctic Canada using LANDSAT TM images. Gray, J.T., et al, 1989, p.562-565, eng 45-240
- Operational mapping of snow cover in the United States and Canada using airborne and satellite data. Carroll, T.R., et al, 1989, p.1257-1259, eng 45-271
- Snow observation by satellite: a review. Lucas, R.M., et al, 1990, p.285-348, eng 45-773
- Satellite-derived reflectance of snow-covered surfaces in northern Minnesota. Hall, D.K., et al, 1990, p.87-96, eng 45-1726
- Refinements in the remote sensing of snow-covered area. Holroyd, E.W., III, et al, 1990, p.79-86, eng 45-2124
- Satellite mapping of alpine pastures in the Himalayas. Lal, J.B., et al, 1991, p.435-443, eng 45-2222
- Polar research from satellites. Thomas, R.H., 1991, 91p., eng 45-2406

**Sensors**

- Comments on "Laboratory and wind tunnel evaluations of the Rosemount icing detector". Hill, G.E., 1991, p.305-306, eng 45-2929
- Design of sealed fluid-filled in situ ice stress sensors. Spencer, P.A., et al, 1991, p.177-185, eng 45-3167
- Settlement (structural)**
- Single pile and pile group in permafrost. Vialov, S.S., et al, 1991, p.44-53, eng 45-2321
- Improved methods of testing piles in frozen soils. Vialov, S.S., et al, 1991, p.155-161, eng 45-2398
- Basic causes of deformation of buildings constructed on permafrost. Zhukov, V.F., 1991, p.174-178, eng 45-2400
- Model pile-settlement behavior in frozen sand. Stelzer, D.L., et al, 1991, p.1-13, eng 45-2416
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- Two and three dimensional response of nonlinear soil under gravity structures. Prasad, K.S.R., et al, 1991, p.253-260, eng 45-3177
- See *also*: Frozen ground settling
- Sewage disposal**
- Borehole drilling for sewage disposal at Asuka Station. Ishizawa, K., et al, 1990, p.145-155, jpn 45-980
- See *also*: Waste disposal
- Sewage treatment**
- Wetlands ecosystems: natural water purifiers? Hammer, D.A., et al, 1989, p.5-19, eng 45-1874
- Root-zone system: Mannersdorf—new results. Haberl, R., et al, 1989, p.606-621, eng 45-1889
- Use of artificial cattail marshes to treat sewage. Miller, G., 1989, p.636-642, eng 45-1890
- Wetlands sewage treatment system for the community of Teslin. Lorimer, R.J., et al, 1991, p.95-107, eng 45-2325
- PS 5 sewage lagoon embankment stabilization. Mobley, K., et al, 1991, p.116-125, eng 45-2327
- Winter sewer construction in Campbell Lake. Corwin, B.J., et al, 1991, p.126-135, eng 45-2328
- Response of an Alaskan wetland to nutrient enrichment. Sanville, W., 1988, p.231-243, eng 45-3383
- Advanced treatment technologies. Koppers, H.M.M., et al, 1990, p.109-208, eng 45-3543
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- Longitudinal dispersion in overflow flow of wastewater. Adrian, D.D., et al, 1990, p.1-8, eng 45-3742
- See *also*: Aeration; Waste treatment
- Shafts (excavations)**
- Observing rock temperatures while surveying cryogenic-hydrogeological operations. Petrova, R.G., et al, 1989, p.47-57, rus 45-2008
- See *also*: Mine shafts
- Shattering**
- See *also*: Frost shattering
- Shear flow**
- Shear flow of sea ice in the marginal ice zone with collision rheology. Leppäranta, M., et al, 1990, p.57-74, eng 45-1679
- Shear rate**
- Studies on the fluidized snow dynamics. Nishimura, K., 1990, 55p., eng 45-2284
- Shear strain**
- Brittle to ductile transition during indentation of ice. Gold, L.W., 1991, p.182-190, eng 45-3534
- Shear strength**
- Rheological fundamentals of soil mechanics. Vialov, S.S., 1986, 564p., eng 45-612
- Quantifying freeze/thaw-induced variability of soil strength. Kok, H., et al, 1990, p.501-506, eng 45-988
- On the shear strength of geophysical scale ice rubble. Hopkins, M.A., et al, 1991, p.201-212, eng 45-3425
- Behaviour of broken ice as a geomaterial. Wong, T.T., et al, 1991, p.451-457, eng 45-3539
- Shear stress**
- Saltation of snow. Pomeroy, J.W., et al, 1990, p.1583-1594, eng 45-223
- Crystal orientation fabrics from two ice cores. Jacka, T.H., et al, 1989, p.41-52, eng 45-1007
- Crack nucleation due to elastic anisotropy in porous ice. Shyam Sunder, S., et al, 1990, p.249-265, eng 45-1617
- Wind tunnel model tests of snow drifting on a two-level flat roof. Isyumov, N., et al, 1990, p.893-904, eng 45-2085
- Shear cell experiments of snow and ice friction. Casassa, G., et al, 1991, p.3745-3756, eng 45-2442
- Analysis of ice island dynamics. Lu, M.C., et al, 1990, p.241-256, eng 45-2735
- Interpretation of pile load tests at the Haga site. Whittle, A.J., 1991, p.267-274, eng 45-3179
- Shelf ice**
- See *also*: Ice shelves
- Shelterbelts**
- See *also*: Forest strips
- Shelters**
- See *also*: Portable shelters

**Ship icing**

- Brine and immiscible liquids for spray ice removal. Sackinger, W.M., et al, 1990, p.575-581, eng 45-160
- Arctic/cold weather operations symposium, 1989; proceedings, volume 1. 1989, 488p., eng 45-532
- How to achieve cold weather underway replenishment capability. Miller, M.O., et al, 1989, p.193-206, eng 45-537
- Topside icing prediction for design and operational support. Zahn, P.B., 1989, p.255-285, eng 45-541
- Forecasting superstructure icing for Navy combatants. Ryerson, C.C., 1989, p.287-296, eng 45-542
- Electro-expulsive ice removal application to vertical launch system hatch and to personnel access hatch. Embry, G.D., et al, 1989, p.307-325, eng 45-544
- Ice removal using low-pressure flashing flow. Derbidge, T.C., et al, 1989, p.327-338, eng 45-545
- Heat pipe application for naval vessel surface deicing. Beltran, M.R., et al, 1989, p.339-366, eng 45-546
- Northstar 89 flight deck deicer and hot air wind evaluation on the U.S.S. America (CV66). Rippman, J.A., et al, 1989, p.397-407, eng 45-547
- Northern latitude logistic support. Mackes, J., 1989, p.451-457, eng 45-548
- On the improvement of warship capability under spray icing conditions. Zakrzewski, W.P., et al, 1989, p.467-477, eng 45-549
- Laboratory test for measurement of adhesion strength of spray ice to coated flat plates. Mulherin, N.D., et al, 1990, 44p., eng 45-976
- Models of atmospheric icing of ships. Zakrzewski, W.P., et al, 1988, p.202-207, eng 45-1339
- Ship spraying/icing model to estimate icing rate. Zakrzewski, W.P., et al, 1988, p.399-404, eng 45-1380
- On the growth of marine icicles. Chung, K.K., et al, 1990, p.393-408, eng 45-1681
- Spray and ice measurement instrumentation for ships. Ryerson, C.C., et al, 1991, p.748-757, eng 45-2384
- Environmental effects information database report. 1989. Var. p., eng 45-2539
- Hydrometeorological conditions and characteristics of ship icing in antarctic waters. Panov, V.V., et al, 1990, p.17-20, rus 45-3075
- Modelling the growth of saline spongy ice on small ship components. Zakrzewski, W.P., et al, 1990, p.291-300, eng 45-3683
- Ships**
- Numerical simulation of ship manoeuvring motion in level ice. Lindström, C.A., 1990, p.198-208, eng 45-134
- Design criteria for oceanographic survey ships operated in the Marginal Ice Zone (MIZ). Strassel, E.S., et al, 1989, p.69-98, eng 45-533
- Cold regions design limits for conventional surface ships. Schultz, L.A., 1989, p.99-111, eng 45-534
- Preliminary results of model tests of the DD-963 in broken ice fields. Thomas, W.L., III, et al, 1989, p.113-121, eng 45-535
- Ship-ice impact load model correlated with full-scale impact data. St. John, J.W., et al, 1989, p.123-138, eng 45-536
- Two-dimensional numerical modelling of large motions of floating bodies in waves. Sen, D., et al, 1989, p.257-277, eng 45-967
- Corrosion of the underwater portion of hulls of icebreakers. Markovich, R.A., 1989, p.113-126, rus 45-1120
- Testing the propulsive performance of models of ice navigating ships. Tsol, L.G., et al, 1989, p.14-19, rus 45-1138
- Ice tests on an "Enthusiast" class harbor tug. Glebko, I.U.V., et al, 1989, p.26-28, rus 45-1139
- Additional hull reinforcements for ships used in the Arctic. Karavanov, S.B., et al, 1989, p.100-106, rus 45-1140
- Measurement of ice forces on small vessels—phase 3: detailed physical calibration. Final report. Glen, I.F., et al, 1990, 31p. + append., eng 45-1648
- Vessel requirements for arctic pipeline trenching and installation. Jolles, W.H., 1990, p.347-364, eng 45-1958
- Enhancements to the Shaft Modeling Tool Kit. Cowper, D.N.B., et al, 1990, 42p., eng 45-2646
- Dynamics, flexural response, and damage of ships in ice. Vaughan, H., et al, 1990, p.133-144, eng 45-2727
- Model tests of a naval combatant in broken ice fields. Thomas, W.L., III, et al, 1990, p.155-165, eng 45-2729
- Safe convoy of non-ice class ships along the Northern Sea Route. Arikainen, A.L., et al, 1990, p.259-267, eng 45-2736
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- Ship model tests in ice with systematically varied ice parameters. Ilves, L., et al, 1990, p.616-626, eng 45-3612

- Ice clearance using air-lifted propeller streams. Järvi, A., (1990, p.627-638, eng) **45-3613**
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- See (also): Icebreakers; Marine transportation; Oceanographic ships; Submarines; Tanker ships
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- See (also): Fast ice
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- See (also): Banks (waterways); Beaches; Coastal topographic features; Littoral zone
- de looking radar**
- Synthetic aperture radar imaging of polynyas. Lyden, J.D., et al, (1987, p.243-245, eng) **45-21**
- International Ice Patrol Side-Looking Airborne Radar (SLAR) experiment 1988. Osmer, S.R., et al, (1989, p.2193-2196, eng) **45-288**
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Long range forecasting of runoff from the Murgab and Tedzhen Rivers. Shentsai, I.D., et al, (1990, p.129-144, rus) 45-997  
Characteristics of snow accumulation on the Austfonna (Spitsbergen). Sin'kevich, S.A., et al, (1989, p.190-194, rus) 45-1058  
Vertical distribution of snow accumulations on river basin slopes. Kondrashov, I.V., et al, (1990, p.3-14, rus) 45-1099  
Avalanche development and surface characteristics of snow accumulations. Achakovskii, S.A., (1990, p.71-76, rus) 45-1106  
Method of computer mapping the exposure and slope of an area. Isaev, A.A., et al, (1990, p.81-84, rus) 45-1108  
Significant phenomena of the winter of 1989-1990. (1990, p.19-21, fre) 45-1129
- Snow survey of Great Britain 1989/90. (1990, 22p., eng) 45-1178  
Snow fencing to increase streamflow on rangelands. Sturges, D.L., (1990, p.145-154, eng) 45-1179  
Climatological analysis of snowfall on the Qinghai-Xizang Plateau. Zou, J., et al, (1989, p.411-422, eng) 45-1185  
Model for hourly snowfall. Sage, J.D., (1988, p.44-48, eng) 45-1308  
Calibration of a snow accumulation model. Admirat, P., et al, (1988, p.129-133, eng) 45-1326  
Snow accretion in Catalonia: a climatological study. Bard, M.D., et al, (1988, p.277-281, eng) 45-1354  
Sensitivity of glaciation to initial snow cover. Oglesby, R.J., (1990, p.219-235, eng) 45-1521  
Snow and avalanches in the Swiss Alps, winter 1988/89. (1991, 155p., ger) 45-1650  
Preliminary tests of solid precipitation measurement tests. Günther, T., (1990, p.224-226, eng) 45-1682  
Forecasting runoff from mountain rivers using mathematical models. Shentsis, I.D., (1990, p.96-100, rus) 45-1743  
Preprint volume. (1991, 436p., eng) 45-1933  
Diagnosing snow band air circulations via simulation. Hakim, G.J., et al, (1991, p.90-96, eng) 45-1935  
Relationship of jet streaks to heavy precipitation in winter storms. Tollerud, E.L., et al, (1991, p.97-100, eng) 45-1936  
Continuum mixture theory with application to turbulent snow. Decker, R., (1990, p.877-887, eng) 45-2096  
Temporal accumulation and ablation patterns of seasonal snowpack. Hardy, J.P., et al, (1990, p.23-34, eng) 45-2118  
Snow hydrology of an alpine basin in the Sierra Nevada. Kattelmann, R., (1990, p.41-50, eng) 45-2120  
Surface mass balance variability on Mizuho Plateau. Zhang, W., et al, (1990, p.1-10, chi) 45-2268  
Fluctuations of antarctic snow accumulation and Southern Hemisphere SLP. Enomoto, H., (1991, p.67-87, eng) 45-2444  
Effect of abiotic factors on vole winter survival. Courtin, G.M., et al, (1991, p.45-52, eng) 45-2472  
Model for description of seasonal mountain snowmelt. Babiková, G., et al, (1990, p.383-393, eng) 45-2994  
Studies on accumulation of snow on different materials. Takahashi, T., (1986, p.226-239, eng) 45-3715
- Snow acoustics**  
Acoustic and seismic signals from snow avalanches. Firsov, P.P., et al, (1990, p.67-71, rus) 45-321  
Method to reduce traffic noise by making use of a snow surface. Hasebe, M., et al, (1990, p.533-538, eng) 45-1912
- Snow air interface**  
Glacier formation and mass balance near the Great Wall Station. Ren, J., (1988, p.242-247, chi) 45-51  
Ice formation and temperature regime on Nelson and King George Is. Ren, J., (1988, p.248-255, chi) 45-52  
Physical parameterization of snow albedo for use in climate models. Marshall, S.E., (1989, 161p., eng) 45-567  
Eurasian snow cover and the El Niño Southern Oscillation. Yasunari, T., (1989, p.613-622, jpn) 45-626  
Model studies of the "atmosphere-snow-sea ice" system in an annual cycle. Oreshko, A.P., et al, (1990, p.51-57, rus) 45-1736  
Turbulent transfer over snow and ice. Morris, E.M., (1989, p.205-223, eng) 45-1809  
Air temperature variation over snow-covered terrain. Hogan, A., et al, (1990, p.1-12, eng) 45-2182  
Sublimation rate of collected blowing snow in a collector. Sato, T., (1990, p.93-116, jpn) 45-2304  
Arctic snow and air temperature budget over sea ice during winter. Overland, J.E., et al, (1991, p.4651-4662, eng) 45-2677  
Numerical model of snow-cover effects on mesoscale circulations. Segal, M., et al, (1991, p.1024-1042, eng) 45-3274  
Oxygen isotope profiles of deposited snow in different environments. Ageta, Y., et al, (1991, p.39-46, jpn) 45-3394  
Maximum variation of air/snow interface temperature. Bates, R.E., et al, (1990, p.411-422, eng) 45-3768
- Snow collapse**  
See *also*: Snowquakes
- Snow compaction**  
Estimates of shock wave attenuation in snow. Johnson, J.B., (1990, 14p., eng) 45-1550  
Simulation of seasonal snowcover based on air temperature and precipitation. Motoyama, H., (1990, p.1104-1110, eng) 45-1651
- Snow composition**  
Precipitation chemistry. Artz, R.S., (1988, p.99-101, eng) 45-1  
Snowfall and oxygen isotope variations off Ellesmere I. Jeffries, M.O., et al, (1987, p.195-199, eng) 45-15  
Theoretical determination of the characteristic equation of snow in the pendular regime. Morris, E.M., et al, (1990, p.179-187, eng) 45-60  
Impact of sampling protocols on winter storm estimates of wet deposition. Lynch, J.A., et al, (1990, 33p., eng) 45-206

- Chemical composition of snow cover as an indicator of gas and dust emissions. Shul'kin, V.M., [1981, p.101-109, rus] 45-207
- Studies of ice sheet hydrology using SAR. Bindschadler, R.A., et al, [1989, p.2719-2721, eng] 45-297
- Geochemistry of the snow cover around coal mines. Makarov, V.N., [1990, p.37-44, rus] 45-671
- Ice, snow and rain chemistry at the Great Wall Station in summer 1985. Li, H.Z., et al, [1989, p.107-112, chi] 45-685
- Precipitation chemistry at the Great Wall Station, winter 1985. Li, H., [1989, p.126-129, chi] 45-686
- Chemical compositions of aerosol particles and snowfalls in Alta, northern Norway. Lee, D.-I., et al, [1989, p.169-178, eng] 45-829
- Fallout in snow. Philippot, J.C., [1990, p.21, eng] 45-918
- Beta radiation from snow. Dibb, J.E., et al, [1990, p.25, eng] 45-919
- Major element chemistry,  $\delta^{18}O$ ,  $\delta^{15}N$  and Sr-87/Sr-86 in a snow profile across central Scandinavia. Andersson, P., et al, [1990, p.2601-2608, eng] 45-955
- Scientists discover problems using Chernobyl fallout for dating the Greenland ice sheet. Dibb, J.E., [1989, p.8-9, eng] 45-959
- Snow and ice electrical conductivity from various glaciers. Kamiyama, K., et al, [1990, p.119-129, eng] 45-977
- Ionic tracer movement through a Wyoming snowpack. Bales, R.C., et al, [1990, p.2749-2758, eng] 45-1176
- Solar proton events in antarctic snow. Dreschhoff, G.A.M., et al, [1990, p.333-346, eng] 45-1434
- Hydrogeochemistry of snow and snowmelt in catchment hydrology. Jones, H.G., et al, [1990, p.255-297, eng] 45-1480
- Scavenging ratios of acid related compounds during winter. Cadle, S.H., et al, [1990, p.2981-2989, eng] 45-1771
- Study on snow chemistry in Canada: research in progress and prospects. Jones, H.G., [1990, p.3/5-3/12, fre] 45-1793
- Formation of the chemical composition of meltwater. Ivanov, A.V., [1989, p.67-83, rus] 45-1829
- Occurrence of zinc in antarctic ancient ice and recent snow. Boutron, C.F., et al, [1990, p.248-259, eng] 45-1847
- Snow in mountain watersheds. Sommerfeld, R.A., et al, [1990, p.122-129, eng] 45-2129
- Recent developments in snow-chemistry research in the western United States. Davis, R.E., et al, [1990, p.99-107, eng] 45-2190
- Impact of biogenic sulphur on sulphate aerosols at Mawson Station. Prospero, J.M., et al, [1991, p.221-223, eng] 45-2264
- Deuterium excess in recent antarctic snow. Petit, J.R., et al, [1991, p.5113-5122, eng] 45-2283
- Pollen variations in ice cap snow. Bourgeois, J.C., [1990, p.313-322, eng] 45-2413
- Aerosol characterization and snow chemistry at Terra Nova Bay. Santachiara, G., et al, [1990, p.61-72, eng] 45-2787
- Variations of water isotope content with altitude in a mountain environment. Holdsworth, G., et al, [1991, p.7483-7494, eng] 45-2800
- Determination of some heavy metals in antarctic snow and coastal sea water. Saini, G., et al, [1990, p.27-30, eng] 45-3196
- Characterization of snow around Terra Nova Bay. Piccardi, G., et al, [1990, p.55-61, eng] 45-3197
- Air water interface in coastal surface waters. Loglio, G., et al, [1990, p.95-102, eng] 45-3200
- Radionuclide analysis in antarctic coastal samples: methods and procedures. Battiston, G., et al, [1990, p.143-147, eng] 45-3201
- Nutrients and organic matter in the snow and ice cover of the arctic basin. Mel'nikov, I.A., et al, [1985, p.90-93, rus] 45-3214
- Oxygen isotope profiles of deposited snow in different environments. Ageta, Y., et al, [1991, p.39-46, jpn] 45-3394
- Preliminary measurements of CO<sub>2</sub> in melting snow. Sommerfeld, R.A., et al, [1991, p.1225-1228, eng] 45-3760
- Snow compression**
- Mathematical model of the properties and formation of snow cover structure. Guseva, E.V., et al, [1990, p.18-25, rus] 45-1731
- Microscopic observations of snow deformation. Shoop, S.A., et al, [1990, p.27-38, eng] 45-2184
- Settling force of deposited snow. Shidei, T., [1986, p.350-383, eng] 45-3722
- Snow (construction material)**
- Processed-snow foundation design at the summit of the Greenland Ice Cap. Curtis, K.C., et al, [1991, p.240-249, eng] 45-2337
- Ice and snow construction materials. Renkel', A.F., [1990, p.43-45, rus] 45-2432
- Snow and ice construction materials. Renkel', A.F., [1990, p.50-52, rus] 45-2433
- Ice and snow construction materials. Renkel', A.F., [1991, p.37-39, rus] 45-2953
- Snow cornices**
- Method to prevent cornice formation by erecting wooden fences. Saito, Y., [1986, p.252-260, eng] 45-3717
- Various methods to prevent cornice formations. Takahashi, K., [1986, p.261-269, eng] 45-3718
- Snow courses**
- Yukon territory snow survey bulletin and water supply forecast—April. [1990, 24p., eng] 45-75
- Yukon territory snow survey bulletin and water supply forecast—March. [1990, 25p., eng] 45-76
- Yukon Territory snow survey bulletin: Mar. 1991. [1991, 25p., eng] 45-2093
- Using GOES visible data to extend snow course data in southern Ontario. Donald, J.R., et al, [1990, p.69-78, eng] 45-3800
- Space and time variability of snow water equivalent in Finland. Perälä, J., et al, [1990, 260p., fin] 45-3872
- Snow cover**
- Chemical composition of snow cover as an indicator of gas and dust emissions. Shul'kin, V.M., [1981, p.101-109, rus] 45-207
- Snow hydrology. Marsh, P., [1990, p.37-61, eng] 45-213
- Simulation of sub-pixel terrain effects on radar backscattering of snow. Shi, J., et al, [1989, p.1009-1011, eng] 45-254
- Results from ground-based radiometry of snow. Hallikainen, M., et al, [1989, p.1231-1234, eng] 45-265
- Correlation of radiometry observations with Colorado River basin snowpack properties. Josberger, E.G., et al, [1989, p.1239-1242, eng] 45-267
- Radar polarimeter measurements of snow. Hallikainen, M., et al, [1989, p.1829-1831, eng] 45-280
- Humidity of air, atmospheric precipitation, snow cover in the USSR. [1989, 288p., eng] 45-310
- Principles and methods of geosystem monitoring. Grin, A.M., ed, [1989, 168p., rus] 45-429
- Geochemistry of the snow cover around coal mines. Makarov, V.N., [1990, p.37-44, rus] 45-671
- Snow observation by satellite: a review. Lucas, R.M., et al, [1990, p.285-348, eng] 45-773
- Identification of geothermal anomalies by snow-cover temperature survey. Lialin, G.N., [1989, p.53-66, eng] 45-1077
- Snow density as a criterion for mountain snow cover observation points. Gavrieliou, G.G., [1990, p.42-45, rus] 45-1103
- Improving the forecasting of snow water content in a glacier basin. Gruzinov, A.V., [1990, p.45-49, rus] 45-1104
- International classification for seasonal snow on the ground. Colbeck, S.C., et al, [1990, 23p., eng] 45-1174
- Ionic tracer movement through a Wyoming snowpack. Bales, R.C., et al, [1990, p.2749-2758, eng] 45-1176
- Snowbank hydrology in the continuous permafrost zone. Lewkowicz, A.G., et al, [1990, p.13-21, eng] 45-1186
- Geocological studies of northern Western Siberia. Konstantinov, I.P., ed, [1990, 117p., rus] 45-1194
- Properties of snow cover in northeastern Western Siberia. Sergeev, B.P., [1990, p.18-28, rus] 45-1197
- Modified differential method in solving the Stefan problem. Tetel'baum, A.S., [1990, p.111-118, rus] 45-1207
- Snow/cloud discrimination with multispectral satellite measurements. Allen, R.C., Jr., et al, [1990, p.994-1004, eng] 45-1273
- Attenuation of 3-cm band radar signals by snow cover in the Antarctic. Trepov, G.V., [1989, p.53-58, rus] 45-1489
- Radiative thermophysics of snow and ice. Krass, M.S., et al, [1990, 260p., rus] 45-1532
- Water-regulating role of taiga forests. Rubtsov, M.V., et al, [1990, 222p., rus] 45-1574
- Forestry equipment—terrain interaction. [1989, 291p., eng] 45-1700
- Changes in global climate. Kondrat'ev, K.I.A., [1985, 280p., eng] 45-1710
- Satellite-derived reflectance of snow-covered surfaces in northern Minnesota. Hall, D.K., et al, [1990, p.87-96, eng] 45-1726
- Mathematical model of the properties and formation of snow cover structure. Guseva, E.V., et al, [1990, p.18-25, rus] 45-1731
- Problems and prospects of studies on the physical processes of snow cover. Golubev, V.N., et al, [1990, p.26-35, rus] 45-1732
- Glaciological data bank. Suslov, V.F., et al, [1990, p.75-79, rus] 45-1739
- Snow cover on small forest and field watersheds in the taiga zone of the European USSR. Deriugin, A.A., [1990, p.101-105, eng] 45-2080
- Proceedings of the 47th annual Eastern Snow Conference. Bangor, ME, June 7-8, 1990. [1990, 250p., eng] 45-2181
- Thermic and humidity relations of chosen Spitsbergen soils. Angiel, M., [1990, p.25-37, eng] 45-2430
- Classification of snow cover and precipitation using the special sensor microwave imager. Grody, N.C., [1991, p.7423-7435, eng] 45-2798
- Variations of water isotope content with altitude in a mountain environment. Holdsworth, G., et al, [1991, p.7483-7494, eng] 45-2800
- Interaction between a snow layer and retaining structures. Shevchuk, S.S., [1990, p.26-31, rus] 45-3006
- Problems of agroindustrial use of lacustrine thermokarst. Tishin, M.I., ed, [1990, 116p., rus] 45-3031
- Formation of snow cover in the vicinity of the city of Anadyr. Maslov, V.I.A., [1990, p.65-72, rus] 45-3036
- Nutrients and organic matter in the snow and ice cover of the arctic basin. Mel'nikov, I.A., et al, [1985, p.90-93, rus] 45-3214
- Remote sensing of snow covers using the gamma-ray technique. Offenbacher, E.L., et al, [1991, 19p., eng] 45-3259
- Recent progress in snow and ice research. Richter-Menge, J.A., et al, [1991, p.218-226, eng] 45-3451
- Natural convection in the subarctic snow cover. Sturm, M., et al, [1991, p.11,657-11,671, eng] 45-3463
- Properties of snow deposited on mountains. Takahashi, K., [1986, p.439-447, eng] 45-3727
- Review of avalanche classifications. Miyazaki, K., [1986, p.448-454, eng] 45-3728
- Utilization of SAR data in the monitoring of snowpacks and wetlands. Leconte, R., et al, [1990, p.233-258, eng] 45-3807
- Interpreting passive and active microwave imagery over snow-covered lakes. Melloh, R.A., et al, [1990, p.259-278, eng] 45-3808
- Snow cover distribution**
- Northern hydrology: an overview. Prowse, T.D., [1990, p.1-36, eng] 45-2112
- Residual snow patch mapping in arctic Canada using LANDSAT TM images. Gray, J.T., et al, [1989, p.562-565, eng] 45-240
- Determination of areal snow water equivalent on the Canadian prairies using passive microwave satellite data. Goodison, B.E., [1989, p.1243-1246, eng] 45-268
- Decorrelation distance of snow in the Colorado River basin. Chang, A.T.C., et al, [1989, p.1247-1250, eng] 45-269
- Operational mapping of snow cover in the United States and Canada using airborne and satellite data. Carroll, T.R., et al, [1989, p.1257-1259, eng] 45-271
- Snow accumulation and topography in Wilkes Land katabatic zone. Goodwin, I.D., [1990, p.235-242, eng] 45-468
- Complex glaciological mapping. Khodakov, V.G., et al, [1989, p.17-24, rus] 45-1029
- Snow cover in mountain systems of the Earth. Getker, M.I., et al, [1989, p.30-38, rus] 45-1031
- Mapping snow cover in the mountains of Afghanistan by means of space photography. Kravtsova, V.I., [1989, p.44-49, rus] 45-1033
- Vertical distribution of snow accumulations on river basin slopes. Kondrashov, I.V., et al, [1990, p.3-14, rus] 45-1099
- Characteristics of snow cover distribution in Kirgiz territory. Solodkov, P.A., [1990, p.14-24, rus] 45-1100
- General distribution of snow cover in northern Kamchatka. Brukhandia, V.I., et al, [1990, p.25-35, rus] 45-1101
- Time and space distribution of initial gamma-field levels in Tien Shan. Getker, M.I., et al, [1990, p.61-71, rus] 45-1105
- Interaction of sea ice, snow, and glaciers with the atmosphere and ocean. Kotliakov, V.M., ed, [1990, 74p., eng] 45-1261
- Snow cover mapping of Afghanistan's mountains with space imagery. Kravtsova, V.I., [1990, p.295-302, eng] 45-1526
- Determining estimation levels of snow cover. Kartashov, V.M., [1990, p.4-5, rus] 45-1603
- Regularities in the occurrence of snow cover in the Amudaria River basin. Kalontarov, B.I., et al, [1990, p.92-96, rus] 45-1742
- Mapping glacial-nival phenomena and human activity. Osokin, N.I., et al, [1990, p.177-181, rus] 45-1758
- Terrain, snow distribution and vegetation patterns. Evans, B.M., et al, [1989, p.270-278, eng] 45-1981
- Recent secular variations in the extent of Northern Hemisphere snow cover. Robinson, D.A., et al, [1990, p.1557-1560, eng] 45-2043
- Refinements in the remote sensing of snow-covered area. Holroyd, E.W., III, et al, [1990, p.79-86, eng] 45-2124
- Snow and ice. Meier, M.F., [1990, p.131-158, eng] 45-2149
- Airborne and satellite snow cover data. Carroll, T.R., [1990, p.87-98, eng] 45-2189
- Model for prediction of snow cover distribution. Sambles, K.M., et al, [1990, p.109-119, eng] 45-2191
- Satellite mapping of alpine pastures in the Himalayas. Lal, J.B., et al, [1991, p.435-443, eng] 45-2222
- Surface mass balance variability on Mizuho Plateau. Zhang, W., et al, [1990, p.1-10, chi] 45-2268
- Frequency distributions of densities for four types of snow in Shinjo. Abe, O., [1990, p.83-92, jpn] 45-2303
- Snow cover effect on oceanic moisture distribution in the Southern Hemisphere. Kotliakov, V.M., et al, [1989, p.242-246, eng] 45-2598
- Operational remote sensing of snow cover in the U.S. and Canada. Carroll, T.R., et al, [1990, p.286-291, eng] 45-2667

**Snow cover distribution (cont.)**

- Use of satellite data for water resources modelling—a Canadian example. Kite, G.W., [1991, p.21-29, eng] 45-2796
- Data obtained from snow cover and atmospheric precipitation in mountains. Popova, L.V., ed, [1990, 110p., rus] 45-2999
- Snow cover formation and melting in field catchments. Shutov, V.A., [1990, p.327-337, eng] 45-3686
- On the relationship between snow distribution and snow melt. Gjessing, Y., [1990, p.111-119, eng] 45-3787
- Observing snow melting in southern Norway from satellite passive microwave. Faanes, T., [1990, p.187-194, eng] 45-3794
- Albedo measurements from snow—image processing of LANDSAT-5 TM data. Winther, J.G., et al, [1990, p.195-201, eng] 45-3795
- Proceedings of the Workshop on Applications of Remote Sensing in Hydrology. [1990, 386p., eng] 45-3797
- Effective use of satellite-observed snow cover data in the snowmelt-runoff model (SRM). Rango, A., [1990, p.19-31, eng] 45-3798
- Application of remotely sensed data in a distributed-parameter watershed model. Leavesley, G.H., et al, [1990, p.47-68, eng] 45-3799
- Determination of snow water equivalent on the Canadian prairies. Goodison, B.E., et al, [1990, p.297-316, eng] 45-3809
- Analysis of MOS-1 microwave scanning radiometer data for Canadian prairie snow cover. Walker, A.E., et al, [1990, p.319-329, eng] 45-3811
- Snowmelt stages on LANDSAT images. Fuller, G.A., et al, [1990, p.375-377, eng] 45-3815
- Space and time variability of snow water equivalent in Finland. Perkkilä, J., et al, [1990, 260p., fin] 45-3872
- Snow cover effect**
- First discovery of fossil ice of 1000-1700 year B.P. in Japan. Yoshida, M., et al, [1990, p.258-259, eng] 45-70
- Adaptation of the ISCCP cloud detection algorithm to combined AVHRR and SMMR arctic data. Key, J., et al, [1989, p.188-191, eng] 45-232
- Physical parameterization of snow albedo for use in climate models. Marshall, S.E., [1989, 161p., eng] 45-567
- Eurasian snow cover and the El Niño Southern Oscillation. Yasunari, T., [1989, p.613-622, jpn] 45-626
- Thermal radiation of ice cover on fresh-water bodies. Bordonskii, G.S., [1990, 100p., rus] 45-635
- Surface talus fabric and particle gliding over snow on Lassen Peak, California. Pérez, F.L., [1990, p.142-153, eng] 45-775
- Climate studies with a coupled atmosphere-upper-ocean-ice-sheet model. Fichefet, T., et al, [1989, p.249-261, eng] 45-793
- Snow cover, freezing and thawing of soil in pine forests. Korepanov, A.A., [1989, p.54-58, eng] 45-858
- Experiments on lichen growth. I. Seasonal patterns and environmental controls. Benedict, J.B., [1990, p.244-254, eng] 45-887
- Influence of snow density on conductivity of snowfall measured by AC method. Asano, K., et al, [1990, p.19-26, eng] 45-904
- Fate of N-15-labelled fertilizer applied on snow at two forest sites in British Columbia. Preston, C.M., et al, [1990, p.1583-1592, eng] 45-1027
- Formation characteristics and thermal effect of snow cover. Kazanskii, O.A., [1990, p.8-17, rus] 45-1196
- Niveo-aeolian sedimentation in Greenland. Dijkman, J.W.A., [1990, p.83-96, eng] 45-1291
- Geomorphic impact of spring avalanches in northwest Spitsbergen (79N). André, M.F., [1990, p.97-110, eng] 45-1292
- Karst drainage in a permafrost setting: the case of Akpatok Island, Northwest Territories, Canada. Lauriol, B., et al, [1990, p.129-144, eng] 45-1294
- Hydrogeochemistry of snow and snowmelt in catchment hydrology. Jones, H.G., et al, [1990, p.255-297, eng] 45-1480
- Sensitivity of glaciation to initial snow cover. Oglesby, R.J., [1990, p.219-235, eng] 45-1521
- O-18 concentrations in sea ice of the Weddell Sea, Antarctica. Lange, M.A., et al, [1990, p.315-323, eng] 45-1542
- Snow water content and mobility of rubber tired vehicles. Osborne, M.D., et al, [1989, p.225-233, eng] 45-1702
- Spectral albedo and emissivity of CO<sub>2</sub> in Martian polar caps: model results. Warren, S.G., et al, [1990, p.14,717-14,741, eng] 45-1842
- Forecasting the temperature of the active layer of rocks. Slavín-Borovskii, V.B., et al, [1989, p.20-31, rus] 45-2005
- Temperature and moisture content of soils in Western Yamal. Sautkin, E.V., et al, [1989, p.111-119, rus] 45-2016
- Air temperature variation over snow-covered terrain. Hogan, A., et al, [1990, p.1-12, eng] 45-2182
- Snowpack effect on mountain vegetation distribution and ecotone. Barbour, M.G., et al, [1991, p.141-149, eng] 45-2226
- Performance of an omnidirectional wheel on snow and ice. Blaisdell, G.L., [1991, p.34-41, eng] 45-2227
- Snowpack and the subnivean environment for an open meadow. Auerbach, N.A., et al, [1991, p.41-44, eng] 45-2471
- Effect of abiotic factors on vole winter survival. Courtin, G.M., et al, [1991, p.45-52, eng] 45-2472
- Net radiation model for calculating daily snowmelt in open environments. Granger, R.J., et al, [1990, p.217-234, eng] 45-2524
- Snow cover effect on oceanic moisture distribution in the Southern Hemisphere. Kotliakov, V.M., et al, [1989, p.242-246, eng] 45-2598
- Engineering-geodynamic conditions of the Middle Yenisey reservoir. Bazhenova, N.N., et al, [1990, p.93-98, rus] 45-2868
- Operational maps of soil moisture of areas with and without snow cover. Nazirov, M., [1990, p.411-424, eng] 45-2912
- Snow depth required to mask the underlying surface. Baker, D.G., et al, [1991, p.387-392, eng] 45-3018
- Detection of objects buried in wet snowpack by an FM-CW radar. Yamaguchi, Y., et al, [1991, p.201-208, eng] 45-3188
- Fractionation of O-18 in the snow-ice cover of the central Arctic Basin. Mel'nikov, I.A., et al, [1985, p.237-241, rus] 45-3241
- Radar altimeter ground truth measurements in Antarctica. [1989, p.1-3, eng] 45-3258
- Observational evaluation of the snow breeze. Segal, M., et al, [1991, p.412-424, eng] 45-3271
- Numerical model of snow-cover effects on mesoscale circulations. Segal, M., et al, [1991, p.1024-1042, eng] 45-3274
- Overwinter soil temperature patterns under six tillage-residue combinations. Benoit, G.R., et al, [1991, p.86-90, eng] 45-3306
- U.S. Army wheeled versus tracked vehicle mobility performance test program—report 2: mobility in shallow snow. Green, C.E., et al, [1991, 48p. + appends., eng] 45-3446
- Withstand voltage characteristics of insulator string covered with snow or ice. Matsuda, H., et al, [1991, p.1243-1250, eng] 45-3468
- Experiments on lichen growth 2. Effects of a seasonal snow cover. Benedict, J.B., [1991, p.189-199, eng] 45-3483
- LandSAT mapping of surface albedo of the Colorado Front Range. Duguay, C.R., et al, [1991, p.213-223, eng] 45-3486
- CLASS—a Canadian land surface scheme for GCMs. 1. Soil model. Verseghy, D.L., [1991, p.111-133, eng] 45-3548
- Properties of sea ice in the Weddell Sea, Antarctica. Lange, M.A., [1990, p.289-299, eng] 45-3584
- Potential effects of global warming on the primary productivity of a subalpine lake. Byron, E.R., et al, [1990, p.983-989, eng] 45-3695
- Portable thermal reference for winter field studies. Lacombe, J., [1990, p.48-54, eng] 45-3769
- Snow cover stability**
- Prediction of snow avalanches in maritime climates. Conway, H., et al, [1989, 139p. + appends., eng] 45-814
- Observations relating to wet snow stability. Conway, H., et al, [1989, Appendix C. 12p., eng] 45-815
- High-speed powder-snow avalanches. Maeno, N., [1989, p.761-767, jpn] 45-870
- Surface energy balance of a perennial snowbank, Melville Island, Northwest Territories, Canada. Young, K.L., et al, [1990, p.290-301, eng] 45-891
- Snow cover in mountain systems of the Earth. Getker, M.I., et al, [1989, p.30-38, rus] 45-1031
- Stability and variability of the maximum water equivalent of snow cover. Kadomtseva, T.G., et al, [1989, p.38-44, rus] 45-1032
- Measurement within the snow cover. Coleou, C., [1990, p.16-18, fre] 45-1128
- Climatic factors in the stability of snow cover in Kazakhstan territory. Murzabekova, U.N., [1990, p.88-95, rus] 45-1582
- Anomalies in dates of formation and deterioration of stable snow cover. Murzabekova, U.N., [1990, p.95-99, rus] 45-1583
- New instrument for determining physical-mechanical properties of snow. Epifanov, V.P., [1990, p.188-192, rus] 45-1761
- Similarity considerations for roof snow loads. Giever, P.M., et al, [1990, p.59-71, eng] 45-1767
- Ablation of avalanche and undisturbed snow, Himalaya Mountains, Pakistan. De Scally, F.A., et al, [1990, p.2757-2767, eng] 45-2113
- Snowpack structure and avalanching, Craigieburn Range, New Zealand. McGregor, G.R., [1990, p.405-417, eng] 45-2213
- Modeling winter grain crop survival in a zone with stable snow cover. Bogomolova, N.A., et al, [1990, p.113-118, rus] 45-2272
- Influence of a simulated transport corridor on snowpack characteristics, Fort Norman, N.W.T., Canada. Kershaw, G.P., [1991, p.31-40, eng] 45-2470
- 3-D transient heat and mass transport in microscopic ice lattices. Chrifon, M., et al, [1990, p.25-33, eng] 45-3868
- Snow cover stratification**
- See *also*: Snow stratigraphy
- Snow cover structure**
- Internal structure of powder-snow avalanches. Nishimura, K., [1990, p.113-116, jpn] 45-114
- IGARSS '89 quantitative remote sensing: an economic tool for the nineties; Proceedings. [1989, 3001p. (5 vols.), eng] 45-227
- Monitoring snow cover with synthetic aperture radar. Bernier, M., et al, [1989, p.1251-1255, fre] 45-270
- Experimental study of microwave transmission in snowpack. Abe, T., et al, [1990, p.915-921, eng] 45-369
- High-speed powder-snow avalanches. Maeno, N., [1989, p.761-767, jpn] 45-870
- Measurement within the snow cover. Coleou, C., [1990, p.16-18, fre] 45-1128
- Formation characteristics and thermal effect of snow cover. Kazanskii, O.A., [1990, p.8-17, rus] 45-1196
- Mathematical model of the properties and formation of snow cover structure. Guseva, E.V., et al, [1990, p.18-25, rus] 45-1731
- Laser spectroscopy of snow and ice cover. Zalikhanov, M.Ch., et al, [1989, p.43-47, eng] 45-2107
- Snowpack structure and avalanching, Craigieburn Range, New Zealand. McGregor, G.R., [1990, p.405-417, eng] 45-2213
- Snowpack and the subnivean environment for an open meadow. Auerbach, N.A., et al, [1991, p.41-44, eng] 45-2471
- Layered character of snow covers. Colbeck, S.C., [1991, p.81-96, eng] 45-2828
- Formation of snow cover in the vicinity of the city of Anadyr. Maslov, V.I.A., [1990, p.65-72, rus] 45-3036
- Snow cover thickness**
- See *also*: Snow depth
- Snow creep**
- Nonlinear formulation of snow creep. Olgne, X., et al, [1990, p.1-18, eng] 45-1763
- Creeping of snow deposited on the slope. Shidei, T., [1986, p.404-418, eng] 45-3724
- Snow load on slopes. Furukawa, I., [1986, p.419-431, eng] 45-3725
- Snow crust**
- Attenuation of 3-cm band radar signals by snow cover in the Antarctic. Trepov, G.V., [1989, p.53-58, rus] 45-1489
- Snow crystal growth**
- Growth rate of snow crystals in Wilkes Land. Qin, D., et al, [1988, p.75-83, chi] 45-38
- Growth process of snow particles in snow clouds. You, L., et al, [1990, p.221-230, eng] 45-611
- Climatological study on the mechanism of graupel formation. Harimaya, T., [1990, p.437-447, eng] 45-785
- Laboratory study on the scavenging of SO<sub>2</sub> by snow crystals. Mitra, S.K., et al, [1990, p.2307-2312, eng] 45-845
- Formation mechanisms of twelve-branched snow crystals. Uyeda, H., et al, [1990, p.549-555, eng] 45-2411
- Formation of snow cover in the vicinity of the city of Anadyr. Maslov, V.I.A., [1990, p.65-72, rus] 45-3036
- Physical factors influencing winter precipitation chemistry. Collett, J.S., Jr., et al, [1991, p.782-788, eng] 45-3819
- Snow crystal nuclei**
- Snow crystal nuclei and aerosol particles. Kikuchi, K., et al, [1990, p.415-435, eng] 45-784
- Snow crystal structure**
- Stratigraphy of shallow snow core in Wilkes Land. Qin, D., [1988, p.22-59, chi] 45-36
- Fractal models of snowflakes. Zhou, J., [1990, p.2607-2609, eng] 45-594
- Modelling of particle distribution in the melting layer. De Wolf, D.A., et al, [1990, p.389-395, eng] 45-1427
- Morphologic analyses of snow crystals of Antarctica. Jia, G., et al, [1990, p.11-17, chi] 45-2269
- Formation mechanisms of twelve-branched snow crystals. Uyeda, H., et al, [1990, p.549-555, eng] 45-2411
- Snow crystals**
- Measuring blowing snow with a photo-electric particle counter at Pole Station, Antarctica. Wendler, G., [1989, p.9-16, eng] 45-393
- Meteorology source book. Parker, S.P., ed. [1988, 304p., eng] 45-527
- Observations on falling motion of natural ice crystals. Ferrari, A., et al, [1989, p.137-146, ita] 45-991
- Model for aerosol components over the Antarctic Peninsula. Dick, A.L., [1990, p.179-196, eng] 45-1441
- Ice haze, snow, and the Mars water cycle. Kahn, R., [1990, p.14,677-14,693, eng] 45-1841
- Snow deformation**
- Nonlinear formulation of snow creep. Olgne, X., et al, [1990, p.1-18, eng] 45-1763
- Microscopic observations of snow deformation. Shoop, S.A., et al, [1990, p.27-3F, eng] 45-2184
- Snow density**
- Initial densification of snow/firn in Wilkes Land. Qin, D., et al, [1988, p.60-74, chi] 45-37



- Numerical simulation of powder-snow avalanches. Fukushima, Y., et al, [1990, p.229-237, eng] 45-66
- Measurement and evaluation of snowpacks. Trabant, D.C., et al, [1990, p.39-93, eng] 45-406
- Drifting snow. Tabler, R.D., et al, [1990, p.95-145, eng] 45-407
- Oxygen-18 thermometer from snow of Queen Maud Land. Hermichen, W.D., et al, [1990, p.307-311, eng] 45-727
- Influence of snow density on conductivity of snowfall measured by AC method. Asano, K., et al, [1990, p.19-26, eng] 45-904
- General distribution of snow cover in northern Kamchatka. Brukhanda, V.I., et al, [1990, p.25-35, rus] 45-1101
- Snow density as a criterion for mountain snow cover observation points. Gavrilov, G.G., [1990, p.42-45, rus] 45-1103
- Geocryological studies of northern Western Siberia. Konstantinov, I.P., ed, [1990, 117p., rus] 45-1194
- Formation characteristics and thermal effect of snow cover. Kazanski, O.A., [1990, p.8-17, rus] 45-1196
- Properties of snow cover in northeastern Western Siberia. Sergeev, B.P., [1990, p.18-28, rus] 45-1197
- Microwave snow sounding for trafficability analysis. Alalomäki, J., et al, [1989, p.145-150, eng] 45-1227
- Regularities in the occurrence of snow cover in the Amudaria River basin. Kalontarov, B.I., et al, [1990, p.92-96, rus] 45-1742
- Summertime formation of depth hoar in central Greenland. Alley, R.B., et al, [1990, p.2393-2396, eng] 45-1991
- Temporal accumulation and ablation patterns of seasonal snowpack. Hardy, J.P., et al, [1990, p.23-34, eng] 45-2118
- Snow stratigraphy and ice formation on Nelson Ice Cap. Wang, X., et al, [1990, p.13-21, chi] 45-2169
- Frequency distributions of densities for four types of snow in Shinjo. Abe, O., [1990, p.83-92, jpn] 45-2303
- Glaciological and meteorological measurements in Dronning Maud Land. Winther, J.G., [1990, p.81-86, eng] 45-2834
- Millimeter-wave radar scattering from snow: 1. Radiative transfer model. Kuga, Y., et al, [1991, p.329-341, eng] 45-3044
- Millimeter-wave radar scattering from snow: 2. Comparison of theory with experimental observations. Ulaby, F.T., et al, [1991, p.343-351, eng] 45-3045
- Snow depth**
- Yukon territory snow survey measurements. Summary 1958-1987. [1989, 38p., eng] 45-72
- Snow surveys in Nepal Himalayas. Ohta, T., et al, [1990, p.29-30, eng] 45-196
- Air temperature and snow depth in Nepal Himalayas. Motoyama, H., et al, [1990, p.55-60, eng] 45-198
- Spatial analysis of snowpack data. Burn, D.H., et al, [1989, p.475-483, eng] 45-399
- Measurement and evaluation of snowpacks. Trabant, D.C., et al, [1990, p.39-93, eng] 45-406
- Ice thickness data, winter 1987-1988. [1990, 70p., eng] 45-552
- Heavy snowfalls in the territories of the Ukraine and Moldavia. Mironchenko, G.V., et al, [1989, p.110-118, rus] 45-828
- Snow cover, freezing and thawing of soil in pine forests. Korepanov, A.A., [1989, p.54-58, eng] 45-858
- Long range forecasting of runoff from the Murgab and Tedzhen Rivers. Shentsis, I.D., et al, [1990, p.129-144, rus] 45-997
- Vertical distribution of snow accumulations on river basin slopes. Kondraahov, I.V., et al, [1990, p.3-14, rus] 45-1099
- General distribution of snow cover in northern Kamchatka. Brukhanda, V.I., et al, [1990, p.25-35, rus] 45-1101
- Record snowfall in Issyk-Kul' in October 1982. Solodkov, P.A., et al, [1990, p.35-41, rus] 45-1102
- Measurement within the snow cover. Coleou, C., [1990, p.16-18, fre] 45-1128
- Attenuation of 3-cm band radar signals by snow cover in the Antarctic. Trepov, G.V., [1989, p.53-58, rus] 45-1489
- Determining estimation levels of snow cover. Kartashov, V.M., [1990, p.4-5, rus] 45-1603
- Investigating the interrelationship between climate and permafrost. Anisimov, O.A., et al, [1990, p.13-20, rus] 45-1630
- Simulation of seasonal snowcover based on air temperature and precipitation. Motoyama, H., [1990, p.1104-1110, eng] 45-1651
- Mathematical model of the properties and formation of snow cover structure. Guseva, E.V., et al, [1990, p.18-25, rus] 45-1731
- Regularities in the occurrence of snow cover in the Amudaria River basin. Kalontarov, B.I., et al, [1990, p.92-96, rus] 45-1742
- Automated snow depth and snowpack temperature measurements. Tanner, B.D., et al, [1990, p.73-78, eng] 45-2123
- Snow and ice. Meier, M.F., [1990, p.131-158, eng] 45-2149
- Model for prediction of snow cover distribution. Sambles, K.M., et al, [1990, p.109-119, eng] 45-2191
- Influence of a simulated transport corridor on snowpack characteristics. Fort Norman, N.W.T., Canada. Kershaw, G.P., [1991, p.31-40, eng] 45-2470
- Snowpack and the subnivean environment for an open meadow. Auerbach, N.A., et al, [1991, p.41-44, eng] 45-2471
- Surface emissivity at below-zero temperatures. Kondrat'ev, K.I.A., et al, [1991, p.7-9, eng] 45-2477
- Sea ice thickness distribution in the northwestern Weddell Sea. Lange, M.A., et al, [1991, p.4821-4837, eng] 45-2690
- Ice thickness data, winter 1988-1989. [1991, 74p., eng] 45-2693
- Data obtained from snow cover and atmospheric precipitation in mountains. Popova, L.V., ed, [1990, 110p., rus] 45-2999
- Snow depth required to mask the underlying surface. Baker, D.G., et al, [1991, p.387-392, eng] 45-3018
- Snow cover formation and melting in field catchments. Shutov, V.A., [1990, p.327-337, eng] 45-3686
- Using GOES visible data to extend snow course data in southern Ontario. Donald, J.R., et al, [1990, p.69-78, eng] 45-3800
- Snow conditions in Sweden during the seasons 1950/51-1979/80. Eriksson, B., [1990, 75p., swe] 45-3883
- Snow deterioration**
- Problems of ice and snow deterioration. Epifanov, V.P., [1990, p.9-12, rus] 45-1729
- Electromagnetic emission during snow and ice deterioration. Berri, B.L., [1990, p.13-18, rus] 45-1730
- Snow disposal**
- Environmental effects of snow dumping: a literature review. Scott, W.S., et al, [1980, p.219-240, eng] 45-184
- See *also*: Snow removal
- Snow distribution**
- See *also*: Snow cover distribution
- Snow drifts**
- See *also*: Snowdrifts
- Snow electrical properties**
- Experimental study of microwave transmission in snowpack. Abe, T., et al, [1990, p.915-921, eng] 45-369
- Microwave radar target acquisition in snow. Kohler, C.R., et al, [1990, 21p., eng] 45-559
- Influence of snow density on conductivity of snowfall measured by AC method. Asano, K., et al, [1990, p.19-26, eng] 45-904
- Attenuation of 3-cm band radar signals by snow cover in the Antarctic. Trepov, G.V., [1989, p.53-58, rus] 45-1489
- Real permittivity of snow at 1 MHz and 0 C. Perla, R., [1991, p.215-219, eng] 45-3427
- Snow erosion**
- Saltation of snow. Pomeroy, J.W., et al, [1990, p.1583-1594, eng] 45-223
- Drifting snow. Tabler, R.D., et al, [1990, p.95-145, eng] 45-407
- Snow evaporation**
- Sublimation rate of collected blowing snow in a cyclone type collector. Sato, T., [1990, p.91-98, jpn] 45-112
- Drifting snow. Tabler, R.D., et al, [1990, p.95-145, eng] 45-407
- Physical properties of deposited snow: metamorphosis of snow crystals and thermal conductivity of snow. Yoshida, J., [1986, p.270-288, eng] 45-3719
- Snow fences**
- Drifting snow. Tabler, R.D., et al, [1990, p.95-145, eng] 45-407
- Wind tunnel tests on highway parking shelter snowbreaks. Takabe, N., et al, [1990, p.221-226, jpn] 45-752
- Snow collection mechanism and capacity of snow fence. Takeuchi, M., [1989, p.10-15, eng] 45-909
- Snow fencing to increase streamflow on rangelands. Sturges, D.L., [1990, p.145-154, eng] 45-1179
- Influence of a snow fence on young reforestation. Mullenbach, P., et al, [1990, 9p., fre] 45-1723
- Stabilization of dunes in winter. Lemieux, G.H., et al, [1990, p.1/2-1/11, fre] 45-1777
- Testing of windbreak models under natural blowing snow conditions in Quebec. Verreault, R., et al, [1990, p.1/12-1/18, fre] 45-1778
- Estimating snow transport from wind speed records. Tabler, R.D., et al, [1990, p.61-72, eng] 45-2122
- Snow fencing near pit reservoirs to improve water supplies. Jairell, R.L., et al, [1990, p.156-159, eng] 45-2136
- Theoretical and experimental approach to the functioning of a snow drift barrier system. Brugnot, G., [1984, p.445-450, fre] 45-2139
- What makes a good snow fence. Perchanok, M.S., [1990, p.39-49, eng] 45-2185
- Snow fence operational and material testing. Perchanok, M.S., [1991, p.708-718, eng] 45-2380
- Measuring the efficiency of snow fences by vehicle-mounted blowing-snow counters. Ishimoto, K., et al, [1988, p.193-196, jpn] 45-2515
- Optimum repair and maintenance of railroads in Siberia and the Far East. Diunin, A.K., ed, [1990, 78p., rus] 45-3004
- Interaction between a snow layer and retaining structures. Shevchuk, S.S., [1990, p.26-31, rus] 45-3006
- Using lightweight avalanche protection walls for railroad lines. Vetoshkina, N.A., et al, [1990, p.41-46, rus] 45-3009
- Method to prevent cornice formation by erecting wooden fences. Saito, Y., [1986, p.252-260, eng] 45-3717
- Various methods to prevent cornice formations. Takahashi, K., [1986, p.261-269, eng] 45-3718
- Snow gauges**
- See *also*: Precipitation gauges
- Snow hardness**
- Shear cell experiments of snow and ice friction. Casassa, G., et al, [1991, p.3745-3756, eng] 45-2442
- Snow heat flux**
- Role of thermal convection in heat and mass transport in the subarctic snow cover. Sturm, M., [1989, 209p., eng] 45-505
- Numerical model of snow-cover effects on mesoscale circulations. Segal, M., et al, [1991, p.1024-1042, eng] 45-3274
- Maximum variation of air/snow interface temperature. Bates, R.E., et al, [1990, p.411-422, eng] 45-3768
- Snow hydrology**
- Hydrological role of forest geosystems. Snytko, V.A., ed, [1989, 165p., rus] 45-33
- Snow hydrology. Marsh, P., [1990, p.37-61, eng] 45-213
- Climate change effects on the snowmelt hydrology of western North American mountain basins. Rango, A., et al, [1989, p.181-183, eng] 45-231
- Measurement and evaluation of snowpacks. Trabant, D.C., et al, [1990, p.39-93, eng] 45-406
- Drifting snow. Tabler, R.D., et al, [1990, p.95-145, eng] 45-407
- Snow avalanches. Trabant, D.C., et al, [1990, p.147-176, eng] 45-408
- Snow model for stream flow forecasting. Day, G.N., [1990, 181p., eng] 45-509
- Snowbank hydrology in the continuous permafrost zone. Lewkovicz, A.G., et al, [1990, p.13-21, eng] 45-1186
- Hydrologic phenomena of snow: review. Nakatsugawa, M., [1990, p.24-40, jpn] 45-1667
- Snow hydrology of an alpine basin in the Sierra Nevada. Kattelmann, R., [1990, p.41-50, eng] 45-2120
- Operational remote sensing of snow cover in the U.S. and Canada. Carroll, T.R., et al, [1990, p.286-291, eng] 45-2667
- Sloping land with snow and ice. Lang, H., [1989, p.146-162, eng] 45-2749
- Snow hydrology. Brooks, K.N., et al, [1991, p.262-286, 380-381, eng] 45-2752
- Effects of suburbanization upon snowmelt runoff. Buttle, J.M., [1990, p.285-302, eng] 45-2995
- Recharge processes during snowmelt: an isotopic and hydrometric investigation. Buttle, J.M., et al, [1990, p.343-360, eng] 45-3464
- Searching for chaotic dynamics in snowmelt runoff. Wilcox, B.P., et al, [1991, p.1005-1010, eng] 45-3549
- Snow hydrology of a headwater arctic basin. 1. Physical measurements and process studies. Kane, D.L., et al, [1991, p.1099-1109, eng] 45-3550
- Snow hydrology of a headwater arctic basin. 2. Conceptual analysis and computer modeling. Hinzman, L.D., et al, [1991, p.1111-1121, eng] 45-3551
- Estimated runoff from man-made snow. Eisel, L.M., et al, [1990, p.519-526, eng] 45-3698
- On the relationship between snow distribution and snow melt. Gjessing, Y., [1990, p.111-119, eng] 45-3787
- Observing snow melting in southern Norway from satellite passive microwave. Faanes, T., [1990, p.187-194, eng] 45-3794
- Effective use of satellite-observed snow cover data in the snowmelt-runoff model (SRM). Rango, A., [1990, p.19-31, eng] 45-3798
- Using GOES visible data to extend snow course data in southern Ontario. Donald, J.R., et al, [1990, p.69-78, eng] 45-3800
- Using spreadsheet software in water-balance modeling. Dexter, L.R., et al, [1991, p.527-536, eng] 45-3817
- Snow ice**
- O-18 concentrations in sea ice of the Weddell Sea, Antarctica. Lange, M.A., et al, [1990, p.315-323, eng] 45-1542
- Properties of sea ice in the Weddell Sea, Antarctica. Lange, M.A., [1990, p.289-299, eng] 45-3584
- Snow ice interface**
- Analyzing the mineralization of ice cover on rivers and reservoirs. Ergin, V.P., [1990, p.89-100, rus] 45-1624
- Quasistationary dimensionless model of arctic ice. Ivanov, B.V., et al, [1990, p.18-31, rus] 45-1633
- Specific aspects of modelling the evolution of ice cover on arctic seas. Appel, J.L., [1990, p.62-70, rus] 45-1637
- Model studies of the "atmosphere-snow-sea ice" system in an annual cycle. Oreshko, A.P., et al, [1990, p.51-57, rus] 45-1736
- Snow impurities**
- Precipitation chemistry. Artz, R.S., [1988, p.99-101, eng] 45-1

**Snow impurities (cont.)**

- Mode of formation of "ablation hollows" controlled by dirt content of snow. Rhodes, J.J., et al, (1987, p.135-139, eng) 45-6
- Evaporation and spread of chemicals on snow and ice. Kawamura, P.I., et al, (1987, p.53-76, eng) 45-180
- Environmental effects of snow dumping: a literature review. Scott, W.S., et al, (1980, p.219-240, eng) 45-184
- Chemical composition of snow cover as an indicator of gas and dust emissions. Shul'kin, V.M., (1981, p.101-109, rus) 45-207
- Contamination of the global environment as observed in the Arctic. Pacyna, J.M., et al, (1990, p.149-157, eng) 45-374
- Measurement and evaluation of snowpacks. Trabant, D.C., et al, (1990, p.39-93, eng) 45-406
- Signals of atmospheric pollution in polar snow and ice. Wolff, E.W., (1990, p.189-205, eng) 45-467
- Release of heavy metals from snowpacks on the Japan Sea side of Japan. Ecker, F.J., et al, (1990, p.141-153, eng) 45-596
- Pollution of the environment by fluorine in the Far North. Fedorov, A.S., et al, (1989, p.95-100, rus) 45-739
- First radiocesium profile and snow cover mass measurements. Kasi, S.S.H., (1988, p.101-105, eng) 45-770
- Change in concentration of petroleum products at low temperatures. Nemirovskaja, I.A., (1989, p.273-280, eng) 45-771
- Chlorinated hydrocarbons in the antarctic atmosphere and snow water. Tulupov, P.E., et al, (1989, p.54-58, eng) 45-881
- Airborne trace metals in snow on the Japan Sea side of Japan. Ecker, F.J., et al, (1990, p.2593-2600, eng) 45-954
- Major element chemistry,  $\delta_{18}O$ ,  $\delta_{13}C$  and Sr-87/Sr-86 in a snow profile across central Scandinavia. Andersson, P., et al, (1990, p.2601-2608, eng) 45-955
- Determination of alkaline earth metals in Japanese rain and snow by ICP emission spectrometry. Dokiya, Y., et al, (1988, p.145-165, eng) 45-1013
- Climatic implications of microparticles in an antarctic coastal ice core. Yao, T.D., et al, (1990, p.1102-1109, eng) 45-1144
- Soluble and insoluble impurities in snow samples from Ross Island, Antarctica. Palais, J.M., et al, (1990, p.89-91, eng) 45-1393
- Record of solar proton events in a firn core from Windless Bight. Zeller, E.J., et al, (1990, p.92-94, eng) 45-1394
- Tracers of volcanic emissions in aerosol and snow samples. Palais, J.M., et al, (1990, p.217-218, eng) 45-1435
- Avacha fumarolic trace elements: distribution in snow and surface waters. Alekseev, V.A., et al, (1990, p.325-336, eng) 45-1704
- Trace metal and rare earth content of black precipitation events. Landsberger, S., et al, (1990, p.363-369, eng) 45-1899
- Problems in background monitoring of natural environments in the Far North. Evseev, A.V., et al, (1990, p.46-58, rus) 45-1965
- Dispersion of Chernobyl fallout by meltwater in an alpine glacier. Ambach, W., et al, (1989, p.151-153, eng) 45-2086
- Laser spectroscopy of snow and ice cover. Zalikhanov, M.Ch., et al, (1989, p.43-47, eng) 45-2107
- 2-D microscopic simulation of heat and mass transport in dry snow. Christon, M., et al, (1990, p.87-105, eng) 45-2168
- Recent developments in snow-chemistry research in the western United States. Davis, R.E., et al, (1990, p.99-107, eng) 45-2190
- Particulate matter and marine aerosol formation processes. Calvelli, G., et al, (1989, p.639-676, eng) 45-2296
- Analysis of the principal components of antarctic precipitations. Piccardi, G., et al, (1989, p.701-712, eng) 45-2297
- Copper, nickel and cadmium in sea water and snow. Saini, G., et al, (1989, p.713-721, eng) 45-2298
- Deducing precipitation chemistry changes from snow cores. Metcalf, R.C., et al, (1990, p.299-316, eng) 45-2529
- Brown snow: a long-range transport event in the Canadian Arctic. Welch, H.E., et al, (1991, p.280-286, eng) 45-3026
- Acidic snowmelt effects on stream trout. Stansley, W., et al, (1990, p.227-237, eng) 45-3304
- Snow line**
- Snowline depression in Chile during the Pleistocene. Caviedes, C.N., (1990, p.99-114, eng) 45-363
- Changes in mountain climate and glacio-hydrological responses. Barry, R.G., (1990, p.161-170, eng) 45-619
- Snow cover in mountain systems of the Earth. Getiker, M.I., et al, (1989, p.30-38, rus) 45-1031
- Recent and glacial snowline in the southern Carpathian Mountains. Horedt, H., (1988, p.167-176, ger) 45-1096
- Interaction of sea ice, snow, and glaciers with the atmosphere and ocean. Kotliakov, V.M., ed, (1990, 74p, eng) 45-1261

- Altitude calculation of climatic snowlines and their changing rules in China. Wu, X.H., et al, (1991, p.56-60, eng) 45-2483
- Snow loads**
- Measurement and evaluation of snowpacks. Trabant, D.C., et al, (1990, p.39-93, eng) 45-406
- Geometrically nonlinear finite element analysis of a glulam timber dome. Davalos, J.F., (1989, 289p., eng) 45-481
- Bending of a conifer branch at subfreezing temperatures: implications for snow interception. Schmidt, R.A., et al, (1990, p.1250-1253, eng) 45-589
- Observations of snow loads on drainage ditches at the gratings. Komatsu, J., et al, (1986, p.40-48, jpn) 45-927
- Predicting roof snow loads on gabled structures. Sack, R.L., et al, (1990, p.2763-2779, eng) 45-956
- Failures of agricultural buildings in Estonia caused by snow loads. Keskkula, T., (1990, p.195-200, eng) 45-1150
- Fourth International Conference on Atmospheric Icing of Structures. (1988, 414p., eng) 45-1299
- Wet snow on overhead lines: state-of-art. Admirat, P., et al, (1988, p.7-13, eng) 45-1301
- Space-time model of a wet snowstorm. Maccagnan, M., et al, (1988, p.14-18, eng) 45-1302
- Risk of wet snow sticking on power lines. Admirat, P., et al, (1988, p.24-29, eng) 45-1304
- Power failures from wet snow. Baldit, M., et al, (1988, p.39-43, eng) 45-1307
- Observation of natural wet snow accretion. Sakamoto, Y., et al, (1988, p.79-83, eng) 45-1316
- Studies of icing and ice-snow accretion in Mt. Zao. Yano, K., (1988, p.109-113, eng) 45-1322
- Calibration of a snow accumulation model. Admirat, P., et al, (1988, p.129-133, eng) 45-1326
- Accretion of wet snow on power lines. Tachizaki, S., et al, (1988, p.175-179, eng) 45-1334
- Thermodynamic simulation of wet snow accretion under wind-tunnel conditions. Sakamoto, Y., et al, (1988, p.180-185, eng) 45-1335
- Computerized camera monitors of snow on power lines. Eeles, W.T., et al, (1988, p.282-286, eng) 45-1355
- Torsion of cables from snow accretion. Admirat, P., et al, (1988, p.324-329, eng) 45-1364
- Countermeasures for snow accretion on conductors. Saotome, H., et al, (1988, p.363-366, eng) 45-1372
- Liquid water content of snow accreted on conductors. Admirat, P., et al, (1988, p.367-371, eng) 45-1373
- Wet snow accretion and galloping on transmission lines. Yamaoka, M., et al, (1988, p.376-380, eng) 45-1375
- Effect of snow and constant loads on the flexural strength of wooden structures. Denesh, N.D., (1990, p.16-20, rus) 45-1587
- Nonlinear formulation of snow creep. Olagne, X., et al, (1990, p.1-18, eng) 45-1763
- Similarity considerations for roof snow loads. Giever, P.M., et al, (1990, p.59-71, eng) 45-1767
- Drifted snow on roofs. O'Rourke, M., (1991, p.698-707, eng) 45-2379
- Condensation of humidity onto a snow covered roof. Nordell, B., (1990, p.287-298, eng) 45-2528
- Studies on snow and ice: to improve power generation. Kuroiwa, D., ed, (1986, 524p., eng) 45-3701
- Railway electrification and snow. Seki, S., (1986, p.12-24, eng) 45-3703
- Studies on snow accretion. Shoda, M., (1986, p.102-150, eng) 45-3709
- Observations of snow accretion on electric transmission lines. Hayashi, K., et al, (1986, p.151-169, eng) 45-3710
- Forecasting the snow accretion. Ito, H., (1986, p.170-180, eng) 45-3711
- Practical methods of snow accretion forecast. Kurashige, K., (1986, p.181-195, eng) 45-3712
- Studies on sleet jump. Kito, S., (1986, p.196-210, eng) 45-3713
- Sleet jump of overhead transmission wires due to falling of accreted snow and ice. Shoda, M., (1986, p.211-225, eng) 45-3714
- Studies on accumulation of snow on different materials. Takahashi, T., (1986, p.226-239, eng) 45-3715
- Snow deposition on the arms of an electric pole: model test. Takahashi, T., (1986, p.240-251, eng) 45-3716
- Study on the effects of the settling force of snow on electric poles, stays and transmission towers. Shoda, K., (1986, p.289-326, eng) 45-3720
- Snow load and the damage it causes to structures. Furukawa, I., (1986, p.327-349, eng) 45-3721
- Settling force of deposited snow. Shidei, T., (1986, p.350-383, eng) 45-3722
- Studies on the settling force of snow on the legs of iron transmission towers. Hayashi, K., et al, (1986, p.384-403, eng) 45-3723
- Creeping of snow deposited on the slope. Shidei, T., (1986, p.404-418, eng) 45-3724
- Snow load on slopes. Furukawa, I., (1986, p.419-431, eng) 45-3725
- Mechanical properties of snow avalanche. Kuroda, M., (1986, p.432-438, eng) 45-3726
- Impact force of an avalanche. Shinoda, N., (1986, p.455-462, eng) 45-3729

**Snow manufacturing**

- Temperature potential for artificial snow-making. Mainyung, J., (1990, p.22-28, fre) 45-3303
- Estimated runoff from man-made snow. Eisel, L.M., et al, (1990, p.519-526, eng) 45-3698
- See (also): Artificial snow
- Snow mechanics**
- Drifting snow. Tabler, R.D., et al, (1990, p.95-145, eng) 45-407
- Estimates of shock wave attenuation in snow. Johnson, J.B., (1990, 14p., eng) 45-1550
- Problems of ice and snow deterioration. Epifanov, V.P., (1990, p.9-12, rus) 45-1729
- New instrument for determining physical-mechanical properties of snow. Epifanov, V.P., (1990, p.188-192, rus) 45-1761
- Mechanics of aeolian transport of snow and sand. Kind, R.J., (1990, p.855-866, eng) 45-2097
- Estimating snow transport from wind speed records. Tabler, R.D., et al, (1990, p.61-72, eng) 45-2122
- Studies on the fluidized snow dynamics. Nishimura, K., (1990, 55p., eng) 45-2284
- Shear cell experiments of snow and ice friction. Casassa, G., et al, (1991, p.3745-3756, eng) 45-2442
- Optimum repair and maintenance of railroads in Siberia and the Far East. Diunin, A.K., ed, (1990, 78p., rus) 45-3004
- Using a handbook on climate to evaluate snow transfer volumes. Matvienko, V.S., et al, (1990, p.17-23, rus) 45-3005
- Interaction between a snow layer and retaining structures. Shevchuk, S.S., (1990, p.26-31, rus) 45-3006
- Snow transport and protecting roads from snowdrifts. Komarov, A.A., et al, (1990, p.36-40, rus) 45-3008
- Penetration of snow into the ceiling structures: tests using marked material. Kaariainen, H., et al, (1989, 55p., + append., fin) 45-3848
- Snow melting**
- Mode of formation of "ablation hollows" controlled by dirt content of snow. Rhodes, J.J., et al, (1987, p.135-139, eng) 45-6
- Analysis and modeling of melt-water refreezing in dry snow. Pfeffer, W.T., et al, (1990, p.238-246, eng) 45-67
- Snow hydrology. Marsh, P., (1990, p.37-61, eng) 45-213
- Snow storage dam project. Miyamoto, H., (1990, p.37-42, jpn) 45-695
- Study on snow melting methods for roads in Hokkaido. Ninagawa, K., et al, (1990, p.87-92, jpn) 45-744
- Interaction of sea ice, snow, and glaciers with the atmosphere and ocean. Kotliakov, V.M., ed, (1990, 74p., eng) 45-1261
- Strongly temperature dependent microphysical processes and winter storms. Stewart, R.E., et al, (1991, p.231-234, eng) 45-1937
- Modeling snowmelt runoff processes in temperate and arctic environments. Sand, K., (1990, 176p., eng) 45-1977
- Using electric heating to protect railroad switches from snowdrifts. Kvon, I.A.D., et al, (1990, p.31-36, rus) 45-3007
- Regional climate change impacts: 1. Impacts on water resources. Mimikou, M.A., et al, (1991, p.247-258, eng) 45-3444
- Preliminary measurements of CO<sub>2</sub> in melting snow. Sommerfeld, R.A., et al, (1991, p.1225-1228, eng) 45-3760
- Observing snow melting in southern Norway from satellite passive microwave. Faanes, T., (1990, p.187-194, eng) 45-3794
- See (also): Snowmelt
- Snow metal friction**
- See (also): Metal snow friction
- Snow metamorphism**
- See (also): Metamorphism (snow)
- Snow morphology**
- International classification for seasonal snow on the ground. Colbeck, S.C., et al, (1990, 23p., eng) 45-1174
- Snow as a field-teaching medium for earth science. Custer, S.G., (1991, p.34-43, eng) 45-2790
- Snow optics**
- Reflectance and transmittance of snow at high spectral resolution. Dozier, J., et al, (1989, p.662-664, eng) 45-242
- Radiative thermodynamics of snow and ice. Krass, M.S., et al, (1990, 260p., rus) 45-1532
- Radiometry of precipitable water over high latitude regions. Wang, J.R., et al, (1991, p.179-184, eng) 45-1598
- Spectral properties of fog over the Malaspina Glacier. AK. Ormsby, J.P., et al, (1991, p.179-185, eng) 45-1720
- Scattering properties of natural snow and frost: comparison with icy satellite photometry. Verbiacer, A.J., et al, (1990, p.418-428, eng) 45-1923
- Investigations of space-time variations in meteorological visibility. Laikhtman, V.I., et al, (1987, p.108-120, rus) 45-2299

**Snow pellets**

- Radar reflectivity-ice water content relationships for use above the melting level in hurricanes. Black, R.A., et al., [1990, p.955-961, eng] 45-774
- Climatological study on the mechanism of graupel formation. Harimaya, T., [1990, p.437-447, eng] 45-785
- Hailstone formation in a Montana hailstorm. Miller, L.J., et al., [1990, p.1619-1646, eng] 45-1383
- Supercooled liquid water development in a winter mountain storm. Sassen, K., et al., [1990, p.1323-1350, eng] 45-1580
- Least-squares polynomial technique for discriminating between drops and graupel in 2D image records. Czys, R.R., et al., [1991, p.J51-J55, eng] 45-1597
- Effect of liquid water on thunderstorm charging. Saunders, C.P.R., et al., [1991, p.11,007-11,017, eng] 45-3378
- Snow permeability**
- Role of thermal convection in heat and mass transport in the subarctic snow cover. Sturm, M., [1989, 209p., eng] 45-505
- Attenuation of 3-cm band radar signals by snow cover in the Antarctic. Trepov, G.V., [1989, p.53-58, rus] 45-1489
- Natural convection in the subarctic snow cover. Sturm, M., et al., [1991, p.11,657-11,671, eng] 45-3463
- Snow physics**
- Snow stratigraphy and ice formation on Law Dome. Xie, Z., [1988, p.1-21, chi] 45-35
- Technogeneous gamma-emitting radionuclides in antarctic snow samples. Adjarova, L., et al., [1990, p.45-48, eng] 45-826
- Snow and ice cover physical characteristics at Law Dome. Xie, Z., et al., [1989, p.8-22, eng] 45-1004
- Electro-physical and physical-mechanical properties of ice. Bogorodskii, V.V., ed., [1989, 256p., rus] 45-1483
- Attenuation of 3-cm band radar signals by snow cover in the Antarctic. Trepov, G.V., [1989, p.53-58, rus] 45-1489
- Radiation temperature of the surface of snow and ice cover. Darovskikh, A.N., et al., [1989, p.72-77, rus] 45-1492
- Radiative thermophysics of snow and ice. Krass, M.S., et al., [1990, 260p., rus] 45-1532
- Estimates of shock wave attenuation in snow. Johnson, J.B., [1990, 14p., eng] 45-1550
- Problems and prospects of studies on the physical processes of snow cover. Golubev, V.N., et al., [1990, p.26-35, rus] 45-1732
- Avalanche diagnosis as a physics problem. Kanaev, L.A., et al., [1990, p.86-92, rus] 45-1741
- New instrument for determining physical-mechanical properties of snow. Epifanov, V.P., [1990, p.188-192, rus] 45-1761
- Snow pillows**
- Measurement and evaluation of snowpacks. Trabant, D.C., et al., [1990, p.39-93, eng] 45-406
- Yukon Territory snow survey bulletin: Mar. 1991. [1991, 25p., eng] 45-2093
- Snow plastics friction**
- See *also*: Plastics snow friction
- Snow recrystallization**
- See *also*: Metamorphism (snow)
- Snow removal**
- New system for controlled snow sliding on a roof. Tamura, M., et al., [1990, p.81-90, jpn] 45-111
- Tests on road snow removal (update): tests on urban snow removal. [1990, p.171-188, jpn] 45-748
- Performance tests on tires for snow removal trucks. Tahata, O., et al., [1990, p.203-208, jpn] 45-749
- Tests on surface components of snow removal drains: tests on snow removal drain covers. Maeda, T., et al., [1990, p.209-214, jpn] 45-750
- Tests on improving the efficiency of snow removal equipment on snow removal trucks. Nakajima, J., et al., [1990, p.215-220, jpn] 45-751
- Highway snow control research in Japan. Itagaki, K., [1990, 60p., eng] 45-999
- Steep climbs for Scania-powered snow groomers. Brebeck, J., [1990, p.36-38, eng] 45-2290
- Snow drainage ditches in Hokkaido. Sakaguchi, K., [1988, p.211-216, jpn] 45-2516
- Snow drainage ditches as winter (severe winter) countermeasures in Shimokawa. Yoshikawa, M., et al., [1988, p.217-222, jpn] 45-2517
- Tests on rotary snowplows (Continuation). [1988, p.1031-1048, jpn] 45-2521
- Tests on the safety and efficiency of operation of sidewings for snow removal trucks. Nakajima, J., et al., [1988, p.1055-1060, jpn] 45-2522
- Tests on the efficiency of snow removal equipment for snow removal trucks. Tsukagata, K., et al., [1988, p.1061-1064, jpn] 45-2523
- Winter maintenance. Pearson, D., [1990, p.337-379, eng] 45-3470
- Snow Sapporo 21st Century Project. Sugawara, T., [1990, p.1-20, eng] 45-3527
- Snow retention**
- Snow storage dam project. Miyamoto, H., [1990, p.37-42, jpn] 45-695
- Methods of evaluating the hydrological role of snow management. Shutov, V.A., [1990, p.15-23, eng] 45-1387
- Width of planned snow-retention afforestation roads. Kolomiets, V.A., [1990, p.93-94, rus] 45-2247
- Snow roads**
- Snow roads and runways. Abele, G., [1990, 100p., eng] 45-1971
- Snow rubber friction**
- See *also*: Rubber snow friction
- Snow samplers**
- Impact of sampling protocols on winter storm estimates of wet deposition. Lynch, J.A., et al., [1990, 33p., eng] 45-206
- Measurement and evaluation of snowpacks. Trabant, D.C., et al., [1990, p.39-93, eng] 45-406
- Technogeneous gamma-emitting radionuclides in antarctic snow samples. Adjarova, L., et al., [1990, p.45-48, eng] 45-826
- Dielectric measurements of snow liquid water content. Brun, E., et al., [1988, p.287-290, eng] 45-1356
- Snow slides**
- New system for controlled snow sliding on a roof. Tamura, M., et al., [1990, p.81-90, jpn] 45-111
- Snow stabilization**
- Processed-snow foundation design at the summit of the Greenland Ice Cap. Curtis, K.C., et al., [1991, p.240-249, eng] 45-2337
- See *also*: Snow cover stability
- Snow stratigraphy**
- Snow stratigraphy and ice formation on Law Dome. Xie, Z., [1988, p.1-21, chi] 45-35
- Ice formation and temperature regime on Nelson and King George Is. Ren, J., [1988, p.248-255, chi] 45-52
- Properties of snow cover in northeastern Western Siberia. Sergeev, B.P., [1990, p.18-28, rus] 45-1197
- Pollen variations in ice cap snow. Bourgeois, J.C., [1990, p.313-322, eng] 45-2413
- Deducing precipitation chemistry changes from snow cores. Metcalf, R.C., et al., [1990, p.299-316, eng] 45-2529
- Layered character of snow covers. Colbeck, S.C., [1991, p.81-96, eng] 45-2828
- Snow strength**
- Interpretation of snow shock impact using embedded stress gauges. Johnson, J.B., et al., [1990, p.117-120, eng] 45-400
- Microwave snow sounding for trafficability analysis. Alalomaki, J., et al., [1989, p.145-150, eng] 45-1227
- Validation study of the CRREL shallow snow mobility model. Blaisdell, G.L., et al., [1990, 72p., eng] 45-1510
- Snow roads and runways. Abele, G., [1990, 100p., eng] 45-1971
- Second validation study of the CRREL shallow snow mobility model. Richmond, P.W., et al., [1990, 39p., eng] 45-2094
- Microscopic observations of snow deformation. Shoop, S.A., et al., [1990, p.27-38, eng] 45-2184
- Snow structure**
- See *also*: Snow cover structure
- Snow surface**
- Mode of formation of "ablation hollows" controlled by dirt content of snow. Rhodes, J.J., et al., [1987, p.135-139, eng] 45-6
- Saltation of snow. Pomeroy, J.W., et al., [1990, p.1583-1594, eng] 45-223
- Roughness length of the snow surface of the Filchner-Ronne Ice Shelf. Heinemann, G., [1989, p.17-24, ger] 45-394
- Avalanche development and surface characteristics of snow accumulations. Achakovskii, S.A., [1990, p.71-76, rus] 45-1106
- See *also*: Glacier surfaces
- Snow surface temperature**
- Radiation temperature of the surface of snow and ice cover. Darovskikh, A.N., et al., [1989, p.72-77, rus] 45-1492
- Snow survey tools**
- Improvements in snow sensor installation techniques. Gehrke, F., et al., [1990, p.154-155, eng] 45-2135
- Snow surveys**
- Yukon territory snow survey measurements. Summary 1958-1987. [1989, 38p., eng] 45-72
- Yukon territory snow survey bulletin and water supply forecast—May. [1990, 24p., eng] 45-73
- Yukon territory snow survey bulletin and water supply forecast—May. [1990, 24p., eng] 45-74
- Yukon territory snow survey bulletin and water supply forecast—April. [1990, 24p., eng] 45-75
- Yukon territory snow survey bulletin and water supply forecast—March. [1990, 25p., eng] 45-76
- Snow surveys in Nepal Himalayas. Ohta, T., et al., [1990, p.29-30, eng] 45-196
- Decorrelation distance of snow in the Colorado River basin. Chang, A.T.C., et al., [1989, p.1247-1250, eng] 45-269
- Operational mapping of snow cover in the United States and Canada using airborne and satellite data. Carroll, T.R., et al., [1989, p.1257-1259, eng] 45-271

- Peculiarities of snow accumulation on Austfonna (Svalbard). Sin'kevich, S.A., et al., [1989, p.279-285, eng] 45-475
- Stability and variability of the maximum water equivalent of snow cover. Kadomtseva, T.G., et al., [1989, p.38-44, rus] 45-1032
- Characteristics of snow accumulation on the Austfonna (Spitsbergen). Sin'kevich, S.A., et al., [1989, p.190-194, rus] 45-1058
- Snow density as a criterion for mountain snow cover observation points. Gavriolov, G.G., [1990, p.42-45, rus] 45-1103
- Snow survey of Great Britain 1989/90. [1990, 22p., eng] 45-1178
- Terrain information system for use in forestry operations. Granberg, H.B., [1989, p.113-143, eng] 45-1701
- Study on snow chemistry in Canada: research in progress and prospects. Jones, H.G., [1990, p.3/5-3/12, fre] 45-1793
- Yukon Territory snow survey bulletin: Mar. 1991. [1991, 25p., eng] 45-2093
- Western Snow Conference, 58th, 1990. [1990, 170p. + appends., eng] 45-2114
- Status of the California Cooperative Snow Surveys Program. Hart, D., et al., [1990, p.9-14, eng] 45-2116
- Snow surveys and water supply forecasting. Johnson, D.E., [1990, p.15-22, eng] 45-2117
- Let's involve schoolkids in data collection efforts. Clagett, G.P., [1990, p.137-140, eng] 45-2131
- Snow sensors in wilderness areas. Brandow, C.A., [1990, p.145-149, eng] 45-2133
- Airborne and satellite snow cover data. Carroll, T.R., [1990, p.87-98, eng] 45-2189
- Statewide cooperative snow survey for Maine. Loiselle, M., et al., [1990, p.225-230, eng] 45-2202
- Snow as a field-teaching medium for earth science. Custer, S.G., [1991, p.34-43, eng] 45-2790
- Yukon Territory snow survey bulletin and water supply forecast, April 1, 1991. [1991, 26p., eng] 45-2846
- Data obtained from snow cover and atmospheric precipitation in mountains. Popova, L.V., ed., [1990, 110p., rus] 45-2999
- Remote sensing of snow covers using the gamma-ray technique. Offenbacher, E.L., et al., [1991, 19p., eng] 45-3259
- Outline of snow survey. Onuma, M., [1986, p.463-481, eng] 45-3730
- Classification of snow and frozen ground surfaces with SSM/I signatures. Neale, C.M.U., et al., [1990, p.345-355, eng] 45-3813
- Snow conditions in Sweden during the seasons 1950/51-1979/80. Eriksson, B., [1990, 75p., swe] 45-3883
- Snow temperature**
- Measurement and evaluation of snowpacks. Trabant, D.C., et al., [1990, p.39-93, eng] 45-406
- Identification of geothermal anomalies by snow-cover temperature survey. Lialin, G.N., [1989, p.53-66, eng] 45-1077
- Formation characteristics and thermal effect of snow cover. Kazanskii, O.A., [1990, p.8-17, rus] 45-1196
- Properties of snow cover in northeastern Western Siberia. Sergeev, B.P., [1990, p.18-28, rus] 45-1197
- Summertime formation of depth hoar in central Greenland. Alley, R.B., et al., [1990, p.2393-2396, eng] 45-1991
- Automated snow depth and snowpack temperature measurements. Tanner, B.D., et al., [1990, p.73-78, eng] 45-2123
- Arctic snow and air temperature budget over sea ice during winter. Overland, J.E., et al., [1991, p.4651-4662, eng] 45-2677
- Glaciological and meteorological measurements in Dronning Maud Land. Winther, J.G., [1990, p.81-86, eng] 45-2834
- On the ski-snow sliding mechanism. Aparin, V.I., et al., [1990, p.57-59, eng] 45-3266
- Natural convection in the subarctic snow cover. Sturm, M., et al., [1991, p.11,657-11,671, eng] 45-3463
- Maximum variation of air/snow interface temperature. Bates, R.E., et al., [1990, p.411-422, eng] 45-3768
- Snow thermal properties**
- Measurement and evaluation of snowpacks. Trabant, D.C., et al., [1990, p.39-93, eng] 45-406
- Role of thermal convection in heat and mass transport in the subarctic snow cover. Sturm, M., [1989, 209p., eng] 45-505
- Formation characteristics and thermal effect of snow cover. Kazanskii, O.A., [1990, p.8-17, rus] 45-1196
- Influence of a simulated transport corridor on snowpack characteristics. Fort Norman, N.W.T., Canada. Kershaw, G.P., [1991, p.31-40, eng] 45-2470
- Dynamics of thermal energy in the snow-soil-regolith system during phase transformations. Mezherovskii, A.P., [1991, p.90-98, rus] 45-3839
- Snow vehicles**
- Snowmobile suspension system design under university-industry collaboration. Sankar, S., et al., [1989, p.183-191, eng] 45-1232
- Validation study of the CRREL shallow snow mobility model. Blaisdell, G.L., et al., [1990, 72p., eng] 45-1510

## Snow vehicles (cont.)

- Workshop on Traction Mechanics on Deformable Terrain, South Lake Tahoe, CA, Oct 9-11, 1989. Blaisdell, G.L., ed. (1990, 37p., eng) 45-1968
- Initial impressions of a candidate mobile over-snow transport system. Blaisdell, G.L., et al. (1990, 13p. + appends., eng) 45-1969
- Design of a modified Caterpillar Challenger tractor for antarctic service. Blaisdell, G.L., et al. (1990, 13p. + figs., eng) 45-1976
- Second validation study of the CRREL shallow snow mobility model. Richmond, P.W., et al. (1990, 39p., eng) 45-2094
- Steep climbs for Scania-powered snow groomers. Brebeck, J., (1990, p.36-38, eng) 45-2290
- Very short pulse C-band radar for crevasse detection. Sultz, T., et al. (1991, p.103-107, eng) 45-3068
- Personnel and cargo transport in Antarctica. Blaisdell, G.L., (1991, 63p., eng) 45-3109
- U.S. Army wheeled versus tracked vehicle mobility performance test program—report 2: mobility in shallow snow. Green, C.E., et al. (1991, 48p. + appends., eng) 45-3446
- Snow water content**
- Theoretical determination of the characteristic equation of snow in the pendular regime. Morris, E.M., et al. (1990, p.179-187, eng) 45-60
- Chemical composition of snow cover as an indicator of gas and dust emissions. Shul'kin, V.M., (1981, p.101-109, rus) 45-207
- Spatial analysis of snowpack data. Burn, D.H., et al. (1989, p.475-483, eng) 45-399
- Principles and methods of geosystem monitoring. Grin, A.M., ed. (1989, 168p., rus) 45-429
- Measurement of the liquid water fraction of snow. Boyne, H.S., et al. (1990, 8p., eng) 45-560
- Chlorinated hydrocarbons in the antarctic atmosphere and snow water. Tulupov, P.E., et al. (1989, p.54-58, eng) 45-881
- General distribution of snow cover in northern Kamchatka. Brukhanda, V.I., et al. (1990, p.25-35, rus) 45-1101
- Improving the forecasting of snow water content in a glacier basin. Gruzinov, A.V., (1990, p.45-49, rus) 45-1104
- Avalanche development and surface characteristics of snow accumulations. Achakovskii, S.A., (1990, p.71-76, rus) 45-1106
- Microwave snow sounding for trafficability analysis. Alalommaki, J., et al. (1989, p.145-150, eng) 45-1227
- Dielectric measurements of snow liquid water content. Brun, E., et al. (1988, p.287-290, eng) 45-1356
- Liquid water content of snow accreted on conductors. Admirat, P., et al. (1988, p.367-371, eng) 45-1373
- Water-regulating role of taiga forests. Rubtsov, M.V., et al. (1990, 222p., rus) 45-1574
- Method of narrowing the water supply forecast range. Stein, R.E., (1990, p.92-98, eng) 45-2126
- Data obtained from snow cover and atmospheric precipitation in mountains. Popova, L.V., ed. (1990, 110p., rus) 45-2999
- Millimeter-wave radar scattering from snow: 1. Radiative transfer model. Kuga, Y., et al. (1991, p.329-341, eng) 45-3044
- Millimeter-wave radar scattering from snow: 2. Comparison of theory with experimental observations. Ulaby, F.T., et al. (1991, p.343-351, eng) 45-3045
- Real permittivity of snow at 1 MHz and 0 C. Perla, R., (1991, p.215-219, eng) 45-3427
- Snow water equivalent**
- Hydrological role of forest geosystems. Snytko, V.A., ed. (1989, 165p., rus) 45-33
- Yukon territory snow survey measurements. Summary 1958-1987. (1989, 38p., eng) 45-72
- Yukon territory snow survey bulletin and water supply forecast—May. (1990, 24p., eng) 45-73
- Yukon territory snow survey bulletin and water supply forecast—April. (1990, 24p., eng) 45-74
- Yukon territory snow survey bulletin and water supply forecast—March. (1990, 25p., eng) 45-76
- Correlation of radiometry observations with Colorado River basin snowpack properties. Josberger, E.G., et al. (1989, p.1239-1242, eng) 45-267
- Determination of areal snow water equivalent on the Canadian prairies using passive microwave satellite data. Goodison, B.E., (1989, p.1243-1246, eng) 45-268
- Measurement and evaluation of snowpacks. Trabant, D.C., et al. (1990, p.39-93, eng) 45-406
- Evaluation of precipitation measurements in the Arctic. Clagett, G.P., (1990, p.617-639, eng) 45-422
- Snow model for stream flow forecasting. Day, G.N., (1990, 181p., eng) 45-509
- Study on using snowmelt to develop farmland: tank model method. Sawada, N., et al. (1990, p.153-156, jpn) 45-753
- First radiocesium profile and snow cover mass measurements. Kasi, S.S.H., (1988, p.101-105, eng) 45-770
- Snow cover in mountain systems of the Earth. Getker, M.I., et al. (1989, p.30-38, rus) 45-1031
- Stability and variability of the maximum water equivalent of snow cover. Kadomtseva, T.G., et al. (1989, p.38-44, rus) 45-1032
- Critique of the climatic record of snow water equivalent. Schmidlin, T.W., (1990, p.1136-1141, eng) 45-1652
- Passive microwave remote sensing contribution to hydrological variables. Choudhury, B.J., (1991, p.63-84, eng) 45-1797
- Western Snow Conference, 58th, 1990. (1990, 170p. + appends., eng) 45-2114
- Temporal accumulation and ablation patterns of seasonal snowpack. Hardy, J.P., et al. (1990, p.23-34, eng) 45-2118
- Snow in mountain watersheds. Sommerfeld, R.A., et al. (1990, p.122-129, eng) 45-2129
- Timing and magnitude of high and low flows. Fedora, M.A., (1990, p.150-153, eng) 45-2134
- 1948 flood on the Columbia River. Speers, D.D., et al. (1990, p.160-163, eng) 45-2137
- Monitoring of snow water equivalent by synthetic aperture radar. Leconte, R., et al. (1990, p.73-86, eng) 45-2188
- Airborne and satellite snow cover data. Carroll, T.R., (1990, p.87-98, eng) 45-2189
- Snowpack effect on mountain vegetation distribution and ecotone. Barbour, M.G., et al. (1991, p.141-149, eng) 45-2226
- Runoff variation forecasts related to climatic changes. Kuznetsova, L.P., et al. (1991, p.126-132, eng) 45-2438
- Operational remote sensing of snow cover in the U.S. and Canada. Carroll, T.R., et al. (1990, p.286-291, eng) 45-2667
- Snow hydrology. Brooks, K.N., et al. (1991, p.262-286, 380-381, eng) 45-2752
- Hydrological yearbook 1984-1986. Leppajarvi, R., ed. (1990, 235p., eng) 45-2845
- Yukon Territory snow survey bulletin and water supply forecast, April 1, 1991. (1991, 26p., eng) 45-2846
- Remote sensing of snow covers using the gamma-ray technique. Offenbacher, E.L., et al. (1991, 19p., eng) 45-3259
- Snow cover formation and melting in field catchments. Shutov, V.A., (1990, p.327-337, eng) 45-3686
- Outline of snow survey. Onuma, M., (1986, p.463-481, eng) 45-3730
- Proceedings of the Workshop on Applications of Remote Sensing in Hydrology. (1990, 386p., eng) 45-3797
- Application of remotely sensed data in a distributed-parameter watershed model. Leavesley, G.H., et al. (1990, p.47-68, eng) 45-3799
- Utilization of SAR data in the monitoring of snowpacks and wetlands. Leconte, R., et al. (1990, p.233-258, eng) 45-3807
- Determination of snow water equivalent on the Canadian prairies. Goodison, B.E., et al. (1990, p.297-316, eng) 45-3809
- Average areal snow water equivalent determination in a mountain basin. Rango, A., (1990, p.317-318, eng) 45-3810
- Analysis of MOS-1 microwave scanning radiometer data for Canadian prairie snow cover. Walker, A.E., et al. (1990, p.319-329, eng) 45-3811
- Time and space distribution of water reserves in snow in field and forest catchment areas. Sokolova, N.V., (1991, p.105-110, rus) 45-3840
- Space and time variability of snow water equivalent in Finland. Perälä, J., et al. (1990, 260p., fin) 45-3872
- Snow wood friction**
- See *also*: Wood snow friction
- Snowdrifts**
- Drifting snow hazard and its control in the Tian Shan Mountains. Wei, W., (1989, p.53-58, eng) 45-402
- Drifting snow. Tabler, R.D., et al. (1990, p.95-145, eng) 45-407
- Wind tunnel simulation of antarctic snowdrifting. Kim, D.H., et al. (1989, 15p., eng) 45-816
- Snow collection mechanism and capacity of snow fence. Takeuchi, M., (1989, p.10-15, eng) 45-909
- Colloquium on the Dynamics of Natural Hazards and Glaciochemistry, Grenoble, France, Dec. 5-7, 1990. (1990, Var.p., fre) 45-1776
- Protection of alpine highways from snowdrifts. Hertig, J.A., (1990, p.1/50-1/64, fre) 45-1783
- Two-phase wind-tunnel study on snow transport by wind. Naaim, F., (1990, p.1/93-1/103, fre) 45-1786
- CLER expert system for snowdrifts. Moutte, F., (1990, p.1/104-1/113, fre) 45-1787
- Wind tunnel model tests of snow drifting on a two-level flat roof. Isyumov, N., et al. (1990, p.893-904, eng) 45-2085
- Froude number paradoxes in modeling of snowdrift. Anno, Y., (1990, p.889-891, eng) 45-2095
- Continuum mixture theory with application to turbulent snow. Decker, R., (1990, p.877-887, eng) 45-2096
- Estimating snow transport from wind speed records. Tabler, R.D., et al. (1990, p.61-72, eng) 45-2122
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- Cold regions engineering. (1991, 790p., eng) 45-2316
- Multiphase flows and the modeling of drifting snow. Decker, R., (1991, p.673-684, eng) 45-2377
- Wind tunnel modeling of time-dependent drift topography. Iversen, J.D., et al. (1991, p.685-697, eng) 45-2378
- Drifted snow on roofs. O'Rourke, M., (1991, p.698-707, eng) 45-2379
- Snow fence operational and material testing. Perchanok, M.S., (1991, p.708-718, eng) 45-2380
- Research study of highway snowdrifting in Canada. Baker, H.A., et al. (1991, p.719-728, eng) 45-2381
- Snow transport as a function of wind speed and height. Tabler, R.D., (1991, p.729-738, eng) 45-2382
- Optimum repair and maintenance of railroads in Siberia and the Far East. Diuinin, A.K., ed. (1990, 78p., rus) 45-3004
- Using a handbook on climate to evaluate snow transfer volumes. Matvienko, V.S., et al. (1990, p.17-23, rus) 45-3005
- Using electric heating to protect railroad switches from snowdrifts. Kvon, I.A.D., et al. (1990, p.31-36, rus) 45-3007
- Snow transport and protecting roads from snowdrifts. Komarov, A.A., et al. (1990, p.36-40, rus) 45-3008
- Protecting mountainous sections of the Frunze-Osh highway from snowdrifts. Avdeev, L.M., et al. (1990, p.60-63, rus) 45-3012
- Prevention of snow drifting with the help of road levelling and design. Saarelainen, S., et al. (1990, 36p., fin) 45-3842
- Snowfall**
- Snowfall and oxygen isotope variations off Ellesmere I. Jeffries, M.O., et al. (1987, p.195-199, eng) 45-15
- Evaluation of precipitation measurements in the Arctic. Clagett, G.P., (1990, p.617-639, eng) 45-422
- Forecasting of snowfall and snow accumulation. (1989, 187p., jpn) 45-531
- Growth process of snow particles in snow clouds. You, L., et al. (1990, p.221-230, eng) 45-611
- Heavy snowfall and avalanche disasters. Yamada, Y., (1989, p.639-655, jpn) 45-628
- Synoptic processes at the Great Wall Station, Jan.-Mar. 1985. Chen, S.M., et al. (1989, p.22-28, chi) 45-683
- Investigative report on improving the accuracy of radar rain and snow gauges. Iwami, Y., et al. (1990, p.107-112, jpn) 45-747
- Heavy snowfalls in the territories of the Ukraine and Moldavia. Mironchenko, G.V., et al. (1989, p.110-118, rus) 45-828
- Topographic effects on precipitating snow clouds in Japan. Kikuchi, K., et al. (1987, p.109-128, eng) 45-905
- Formation of the annual mass balance of a conic summit glacier. Kunakhovich, M.G., (1989, p.163-169, rus) 45-1053
- Formation of extremely large avalanches in the Elbrus area, 1967-1987. Troshkina, E.S., et al. (1989, p.213-217, rus) 45-1064
- Record snowfall in Issyk-Kul' in October 1982. Solodkov, P.A., et al. (1990, p.35-41, rus) 45-1102
- Model for hourly snowfall. Sage, J.D., (1988, p.44-48, eng) 45-1308
- Heavy snowfall within a mesoscale convergence zone. Sanderson, R.M., et al. (1990, p.41-52, eng) 45-1519
- Field test results on a precipitation occurrence and identification sensor. Wiggins, W.L., et al. (1991, p.348-351, eng) 45-1596
- Kinematics and dynamics of heavy snowfall bands over European territory. Gromova, G.G., et al. (1989, p.3-12, rus) 45-1848
- Characteristics of heavy and very heavy precipitation during the winter. Lapcheva, V.F., (1989, p.122-132, rus) 45-1849
- Periodic-stochastic modeling of separation of precipitation into rainfall and snowfall. Yevjevich, V., et al. (1990, p.2613-2623, eng) 45-2077
- Continuum mixture theory with application to turbulent snow. Decker, R., (1990, p.877-887, eng) 45-2096
- Precipitation extremes at the Central Sierra Snow Laboratory, California. Azuma, D., et al. (1990, p.141-144, eng) 45-2132
- Proceedings of the 47th annual Eastern Snow Conference, Bangor, ME, June 7-8, 1990. (1990, 250p., eng) 45-2181
- Objective guidance for 1- and 2-day mesoscale forecasts of lake-effect snow. Burrows, W.A., (1990, p.121-134, eng) 45-2192
- Impacts of heavy snowfall during December 1989 in the Lake Erie snowbelt. Schmidlin, T.W., (1990, p.135-142, eng) 45-2193
- Great Lakes winter of 1990. Assel, R.A., et al. (1990, p.143-154, eng) 45-2194
- Lake Ontario winter storms (LOWS) project. Niziol, T.A., et al. (1990, p.175-187, eng) 45-2197
- Regional snowfall intensity and the Great Lakes anomaly. Ryerson, C.C., et al. (1990, p.189-199, eng) 45-2198
- Lake Ontario and lake effect snow in New York. Ferlito, J.J., et al. (1990, p.219-224, eng) 45-2201
- Investigations of space-time variations in meteorological visibility. Lalkhtman, V.I., et al. (1987, p.108-120, rus) 45-2299

- Investigative report on the observation characteristics of radar rain and snow gages. Takahashi, T., et al, 1988, p.53-58, jpn) **45-2506**
- Review of precipitation-related aspects of west antarctic meteorology. Bromwich, D.H., et al, 1991, p.1-22, eng) **45-3278**
- Penetration of snow into the ceiling structures; tests using marked material. Kärriäinen, H., et al, 1989, 55p. + appends., fin) **45-3848**
- Snowflakes**
- Fractal models of snowflakes. Zhou, J., 1990, p.2607-2609, eng) **45-594**
- Stars of snow. Delly, J.G., 1990, p.223-232, eng) **45-1647**
- Aerosol collection efficiency indicated by disks modelling snowflakes. Sparmacher, H., et al, 1990, p.S209-S212, eng) **45-2216**
- Formation mechanisms of twelve-branched snow crystals. Uyeda, H., et al, 1990, p.549-555, eng) **45-2411**
- On the size distribution of rimed snowflakes. Ito, K., et al, 1986, p.25-35, eng) **45-3704**
- Velocity of falling snowflakes. Magono, C., 1986, p.36-55, eng) **45-3705**
- Snowmelt**
- Hydrological role of forest geosystems. Snytko, V.A., ed, 1989, 165p., rus) **45-33**
- Episodic acidification of Adirondack lakes during snowmelt. Schaefer, D.A., et al, 1990, p.1639-1647, eng) **45-224**
- Climate change effects on the snowmelt hydrology of western North American mountain basins. Rango, A., et al, 1989, p.181-183, eng) **45-231**
- Microwave satellite forecasting of snowmelt runoff. Wankiewicz, A., 1989, p.1235-1238, eng) **45-266**
- Decorrelation distance of snow in the Colorado River basin. Chang, A.T.C., et al, 1989, p.1247-1250, eng) **45-269**
- Summer 1987 flooding in glacial basins of the Pennine Alps. Rey, Y., et al, 1990, p.115-124, fre) **45-370**
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- Release of heavy metals from snowpacks on the Japan Sea side of Japan. Ecker, F.J., et al, 1990, p.141-153, eng) **45-596**
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- Study on using snowmelt to develop farmland: tank model method. Sawada, N., et al, 1990, p.153-156, jpn) **45-753**
- Phytoplankton dynamics in three Rocky Mountain lakes, Colorado, U.S.A. McKnight, D.M., et al, 1990, p.264-274, eng) **45-889**
- Surface energy balance of a perennial snowbank, Melville Island, Northwest Territories, Canada. Young, K.L., et al, 1990, p.290-301, eng) **45-891**
- Groundwater flow simulation considering snowmelt. Watanabe, K., et al, 1987, p.25-43, jpn) **45-924**
- Fate of N-15-labelled fertilizer applied on snow at two forest sites in British Columbia. Presti, C.M., et al, 1990, p.1583-1592, eng) **45-1027**
- Methods of mapping snowmelt and glacier runoff in mountainous countries. Ananicheva, I.D., et al, 1989, p.49-55, rus) **45-1034**
- Snow fencing to increase streamflow on rangelands. Sturges, D.L., 1990, p.145-154, eng) **45-1179**
- Snowbank hydrology in the continuous permafrost zone. Lewkowicz, A.G., et al, 1990, p.13-21, eng) **45-1186**
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- Hydrologic phenomena of snow: review. Nakatsugawa, M., 1990, p.24-40, jpn) **45-1667**
- Formation of the chemical composition of meltwater. Ivanov, A.V., 1989, p.67-83, rus) **45-1829**
- Modeling snowmelt runoff processes in temperate and arctic environments. Sand, K., 1990, 176p., eng) **45-1977**
- Transport of suspended materials in Swedish rivers. Brandt, M., 1990, p.273-283, eng) **45-2030**
- Hydrologic flow path definition and partitioning of spring meltwater. Maulé, C.P., et al, 1990, p.2959-2970, eng) **45-2078**
- Chemical weathering of a watershed in CO. Mast, M.A., et al, 1990, p.2971-2978, eng) **45-2079**
- Snow cover on small forest and field watersheds in the taiga zone of the European USSR. Deriugin, A.A., 1990, p.101-105, eng) **45-2080**
- Comparative snowmelt models applied to a balsam fir forest. Převost, M., et al, 1991, p.1-10, eng) **45-2109**
- Ablation of avalanched and undisturbed snow, Himalaya Mountains, Pakistan. De Scally, F.A., et al, 1990, p.2757-2767, eng) **45-2113**
- Western Snow Conference, 58th, 1990, 170p. + appends., eng) **45-2114**
- Learning from watching snowmelt. Frazier, J.W., et al, 1990, p.35-40, eng) **45-2119**
- Snow hydrology of an alpine basin in the Sierra Nevada. Kattelmann, R., 1990, p.41-50, eng) **45-2120**
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- Proceedings of the 47th annual Eastern Snow Conference, Bangor, ME, June 7-8, 1990, 1990, 250p., eng) **45-2181**
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- Two packages for meteorological data processing and runoff simulation for personal computers. Gandolfi, C., et al, 1987, p.192-198, eng) **45-2437**
- Runoff variation forecasts related to climatic changes. Kuznetsova, L.P., et al, 1991, p.126-132, eng) **45-2438**
- Date of snowmelt at Barrow, Alaska, U.S.A. Dutton, E.G., et al, 1991, p.115-119, eng) **45-2475**
- Snowmelt runoff forecasting system for the Rumoi River. Hiata, T., et al, 1988, p.395-398, jpn) **45-2518**
- Snowmelt in converting mountain land into farmland (Part 3). Sawada, N., et al, 1988, p.837-842, jpn) **45-2520**
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- Snow hydrology. Brooks, K.N., et al, 1991, p.262-286, 380-381, eng) **45-2752**
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- Snow hydrology of a headwater arctic basin. 1. Physical measurements and process studies. Kane, D.L., et al, 1991, p.1099-1109, eng) **45-3550**
- Snow hydrology of a headwater arctic basin. 2. Conceptual analysis and computer modeling. Hinzman, L.D., et al, 1991, p.1111-1121, eng) **45-3551**
- Longitudinal and seasonal water chemistry variations in a northern Appalachian stream. Phillips, R.A., et al, 1990, p.489-498, eng) **45-3697**
- Estimated runoff from man-made snow. Eisel, L.M., et al, 1990, p.519-526, eng) **45-3698**
- Snow research and electric power generation. Hori, S., 1986, p.1-11, eng) **45-3702**
- On the relationship between snow distribution and snow melt. Gjessing, Y., 1990, p.111-119, eng) **45-3787**
- Proceedings of the Workshop on Applications of Remote Sensing in Hydrology, 1990, 386p., eng) **45-3797**
- Effective use of satellite-observed snow cover data in the snowmelt-runoff model (SRM). Rango, A., 1990, p.19-31, eng) **45-3798**
- Microwave satellite spring runoff correlations. Wankiewicz, A., 1990, p.331-344, eng) **45-3812**
- Snowmelt stages on LANDSAT images. Fuller, G.A., et al, 1990, p.375-377, eng) **45-3815**
- Water and sediment yields into the Sutlej River from the High Himalaya. Sharma, P.D., et al, 1991, p.87-100, eng) **45-3885**
- See *also*: Meltwater; Snow melting
- Snowmobiles**
- See *also*: Snow vehicles
- Snowplows**
- See *also*: Snow removal
- Snowsheds**
- Snowsheds on the Baykal-Amur mainline. IAdroshnikov, V.I., 1991, p.4-6, rus) **45-2950**
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- Handbook on climate of the USSR, 1989, 268p., eng) **45-309**
- Space-time model of a wet snowstorm. Maccagnan, M., et al, 1988, p.14-18, eng) **45-1302**
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- Northeast snowstorms. Horne, T.A., 1991, p.86-87, eng) **45-1961**
- Preprint volume, 1991, 436p., eng) **45-1933**
- Diagnosing snow band air circulations via simulation. Hakim, G.J., et al, 1991, p.90-96, eng) **45-1935**
- Relationship of jet streaks to heavy precipitation in winter storms. Tollerud, E.I., et al, 1991, p.97-100, eng) **45-1936**
- Effect of melting in a Denver snow dump. Marwitz, J., et al, 1991, p.241-244, eng) **45-1939**
- Lake-effect storms east of Lake Ontario. Penc, R.S., et al, 1991, p.252-257, eng) **45-1940**
- December to remember. Heim, R., et al, 1990, p.329-332, eng) **45-2049**
- Jacksonville's White Christmas. Winterling, G., 1990, p.334-335, eng) **45-2050**
- Lake Ontario winter storms (LOWS) project. Niziol, T.A., et al, 1990, p.175-187, eng) **45-2197**
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- Snowstorm. Shiotani, M., 1986, p.56-67, eng) **45-3706**
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- See *also*: Organizations
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**Soil analysis (cont.)**

- Cellular slime molds in soils of Alaskan tundra, U.S.A. Stephenson, S.L., et al, [1991, p.104-107, eng] **45-2474**
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- Phosphatase enzyme activity at subzero temperatures in arctic tundra soils. Neal, J.L., [1990, p.883-884, eng] **45-1019**
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- Soil classification**
- Classification and diagnostics of soils in the subarctic Kola Peninsula. Nikonov, V.V., et al, [1989, p.4-18, rus] **45-1118**
- Pedogenic zonation of soils of the southern circumpolar region. Bockheim, J.G., et al, [1990, p.47-66, eng] **45-1855**
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- See *also*: Soil erosion; Slope protection
- Soil creep**
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- Determining the creep properties of saline frozen soils. Brushkov, A.V., et al, [1990, p.83-90, rus] **45-2894**
- Influence of first phase change on the rheological behavior of clay between 0 and -5 C. Thimus, J.F., et al, [1991, p.107-111, eng] **45-3156**
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- See *also*: Gullies; Soil conservation
- Soil fluidization**
- See *also*: Thixotropy
- Soil formation**
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- Soil development rates in the Transantarctic Mountains. Bockheim, J.G., [1990, p.59-77, eng] **45-715**
- Soil formation in mining areas along the arctic coast of northeastern USSR. Andreev, D.P., et al, [1989, p.99-103, rus] **45-740**
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- Canada-France ground freezing experiment: phase 8: fourth freeze cycle. [1989, 73p., eng] **45-388**
- Canada-France ground freezing experiment: phase 7. [1988, 35p., eng] **45-389**

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Analysis of subsour stresses on buried submarine pipelines—Vol.4. Poorooshasb, F., [1990, 168p., eng] **45-1559**  
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- Effect of salinity on hydro- and thermophysical properties of soils. Loseva, S.G., et al, [1990, p.24-33, rus] **45-2886**
- Dynamics of thermal energy in the snow-soil-regolith system during phase transformations. Mezherovskii, A.P., [1991, p.90-98, rus] **45-3839**  
See *also*: Frozen ground physics; Permafrost physics
- Soil pollution**  
Environmental effects of snow dumping: a literature review. Scott, W.S., et al, [1980, p.219-240, eng] **45-184**  
Pollution of the environment by fluorine in the Far North. Fedorov, A.S., et al, [1989, p.95-100, rus] **45-739**  
Determining explosives residues in soil. Bauer, C.F., et al, [1990, p.541-552, eng] **45-839**  
Simplified field method for the determination of TNT in soil. Jenkins, T.F., [1990, 18p., eng] **45-1586**  
Electrical resistivity studies of ground water contamination. Campanella, R.G., et al, [1990, 42p., eng] **45-2310**  
Gas chromatography determination of volatile organics in soil. Hewitt, A.D., et al, [1991, 7p., eng] **45-2826**  
Compositing of explosives-contaminated soils in cold climates. Ayorinde, O.A., et al, [1991, 29p., eng] **45-2917**  
Bioremediation of petroleum spills in arctic and subarctic environments. Travis, M.D., [1990, p.4-12, eng] **45-3465**  
Dissolution of metals from soils by nitric acid. Hewitt, A.D., et al, [1990, p.187-192, eng] **45-3744**  
Microwave-heated-acid dissolution of metals from contaminated soils and sediments. Hewitt, A.D., et al, [1989, p.463-470, eng] **45-3765**
- Soil pressure**  
Problems with the segregation potential theory by W. van Gassen and D.C. Segó—comments. Konrad, J.M., [1990, p.215-216, eng] **45-502**  
Freezing point of load-bearing moist soil and its determination. Liu, Z.C., et al, [1990, 493-497, eng] **45-593**  
Dependence of phase composition of water in freezing and frozen soils on external pressure. Kondakov, V.V., et al, [1989, p.17-23, eng] **45-650**
- Soil profiles**  
Soils and soil-forming processes in the Central Asian facies. Nogina, N.A., [1990, p.1-11, eng] **45-1707**  
Soils in the main cryogenic areas of the northern Russian Plain. Makeev, A.O., et al, [1989, 270p., rus] **45-2210**  
Interpretation of pile load tests at the Haga site. Whittle, A.J., [1991, p.267-274, eng] **45-3179**  
Snow hydrology of a headwater arctic basin. 1. Physical measurements and process studies. Kane, D.L., et al, [1991, p.1099-1109, eng] **45-3550**  
Origin of silt-enriched alpine surface mantles in Indian Basin, Wyoming. Munn, L.C., et al, [1990, p.1670-1677, eng] **45-3863**
- Soil science**  
Evolution and differentiation of Earth's natural environment. Gerasimov, I.P., [1990, 311p., rus] **45-2839**  
Problems of soil science in Siberia; collected scientific papers. Gadzhiev, I.M., ed, [1990, 183p., rus] **45-2904**  
Ecological soil petrography and mineralogy. Gradusov, B.P., et al, [1990, p.13-34, rus] **45-2906**  
Current soil research problems in Siberia and the Far East. Gadzhiev, I.M., et al, [1990, p.34-42, rus] **45-2907**
- Soil settling**  
See *also*: Settlement (structural)
- Soil stabilization**  
Artificial improvement of soils in pipeline construction. Babin, L.A., et al, [1990, 152p., rus] **45-29**  
Effect of low temperature on polymeric binding agent for rock mass. Inada, Y., et al, [1982, p.343-350, jpn] **45-116**  
Reinforced earth walls in cold regions. Noto, S., [1986, p.29-33, jpn] **45-929**  
Stabilization of dunes in winter. Lemieux, G.H., et al, [1990, p.172-171, fre] **45-1777**  
PS 5 sewage lagoon embankment stabilization. Mobley, K., et al, [1991, p.116-125, eng] **45-2327**  
Laboratory tests with a hybrid thymosyphon. Haynes, F.D., et al, [1991, p.93-99, eng] **45-3154**  
Runoff sediment concentration under varying soil and freezing regimes. Edwards, L.M., et al, [1991, p.403-407, eng] **45-3211**  
Gravel-pad foundations to control groundwater movements in frost-susceptible soil—a case study. Walum, R.S., [1990, p.175-186, eng] **45-3793**
- Soil strength**  
Effect of load on frost heaving of subsoil. Jiang, H.J., et al, [1990, p.41-47, chi] **45-460**  
Rheological fundamentals of soil mechanics. Vialov, S.S., [1986, 564p., eng] **45-612**
- Quantifying freeze/thaw-induced variability of soil strength. Kok, H., et al, [1990, p.501-506, eng] **45-988**
- Analysis of soil-stress cell interaction. Van Deusen, D.A., et al, [1991, p.472-482, eng] **45-2359**
- Significance of a cap yield surface in earth pressure calculations. Evgin, E., et al, [1991, p.275-281, eng] **45-3180**
- Behaviour of broken ice as a geomaterial. Wong, T.T., et al, [1991, p.451-457, eng] **45-3539**
- Soil structure**  
Rheological fundamentals of soil mechanics. Vialov, S.S., [1986, 564p., eng] **45-612**  
Relict periglacial structures on a coastal plain in Sweden. Svensson, H., [1990, p.79-91, eng] **45-1190**  
Influence of ice segregation and solutes on soil structural stability. Perfect, E., et al, [1990, p.571-581, eng] **45-1445**  
Substrate design for wetlands wastewater treatment. Steiner, G.R., et al, [1989, p.363-377, eng] **45-1882**  
Proceedings. [1990, 499p., eng] **45-1945**  
Ice-rich diamictic blocks in Quaternary outwash sediments in Austria. Krainer, K., et al, [1990, p.249-254, eng] **45-2027**  
Frost activity indicators in Italian loess deposits. Cremaachi, M., et al, [1990, p.39-48, eng] **45-2076**  
Frost action of soil revealed by magnetic susceptibility anisotropy. Warburton, J., [1990, p.507-510, eng] **45-2214**
- Effect of erosion and deflation on the structure of soil cover. Dzhaneisov, R.D., et al, [1990, 91p., rus] **45-2244**
- Soil wedge polygons in northern Quebec: description and paleoclimatic significance. Jetchick, E., et al, [1990, p.353-367, eng] **45-2414**  
Development of soil structure in some turbid cryosols in the Canadian low Arctic. Smith, C.A.S., et al, [1991, p.11-29, eng] **45-2664**
- Soil surveys**  
Saline frozen soils and their distribution over USSR territory. Dubikov, G.I., et al, [1990, p.3-9, rus] **45-2883**  
Classification of soils, basic principles, and their application. Sokolov, I.A., [1990, p.4-13, rus] **45-2905**
- Soil temperature**  
Thermal properties of permafrost in the North. Pavlov, A.V., et al, [1989, p.52-58, rus] **45-105**  
Zero-curtain effect: heat and mass transfer across an isothermal region in freezing soil. Outcalt, S.I., et al, [1990, p.1509-1516, eng] **45-222**  
Thermal data and core specimen analysis, Norman Wells Pipeline. Riseborough, D.W., [1989, 30p. + appends., eng] **45-386**  
Canada-France ground freezing experiment: phase 8: fourth freeze cycle. [1989, 73p., eng] **45-388**  
Canada-France ground freezing experiment: phase 7. [1988, 35p., eng] **45-389**  
Third freeze cycle of the Canada-France ground freezing experiment. [1988, 76p., eng] **45-390**  
Arctic stream scour: a case history. Barrett, J.K., et al, [1990, p.791-803, eng] **45-428**  
Natural conditions in developed regions of Siberia. Klimovskii, I.V., ed, [1987, 172p., rus] **45-568**  
Variations in geocryological conditions of gas pipeline routes in Yakutia. Konstantinov, I.P., et al, [1987, p.126-134, rus] **45-582**  
Geothermal conditions of the Neryungrinskiy coal deposit. Deviatkin, V.N., et al, [1987, p.134-138, rus] **45-583**  
Thermal conductivity and diffusivity of soil. Sorour, M.M., et al, [1990, p.189-199, eng] **45-591**  
Role of heat exchange in the formation of the temperature conditions of permafrost rocks. Brykain, V.N., [1989, p.10-14, eng] **45-646**  
Theoretical and field study of temperature fields in thawing soils. Bronfenbrener, L.E., et al, [1989, p.33-39, eng] **45-648**  
Determination of mean annual temperature of permafrost soil. Khrustalev, L.N., et al, [1989, p.89-93, eng] **45-652**
- Identification of geothermal anomalies by snow-cover temperature survey. Lialin, G.N., [1989, p.53-66, eng] **45-1077**  
Variations in the salinity of seasonally and perennially frozen soils. Anisimova, N.P., [1990, p.40-46, rus] **45-1199**
- Algorithm for a periodically stabilized regime in the solution of a Stefan problem. Shender, N.I., et al, [1990, p.105-110, rus] **45-1206**
- Interaction of sea ice, snow, and glaciers with the atmosphere and ocean. Kotliakov, V.M., ed, [1990, 74p., eng] **45-1261**
- Soil and rock temperatures in discontinuous permafrost. King, L., [1990, p.177-188, eng] **45-1297**  
Modelling temperature distribution in water-bearing formations, especially by freezing. Marcak, H., et al, [1988, p.310-313, ger] **45-1477**  
Permafrost response to surface temperature change. Harrison, W.D., [1991, p.683-695, eng] **45-1527**  
Climatic characteristics of the taiga in interior Alaska. Slaughter, C.W., et al, [1986, p.9-21, eng] **45-1589**

**Soil temperature (cont.)**

- Fire in taiga communities of interior Alaska. Dyrness, C.T., et al, (1986, p.74-86, eng) 45-1590
- Mathematical model of periodically stabilizing phase front variations. Tetel'baum, A.S., et al, (1989, p.96-99, rus) 45-1831
- Methods of studying the thermal regime of soils in the cryolithozone. Pavlov, A.V., ed, (1989, 128p., rus) 45-2003
- Evaluating bearing ground stability of gas fields in the cryolithozone. Ivlev, A.I.U., (1989, p.66-73, rus) 45-2010
- Temperature and moisture content of soils in Western Yamal. Sautkin, E.V., et al, (1989, p.111-119, rus) 45-2016
- Influence of humidity and temperature upon the rate of soil metabolism. Fischer, Z., (1990, p.17-24, eng) 45-2429
- Thermic and humidity relations of chosen Spitsbergen soils. Angiel, M., (1990, p.25-37, eng) 45-2430
- Snowpack and the subnivean environment for an open meadow. Auerbach, N.A., et al, (1991, p.41-44, eng) 45-2471
- Marine transgression, shoreline emergence: sea level changes. Taylor, A.E., (1991, p.6893-6909, eng) 45-2505
- Fluctuating movement of the permafrost boundary. Mel'nikov, P.I., et al, (1989, p.50-52, eng) 45-2597
- Estimating soil surface temperature from meteorological data. Fikul, J.L., Jr., (1991, p.187-195, eng) 45-2928
- Forecasting midyear temperatures of coarsely dispersed soils. Stepanova, I.V., et al, (1990, p.112-115, rus) 45-3042
- Influence of first phase change on the rheological behavior of clay between 0 and -5 C. Thimus, J.F., et al, (1991, p.107-111, eng) 45-3156
- Surface energy budget of boreal forest soil temperature. Bonan, G.B., (1991, p.767-781, eng) 45-3293
- Overwinter soil temperature patterns under six tillage-residue combinations. Benoit, G.R., et al, (1991, p.86-90, eng) 45-3306
- Thermal response of the active layer to climatic warming in a permafrost environment. Kane, D.L., et al, (1991, p.111-122, eng) 45-3418
- Pergelic soils of the western contiguous United States: distribution and taxonomy. Bockheim, J.G., et al, (1991, p.206-212, eng) 45-3485
- CLASS—a Canadian land surface scheme for GCMS. 1. Soil model. Versegny, D.L., (1991, p.111-133, eng) 45-3548
- Arctic hydrology in Greenland—permafrost hydrology and data technology. Thomsen, T., (1990, p.9-26, eng) 45-3778
- See *also*: Frozen ground temperature
- Soil tests**
- Sampling of saturated and unsaturated sands by freezing. Konrad, J.M., (1990, p.88-96, eng) 45-354
- Fate of ice-nucleating bacteria in synthetic snow samples. Goodnow, R.A., et al, (1990, p.2223-2227, eng) 45-436
- New concept of frost-heave characteristics of soils, by Otto J. Svec—comments. Nixon, J.F., et al, (1990, p.217-222, eng) 45-503
- Thermal conductivity and diffusivity of soil. Sorour, M.M., et al, (1990, p.189-199, eng) 45-591
- Experiments to improve frost heaving test methods. Mizushima, T., et al, (1987, p.1-10, jpn) 45-923
- Quantifying freeze/thaw-induced variability of soil strength. Kok, H., et al, (1990, p.501-506, eng) 45-988
- Numerical modeling of structure-frozen soil/ice interaction. Pusawewala, U.G.A., et al, (1990, p.133-151, eng) 45-1523
- Quasi-steady problems in freezing soils: II. Experiment on the steady growth of an ice layer. Takeda, K., et al, (1990, p.225-247, eng) 45-1616
- Solute partitioning in freezing soils. Konrad, J.M., et al, (1990, p.726-736, eng) 45-1869
- Analysis of soil-stress cell interaction. Van Deusen, D.A., et al, (1991, p.472-482, eng) 45-2359
- Runoff sediment concentration under varying soil and freezing regimes. Edwards, L.M., et al, (1991, p.403-407, eng) 45-3211
- Soil texture**
- Role of heat exchange in the formation of the temperature conditions of permafrost rocks. Bryksin, V.N., (1989, p.10-14, eng) 45-646
- Reconstructed ice-flow patterns and ice limits using drift pebble lithology. Bell, T., et al, (1989, p.577-590, eng) 45-1613
- Characteristics of simultaneous thawing and erosion of frozen sand. Medvedskii, R.I., (1990, p.667-671, eng) 45-1684
- Soils in the main cryogenic areas of the northern Russian Plain. Makeev, A.O., et al, (1989, 270p., rus) 45-2210
- Role of freezing in comminution of primary minerals of podzolic soils. Leporski, O.R., et al, (1991, p.107-111, eng) 45-3816
- Origin of silt-enriched alpine surface mantles in Indian Basin, Wyoming. Munn, L.C., et al, (1990, p.1670-1677, eng) 45-3863
- Soil thawing**
- See *also*: Ground thawing
- Soil veins**
- See *also*: Patterned ground
- Soil water**
- Hydrological role of forest geosystems. Snytko, V.A., ed, (1989, 165p., rus) 45-33
- Characteristic curves of soil water potential. Deng, Y.S., et al, (1990, p.48-54, chi) 45-461
- Freeze and thaw point of wet clay and its determination. Liu, Z.C., (1990, p.183-189, eng) 45-500
- Natural conditions in developed regions of Siberia. Klimovskii, I.V., ed, (1987, 172p., rus) 45-568
- Natural conditions in the formation of anthropogenic cryopegs, Yakutsk. Anisimova, N.P., et al, (1987, p.55-65, rus) 45-575
- Use of thermosiphons in meliorative development of central Yakutia. Chzhan, R.V., et al, (1987, p.117-126, rus) 45-581
- Dependence of phase composition of water in freezing and frozen soils on external pressure. Kondakov, V.V., et al, (1989, p.17-23, eng) 45-650
- Investigating the use of geotextiles to mitigate frost heave. Henry, K.S., (1990, 28p., eng) 45-841
- Snow cover, freezing and thawing of soil in pine forests. Korepanov, A.A., (1989, p.54-58, eng) 45-858
- Relationship of biomass to depth to frozen soil in Alaskan tundra. Gross, M.F., et al, (1990, p.275-282, eng) 45-890
- Quantifying freeze/thaw-induced variability of soil strength. Kok, H., et al, (1990, p.501-506, eng) 45-988
- Characteristics of foundation work on permafrost. Galdenko, E.I., et al, (1990, p.95-104, rus) 45-1205
- Methods of evaluating the hydrological role of snow management. Shutov, V.A., (1990, p.15-23, eng) 45-1387
- Influence of ice segregation and solutes on soil structural stability. Perfect, E., et al, (1990, p.571-581, eng) 45-1445
- Effect of fires on frozen soils. Tarabukina, V.G., et al, (1990, 119p., rus) 45-1572
- Water-regulating role of taiga forests. Rubtsov, M.V., et al, (1990, 222p., rus) 45-1574
- Passive microwave remote sensing contribution to hydrological variables. Choudhury, B.J., (1991, p.63-84, eng) 45-1797
- Temperature and moisture content of soils in Western Yamal. Sautkin, E.V., et al, (1989, p.111-119, rus) 45-2016
- Hydraulic properties in an operational model of frozen soil. Lundin, L.-C., (1990, p.289-310, eng) 45-2089
- Calculating the effect of water reserves and depth of soil freezing. Komarov, V.D., (1989, p.21-29, rus) 45-2275
- Modeling solute transport in ground water at or near freezing. Zukowski, M.D., et al, (1991, p.21-25, eng) 45-2795
- Determining the phase composition of saline frozen soils. Petrukhin, I.U.S., (1990, p.38-45, rus) 45-2888
- Transfer of salt in frozen dispersed soils. Ostromov, V.E., (1990, p.45-55, rus) 45-2889
- Operational maps of soil moisture of areas with and without snow cover. Nazirov, M., (1990, p.411-424, eng) 45-2912
- CLASS—a Canadian land surface scheme for GCMS. 1. Soil model. Versegny, D.L., (1991, p.111-133, eng) 45-3548
- Spatial and temporal influence of soil frost on infiltration and erosion of sagebrush rangelands. Blackburn, W.H., et al, (1990, p.991-997, eng) 45-3696
- Qualitative evaluation of data networks for streamflow simulation in Manitoba. Warkentin, A.A., (1990, p.215-223, eng) 45-3806
- See *also*: Ground water; Unfrozen water content
- Soil water migration**
- Collection of intact cores from a rocky desert and a glacial till soil. Lewis, T.E., et al, (1990, p.938-940, eng) 45-225
- Frozen ground effects on infiltration and runoff. Kane, D.L., et al, (1990, p.259-300, eng) 45-410
- Cryogenic migration of ions and bound moisture in ice-saturated disperse rocks. Lebedenko, I.U.P., (1989, p.1-9, eng) 45-645
- Comparison of two methods of calculating soil freezing depth. Gelfan, A.N., (1989, p.78-83, eng) 45-665
- Frost action in clay soils; suction of unfrozen water. Brown, S.C., et al, (1990, p.547-561, eng) 45-1142
- Conditions and processes of the cryogenic migration of substances. Romanov, V.P., ed, (1989, 175p., rus) 45-1823
- Isotopic-oxygen composition of structure-forming ice of the active layer. Mikhalev, D.V., (1989, p.162-169, rus) 45-1837
- Response of soil moisture change to hydrological processes in a continuous permafrost environment. Woo, M.K., et al, (1990, p.235-252, eng) 45-2525
- Modeling solute transport in ground water at or near freezing. Zukowski, M.D., et al, (1991, p.21-25, eng) 45-2795
- Determining the phase composition of saline frozen soils. Petrukhin, I.U.S., (1990, p.38-45, rus) 45-2888
- Classifying frozen soils according to salinity. Panchenko, V.I., et al, (1990, p.70-73, rus) 45-2892
- Investigation of heat and mass transport during freezing in peat soils. Gamaunov, N.I., et al, (1990, p.88-97, eng) 45-3051
- Transport equations during ice segregation in a dispersed medium. Horiguchi, K., (1991, p.297-298, eng) 45-3210
- Hydrologic and thermal properties of the active layer in the Alaskan Arctic. Hinzman, L.D., et al, (1991, p.95-110, eng) 45-3417
- Recharge processes during snowmelt: an isotopic and hydrometric investigation. Buttle, J.M., et al, (1990, p.343-360, eng) 45-3464
- Effect of geotextiles on water migration in freezing soils. Henry, K.S., (1991, p.469-483, eng) 45-3737
- Soils**
- Thermistor-based thermal conductivity measurement system. Atkins, R.T., et al, (1990, 11p., eng) 45-190
- Effect of soil type on the bending strength of alluvium reinforced ice. Weber, L.J., et al, (1990, p.486-499, eng) 45-3601
- See *also*: Clay soils; Chernozem; Cryogenic soils; Desert soils; Fines; Forest soils; Frozen ground; Meadow soils; Mountain soils; Noncohesive soils; Organic soils; Podsol; Saline soils; Subgrade soils
- Solar activity**
- Record of solar proton events in a firm core from Windless Bight. Zeller, E.J., et al, (1990, p.92-94, eng) 45-1394
- Solar proton events in antarctic snow. Dreschhoff, G.A.M., et al, (1990, p.333-346, eng) 45-1434
- Solar radiation**
- Reflectance and transmittance of snow at high spectral resolution. Dozier, J., et al, (1989, p.662-664, eng) 45-242
- Effect of surface ice on solar pond performance. Atkinson, J.F., (1990, p.207-214, eng) 45-1018
- Solar heating of a stratified ocean in the presence of a static ice cover. Perovich, D.K., et al, (1990, p.18,233-18,245, eng) 45-1020
- Estimating subsurface melting of an ice layer. Volkov, V.E., et al, (1989, p.138-143, rus) 45-1050
- Interaction of sea ice, snow, and glaciers with the atmosphere and ocean. Kotliakov, V.M., ed, (1990, 74p., eng) 45-1261
- Climatic characteristics of the taiga in interior Alaska. Slaughter, C.W., et al, (1986, p.9-21, eng) 45-1589
- Changes in global climate. Kondrat'ev, K.I.A., (1985, 280p., eng) 45-1710
- Satellite-derived reflectance of snow-covered surfaces in northern Minnesota. Hall, D.K., et al, (1990, p.87-96, eng) 45-1726
- Factors in the stability of glacier systems. Lebedeva, I.M., (1990, p.64-75, rus) 45-1738
- Deterioration of freshwater ice due to radiation decay. Prowe, T.D., et al, (1990, p.685-697, eng) 45-2253
- Net radiation model for calculating daily snowmelt in open environments. Granger, R.J., et al, (1990, p.217-234, eng) 45-2524
- Snow depth required to mask the underlying surface. Baker, D.G., et al, (1991, p.387-392, eng) 45-3018
- Parameterization of broad band radiative transfer properties of water, ice and mixed clouds. Rockel, B., et al, (1991, p.1-13, eng) 45-3267
- Bio-optical model of antarctic sea ice. Arrigo, K.R., et al, (1991, p.10,581-10,592, eng) 45-3308
- Primary productivity in the coastal ice-covered area near Showa Station. Satoh, H., et al, (1991, p.30-38, eng) 45-3392
- Solar visible spectrum**
- See *also*: Sunlight
- Solid liquid interfaces**
- See *also*: Liquid solid interfaces
- Solid phases**
- Low-temperature destabilization of oil emulsion systems in water treatment technology. Andrienko, N.M., (1989, p.95-98, eng) 45-666
- Solidification of an alloy in a cavity cooled through its top surface. Cao, W.Z., et al, (1990, p.427-434, eng) 45-772
- When the melting and freezing points are not the same. Berry, R.S., (1990, p.68-74, eng) 45-966
- Solidification of an alloy cooled from above: Part 1. Equilibrium growth. Kerr, R.C., et al, (1990, p.323-342, eng) 45-970
- Solidification of an alloy cooled from above: Part 2. Non-equilibrium interfacial kinetics. Kerr, R.C., et al, (1990, p.331-348, eng) 45-1087
- Fluid mixing during melting. Woods, A.W., (1991, p.1393-1404, eng) 45-3030
- Solidification**
- Inward solidification of a superheated liquid in a cooled horizontal tube. Viskanta, R., et al, (1982, p.39-46, eng) 45-2933
- Freezing of a binary alloy saturating a packed bed of spheres. Cao, W.Z., et al, (1991, p.46-53, eng) 45-3234
- Influence of the freezing process on vapour transport during sublimation in vacuum-freezing-drying. Kochs, M., et al, (1991, p.2395-2408, eng) 45-3864



- Solids**  
 When the melting and freezing points are not the same. Berry, R.S., [1990, p.68-74, eng] 45-966  
 Calculating dielectric response function of cubic ice. Zaider, M., et al, [1990, p.25-39, eng] 45-2948  
 Prediction of freezing times of two-dimensional objects. Hossain, M.M., et al, [1989, p.651-657, eng] 45-3107
- Solidification**  
 Clast-fabric strength in periglacial slope deposits as a function of clast size and shape. Yamamoto, K., [1989, p.187-197, eng] 45-830  
 Subsurface movement on solifluction slopes—a 20-year study. Price, L.W., [1991, p.200-205, eng] 45-3484
- Solubility**  
 Refinery/additive technologies and low temperature engine oil pumpability. Rossi, A., [1989, p.257-267, eng] 45-1239  
 Nonevaporative preconcentration technique for volatile and semivolatile solutes in certain polar solvents. Jenkins, T.F., et al, [1991, p.1341-1343, eng] 45-3447
- Solutions**  
 Gas pressure calibration using mercury melting curve with ice-salt mixtures. Lusk, J., [1990, p.852-856, eng] 45-712  
 Solidification of an alloy in a cavity cooled through its top surface. Cao, W.Z., et al, [1990, p.427-434, eng] 45-772  
 Transfer of hydrogen from NADPH to NAD<sup>+</sup> in frozen aqueous solution. Aso, Y., et al, [1990, p.2187-2188, eng] 45-957  
 Study of the frozen water-poly(vinyl alcohol) system by H-2 and C-13 NMR spectroscopy. Gusev, D.G., et al, [1990, p.651-655, eng] 45-958  
 Solidification of an alloy cooled from above: Part 1. Equilibrium growth. Kerr, R.C., et al, [1990, p.323-342, eng] 45-970  
 Solidification of an alloy cooled from above: Part 2. Non-equilibrium interfacial kinetics. Kerr, R.C., et al, [1990, p.331-348, eng] 45-1087  
 Void formation in unidirectional solidification. Tagavi, K., et al, [1990, p.239-255, eng] 45-1422  
 Contamination of aqueous samples with formate and acetate from ambient air. Hewitt, A.D., et al, [1991, p.453-457, eng] 45-1697  
 Volume and entropy changes of water in electrolyte solutions below 0 deg C. Leyendekkers, J.V., [1990, p.2231-2236, eng] 45-2260  
 Critical cooling rates to avoid ice crystallization in solutions of cryoprotective agents. Sutton, R.L., [1991, p.101-105, eng] 45-2261  
 Promotion of H-bond cage dynamics by alcohol in supercooled water. Bulone, D., et al, [1991, p.6816-6826, eng] 45-2776  
 Further inquiry into the cryobehavior of aqueous solutions of glycerol. Chang, Z.H., et al, [1991, p.268-278, eng] 45-3100  
 Freezing of a binary alloy saturating a packed bed of spheres. Cao, W.Z., et al, [1991, p.46-53, eng] 45-3234  
 Freezing-point of mixtures of H<sub>2</sub>O-16 and H<sub>2</sub>O-18. Kiyosawa, K., [1991, p.583-588, eng] 45-3305  
 Freezing point depressions of dilute potassium chloride solutions. Partanen, J.I., [1990, p.317-320, eng] 45-3374  
 Freezing point depression of dilute aqueous sodium chloride solutions. Partanen, J.I., et al, [1991, p.172-176, eng] 45-3403  
 Effect of gelatin on hydrolysis in frozen aqueous solutions. Sergeev, B.M., et al, [1991, p.978-983, eng] 45-3775  
 Influence of the freezing process on vapour transport during sublimation in vacuum-freezing-drying. Kocha, M., et al, [1991, p.2395-2408, eng] 45-3864
- Sound**  
 See *also*: Acoustic measurement
- Sonic velocity**  
 See *also*: Sound transmission
- Sound**  
 See *also*: Acoustics
- Sound transmission**  
 Temperature, salinity and sound-speed fields near ice faces. Sykes, P., [1989, 16p. + appenda., eng] 45-947  
 Observations of wave/ice interactions and ambient noise generation in the Marginal Ice Zone. Rottier, P., [1989, 36 leaves, eng] 45-965  
 Modeling the acoustic scattering by under-ice-ridge keels. Rubenstein, D., et al, [1991, p.666-672, eng] 45-2401  
 Influence of sea ice on ocean ambient sound. Sagen, H., et al, [1990, p.413-426, eng] 45-2748  
 Acoustic propagation in the western Greenland Sea frontal zone. Mellberg, L.E., et al, [1991, p.2144-2156, eng] 45-3379
- Sound waves**  
 Apparent coherent energy loss of ice-reflected, high-frequency LFM pulses. Posey, J.W., et al, [1989, p.1240-1245, eng] 45-438  
 Eastern Arctic ambient noise. Pritchard, R.S., [1989, p.1246-1251, eng] 45-439  
 Acoustic emission generated by moving loads on sea ice: preliminary results. Langhorne, P.J., et al, [1990, p.337-342, eng] 45-1623
- Observation and inversion of seismo-acoustic waves in a complex arctic ice environment. Miller, B.E., et al, [1991, p.1668-1685, eng] 45-2666
- Sounding**  
 Design and performance of the antarctic radar depth sounder. Raju, G., et al, [1990, p.247-254, eng] 45-68  
 PC-based portable ice-radar receiver. Hammond, W.R., et al, [1990, p.255-257, eng] 45-69  
 Implications of dielectric properties of icy satellites for radar sounding. Thompson, W.R., et al, [1990, p.336-354, eng] 45-848  
 Microwave snow sounding for trafficability analysis. Alalloomäki, J., et al, [1989, p.145-150, eng] 45-1227  
 Preprint volume. [1991, 436p., eng] 45-1933  
 Surface emissivity at below-zero temperatures. Kondrat'ev, K.I.A., et al, [1991, p.7-9, eng] 45-2477  
 Studying the geocryological conditions of the Apsat coal deposits. Nim, I.U.A., et al, [1989, p.126-135, rus] 45-2638  
 Impulse radar bathymetric profiling in weed-infested fresh water. Kovacs, A., [1991, 19p., eng] 45-2955  
 Utilization of ground penetrating radar to conduct sediment surveys of frozen reservoirs. Iivari, T.A., et al, [1988, p.1055-1061, eng] 45-3099  
 See *also*: Echo sounding; Radio echo soundings
- South Atlantic Ocean**  
 Atlantic ice massif—cycle and isolation processes. Kozlovskii, A.M., [1990, p.331-339, eng] 45-730
- South Korea**  
 Alluvial fans in Japan and South Korea. Ono, Y., [1990, p.91-107, eng] 45-1577
- South Pacific Ocean**  
 Structure and dynamics of the Pacific ice massif. Krivoshein, V.K., [1990, p.165-174, rus] 45-1565
- Spaceborne photography**  
 IGARSS '89 quantitative remote sensing: an economic tool for the nineties; Proceedings. [1989, 3001p. (5 vols.), eng] 45-227  
 Integration of digital elevation model parameters with mountain radar imagery. Gratton, D.J., et al, [1989, p.60-62, eng] 45-229  
 Residual snow patch mapping in arctic Canada using LANDSAT TM images. Gray, J.T., et al, [1989, p.562-565, eng] 45-240  
 Spring surface circulation patterns detected using remote sensing of drifting ice floes in Hudson Bay, Canada. Larouche, P., [1989, p.780-782, eng] 45-251  
 Hough transform technique for extracting lead features from sea ice imagery. Fetterer, F.M., et al, [1989, p.1125-1128, eng] 45-258  
 Automatic estimation of ice kinematics using remote sensing data. Flesche, H., et al, [1989, p.1133-1136, eng] 45-260  
 Identification and volume estimation of icebergs by remote sensing in the Barents Sea. Vefsnmo, S., et al, [1989, p.2355-2358, eng] 45-293  
 Observations of sea ice drift off Newfoundland using satellite imagery and ice beacons. Peterson, I.K., et al, [1989, p.2359-2362, eng] 45-294  
 Breonic, Aurine and Pusteresi alpine glaciers through the 7 September 1985 Landsat TM image. Attardo, C., et al, [1989, p.3-19, ita] 45-359  
 Calving and drift of iceberg B-9 in the Ross Sea. Keys, H.J.R., et al, [1990, p.243-257, eng] 45-469  
 Monitoring river ice with Landsat images. Gatto, L.W., [1990, p.1-16, eng] 45-484  
 Experiment in cryogenic-landscape mapping of southern Yakutia. Shtat, M.M., et al, [1987, p.49-55, rus] 45-574  
 Snow observation by satellite: a review. Lucas, R.M., et al, [1990, p.285-348, eng] 45-773  
 Satellite image atlas of glaciers of the world. Williams, R.S., Jr., ed, [1989, 48p., eng] 45-817  
 Glaciers of Irian Jaya, Indonesia. Allison, I., et al, [1989, p.1-20, eng] 45-818  
 Glaciers of New Zealand. Chinn, T.J.H., [1989, p.21-48, eng] 45-819  
 Concerning the near-surface circulation in the subarctic frontal zone. Ginzburg, A.I., et al, [1986, p.6-12, eng] 45-861  
 Divergent redistribution of ice in the Northern Arctic Ocean. Nazirov, M., [1987, p.244-254, eng] 45-862  
 Identification of regional features of the marshes of western Siberia. Gorozhankina, S.M., [1986, p.358-372, eng] 45-864  
 Evaluating engineering-geological conditions of lake-bog flatlands. Svitnev, A.I., [1987, p.517-528, eng] 45-865
- Radar sounding of the surface of the Earth from space. Nazirov, M., et al, [1990, 200p., rus] 45-986  
 Mapping snow cover in the mountains of Afghanistan by means of space photography. Kravtsova, V.I., [1989, p.44-49, rus] 45-1033  
 Airborne topographic mapping of glacier fluctuations. Kuz'michenok, V.A., [1989, p.80-87, rus] 45-1039  
 Satellite images of icing clouds. Schickel, K.P., [1988, p.49-51, eng] 45-1309  
 Snow cover mapping of Afghanistan's mountains with space imagery. Kravtsova, V.I., [1990, p.295-302, eng] 45-1526
- U.S. civilian environmental satellite program. Koffler, R., et al, [1991, p.336-343, eng] 45-1918  
 Evolution of glacier surge as analyzed through satellite images. Espizua, L.E., et al, [1990, p.255-259, eng] 45-2028
- Methods for obtaining data on natural resources and environments. Goncharov, A.K., ed, [1990, 200p., rus] 45-2206  
 Spaceborne remote sensing of the earth. Volkov, A.M., et al, [1990, p.5-20, rus] 45-2207  
 Determining the condition of sea ice in the fall. Bukharov, M.V., et al, [1990, p.175-185, rus] 45-2209  
 Satellite mapping of alpine pastures in the Himalayas. Lal, J.B., et al, [1991, p.435-443, eng] 45-2222  
 Comparative digital analysis of Seasat-SAR and Landsat-TM data for Iceland. Rast, M., et al, [1991, p.527-544, eng] 45-2223  
 Comparison of altimeter and radar measurements over Greenland pack ice. Fetterer, F.M., et al, [1991, p.569-583, eng] 45-2224  
 Satellite radar altimeter capability for ice sheet surface change measurement. Partington, K.C., et al, [1991, p.585-609, eng] 45-2225  
 AVHRR imagery reveals antarctic ice dynamics. Bindschadler, R.A., et al, [1990, p.741-742, eng] 45-2238  
 Polar research from satellites. Thomas, R.H., [1991, 91p., eng] 45-2406  
 Using satellite photography for investigating Late Pleistocene glaciation areas. Glushkova, O.I.U., [1989, p.89-101, rus] 45-2496  
 Glacial flow indicators in air photographs. Kujansuu, R., [1990, p.71-86, eng] 45-2546  
 Evaporation and snowmelt estimates from satellite data. Miller, W., [1990, p.298-303, eng] 45-2668  
 Fram Strait satellite image-derived ice motions. Emery, W.J., et al, [1991, p.4751-4768, eng] 45-2684  
 Geophysical sea ice products at the Alaska SAR facility. Holt, B., et al, [1990, p.333-344, eng] 45-2742  
 Creating a computer radar map of Antarctica. Spiridonov, I.U.G., et al, [1989, p.126-134, rus] 45-2758  
 Experience in using satellite radar images for ice navigation. Nikitin, P.A., et al, [1989, p.135-141, rus] 45-2759  
 Ice pattern recognition on space photos including drift. Bashun, V.V., et al, [1990, p.386-391, eng] 45-2911  
 Marine Observation Satellite 1 data at Showa Station. Yamanouchi, T., et al, [1991, p.22-30, eng] 45-3062  
 Satellite information on ice conditions in the southern ocean and its scientific and operational application to navigation. Provorkin, A.V., et al, [1990, p.13-16, rus] 45-3074  
 SPOT imagery and nature and structure of ice on Adélie Coast. Chotin, E., et al, [1991, p.827-834, fre] 45-3096  
 Landsat mapping of surface albedo of the Colorado Front Range. Duguay, C.R., et al, [1991, p.213-223, eng] 45-3486  
 Microwave remote sensing in ice engineering. Swift, C.T., [1990, p.66-78, eng] 45-3565  
 Prediction of the horizontal progressions of arctic ice by remote methods. Frankenstein, S., et al, [1990, p.1113-1121, eng] 45-3658  
 Observing snow melting in southern Norway from satellite passive microwave. Paanes, T., [1990, p.187-194, eng] 45-3794  
 Albedo measurements from snow—image processing of LANDSAT-5 TM data. Winther, J.G., et al, [1990, p.195-201, eng] 45-3795  
 Using GOES visible data to extend snow course data in southern Ontario. Donald, J.R., et al, [1990, p.69-78, eng] 45-3800  
 Interpretation of sea ice using NOAA-AVHRR data. Ahlnäs, K., et al, [1990, 46p., eng] 45-3850  
 Digital transmission of satellite images to an icebreaker. Mikisara, K., et al, [1990, 39p., fin] 45-3852  
 See *also*: LANDSAT
- Spacecraft**  
 Radar sounder (final report Aug. 1987-Sep. 1988). Nathanson, F.E., et al, [1988, 139p., eng] 45-316  
 Debris/ice/TPS assessment and photographic analysis for Shuttle Mission STS-33R. Stevenson, C.G., et al, [1989, 170p., eng] 45-605  
 Snow observation by satellite: a review. Lucas, R.M., et al, [1990, p.285-348, eng] 45-773  
 U.S. civilian environmental satellite program. Koffler, R., et al, [1991, p.336-343, eng] 45-1918  
 Spaceborne remote sensing of the earth. Volkov, A.M., et al, [1990, p.5-20, rus] 45-2207  
 Determining the specific active area of scattering of a probed surface. Milekhin, O.E., et al, [1989, p.104-113, rus] 45-2756  
 Characteristics of external calibration of the Kosmos-1500 satellite side-look radar. Bukharov, M.V., et al, [1989, p.114-125, rus] 45-2757  
 Experience in using satellite radar images for ice navigation. Nikitin, P.A., et al, [1989, p.135-141, rus] 45-2759  
 Ice measurements by GEOSAT radar altimetry. Zwally, H.J., et al, [1987, p.251-254, eng] 45-2764

**Spacecraft (cont.)**

- Use of satellite data for water resources modeling—a Canadian example. Kite, G.W., et al, 1991, p.21-29, eng 45-2796

**Spain****—Pyrenees**

- Geomorphic processes above timberline in the Spanish Pyrenees. Garcia-Ruiz, J.M., et al, 1990, p.201-214, eng 45-1808

**Specific volume**

- See *also*: Density (mass/volume)

**Specifications**

- Topside icing prediction for design and operational support. Zahn, P.B., et al, 1989, p.255-285, eng 45-541  
See *also*: Building codes; Design criteria; Standards

**Spectra**

- Theory of charge-transfer spectra in frozen media. Marcus, R.A., et al, 1990, p.4963-4966, eng 45-433  
Luminescence spectrum of irradiated deuterium oxide ice. Vernon, C.F., et al, 1990, p.529-531, eng 45-590  
Ice and minerals on Callisto: a reassessment of the reflectance spectra. Roush, T.L., et al, 1990, p.355-382, eng 45-849  
Infrared spectra of T2O ice. Kanesaka, I., et al, 1990, p.6113-6114, eng 45-1088  
2-13 micron spectrum of cirrus clouds. Lynch, D.K., et al, 1991, p.126-129, eng 45-1513  
Spectral properties of fog over the Malaspina Glacier, AK. Ormsby, J.P., et al, 1991, p.179-185, eng 45-1720  
Features of turbulent exchange in the periglacial layer of air. Moskalenko, I.G., et al, 1990, p.57-64, rus 45-1737

- Absorption coefficients of CO<sub>2</sub> ice on the Martian south polar cap. Calvin, W.M., et al, 1990, p.14,743-14,750, eng 45-1843  
Spectra of dangling OH groups at ice cluster surfaces and within pores of amorphous ice. Rowland, B., et al, 1991, p.812-813, eng 45-1904  
Frozen-liquid PMR spectra and interactions of water with spherical carbon adsorbents. Turov, V.V., et al, 1990, p.102-105, eng 45-2285  
Evidence of carbonic acid in proton irradiated ices. Moore, M.H., et al, 1991, p.255-262, eng 45-2467  
Neutron scattering study of high pressure ice. Li, J.-C., et al, 1991, p.6770-6775, eng 45-2775  
Modeling the reflectance spectrum of Callisto at 0.25 to 4.1 millimicrons. Calvin, W.M., et al, 1991, p.305-317, eng 45-2939

**Spectrometers**

- Infrared extinction properties of clouds in polar regions. Prabhakara, C., et al, 1990, p.1313-1329, eng 45-2986

**Spectroscopy**

- In-situ detection of contaminant plumes in ground water. Seitz, W.R., et al, 1990, 12p., eng 45-935  
Determination of alkaline earth metals in Japanese rain and snow by ICP emission spectrometry. Dokiya, Y., et al, 1988, p.145-165, eng 45-1013  
2-13 micron spectrum of cirrus clouds. Lynch, D.K., et al, 1991, p.126-129, eng 45-1513  
Laser spectroscopy of snow and ice cover. Zalikhanov, M.Ch., et al, 1989, p.43-47, eng 45-2107  
Four-photon polarization spectroscopy of a Rayleigh line wing in liquid water near 0 deg C. Bunkin, A.F., et al, 1990, p.29-31, eng 45-2930  
See *also*: Ice spectroscopy; Infrared spectroscopy

**Spectral reflection**

- Reflectance and transmittance of snow at high spectral resolution. Dozier, J., et al, 1989, p.662-664, eng 45-242  
Radar reflections from water injected into an antarctic glacier. Davis, C.H., et al, 1990, p.723-726, eng 45-721  
Ice and minerals on Callisto: a reassessment of the reflectance spectra. Roush, T.L., et al, 1990, p.355-382, eng 45-849  
Lidar observations of the horizontal orientation of ice crystals in cirrus clouds. Thomas, L., et al, 1990, p.211-216, eng 45-1384

**Spitsbergen****—Hansa Glacier**

- Yearly dynamics of the front zone of the Hansa Glacier (1987-1988). Dabrowski, S., et al, 1990, p.109-130, pol 45-2581

**—Vársölbukta**

- Tundra plant communities near Vársölbukta. Spitsbergen. Moraczewski, I.R., et al, 1990, p.47-68, eng 45-3557

**Spongy ice**

- Experiments on the growth of spongy ice near a stagnant point. Lock, G.S.H., et al, 1990, p.143-150, eng 45-55  
Spongy saline ice formation in the vicinity of a stagnation point. Lock, G.S.H., et al, 1990, p.999-1009, eng 45-3648  
Origin of spongy ice. Makkonen, L., et al, 1990, p.1022-1030, eng 45-3650

**Spray**

- See *also*: Sea spray

**Spray freezing**

- Flexural strength of sand-reinforced ice. Nixon, W.A., et al, 1991, p.14-27, eng 45-2417

- Activation energy for creep of spray ice. Chandler, N., et al, 1991, p.42-49, eng 45-2419  
Comparison between different construction methods of ice islands. Szilder, K., et al, 1991, p.9-15, eng 45-3142

- Spray ice islands for exploration in the Canadian Beaufort Sea. Weaver, J.S., et al, 1991, p.17-22, eng 45-3143

- Rubble-spray ice islands. Gulati, K.C., et al, 1990, p.596-605, eng 45-3610

- Numerical modelling of mixed snow and sea spray icing. Horjen, I., et al, 1990, p.945-960, eng 45-3643

**Springs (water)**

- See *also*: Hot springs

**Stability**

- Facility to evaluate ground aircraft de-icing fluids. Laforte, J.L., et al, 1990, p.161-171, eng 45-498  
Topside icing prediction for design and operational support. Zahn, P.B., et al, 1989, p.255-285, eng 45-541  
Stability of gas hydrates. Rodger, P.M., et al, 1990, p.6080-6089, eng 45-713  
Fluid-elastic stability threshold in the presence of turbulence. Lever, J.H., et al, 1989, p.407-419, eng 45-968  
Improving the stability of main gas pipelines in the cryolithozone. Mazur, I.L., et al, 1990, 72p., rus 45-1706

- Pressure-induced phase transitions in clathrate hydrates. Handa, Y.P., et al, 1991, p.623-627, eng 45-1903

- Proceedings. (1990, 499p., eng 45-1945  
Stability of floating and submerged blocks. Daly, S.F., et al, 1990, p.737-752, eng 45-2257

- Study of clathrate hydrates from vapour-deposited amorphous ice. Halbrucker, A., et al, 1990, p.3785-3792, eng 45-2415

- Prevention of oil well collapse in permafrost. Medvedskii, R.I., et al, 1989, p.74-82, eng 45-2585

- Roof bolting parameters in placer mines. Kychkin, N.L., et al, 1990, p.569-572, eng 45-2932

- Freeze/thaw effect on soil aggregate stability. Edwards, L.M., et al, 1991, p.193-204, eng 45-3193

- Prediction of conductor ice accretion and mitigation of its rotational effects. Skelton, P.L.I., et al, 1990, p.965-980, eng 45-3400

- Rubble-spray ice islands. Gulati, K.C., et al, 1990, p.596-605, eng 45-3610

- Stochastic approach to the ice-structure interaction. Kajaste-Rudniski, J., et al, 1990, p.961-973, eng 45-3644

- Problems of ice force evaluation on offshore structures. Khrapatyi, N.G., et al, 1990, p.984-994, eng 45-3646

- Design optimization of jacket platforms for ice infested waters. Wang, L.Y., et al, 1990, p.1056-1070, eng 45-3653

- Application of Maattanen model on multilegged structures. Wang, L.Y., et al, 1990, p.1071-1083, eng 45-3654

- See *also*: Slope stability; Snow cover stability; Static stability

**Stabilization**

- Deformation of reinforced concrete anchor foundations in the far north. Grebenets, V.I., et al, 1991, p.257-260, eng 45-3561

- See *also*: Channel stabilization; Snow stabilization; Soil stabilization

**Standards**

- New concept of frost-heave characteristics of soils, by Otto J. Svee—comments. Nixon, J.F., et al, 1990, p.217-222, eng 45-503

- Snow avalanche hazards and mitigation in the United States. (1990, 84p., eng 45-1182

- State standards index of the USSR, 1990. (1990, 4 vols., rus 45-1602

- Survey of standards for determination of vapour pressure over ice and water surfaces. Gibbins, C.J., et al, 1990, p.859-885, eng 45-3104

- Freezing point depression of dilute aqueous sodium chloride solutions. Partanen, J.I., et al, 1991, p.172-176, eng 45-3403

- Guidelines on application of seasonal load restrictions. Mahoney, J.P., et al, 1990, p.75-84, eng 45-3692

- See *also*: Building codes; Design criteria; Work time standards

**Starters**

- See *also*: Engine starters

**Static loads**

- Tests of vehicles in the North. Bezverkhii, S.F., et al, 1989, p.93-99, eng 45-1220

**Stations**

- Environment One: plan for a new research station at the South Pole. Osgood, S.G., et al, 1991, p.250-271, eng 45-2338

- Cold climate building research at Wase Base, Antarctica. Haugun, D., et al, 1991, p.272-281, eng 45-2339

- See *also*: Drift stations; Weather stations

**Statistical analysis**

- Decorrelation distance of snow in the Colorado River basin. Chang, A.T.C., et al, 1989, p.1247-1250, eng 45-269

- Statistical descriptions of keel-related features in the under-ice draft distribution. Key, J., et al, 1989, p.2346-2349, eng 45-291

- Forecasting of glacier meltwater runoff by time series analysis. Song, Q., et al, 1990, p.161-165, chj 45-456

- Analyses of radio-echo data from Antarctica. Herzfeld, U.C., et al, 1988, p.95-110, eng 45-1091

- Analysis of avalanches. (1990, p.22-24, fre 45-1130  
Model for hourly snowfall. Sage, J.D., (1988, p.44-48, eng 45-1308

- Analysis of subsurface stresses on buried submarine pipelines—vol.1A and 1B. Comfort, G., et al, 1990, 106p. + 324p., eng 45-1556

- Statistical analysis of data at the Giuliue Alps glacier terminus. Serandrei Barbero, R., et al, 1989, p.139-149, ita 45-1987

- Recent secular variations in the extent of Northern Hemisphere snow cover. Robinson, D.A., et al, 1990, p.1557-1560, eng 45-2043

- Calculating maximum and minimum water supply forecasts. Huber, A.L., et al, 1990, p.99-109, eng 45-2127

- Ice thickness distribution in the Arctic Ocean. Wadhams, P., et al, 1990, p.3-20, eng 45-2718

- Predictability of seasonal ice cover variations in the southern ocean. Romanov, A.A., et al, 1990, p.82-86, rus 45-3083

- Long-range prediction of regional sea ice anomalies in the Arctic. Chapman, W.L., et al, 1991, p.271-288, eng 45-3236

- Extreme value prediction of snow avalanche runoff. McClung, D.M., et al, 1991, p.163-175, eng 45-3422

- Searching for chaotic dynamics in snowmelt runoff. Wilcox, B.P., et al, 1991, p.1005-1010, eng 45-3549

- Potential effects of global warming on the primary productivity of a subalpine lake. Byron, E.R., et al, 1990, p.983-989, eng 45-3695

- Space and time variability of snow water equivalent in Finland. Perälä, J., et al, 1990, 260p., fin 45-3872

**Steam**

- Ice removal using low-pressure flashing flow. Derbidge, T.C., et al, 1989, p.327-338, eng 45-545

- Production of phreatic explosions in the interaction of lava and ice. Vinogradov, V.N., et al, 1990, p.89-98, eng 45-1076

- Way of preventing structures from damage due to ice pressure. Ao, B.J., et al, 1990, p.858-863, eng 45-3635

- Efficiency analysis of a steam heat distribution system. Phetteplace, G.E., et al, 1991, p.199-213, eng 45-3746

**Steam curing**

- See *also*: Concrete curing

**Steel structures**

- Roll-along de-icer. Scott, D., et al, 1990, p.86, eng 45-621

- Steel gallery supports for construction in the north. Buldakov, I.U.K., et al, 1990, p.12-14, rus 45-800

**Steels**

- Immersion tests of high-strength steels for icebreakers. Inoue, T., et al, 1990, p.178-187, eng 45-132

- Corrosion of welds in high-strength steels for icebreakers. Inoue, T., et al, 1990, p.188-196, eng 45-133

- Effect of temperature and galvanization on the compressive strength of cold-formed angles. Polyzos, D., et al, 1990, p.440-451, eng 45-398

- Ice and steel—a comparison of creep and failure. Sinha, N.K., et al, 1989, p.201-212, eng 45-518

- Corrosion of the underwater portion of hulls of icebreakers. Markovich, R.A., et al, 1989, p.113-126, rus 45-1120

- Strength of cryogenic engineering alloys under electromagnetic loads. Strizhalo, V.A., et al, 1990, 151p., rus 45-1856

- Low temperature brittle fracture behavior of steel in mixed modes I and II. Maccagno, T.M., et al, 1991, p.111-128, eng 45-2294

- Effect of saline soil cements on frozen rocks and construction materials. Gaidenko, E.I., et al, 1989, p.114-123, rus 45-2636

- Service temperature of steel in cold climates. Huther, M., et al, 1990, p.229-239, eng 45-2734

**Stefan problem**

- Boundary integral approach to unstable solidification. Straub, J., et al, 1989, p.342-389, eng 45-973

- Kinetics of changes in configuration of cooled ice bodies in water. Kirov, M.V., et al, 1989, p.219-222, rus 45-1066

- Geocryological studies of northern Western Siberia. Konstantinov, I.P., ed, (1990, 117p., rus 45-1194

- Algorithm for a periodically stabilized regime in the solution of a Stefan problem. Shender, N.I., et al, 1990, p.105-110, rus 45-1206

- Modified differential method in solving the Stefan problem. Tetelbaum, A.S., et al, 1990, p.111-118, rus 45-1207

- Efficient method for the numerical solution of Stefan problems. Keith, T.G., Jr., et al, 1988, p.192-196, eng 45-1337

- Tube assembly heat exchange with solidification of the heat carrier. Semenov, V.I.U., et al, 1990, p.567-571, eng 45-1683

- Solving the Stefan problem for saline soils at subzero temperatures. Tetelbaum, A.S., et al, 1989, p.13-24, rus 45-1825

- Mathematical model of periodically stabilizing phase front variations. Tetelbaum, A.S., et al. [1989, p.96-99, rus] **45-1831**
- Solution of the time discretized Stefan problem by Newton's method. Kelley, C.T., et al. [1990, p.851-872, eng] **45-2583**
- Prevention of oil well collapse in permafrost. Medvedskii, R.I., et al. [1989, p.74-82, eng] **45-2585**
- Modified differential method with smoothing coefficients for solving the Stefan problem. Tetelbaum, A.S., [1989, p.136-146, rus] **45-2639**
- Iterative solution of a nonlinear system arising in phase-change problems. Williams, M.A., et al. [1990, p.1087-1101, eng] **45-3056**
- Estimated solutions of the one-dimensional Stefan problem. Aksenov, B.G., [1990, p.710-716, eng] **45-3057**
- Growth and decay of ice. Lock, G.S.H., [1990, p.434p., eng] **45-3069**
- Moving and deforming finite-element simulation of two-dimensional Stefan problems. Zabarav, N., et al. [1990, p.495-506, eng] **45-3699**
- Steppes**
- Ecological soil petrography and mineralogy. Gradusov, B.P., et al. [1990, p.13-34, rus] **45-2906**
- Pingo slope steppe vegetation on an arctic plain. Walker, M.D., et al. [1991, p.170-188, eng] **45-3462**
- Storage**
- See *also*: Cold storage; Ice (water storage); Oil storage; Snow retention; Underground storage; Water storage
- Storage tanks**
- Durability of prestressed concrete tanks. Schupack, M., et al. [1989, p.51-55, 58, eng] **45-2111**
- Prediction of wall temperature gradients in concrete storage structures. Jofriet, J.C., et al. [1991, p.12-19, eng] **45-2665**
- See *also*: Tanks (containers)
- Storms**
- Hailstone formation in a Montana hailstorm. Miller, L.J., et al. [1990, p.1619-1646, eng] **45-1383**
- Supercooled liquid water development in a winter mountain storm. Sassen, K., et al. [1990, p.1323-1350, eng] **45-1580**
- Preprint volume. [1991, 436p., eng] **45-1933**
- Strongly temperature dependent microphysical processes and winter storms. Stewart, R.E., et al. [1991, p.231-234, eng] **45-1937**
- Aircraft icing as an applied winter storms problem. Politovich, M.K., [1991, p.235-240, eng] **45-1938**
- Storm and cloud dynamics. Cotton, W.R., et al. [1989, p.883p., eng] **45-2427**
- Microphysical characteristics through the melting region of a midlatitude winter storm. Raga, G.B., et al. [1991, p.843-855, eng] **45-2663**
- Arctic hurricanes. Businger, S., [1991, p.18-33, eng] **45-2788**
- Vernal atmospheric mixing in the Antarctic. Murphy, B.B., et al. [1991, p.494-507, eng] **45-2842**
- Hailstorm over Telangana. Pandharinath, N., et al. [1990, p.433-438, eng] **45-3050**
- See *also*: Ice storms; Snowstorms; Thunderstorms
- Strain measuring instruments**
- Measurement of ice forces on small vessels—phase 3: detailed physical calibration. Final report. Glen, I.F., et al. [1990, 31p. + appends., eng] **45-1648**
- Design of a high-pressure low-temperature triaxial deformation cell for ice. Sammonds, P.R., et al. [1991, p.177-188, eng] **45-3423**
- Testing system for strain rate control of ice deformation. Rist, M.A., et al. [1991, p.189-200, eng] **45-3424**
- Strain relaxation**
- See *also*: Relaxation (mechanics)
- Strain tests**
- Compression-annealing experiments for ice. Huang, M., et al. [1988, p.141-152, chj] **45-43**
- Wing cracks and brittle compressive fracture. Cannon, N.P., et al. [1990, p.1955-1962, eng] **45-1168**
- Brittle compressive fracture of ice. Schulson, E.M., [1990, p.1963-1976, eng] **45-1169**
- Measurement of ice forces on small vessels—phase 3: detailed physical calibration. Final report. Glen, I.F., et al. [1990, 31p. + appends., eng] **45-1648**
- Strain gradient influence on brittle failure of ice. Sayed, M., [1990, p.179-191, eng] **45-1909**
- Behavior of laboratory-made spray ice in triaxial compression testing. Steel, A., et al. [1990, p.192-204, eng] **45-1910**
- Preliminary results of direct tension tests on first-year sea ice samples. Richter-Menge, J.A., et al. [1991, p.569-578, eng] **45-2367**
- Analysis of modified bitumen roofing materials using the stiffness modulus. Norris, R.E., et al. [1991, p.401-417, eng] **45-2463**
- Strains**
- Short term variations in the speed of ice stream B. Harrison, W.D., et al. [1990, p.81-82, eng] **45-1257**
- See *also*: Shear strain
- Stratification**
- Vernal stratification in a saline lake: causes and biological significance. Northcote, T.G., et al. [1990, p.105-114, eng] **45-2945**
- Subice layering and origin of acidic waters in a small boreal lake during spring runoff. Roberge, J., et al. [1991, p.479-492, eng] **45-3105**
- See *also*: Firm stratification; Snow stratigraphy
- Stratigraphy**
- Glaciation and gold-placer formation in AK. Reger, R.D., et al. [1990, 30p., eng] **45-653**
- Quaternary age: paleogeography and lithology. Anshin, A.L., ed. [1989, 251p., rus] **45-786**
- Using loess-soil formation to correlate glacial, periglacial, and coastal zones. Velichko, A.A., et al. [1989, p.14-21, rus] **45-788**
- Correlating marine, loess, and glacial-flatland formations. Zubakov, V.A., [1989, p.21-24, rus] **45-789**
- Middle Pleistocene glacial and periglacial formations in the Russian Plain. Udartsev, V.P., et al. [1989, p.193-200, rus] **45-790**
- Paleogeography and chronostratigraphy of the Pleistocene in Siberia. Arkhipov, S.A., [1989, p.201-214, rus] **45-791**
- Chrono-stratigraphic scale of the Pleistocene glacial epoch in Siberia. Arkhipov, S.A., [1989, p.20-30, rus] **45-1135**
- Geophysical aspects of ice core drilling in Antarctica. Moore, J.C., [1988, 168p. + appends., eng] **45-1518**
- Presence of glacial deposits in the central basin of the Barents Sea. Gataullin, V.N., et al. [1990, p.1463-1467, rus] **45-1860**
- Ice-rich diamicton blocks in Quaternary outwash sediments in Austria. Krainer, K., et al. [1990, p.249-254, eng] **45-2027**
- Late Wisconsinan glacial and glaciomarine sediments in Maine. Retelle, M.J., et al. [1989, p.33-51, eng] **45-2064**
- Stratified waterlain glaciogenic sediments in Maine. Weddie, T.K., [1989, p.53-69, eng] **45-2065**
- Field methods for glacial indicator tracing. Hirvas, H., et al. [1990, p.217-248, eng] **45-2553**
- Dufek intrusion of Antarctica. Ford, A.B., [1990, p.15-32, eng] **45-2802**
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- Stratigraphy and correlation of Quaternary deposits in Asia and the Pacific. Khudiakov, G.I., ed. [1991, 208p., rus] **45-3436**
- Holocene climatology-stratigraphy of the ice domes in Severnaya Zemlya. Kotliakov, V.M., et al. [1991, p.100-112, rus] **45-3440**
- Paleogene and neogene of northeastern USSR. Baranova, I.U.P., ed. [1989, 181p., rus] **45-3834**
- See *also*: Firm stratification; Snow stratigraphy
- Stratosphere**
- Surface kinetic limitation of ice crystal growth in the stratosphere. Mackenzie, A.R., [1990, p.S259-S262, eng] **45-2218**
- Potential for ozone depletion in the arctic polar stratosphere. Bruze, W.H., et al. [1991, p.1260-1266, eng] **45-2831**
- On data sources and quality for the Southern Hemisphere stratosphere. Karoly, D.J., et al. [1989, p.19-32, eng] **45-2973**
- Seasonal cycle of the polar stratosphere in the two hemispheres. O'Neill, A., et al. [1989, p.33-54, eng] **45-2974**
- Final warming of the stratosphere. Mechoso, C.R., [1989, p.55-69, eng] **45-2975**
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- Dynamical properties of the antarctic circumpolar vortex inferred from aircraft observations. Hartmann, D.L., [1989, p.117-134, eng] **45-2978**
- Stratospheric sudden warming in late winter and shallow ozone hole in 1988. Kanzawa, H., et al. [1989, p.135-148, eng] **45-2979**
- Nitrogen chemistry in Antarctica: a brief review. Solomon, S., [1989, p.191-201, eng] **45-2980**
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- Antarctic ozone depletion and potential effects on the global ozone budget. Grose, W.L., et al. [1989, p.237-251, eng] **45-2982**
- Nitric acid transport from stratosphere to troposphere and ice sheet. Iwasaka, Y., et al. [1991, p.12-21, eng] **45-3061**
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- Stream flow**
- Northern hydrology: Canadian perspectives. Prowse, T.D., ed. [1990, 308p., eng] **45-211**
- Regional hydrology. Wedel, J.H., [1990, p.207-226, eng] **45-220**
- Measurement and interpretation of streamflow data. Santeford, H.S., [1990, p.401-431, eng] **45-415**
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- Snow model for stream flow forecasting. Day, G.N., [1990, 181p., eng] **45-509**
- Snow fencing to increase streamflow on rangelands. Sturges, D.L., [1990, p.145-154, eng] **45-1179**
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- Effects of beaver dams on subarctic wetland hydrology. Woo, M.K., et al. [1990, p.223-230, eng] **45-1420**
- Environmental isotope studies of storm and snowmelt runoff generation. Sklash, M.G., [1990, p.401-435, eng] **45-1482**
- Hydrologic flow path definition and partitioning of spring meltwater. Maulé, C.P., et al. [1990, p.2959-2970, eng] **45-2078**
- Snow hydrology of an alpine basin in the Sierra Nevada. Kattelmann, R., [1990, p.41-50, eng] **45-2120**
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- Accuracy of selected techniques for estimating ice-affected streamflow. Walker, J.F., [1991, p.697-712, eng] **45-2969**
- Effects of CO<sub>2</sub>-induced climatic changes on snowpack and streamflow. Cooley, K.R., [1990, p.511-522, eng] **45-2992**
- Model for description of seasonal mountainous snowmelt. Babiaková, G., et al. [1990, p.383-393, eng] **45-2994**
- Longitudinal and seasonal water chemistry variations in a northern Appalachian stream. Phillips, R.A., et al. [1990, p.489-498, eng] **45-3697**
- Qualitative evaluation of data networks for streamflow simulation in Manitoba. Warkentin, A.A., [1990, p.215-223, eng] **45-3806**
- See *also*: River flow; Runoff
- Streams**
- Predicting sediment concentrations for subarctic creeks. Wilbur, S., [1989, p.145-156, eng] **45-342**
- Analysis of winter low-flow rates in New Hampshire streams. Melloh, R.A., [1990, 12p., eng] **45-1260**
- Tundra lakes and streams as gas conduits to the atmosphere. Kling, G.W., et al. [1991, p.298-301, eng] **45-1474**
- Winter fecal coliform concentrations in stream sediments. Kidd, D.R., [1989, n.p., eng] **45-1654**
- Learning from watching snowmelt. Frazier, J.W., et al. [1990, p.35-40, eng] **45-2119**
- Icing affects fall discharge characteristics of a rangeland stream. Sturges, D.L., [1990, p.164-167, eng] **45-2138**
- High latitude limnology. Vincent, W.F., ed. [1989, 323p., eng] **45-2602**
- Filamentous green algae in freshwater streams on Signy Island, Antarctica. Hawes, I., [1989, p.1-18, eng] **45-2603**
- Nutrients, stream discharge and microbiology of arctic streams. Hullah, M.A., et al. [1989, p.19-26, eng] **45-2604**
- Microbial communities in antarctic streams; photosynthesis. Howard-Williams, C., et al. [1989, p.27-38, eng] **45-2605**
- Microbial communities in antarctic streams; low temperature effects. Vincent, W.F., et al. [1989, p.39-49, eng] **45-2606**
- Nitrogen dynamics in two antarctic streams. Howard-Williams, C., et al. [1989, p.51-61, eng] **45-2607**
- Benthic algal biomass and productivity in high subarctic streams, Alaska. LaPerriere, J.D., et al. [1989, p.63-75, eng] **45-2608**
- Abundance and distribution of invertebrates in Alaskan streams. Oswood, M.W., [1989, p.97-110, eng] **45-2610**
- Invertebrate community composition in arctic streams. Miller, M.C., et al. [1989, p.111-127, eng] **45-2611**
- Geochemical processes in the Lake Fryxell Basin (Victoria Land, Antarctica). Green, W.J., et al. [1989, p.129-148, eng] **45-2612**
- Acidic snowmelt effects on stream trout. Stansley, W., et al. [1990, p.227-237, eng] **45-3304**
- Strength**
- Comparison of latex-modified portland cement mortars. Walters, D.G., [1990, p.371-377, eng] **45-2073**
- Frost resistance of elastomers. Bukhina, M.F., et al. [1989, 176p., rus] **45-2204**
- See *also*: Bearing strength; Concrete strength; Flexural strength; Frozen ground strength; Frozen rock strength; Ice cover strength; Ice strength; Impact strength; Shear strength; Snow strength; Soil strength; Ultimate strength
- Stress concentration**
- Time-dependent effects on ridge initiation in sea ice leads. Coon, M.D., et al. [1989, p.1298-1303, eng] **45-448**
- Stress relaxation**
- See *also*: Relaxation (mechanics)

**Stress strain diagrams**

- Influence of grain size on compressive strength of polycrystalline ice. Cannon, N.P., [1985, 75p., eng] 45-183
- Effect of grain size on the tensile strength of ice at two strain-rates. Lee, R.W., [1985, 114p., eng] 45-492
- Deformation of a floating drilling platform made of built-up ice. Derradji-Aouat, A., et al, [1991, p.1-8, eng] 45-3141
- New creep damage relationship for ice. Marcellus, R.W., et al, [1991, p.39-45, eng] 45-3146
- Appraisal of a multisurface plasticity model for soils. Derradji-Aouat, A., et al, [1991, p.75-82, eng] 45-3151
- Measurement of volumetric strain in the triaxial testing of ice samples. Spencer, P.A., et al, [1991, p.237-244, eng] 45-3175
- Significance of a cap yield surface in earth pressure calculations. Evgin, E., et al, [1991, p.275-281, eng] 45-3180
- Parametric expressions for ice compressive and flexural strength. Hirayama, K., et al, [1990, p.196-209, eng] 45-3576
- Deformation of natural ice island ice under constant strain rate uniaxial compression. Jeffries, M.O., et al, [1990, p.238-251, eng] 45-3580

**Stresses**

- Analysis of subscour stresses on buried submarine pipelines—summary report. Comfort, G., et al, [1990, 30p., eng] 45-1555
- Modified Nadreau yield function. Kormann, J.P., et al, [1990, p.89-92, eng] 45-1770
- Allowing for mechanical strength of ice deposits during calculation of overhead line wires. Krymskii, M.M., [1989, p.29-39, eng] 45-2558
- Nonlinear analysis of stress distribution in an ice floe. Evgin, E., et al, [1991, p.55-62, eng] 45-3148
- Design of sealed fluid-filled in situ ice stress sensors. Spencer, P.A., et al, [1991, p.177-185, eng] 45-3167
- Field observations of stresses in young ice. Perovich, D.K., et al, [1991, p.191-198, eng] 45-3169
- See *also*: Shear stress; Strength; Tensile properties; Thermal stresses

**Striations**

- On the use of glacial striae for reconstruction of paleo-ice sheet flow patterns. Kleman, J., [1990, p.217-236, eng] 45-2025

See *also*: Ice scoring

**Structural analysis**

- Structure and dynamics of cryogenic systems of oil and gas deposits. Zaikanov, V.G., et al, [1989, p.22-27, rus] 45-102
- Icebreaker manoeuvrability. Peirce, T.H., et al, [1990, p.145-154, eng] 45-2728

**Structures**

- Nonlinear formulation of snow creep. Olgne, X., et al, [1990, p.1-18, eng] 45-1763
- Reliability of the frozen bearing ground of structures. Zhelezniak, I.I., [1990, 171p., rus] 45-2423
- Saline frozen soils as a foundation for structures; collected scientific papers. Vialov, S.S., ed, [1990, 143p., rus] 45-2882
- Optimum repair and maintenance of railroads in Siberia and the Far East. Diunin, A.K., ed, [1990, 78p., rus] 45-3004
- Interaction between a snow layer and retaining structures. Shevchuk, S.S., [1990, p.26-31, rus] 45-3006
- Effect of braking structures on the velocity and range of avalanches. Kozlov, I.U.V., et al, [1990, p.46-52, rus] 45-3010
- See *also*: Buildings; Concrete structures; Floating structures; Hydraulic structures; Inflatable structures; Offshore structures; Pile structures; Steel structures; Subsurface structures; Superstructures; Underground facilities; Underground facilities; Wooden structures

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**Subarctic landscapes**

- Dune development in an Alaskan subarctic environment. Dijkmans, J.W.A., et al, [1990, p.93-109, eng] 45-1191
- Effects of beaver dams on subarctic wetland hydrology. Woo, M.K., et al, [1990, p.223-230, eng] 45-1420
- Methane emission measurements from subarctic fens. Moore, T.R., et al, [1991, p.102-109, eng] 45-2792
- Geomorphology of the cryomorphogenesis of subarctic lowlands. Lovchuk, V.V., [1990, p.128-135, rus] 45-2825

See *also*: Subpolar regions

**Subglacial caves**

- Thermal regime of caves in glaciers in northern Kirgizia. Mikhailiev, V.N., [1990, p.68-71, rus] 45-2710

**Subglacial drainage**

- Ice-marginal thrusting of drift and bedrock: thermal regime, subglacial aquifers, and glacial surges. Mooers, H.D., [1990, p.849-862, eng] 45-381
- Ice-dammed lake drainage mechanisms in Greenland. Russell, A.J., et al, [1988, p.143-147, eng] 45-1094

- Glacial drainage systems along the Antarctic Peninsula and Palmer Archipelago. Williams, C., et al, [1990, p.116-117, eng] 45-1411

- Moraine formation as a product of subglacial sedimentation. Sharpe, D.R., et al, [1990, p.1478-1486, eng] 45-2482

- Glacimarine processes at grounding-line fans and their growth to ice-contact deltas. Powell, R.D., [1990, p.53-73, eng] 45-2781

- Radio echo soundings in the Shirase Glacier and Princess Ragnhild Coast areas. Nishio, F., et al, [1991, p.93-102, eng] 45-3067

- Subglacially formed dunes in a drumlin field. Shaw, J., et al, [1991, p.21-34, eng] 45-3825

**Subglacial navigation**

- Geostrategic conditions of deterrence in the Barents Sea. Ostreng, W., [1991, p.201-214, eng] 45-3334

**Subglacial observations**

- Sub-glacial sediment deformation model. Schokking, F., [1990, p.291-304, eng] 45-356

- Sea-ice velocity measurement verification of an acoustic current profiler. Melrose, S.K., et al, [1989, p.1304-1307, eng] 45-449

- Origin of the properties of the halocline north of Ellemerer I. Jones, E.P., et al, [1990, p.485-498, eng] 45-524

- Spreading of oil spilled under ice. Yapa, P.D., et al, [1990, p.1468-1483, eng] 45-1289

- Photoheterotrophy and dark heterotrophy in ice-covered Lake St. Clair. Wallen, D.G., [1990, p.339-345, eng] 45-1388

- Winter short-pulse radar studies on the Tanana River, Alaska. Delaney, A.J., et al, [1990, p.244-250, eng] 45-1421

- Long waves in an ice cover-fluid system, under ice compression. Gol'dshstein, R.V., et al, [1989, p.188-205, rus] 45-1505

- Ice topography over subglacial lakes. Shonaker, E.M., [1990, p.323-329, eng] 45-1621

- Effect of large ice sheets on earthquake genesis. Johnston, A.C., [1989, p.581-599, eng] 45-1932

- Techniques for streamflow measurement under ice conditions. Pelletier, P.M., [1990, p.317-340, eng] 45-2530

- Turbulent mixing near the Yermak Plateau during the Coordinated Eastern Arctic Experiment. Padman, L., et al, [1991, p.4769-4782, eng] 45-2685

- Role of subglacial and marine processes in the production of laminated sediments. Domack, E.W., [1990, p.91-103, eng] 45-2783

- Modeling acoustic propagation beneath ice. Clark, J.H., et al, [1991, p.327-329, eng] 45-3043

- Utilization of ground penetrating radar to conduct sediment surveys of frozen reservoirs. Iivari, T.A., et al, [1988, p.1055-1061, eng] 45-3099

- Subice layering and origin of acidic waters in a small boreal lake during spring runoff. Roberge, J., et al, [1991, p.479-492, eng] 45-3105

- Topographic and gravity anomaly maps near Mizuho Plateau. Nagao, T., et al, [1991, p.56-69, jpn] 45-3396

- Measurements of flow velocity under the ice cover. Yamaguchi, H., et al, [1990, p.1155-1170, eng] 45-3662

**Subgrade soils**

- Effect of load on frost heaving of subsoil. Jiang, H.J., et al, [1990, p.41-47, chj] 45-460

- Predicting pavement thaw weakening with a deflectometer. Janoo, V.C., et al, [1990, p.31-40, eng] 45-3689

**Subgrades**

- Repair of frost damages on main road 21 in Tulli, Kilpisjärvi. Saarelainen, S., [1990, 54p. + append., fin] 45-3841

- Repair structures of frost damages on main road 21 in Peera, Finland. Saarelainen, S., [1990, 62p. + append., fin] 45-3843

- Improvement of icing on main road 21; construction and monitoring. Lehtonen, J., [1990, 60p., fin] 45-3873

- See *also*: Foundations; Pavement bases; Permafrost bases; Roadbeds

**Sublimation**

- Radiative thermophysics of snow and ice. Krass, M.S., et al, [1990, 260p., rus] 45-1532

- Sublimation rate of collected blowing snow in a collector. Yato, T., [1990, p.93-116, jpn] 45-2304

- Influence of the freezing process on vapour transport during sublimation in vacuum-freezing-drying. Kochs, M., et al, [1991, p.2395-2408, eng] 45-3864

- See *also*: Evaporation; Ice sublimation; Snow evaporation

**Submarine geology**

- See *also*: Marine geology

**Submarine permafrost**

- See *also*: Subsea permafrost

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- See *also*: Bottom topography; Ocean bottom

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- Geostrategic conditions of deterrence in the Barents Sea. Ostreng, W., [1991, p.201-214, eng] 45-3334

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- See *also*: Underwater ice

**Subpermafrost ground water**

- Ground-water hydrology. Van Everdingen, R.O., [1990, p.77-101, eng] 45-215

- Ground water. Nelson, G.L., et al, [1990, p.317-348, eng] 45-412

- Flowing artesian wells in permafrost regions. Wheaton, S.R., [1990, p.721-737, eng] 45-425

- Possible Martian brines: radar observations and models. Zent, A.P., et al, [1990, p.14,531-14,542, eng] 45-1840

- Permafrost and ground-water conditions, Huola River Basin, northeast China. Wang, B.L., [1990, p.45-52, eng] 45-2233

- Groundwater in cold climates: interaction between glacier and karst aquifers. Lauritzen, S.E., [1990, p.139-146, eng] 45-3790

**Subpolar regions**

- Concerning the near-surface circulation in the subarctic frontal zone. Ginzburg, A.I., et al, [1986, p.6-12, eng] 45-861

- Distinguishing the Pacific subarctic front. Kuz'min, V.A., [1988, p.60-62, rus] 45-876

- Influence of a simulated transport corridor on snowpack characteristics, Fort Norman, N.W.T., Canada. Kershaw, G.P., [1991, p.31-40, eng] 45-2470

- General ecology and paleogeography of the polar oceans. Matishov, G.G., et al, [1990, 223p., rus] 45-2881

- Vertical fine structure of temperature profile in the subarctic front zone. Navrotskii, V.V., et al, [1991, p.468-474, rus] 45-2935

See *also*: Subarctic landscapes

**Subsea permafrost**

- Transient electromagnetics for permafrost. Walker, G.G., [1988, 308p., eng] 45-510

- Thaw subsidence effects on offshore pipelines and wells. Nixon, J.F., [1990, p.273-287, eng] 45-1954

- Thaw-subsidence effects on offshore pipelines. Nixon, J.F., [1991, p.28-39, eng] 45-2418

- Marine transgression, shoreline emergence: sea level changes. Taylor, A.E., [1991, p.6893-6909, eng] 45-2505

- Engineering geology of eroding coastlines. Kurfurst, P.J., et al, [1991, p.179-188, eng] 45-3270

**Subsidence**

- Thaw subsidence effects on offshore pipelines and wells. Nixon, J.F., [1990, p.273-287, eng] 45-1954

- Thaw-subsidence effects on offshore pipelines. Nixon, J.F., [1991, p.28-39, eng] 45-2418

- Evidence for episodic Late Holocene subsidence in estuarine deposits. Combelick, R.A., [1990, 67p., eng] 45-3086

**Substrates**

- Theory of ice crystal nucleation on substrates. Gorbunov, B.Z., [1991, p.564-570, eng] 45-2564

**Subsurface drainage**

- Karst drainage in a permafrost setting: the case of Akpatok Island, Northwest Territories, Canada. Lauriol, B., et al, [1990, p.129-144, eng] 45-1294

**Subsurface investigations**

- Estimating subsurface melting of an ice layer. Volkov, V.E., et al, [1989, p.138-143, rus] 45-1050

- Winter short-pulse radar studies on the Tanana River, Alaska. Delaney, A.J., et al, [1990, p.244-250, eng] 45-1421

- Use of uranium-isotope information for modeling water inflow in fractured rocks under permafrost conditions. Chalov, P.I., et al, [1991, p.166-174, eng] 45-2439

- Evidence for a frozen bed, Byrd Glacier, Antarctica. Scofield, J.P., et al, [1991, p.11,649-11,655, eng] 45-3462

- Subsurface movement on solifluction slopes—a 20-year study. Price, L.W., [1991, p.200-205, eng] 45-3484

**Subsurface structures**

- Buildings at Japanese stations in Antarctica. Hannuki, T., [1990, p.5-12, jpn] 45-693

- Radon measurements as indicators of permafrost distribution. Sellmann, P.V., et al, [1990, p.331-336, eng] 45-1622

- Observed deformation structures beneath relict iceberg scours. Woodworth-Lynas, C.M.T., [1990, p.103-125, eng] 45-1947

- Temperature regime of structures with permafrost bases. Gokhman, M.R., et al, [1991, p.189-194, eng] 45-2996

- Snow depth required to mask the underlying surface. Baker, D.G., et al, [1991, p.387-392, eng] 45-3018

- Detection of objects buried in wet snowpack by an FM-CW radar. Yamaguchi, Y., et al, [1991, p.201-208, eng] 45-3188

See *also*: Underground facilities

**Sunlight**

- Green icebergs and remote sensing. Lee, R.L., Jr., [1990, p.1862-1874, eng] 45-1171

- Photosynthesis and nitrogen uptake by sea ice microalgae. Priscu, J.C., et al, [1991, p.201-210, eng] 45-2669

**Sunshine**

- See *also*: Insolation

**Supercooled clouds**

- Anomalous radar backscattering from ice particles in a cloud. Aivazian, G.M., [1989, p.51-56, eng] 45-856

- Satellite images of icing clouds. Schickel, K.P., [1988, p.49-51, eng] 45-1309
- Supercooled liquid water development in a winter mountain storm. Sassen, K., et al, [1990, p.1323-1350, eng] 45-1580
- Aircraft icing as an applied winter storms problem. Politovich, M.K., [1991, p.235-240, eng] 45-1938
- Experimental study of the production of ice crystals by a twin-turboprop aircraft. Kelly, R.D., et al, [1991, p.217-226, eng] 45-2554
- Aircraft-produced ice particles in a highly supercooled altocumulus cloud. Sassen, K., [1991, p.765-775, eng] 45-3209
- Explanation for the existence of supercooled water at the top of cold clouds. Rauber, R.M., et al, [1991, p.1005-1023, eng] 45-3273
- Supercooled fog**
- Power line icing in freezing rain and fog. Melo, O.T., et al, [1988, p.70-75, eng] 45-1314
- Crystallization of supercooled water drops, induced by infrared radiation at the resonant frequency of ice. Dubrovich, N.A., [1991, p.38-39, eng] 45-3474
- Supercooling**
- Experiments on the growth of spongy ice near a stagnant point. Lock, G.S.H., et al, [1990, p.143-150, eng] 45-55
- Effect of cooling rate on freezing temperature of supercooled water. Saito, A., et al, [1990, p.1697-1709, eng] 45-487
- Cooling rate and freezing temperature of supercooled water. Saito, A., et al, [1989, p.31-38, jpn] 45-700
- Boundary integral approach to unstable solidification. Strain, J., [1989, p.342-389, eng] 45-973
- Spin-lattice relaxation and molecular dynamics of supercooled water. Zavodovskii, A.G., [1989, p.1170-1172, eng] 45-1025
- Raman spectroscopic study of dilute H<sub>2</sub>O in liquid H<sub>2</sub>O in the temperature range -31.5 to 160 C. Hare, D.E., et al, [1990, p.6954-6961, eng] 45-1172
- Contact supercooling of water layers and bottom ice formations in the sea. Cherepanov, N.V., et al, [1989, p.124-134, rus] 45-1499
- Passive and active bottom ice formation. Tyshko, K.P., et al, [1989, p.135-143, rus] 45-1500
- Physics of supercooling of thin water skins covering gyrating hailstones. List, R., [1990, p.1919-1925, eng] 45-1804
- Comments on "Physics of supercooling of thin water skins covering gyrating hailstones". Knight, C.A., et al, [1991, p.217-220, eng] 45-1805
- Tiny tubes prevent liquids from freezing. [1991, p.27, eng] 45-2221
- Estimation of supercooling temperature of water. Maliarenko, V.V., [1989, p.26-29, eng] 45-2481
- Promotion of H-bond cage dynamics by alcohol in supercooled water. Bulone, D., et al, [1991, p.6816-6826, eng] 45-2776
- Diffraction studies of phase changes in supercooled molecular clusters. Bartell, L.S., et al, [1991, p.1159-1167, eng] 45-2777
- Four-photon polarization spectroscopy of a Rayleigh line wing in liquid water near 0 deg C. Bunkin, A.F., et al, [1990, p.29-31, eng] 45-2930
- Electron microscope observation of freezing stress response in plant tissues. Malone, S.R., et al, [1991, p.871-881, eng] 45-3275
- Frazil ice problems at Stornorrforrs water power plant in the Ume River. Sahlborg, J., [1990, p.427-441, eng] 45-3596
- Superstructures**
- Forecasting superstructure icing for Navy combatants. Ryerson, C.C., [1989, p.287-296, eng] 45-542
- Supplies**
- See *also*: Logistics
- Supports**
- Steel gallery supports for construction in the north. Buldakov, I.U.K., et al, [1990, p.12-14, rus] 45-800
- Determining bending moments. Matskevich, D.G., et al, [1988, p.140-146, rus] 45-1517
- Low-temperature performance of elastomeric bearings. Roeder, C.W., et al, [1990, p.113-132, eng] 45-1522
- See *also*: Pipeline supports; Power line supports
- Suprapermafrost ground water**
- Ground water. Nelson, G.L., et al, [1990, p.317-348, eng] 45-412
- Flowing artesian wells in permafrost regions. Wheaton, S.R., [1990, p.721-737, eng] 45-425
- Use of water of taliks above permafrost for water supply to oil fields. Burchak, T.V., et al, [1989, p.15-24, eng] 45-647
- Combined geocryological and hydrogeological investigations. Collected scientific articles. Anisimova, N.P., ed, [1989, 163p., rus] 45-2623
- Types of formation regimes of suprapermafrost ground water. Lomovtseva, N.S., et al, [1989, p.5-12, rus] 45-2624
- Chemical composition of suprapermafrost ground water in the active layer. Lebedeva, T.N., [1989, p.22-33, rus] 45-2626
- Formation and regime of the flow of suprapermafrost ground water. Boitsov, A.V., [1989, p.61-65, rus] 45-2629
- Determining subaqueous discharging of suprapermafrost ground water. Anisimovs, N.P., et al, [1989, p.108-114, rus] 45-2635
- Formation of the chemical composition of surface waters. Brazhnik, S.N., [1990, p.73-77, rus] 45-3037
- Surface drainage**
- Effects of beaver dams on subarctic wetland hydrology. Woo, M.K., et al, [1990, p.223-230, eng] 45-1420
- Alpine proglacial fluvial sediment budget. Warburton, J., [1990, p.261-272, eng] 45-2029
- Chemical weathering of a watershed in CO. Mast, M.A., et al, [1990, p.2971-2978, eng] 45-2079
- Mathematical models for the prediction of river runoff. Shentzis, I.D., [1990, p.487-500, eng] 45-2991
- Effects of suburbanization upon snowmelt runoff. Buttle, J.M., [1990, p.285-302, eng] 45-2995
- Drainage pattern in a subpolar glacier: Bröggerbreen, Svalbard. Hagen, J.O., et al, [1990, p.121-131, eng] 45-3788
- Surface effect vehicles**
- See *also*: Air cushion vehicles
- Surface energy**
- Surface energy balance of a perennial snowbank, Melville Island, Northwest Territories, Canada. Young, K.L., et al, [1990, p.290-301, eng] 45-891
- Volume- and surface-binding energies of ice systems containing CO, CO<sub>2</sub>, and H<sub>2</sub>O. Sandford, S.A., et al, [1990, p.188-192, eng] 45-1022
- Formation of ice on roads beneath bridges. Barker, H.W., et al, [1990, p.1180-1184, eng] 45-1653
- Evapotranspiration from a small Alaskan arctic watershed. Kane, D.L., et al, [1990, p.253-272, eng] 45-2526
- Surface energy budget of boreal forest soil temperature. Bonan, G.B., [1991, p.767-781, eng] 45-3293
- Surface migration**
- Koyaanismuyay: the hypothesis of a perennially dichotomous Triton. Moore, J.M., et al, [1990, p.1757-1760, eng] 45-2045
- Nitrogen frost migration on Triton: a historical model. Spencer, J.R., [1990, p.1769-1772, eng] 45-2046
- Stability of nitrogen on Triton. Stansberry, J.A., et al, [1990, p.1773-1776, eng] 45-2047
- Surface properties**
- Utilization of local texture transforms for adaptive filtering of SAR sea ice imagery. Salter, D.F., et al, [1989, p.777-779, eng] 45-250
- Extraction of ridge feature characteristics from SAR images of sea ice. Vesceky, J.F., et al, [1989, p.1129-1132, eng] 45-259
- Millimeter-wave radar scattering from terrain: data handbook. Haddock, T.F., et al, [1990, 133p., eng] 45-313
- Observation of the boundary layer on the top of ice growing from melt. Krasinski, M.J., et al, [1990, p.625-632, eng] 45-614
- Heavy trucks, climate and pavement damage. [1988, 173p., eng] 45-1479
- Aerodynamic roughness of different types of sea ice. Guest, P.S., et al, [1991, p.4709-4721, eng] 45-2681
- Chemical and glaciological studies. Corr, H., [1990, p.87-89, eng] 45-2835
- Model surface treatment for testing in ice. Tatinclaux, J.C., et al, [1990, p.766-775, eng] 45-3627
- See *also*: Glacier surfaces; Ice surface; Microrelief; Snow surface
- Surface roughness**
- Millimeter-wave radar scattering from terrain: data handbook. Haddock, T.F., et al, [1990, 133p., eng] 45-313
- Roughness length of the snow surface of the Filchner-Ronne Ice Shelf. Heinemann, G., [1989, p.17-24, ger] 45-394
- Modeling of surface roughness effects on glaze ice accretion. Hansman, R.J., Jr., et al, [1990, p.35-42, eng] 45-599
- Microphysics of surface roughness in glaze ice accretion. Hansman, R.J., Jr., et al, [1988, p.139-146, eng] 45-1328
- Effect of surface roughness on ice loads during icing. Personne, P., et al, [1988, p.232-235, eng] 45-1345
- Measurements of SAR backscatter signatures from sea ice. Livingstone, C.E., et al, [1991, p.29-41, eng] 45-1725
- Evolution of ice cover roughness. Ashton, G.D., et al, [1991, p.294-305, eng] 45-2341
- Aerodynamic roughness of different types of sea ice. Guest, P.S., et al, [1991, p.4709-4721, eng] 45-2681
- Sea ice thickness distribution in the northwestern Weddell Sea. Lange, M.A., et al, [1991, p.4821-4837, eng] 45-2690
- Modeling of surface roughness effects on glaze ice accretion. Hansman, R.J., Jr., et al, [1991, p.54-60, eng] 45-3235
- See *also*: Roughness coefficient
- Surface structure**
- Self-organization in freezing soils: from microscopic ice lenses to patterned ground. Hallet, B., [1990, p.842-852, eng] 45-1553
- Medium scale landforms of glacial erosion in South Greenland: process and form. Glasser, N.F., et al, [1990, p.211-215, eng] 45-2024
- Frost lenses? Sure. But in concrete? Perenchio, W.F., et al, [1990, p.51-53, eng] 45-2048
- Measurements of the cohesive force of water frost. Hatzes, A.P., et al, [1991, p.113-121, eng] 45-2289
- Modeling the reflectance spectrum of Callisto at 0.25 to 4.1 millimicrons. Calvin, W.M., et al, [1991, p.305-317, eng] 45-2939
- IHS transform for the integration of radar imagery with other remotely sensed data. Harris, J.R., et al, [1990, p.1631-1641, eng] 45-2946
- SAR sea ice discrimination using texture statistics: a multivariate approach. Barber, D.G., et al, [1991, p.385-395, eng] 45-2947
- Basis for ice formation design. LaFleur, R.S., [1990, p.393-401, eng] 45-3195
- Evaluation of second-order texture parameters for sea ice classification from radar images. Shokr, M.E., [1991, p.10,625-10,640, eng] 45-3312
- Surface temperature**
- Surface energy balance and surface temperature in cold regions. Lunardini, V.J., et al, [1990, p.101-110, eng] 45-124
- USNS *Bartlett* cruise to the Greenland Sea in September 1989. Data report. Bourke, R.H., et al, [1990, 122p., eng] 45-451
- Thermal analysis of engine inlet anti-icing systems. Al-Khalil, K.M., et al, [1990, p.628-634, eng] 45-1015
- Radiation temperature of the surface of snow and ice cover. Darovskikh, A.N., et al, [1989, p.72-77, rus] 45-1492
- Questions on interpreting data from infrared-ice reconnaissance. Tarashkevich, V.N., et al, [1989, p.88-91, rus] 45-1494
- Permafrost response to surface temperature change. Harrison, W.D., [1991, p.683-695, eng] 45-1527
- Formation of ice on roads beneath bridges. Barker, H.W., et al, [1990, p.1180-1184, eng] 45-1653
- One-dimensional temperature modeling techniques: review and recommendations. Balick, L.K., et al, [1990, 17p., eng] 45-1698
- Temperature and moisture content of soils in Western Yamal. Sautkin, E.V., et al, [1989, p.111-119, rus] 45-2016
- Variations in permafrost thickness in response to changes in paleoclimate. Osterkamp, T.E., et al, [1991, p.4423-4434, eng] 45-2228
- Marine transgression, shoreline emergence: sea level changes. Taylor, A.E., [1991, p.6893-6909, eng] 45-2505
- Re-examination of CO<sub>2</sub>-climate relationship as deduced from Vostok ice core. Barnola, J.M., et al, [1991, p.83-90, eng] 45-2586
- Service temperature of steel in cold climates. Huther, M., et al, [1990, p.229-239, eng] 45-2734
- Estimating soil surface temperature from meteorological data. Pikel, J.L., Jr., [1991, p.187-195, eng] 45-2928
- Frost growth parameters in a forced air stream. Östin, R., et al, [1991, p.1009-1017, eng] 45-3022
- Surface air temperature secular trends in northern high latitudes. Tsuchiya, I., [1991, p.43-51, eng] 45-3063
- Duration of liquid water habitats on early Mars. McKay, C.P., et al, [1991, p.214-221, eng] 45-3192
- Dynamics of arctic ice in seasonal energy balance model of the climate with regional resolution. Kolomeev, M.P., et al, [1990, p.22-27, eng] 45-3269
- Observational evaluation of the snow breeze. Segal, M., et al, [1991, p.412-424, eng] 45-3271
- Holographic interferometry experiments on the growth of ice from a horizontal pipe. Spatz, T.L., et al, [1991, p.1847-1859, eng] 45-3365
- CLASS—a Canadian land surface scheme for GCMs. 1. Soil model. Verseghy, D.L., [1991, p.111-133, eng] 45-3548
- River surface temperature determination in calm weather. Matoušek, V., [1990, p.363-371, eng] 45-3590
- Arctic hydrology in Greenland—permafrost hydrology and data technology. Thomsen, T., [1990, p.9-26, eng] 45-3778
- Experiment of a warmed scaffolding in a building site. Käärinen, H., et al, [1990, 52p. + appendix, fin] 45-3851
- Surface tension**
- See *also*: Interfacial tension
- Surface waters**
- Water-quality research. Gregor, D.J., [1990, p.163-186, eng] 45-218
- Surface water supplies. Ryan, W.L., [1990, p.301-316, eng] 45-411
- D/H on Mars: effects of floods, volcanism, impacts, and polar processes. Carr, M.H., [1990, p.210-227, eng] 45-1023
- Transform equations of long flexural-gravity waves in an ice-covered sea. Iakovlev, V.V., [1990, p.107-113, rus] 45-1121
- Cylindrical flexural-gravity waves in an ice-covered sea. Tkachenko, V.A., et al, [1990, p.114-120, rus] 45-1122
- Water resources data for Alaska, water year 1989. Lamke, R.D., et al, [1990, 224p., eng] 45-1148
- Spreading of oil spilled under ice. Yapa, P.D., et al, [1990, p.1468-1483, eng] 45-1289
- Questions on interpreting data from infrared-ice reconnaissance. Tarashkevich, V.N., et al, [1989, p.88-91, rus] 45-1494

**Surface waters (cont.)**

- Surface water hydrology. Wolman, M.G., ed, 1990, 374p., eng 45-2143
- Surface waters of North America; influence of land and vegetation on streamflow. Saxton, K.E., et al, 1990, p.55-80, eng 45-2145
- Modeling runoff in semiarid rangeland watersheds. Heydarpour, J., 1989, p.210-215, eng 45-2403
- Thermal effect of surface water on permafrost in arctic regions. Klimovskii, I.V., et al, 1989, p.66-73, rus 45-2630
- Model for description of seasonal mountainous snowmelt. Babiková, G., et al, 1990, p.383-393, eng 45-2994
- Formation of the chemical composition of surface waters. Brazhnik, S.N., 1990, p.73-77, rus 45-3037
- Duration of liquid water habitats on early Mars. McKay, C.P., et al, 1991, p.214-221, eng 45-3192
- Role of atmospheric precipitation in the formation of the chemical content of surface water. Brazhnik, S.N., 1990, p.73-77, rus 45-3866

**Surging glaciers**

See *also*: Glacier surges

**Surveys**

- Integrity monitoring criteria and methods for ice scour problems. Price, P.St.J., et al, 1990, p.419-444, eng 45-1963
- Examination of potential pipeline monitoring techniques. Witney, K.C., 1990, p.445-453, eng 45-1964
- See *also*: Aerial surveys; Electromagnetic prospecting; Exploration; Geodetic surveys; Geological surveys; Geophysical surveys; Glacier surveys; Ice surveys; Infrared reconnaissance; Magnetic surveys; Mapping; Oceanographic surveys; Photogrammetric surveys; Photographic reconnaissance; Route surveys; Seismic surveys; Site surveys; Snow surveys; Soil surveys; Topographic surveys

**Survival**

- Fate of ice-nucleating bacteria in synthetic snow samples. Goodnow, R.A., et al, 1990, p.2223-2227, eng 45-4336
- Arctic/cold weather operations symposium, 1989; proceedings, volume 1. 1989, 488p., eng 45-532
- Frozen and alive. Storey, K.B., et al, 1990, p.92-97, eng 45-1017
- Effect of abiotic factors on vole winter survival. Courtin, G.M., et al, 1991, p.45-52, eng 45-2472
- See *also*: Cold weather survival; Viability

**Suspended sediments**

- Discharge of suspended sediments in the glacier-nourished Adishura River. Karalashvili, T.V., 1989, p.210-212, rus 45-1063
- Winter fecal coliform concentrations in stream sediments. Kidd, D.R., 1989, n.p., eng 45-1654
- Behavior of a glacier-derived suspended sediment plume in a small arctic inlet. Dowdeswell, J.A., et al, 1991, p.111-123, eng 45-2021
- Movement and storage of sediment in rivers of the United States and Canada. Meade, R.H., et al, 1990, p.255-280, eng 45-2151
- Glacimarine environments: processes and sediments. Dowdeswell, J.A., ed, 1990, 423p., eng 45-2778
- Sediment transport and deposition in a glacial fjord. Cowan, E.A., et al, 1990, p.75-89, eng 45-2782
- Transfer of terrigenous suspended material to the Barents Sea by glaciers. Medvedev, V.S., et al, 1990, p.103-110, rus 45-2878

**Svalbard**

- Isotope variations in the temperate glaciers of the Eurasian Arctic. Valkmiae, R.A., 1990, p.45-55, eng 45-373
- Peculiarities of snow accumulation on Austfonna (Svalbard). Sin'kevich, S.A., et al, 1989, p.279-285, eng 45-475

**Swamps**

- Wetlands considerations. Rundquist, L.A., 1990, p.371-397, eng 45-414
- Development of bogs in western Siberia. Orlov, V.I., et al, 1989, p.70-77, rus 45-643
- Runoff from hummocky marshes of western Siberia. Moskvin, I.U.P., 1989, p.73-78, eng 45-661
- Characteristics of the formation of alassy peat bogs in northern Yakutia. Vasil'ev, I.S., 1989, p.82-87, rus 45-670
- Proceedings. Vol.2. 1988, 105p., eng 45-759
- Properties, geomorphology and classification of peatlands. Malby, E., 1988, p.5-13, eng 45-760
- Up-to-date method to study marsh-ridden areas in West Siberia. Novikov, S.M., 1988, p.14-17, eng 45-761
- Water and energy regime of palsa bogs in West Siberia. Moskvin, I.U.P., 1988, p.18-21, eng 45-762
- Optimization of the microclimate of bog geosystems. Kovriga, P.A., et al, 1988, p.22-29, eng 45-763
- Wetland soil formation. Malby, E., 1988, p.30-36, eng 45-764
- Hydrology of wetlands and man's influence on it. Verry, E.S., 1988, p.41-61, eng 45-765
- Drainage from swamps in river basins. Ivanov, K.E., et al, 1988, p.62-65, eng 45-766
- Drainage effect on the environment. Shiklomanov, I.A., et al, 1988, p.66-71, eng 45-767
- Water table of drained peatlands in Ontario. Berry, G.J., et al, 1988, p.72-79, eng 45-768

- Water quality of peatlands and man's influence on it. Sallantausta, T., 1988, p.80-98, eng 45-769
- First radiocesium profile and snow cover mass measurements. Kasi, S.S.H., 1988, p.101-105, eng 45-770
- Northern prairie wetlands. Van der Valk, A.G., ed, 1989, 400p., eng 45-831
- Hydrologic studies of wetlands in the northern prairie. Winter, T.C., 1989, p.16-54, eng 45-832
- Chemical characteristics of water in northern prairie wetlands. LaBaugh, J.W., 1989, p.56-90, eng 45-833
- Nitrogen and phosphorus dynamics and the fate of agricultural runoff. Neely, R.K., et al, 1989, p.92-131, eng 45-834
- Vegetation of wetlands of the prairie pothole region. Kantrud, H.A., et al, 1989, p.132-187, eng 45-835
- Water and wetland resources of the Nebraska sandhills. Novacek, J.M., 1989, p.340-384, eng 45-836
- Dynamics of wetland landscapes and reliably predicting their development. Aaviksoo, K.D., et al, 1989, p.221-226, eng 45-857
- Identification of regional features of the marshes of western Siberia. Gorozhankina, S.M., 1986, p.358-372, eng 45-864
- Evaluating engineering-geological conditions of lake-bog flatlands. Svitnev, A.I., 1987, p.517-528, eng 45-865
- Freshwater wetlands and wildlife. Sharitz, R.R., ed, 1989, 1265p., eng 45-1400
- Biogeomorphology and spatial structure of northern patterned peatlands. Madsen, B.J., 1989, p.235-247, eng 45-1401
- Prairie wetlands: characteristics, importance to waterfowl, and status. Krapu, G.L., et al, 1989, p.811-828, eng 45-1402
- Perspectives on the status of Canadian prairie wetlands. Miller, J.B., 1989, p.829-852, eng 45-1403
- Status of the national wetlands inventory in Alaska. Hall, J.V., 1989, p.853-859, eng 45-1404
- Ground water input in kettle hole peatlands. Kratz, T.K., et al, 1989, p.1141-1151, eng 45-1405
- Wetland creation and restoration: the status of the science. Kusler, J.A., ed, 1990, 594p., eng 45-1406
- Creation of wetlands in the northeastern United States. Lowry, D.J., 1990, p.267-280, eng 45-1407
- Regional analysis of the creation and restoration of kettle and pothole wetlands. Hollands, G.G., 1990, p.281-298, eng 45-1408
- Regional analysis of fringe wetlands in the Midwest: creation and restoration. Levine, D.A., et al, 1990, p.299-325, eng 45-1409
- Creation and restoration of riparian wetlands in the agricultural Midwest. Willard, D.E., et al, 1990, p.327-350, eng 45-1410
- Effects of beaver dams on subarctic wetland hydrology. Woo, M.K., et al, 1990, p.223-230, eng 45-1420
- Constructed wetlands for wastewater treatment: municipal, industrial, and agricultural. 1989, 831p., eng 45-1873
- Wetlands ecosystems: natural water purifiers? Hammer, D.A., et al, 1989, p.5-19, eng 45-1874
- Hydrologic factors in wetland water treatment. Kadlec, R.H., 1989, p.21-40, eng 45-1875
- Physical and chemical characteristics of freshwater wetland soils. Faulkner, S.P., et al, 1989, p.41-72, eng 45-1876
- Wetland vegetation. Guntenspergen, G.R., et al, 1989, p.73-88, eng 45-1877
- Wetlands microbiology: form, function, processes. Portier, R.J., et al, 1989, p.89-105, eng 45-1878
- Use of wetlands for treatment of mining wastes. Wildeman, T.R., et al, 1989, p.221-231, eng 45-1879
- Wetlands for wastewater treatment at oil refinery. Litchfield, D.K., et al, 1989, p.233-237, eng 45-1880
- Performance expectations and loading rates for constructed wetlands. Watson, J.T., et al, 1989, p.319-351, eng 45-1881
- Substrate design for wetlands wastewater treatment. Steiner, G.R., et al, 1989, p.363-377, eng 45-1882
- Hydraulic design for wetlands wastewater treatment. Watson, J.T., et al, 1989, p.379-391, eng 45-1883
- Operations optimization of wetland water treatment. Girts, M.A., et al, 1989, p.417-429, eng 45-1884
- Decomposition in wastewater wetlands. Kadlec, R.H., 1989, p.459-468, eng 45-1885
- Denitrification in artificial wetlands. Stengel, E., et al, 1989, p.484-492, eng 45-1886
- Sulfate reduction in wetlands to treat mine drainage. Hedin, R.S., et al, 1989, p.508-514, eng 45-1887
- Bacterial treatment of mine drainage in a wetland. Batal, W., et al, 1989, p.550-557, eng 45-1888
- Root-zone system: Mannesdorf—new results. Haberl, R., et al, 1989, p.606-621, eng 45-1889
- Use of artificial cattail marshes to treat sewage. Miller, G., 1989, p.636-642, eng 45-1890
- Research site for passive mine drainage treatment. Howard, E.A., et al, 1989, p.761-764, eng 45-1892

- Manganese and iron encrustation on green algae living in acid mine drainage. Stevens, S.E., Jr., et al, 1989, p.765-773, eng 45-1893
- Using forest products in the treatment of acid mine drainage. Howard, E.A., et al, 1989, p.774-779, eng 45-1894
- Use of wetlands to remove nickel and copper from mine drainage. Eger, P., et al, 1989, p.780-787, eng 45-1895
- Windsor Coal Company wetland: an overview. Koibash, R.L., et al, 1989, p.788-792, eng 45-1896
- Wetland treatment of coal mine drainage: controlled studies of iron retention in model wetland systems. Henrot, J., et al, 1989, p.793-800, eng 45-1897
- Hydrology of lakes and wetlands. Winter, T.C., et al, 1990, p.159-187, eng 45-2150
- Landscape indication of Quaternary deposit: and soils in the Pripet Marshes. Obukhovskii, I.U.M., 1990, 192p., rus 45-2211
- Wetlands sewage treatment system for the community of Testlia. Lorimer, R.J., et al, 1991, p.95-107, eng 45-2325
- Structure and regime of swamps in the permafrost zone of Western Siberia. Novikov, S.M., 1989, p.80-89, rus 45-2446
- Chemical composition of soil and ground waters in freezing swamps. Ivanov, A.V., et al, 1989, p.149-154, rus 45-2447
- Methane emission measurements from subarctic fens. Moore, T.R., et al, 1991, p.102-109, eng 45-2792
- Response of an Alaskan wetland to nutrient enrichment. Sanville, W., 1988, p.231-243, eng 45-3383
- Hydrological peculiarities of permafrost regions. Novikov, S.M., et al, 1990, p.55-61, eng 45-3782
- Sweden**
- Relict periglacial structures on a coastal plain in Sweden. Svensson, H., 1990, p.79-91, eng 45-1190
- Mass balance comparison of two Swedish glaciers. Stroeven, A.P., et al, 1990, p.113-118, eng 45-1192
- Small glaciers as sensitive indicators of climatic fluctuations. Grunnd, H., 1990, p.119-123, eng 45-1193
- On the use of glacial striae for reconstruction of paleo-ice sheet flow patterns. Kleman, J., 1990, p.217-236, eng 45-2025
- Snow conditions in Sweden during the seasons 1950/51-1979/80. Eriksson, B., 1990, 75p., swe 45-3883
- Kiruna**
- Water vapor and ozone in polar stratospheres. Hofmann, D.J., et al, 1991, p.1011-1014, eng 45-3757
- Mt. Fulufjället**
- Boulder fields of Mt. Fulufjället, west-central Sweden. Kleman, J., et al, 1990, p.63-78, eng 45-1189
- Switzerland**
- Alpine proglacial fluvial sediment budget. Warburton, J., 1990, p.261-272, eng 45-2029
- Glacial sedimentary sequences in the Bern and Solothurn Seeland and Mittelland. Pugin, A., 1991, p.177-205, fre 45-3827
- Alps**
- Thermal characteristics of the permafrost within a rock glacier. Mühlh, D.V., et al, 1990, p.151-158, eng 45-56
- Mass balance of Rhonegletscher during 1882/83-1986/87. Chen, J., et al, 1990, p.199-209, eng 45-62
- Summer 1987 flooding in glacial basins of the Pennine Alps. Rey, Y., et al, 1990, p.115-124, fre 45-370
- Soil and rock temperatures in discontinuous permafrost. King, L., 1990, p.177-188, eng 45-1297
- Snow and avalanches in the Swiss Alps, winter 1988/89. 1991, 155p., ger 45-1650
- Morphological changes in the Swiss Alps resulting from the 1987 summer storms. Naef, F., et al, 1989, p.36-42, eng 45-2768
- Comparison of 18th century and modern ideas on avalanches. Carozzi, A.V., 1990, p.371-399, eng 45-2938
- Rhone Glacier**
- Pleniglacial permafrost conditions in the Netherlands. Ran, E.T.H., et al, 1990, p.207-218, eng 45-355
- Walliser Alps**
- Past and present permafrost distribution in the Turtmannal, Wallis, Swiss Alps. Van Tatenhove, F., et al, 1990, p.302-316, eng 45-892
- Symposia**
- See *also*: Meetings
- Synoptic meteorology**
- Long range forecasting of runoff from the Murgab and Tedzhen Rivers. Shentais, I.D., et al, 1990, p.129-144, rus 45-997
- Glaciers and climate: some new aspects of investigating the problems. Voloshina, A.P., 1989, p.251-260, rus 45-1074
- Atmospheric processes and weather forecasting in the Arctic. Dmitriev, A.A., et al, 1989, 253p., rus 45-1573
- Kinematics and dynamics of heavy snowfall bands over European territory. Gromova, G.G., et al, 1989, p.3-12, rus 45-1848
- Formation of airmass and frontal ice-hoar frost deposits (Volga region). Maksimovich, S.N., 1989, p.138-143, rus 45-1851

- Formation of light frost in the territory of the Turkmen SSR. Tumasova, V.V., [1989, p.143-151, rus] 45-1852
- Evolution of a freezing rain storm, part I: synoptic and mesoscale conditions. Zamora, R.J., et al, [1991, p.258-263, eng] 45-1941
- Regional snowfall intensity and the Great Lakes anomaly. Ryerson, C.C., et al, [1990, p.189-199, eng] 45-2198
- Formation, preservation and deterioration of ice-hoar frost deposits. Guljaev, I.U.N., [1989, p.141-145, rus] 45-2873
- Hailstorm over Telangana. Pandharinath, N., et al, [1990, p.433-438, eng] 45-3050
- Papal Front of 3 May 1987: a remarkable example of frontogenesis near the Alps. Volkert, H., et al, [1991, p.125-150, eng] 45-3479
- Synthetic**  
See *also*: Artificial
- Synthetic aperture radar**  
Predictions of wave propagation in the marginal ice zone. Liu, A.K., et al, [1991, p.4605-4621, eng] 45-2674
- Observation of wave refraction at an ice edge by synthetic aperture radar. Liu, A.K., et al, [1991, p.4803-4808, eng] 45-2688
- Radar detection of a calving event at the Milne Ice Shelf, N.W.T. Jeffries, M.O., et al, [1990, p.321-331, eng] 45-2741
- Geophysical sea ice products at the Alaska SAR facility. Holt, B., et al, [1990, p.333-344, eng] 45-2742
- Multi-frequency imaging radar polarimetry of sea ice. Drinkwater, M.R., [1990, p.365-376, eng] 45-2745
- Determining the specific active area of scattering of a probed surface. Milekhin, O.E., et al, [1989, p.104-113, rus] 45-2756
- Characteristics of external calibration of the Kosmos-1500 satellite side-look radar. Bukharov, M.V., et al, [1989, p.114-125, rus] 45-2757
- Creating a computer radar map of Antarctica. Spiridonov, I.U.G., et al, [1989, p.126-134, rus] 45-2758
- McMurdo SAR Facility: report of the ad hoc science working team. Jezek, K.C., ed, [1991, 32p., eng] 45-2916
- SAR sea ice discrimination using texture statistics: a multivariate approach. Barber, D.G., et al, [1991, p.385-395, eng] 45-2947
- Detection of waves in frazil ice in synthetic aperture radar imagery. Wadhams, P., et al, [1991, p.8835-8852, eng] 45-3019
- Modified beta density function as a model for synthetic aperture radar clutter statistics. Maffett, A.L., et al, [1991, p.277-283, eng] 45-3190
- Time-delayed reflections in L-band synthetic aperture radar imagery of icebergs. Gray, A.L., et al, [1991, p.284-291, eng] 45-3191
- Ocean feature study using synthetic aperture radar. Ikeda, M., et al, [1991, p.10,593-10,602, eng] 45-3309
- Evaluation of second-order texture parameters for sea ice classification from radar images. Shokr, M.E., [1991, p.10,625-10,640, eng] 45-3312
- Comparative ground truth and remotely sensed measurements of Baltic Sea ice ridges. Kankaanpää, P., et al, [1990, p.1130-1143, eng] 45-3660
- Proceedings of the 2nd Synthetic Aperture Radar Workshop, Jun 1990. Kobrick, M., ed, [1990, 57p. + appends., eng] 45-3752
- Synthetic aperture radar observations of the Greenland Ice Sheet. Jezek, K.C., et al, [1990, p.21-28, eng] 45-3753
- Comparison of active and passive microwave signatures of arctic sea ice. Drinkwater, M.R., et al, [1990, p.29-36, eng] 45-3754
- River and lake ice conditions as determined from AIRSAR imagery. Melloh, R.A., et al, [1990, p.37-42, eng] 45-3755
- Interpretation of synthetic aperture radar imagery of snow-covered river ice. Melloh, R.A., et al, [1990, 13p., eng] 45-3766
- Utilization of SAR data in the monitoring of snowpacks and wetlands. Leconte, R., et al, [1990, p.233-258, eng] 45-3807
- Interpreting passive and active microwave imagery over snow-covered lakes. Melloh, R.A., et al, [1990, p.259-278, eng] 45-3808
- Synthetic materials**  
Plastic highway bridges. Plecnik, J., et al, [1991, p.64-65, eng] 45-3477
- Taiga**  
Engineering and geocryological studies of gas-deposit areas, Western Siberia. Moskalenko, N.G., et al, [1989, p.3-15, rus] 45-100
- Classification of territory and forecasting its geological changes. Nefedova, T.V., [1990, p.46-49, rus] 45-637
- Soil freezing and thawing in the middle taiga of the European USSR. Deriugin, A.A., [1989, p.81-88, eng] 45-859
- Ecosystems of landscapes in the western central taiga (structure, dynamics). Lopatin, V.D., ed, [1990, 284p., rus] 45-1119
- Effect of fires on frozen soils. Tarabukina, V.G., et al, [1990, 119p., rus] 45-1572
- Water-regulating role of taiga forests. Rubtsov, M.V., et al, [1990, 222p., rus] 45-1574
- Climatic characteristics of the taiga in interior Alaska. Slaughter, C.W., et al, [1986, p.9-21, eng] 45-1589
- Fire in taiga communities of interior Alaska. Dyrness, C.T., et al, [1986, p.74-86, eng] 45-1590
- Autonomous taiga soil formation on the coast of the Sea of Okhotsk. Sedov, S.N., et al, [1990, p.24-35, eng] 45-1709
- Fighting large-scale forest fires. Valendik, E.N., [1990, 192p., rus] 45-1997
- Changes in the thermal regime of frost mounds in the northern taiga. Gorianov, P.A., [1989, p.88-95, rus] 45-2013
- Snow cover on small forest and field watersheds in the taiga zone of the European USSR. Deriugin, A.A., [1990, p.101-105, eng] 45-2080
- Humid temperate flatlands. Chernogaeva, G.M., [1989, p.332-337, eng] 45-2751
- Problems of soil science in Siberia; collected scientific papers. Gadzhiev, I.M., ed, [1990, 183p., rus] 45-2904
- Ecological soil petrography and mineralogy. Gradusov, B.P., et al, [1990, p.13-34, rus] 45-2906
- Soil cover of Siberia: formation and use. Volkovintser, V.I., et al, [1990, p.143-151, rus] 45-2909
- Taiga soils in the northwestern part of the Yenisey mountain ridge. Korsunov, V.M., et al, [1990, p.152-163, rus] 45-2910
- Model of transition processes in the tundra-taiga system. Bogatyrev, B.G., [1991, p.508-511, rus] 45-2936
- Tailings**  
Tailings management program—an operating success, Echo Bay's Lupin Mine. Wilson, H.R., [1989, p.135-144, eng] 45-341
- Revegetation of mine tailings. McKendrick, J.D., et al, [1989, p.157-165, eng] 45-343
- Design and construction of ash dumps. Sysoev, I.U.M., et al, [1990, 249p., rus] 45-2574
- Projected ecosystem consequences arising from the discharge of mine-tailing to the sea. Ellis, D.V., et al, [1975, p.11/99-11/107, eng] 45-3225
- Tailings management in the Canadian Arctic: Echo Bay's Lupin Mine. Wilson, H.R., [1991, p.213-214, eng] 45-3363
- Taliks**  
Geocryological subdivision map of the Baykal-Amur region. Fotiev, S.M., et al, [1987, p.25-38, rus] 45-572
- Use of water of taliks above permafrost for water supply to oil fields. Burchak, T.V., et al, [1989, p.15-24, eng] 45-647
- Prospecting for man-induced cryopegs using transient processes. Nim, I.U.A., [1989, p.117-130, rus] 45-1833
- Observing rock temperatures while surveying cryogenic-hydrogeological operations. Petrova, R.G., et al, [1989, p.47-57, rus] 45-2008
- Cryolithology of the lower course of the Lena River. Kunitiskil, V.V., [1989, 162p., rus] 45-2424
- Drainage pattern in a subpolar glacier: Bröggerbreen, Svalbard. Hagen, J.O., et al, [1990, p.121-131, eng] 45-3788
- Taliks beneath lakes**  
Ground water. Nelson, G.L., et al, [1990, p.317-348, eng] 45-412
- Development of thermokarst lakes during the Holocene at sites near Mayo, Yukon Territory. Burn, C.R., et al, [1990, p.161-176, eng] 45-1296
- Formation of a specific subaqueous talik in a coastal zone of the Kara Sea. Grigor'ev, N.F., et al, [1989, p.74-78, rus] 45-2631
- Use and improvement in the quality of water in sublacustrine taliks. Fedorov, A.M., [1989, p.96-107, rus] 45-2634
- Forecasting lacustrine thermokarst in the Chukotskiy Peninsula. Tishin, M.I., [1990, p.96-99, rus] 45-3040
- Taliks beneath rivers**  
Ground water. Nelson, G.L., et al, [1990, p.317-348, eng] 45-412
- Taluz**  
Surficial taluz fabric and particle gliding over snow on Lassen Peak, California. Pérez, F.L., [1990, p.142-153, eng] 45-775
- Talus rock glacier in the Venezuelan Andes. Pérez, F.L., [1988, p.149-159, eng] 45-1095
- Geomorphic impact of spring avalanches in northwest Spitsbergen (79N). André, M.F., [1990, p.97-110, eng] 45-1292
- Morphology of a rock glacier in Ireland. Wilson, P., [1990, p.237-247, eng] 45-2026
- Analysis of the segmentation in the profile of alpine taluz slopes. Franco, B., et al, [1990, p.53-60, eng] 45-2234
- Formation of ice in caves, abandoned mining excavations, and taluz. Martin, V.I., [1990, p.16-17, rus] 45-2697
- Tanks (combat vehicles)**  
Validation study of the CRREL shallow snow mobility model. Blaisdell, G.L., et al, [1990, 72p., eng] 45-1510
- Tanks (containers)**  
See *also*: Storage tanks
- Tectonics**  
Coal resources of the Susitna lowland, Alaska. Merritt, R.D., [1990, 181p. + appends., eng] 45-489
- Tectonics of the Barents-Kara platform. Senin, B.V., et al, [1988, p.10-18, rus] 45-680
- Tectonic structures in the relief of the marginal belt of the Valdai glaciation. Iurenkov, G.I., [1989, p.49-54, rus] 45-702
- Morphology and plate tectonics: the modern polar oceans. Johnson, G.L., [1990, p.11-28, eng] 45-1266
- Arctic Ocean region. Grantz, A., ed, [1990, 644p. + 11 maps and charts in a separate case, eng] 45-1688
- Geological-geomorphological aspects of water supply problems in Siberia. Zykina, V.S., ed, [1990, 137p., rus] 45-2818
- Fractures in the foundation of recent relief in the West Siberian Plain. Babushkin, A.E., [1990, p.66-70, rus] 45-2819
- Effect of neotectonics on water and salt regimes in land reclamation areas. Borisenko, I.M., et al, [1990, p.122-128, rus] 45-2824
- Crustal structure between the Antarctic Peninsula and Ellsworth Land. McGibbon, K.J., et al, [1991, p.475-479, eng] 45-2949
- Tertiary history and tectonics of the Forlandsundet Basin. Lepvrier, C., [1990, 16p., eng] 45-3882
- Telecommunication**  
Telecommunications for the Italian research program. Blasi, L., et al, [1990, p.213-224, eng] 45-135
- Communications channel serviceability during power line icing. Golov, P.I.A., et al, [1988, p.36-42, eng] 45-2568
- See *also*: Data transmission; Radio communication
- Telemetering equipment**  
Severe Environment Surface Mooring (SESAMOOR). Kery, S.M., [1989, p.1398-1405, eng] 45-450
- Preliminary study of an advanced automatic station for marine data acquisition in Antarctica. Gasparoni, F., et al, [1989, p.1646-1651, eng] 45-722
- International Ice Patrol's air-deployed bathythermograph system. Alfultis, M.A., [1989, p.1652-1657, eng] 45-723
- Detection of coarse sediment movement using radio transmitters. Chacho, E.F., Jr., et al, [1990, p.5-9, eng] 45-2099
- Western Snow Conference, 58th, 1990. [1990, 170p. + appends., eng] 45-2114
- Automated snow depth and snowpack temperature measurements. Tanner, B.D., et al, [1990, p.73-78, eng] 45-2123
- Snow sensors in wilderness areas. Brandow, C.A., [1990, p.145-149, eng] 45-2133
- Improvements in snow sensor installation techniques. Gehrke, F., et al, [1990, p.154-155, eng] 45-2135
- See *also*: Remote sensing
- Telluric currents**  
See *also*: Geoelectricity
- Temperature**  
Thermal fracturing of rock. Dmitriev, A.P., et al, [1990, 254p., rus] 45-636
- See *also*: Air temperature; Frozen ground temperature; Frozen rock temperature; Ice temperature; Low temperature research; Low temperature tests; Snow surface temperature; Snow temperature; Soil temperature; Surface temperature; Thermal properties; Threshold temperatures; Water temperature
- Temperature control**  
Gas pressure calibration using mercury melting curve with ice-salt mixtures. Lusk, J., [1990, p.852-856, eng] 45-712
- Airborne cryogenic frost-point hygrometer. Spyers-Duran, P.A., [1991, p.303-306, eng] 45-1593
- Development of a cryogenic dew/frost point hygrometer. Buck, A.L., et al, [1991, p.322-326, eng] 45-1594
- Precooling concrete using frozen sand. Kurita, M., et al, [1990, p.60-65, eng] 45-2108
- Regulation of the temperature regime of lower pools of high-head hydro developments. Liapin, V.E., [1990, p.329-335, eng] 45-2165
- Temperature regime of structures with permafrost bases. Gokhman, M.R., et al, [1991, p.189-194, eng] 45-2996
- Heat pipes for ground heating and cooling. Vasiliev, L.L., [1988, p.125-138, eng] 45-3216
- Overwinter soil temperature patterns under six tillage-residue combinations. Benoit, G.R., et al, [1991, p.86-90, eng] 45-3306
- Thermal analysis of forced-air airport foundation cooling. Smith, L.B., et al, [1991, p.399-409, eng] 45-3538
- Temperature distribution**  
On the temperature distribution of glaciers in China. Huang, M., [1990, p.210-217, eng] 45-63
- Temperature distribution of Chongce Ice Cap, west Kunlun Mts. Zhou, T., et al, [1990, p.1024-1028, eng] 45-592
- Sea ice temperature vertical distribution near Showa Station, 1984-1985. Matsuda, O., et al, [1990, p.139-144, eng] 45-979

**Temperature distribution (cont.)**

- Impact of climate on the temperature distribution of ice in the ice divide of the Austfonna (Nordaustlandet). Larina, T.B., et al, (1989, p.185-190, rus) 45-1057
- Modelling temperature distribution in water-bearing formations, especially by freezing. Marcak, H., et al, (1988, p.310-313, ger) 45-1477
- Summer temperature distribution of moss cover in cryolithozone regions. Stashenko, A.I., (1990, p.167-170, rus) 45-1717
- Methods for stochastic modelling of temperature fields in the cryolithozone. Sagaidachnyi, I.U.A., et al, (1989, p.31-43, rus) 45-2006
- Vertical fine structure of temperature profile in the subarctic front zone. Navrotskii, V.V., et al, (1991, p.468-474, rus) 45-2935
- Investigation of heat and mass transport during freezing in peat soils. Gamaiunov, N.I., et al, (1990, p.88-97, eng) 45-3051
- Temperature distribution in composting material in a cold environment. Ayorinde, O.A., et al, (1991, p.87-92, eng) 45-3153
- Comparison of Laplace transform and finite difference solutions for an evolving permafrost region. Morland, L.W., et al, (1990, p.631-648, eng) 45-3208
- Performance of triangular spine fins under frosting conditions. Kondepudi, S.N., et al, (1988, p.1-7, eng) 45-3215
- Laboratory investigations of mixing processes under simulated ice cover. Loose, F., (1990, p.324-336, eng) 45-3587
- Temperature effects**
- Response of Greenland ice sheet to temperature changes. Braithwaite, R.J., et al, (1990, p.217-221, eng) 45-64
- Using monitors in permafrost with oil and gas deposits. Popkov, O.N., et al, (1989, p.58-65, rus) 45-106
- Interaction between permafrost and a deposit of natural gas hydrates. Tipenko, G.S., et al, (1990, p.73-84, rus) 45-322
- Low-temperature effects on the microstructure of cement paste exposed to seawater. Ramachandran, V.S., et al, (1990, p.340-347, eng) 45-358
- Water quality considerations. Jokela, J.B., (1990, p.349-369, eng) 45-413
- Elastic properties of a tungsten monocarbide-based metal/ceramic at low temperatures. Ulianov, V.L., et al, (1990, p.93-95, eng) 45-993
- Anomalies in the viscosity of amorphous ice. Shavlov, A.V., (1989, p.1206-1207, eng) 45-1026
- New approach to solving thermophysical problems of paleoclimatology. Faiko, L.I., (1989, p.133-138, rus) 45-1049
- Vehicle emission characteristics under cold ambient conditions. Larson, R.E., (1989, p.151-159, eng) 45-1228
- Behaviour of metal supported catalysts in subzero conditions. Aitta, E., et al, (1989, p.165-169, eng) 45-1230
- Compressibility of diesel and methanol fuels at low temperatures. Varde, K.S., (1989, p.455-459, eng) 45-1254
- Periglacial phenomena in New Zealand. Soons, J.M., et al, (1990, p.145-159, eng) 45-1295
- Synthetic products as basic components of low-pour motor oils. Tsvetkov, O.N., et al, (1990, p.189-192, eng) 45-1385
- Thermophilic bacteria among arctic, subarctic, and alpine habitats. Boyd, W.L., et al, (1990, p.401-411, eng) 45-1419
- Vapor-pressure dependence on temperature in models of snow metamorphism. Colbeck, S.C., (1990, p.351-352, eng) 45-1547
- Improving the stability of main gas pipelines in the cryolithozone. Mazur, I.I., et al, (1990, 72p., rus) 45-1706
- Strongly temperature dependent microphysical processes and winter storms. Stewart, R.E., et al, (1991, p.231-234, eng) 45-1937
- Impact of fluctuations in mean precipitation and temperature on runoff. Karl, T.R., et al, (1989, p.423-447, eng) 45-2249
- Frozen-liquid PMR spectra and interactions of water with spherical carbon adsorbents. Turov, V.V., et al, (1990, p.102-105, eng) 45-2285
- Characterization of polymer networks by measurements of the freezing point depression. Arndt, K.F., et al, (1990, p.806-813, eng) 45-2312
- Flexural strength of sand-reinforced ice. Nixon, W.A., et al, (1991, p.14-27, eng) 45-2417
- Activation energy for creep of spray ice. Chandler, N., et al, (1991, p.42-49, eng) 45-2419
- Temperature effect on R-value of foam insulation. Bomberg, M.T., et al, (1991, p.241-267, eng) 45-2582
- Thermal effect of surface water on permafrost in arctic regions. Klimovskii, I.V., et al, (1989, p.66-73, rus) 45-2630
- Measurements of the DC resistivity of annual sea ice. Sackinger, W.M., et al, (1990, p.79-89, eng) 45-2723
- Service temperature of steel in cold climates. Huther, M., et al, (1990, p.229-239, eng) 45-2734
- Study of frost melting on a heat pump heat exchanger. Sugawara, M., et al, (1990, p.570-583, eng) 45-2774
- Promotion of H-bond cage dynamics by alcohol in supercooled water. Bulone, D., et al, (1991, p.6816-6826, eng) 45-2776
- Model of the thermal conductivity of porous water ice at low gas pressures. Steiner, G., et al, (1991, p.507-513, eng) 45-2793
- Modeling solute transport in ground water at or near freezing. Zukowski, M.D., et al, (1991, p.21-25, eng) 45-2795
- Microbial transformation of polychlorinated biphenyls in polar marine regions. Izrael, I.U.A., et al, (1990, p.4-7, eng) 45-3052
- Unsteady free convective flow in an enclosure containing water near its density maximum. Oosthuizen, P.H., et al, (1990, p.83-91, eng) 45-3098
- Graphical method simplifies diesel cloud point determinations. Khan, H.U., et al, (1990, p.98-101, eng) 45-3101
- Growth and survival of seedlings of various *Picea* species under northern climatic conditions. Junttila, O., et al, (1990, p.69-81, eng) 45-3207
- Temperature potential for artificial snow-making. Mainguy, J., (1990, p.22-28, fre) 45-3303
- Oxygen isotope profiles of deposited snow in different environments. Ageta, Y., et al, (1991, p.39-46, jpn) 45-3394
- Results from in situ four point bending tests with Baltic Sea ice. Kujala, P., et al, (1990, p.261-278, eng) 45-3582
- Temperature gradients**
- Theoretical and field study of temperature fields in thawing soils. Bronfenbrener, L.E., et al, (1989, p.33-39, eng) 45-648
- 2-D microscopic simulation of heat and mass transport in dry snow. Christon, M., et al, (1990, p.87-105, eng) 45-2168
- Prediction of wall temperature gradients in concrete storage structures. Joffriet, J.C., et al, (1991, p.12-19, eng) 45-2665
- Transfer of salt in frozen dispersed soils. Ostromov, V.E., (1990, p.45-55, rus) 45-2889
- Vertical fine structure of temperature profile in the subarctic front zone. Navrotskii, V.V., et al, (1991, p.468-474, rus) 45-2935
- Fine thermohaline structure of water near antarctic icebergs. Popov, I.K., et al, (1990, p.87-92, rus) 45-3084
- 3-D transient heat and mass transport in microscopic ice lattices. Christon, M., et al, (1990, p.25-33, eng) 45-3868
- Temperature inversions**
- Characteristics of the low-level temperature inversion along the Alaskan arctic coast. Kahl, J.D., (1990, p.537-548, eng) 45-2177
- Temperature measurement**
- Purity determination of standard analytical reference materials. Black, P.B., et al, (1990, 6p., eng) 45-90
- Arctic region temperature mapping by integration of automated station data. Jacobs, J.D., (1990, p.84-96, eng) 45-362
- Measurement of the thermal regimes in perennial sea ice. Wetlaufer, J.S., et al, (1989, p.1282-1286, eng) 45-445
- Freeze and thaw point of wet clay and its determination. Liu, Z.C., (1990, p.183-189, eng) 45-500
- Theoretical and field study of temperature fields in thawing soils. Bronfenbrener, L.E., et al, (1989, p.33-39, eng) 45-648
- Determination of mean annual temperature of permafrost soil. Khrustalev, L.N., et al, (1989, p.89-93, eng) 45-652
- Use of thermistors for spring road management. Barcomb, J., (1989, p.12-20, eng) 45-659
- International Ice Patrol's air-deployed bathythermograph system. Alfultia, M.A., (1989, p.1652-1657, eng) 45-723
- Phase transitions of water in brick during cooling. Nakamura, M., et al, (1985, p.1567-1570, eng) 45-777
- Numerical experiments on the reconstruction of the paleoclimate. Barkov, N.I., et al, (1989, p.116-121, rus) 45-1045
- Identification of geothermal anomalies by snow-cover temperature survey. Lialin, G.N., (1989, p.53-66, eng) 45-1077
- Soil and rock temperatures in discontinuous permafrost. King, L., (1990, p.177-188, eng) 45-1297
- Heat flux and temperature measurement in building systems. Flanders, S.N., (1986, p.101-120, eng) 45-2098
- Automated snow depth and snowpack temperature measurements. Tanner, B.D., et al, (1990, p.73-78, eng) 45-2123
- In-situ heat flux measurements in buildings. Flanders, S.N., et al, (1991, 260p., eng) 45-2648
- Heat flux transducers to study building insulations. Perrine, E.L., (1991, p.3-12, eng) 45-2649
- Systematic errors with surface mounted heat flux transducers. Trethowen, H.A., (1991, p.15-27, eng) 45-2650
- HFT guard plate for exterior envelope surface measurements. Christian, J.E., (1991, p.29-51, eng) 45-2651
- Development of a method to assess HFT shunting error. Mack, R.T., et al, (1991, p.53-79, eng) 45-2652
- Verification of a thin-heat device as a secondary HFT calibration source. Beardon, T.W., et al, (1991, p.81-94, eng) 45-2653
- Heat flux transducers to determine heat transfer coefficients. Emery, A.F., et al, (1991, p.97-110, eng) 45-2654
- Heat flux transducer measurement of thermal performance of walls. Burch, D.M., et al, (1991, p.111-122, eng) 45-2655
- Thermal admittance of a wall measured by heat flux. Bellattar, S., et al, (1991, p.123-142, eng) 45-2656
- Heat flux transducers to measure energy conservation in houses. Kippenhan, C.J., et al, (1991, p.143-158, eng) 45-2657
- Using parameter estimation to analyze building envelope thermal performance. Beck, J.V., et al, (1991, p.161-191, eng) 45-2658
- Prediction of errors for in-situ measurement of thermal resistance. Flanders, S.N., et al, (1991, p.193-219, eng) 45-2659
- Thermistor-based system for thermal conductivity measurement. Atkins, R.T., et al, (1991, p.223-236, eng) 45-2660
- In-situ method for thermal conductivity and diffusivity measurements. Morabito, P., (1991, p.237-249, eng) 45-2661
- Calibration transfer standards for fenestration systems. Goss, W.P., et al, (1991, p.251-260, eng) 45-2662
- Studies on, and underneath, the ice shelf Fimbulisen. Orheim, O., et al, (1990, p.59-73, eng) 45-2832
- Further inquiry into the cryobehavior of aqueous solutions of glycerol. Chang, Z.H., et al, (1991, p.268-278, eng) 45-3100
- Numerical study of the right angled thermosyphon. Lock, G.S.H., et al, (1991, p.113-117, eng) 45-3157
- Heat transfer in a right-angled thermosyphon. Lock, G.S.H., et al, (1991, p.261-265, eng) 45-3178
- Overwinter soil temperature patterns under six tillage-residue combinations. Benoit, G.R., et al, (1991, p.86-90, eng) 45-3306
- Measuring the heat of sublimation of dry ice with a polystyrene foam cup calorimeter. Burgstahler, A.W., et al, (1991, p.332-333, eng) 45-3362
- Freezing point depressions of dilute potassium chloride solutions. Partanen, J.I., (1990, p.317-320, eng) 45-3374
- Freezing point depression of dilute aqueous sodium chloride solutions. Partanen, J.I., et al, (1991, p.172-176, eng) 45-3403
- Natural convection in the subarctic snow cover. Sturm, M., et al, (1991, p.11,657-11,671, eng) 45-3463
- Measurement of river water temperature with better repeatability than 1 mK. Hari, J., (1990, p.339-340, eng) 45-3687
- Maximum variation of air/snow interface temperature. Bates, R.E., et al, (1990, p.411-422, eng) 45-3768
- Portable thermal reference for winter field studies. Lacombe, J., (1990, p.48-54, eng) 45-3769
- See also: Geothermometry
- Temperature regime**
- See also: Thermal regime
- Temperature variations**
- Thermal conductivity and diffusivity of soil. Sorour, M.M., et al, (1990, p.189-199, eng) 45-591
- Endogenic model of permanent variations in the climate of the Earth. Kovalenko, V.D., et al, (1990, p.111-124, rus) 45-996
- Permafrost response to surface temperature change. Harrison, W.D., (1991, p.683-695, eng) 45-1527
- Model studies of the "atmosphere-snow-sea ice" system in an annual cycle. Oreshko, A.P., et al, (1990, p.51-57, rus) 45-1736
- Methods of studying the thermal regime of soils in the cryolithozone. Pavlov, A.V., ed, (1989, 128p., rus) 45-2003
- Observing rock temperatures while surveying cryogenic-hydrogeological operations. Petrova, R.G., et al, (1989, p.47-57, rus) 45-2008
- Modelling the thermal regime of ground in non-disturbed and disturbed complexes. Stashenko, A.I., (1989, p.79-88, rus) 45-2012
- Temperature evolution of floodplain geosystems in northern Yakutia. Zaikanov, V.G., (1989, p.95-102, rus) 45-2014
- Temperature of water masses and the surface of bottom sediments of Lake Krugloye. Kotlov, S.B., et al, (1989, p.102-110, rus) 45-2015
- Air temperature variation over snow-covered terrain. Hogan, A., et al, (1990, p.1-12, eng) 45-2182
- Variability of the climate system and detection of the greenhouse effect. Wigley, T.M.L., et al, (1990, p.324-327, eng) 45-2239
- Relationship of ice cover growth on the Kuybyshev and Gor'kiy reservoirs to temperature anomalies of Atlantic waters. Podsechina, T.V., (1989, p.87-93, rus) 45-2277
- Temperature anomalies and atmospheric ice in the Ural caves. Ryzhkov, A.F., et al, (1990, p.25-28, rus) 45-2699



- Temperature anomalies in Razvaika Mountain near Zheleznovodsk. Lukin, V.S., (1990, p.50-53, rus) 45-2705
- Increased ocean heat transports and warmer climate. Rind, D., et al, (1991, p.7437-7461, eng) 45-2799
- Final warming of the stratosphere. Mechoso, C.R., (1989, p.55-69, eng) 45-2975
- Comparison of the Southern Hemisphere springs of 1988 and 1987. Newman, P.A., et al, (1989, p.71-89, eng) 45-2976
- Surface air temperature secular trends in northern high latitudes. Tsuchiya, I., (1991, p.43-51, eng) 45-3063
- Tensile properties**
- Effect of grain size on the tensile strength of ice at two strain-rates. Lee, R.W., (1985, 114p., eng) 45-492
- Asphalt performance at low temperatures. Biczysko, S.J., (1990, p.20-25, eng) 45-853
- Performance of thermoplastic elastomers (TPEs) at subzero temperatures. Brugada, R., (1989, p.67-73, eng) 45-1216
- Tensile properties of impact ice. Chu, M.L., et al, (1988, p.254-258, eng) 45-1349
- Strength of cryogenic engineering alloys under electromagnetic loads. Strizhalo, V.A., et al, (1990, 154p., rus) 45-1856
- CRREL research on materials in cold environments. Dutta, P.K., (1990, 20p., eng) 45-2002
- Ductile-brittle transition in ice & size effect. Schulson, E.M., et al, (1991, p.554-568, eng) 45-2366
- Preliminary results of direct tension tests on first-year sea ice samples. Richter-Menge, J.A., et al, (1991, p.569-578, eng) 45-2367
- Allowing for mechanical strength of ice deposits during calculation of overhead line wires. Krymskii, M.M., (1989, p.29-39, eng) 45-2558
- Tensile strength of cracked ice by E.M. Schulson, S.G. Hoxie, W.A. Nixon. Parsons, B.L., (1991, p.221-222, eng) 45-3428
- Tension**
- See *also*: Interfacial tension
- Terminology**
- Russian-English arctic environment glossary. (1991, 154p., eng) 45-3085
- Terraces**
- Natural conditions in the formation of anthropogenic cryopegs. Yakutsk. Anisimova, N.P., et al, (1987, p.55-65, rus) 45-575
- Origin and development of some lakes in the Anadyr Plain. Liubomirov, A.S., (1987, p.89-99, rus) 45-578
- Valley and terrace formation during fluvial morphogenesis. Eberkhardt, G.I.A., (1990, p.102-107, rus) 45-676
- Melioration of terraced slopes in the Altay Mountains. Chaiko, A.V., et al, (1990, p.75-81, rus) 45-2820
- Problems in Pleistocene paleogeography of the Great Kurile ridge. Bulgakov, R.F., (1990, p.31-40, rus) 45-3435
- Development of river valleys in Pleistocene glaciation regions (Kolyma). Rudnev, A.V., (1989, p.127-137, rus) 45-3838
- Terrain identification**
- Geomorphic patterns produced by the last Canadian ice sheet. Clark, C.D., et al, (1989, p.97-100, eng) 45-230
- Terrain, snow distribution and vegetation patterns. Evans, B.M., et al, (1989, p.270-278, eng) 45-1981
- Dark-floor craters on Ganymede. Schenk, P.M., et al, (1991, p.318-346, eng) 45-2940
- Scene identification and its effect on cloud radiative forcing in the Arctic. Li, Z.Q., et al, (1991, p.9175-9188, eng) 45-3469
- See *also*: Geobotanical interpretation
- Test chambers**
- Arctic environmental facilities: test capabilities. (1990, 17p., eng) 45-823
- Engine testing at low temperatures. Nylund, N.O., (1989, p.85-92, eng) 45-1219
- See *also*: Cloud chambers; Cold chambers; Wind tunnels
- Test equipment**
- Engine testing at low temperatures. Nylund, N.O., (1989, p.85-92, eng) 45-1219
- Reversed direct-stress testing of ice: equipment and example results. Cole, D.M., et al, (1990, p.295-302, eng) 45-1619
- Catalog of smoke/obscurant characterization instruments. O'Brien, H.W., ed, (1984, 184p., eng) 45-3476
- Ice cover strength decay using borehole indenter. Sinha, N.K., (1990, p.735-744, eng) 45-3624
- Tests**
- Purity determination of standard analytical reference materials. Black, P.B., et al, (1990, 6p., eng) 45-90
- Fence characterization for intrusion detection systems. Walsh, M.R., et al, (1990, 23p., eng) 45-98
- Testing of the M138 auxiliary mine dispenser (FLIPPER). O'Bryon, M.K., (1990, 32p. + appends., eng) 45-551
- Testing the propulsive performance of models of ice navigating ships. Tsot, L.G., et al, (1989, p.14-19, rus) 45-1138
- Ice tests on an "Enthusiast" class harbor tug. Glebko, I.U.V., et al, (1989, p.26-28, rus) 45-1139
- Effect of testing methods on the measured strength properties of saline frozen soils. Grishin, P.A., (1990, p.99-103, rus) 45-2896
- Determining long-term equivalent cohesion of frozen soils. Vorob'evskii, B.E., (1990, p.121-123, rus) 45-2900
- Physical modelling of icebreaking ships in fine-grain model ice. Enkvist, E., (1990, p.15-42, eng) 45-3563
- See *also*: Bearing tests; Cold weather tests; Environmental tests; Freeze thaw tests; Hardness tests; High pressure tests; Impact tests; Low temperature tests; Mechanical tests; Penetration tests; Pile load tests; Plasticity tests; Soil tests; Strain tests; Ultrasonic tests
- Textures**
- See *also*: Cryogenic textures; Soil texture
- Thaw consolidation**
- Physical and thermal properties of Norman Wells-Zama Pipeline core specimens. Patterson, D.E., et al, (1988, 59p. + appends., eng) 45-387
- Cost-effectiveness of geotextiles; review of performance in Alaskan roads. Reckard, M., (1991, 50p., eng) 45-2000
- Thaw depth**
- Surface energy balance and surface temperature in cold regions. Lunardini, V.J., et al, (1990, p.101-110, eng) 45-124
- Methods of calculating moisture migration in seasonal freezing and thawing of soils. Ianitskii, P.A., (1989, p.36-44, eng) 45-651
- Soil freezing and thawing in the middle taiga of the European USSR. Deriugin, A.A., (1989, p.81-88, eng) 45-859
- Ground temperature regimes and periglacial processes in the Sör Rondane Mountains. Matsuoka, N., et al, (1990, p.55-66, eng) 45-1529
- Frost depth and load restrictions on roads during spring thaw. Madden, D.A., et al, (1990, 33p., eng) 45-1670
- Freeze thaw tests of asphalt concrete pavements. Janoo, V.C., et al, (1990, 56p., eng) 45-1699
- Evaluating bearing ground stability of gas fields in the cryolithozone. Ivlev, A.I.U., (1989, p.66-73, rus) 45-2010
- Modelling the thermal regime of ground in non-disturbed and disturbed complexes. Stashenko, A.I., (1989, p.79-88, rus) 45-2012
- Temperature and moisture content of soils in Western Yamal. Sautkin, E.V., et al, (1989, p.111-119, rus) 45-2016
- Computer predictions of thaw beneath gravel embankments on warm permafrost. Bigl, S.R., et al, (1991, p.191-199, eng) 45-2333
- Forecasting midyear temperatures of coarsely dispersed soils. Stepanova, I.V., et al, (1990, p.112-115, rus) 45-3042
- Predicting pavement thaw weakening with a deflectometer. Janoo, V.C., et al, (1990, p.31-40, eng) 45-3689
- Loading type effect on pavement deflection. Wiman, L.G., et al, (1990, p.829-839, eng) 45-3693
- See *also*: Active layer
- Thaw layer**
- See *also*: Active layer
- Thaw weakening**
- Use of thermistors for spring road management. Barcomb, J., (1989, p.12-20, eng) 45-659
- Pavement response and load restrictions on spring thaw-weakened flexible pavements. Rutherford, M.S., (1989, p.1-12, eng) 45-806
- Freeze thaw tests of asphalt concrete pavements. Janoo, V.C., et al, (1990, 56p., eng) 45-1699
- Effect of permafrost conditions and type of foundations on deformation of building in Vorkuta. Belotserkovskaja, G.V., (1991, p.161-163, eng) 45-2399
- Asphalt concrete airport pavements during thaw weakening. Janoo, V.C., et al, (1991, 68p., eng) 45-2956
- Predicting pavement thaw weakening with a deflectometer. Janoo, V.C., et al, (1990, p.31-40, eng) 45-3689
- Threshold pavement thickness to survive spring thaw. White, T.D., et al, (1990, p.41-51, eng) 45-3690
- Guidelines on application of seasonal load restrictions. Mahoney, J.P., et al, (1990, p.75-84, eng) 45-3692
- Thaw weakening of pavement structures in seasonal frost areas. Janoo, V.C., et al, (1990, p.217-233, eng) 45-3747
- Flexible pavement thawing and timing of spring load restrictions. Rutherford, M.S., (1990, p.248-258, eng) 45-3749
- Thawing**
- Frozen and alive. Storey, K.B., et al, (1990, p.92-97, eng) 45-1017
- Variations in permafrost thickness in response to changes in paleoclimate. Osterkamp, T.E., et al, (1991, p.4423-4434, eng) 45-2228
- Heat transfer with freezing and thawing. Lunardini, V.J., (1991, 437p., eng) 45-2390
- See *also*: Artificial thawing; Defrosting; Geothermal thawing; Ground thawing; Melting
- Thawing rate**
- Soil freezing and thawing in the middle taiga of the European USSR. Deriugin, A.A., (1989, p.81-88, eng) 45-859
- Prediction of freezing times of two-dimensional objects. Hossain, M.M., et al, (1989, p.651-657, eng) 45-3107
- Theories**
- Melting, freezing and other peculiarities in small systems. Berry, R.S., (1990, p.259-270, eng) 45-401
- Theory of charge-transfer spectra in frozen media. Marcus, R.A., (1990, p.4963-4966, eng) 45-433
- Koyaanimuuyaw: the hypothesis of a perennially dichotomous Triton. Moore, J.M., et al, (1990, p.1757-1760, eng) 45-2045
- Production of Antarctic Bottom Water in the Weddell and Ross Seas. St. Pierre, D.B., (1989, 124p., eng) 45-2071
- Neptune's Triton: a moon rich in dry ice and carbon. Prentice, A.J.R., (1990, p.364-367, eng) 45-2083
- Theory of ice crystal nucleation on substrates. Gorbunov, B.Z., (1991, p.564-570, eng) 45-2564
- Probability of heterogeneous nucleation on substrates. Gorbunov, B.Z., et al, (1991, p.570-574, eng) 45-2565
- See *also*: Analysis (mathematics); Ice age theory
- Theory**
- Diffraction of VLF radio waves by polar ice caps. Wait, J.R., (1991, p.1030-1032, eng) 45-3700
- Thermal analysis**
- Thermal analysis of engine inlet anti-icing systems. Al-Khalil, K.M., et al, (1990, p.628-634, eng) 45-1015
- Thermal expansion coefficients for sea ice. Johnson, J.B., et al, (1990, p.343-349, eng) 45-1545
- Thermal history models for KOSI sublimation experiments. Spohn, T., et al, (1990, p.358-371, eng) 45-1724
- Thermal energy storage with encapsulated ice. Laybourn, D.R., (1988, p.1971-1988, eng) 45-2563
- Heat transfer under frosting conditions to plain and thick-finned tubes. Al-Sahaf, J., et al, (1991, p.1-17, eng) 45-2566
- Thermal balance**
- See *also*: Glacier heat balance; Heat balance
- Thermal conductivity**
- Temperature regime and thermal property of Law Dome active layer. Qin, D., et al, (1988, p.84-92, chj) 45-39
- Thermistor-based thermal conductivity measurement system. Atkins, R.T., et al, (1990, 11p., eng) 45-190
- Analysis of Norman Wells core samples. Final report. Patterson, D.E., et al, (1987, 60p. + appends., eng) 45-384
- Physical and thermal properties of Norman Wells-Zama Pipeline core specimens. Patterson, D.E., et al, (1988, 59p. + appends., eng) 45-387
- Thermal conductivity and diffusivity of soil. Sorour, M.M., et al, (1990, p.189-199, eng) 45-591
- Temperature distribution of Chongce Ice Cap, west Kunlun Mts. Zhou, T., et al, (1990, p.1024-1028, eng) 45-592
- Deicing of solids using radiant heating. Song, B., et al, (1990, p.311-317, eng) 45-667
- Phase changes in water with coiled copper wires. Hirasawa, Y., et al, (1989, p.161-166, jpn) 45-699
- Clay mortar and cement reinforcement rings for gas wells in permafrost. Gavril'ev, R.I., et al, (1990, p.72-76, rus) 45-1202
- Quasi-steady problems in freezing soils: II. Experiment on the steady growth of an ice layer. Takeda, K., et al, (1990, p.225-247, eng) 45-1616
- Problems of ice and snow deterioration. Epifanov, V.P., (1990, p.9-12, rus) 45-1729
- Effect of sunlight penetration on the thermal regime of icy regoliths. Fanale, F.P., et al, (1990, p.193-204, eng) 45-1906
- Description of freezing front progression in a slab. Guiffant, G., et al, (1991, p.11-17, eng) 45-1907
- Characteristics of restoring the temperature field disturbed by drilling. Berkovchenko, S.A., (1989, p.43-47, rus) 45-2007
- Conservative algorithm for multidimensional conduction phase change. Comini, G., et al, (1990, p.697-709, eng) 45-2175
- Rock characteristics under very low temperatures. Aoki, K., et al, (1990, p.319-325, eng) 45-2295
- Temperature effect on R-value of foam insulation. Bomberg, M.T., et al, (1991, p.241-267, eng) 45-2582
- In-situ heat flux measurements in buildings. Flanders, S.N., ed, (1991, 260p., eng) 45-2648
- Prediction of errors for in-situ measurement of thermal resistance. Flanders, S.N., et al, (1991, p.193-219, eng) 45-2659
- Thermistor-based system for thermal conductivity measurement. Atkins, R.T., et al, (1991, p.223-236, eng) 45-2660
- In-situ method for thermal conductivity and diffusivity measurements. Morabito, P., (1991, p.237-249, eng) 45-2661
- Rocks—accumulators of cold. Kostarev, V.P., et al, (1990, p.11-15, rus) 45-2696
- Model of the thermal conductivity of porous water ice at low gas pressures. Steiner, G., et al, (1991, p.507-513, eng) 45-2793
- Ice sublimation below artificial crusts: results from comet simulation experiments. Kömle, N.I., et al, (1991, p.515-524, eng) 45-2794
- Frost growth parameters in a forced air stream. Ostin, R., et al, (1991, p.1009-1017, eng) 45-3022

- Thermal conductivity (cont.)**
- Laboratory tests with a hybrid thermosyphon. Haynes, F.D., et al., 1991, p.93-99, eng 45-3154
- Numerical study of the right angled thermosyphon. Lock, G.S.H., et al., 1991, p.113-117, eng 45-3157
- Heat transfer in a right-angled thermosyphon. Lock, G.S.H., et al., 1991, p.261-265, eng 45-3178
- Thermal regime of reservoirs in tundra zone. Razgovorova, E.L., et al., 1990, p.396-404, eng 45-3593
- Calibration of Nordic equipment for measurement of thermal conductivity. Svenningsen, N., 1988, 10p., nor 45-3855
- 3-D transient heat and mass transport in microscopic ice lattices. Christon, M., et al., 1990, p.25-33, eng 45-3868
- Thermal diffusion**
- Temperature regime and thermal property of Law Dome active layer. Qin, D., et al., 1988, p.84-92, chi 45-39
- Thermal conductivity and diffusivity of soil. Sorour, M.M., et al., 1990, p.189-199, eng 45-591
- Thermodiffusion flow of thin intervening layers of unfrozen water in bundles of quartz fibers. Brovka, G.P., et al., 1990, p.294-297, eng 45-1271
- Enthalpy formulation for phase change problems. Lee, S.L., et al., 1991, p.1491-1502, eng 45-3023
- Thermal drills**
- Electrochaude thermal drill for glaciers. Rado, C., et al., 1987, p.236-238, eng 45-19
- Soviet experience of deep drilling in Antarctica. Kudriashov, B.B., 1989, p.113-122, eng 45-338
- Thermal drilling in a permafrost zone. Musienko, V.A., et al., 1989, p.24-29, rus 45-708
- Borehole drilling for sewage disposal at Asuka Station. Ishizawa, K., et al., 1990, p.145-155, jpn 45-980
- Ice core drilling. 1989, 205p., eng 45-1446
- Thermal ice core drill 4000. Augustin, L., et al., 1989, p.59-65, eng 45-1457
- Ice core drilling on Adélie Coast. Donnou, D., et al., 1989, p.66-69, eng 45-1458
- Telemetering and remote control circuits for a 4000 m thermal drill. Marec, G., et al., 1989, p.72-85, eng 45-1460
- Ice core drilling at Law Dome in 1987. Etheridge, D.M., et al., 1989, p.86-96, eng 45-1461
- Antifreeze-thermodrilling of cores in arctic sheet glaciers. Zagorodnov, V.S., 1989, p.97-109, eng 45-1462
- Drilling with ethanol-based antifreeze in Antarctica. Morev, V.A., et al., 1989, p.110-113, eng 45-1463
- Evaluation of hot water drills. Bässler, K.H., et al., 1989, p.116-122, eng 45-1464
- Hot water drill for glacier in Greenland. Iken, A., et al., 1989, p.123-136, eng 45-1465
- Deep hot water drill system with potential for bottom sampling. Koci, B.R., 1989, p.137-139, eng 45-1466
- Danish contribution to the family of hot-water glacier drills. Olesen, O.B., 1989, p.140-148, eng 45-1467
- Investigation of ice and rock drilling by melting. Litvinenko, V.S., 1989, p.160-163, eng 45-1469
- Electrochaude: recent development in borehole drilling. Rado, C., et al., 1989, p.164-168, eng 45-1470
- Hot-water drilling and bore-hole closure in cold ice. Humphrey, N., et al., 1990, p.287-298, eng 45-1539
- Drilling in the permafrost. Kudriashov, B.B., et al., 1990, 318p., eng 45-1854
- High-temperature penetrometer for boring ice and rocks by melting. Kudriashov, B.B., et al., 1990, p.66-73, rus 45-2488
- Thermal effects**
- See *also*: Temperature effects
- Thermal expansion**
- Thermal expansion coefficients for sea ice. Johnson, J.B., et al., 1990, p.343-349, eng 45-1545
- Ice power. Scott, D., 1989, p.154, eng 45-1554
- Measurement of P-T coexistence curve for ice-water mixture. Nordell, B., 1990, p.83-88, eng 45-1769
- Mechanism of expansion of concrete aggregate due to frost action. Rusin, Z., 1991, p.614-624, eng 45-3399
- Role of thermal expansion of ice in forming lake shoreline profiles. Tesaker, E., 1990, p.464-473, eng 45-3599
- Thermal imagery**
- See *also*: Infrared photography
- Thermal insulation**
- Improving thermal insulation of external wall panel joints. Zheleznyi, V.I., 1985, p.27-38, rus 45-633
- Thermodynamic processes management in a mining operations area. El'chaninov, E.A., 1989, 236p., rus 45-1668
- In-situ measurement of window performance. Carpenter, S., 1991, p.14-18, eng 45-2142
- Numerical analysis of frost shields. Coutermarsh, B.A., et al., 1991, p.178-190, eng 45-2332
- Use of rigid insulation below grade for roadways and parking areas. Larsen, L.A., et al., 1991, p.428-437, eng 45-2354
- Building a worldwide roofing community. 1991, 536p., eng 45-2452
- Single-ply roof membranes under cold temperatures. Turenne, R.G., et al., 1991, p.7-14, eng 45-2453
- Durability assessment of roofing membranes. Beech, J.C., 1991, p.227-233, eng 45-2456
- Aging of chlorosulfopolyethylene roofing. Shul'zhenko, I.U.P., et al., 1991, p.327-334, eng 45-2458
- Field experiences versus standards and designs. Booth, R.J., et al., 1991, p.351-355, eng 45-2459
- Outdoor construction test facility, Saskatoon, Canada. Hedlin, C.P., 1991, p.377-381, eng 45-2460
- New wetting curves for common roof insulations. Tobiasson, W., et al., 1991, p.383-390, eng 45-2461
- Attic testing at the Roof Research Center—initial results. Wilkes, K.E., et al., 1991, p.391-400, eng 45-2462
- Glass transition temperatures of polymeric roofing membranes. Dutt, O., et al., 1991, p.495-501, eng 45-2465
- Thermal analysis of polymer roofing membranes. Gaddy, G.D., et al., 1991, p.502-507, eng 45-2466
- Use of insulation for frost prevention: Jackman Airport, Maine, 1986-1987 winter. Kestler, M.A., et al., 1991, 45p., eng 45-2643
- In-situ heat flux measurements in buildings. Flanders, S.N., ed., 1991, 260p., eng 45-2648
- Heat flux transducers to study building insulations. Perrine, E.L., 1991, p.3-12, eng 45-2649
- HFT guard plate for exterior envelope surface measurements. Christian, J.E., 1991, p.29-51, eng 45-2651
- Heat flux transducer measurement of thermal performance of walls. Burch, D.M., et al., 1991, p.111-122, eng 45-2655
- Phase-change numerical heat transfer analysis with applications to frost shielding. Farag, I.H., et al., 1991, p.29-36, eng 45-2915
- Applications and development of IR techniques for building research in Finland. Kaasinen, H., et al., 1991, p.90-98, eng 45-2924
- Effect of spatial variability in insulation moisture content profiles. Ayoñade, O.A., et al., 1991, p.101-105, eng 45-3155
- Geotextiles as capillary barriers. Henry, K.S., 1990, p.30-36, eng 45-3736
- Effect of geotextiles on water migration in freezing soils. Henry, K.S., 1991, p.469-483, eng 45-3737
- Phase change heat transfer analysis with applications to frost shielding. Farag, I.H., et al., 1990, p.9-13, eng 45-3739
- Calibration of Nordic equipment for measurement of thermal conductivity. Svenningsen, N., 1988, 10p., nor 45-3855
- Finnish cold climate construction technology, part 2. 1990, 112p. + appends., fin 45-3874
- See *also*: Cellular plastics; Pipeline insulation
- Thermal measurements**
- See *also*: Temperature measurement
- Thermal processes**
- See *also*: Hydrothermal processes
- Thermal properties**
- Physical and thermal properties of core specimens, Norman Wells Pipeline. Patterson, D.E., et al., 1989, 23p. + appends., eng 45-3885
- Physical and thermal properties of Norman Wells-Zama Pipeline core specimens. Patterson, D.E., et al., 1988, 59p. + appends., eng 45-387
- Algorithm for a periodically stabilized regime in the solution of a Stefan problem. Shender, N.I., et al., 1990, p.105-110, rus 45-1206
- Rocks—accumulators of cold. Kostarev, V.P., et al., 1990, p.11-15, rus 45-2696
- Effect of salinity on hydro- and thermophysical properties of soils. Loseva, S.G., et al., 1990, p.24-33, rus 45-2886
- See *also*: Ice thermal properties; Permafrost thermal properties; Snow thermal properties; Specific heat
- Thermal radiation**
- Thermal radiation of ice cover on fresh-water bodies. Bordonskii, G.S., 1990, 100p., rus 45-635
- Beryllium oxide: a frost-preventing insulator. Ribbing, C.G., 1990, p.882-884, eng 45-899
- Spectral albedo and emissivity of CO<sub>2</sub> in Martian polar caps: model results. Warren, S.G., et al., 1990, p.14,717-14,741, eng 45-1842
- Thermal regime**
- Thermal regime of an arctic valley glacier. Blatter, H., 1987, p.200-211, eng 45-16
- Frozen ground effects on infiltration and runoff. Kane, D.L., et al., 1990, p.259-300, eng 45-410
- Measurement of the thermal regimes in perennal sea ice. Wettlaufer, J.S., et al., 1989, p.1282-1286, eng 45-445
- Calculating formula of time-dependent temperature regime of frozen soil. Wang, J.F., 1990, p.128-133, eng 45-485
- Drilling exploratory wells with pneumatic drills. Kudriashov, B.B., et al., 1990, 263p., rus 45-634
- Thermal regime of hydraulic-fill structures during winter operation. Panteleev, V.G., et al., 1990, p.36-40, eng 45-669
- Coupled one-dimensional sea ice-ocean model applied to a semi-enclosed basin. Omstedt, A., 1990, p.568-582, eng 45-1175
- Controlling the frozen regime of bearing ground of structures over mines. Gur'ianov, I.E., 1990, p.77-92, rus 45-1203
- Modified differential method in solving the Stefan problem. Tetel'baum, A.S., 1990, p.111-118, rus 45-1207
- Temperature regime of oil and gas pipelines laid jointly in frozen ground. Danielian, I.U.S., et al., 1988, p.91-96, eng 45-1426
- Permafrost response to surface temperature change. Harrison, W.D., 1991, p.683-695, eng 45-1527
- Radiative thermophysics of snow and ice. Krass, M.S., et al., 1990, 260p., rus 45-1532
- Heat transfer when drilling in permafrost. Sedov, V.T., 1990, 126p., rus 45-1533
- Frozen ground areas formed in earth dams and their surroundings. Belan, V.I., 1990, p.74-79, rus 45-1588
- Mass balance and thermal regime of a crater glacier at Ushkovskii Volcano. Murav'ev, I.A.D., et al., 1990, p.411-424, eng 45-1705
- Problem of the thermal physics of snow-firm sequences. Bozhinskii, A.N., et al., 1990, p.35-39, rus 45-1733
- Ice and thermal conditions of small flatland reservoirs. Emel'ianov, I.U.N., et al., 1990, p.101-104, rus 45-1744
- Hydrothermal regime of the ice-divide area of Austfonna, Nordaustlandet. Zagorodnov, V.S., et al., 1990, p.133-141, rus 45-1752
- Methods of studying the thermal regime of soils in the cryolithozone. Pavlov, A.V., ed., 1989, 128p., rus 45-2003
- Studying the thermal regime of natural complexes of tundra zones. Pavlov, A.V., et al., 1989, p.6-20, rus 45-2004
- Characteristics of restoring the temperature field disturbed by drilling. Berkovchenko, S.A., 1989, p.43-47, rus 45-2007
- Evaluating bearing ground stability of gas fields in the cryolithozone. Ivlev, A.I.U., 1989, p.66-73, rus 45-2010
- Modelling the thermal regime of ground in non-disturbed and disturbed complexes. Stashenko, A.I., 1989, p.79-88, rus 45-2012
- Changes in the thermal regime of frost mounds in the northern taiga. Goriainov, P.A., 1989, p.88-95, rus 45-2013
- Investigations of ground thermal regime in cryolithozone regions. Belikhova, M.G., 1989, p.120-122, rus 45-2017
- Frozen type filled ash dump. Kuznetsov, G.I., et al., 1990, p.77-83, rus 45-2248
- Climate, hydrology and vegetation patterns, Hot Weather Creek, Arctic Canada. Edlund, S.A., et al., 1990, p.273-286, eng 45-2527
- Fluctuating movement of the permafrost boundary. Mel'nikov, P.I., et al., 1989, p.50-52, eng 45-2597
- Problems in geometeorology and the accumulation of winter cold. Koval'chuk, A.I., ed., 1990, 119p., rus 45-2695
- Thermal regime of karst caves and tunnels in the Central Volga region. Stankevich, E.F., et al., 1990, p.38-41, rus 45-2702
- Thermal regime and cryogenic structure of coarse clastic deposits. Gorbunov, A.P., et al., 1990, p.54-58, rus 45-2706
- Thermal regime of caves in glaciers in northern Kirgizia. Mikhail'ev, V.N., 1990, p.68-71, rus 45-2710
- Thermal regime of clayey soils at the Kungur weather station. Lukin, A.V., 1990, p.95-97, rus 45-2714
- Temperature regime of structures with permafrost bases. Gokhman, M.R., et al., 1991, p.189-194, eng 45-2996
- Mathematical model of ice cover edge dynamics of power plant tail race. Belopetskiĭ, V.M., et al., 1990, p.78-82, eng 45-3268
- Surface energy budget of boreal forest soil temperature. Bonan, G.B., 1991, p.767-781, eng 45-3293
- Hydrologic and thermal properties of the active layer in the Alaskan Arctic. Hinzman, L.D., et al., 1991, p.95-110, eng 45-3417
- Thermal response of the active layer to climatic warming in a permafrost environment. Kane, D.L., et al., 1991, p.111-122, eng 45-3418
- CLASS—a Canadian land surface scheme for GCMS. 1. Soil model. Verseghy, D.L., 1991, p.111-133, eng 45-3548
- Ice thermal processes in the mouth areas of the Siberian rivers. Ivanov, V.V., et al., 1990, p.219-230, eng 45-3578
- Thermal regime of reservoirs in tundra zone. Razgovorova, E.L., et al., 1990, p.396-404, eng 45-3593
- Winter channel formation in sluiced disposal areas. Panteleev, V.G., et al., 1990, p.709-718, eng 45-3621
- Mathematical model for ice processes in river networks. Shen, H.T., et al., 1990, p.726-734, eng 45-3623
- Thermal regimes of waters in cold regions. Ono, N., 1990, p.49-58, eng 45-3665
- Temperature regime of road pavements in Czechoslovakia. Poliček, I., et al., 1990, p.53-63, eng 45-3691

**Thermal stresses**

Thermal stresses induced by water solidification in a cylindrical tube. Lin, S., et al. (1990, p.1079-1082, eng) 45-1390  
 Cost-effectiveness of geotextiles; review of performance in Alaskan roads. Reckard, M., (1991, 50p., eng) 45-2000  
 Frost resistance of elastomers. Bukhina, M.F., et al. (1989, 176p., rus) 45-2204  
 Prediction of wall temperature gradients in concrete storage structures. Jofriet, J.C., et al. (1991, p.12-19, eng) 45-2665  
 Surface cracking in asphalt layers. Kunst, P.A.J.C., et al. (1990, 199p., eng) 45-3108  
 Acoustical radiation from thermally stressed sea ice. Xie, Y., et al. (1991, p.2215-2231, eng) 45-3380  
 Thermal stresses development in pavements during wintertime. Laforte, M.A., (1990, p.149-179, eng) 45-3496  
 Test methods to characterize low temperature cracking. Janoo, V.C., et al. (1990, p.257-287, eng) 45-3500  
 Investigation of stress of ice cover under changes of temperature. Ivchenko, A.B., (1990, p.149-157, eng) 45-3673

**Thermistors**

Thermistor-based thermal conductivity measurement system. Atkins, R.T., et al. (1990, 11p., eng) 45-190  
 Use of thermistors for spring road management. Barcomb, J., (1989, p.12-20, eng) 45-659  
 Thermistor-based system for thermal conductivity measurement. Atkins, R.T., et al. (1991, p.223-236, eng) 45-2660

**Thermocouples**

Experimental study of formation and melting of ice about horizontal tubes. Torikoshi, K., et al. (1990, p.57-63, eng) 45-1165  
 Investigation of a novel aid for cold starting of diesels. Zheng, J., et al. (1989, p.321-331, eng) 45-1244  
 Automated snow depth and snowpack temperature measurements. Tanner, B.D., et al. (1990, p.73-78, eng) 45-2123

**Thermodynamic properties**

Modelling sea ice thermodynamics and dynamics in climate studies. Hibler, W.D., III, (1988, p.509-563, eng) 45-1646  
 Thermodynamic properties of ice, water, and a mixture of the two at high pressures. Nagornov, O.V., et al. (1990, p.378-385, eng) 45-3254  
 See *also*: Frozen ground thermodynamics

**Thermodynamics**

Role of irreversible thermodynamics and rheology in the regulation-flow phenomenon. Wood, J.A., (1990, p.133-145, eng) 45-496  
 Reaction of sea ice to aerosol pollution of the atmosphere. Savchenko, V.G., et al. (1989, p.85-90, eng) 45-878  
 Quasistationary dimensionless model of arctic ice. Ivanov, B.V., et al. (1990, p.18-31, rus) 45-1633  
 Space-time variations in characteristics of ice cover. Makshas, A.P., et al. (1990, p.71-80, rus) 45-1638  
 Thermodynamic processes management in a mining operations area. El'chaninov, E.A., (1989, 236p., rus) 45-1668

Dynamics of ice conditions in the coastal zone of Antarctica. Korotkov, A.I., et al. (1990, p.126-133, rus) 45-1751

Thermodynamics of ice creep. Ivanov, A.I., (1990, p.165-169, rus) 45-1756

Volume and entropy changes of water in electrolyte solutions below 0 deg C. Leyendekkers, J.V., (1990, p.2231-2236, eng) 45-2260

Estimation of supercooling temperature of water. Malarenko, V.V., (1989, p.26-29, eng) 45-2481  
 Microphysical characteristics through the melting region of a midlatitude winter storm. Raga, G.B., et al. (1991, p.843-855, eng) 45-2663

Thermodynamic model for sea ice advance and retreat. Tang, C.L., (1991, p.4723-4737, eng) 45-2682  
 Icebergs as oceanographic tracers (in the example of the Weddell Sea). Nazirov, M., (1989, p.142-148, rus) 45-2760

Saline frozen soils as a foundation for structures: collected scientific papers. Vialov, S.S., ed. (1990, 143p., rus) 45-2882

Growth and decay of ice. Lock, G.S.H., (1990, 434p., eng) 45-3069

Survey of standards for determination of vapour pressure over ice and water surfaces. Gibbins, C.J., (1990, p.859-885, eng) 45-3104

Dynamics of ice conditions in the coastal zone of Antarctica. Korotkov, A.I., et al. (1990, p.261-270, eng) 45-3132

Numerical study of the right angled thermosyphon. Lock, G.S.H., et al. (1991, p.113-117, eng) 45-3157

Energy dissipation thru melting in multi-year sea ice. Gagnon, R.E., et al. (1991, p.157-161, eng) 45-3164

Heat transfer in a right-angled thermosyphon. Lock, G.S.H., et al. (1991, p.261-265, eng) 45-3178

Modeling ice cover evolution in the arctic seas during the melt period. Appel', I.L., (1990, p.97-110, eng) 45-3568

Studies of the ice dynamics in the Arctic Basin over long-term periods. Appel', I.L., et al. (1990, p.111-123, eng) 45-3569

Method of thermodynamic numerical sea ice forecast in the Bohai Sea. Chen, W.B., et al. (1990, p.143-152, eng) 45-3572

Continuum damage modelling of polycrystalline ice. Sjolind, S.G., (1990, p.449-463, eng) 45-3598

Dynamics of thermal energy in the snow-soil-regolith system during phase transformations. Mezherovskii, A.P., (1991, p.90-98, rus) 45-3839

**Thermokarst**

Problems of agroindustrial use of lacustrine thermokarst. Tishin, M.I., ed. (1990, 116p., rus) 45-3031

Formation of the alassy complex of deposits in the Mayn River basin. Kotov, A.N., (1990, p.59-64, rus) 45-3035

**Thermokarst development**

Development of thermokarst lakes in the Arctic. Shumilov, I.U.V., (1990, p.20-26, rus) 45-3032

**Thermokarst lakes**

Development of thermokarst lakes during the Holocene at sites near Mayo, Yukon Territory. Burn, C.R., et al. (1990, p.161-176, eng) 45-1296

Problems of agroindustrial use of lacustrine thermokarst. Tishin, M.I., ed. (1990, 116p., rus) 45-3031

Development of thermokarst lakes in the Arctic. Shumilov, I.U.V., (1990, p.20-26, rus) 45-3032

Evolution of basins of dry lakes in the Lower Anadyr lowlands. Maslov, V.I.A., et al. (1990, p.88-95, rus) 45-3039

Forecasting lacustrine thermokarst in the Chukotkiy Peninsula. Tishin, M.I., (1990, p.96-99, rus) 45-3040

**Thermometry**

See *also*: Resistance thermometers; Temperature measurement

**Thickness**

Summer temperature distribution of moss cover in cryolithozone regions. Stashenko, A.I., (1990, p.167-170, rus) 45-1717

Gas release from comets. Natesco, G., et al. (1991, p.411-413, eng) 45-2941

Threshold pavement thickness to survive spring thaw. White, T.D., et al. (1990, p.41-51, eng) 45-3690

See *also*: Ice cover thickness; Glacier thickness; Snow depth

**Thickness gages**

Development and testing of ice thickness gages: progress report. Takashima, K., et al. (1990, p.293-298, jpn) 45-756

Spray and ice measurement instrumentation for ships. Ryerson, C.C., et al. (1991, p.748-757, eng) 45-2384

**Thin sections**

See *also*: Microscope slides

**Thunderstorms**

Microphysical and radiative characteristics of convective clouds during COHMEX. Fulton, R., et al. (1991, p.98-116, eng) 45-3016

Effect of liquid water on thunderstorm charging. Saunders, C.P.R., et al. (1991, p.11,007-11,017, eng) 45-3378

**Tidal currents**

Oceanographic observations off Prince Edward I., Canada. Drinkwater, K.F., et al. (1988, 37p., eng) 45-1283

Push and tidal deformation of drifting ice. Legen'kov, A.P., (1988, 104p., rus) 45-1861

Outer Continental Shelf Environmental Assessment Program: Final reports of principal investigators, Vol.70. (1990, 652p., eng) 45-2153

**Tides**

Bering, Chukchi, and Beaufort Seas coastal and ocean zones. (1988, 128 leaves, eng) 45-807

Water level and ice melting observations on Beaver Lake. Piskun, A.A., (1990, p.55-64, rus) 45-2570

**Till**

See *also*: Glacial till

**Timberlines**

See *also*: Forest lines

**Time factor**

Thermomechanics of the East Antarctic Ice Sheet. Grigorian, S.S., et al. (1990, p.44-51, rus) 45-1735

Timing and magnitude of high and low flows. Fedora, M.A., (1990, p.150-153, eng) 45-2134

Forecasting the time distribution of water inflow into a reservoir. Komarov, V.D., (1989, p.3-10, rus) 45-2274

Investigations of space-time variations in meteorological visibility. Lalkhtman, V.I., et al. (1987, p.108-120, rus) 45-2299

Nonlinear analysis of stress distribution in an ice floe. Evgin, E., et al. (1991, p.55-62, eng) 45-3148

**Tires**

Specific luminance of dry road markings during different seasons. Lundkvist, S.O., (1990, 21p., swe) 45-209

Performance tests on tires for snow removal trucks. Tahata, O., et al. (1990, p.203-208, jpn) 45-749

Characteristics of nonmetallic tire chains in Hokkaido. Hattori, K., et al. (1987, p.13-20, jpn) 45-920

Friction measurements under winter runway conditions. Yager, T.J., (1990, p.32-35, eng) 45-1184

Subzero Engineering Conference proceedings. (1989, 470p., eng) 45-1209

Indoor test of ice and snow tires on iced drum. Shimizu, K., et al. (1989, p.47-52, eng) 45-1213

Design of sub-arctic type winter tyres. Lindstrom, L., et al. (1989, p.53-60, eng) 45-1214

Safe winter driving. Craellus, K., (1989, p.61-66, eng) 45-1215

Tire force generation on ice. Hayhoe, G.F., et al. (1989, p.199-207, eng) 45-1233

Studless tires use in Japan. Horuchi, K., (1989, p.209-215, eng) 45-1234

Decreasing of wearing effect of studded tires on road pavements. Sistonen, M., (1989, p.217-221, eng) 45-1235

Snow water content and mobility of rubber tired vehicles. Osborne, M.D., et al. (1989, p.225-233, eng) 45-1702

Workshop on Traction Mechanics on Deformable Terrain, South Lake Tahoe, CA, Oct. 9-11, 1989. Blaisdell, G.L., ed. (1990, 37p., eng) 45-1968

Road grip of winter tires on ice. Nordström, O., et al. (1990, 79p. + appends., swe) 45-2036

Study of the present status of studded tires. Samuelsson, E., (1990, 9p. + appends., swe) 45-2039

Field test of studded and non-studded winter tires; subjective rating. Samuelsson, E., (1990, 17p. + appends., swe) 45-2040

Second validation study of the CRREL shallow snow mobility model. Richmond, P.W., et al. (1990, 39p., eng) 45-2094

Tire snow traction performance. Ohoyama, K., et al. (1990, p.86-88, eng) 45-3205

**Tissues**

See *also*: Plant tissues

**Tools**

See *also*: Equipment

**Topographic effects**

Topographic effects on precipitating snow clouds in Japan. Kikuchi, K., et al. (1987, p.109-128, eng) 45-905

Strong katabatic wind event at Terra Nova Bay. Bromwich, D.H., et al. (1990, p.223-225, eng) 45-1438

Influence of a simulated transport corridor on snowpack characteristics, Fort Norman, N.W.T., Canada. Kershaw, G.P., (1991, p.31-40, eng) 45-2470

Ocean eddy-ocean jet interaction in a marginal ice zone. Smith, D.C., IV, et al. (1991, p.4675-4689, eng) 45-2679

Turbulent mixing near the Yermak Plateau during the Coordinated Eastern Arctic Experiment. Padman, L., et al. (1991, p.4769-4782, eng) 45-2685

Temperature potential for artificial snow-making. Mainguy, J., (1990, p.22-28, fre) 45-3303

Radar measurements of winter storm turbulence. Campstron, B., et al. (1991, p.1306-1318, eng) 45-3373

Extreme value prediction of snow avalanche runoff. McClung, D.M., et al. (1991, p.163-175, eng) 45-3422

Influence of atmospheric pressure gradient variations on polar atmosphere simulation. Simmons, A.J., et al. (1991, p.29-58, eng) 45-3478

Papal Front of 3 May 1987: a remarkable example of frontogenesis near the Alps. Volkert, H., et al. (1991, p.125-150, eng) 45-3479

Comparative study of icing rates in the White Mountains of New Hampshire. Govoni, J.W., (1990, 5p., eng) 45-3745

**Topographic features**

Potential of radar echoes from ice sheets for wind measurement. Remy, F., et al. (1990, p.133-142, eng) 45-54

Evolution of topography on comets II. Icy craters and trenches. Colwell, J.E., et al. (1990, p.205-215, eng) 45-847

Morphology of a multi-year ice ridge in the High Arctic. Connors, D.N., et al. (1989, p.1123-1128, eng) 45-901

Cathedral Massif Glacier map 1:5000. Slupetzky, H., et al. (1988, p.125-136, ger) 45-1093

Ice topography over subglacial lakes. Shoemaker, E.M., (1990, p.323-329, eng) 45-1621

High-resolution topography and albedo of the south polar layered deposits on Mars. Herkenhoff, K.E., et al. (1990, p.14,511-14,529, eng) 45-1839

Satellite radar altimeter capability for ice sheet surface change measurement. Partington, K.C., et al. (1991, p.585-609, eng) 45-2225

Application of GPS relative positioning for height determination above sea level in the antarctic marginal ice zone. Shibuya, K., et al. (1990, p.149-162, eng) 45-3205

See *also*: Bottom topography; Coastal topographic features; Nival relief; Pit and mound topography; Polygonal topography

**Topographic maps**

Analyses of radio-echo data from Antarctica. Herzfeld, U.C., et al. (1988, p.95-110, eng) 45-1091

**Topographic maps (cont.)**

- Cathedral Massif Glacier map 1:5000. Slupetzky, H., et al, (1988, p.125-136, ger) 45-1093  
 Geomorphological structure of Bungler Hills. Bol'shianov, D.I.U., (1990, p.79-90, rus) 45-2572

**Topographic surveys**

- Areas of gravitational spreading of ridges. Varnes, D.J., et al, (1989, 36p., eng) 45-320  
 Possibilities of aerotopographic monitoring of surging glaciers. Osipova, G.B., et al, (1990, p.149-156, rus) 45-1754  
 Terrain, snow distribution and vegetation patterns. Evans, B.M., et al, (1989, p.270-278, eng) 45-1981  
 Ice measurements by GEOSAT radar altimetry. Zwally, H.J., et al, (1987, p.251-254, eng) 45-2764

**Topography**

- Surface waters of North America; influence of land and vegetation on streamflow. Saxton, K.E., et al, (1990, p.55-80, eng) 45-2145

**Towers**

- Icing of transmission lines and telecommunication towers. Fikke, S.M., et al, (1988, p.76-78, eng) 45-1315  
 Deformation of reinforced concrete anchor foundations in the far north. Grebenets, V.I., et al, (1991, p.257-260, eng) 45-3561

**Towing**

- See (also): Iceberg towing

**Tracked vehicles**

- Validation study of the CRREL shallow snow mobility model. Blaisdell, G.L., et al, (1990, 72p., eng) 45-1510  
 Initial impressions of a candidate mobile over-snow transport system. Blaisdell, G.L., et al, (1990, 13p. + appends., eng) 45-1969  
 Design of a modified Caterpillar Challenger tractor for antarctic service. Blaisdell, G.L., et al, (1990, 13p. + figs., eng) 45-1976  
 Second validation study of the CRREL shallow snow mobility model. Richmond, P.W., et al, (1990, 39p., eng) 45-2094  
 Terramechanics and off-road vehicles. Wong, J.Y., (1989, 251p., eng) 45-2389  
 Personnel and cargo transport in Antarctica. Blaisdell, G.L., (1991, 63p., eng) 45-3109  
 U.S. Army wheeled versus tracked vehicle mobility performance test program—report 2: mobility in shallow snow. Green, C.E., et al, (1991, 48p. + appends., eng) 45-3446

**Tracking (position)**

- See (also): Radar tracking

**Traction**

- Braking and starting performance with winter tires (2nd report). Ninagawa, K., et al, (1989, p.11-16, jpn) 45-908  
 Studless tires use in Japan. Horiuchi, K., (1989, p.209-215, eng) 45-1234  
 Electronic wheel slip control systems for commercial vehicles. Göhring, E., (1989, p.287-299, eng) 45-1241  
 Traction control for commercial vehicles. Emig, R., et al, (1989, p.355-363, eng) 45-1248  
 Validation study of the CRREL shallow snow mobility model. Blaisdell, G.L., et al, (1990, 72p., eng) 45-1510  
 Workshop on Traction Mechanics on Deformable Terrain, South Lake Tahoe, CA, Oct. 9-11, 1989. Blaisdell, G.L., ed, (1990, 37p., eng) 45-1968  
 Effect of fines in sand on friction on ice. Blaisdell, G.L., et al, (1990, 16p. + figs., eng) 45-1970  
 Terramechanics and off-road vehicles. Wong, J.Y., (1989, 251p., eng) 45-2389  
 Tire snow traction performance. Ohoyama, K., et al, (1990, p.86-88, eng) 45-3205  
 U.S. Army wheeled versus tracked vehicle mobility performance test program—report 2: mobility in shallow snow. Green, C.E., et al, (1991, 48p. + appends., eng) 45-3446

**Tractors**

- Design of a modified Caterpillar Challenger tractor for antarctic service. Blaisdell, G.L., et al, (1990, 13p. + figs., eng) 45-1976  
 Personnel and cargo transport in Antarctica. Blaisdell, G.L., (1991, 63p., eng) 45-3109

**Tramability**

- Microwave snow sounding for trafficability analysis. Alaloniemi, J., et al, (1989, p.145-150, eng) 45-1227  
 Forestry equipment—terrain interaction. (1989, 291p., eng) 45-1700  
 Terrain information system for use in forestry operations. Granberg, H.B., (1989, p.113-143, eng) 45-1701  
 Snow water content and mobility of rubber tired vehicles. Osborne, M.D., et al, (1989, p.225-233, eng) 45-1702  
 Workshop on Traction Mechanics on Deformable Terrain, South Lake Tahoe, CA, Oct. 9-11, 1989. Blaisdell, G.L., ed, (1990, 37p., eng) 45-1968  
 Snow roads and runways. Abele, G., (1990, 100p., eng) 45-1971  
 Terramechanics and off-road vehicles. Wong, J.Y., (1989, 251p., eng) 45-2389  
 Traffic and transport on ice cover in Nenjiang River. Xu, B.M., et al, (1990, p.835-844, eng) 45-3633

- See (also): Soil trafficability

**Training**

- See (also): Education

**Transformations**

- See (also): Metamorphism (snow); Permafrost transformation; Phase transformations

**Transition heating**

- Performance of triangular spine fins under frosting conditions. Kondepudi, S.N., et al, (1988, p.1-7, eng) 45-3215

- Ice-rink roof structures and the "stalagmite" effect. Bloudek, K., (1989, p.151-153, eng) 45-3466

**Transmission**

- See (also): Light transmission; Radiation absorption

**Transmission line towers**

- See (also): Power line supports

**Transmission lines**

- Properties and effect of freezing rain and winter fog on outline insulators. Farzaneh, M., et al, (1990, p.33-46, eng) 45-1765  
 Attenuation in a power line passing over permafrost. Zakruzhnii, E.G., et al, (1986, p.28-34, eng) 45-2557  
 Communications channel serviceability during power line icing. Golov, P.I.A., et al, (1988, p.36-42, eng) 45-2568  
 Prediction of conductor ice accretion and mitigation of its rotational effects. Skelton, P.L.L., et al, (1990, p.965-980, eng) 45-3400  
 Withstand voltage characteristics of insulator string covered with snow or ice. Matsuda, H., et al, (1991, p.1243-1250, eng) 45-3468

- See (also): Power lines

**Transmissivity**

- See (also): Light transmission; Radiation absorption; Trans-mission

**Transparency**

- See (also): Light transmission; Turbidity

**Transpiration**

- See (also): Evapotranspiration

**Transportation**

- Determining the breakdown parameters of packed and frozen explosives. Dzhoz, V.F., et al, (1990, p.33-35, rus) 45-2245  
 Personnel and cargo transport in Antarctica. Blaisdell, G.L., (1991, 63p., eng) 45-3109  
 Core processing, analysis and transportation, JAGE-89. Shoji, H., et al, (1991, p.129-141, jpn) 45-3398  
 Finnish cold climate construction. Part 3. Traffic and arteries. Laukkanen, K., et al, (1990, 58p. + appends., fin) 45-3875  
 See (also): Fuel transport; Marine transportation; Military transportation; Petroleum transportation; Tanker ships

**Tree lines**

- See (also): Forest lines

**Trees (plants)**

- Bending of a conifer branch at subfreezing temperatures: implications for snow interception. Schmidt, R.A., et al, (1990, p.1250-1253, eng) 45-589  
 Fate of N-15-labelled fertilizer applied on snow at two forest sites in British Columbia. Preston, C.M., et al, (1990, p.1583-1592, eng) 45-1027  
 Ecosystems of landscapes in the western central taiga (structure, dynamics). Lopatin, V.D., ed, (1990, 284p., rus) 45-1119  
 Ecology and modeling post-fire larch fall and regeneration on permafrost. Matveev, P.M., et al, (1990, p.14-21, rus) 45-2420  
 Autumn freeze testing of one-year reciprocal families of *Pinus sylvestris* (L.). Nilsson, J.E., et al, (1990, p.501-511, eng) 45-3206  
 Growth and survival of seedlings of various *Picea* species under northern climatic conditions. Junttila, O., et al, (1990, p.69-81, eng) 45-3207

**Trenching**

- Analysis of subsour stresses on buried submarine pipelines—Vol.3. Murray, A., et al, (1990, 45p. + appends., eng) 45-1558  
 Proceedings. (1990, 499p., eng) 45-1945  
 Design ice gouge depth computation through computer simulations. Wang, A.T., (1990, p.237-247, eng) 45-1953

- Influence of burial trench conditions on offshore pipeline stability. Rogers, B.T., (1990, p.303-319, eng) 45-1955

- Vessel requirements for arctic pipeline trenching and installation. Jolles, W.H., (1990, p.347-364, eng) 45-1958

- Application of Voker Stevin's experience to arctic offshore pipeline installation. (1990, p.365-373, eng) 45-1959

**Triton**

- Rheology of solid methane and nitrogen: applications to Triton. Eluzskiewicz, J., et al, (1990, p.1753-1756, eng) 45-2044  
 Koyasismuuyaw: the hypothesis of a perennially dichotomous Triton. Moore, J.M., et al, (1990, p.1757-1760, eng) 45-2045  
 Nitrogen frost migration on Triton: a historical model. Spencer, J.R., (1990, p.1769-1772, eng) 45-2046  
 Stability of nitrogen on Triton. Stanberry, J.A., et al, (1990, p.1773-1776, eng) 45-2047

- Neptune's Triton: a moon rich in dry ice and carbon. Prentice, A.J.R., (1990, p.364-367, eng) 45-2083

**Trucks**

- See (also): Motor vehicles

**Tundra**

- Geography of the vegetation of Chukotskiy Peninsula. Kozhevnikov, I.U.P., (1989, 175p., rus) 45-30  
 Environmental protection of West Siberian oil-bearing areas. Abzalov, R.Z., et al, (1989, p.128-135, rus) 45-109  
 Erosion processes in the tundra zone of the European USSR. Zharkova, I.U.G., et al, (1990, p.106-111, rus) 45-803

- Relationship of biomass to depth to frozen soil in Alaskan tundra. Gross, M.F., et al, (1990, p.275-282, eng) 45-890

- Phosphatase enzyme activity at subzero temperatures in arctic tundra soils. Neal, J.L., (1990, p.883-884, eng) 45-1019

- Cryoplanation terraces, northern Yukon. Lauriol, B., (1990, p.347-351, eng) 45-1424

- Tundra lakes and streams as gas conduits to the atmosphere. Kling, G.W., et al, (1991, p.298-301, eng) 45-1474

- Experiment in composing a geobotanical map of the Noril'sk city region. Moskalenko, N.G., (1972, p.54-63 + map, rus) 45-1716

- Studying the thermal regime of natural complexes of tundra zones. Pavlov, A.V., et al, (1989, p.6-20, rus) 45-2004

- Freezing resistance of arctic tundra plants on Svalbard. Odasz, A.M., (1990, p.1-8, eng) 45-2115

- Rate of cellulose decomposition in soils of Spitsbergen tundra. Biełkowski, P., (1990, p.39-45, eng) 45-2431

- Deposits of the glacial paleoshelf in the Bol'shezemel'skaya tundra. Lavrushin, I.U.A., et al, (1989, p.3-51, rus) 45-2445

- Arctic tundra rehabilitation: observations of progress and benefits to Alaska. McKendrick, J.D., (1991, p.29-40, eng) 45-2449

- Strip mine reclamation and Alaska's big game wildlife. Elliott, C.L., et al, (1991, p.41-44, eng) 45-2450

- From boreal forest to reclaimed site: revegetation at the Usibelli Coal Mine. Helm, D.J., (1991, p.45-50, eng) 45-2451

- Cellular slime molds in soils of Alaskan tundra, U.S.A. Stephenson, S.L., et al, (1991, p.104-107, eng) 45-2474

- Date of snowmelt at Barrow, Alaska, U.S.A. Dutton, E.G., et al, (1991, p.115-119, eng) 45-2475

- Flatlands with snow and ice. Chernogaeva, G.M., (1989, p.324-331, eng) 45-2750

- Problems of soil science in Siberia, collected scientific papers. Gadzhiev, I.M., ed, (1989, 183p., rus) 45-2904

- Ecological soil petrography and mineralogy. Gradusov, B.P., et al, (1990, p.13-34, rus) 45-2906

- Soil cover of Siberia: formation and use. Volkovitsker, V.I., et al, (1990, p.143-151, rus) 45-2909

- Model of transition processes in the tundra-taiga system. Bogatyrev, B.G., (1991, p.508-511, rus) 45-2936

- Tundra polygons in Quebec. Gray, J.T., et al, (1991, p.111-117, eng) 45-2997

- Analyzing landscape change in arctic ecosystems. Walker, D.A., et al, (1991, p.244-276, eng) 45-3187

- Productivity of phytocenoses in mountain tundra of the Khibini Mountains. Lukianova, L.M., et al, (1991, p.181-187, eng) 45-3263

- Forestry Canada's perspectives on climate change. Hall, J.P., et al, (1990, p.291-294, eng) 45-3302

- Productivity of agrophytocenoses in the eastern European tundra. Archegova, I.B., ed, (1991, 152p., rus) 45-3391

- Arctic and sub-arctic soil emissions and global climatic changes. Christensen, T., (1991, p.205-210, eng) 45-3415

- Environmental effects on CO<sub>2</sub> efflux from water track and tussock tundra in arctic Alaska, U.S.A. Oberbauer, S.F., et al, (1991, p.162-169, eng) 45-3481

- Landsat mapping of surface albedo of the Colorado Front Range. Duguay, C.R., et al, (1991, p.213-223, eng) 45-3486

- Ammonium uptake by *Eriophorum vaginatum* roots. Marion, G.M., et al, (1990, p.50-55, eng) 45-3767

- See (also): Alpine tundra; Forest tundra

**Tundra soils**

- Tundra plant communities near Vårslbukta, Spitsbergen. Moraczewski, I.R., (1990, p.47-68, eng) 45-3557

**Tunnels**

- Investigation into the creep behavior of CRREL tunnel, Alaska. Huang, S.L., et al, (1989, p.65-73, eng) 45-333

- Cone penetrometer tests in permafrost—the Fox Tunnel, Alaska. Ladanyi, B., et al, (1989, p.75-82, eng) 45-334

- Use of uranium-isotope information for modeling water inflow in fractured rocks under permafrost conditions. Chalov, P.I., et al, (1991, p.166-174, eng) 45-2439

- Thermal regime of karst caves and tunnels in the Central Volga region. Stankevich, E.F., et al, (1990, p.38-41, rus) 45-2702

- Waveform analysis of electromagnetic scattering for a three dimensional tunnel. Moran, M.L., et al, (1990, 4p., eng) 45-3771
- Pressuremeter stress relaxation testing in a permafrost tunnel. Ladanyi, B., et al, (1991, p.213-224, eng) 45-3830
- See *also*: Ice tunnels; Railroad tunnels; Snow tunnels
- Turbidity**
- Discharge of suspended sediments in the glacier-nourished Adishura River. Karalashvili, T.V., (1989, p.210-212, rus) 45-1063
- Behavior of a glacier-derived suspended sediment plume in a small arctic inlet. Dowdeswell, J.A., et al, (1991, p.111-123, eng) 45-2021
- See *also*: Transparency; Visibility
- Turbulence**
- Three-dimensional structure of iceberg tracks. Pisarsvkaia, L.G., et al, (1989, p.140-144, rus) 45-1662
- Aircraft observations of the arctic atmospheric boundary layer. Walter, B., et al, (1991, p.4663-4673, eng) 45-2678
- Turbulent boundary layer**
- Ice motions forced by boundary layer turbulence. DiMarco, R.L., et al, (1991, p.10,617-10,624, eng) 45-3311
- Turbulent diffusion**
- Ice cover melting under turbulent flow conditions. Sarraf, S., et al, (1990, p.313-316, eng) 45-3194
- Turbulent exchange**
- Features of turbulent exchange in the periglacial layer of air. Moskalenko, I.G., et al, (1990, p.57-64, rus) 45-1737
- Turbulent transfer over snow and ice. Morris, E.M., (1989, p.205-223, eng) 45-1809
- Turbulent flow**
- Path-averaged turbulent heat fluxes from scintillation measurements at two wavelengths. Andreas, E.L., (1990, p.93-105, eng) 45-804
- Fluid-elastic stability threshold in the presence of turbulence. Lever, J.H., et al, (1989, p.407-419, eng) 45-968
- Role of heat transfer sources in changes to cyclone tracks. Abramov, V.A., et al, (1990, p.116-124, rus) 45-1642
- Three-wavelength method of measuring path-averaged turbulent heat fluxes. Andreas, E.L., (1990, p.801-814, eng) 45-1665
- Local advection processes in the surface layer of the marginal ice zone. Claussen, M., (1991, p.1-27, eng) 45-2163
- Conceptual model for vertical frazil distribution in turbulent flows. Liou, C.P., et al, (1991, p.336-347, eng) 45-2345
- Basis for ice formation design. LaFleur, R.S., (1990, p.393-401, eng) 45-3195
- Radar measurements of winter storm turbulence. Campistron, B., et al, (1990, p.1306-1318, eng) 45-3373
- Papal Front of 3 May 1987: a remarkable example of frontogenesis near the Alps. Volkert, H., et al, (1991, p.125-150, eng) 45-3479
- Turf**
- See *also*: Peat
- Ultimate strength**
- Steel-ice friction coefficient under high contact pressure. Enoki, K., et al, (1990, p.902-911, eng) 45-3639
- Ultrasonic tests**
- Measuring water flow using ultrasound. Zatylnikov, A.I., (1988, p.13-19, rus) 45-1857
- Forecasting the frost resistance of concrete based on local materials. Akimov, A.V., et al, (1988, 83p., rus) 45-2306
- Ultraviolet radiation**
- Ultraviolet transmission of sea ice. Trodahl, H.J., et al, (1990, p.2177-2179, eng) 45-1994
- Ultraviolet radiation environment of the Antarctic Peninsula. Lubin, D., (1989, 134p., eng) 45-2830
- Effect of cloud cover on UV radiation over the Antarctic Peninsula. Lubin, D., et al, (1991, p.478-493, eng) 45-2841
- HOx and ClOx interactions in the ozone hole photochemistry. Crutzen, P.J., et al, (1989, p.203-212, eng) 45-2981
- Underground facilities**
- See *also*: Subsurface structures
- Underground ice**
- See *also*: Ground ice
- Underground pipelines**
- Permafrost and terrain research and monitoring: Norman Wells pipeline. Volume I: environmental and engineering considerations. MacInnes, K.L., et al, (1989, 132p., eng) 45-32
- Corrosion protection of gas pipelines buried in permafrost. Sackinger, W.M., (1990, p.565-574, eng) 45-159
- Thermal data and core specimen analysis, Norman Wells Pipeline. Riseborough, D.W., (1989, 30p. + append., eng) 45-386
- Canada-France ground freezing experiment: phase 8: fourth freeze cycle. (1989, 73p., eng) 45-388
- Canada-France ground freezing experiment: phase 7. (1988, 35p., eng) 45-389
- Third freeze cycle of the Canada-France ground freezing experiment. (1988, 76p., eng) 45-390
- Peculiarities of maintaining underground gas lines in the Far North. Borovkov, V.A., (1989, p.30-31, rus) 45-707
- Improving the strength of gas pipelines under complicated conditions. Kharionovskii, V.V., (1990, 179p., rus) 45-985
- Profiling top of buried pipe of the trans Alaska pipeline using the TSI pipe locator. McDevitt, P.G., et al, (1988, p.279-286, eng) 45-1181
- Temperature regime of oil and gas pipelines laid jointly in frozen ground. Danielian, I.U.S., et al, (1988, p.91-96, eng) 45-1426
- Microcomputer simulation of phase change heat transfer. Farag, I.H., et al, (1990, p.43-65, eng) 45-1432
- Analysis of subsour stresses on buried submarine pipelines—summary report. Comfort, G., et al, (1990, 30p., eng) 45-1555
- Analysis of subsour stresses on buried submarine pipelines—Vol.1A and 1B. Comfort, G., et al, (1990, 106p. + 324p., eng) 45-1556
- Analysis of subsour stresses on buried submarine pipelines—Vol.2. Beun, K., et al, (1990, 204p., eng) 45-1557
- Analysis of subsour stresses on buried submarine pipelines—Vol.3. Murray, A., et al, (1990, 45p. + append., eng) 45-1558
- Proceedings. (1990, 499p., eng) 45-1945
- Character and distribution of sea-ice and iceberg scours. Lewis, C.F.M., et al, (1990, p.57-101, eng) 45-1946
- Case study analysis of the probability of ice scour-induced damage for submarine pipelines. Comfort, G., (1990, p.145-164, eng) 45-1949
- Design of marine pipelines in seabed vulnerable to ice scour. Palmer, A., (1990, p.167-178, eng) 45-1950
- Thaw subsidence effects on offshore pipelines and wells. Nixon, J.F., (1990, p.273-287, eng) 45-1954
- Influence of burial trench conditions on offshore pipeline stability. Rogers, B.T., (1990, p.303-319, eng) 45-1955
- First arctic pipeline and later developments. Brown, R.J., (1990, p.323-334, eng) 45-1956
- Construction strategies for arctic offshore pipelines. McKeehan, D.S., (1990, p.335-345, eng) 45-1957
- Vessel requirements for arctic pipeline trenching and installation. Jolles, W.H., (1990, p.347-364, eng) 45-1958
- Application of Voker Stevin's experience to arctic offshore pipeline installation. (1990, p.365-373, eng) 45-1959
- Operations and maintenance of a northern pipeline. Sangster, R.H.B., (1990, p.377-384, eng) 45-1960
- Geotechnical monitoring for an arctic offshore pipeline. Hanna, A.J., et al, (1990, p.385-394, eng) 45-1961
- Integrity monitoring criteria and methods for ice scour problems. Price, P.St.J., et al, (1990, p.419-444, eng) 45-1963
- Examination of potential pipeline monitoring techniques. Witney, K.C., (1990, p.445-453, eng) 45-1964
- Soil-pipe interaction during frost heaving around a buried chilled pipeline. Shen, M., et al, (1991, p.11-21, eng) 45-2318
- Numerical analysis of frost shields. Coutermarsh, B.A., et al, (1991, p.178-190, eng) 45-2332
- Thaw-subsidence effects on offshore pipelines. Nixon, J.F., (1991, p.28-39, eng) 45-2418
- Underground storage**
- Strength characteristics of rocks after having been at low temperature. Inada, Y., et al, (1982, p.335-342, jpn) 45-115
- Effect of low temperature on polymeric binding agent for rock mass. Inada, Y., et al, (1982, p.343-350, jpn) 45-116
- Mechanical characteristics of rocks at low temperatures. Inada, Y., et al, (1980, p.1221-1227, jpn) 45-118
- Mechanical characteristics of rocks related to cooling. Inada, Y., et al, (1979, p.979-985, jpn) 45-120
- Rock characteristics under very low temperatures. Aoki, K., et al, (1990, p.319-325, eng) 45-2295
- Using natural cold in automated underground cold storage areas. Kuz'min, M.P., et al, (1990, p.98-100, rus) 45-2715
- Cryogenic properties of soils and rocks: 1. Anomalous behaviour of water. Quinn, F.X., et al, (1991, p.195-209, eng) 45-3401
- Cryogenic properties of soils and rocks: 2. The influence of water types on the uniaxial mechanical behaviour of clays. Unsworth, J.F., et al, (1991, p.211-225, eng) 45-3402
- Underice**
- See *also*: Ice bottom surface; Subglacial
- Underwater acoustics**
- Acoustic equipment for underwater surveys of hydraulic structures. Kononov, V.V., et al, (1989, p.13-20, rus) 45-81
- Arctic acoustics and experiments in the Marginal Ice Zone. Meredith, R.W., et al, (1989, 75p., eng) 45-312
- Low-frequency acoustic wave-scattering phenomena under ice cover. Kuo, E.Y.T., (1990, p.361-372, eng) 45-366
- Environmental signatures in arctic ambient noise. Gough, E.C., Jr., (1989, p.1225-1230, eng) 45-437
- Apparent coherent energy loss of ice-reflected, high-frequency LFM pulses. Posey, J.W., et al, (1989, p.1240-1245, eng) 45-438
- Eastern Arctic ambient noise. Pritchard, R.S., (1989, p.1246-1251, eng) 45-439
- Noise Package: an autonomous ambient noise measurement system. Spychalaki, S.E., et al, (1989, p.1255-1257, eng) 45-440
- Compact acoustic recorder. Stein, R., (1989, p.1258-1262, eng) 45-441
- Measurements of under-ice broadband coherence. Meredith, R.W., (1990, p.1003-1010, eng) 45-656
- Arctic acoustics ultrasonic modeling studies. Chamuel, J.R., (1990, 136p., eng) 45-822
- Compendium of environmental data collected during the Iceshelf-88 exercise. Bucca, P.J., (1990, n.p., eng) 45-936
- Temperature, salinity and sound-speed fields near ice faces. Sykes, P., (1989, 16p. + append., eng) 45-947
- Sea ice noise-generating processes. Pritchard, R.S., (1990, p.2830-2842, eng) 45-2291
- Under-ice ocean seismic energy scattering. Keenan, R.E., et al, (1991, p.1128-1133, eng) 45-2292
- Modeling the acoustic scattering by under-ice-ridge keels. Rubenstein, D., et al, (1991, p.666-672, eng) 45-2401
- Directionality of ice cracking events. Zakarasukas, P., et al, (1991, p.722-734, eng) 45-2402
- Observation and inversion of seismo-acoustic waves in a complex arctic ice environment. Miller, B.E., et al, (1991, p.1668-1685, eng) 45-2666
- Ice Technology for Polar Operations: proceedings of the 2nd international conference. (1990, 426p., eng) 45-2717
- Influence of sea ice on ocean ambient sound. Sagen, H., et al, (1990, p.415-426, eng) 45-2748
- Impulse radar bathymetric profiling in weed-infested fresh water. Kovacs, A., (1991, 19p., eng) 45-2955
- Modeling acoustic propagation beneath ice. Clark, J.H., et al, (1991, p.327-329, eng) 45-3043
- Acoustic propagation in the western Greenland Sea frontal zone. Mellberg, L.E., et al, (1991, p.2144-2156, eng) 45-3379
- Underwater ice**
- Double-diffusive underwater ice formation. Krylov, A.D., (1989, p.92-94, rus) 45-736
- Stability of floating and submerged blocks. Daly, S.F., et al, (1990, p.737-752, eng) 45-2257
- USACRREL underwater frazil ice detector. Daly, S.F., et al, (1991, p.758-764, eng) 45-2385
- Sea ice dynamics at Atka Iceport. Kipfstuhl, J., (1991, 88p., ger) 45-3521
- Underwater permafrost**
- See *also*: Permafrost beneath lakes; Permafrost beneath rivers; Subsea permafrost
- Underwater structures**
- See *also*: Hydraulic structures
- Unfrozen water content**
- Physical and thermal properties of Norman Wells-Zama Pipeline core specimens. Patterson, D.E., et al, (1988, 59p. + append., eng) 45-387
- Third freeze cycle of the Canada-France ground freezing experiment. (1988, 76p., eng) 45-390
- Frozen ground effects on infiltration and runoff. Kane, D.L., et al, (1990, p.259-300, eng) 45-410
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- Compressive strength behavior of fine-grained frozen soils. Wijeweera, H., et al, (1990, p.472-483, eng) 45-632
- Cryogenic migration of ions and bound moisture in ice-saturated disperse rocks. Lebedenko, I.U.P., (1989, p.1-9, eng) 45-645
- Dependence of phase composition of water in freezing and frozen soils on external pressure. Kondakov, V.V., et al, (1989, p.17-23, eng) 45-650
- Frost action in clay soils; unfrozen water content. Brown, S.C., et al, (1990, p.535-546, eng) 45-1141
- Frost action in clay soils; suction of unfrozen water. Brown, S.C., et al, (1990, p.547-561, eng) 45-1142
- Controlling the crystallization of water in closed voids. Kuz'min, G.P., et al, (1990, p.92-95, rus) 45-1204
- Thermodiffusion flow of thin intervening layers of unfrozen water in bundles of quartz fibers. Brovka, G.P., et al, (1990, p.294-297, eng) 45-1271
- Solving the Stefan problem for saline soils at subzero temperatures. Tetelbaum, A.S., (1989, p.13-24, rus) 45-1825
- Solute rejection in freezing soils. Panday, S., et al, (1991, p.99-108, eng) 45-2090
- Measurement of cloud liquid water content and droplet size. Howe, J.B., (1991, 18p., eng) 45-2642
- Rock-accumulators of cold. Kostarev, V.P., et al, (1990, p.11-15, rus) 45-2696
- Synchronous content of unfrozen water in saline soils. Bronfenbrenner, L.E., (1990, p.34-38, rus) 45-2887
- Determining the phase composition of saline frozen soils. Petrukhin, I.U.S., (1990, p.38-45, rus) 45-2888
- Classifying frozen soils according to salinity. Panchenko, V.I., et al, (1990, p.70-73, rus) 45-2892
- Formation of the alasy complex of deposits in the Mayn River basin. Kotov, A.N., (1990, p.59-64, rus) 45-3035

- Unfrozen water content (cont.)**  
Cryogenic properties of soils and rocks: 1. Anomalous behaviour of water. Quinn, F.X., et al, 1991, p.195-209, eng 45-3401  
Cryogenic properties of soils and rocks: 2. The influence of water types on the uniaxial mechanical behaviour of clays. Unsworth, J.F., et al, 1991, p.211-225, eng 45-3402
- United Kingdom**  
—**Ireland**  
Morphology of a rock glacier in Ireland. Wilson, P., 1990, p.237-247, eng 45-2026  
—**Scotland**  
Trace metal and rare earth content of black precipitation events. Landsberger, S., et al, 1990, p.363-369, eng 45-1899
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Areas of glacial spreading of ridges. Varnes, D.J., et al, 1989, 36p., eng 45-320  
December to remember. Heim, R., et al, 1990, p.329-332, eng 45-2049  
—**Alaska**  
Fiscal year 1988 program report: Alaska Water Research Center. Kane, D.L., 1990, 65p., eng 45-95  
Overview of coal mining in Alaska. Sims, J.F.M., 1989, p.3-8, eng 45-326  
Minerals other than gold in Alaska. Foley, J.Y., 1989, p.9-13, eng 45-327  
Mineral exploration and development in AK. Green, C.B., et al, 1989, p.205-209, eng 45-347  
Drift mining at Tenderfoot Creek. Groppe, C., et al, 1989, p.211-215, eng 45-348  
Slope optimization at the Valdez Creek placer mine. Martin, P.L., 1989, p.227-236, eng 45-350  
Mountain glaciers—an overview with emphasis on Alaska. Coffin, J.H., et al, 1990, p.177-258, eng 45-409  
Alaska's mineral industry, 1989. Bundtzen, T.K., et al, 1989, 100p., eng 45-491  
Transient electromagnetics for permafrost. Walker, G.G., 1988, 308p., eng 45-510  
Relationship of biomass to depth to frozen soil in Alaskan tundra. Gross, M.F., et al, 1990, p.275-282, eng 45-890  
Alaska's high-rank coals. 1990, 36p., eng 45-931  
Profiling top of buried pipe of the trans Alaska pipeline using the TSI pipe locator. McDevitt, P.G., et al, 1988, p.279-286, eng 45-1181  
Paleoenvironmental significance of glaciomarine biofacies in the Gulf of Alaska. Lagoe, M.B., et al, 1989, p.194-209, eng 45-1183  
Dune development in an Alaskan subarctic environment. Dijkman, J.W.A., et al, 1990, p.93-109, eng 45-1191  
Note on biological weathering on nunataks of the Juneau Icefield, Alaska. Hall, K., et al, 1990, p.189-196, eng 45-1298  
Status of the national wetlands inventory in Alaska. Hall, J.V., 1989, p.853-859, eng 45-1404  
Pleistocene periglacial eolian deposits in Alaska. Lea, P.D., 1990, p.582-591, eng 45-1412  
Winter short-pulse radar studies on the Tanana River, Alaska. Delaney, A.J., et al, 1990, p.244-250, eng 45-1421  
Digital terrain models as a tool for glacier studies. Rentsch, H., et al, 1990, p.273-278, eng 45-1537  
Climatic characteristics of the taiga in interior Alaska. Slaughter, C.W., et al, 1986, p.9-21, eng 45-1589  
Fire in taiga communities of interior Alaska. Dyrness, C.T., et al, 1986, p.74-86, eng 45-1590  
Mass balance of the Taku Glacier, Alaska from 1946 to 1986. Pelto, M.S., et al, 1990, p.121-130, eng 45-1773  
Tongass: Alaska's vanishing rain forest. Ketchum, R.G., et al, 1987, 112p., eng 45-2104  
Characteristics of the low-level temperature inversion along the Alaskan arctic coast. Kahl, J.D., 1990, p.537-548, eng 45-2177  
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Arctic tundra rehabilitation: observations of progress and benefits to Alaska. McKendrick, J.D., 1991, p.29-40, eng 45-2449  
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From boreal forest to reclaimed site: revegetation at the Usibelli Coal Mine. Helm, D.J., 1991, p.45-50, eng 45-2451  
Exploration activity heats up in the Alaskan offshore. 1990, p.34-35, eng 45-2555  
Abundance and distribution of invertebrates in Alaskan streams. Oswood, M.W., 1989, p.97-110, eng 45-2610  
Summary of water-use data in Alaska, 1986. Petrik, W.A., 1990, 68p., eng 45-2844  
Alaska place names. Schorr, A.E., 1991, 191p., eng 45-3860
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Results of an aquifer test for a proposed water supply at Anchor Point, Alaska. Petrik, W.A., et al, 1991, 13p., eng 45-2843
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Petroleum geology and geochemistry of the Arctic National Wildlife Refuge 1002 area. Banet, A.C., Jr., 1990, 26p. + appends., eng 45-3884
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Date of snowmelt at Barrow, Alaska, U.S.A. Dutton, E.G., et al, 1991, p.115-119, eng 45-2475  
Air pollution measurements at Barrow, AK. Jaffe, D.A., et al, 1991, p.7395-7405, eng 45-2797  
Primary productivity of the benthic microalgae in the Chukchi Sea near Barrow, Alaska. Matheke, G.E.M., et al, 1974, p.1779-1786, eng 45-3247
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Effects of glacial surging on sedimentation in a modern ice-contact lake, Alaska. Smith, N.D., 1990, p.1393-1403, eng 45-894
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Glaciation and gold-placer formation in AK. Reger, R.D., et al, 1990, 30p., eng 45-653
- Alaska—Copper River**  
Bibliography of Quaternary geology of the Copper River, AK. Ferrinas, O.J., Jr., 1991, 20p., eng 45-2692
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Geohydrology and ground-water geochemistry at a sub-arctic landfill, Fairbanks, Alaska. Downey, J.S., et al, 1990, 25p., eng 45-2914
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Simulation studies help predict oil impact in Alaska offshore areas. Signorini, S., et al, 1990, p.41-44, eng 45-3546
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Forecasting of closure of Russel Fiord by Hubbard Glacier. Traabant, D.C., et al, 1991, 34p., eng 45-3833
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Case study of bank erosion on the Kinak River, Alaska. Kraeger-Rovey, C., 1983, p.223-230, eng 45-2958
- Alaska—Kodiak Harbor**  
Final supplemental environmental impact statement: Kodiak Harbor, Alaska. 1991, 86p. + appends., eng 45-2051
- Alaska—Nome**  
Late Cenozoic geologic controls on placer-gold distribution. Kaufman, D.S., et al, 1989, p.26-45, eng 45-193
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Design engineering problems of surface coal mines in arctic Alaska. Sengupta, M., 1990, p.735-743, eng 45-175
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- Alaska—Norton Sound**  
OCS Mining Program: Norton Sound Lease Sale. Final environmental impact statement. 1991, Var. p., eng 45-2160  
OCS Mining Program: Norton Sound Lease Sale. Second draft environmental impact statement. 1990, Var. p., eng 45-2161
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Phytoplankton in coastal waters of the Arctic Ocean at Point Barrow, Alaska. Bursa, A., 1963, p.239-262, eng 45-3071
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Colorado climate: temperature, precipitation, frost and growth data. 1989, 290p., eng 45-488  
Phytoplankton dynamics in three Rocky Mountain lakes, Colorado, U.S.A. McKnight, D.M., et al, 1990, p.264-274, eng 45-889  
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Chemical weathering of a watershed in CO. Mast, M.A., et al, 1990, p.2971-2978, eng 45-2079
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Correlation of radiometry observations with Colorado River basin snowpack properties. Joeburger, E.G., et al, 1989, p.1239-1242, eng 45-267
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1948 flood on the Columbia River. Speers, D.D., et al, 1990, p.160-163, eng 45-2137
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Jacksonville's White Christmas. Winterling, G., 1990, p.334-335, eng 45-2050
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Studies in Maine geology. Tucker, R.D., ed, 1989, 6 vols., eng 45-2054  
Deposition of the glaciomarine mud in the Gulf of Maine. Oldale, R.N., 1989, p.1-10, eng 45-2055  
Submerged shoreline on the inner continental shelf of Maine. Shipp, R.C., et al, 1989, p.11-28, eng 45-2056  
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Maine lakes and their outlet deltas. Caldwell, D.W., et al, 1989, p.97-108, eng 45-2060  
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Changing perspectives of the Quaternary surficial geology of Maine. Borns, H.W., Jr., 1989, p.1-11, eng 45-2062  
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Stratified waterlain glacial sediments in Maine. Weddle, T.K., 1989, p.53-69, eng 45-2065  
Deglaciation of the Androscoggin River valley in Maine and New Hampshire. Thompson, W.B., et al, 1989, p.71-88, eng 45-2066  
Late-glacial dunes, ventifacts, and wind direction in west-central Maine. McKeon, J.B., 1989, p.89-101, eng 45-2067  
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Postglacial evolution of drainage in the St. John River basin. Kite, J.S., et al, 1989, p.135-142, eng 45-2070  
Iceberg-calving rates reconstructed from paleo-sea levels. Lowell, T.V., 1991, p.155-158, eng 45-2180  
Statewide cooperative snow survey for Maine. Loiselle, M., et al, 1990, p.225-230, eng 45-2202
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Deglaciation of the Androscoggin River valley in Maine and New Hampshire. Thompson, W.B., et al, 1989, p.71-88, eng 45-2066
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Winter environment of the Ohio River valley. Daly, S.F., et al, 1990, 57p., eng 45-1999
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Snow Sapporo 21st Century Project. Sugawara, T., 1990, p.1-20, eng 45-3527  
Finnish cold climate construction technology, part 2. 1990, 112p. + appends., fin 45-3874
- Urea**  
Determination of flexural strength in urea model ice. Borland, S.L., 1990, 9p., eng 45-840
- Urethane foam**  
See also: Cellular plastics

- USSR**  
 Conference on ecological impact of oil and gas industry, 1988. (1989, 235p., rus) **45-99**  
 Handbook on climate of the USSR. (1989, 268p., eng) **45-309**  
 Humidity of air, atmospheric precipitation, snow cover in the USSR. (1989, 288p., eng) **45-310**  
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 Activity of microorganisms oxidizing hydrocarbons assayed in natural waters. Il'inskiĭ, V.V., et al, (1989, p.658-662, rus) **45-3138**  
 Soviet maritime arctic. Brigham, L.W., ed, (1991, 336p., eng) **45-3323**  
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 Environmental protection of geocryological zones in Western Siberia. Mel'nikov, E.S., et al, (1989, p.36-43, rus) **45-104**  
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 Development of river valleys in Pleistocene glaciation regions (Kolyma). Rudnev, A.V., (1989, p.127-137, rus) **45-3838**
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 See *also*: Water vapor
- Vapor barriers**  
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 Environmental effects on CO<sub>2</sub> efflux from water track and tussock tundra in arctic Alaska, U.S.A. Oberbauer, S.F., et al, (1991, p.162-169, eng) **45-3481**  
 3-D transient heat and mass transport in microscopic ice lattices. Christon, M., et al, (1990, p.25-33, eng) **45-3868**
- Vapor pressure**  
 Production of phreatic explosions in the interaction of lava and ice. Vinogradov, V.N., et al, (1990, p.89-98, eng) **45-1076**  
 Vapor-pressure dependence on temperature in models of snow metamorphism. Colbeck, S.C., (1990, p.351-352, eng) **45-1547**  
 Relation between water vapor saturation and temperature. Afinogenov, L.P., (1987, p.129-133, rus) **45-2300**  
 Study of clathrate hydrates from vapour-deposited amorphous ice. Hallbrucker, A., et al, (1990, p.3785-3792, eng) **45-2415**  
 Model of the thermal conductivity of porous water ice at low gas pressures. Steiner, G., et al, (1991, p.507-513, eng) **45-2793**  
 Survey of standards for determination of vapour pressure over ice and water surfaces. Gibbins, C.J., (1990, p.859-885, eng) **45-3104**  
 Freezing-point of mixtures of H<sub>2</sub>O-16 and H<sub>2</sub>O-18. Kiyosawa, K., (1991, p.583-588, eng) **45-3305**
- Vapor transfer**  
 Environmental influences on mine detection. Hogan, A.W., et al, (1990, 6p., eng) **45-933**  
 Thermal history models for KOSI sublimation experiments. Spohn, T., et al, (1990, p.358-371, eng) **45-1724**  
 Evolution of the water regime of Phobos. Fanale, F.P., et al, (1990, p.380-395, eng) **45-1921**  
 Gas release from comets. Nonesco, G., et al, (1991, p.411-413, eng) **45-2941**  
 Structural and measurement problems of arctic atmospheric water balance. Lenart, W., (1990, p.37-45, eng) **45-3780**  
 Influence of the freezing process on vapour transport during sublimation in vacuum-freezing-drying. Kochs, M., et al, (1991, p.2395-2408, eng) **45-3864**
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 Snowline depression in Chile during the Pleistocene. Caviedes, C.N., (1990, p.99-114, eng) **45-363**  
 Variability of thickness of ice and snow in arctic seas and its parameterization. Appel, I.L., (1989, p.66-72, eng) **45-660**  
 Sea-level change and glacier oscillation indicators on Melville Moraine, Northwest Territories. Dredge, L.A., (1990, p.1215-1224, eng) **45-1272**  
 Sea ice thickness distribution in the northwestern Weddell Sea. Lange, M.A., et al, (1991, p.4821-4837, eng) **45-2690**  
 Air temperature and precipitation variations at Svalbard. Brzdil, R., (1988, p.53-68, eng) **45-3027**  
 Spatial variability of sea-ice properties in the northwestern Weddell Sea. Eicken, H., et al, (1991, p.10,603-10,615, eng) **45-3310**  
 Recent variations in arctic and antarctic sea-ice covers. Gloersen, P., et al, (1991, p.33-36, eng) **45-3489**  
 See *also*: Diurnal variations; Glacier oscillation; Periodic variations; Seasonal variations; Temperature variations
- Vegetation**  
 Geography of the vegetation of Chukotskiy Peninsula. Kozhevnikov, I.U.P., (1989, 175p., rus) **45-30**  
 Environmental effects of snow dumping: a literature review. Scott, W.S., et al, (1980, p.219-240, eng) **45-184**  
 Erosion processes in the tundra zone of the European USSR. Zharkova, I.U.G., et al, (1990, p.106-111, rus) **45-803**  
 Vegetation and climate of the Malyk-Siyensk region in the Pleistocene. Prokhorova, T.P., (1989, p.10-20, rus) **45-2494**  
 Productivity of agrophytocenoses in the eastern European tundra. Archegova, I.B., ed, (1991, 152p., rus) **45-3391**  
 Ecological aspects of lake regulation in northern Finland; part 2. Hellsten, S., et al, (1989, 131p. + append., fin) **45-3845**  
 Ecological aspects of lake regulation in northern Finland; part 5. Aalasaarela, E., et al, (1989, 49p., fin) **45-3847**  
 See *also*: Grasses; Lichens; Mosses; Plants (botany); Protective vegetation; Revegetation; Trees (plants)
- Vegetation factors**  
 Snow cover on small forest and field watersheds in the taiga zone of the European USSR. Deriugin, A.A., (1990, p.101-105, eng) **45-2080**  
 Runoff sediment concentration under varying soil and freezing regimes. Edwards, L.M., et al, (1991, p.403-407, eng) **45-3211**  
 Spatial and temporal influence of soil frost on infiltration and erosion of sagebrush rangelands. Blackburn, W.H., et al, (1990, p.991-997, eng) **45-3696**

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station patterns

vegetation of wetlands of the prairie pothole region. Kantrud, H.A., et al, (1989, p.132-187, eng) **45-835**  
 dynamics of wetland landscapes and reliably predicting their development. Aaviksoo, K.D., et al, (1989, p.221-226, eng) **45-857**  
 geomorphology and spatial structure of northern patterned peatlands. Madsen, B.J., (1989, p.235-247, eng) **45-1401**  
 terrain, snow distribution and vegetation patterns. Evans, B.M., et al, (1989, p.270-278, eng) **45-1981**  
 surface waters of North America: influence of land and vegetation on streamflow. Saxton, K.E., et al, (1990, p.55-80, eng) **45-2145**  
 snowpack effect on mountain vegetation distribution and ecotone. Barbour, M.G., et al, (1991, p.141-149, eng) **45-2226**  
 climate, hydrology and vegetation patterns. Hot Weather Creek, Arctic Canada. Edlund, S.A., et al, (1990, p.273-286, eng) **45-2527**  
 distribution of aquatic and terrestrial vegetation in Antarctica. Broady, P.A., (1989, p.77-95, eng) **45-2609**  
 snow slope steppe vegetation on an arctic plain. Walker, M.D., et al, (1991, p.170-188, eng) **45-3482**  
 structure and productivity of high-altitude plant communities of the southern Urals. Andreiashkina, N.I., (1991, p.326-331, eng) **45-3862**  
**ice wheels**  
 electronic wheel slip control systems for commercial vehicles. Gohring, E., (1989, p.287-299, eng) **45-1241**  
 performance of an omnidirectional wheel on snow and ice. Blaisdell, G.L., (1991, p.34-41, eng) **45-2227**  
**icles**  
 tests of vehicles in the North. Bezverkhii, S.F., et al, (1989, p.93-99, eng) **45-1220**  
 validation study of the CRREL shallow snow mobility model. Blaisdell, G.L., et al, (1990, 72p., eng) **45-1510**  
 ice power. Scott, D., (1989, p.154, eng) **45-1554**  
 registry equipment—terrain interaction. (1989, 291p., eng) **45-1700**  
 use of central vehicle wash facilities in cold weather. Gerdes, G.L., et al, (1990, 22p., eng) **45-1973**  
 validation study of the CRREL shallow snow mobility model. Richmond, P.W., et al, (1990, 39p., eng) **45-2094**  
 study of indenter friction against an ice sheet. Igoshin, V.A., et al, (1990, p.71-74, eng) **45-3265**  
**ice alsoy: Air cushion vehicles; Aircraft; Airplanes; All terrain vehicles; Amphibious vehicles; Helicopters; Hydrofoil craft; Iceboats; Motor vehicles; Railroad cars; Ships; Sleds; Snow vehicles; Spacecraft; Submarines; Tank cars; Tank trucks; Tanker aircraft; Tanker ships; Tanks (combat vehicles); Tracked vehicles; Tractors**  
**ice**  
**ice alsoy: Ice veins**  
**icity**  
 model for scaling avalanche speeds. McClung, D.M., (1990, p.188-198, eng) **45-61**  
 ice velocity measurements by upward-looking Doppler current profilers. Belliveau, D.J., et al, (1990, p.596-602, eng) **45-353**  
 reflection of floating ice in proximity of a slow-moving pressure field. Bukatov, A.E., et al, (1988, p.3-8, rus) **45-875**  
 mass balance comparison of two Swedish glaciers. Stroeven, A.P., et al, (1990, p.113-118, eng) **45-1192**  
 characteristics of the total drift of compacted ice in a coastal zone. Truskov, P.A., et al, (1990, p.110-114, rus) **45-1747**  
 mechanism of self-regulation and attenuation in glacier atmosphere. Kazanski, A.B., et al, (1990, p.156-164, rus) **45-1755**  
 minimum mixture theory with application to turbulent flow. Decker, R., (1990, p.877-887, eng) **45-2096**  
 satellite-image-derived velocity field of an antarctic ice stream. Bindshadler, R.A., et al, (1991, p.242-246, eng) **45-2267**  
 probabilistic concept of safe speeds for arctic shipping. Lunik, A.L., et al, (1990, p.295-306, eng) **45-2739**  
 routine repair and maintenance of railroads in Siberia and the Far East. Diunin, A.K., ed, (1990, 78p., rus) **45-3004**  
 effect of braking structures on the velocity and range of avalanches. Kozlov, I.U.V., et al, (1990, p.46-52, rus) **45-3010**  
 onset of a catastrophic avalanche on the western part of IAM. Kozlov, I.U.V., (1990, p.52-59, rus) **45-3011**  
 all-scale experiments on splitting of ice floes. Sodhi, J.S., (1991, p.171-175, eng) **45-3166**  
 vertical frazil ice: a simplified theoretical model. Kolodko, V., (1990, p.252-260, eng) **45-3581**  
 laboratory investigations of mixing processes under simulated ice cover. Loose, F., (1990, p.324-336, eng) **45-3587**  
**ice alsoy: Seismic velocity; Wind velocity**  
**ity measurement**  
 observations of sea ice drift off Newfoundland using satellite imagery and ice beacons. Peterson, I.K., et al, (1989, p.2359-2362, eng) **45-294**

Determination of surface velocity on the Val Pisella eastern rock glacier (upper Valtellina, central Alps). Smiraglia, C., (1989, p.41-44, ita) **45-360**  
 Sea-ice velocity measurement verification of an acoustic current profiler. Melrose, S.K., et al, (1989, p.1304-1307, eng) **45-449**  
 Optimum drifter deployment for iceberg drift forecasting. Venkatesh, S., et al, (1990, p.117-131, eng) **45-495**  
 Fast-flowing outlet glaciers on Svalbard ice caps. Dowdeswell, J.A., et al, (1990, p.778-781, eng) **45-617**  
 Influence of shape on iceberg wave-induced velocity statistics. Lever, J.H., et al, (1990, p.263-269, eng) **45-716**  
 Observations on falling motion of natural ice crystals. Ferrari, A., et al, (1989, p.137-146, ita) **45-991**  
 Mass balance and ice flow velocity of the Davydov Glacier (1984-85). Aizin, V.B., et al, (1989, p.197-202, rus) **45-1060**  
 World's northernmost surging glacier. Higgins, A.K., et al, (1988, p.111-123, eng) **45-1092**  
 Velocity measurements at the Obersulzbachkees (Venediger Group) in 1985/86 and 1986/87. Slupetzky, H., (1988, p.199-202, eng) **45-1098**  
 Measuring the velocity of electromagnetic wave propagation in a glacier. Sheremet'ev, A.N., (1989, p.59-64, rus) **45-1490**  
 Thickness and movement velocity of ice cover in the area of Dome B. Sheremet'ev, A.N., (1989, p.65-71, rus) **45-1491**  
 Calculating the parameters of ice drift in the Greenland Sea. Zubakin, G.K., (1990, p.105-115, rus) **45-1641**  
 Studies on the fluidized snow dynamics. Nishimura, K., (1990, 55p., eng) **45-2284**  
 Techniques for streamflow measurement under ice conditions. Pelletier, P.M., (1990, p.317-340, eng) **45-2530**  
 Yearly dynamics of the front zone of the Hansa Glacier (1987-1988). Dabrowski, S., et al, (1990, p.109-130, pol) **45-2581**  
 Fram Strait satellite image-derived ice motions. Emery, W.J., et al, (1991, p.4751-4768, eng) **45-2684**  
 Analysis of ice island dynamics. Lu, M.C., et al, (1990, p.241-256, eng) **45-2735**  
 Observations of short-period ice floe accelerations during leg II of the *Polarbjörn* drift. Martin, S., et al, (1991, p.10,567-10,580, eng) **45-3307**  
 Measurements of flow velocity under the ice cover. Yamaguchi, H., et al, (1990, p.1155-1170, eng) **45-3662**  
**Venezuela**  
**—Andes**  
 Talus rock glacier in the Venezuelan Andes. Pérez, F.L., (1988, p.149-159, eng) **45-1095**  
**Ventilation**  
 Some aspects of mining in high mountain area above snow line in China. Li, D.Q., et al, (1989, p.217-225, eng) **45-349**  
 Construction and design of ventilated foundations on permafrost. Goncharov, I.U.M., et al, (1990, p.47-58, rus) **45-1200**  
 Ventilated passages for cooling frozen bearing ground. Kazarnovskii, I.I., et al, (1990, p.32-33, rus) **45-1605**  
**Vertical sections**  
 See *alsoy: Profiles*  
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 Study of VLF electromagnetic fields in the arctic auroral zone. Gusev, A.I., et al, (1986, p.32-35, rus) **45-741**  
**Vessels**  
 See *alsoy: Ships*  
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 Plant cold hardiness. Calkins, J.B., et al, (1990, p.194-211, eng) **45-2964**  
 See *alsoy: Cold tolerance; Cold weather survival; Survival*  
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 Dynamic interaction of ice floes with flexible vertical supports in the sea. Vershinin, S.A., et al, (1989, p.223-237, rus) **45-1508**  
 Ice removal using a rotating working device. Sabatanskene, V.A., et al, (1989, p.403-408, eng) **45-2927**  
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 Application of Maattanen model on multilegged structures. Wang, L.Y., et al, (1990, p.1071-1083, eng) **45-3654**  
 Contribution of damping in the Maattanen model. Xu, J.Z., et al, (1990, p.1097-1104, eng) **45-3656**  
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 Low-temperature performance of elastomeric bearings. Roeder, C.W., et al, (1990, p.113-132, eng) **45-1522**  
**Viscoelasticity**  
 Elastic and rheological properties of sea ice and its texture. Hellmann, H., (1990, 99p., ger) **45-79**  
 Continuum damage modelling of polycrystalline ice. Sjöland, S.G., (1990, p.449-463, eng) **45-3598**  
**Viscosity**  
 Anomalies in the viscosity of amorphous ice. Shavlov, A.V., (1989, p.1206-1207, eng) **45-1026**  
 Good diesel fuel cold properties reduce engine performance. Mikkonen, S., et al, (1989, p.123-132, eng) **45-1224**

Refinery/additive technologies and low temperature engine oil pumpability. Rossi, A., (1989, p.257-267, eng) **45-1239**  
 Lubricant low temperature pumpability studies. May, C.J., et al, (1989, p.277-286, eng) **45-1240**  
 Synthetic automotive lubricants for superior low-temperature operation. Aho, E., et al, (1989, p.421-437, eng) **45-1252**  
 Low temperature operability of diesel engines. Rieckard, D.J., et al, (1989, p.33-37, eng) **45-1290**  
 Synthetic products as basic components of low-pour motor oils. Tsvetkov, O.N., et al, (1990, p.189-192, eng) **45-1385**  
 Critical assessment of low temperature properties of multi-grade SAE 10W-30 engine oils. Deysarkar, A.K., et al, (1990, p.502-507, eng) **45-1525**  
 Planetary applications of slurry rheology. Kargel, J.S., et al, (1991, p.93-112, eng) **45-2288**  
 Modeling solute transport in ground water at or near freezing. Zukowski, M.D., et al, (1991, p.21-25, eng) **45-2795**  
 Graphical method simplifies diesel cloud point determinations. Khan, H.U., et al, (1990, p.98-101, eng) **45-3101**  
 Rheological model of polycrystalline ice. Ivchenko, A.B., (1990, p.230-237, eng) **45-3579**  
**Viscous flow**  
 Rheological fundamentals of soil mechanics. Vialov, S.S., (1986, 564p., eng) **45-612**  
 Studies on the fluidized snow dynamics. Nishimura, K., (1990, 55p., eng) **45-2284**  
**Visibility**  
 Safe vehicle speed on winter roads in blowing snow. Fukuzawa, Y., et al, (1990, p.171-178, jpn) **45-780**  
 Measurement of visibility in blowing snow. Ishimoto, K., (1990, p.195-202, jpn) **45-783**  
 Development of a vehicle-mounted blowing snow monitor. Ishimoto, K., et al, (1987, p.13-17, jpn) **45-922**  
 Investigations of space-time variations in meteorological visibility. Lalkhtman, V.I., et al, (1987, p.108-120, rus) **45-2299**  
 Measuring blowing snow by visibility meters. Nohara, T., et al, (1988, p.189-192, jpn) **45-2514**  
 Springtime visibility in the Arctic. Meyer, F.G., et al, (1991, p.342-357, eng) **45-3017**  
 Snow depth required to mask the underlying surface. Baker, D.G., et al, (1991, p.387-392, eng) **45-3018**  
 Occurrence and characteristics of lower tropospheric ice crystals in the Arctic. Curry, J.A., et al, (1990, p.749-764, eng) **45-3239**  
 See *alsoy: Transparency; Turbidity*  
**Visible Light**  
 Springtime visibility in the Arctic. Meyer, F.G., et al, (1991, p.342-357, eng) **45-3017**  
**Vitreous ice**  
 Glass transition of the amorphous phase in frozen aqueous systems. Blond, G., et al, (1991, p.239-247, eng) **45-2937**  
 Recent insights on the role of cryoprotective agents in vitrification. MacFarlane, D.R., et al, (1990, p.345-358, eng) **45-2961**  
 Prediction of devitrification tendency. Boutron, P., et al, (1990, p.359-377, eng) **45-2962**  
 Experimental dissection of devitrification in aqueous solutions of 1,3-butanediol. Mehl, P.M., (1990, p.378-400, eng) **45-2963**  
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 Dirt bands in the bare ice area of the Sör Rondane Mountains. Narokka, H., et al, (1991, p.47-55, jpn) **45-3395**  
 Volcanic ash from the 1362 A.D. Oraefajokull eruption (Iceland) in the Greenland Ice Sheet. Palais, J.M., et al, (1991, p.1241-1244, eng) **45-3762**  
**Volcanoes**  
 Production of phreatic explosions in the interaction of lava and ice. Vinogradov, V.N., et al, (1990, p.89-98, eng) **45-1076**  
 Avacha fumarolic trace elements: distribution in snow and surface waters. Alekseev, V.A., et al, (1990, p.325-336, eng) **45-1704**  
 Mass balance and thermal regime of a crater glacier at Ushkovskii Volcano. Murav'ev, I.A.D., et al, (1990, p.411-424, eng) **45-1705**  
 Fluid volcanism on Miranda and Ariel: flow morphology and composition. Schenk, P.M., (1991, p.1887-1906, eng) **45-2166**  
 Hazardous hydrologic consequences of volcanic eruptions. Pierson, T.C., (1989, p.220-236, eng) **45-2769**  
 Glacial and volcanic geomorphology of the Chimborazo—Carihuairazo Massif, Ecuadorian Andes. Clapperton, C.M., (1990, p.91-116, eng) **45-2789**  
 Volcanoes of North America: United States and Canada. Wood, C.A., ed, (1990, 354p., eng) **45-2827**  
 Volcanoes of the antarctic plate and southern oceans. LeMasurier, W.E., ed, (1990, 487p., eng) **45-2926**  
**Volume**  
 Volume and entropy changes of water in electrolyte solutions below 0 deg C. Leyendekkers, J.V., (1990, p.2231-2236, eng) **45-2260**  
 See *alsoy: Ice volume*



- Walls**  
 Improving thermal insulation of external wall panel joints. Zheleznyf, V.I., [1985, p.27-38, rus] 45-633  
 Impermeability of closed-system frozen walls. Tobe, N., [1989, p.137-146, jpn] 45-871  
 Reinforced earth walls in cold regions. Noto, S., [1986, p.29-33, jpn] 45-929  
 Heat flux transducer measurement of thermal performance of walls. Burch, D.M., et al, [1991, p.111-122, eng] 45-2655  
 Thermal admittance of a wall measured by heat flux. Bellatir, S., et al, [1991, p.123-142, eng] 45-2656  
 Prediction of wall temperature gradients in concrete storage structures. Jofriet, J.C., et al, [1991, p.12-19, eng] 45-2665  
 Using lightweight avalanche protection walls for railroad lines. Vetoshkina, N.A., et al, [1990, p.41-46, rus] 45-3009
- Warning systems**  
 Bibliography on ice and fog: detection and warning systems. [1990, 95p., eng] 45-205  
 On-line early warning system for ice jams and stoppages on the upper Niagara River. Crissman, R.D., [1990, p.719-736, eng] 45-2256  
 See *also*: Monitors
- Waste disposal**  
 Environmental protection of West Siberian oil-bearing areas. Abzalov, R.Z., et al, [1989, p.128-135, rus] 45-109  
 Waste management at Terra Nova Bay. Cervellati, R., et al, [1990, p.664-682, eng] 45-169  
 Closure of the Black Angel zinc and lead mine in Greenland. Asmund, G., et al, [1990, p.744-759, eng] 45-176  
 Ground water. Nelson, G.L., et al, [1990, p.317-348, eng] 45-412  
 Cold region environmental concerns. Alter, A.J., [1990, p.257-298, eng] 45-2092  
 Freeze-thaw effects on clay covers and liners. Chamberlain, E.J., et al, [1991, p.136-151, eng] 45-2329  
 Design and construction of ash dumps. Sysoev, I.U.M., et al, [1990, 249p., rus] 45-2574  
 Geohydrology and ground-water geochemistry at a sub-arctic landfill, Fairbanks, Alaska. Downey, J.S., et al, [1990, 25p., eng] 45-2914  
 Winter channel formation in sluiced disposal areas. Pantelev, V.G., et al, [1990, p.709-718, eng] 45-3621  
 See *also*: Sewage disposal
- Waste treatment**  
 Effect of winter heat loss on treatment plant efficiency. Wells, S.A., [1990, p.34-39, eng] 45-306  
 Tailings management program—an operating success, Echo Bay's Lupin Mine. Wilson, H.R., [1989, p.135-144, eng] 45-341  
 Fungi in reclamation of cold climate mining wastes. Veith, D.L., et al, [1989, p.177-188, eng] 45-346  
 Low-temperature destabilization of oil emulsion systems in water treatment technology. Andrienko, N.M., [1989, p.95-98, eng] 45-666  
 Freezing of water and wastewater sludges. Vesilind, P.A., et al, [1990, p.854-862, eng] 45-1086  
 Effect of the PVA freezing method on nitrification of sludge cell reactors. Myoga, H., et al, [1991, p.1117-1124, eng] 45-1675  
 Constructed wetlands for wastewater treatment: municipal, industrial, and agricultural. [1989, 831p., eng] 45-1873  
 Use of wetlands for treatment of mining wastes. Wildeman, T.R., et al, [1989, p.221-231, eng] 45-1879  
 Wetlands for wastewater treatment at oil refinery. Litchfield, D.K., et al, [1989, p.233-237, eng] 45-1880  
 Performance expectations and loading rates for constructed wetlands. Watson, J.T., et al, [1989, p.319-351, eng] 45-1881  
 Biology and chemistry of generation, prevention and abatement of acid mine drainage. Silver, M., [1989, p.753-760, eng] 45-1891  
 Research site for passive mine drainage treatment. Howard, E.A., et al, [1989, p.761-764, eng] 45-1892  
 Manganese and iron encrustation on green algae living in acid mine drainage. Stevens, S.E., Jr., et al, [1989, p.765-773, eng] 45-1893  
 Using forest products in the treatment of acid mine drainage. Howard, E.A., et al, [1989, p.774-779, eng] 45-1894  
 Use of wetlands to remove nickel and copper from mine drainage. Eger, P., et al, [1989, p.780-787, eng] 45-1895  
 Windsor Coal Company wetland: an overview. Kolbash, R.I., et al, [1989, p.788-792, eng] 45-1896  
 Wetland treatment of coal mine drainage: controlled studies of iron retention in model wetland systems. Henrot, J., et al, [1989, p.793-800, eng] 45-1897  
 Gas chromatography determination of volatile organics in soil. Hewitt, A.D., et al, [1991, 7p., eng] 45-2826  
 Freeze crystallization leaves contaminants out in the cold. Roy, K.A., [1990, p.56-61, eng] 45-2913
- Composting of explosives-contaminated soils in cold climates. Ayorinde, O.A., et al, [1991, 29p., eng] 45-2917  
 Tailings management in the Canadian Arctic: Echo Bay's Lupin Mine. Wilson, H.R., [1991, p.213-214, eng] 45-3363  
 Solvent-water partitioning and extraction of phosphonates. Leggett, D.C., [1990, p.889-895, eng] 45-3740  
 Longitudinal dispersion in overland flow of wastewater. Adrian, D.D., et al, [1990, p.1-8, eng] 45-3742  
 Dissolution of metals from soils by nitric acid. Hewitt, A.D., et al, [1990, p.187-192, eng] 45-3744  
 See *also*: Sewage treatment
- Wastes**  
 Winter fecal coliform concentrations in stream sediments. Kidd, D.R., [1989, n.p., eng] 45-1654  
 Using wastes from soda production for lowering the freezing temperature. Tseftin, N.A., et al, [1990, p.55-64, rus] 45-3002  
 Treatment of wastewater in polar environments—status and future trends in Scandinavia. Rusten, B., et al, [1990, p.99-106, eng] 45-3028  
 Estimation of detection capability for toxic wastes. Grant, C.L., et al, [1991, p.15-33, eng] 45-3735  
 Microwave-heated-acid dissolution of metals from contaminated soils and sediments. Hewitt, A.D., et al, [1989, p.463-470, eng] 45-3765  
 See *also*: Radioactive wastes
- Water**  
 Effect of cooling rate on freezing temperature of supercooled water. Saito, A., et al, [1990, p.1697-1709, eng] 45-487  
 Spin-lattice relaxation and molecular dynamics of supercooled water. Zavadovskii, A.G., [1989, p.1170-1172, eng] 45-1025  
 Natural convection heat transfer in water near its density maximum. Yen, Y.C., [1990, 92p., eng] 45-2237  
 See *also*: Anomalous water; Artesian water; Distilled water; Ground water; Heavy water; Hygroscopic water; Lake water; Meltwater; Salt water; Sea water; Soil water; Supermafrost ground water; Suprapermafrost ground water; Surface waters; Unfrozen water content
- Water air interactions**  
 See *also*: Air water interactions
- Water balance**  
 Climate change and erosion processes in mountain regions of western Canada. Slaymaker, O., [1990, p.171-182, eng] 45-620  
 Runoff from hummocky marshes of western Siberia. Moskvina, I.U.P., [1989, p.73-78, eng] 45-661  
 Water cycle and climate. Peixoto, J.P., et al, [1990, p.570-579, fre] 45-964  
 Snow/ink hydrology in the continuous permafrost zone. Lewkowicz, A.G., et al, [1990, p.13-21, eng] 45-1186  
 Methods of evaluating the hydrological role of snow management. Shutov, V.A., [1990, p.15-23, eng] 45-1387  
 Geography of surface runoff: some lessons for research. Church, M., et al, [1990, p.299-325, eng] 45-1481  
 Water-regulating role of taiga forests. Rubtsov, M.V., et al, [1990, 222p., rus] 45-1574  
 Thermic and humidity relations of chosen Spitsbergen soils. Angiel, M., [1990, p.25-37, eng] 45-2430  
 Response of soil moisture change to hydrological processes in a continuous permafrost environment. Woo, M.K., et al, [1990, p.235-252, eng] 45-2525  
 Evapotranspiration from a small Alaskan arctic watershed. Kane, D.L., et al, [1990, p.253-272, eng] 45-2526  
 Hydrologic processes in a southern Ontario wetland. Gehrels, J., et al, [1990, p.221-234, eng] 45-2942  
 Water yield models for snow-covered Iranian watersheds. Moussavi, M., et al, [1990, p.535-546, eng] 45-2993  
 Hydro-thermally balanced and microclimatic investigations of a meadow-improving plot. Gavrilova, M.K., [1990, p.36-45, rus] 45-3033  
 Hydrologic and thermal properties of the active layer in the Alaskan Arctic. Hinzman, L.D., et al, [1991, p.95-110, eng] 45-3417  
 Arctic hydrology in Greenland—permafrost hydrology and data technology. Thomsen, T., [1990, p.9-26, eng] 45-3778  
 Structural and measurement problems of arctic atmospheric water balance. Lenart, W., [1990, p.37-45, eng] 45-3780  
 Studies of the arctic water resources: state-of-the-art and future plans. Ivanov, V.V., [1990, p.63-74, eng] 45-3783  
 Using spreadsheet software in water-balance modeling. Dexter, L.R., et al, [1991, p.527-536, eng] 45-3817
- Water chemistry**  
 Water-quality research. Gregor, D.J., [1990, p.163-186, eng] 45-218  
 Gas hydrate and acoustically laminated sediments. Max, M.D., [1990, 72p., eng] 45-314  
 Origin of the properties of the halocline north of Ellesmere I. Jones, E.P., et al, [1990, p.485-498, eng] 45-524  
 Water quality of peatlands and man's influence on it. Sallantausta, T., [1988, p.80-98, eng] 45-769  
 Chemical characteristics of water in northern prairie wetlands. LaBaugh, J.W., [1989, p.56-90, eng] 45-833
- Ice nucleation by alcohols layered in water. Gavish, M., et al, [1990, p.973-975, eng] 45-911  
 Role of cryogenesis in the formation of ground water in ore deposits. Makarov, V.N., [1989, p.37-55, rus] 45-1827  
 Ultraviolet transmission of sea ice. Trodahl, H.J., et al, [1990, p.2177-2179, eng] 45-1994  
 Recent developments in snow-chemistry research in the western United States. Davis, R.E., et al, [1990, p.99-107, eng] 45-2190  
 Chemical composition of soil and ground waters in freezing swamps. Ivanov, A.V., et al, [1989, p.149-154, rus] 45-2447  
 Geochemical processes in the Lake Fryxell Basin (Victoria Land, Antarctica). Green, W.J., et al, [1989, p.129-148, eng] 45-2612  
 Some aspects of iron cycling in maritime antarctic lakes. Ellis-Evans, J.C., et al, [1989, p.149-164, eng] 45-2613  
 Biogeochemical study of organic substances in antarctic lakes. Matsumoto, G.I., [1989, p.265-289, eng] 45-2619  
 Vertical distribution of organic constituents in an antarctic lake: Lake Fryxell. Matsumoto, G.I., et al, [1989, p.291-303, eng] 45-2620  
 Combined geocryological and hydrogeological investigations. Collected scientific articles. Anisimova, N.P., ed, [1989, 163p., rus] 45-2623  
 Chemical composition of suprapermafrost ground water in the active layer. Lebedeva, T.N., [1989, p.22-33, rus] 45-2626  
 Gas-hydrogeochemical variations in the active layer in northeast USSR. Giotov, V.E., [1989, p.33-46, rus] 45-2627  
 Formation of the chemical composition of water in Kolyma Bay. Razumov, S.O., [1989, p.78-87, rus] 45-2632  
 Model for description of seasonal mountainous snowmelt. Babiaková, G., et al, [1990, p.383-393, eng] 45-2994  
 Formation of the chemical composition of surface waters. Brazhnik, S.N., [1990, p.73-77, rus] 45-3037  
 Longitudinal and seasonal water chemistry variations in a northern Appalachian stream. Phillips, R.A., et al, [1990, p.489-498, eng] 45-3697  
 Role of atmospheric precipitation in the formation of the chemical content of surface water. Brazhnik, S.N., [1990, p.73-77, rus] 45-3866
- Water content**  
 Characteristic curves of soil water potential. Deng, Y.S., et al, [1990, p.48-54, chi] 45-461  
 Determining low levels of nitroaromatics and nitramines in water. Miyares, P.H., et al, [1990, 26p., eng] 45-663  
 Radar reflectivity-ice water content relationships for use above the melting level in hurricanes. Black, R.A., [1990, p.955-961, eng] 45-774  
 Scheme for parameterizing ice-cloud water content in general circulation models. Heymsfield, A.J., et al, [1990, p.1865-1877, eng] 45-1803  
 Water content during abscisic acid induced freezing in bromegrass cells. Tanino, K., et al, [1990, p.460-464, eng] 45-3276  
 See *also*: Snow water content; Unfrozen water content
- Water erosion**  
 Climate change and erosion processes in mountain regions of western Canada. Slaymaker, O., [1990, p.171-182, eng] 45-620  
 Recent water release in the Thariss region of Mars. Mouginiis-Mark, P.J., [1990, p.362-373, eng] 45-896  
 Boulder-paved river channels: a case study of a fluvio-periglacial landform. Davies, D.A., et al, [1990, p.213-231, eng] 45-1389  
 Alpine proglacial fluvial sediment budget. Warburton, J., [1990, p.261-272, eng] 45-2029  
 Bank recession and channel changes near dikes on the Tanana River, AK. Gatto, L.W., [1983, p.4.2-4.21, eng] 45-2492  
 Morphological changes in the Swiss Alps resulting from the 1987 summer storms. Nsef, F., et al, [1989, p.36-42, eng] 45-2768
- Water films**  
 Investigation of surface water behavior during glaze ice accretion. Hansman, R.J., Jr., et al, [1990, p.55-62, eng] 45-601  
 Properties and effect of freezing rain and winter fog on outline insulators. Farzaneh, M., et al, [1990, p.33-46, eng] 45-1765  
 Physics of supercooling of thin water skins covering gyrating hailstones. List, R., [1990, p.1919-1925, eng] 45-1804  
 Comments on "Physics of supercooling of thin water skins covering gyrating hailstones". Knight, C.A., et al, [1991, p.217-220, eng] 45-1805  
 On the ski-snow sliding mechanism. Aparin, V.I., et al, [1990, p.57-59, eng] 45-3266
- Water flow**  
 Freezing characteristics of layered air-water flow in a horizontal circular tube. Fukusako, S., et al, [1989, p.47-53, jpn] 45-701  
 Ice conditions in pools of the dam of the Kolyma hydroelectric station during initial operation. Kozhevnikova, T.E., et al, [1990, p.104-107, eng] 45-855

- Water flow (cont.)**  
 Effect of hydrometeorological factors on spreading of oil products in reservoirs. Al'khimenko, A.I., [1989, p.199-204, eng] 45-1079  
 Ice formation in water flow around cooled cylinders. Hirata, T., et al, [1990, p.707-713, eng] 45-1263  
 Currents and water temperatures in Green Bay. Gottlieb, E.S., et al, [1990, 90p., eng] 45-1417  
 Simulation of flood waves from outburst of glacier-dammed lake. Fernández, P.C., et al, [1991, p.42-53, eng] 45-1655  
 Measuring water flow using ultrasound. Zatylnikov, A.I., [1988, p.13-19, rus] 45-1857  
 Performance expectations and loading rates for constructed wetlands. Watson, J.T., et al, [1989, p.319-351, eng] 45-1881  
 Substrate design for wetlands wastewater treatment. Steiner, G.R., et al, [1989, p.363-377, eng] 45-1882  
 Hydraulic properties in an operational model of frozen soil. Lundin, L.-C., [1990, p.289-310, eng] 45-2089  
 Apparent hydraulic conductivities associated with thawing, frost-susceptible soils. Egginton, P.A., et al, [1990, p.69-77, eng] 45-2236  
 Dynamic transport of river ice. Shen, H.T., et al, [1990, p.659-671, eng] 45-2251  
 Jam initiation in unobstructed channels: laboratory observations. Ettema, R., [1990, p.673-684, eng] 45-2252  
 Forecasting the time distribution of water inflow into a reservoir. Komarov, V.D., [1989, p.3-10, rus] 45-2274  
 Glacial waters, solid transport and decantation in hydroelectrical systems. Bezinge, A., et al, [1989, p.247-256, fre] 45-2286  
 Heat exchange at the ice/water interface on flowing water. Hausser, R., et al, [1991, p.348-354, eng] 45-2346  
 Use of uranium-isotope information for modeling water inflow in fractured rocks under permafrost conditions. Chalov, P.I., et al, [1991, p.166-174, eng] 45-2439  
 Formation and regime of the flow of suprapermafrost ground water. Boltsov, A.V., [1989, p.61-65, rus] 45-2629  
 Role of large-scale under-ice topography in separating estuary and ocean on an arctic shelf. Macdonald, R.W., et al, [1991, p.37-53, eng] 45-2791  
 Subice layering and origin of acidic waters in a small boreal lake during spring runoff. Roberge, J., et al, [1991, p.479-492, eng] 45-3105  
 Ice cover melting under turbulent flow conditions. Sarraf, S., et al, [1990, p.313-316, eng] 45-3194  
 Influence of ice cover on transverse bed slopes in a curved alluvial channel. Tsai, W.F., et al, [1990, p.800-810, eng] 45-3630  
 Longitudinal dispersion in overland flow of wastewater. Adrian, D.D., et al, [1990, p.1-8, eng] 45-3742  
 Hydrology of Svalbard—hydrological problems in cold climate. Proceedings, [1990, 224p., eng] 45-3776
- Water freezing**  
 See *also*: Ice formation
- Water ice interface**  
 See *also*: Ice water interface
- Water intakes**  
 Considerations in the design and operation of hydro power intakes. Gemperline, E.J., [1990, p.517-556, eng] 45-420  
 Glacial waters, solid transport and decantation in hydroelectrical systems. Bezinge, A., et al, [1989, p.247-256, fre] 45-2286  
 Use and improvement in the quality of water in sublacustrine taliks. Fedorov, A.M., [1989, p.96-107, rus] 45-2634  
 Determining subaqueous discharging of suprapermafrost ground water. Anisimova, N.P., et al, [1989, p.108-114, rus] 45-2635  
 Frazil ice blockage of intake trash racks. Daly, S.F., [1991, 12p., eng] 45-2921  
 Investigation of trash rack heating to prevent frazil ice freezeup. Daly, S.F., et al, [1990, p.584-595, eng] 45-3609
- Water jets**  
 See *also*: Hydraulic jets
- Water level**  
 Calculating ice jam water levels. Buzin, V.A., [1989, p.79-84, eng] 45-662  
 Development of water level observation systems for winter. Nagasaka, T., et al, [1990, p.185-190, jpn] 45-745  
 Geocryological changes in hydroelectric station reservoir basins. Kudoiarov, L.I., et al, [1990, p.55-60, eng] 45-854  
 Determining bending moments. Matskevich, D.G., et al, [1988, p.140-146, rus] 45-1517  
 Determining loads from adhered ice on a support column system. Shkhinek, K.N., et al, [1987, p.76-80, rus] 45-1566  
 Possible climate change and its impact on snowmelt and water supply in California. Roos, M., [1990, p.130-136, eng] 45-2130  
 Water level and ice melting observations on Beaver Lake. Piakun, A.A., [1990, p.55-64, rus] 45-2570  
 Effects of an altered water regime on Great Lakes coastal wetlands. Mortach, L., [1990, p.217-224, eng] 45-3299
- Forecasting of river water level elevation due to ice jams. Havlik, A., [1990, p.606-615, eng] 45-3611  
 Prediction of maximum water stages due to ice jams. Karnovich, V.N., et al, [1990, p.674-679, eng] 45-3617  
 Calculation of water level in a river reach with frazil ice jam. Sun, Z.C., et al, [1990, p.756-765, eng] 45-3626  
 Ecological aspects of lake regulation in northern Finland. Part 1. General results. Alasaarela, E., et al, [1989, 56p., fin] 45-3844  
 Ecological aspects of lake regulation in northern Finland; part 5. Alasaarela, E., et al, [1989, 49p., fin] 45-3847  
 See *also*: Sea level; Water table
- Water pollution**  
 Diagnostic-feasibility study of Lake Riley. Final report. Osgood, R.A., [1983, 47p., eng] 45-84  
 Episodic acidification of Adirondack lakes during snowmelt. Schaefer, D.A., et al, [1990, p.1639-1647, eng] 45-224  
 Water quality considerations. Jokela, J.B., [1990, p.349-369, eng] 45-413  
 Determining low levels of nitroaromatics and nitramines in water. Miyares, P.H., et al, [1990, 26p., eng] 45-663  
 Pollution of the environment by fluorine in the Far North. Fedorov, A.S., et al, [1989, p.95-100, rus] 45-739  
 Change in concentration of petroleum products at low temperatures. Nemirovskaia, I.A., [1989, p.273-280, eng] 45-771  
 In-situ detection of contaminant plumes in ground water. Seitz, W.R., [1990, 12p., eng] 45-935  
 Literature survey on arctic pollution. Blackburn, D., et al, [1990, 24p., eng] 45-945  
 Effect of hydrometeorological factors on spreading of oil products in reservoirs. Al'khimenko, A.I., [1989, p.199-204, eng] 45-1079  
 Draft supplemental environmental impact statement; Kodiak Harbor, Alaska. [1990, 86p. + appends., eng] 45-1147  
 Water resources data for Alaska, water year 1989. Lamke, R.D., et al, [1990, 224p., eng] 45-1148  
 Avacha fumarolic trace elements: distribution in snow and surface waters. Alekseev, V.A., et al, [1990, p.325-336, eng] 45-1704  
 Electrical resistivity studies of ground water contamination. Campanella, R.G., et al, [1990, 42p., eng] 45-2310  
 Modeling runoff in semiarid rangeland watersheds. Heydarpour, J., [1989, p.210-215, eng] 45-2403  
 Environmental protection of Lake Saroma, Hokkaido. Takeuchi, T., et al, [1988, p.65-70, jpn] 45-2507  
 Air-sea exchange of organic air pollutants in arctic oceans. Hincley, D.A., et al, [1991, p.7201-7213, eng] 45-2559  
 Determining subaqueous discharging of suprapermafrost ground water. Anisimova, N.P., et al, [1989, p.108-114, rus] 45-2635  
 Geochemistry and ground-water geochemistry at a sub-arctic landfill, Fairbanks, Alaska. Downey, J.S., et al, [1990, 25p., eng] 45-2914  
 Microbial transformation of polychlorinated biphenyls in polar marine regions. Izrael, I.U.A., et al, [1990, p.4-7, eng] 45-3052  
 Environmental threats in the arctic. Stokke, O.S., [1990, p.22-41, eng] 45-3087  
 Environmental threats of military presence in the arctic. Heininen, L., [1990, p.42-69, eng] 45-3088  
 Oil-oxidizing and heterotrophic microflora on the Eastern Murman coast. Dermicheva, S.G., [1985, p.139-143, eng] 45-3290  
 Environmental protection in the Soviet arctic seas. Roginko, A., [1991, p.63-82, eng] 45-3327  
 Highway deicing salts and the mobilization of selected heavy metals from stream sediments. Cole, H.D., [1990, 126p., eng] 45-3353  
 Brine-induced advection of dissolved aromatic hydrocarbons to arctic bottom waters. Payne, J.R., et al, [1991, p.940-951, eng] 45-3818
- Water pressure**  
 Mechanism of expansion of concrete aggregate due to frost action. Rusin, Z., [1991, p.614-624, eng] 45-3399
- Water purification**  
 See *also*: Aeration; Water treatment
- Water reserves**  
 Water and wetland resources of the Nebraska sandhills. Novacek, J.M., [1989, p.340-384, eng] 45-836  
 Climate change, hydrology, and water resources. Gleick, P.H., [1989, p.329-344, eng] 45-960  
 Variations in water reserves of some glaciers of Central Asia. Akbarov, A.A., [1990, p.84-94, rus] 45-1109  
 Himalayan glaciers as a sustainable water resource. Hasnain, S.I., [1989, p.106-112, eng] 45-1674  
 Snow cover on small forest and field watersheds in the taiga zone of the European USSR. Derugin, A.A., [1990, p.101-105, eng] 45-2080  
 Calculating the effect of water reserves and depth of soil freezing. Komarov, V.D., [1989, p.21-29, rus] 45-2275  
 Searching for the waters of Mars. Squyres, S.W., [1989, p.20-28, eng] 45-2534  
 Water yield models for snow-covered Iranian watersheds. Mousavi, M., et al, [1990, p.535-546, eng] 45-2993
- Water and ice resources of the Issyk-Kul-Chu region, their current and future state. Dikikh, A.N., et al, [1991, p.390-396, eng] 45-3237  
 Implications of climate change for water resources in the Great Lakes basin. Clamen, M., [1990, p.179-186, eng] 45-3297  
 Regional climate change impacts: 1. Impacts on water resources. Mimikou, M.A., et al, [1991, p.247-258, eng] 45-3444  
 Estimated runoff from man-made snow. Eisel, L.M., et al, [1990, p.519-526, eng] 45-3698  
 Hydrology of Svalbard—hydrological problems in cold climate. Proceedings, [1990, 224p., eng] 45-3776  
 Studies of the arctic water resources: state-of-the-art and future plans. Ivanov, V.V., [1990, p.63-74, eng] 45-3783  
 Groundwater in cold climates: interaction between glacier and karst aquifers. Lauritzen, S.E., [1990, p.139-146, eng] 45-3790  
 Time and space distribution of water reserves in snow in field and forest catchment areas. Sokolova, N.V., [1991, p.105-110, rus] 45-3840
- Water retention**  
 Hydrogeochemistry of snow and snowmelt in catchment hydrology. Jones, H.G., et al, [1990, p.255-297, eng] 45-1480
- Water storage**  
 Effects of beaver dams on subarctic wetland hydrology. Woo, M.K., et al, [1990, p.223-230, eng] 45-1420  
 Surface radar investigations of an icing mound on the Sagavanirktok River, Alaska. Arcone, S.A., et al, [1990, p.353-363, eng] 45-2744  
 See *also*: Ice (water storage); Snow retention; Snow water equivalent; Water retention
- Water structure**  
 Properties of water clusters and one-dimensional ice. Hagen, D.E., et al, [1990, p.1391-1396, eng] 45-226  
 Identification of two distinct structural and dynamical domains in an amorphous water cluster. Buch, V., [1990, p.2631-2639, eng] 45-805  
 Study of the frozen water-poly(vinyl alcohol) system by H-2 and C-13 NMR spectroscopy. Gusev, D.G., et al, [1990, p.651-655, eng] 45-958  
 Structure of water. Eagland, D., [1990, p.548-552, fre] 45-963  
 Raman spectroscopic study of dilute HOD in liquid H<sub>2</sub>O in the temperature range -31.5 to 160 C. Hare, D.E., et al, [1990, p.6954-6961, eng] 45-1172  
 Volume and entropy changes of water in electrolyte solutions below 0 deg C. Leyendekkers, J.V., [1990, p.2231-2236, eng] 45-2260  
 Estimation of supercooling temperature of water. Maliarenko, V.V., [1989, p.26-29, eng] 45-2481  
 Promotion of H-bond cage dynamics by alcohol in supercooled water. Bulone, D., et al, [1991, p.6816-6826, eng] 45-2776  
 Four-photon polarization spectroscopy of a Rayleigh line wing in liquid water near 0 deg C. Bunkin, A.F., et al, [1990, p.29-31, eng] 45-2930
- Water supply**  
 Yukon territory snow survey bulletin and water supply forecast—May, [1990, 24p., eng] 45-73  
 Yukon territory snow survey bulletin and water supply forecast—May, [1990, 24p., eng] 45-74  
 Yukon territory snow survey bulletin and water supply forecast—April, [1990, 24p., eng] 45-75  
 Yukon territory snow survey bulletin and water supply forecast—March, [1990, 25p., eng] 45-76  
 Estimation of the recharge area contributing water to a pumped well. Morrissey, D.J., [1989, 50p., eng] 45-86  
 Fiscal year 1988 program report: Alaska Water Research Center. Kane, D.L., [1990, 65p., eng] 45-95  
 Surface water supplies. Ryan, W.L., [1990, p.301-316, eng] 45-411  
 Water quality considerations. Jokela, J.B., [1990, p.349-369, eng] 45-413  
 Use of water of taliks above permafrost for water supply to oil fields. Burchak, T.V., et al, [1989, p.15-24, eng] 45-647  
 Winter short-pulse radar studies on the Tanana River, Alaska. Delaney, A.J., et al, [1990, p.244-250, eng] 45-1421  
 Yukon Territory snow survey bulletin: Mar. 1991, [1991, 25p., eng] 45-2093  
 Western Snow Conference, 58th, 1990, [1990, 170p. + appends., eng] 45-2114  
 Status of the California Cooperative Snow Surveys Program. Hart, D., et al, [1990, p.9-14, eng] 45-2116  
 Snow surveys and water supply forecasting. Johnson, D.E., [1990, p.15-22, eng] 45-2117  
 Use of state-of-the-art systems for optimum water management. Horciza, E.E., [1990, p.87-91, eng] 45-2125  
 Method of narrowing the water supply forecast range. Stein, R.E., [1990, p.92-98, eng] 45-2126  
 Calculating maximum and minimum water supply forecasts. Huber, A.L., [1990, p.99-109, eng] 45-2127

- Possible climate change and its impact on snowmelt and water supply in California. Roos, M., [1990, p.130-136, eng] **45-2130**
- Snow fencing near pit reservoirs to improve water supplies. Jairell, R.L., et al, [1990, p.156-159, eng] **45-2136**
- 1948 flood on the Columbia River. Speers, D.D., et al, [1990, p.160-163, eng] **45-2137**
- Low flows and hydrologic droughts. Rogers, J.D., et al, [1990, p.121-130, eng] **45-2148**
- Water conservation at the antarctic Wesa Base—results 1989-90. Marklund, S., [1991, p.85-94, eng] **45-2324**
- Hazards to water resources development in mountain regions. Hewitt, K., [1989, p.294-312, eng] **45-2772**
- Use of satellite data for water resources modelling—a Canadian example. Kite, G.W., [1991, p.21-29, eng] **45-2796**
- Geological-geomorphological aspects of water supply problems in Siberia. Zykina, V.S., ed, [1990, 137p., rus] **45-2818**
- Results of an aquifer test for a proposed water supply at Anchor Point, Alaska. Petrik, W.A., et al, [1991, 13p., eng] **45-2843**
- Summary of water-use data in Alaska, 1986. Petrik, W.A., [1990, 68p., eng] **45-2844**
- Climate change and water supply and demand in western Canada. Lawford, R.G., [1990, p.193-200, eng] **45-3298**
- Polar ice and iceberg use: potential for water supply. Stablein, G., [1991, p.348-354, ger] **45-3555**
- Isdammen: the public water supply in Longyearbyen. Björnsen, B., [1990, p.1-8, eng] **45-3777**
- See *also*: Alimentation
- Water temperature**
- Year-round temperature simulation of cold climate lakes. Gu, R., et al, [1990, p.147-160, eng] **45-497**
- On the rate of heat transfer between a lake and an ice sheet. Hamblin, P.F., et al, [1990, p.173-182, eng] **45-499**
- Origin of the properties of the halocline north of Ellesmere I. Jones, E.P., et al, [1990, p.485-498, eng] **45-524**
- International Ice Patrol's air-deployed bathythermograph system. Alfultis, M.A., [1989, p.1652-1657, eng] **45-723**
- Temperature-salinity-density ratio near the Pacific subarctic front. Kuz'min, V.A., [1989, p.58-61, rus] **45-737**
- Converting the thermal energy of arctic sea water into electricity. Moskvicheva, V.N., et al, [1987, p.72-77, eng] **45-866**
- Interannual variability of cold water at the bottom of the continental shelf of the southeastern Bering Sea. Ohtani, K., et al, [1990, p.230-235, jpn] **45-869**
- Distinguishing the Pacific subarctic front. Kuz'min, V.A., [1988, p.60-62, rus] **45-876**
- Solar heating of a stratified ocean in the presence of a static ice cover. Perovich, D.K., et al, [1990, p.18,233-18,245, eng] **45-1020**
- Long-term temperature monitoring program, 1987: Scotia-Fundy, Gulf of St. Lawrence, and Newfoundland. Gregory, D.N., et al, [1988, 491p., eng] **45-1275**
- Current meter, CTD and meteorological observations on the northern Grand Banks for Apr.-Oct. 1986. DeYoung, B., et al, [1988, 94p., eng] **45-1276**
- Oceanographic observations of the Grand Banks. Petrie, B., et al, [1988, 270p., eng] **45-1277**
- Long-term temperature monitoring program, 1989: Scotia-Fundy and the Gulf of St. Lawrence. Gregory, D.N., et al, [1990, 175p., eng] **45-1278**
- Long-term temperature monitoring program, 1988: Scotia-Fundy and Gulf of St. Lawrence. Gregory, D.N., et al, [1989, 233p., eng] **45-1279**
- Hydrographic measurements from C.S.S. Hudson Cruise 82-002. Hendry, R.M., [1989, 112p., eng] **45-1281**
- Monthly means of temperature, salinity and sigma-t for the Gulf of St. Lawrence. Petrie, B., [1990, 137p., eng] **45-1284**
- Currents and temperature data from northwestern Baffin Bay, Sep. 1983-Sep. 1984. Ross, C.K., [1990, 227p., eng] **45-1285**
- Currents and temperature data from southwestern Baffin Bay, Oct. 1984-Oct. 1985. Ross, C.K., [1990, 180p., eng] **45-1286**
- Sea ice observations and oceanic processes on the antarctic continental shelf. Jacobs, S.S., et al, [1990, p.135-136, eng] **45-1415**
- Currents and water temperatures in Green Bay. Gottlieb, E.S., et al, [1990, 90p., eng] **45-1417**
- Contact supercooling of water layers and bottom ice formations in the sea. Cherepanov, N.V., et al, [1989, p.124-134, rus] **45-1499**
- Radiative thermophysics of snow and ice. Kraas, M.S., et al, [1990, 260p., rus] **45-1532**
- Mechanism of frazil ice formation in the Antarctic. Korotkov, A.I., [1990, p.105-116, rus] **45-1562**
- Melting rate of fresh ice in sea water and the temperature of the current. Bannov-Balkov, I.U.L., et al, [1989, p.106-113, rus] **45-1660**
- Ice and thermal conditions of small flatland reservoirs. Emel'yanov, I.U.N., et al, [1990, p.101-104, rus] **45-1744**
- Winter environment of the Ohio River valley. Daly, S.F., et al, [1990, 57p., eng] **45-1999**
- Temperature of water masses and the surface of bottom sediments of Lake Krugloye. Kotlov, S.B., et al, [1989, p.102-110, rus] **45-2015**
- Anomalous temperature and oxygen gradients under the ice of a high-plains lake in Wyoming. Rahel, F.J., [1990, p.751-755, eng] **45-2020**
- Regulation of the temperature regime of lower pools of high-head hydro developments. Liapin, V.E., [1990, p.329-335, eng] **45-2165**
- Thermohaline structure and dynamics of water masses. Jankowski, A., et al, [1990, p.3-16, eng] **45-2428**
- Estimation of supercooling temperature of water. Maliarenko, V.V., [1989, p.26-29, eng] **45-2481**
- Heat flux at the ice-ocean interface. Wettlaufer, J.S., [1991, p.7215-7236, eng] **45-2560**
- Hydrographic observations of an arctic front in the Greenland Sea. van Aken, H.M., et al, [1991, p.4739-4750, eng] **45-2683**
- Turbulent mixing near the Yermak Plateau during the Coordinated Eastern Arctic Experiment. Padman, L., et al, [1991, p.4769-4782, eng] **45-2685**
- Evidence for stability enhancement of sea ice in the Greenland and Labrador Seas. Marsden, R.F., et al, [1991, p.4783-4789, eng] **45-2686**
- Modeling solute transport in ground water at or near freezing. Zukowski, M.D., et al, [1991, p.21-25, eng] **45-2795**
- Water exchange under fast ice in Lützow-Holm Bay. Ohshima, K.I., et al, [1991, p.74-80, eng] **45-3065**
- Unsteady free convective flow in an enclosure containing water near its density maximum. Oosthuizen, P.H., et al, [1990, p.83-91, eng] **45-3098**
- Thermodynamic properties of ice, water, and a mixture of the two at high pressures. Nagornov, O.V., et al, [1990, p.378-385, eng] **45-3254**
- Interactions between oceans and ice sheets in the marginal zones of continents. Glazovskii, A.F., [1990, p.127-146, eng] **45-3524**
- Internal waves and velocity fine structure in the Arctic Ocean. D'Asaro, E.A., et al, [1991, p.12,725-12,738, eng] **45-3559**
- Prediction of reservoir freezeover. Ashton, G.D., et al, [1990, p.124-135, eng] **45-3570**
- River surface temperature determination in calm weather. Matoušek, V., [1990, p.363-371, eng] **45-3590**
- Effects of water transfer on temperature and ice regime. Tesaker, E., [1990, p.474-485, eng] **45-3600**
- Measurement of river water temperature with better repeatability than 1 mK. Hari, J., [1990, p.339-340, eng] **45-3687**
- Water transport**
- Evolution of the water regime of Phobos. Fanale, F.P., et al, [1990, p.380-395, eng] **45-1921**
- Effects of water transfer on temperature and ice regime. Tesaker, E., [1990, p.474-485, eng] **45-3600**
- Water treatment**
- Effect of winter heat loss on treatment plant efficiency. Wells, S.A., [1990, p.34-39, eng] **45-306**
- Design of urban sedimentation basins in Anchorage. Jokela, J.B., et al, [1990, p.761-789, eng] **45-427**
- Low-temperature destabilization of oil emulsion systems in water treatment technology. Andrienko, N.M., [1989, p.95-98, eng] **45-666**
- Constructed wetlands for wastewater treatment: municipal, industrial, and agricultural. [1989, 831p., eng] **45-1873**
- Wetlands ecosystems: natural water purifiers? Hammer, D.A., et al, [1989, p.5-19, eng] **45-1874**
- Hydrologic factors in wetland water treatment. Kadlec, R.H., [1989, p.21-40, eng] **45-1875**
- Physical and chemical characteristics of freshwater wetland soils. Faulkner, S.P., et al, [1989, p.41-72, eng] **45-1876**
- Wetland vegetation. Guntenspergen, G.R., et al, [1989, p.73-88, eng] **45-1877**
- Wetlands microbiology: form, function, processes. Portier, R.J., et al, [1989, p.89-105, eng] **45-1878**
- Use of wetlands for treatment of mining wastes. Wildeman, T.R., et al, [1989, p.221-231, eng] **45-1879**
- Wetlands for wastewater treatment at oil refinery. Litchfield, D.K., et al, [1989, p.233-237, eng] **45-1880**
- Performance expectations and loading rates for constructed wetlands. Watson, J.T., et al, [1989, p.319-351, eng] **45-1881**
- Substrate design for wetlands wastewater treatment. Steiner, G.R., et al, [1989, p.363-377, eng] **45-1882**
- Hydraulic design for wetlands wastewater treatment. Watson, J.T., et al, [1989, p.379-391, eng] **45-1883**
- Operations optimization of wetland water treatment. Girts, M.A., et al, [1989, p.417-429, eng] **45-1884**
- Decomposition in wastewater wetlands. Kadlec, R.H., [1989, p.459-468, eng] **45-1885**
- Denitrification in artificial wetlands. Stengel, E., et al, [1989, p.484-492, eng] **45-1886**
- Sulfate reduction in wetlands to treat mine drainage. Hedin, R.S., et al, [1989, p.508-514, eng] **45-1887**
- Bacterial treatment of mine drainage in a wetland. Batal, W., et al, [1989, p.550-557, eng] **45-1888**
- Biology and chemistry of generation, prevention and abatement of acid mine drainage. Silver, M., [1989, p.753-760, eng] **45-1891**
- Research site for passive mine drainage treatment. Howard, E.A., et al, [1989, p.761-764, eng] **45-1892**
- Manganese and iron encrustation on green algae living in acid mine drainage. Stevens, S.E., Jr., et al, [1989, p.765-773, eng] **45-1893**
- Using forest products in the treatment of acid mine drainage. Howard, E.A., et al, [1989, p.774-779, eng] **45-1894**
- Use of wetlands to remove nickel and copper from mine drainage. Eger, P., et al, [1989, p.780-787, eng] **45-1895**
- Windsor Coal Company wetland: an overview. Kolbash, R.L., et al, [1989, p.788-792, eng] **45-1896**
- Wetland treatment of coal mine drainage: controlled studies of iron retention in model wetland systems. Henrot, J., et al, [1989, p.793-800, eng] **45-1897**
- Cold regions engineering. [1991, 790p., eng] **45-2316**
- Sludge dewatering in freezing beds. Martel, C.J., [1991, p.108-115, eng] **45-2326**
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- Treatment of wastewater in polar environments—status and future trends in Scandinavia. Rusten, B., et al, [1990, p.99-106, eng] **45-3028**
- Pilot scale studies of sludge dewatering in a freezing bed. Martel, C.J., et al, [1990, 15p., eng] **45-3738**
- Longitudinal dispersion in overland flow of wastewater. Adrian, D., et al, [1990, p.1-8, eng] **45-3742**
- See *also*: Aeration
- Water vapor**
- Seasonal variation of some constituents of antarctic tropospheric air. Hogan, A.W., et al, [1990, p.2365-2368, eng] **45-1514**
- Radiometry of precipitable water over high latitude regions. Wang, J.R., et al, [1991, p.179-184, eng] **45-1598**
- Ice haze, snow, and the Mars water cycle. Kahn, R., [1990, p.14,677-14,693, eng] **45-1841**
- Estimation of sublimation rate from ice disk on heating plate at low pressures. Tachiwaki, T., et al, [1990, p.2038-2040, eng] **45-2022**
- Relation between water vapor saturation and temperature. Afinogenov, L.P., [1987, p.129-133, rus] **45-2300**
- Frost growth parameters in a forced air stream. Ostin, R., et al, [1991, p.1009-1017, eng] **45-3022**
- Survey of standards for determination of vapour pressure over ice and water surfaces. Gibbins, C.J., [1990, p.859-885, eng] **45-3104**
- Water vapor and ozone in polar stratospheres. Hofmann, D.J., et al, [1991, p.1011-1014, eng] **45-3757**
- Structural and measurement problems of arctic atmospheric water balance. Lenart, W., [1990, p.37-45, eng] **45-3780**
- Water waves**
- Influence of shape on iceberg wave-induced velocity statistics. Lever, J.H., et al, [1990, p.263-269, eng] **45-716**
- Development of three-dimensional internal waves in a sea with ice cover. Bukatov, A.E., et al, [1986, p.3-9, rus] **45-867**
- Two-dimensional numerical modelling of large motions of floating bodies in waves. Sen, D., et al, [1989, p.257-277, eng] **45-967**
- Water waves generated by an avalanche into a lake. Naaim, M., et al, [1990, p.2/8-2/16, fre] **45-1788**
- Wave-induced drift force in the marginal ice zone. Masson, D., [1991, p.3-10, eng] **45-1806**
- Environmental conditions in the Southern Barents Sea. Kvitrud, A., et al, [1991, p.125-130, eng] **45-3159**
- Effect of internal waves on sea ice drift. Bruno, M.S., [1991, p.137-141, eng] **45-3161**
- Arctic slope protection methods. Leidersdorf, C.B., et al, [1991, p.1687-1701, eng] **45-3256**
- Recent performance of linked concrete mat armor under wave and ice impact. Gadd, P.E., et al, [1991, p.2768-2781, eng] **45-3257**
- Internal waves and velocity fine structure in the Arctic Ocean. D'Asaro, E.A., et al, [1991, p.12,725-12,738, eng] **45-3559**
- Waves induced by calving of Unteraargletscher. Funk, M., et al, [1990, p.372-384, eng] **45-3591**
- See *also*: Ocean waves
- Waterproofing**
- Silane coupling agents to reduce moisture susceptibility of asphalt concrete. Stolle, D.F.E., et al, [1990, p.115-145, eng] **45-3495**
- Watersheds**
- Hydrogeochemistry of snow and snowmelt in catchment hydrology. Jones, H.G., et al, [1990, p.255-297, eng] **45-1480**
- Hydrologic flow path definition and partitioning of spring meltwater. Maulé, C.P., et al, [1990, p.2959-2970, eng] **45-2078**
- Chemical weathering of a watershed in CO. Mast, M.A., et al, [1990, p.2971-2978, eng] **45-2079**
- Snow cover on small forest and field watersheds in the taiga zone of the European USSR. Deriugin, A.A., [1990, p.101-105, eng] **45-2080**

**Watersheds (cont.)**

- Western Snow Conference, 58th, 1990. (1990, 170p. +  
append., eng) 45-2114
- Learning from watching snowmelt. Frazier, J.W., et al,  
(1990, p.35-40, eng) 45-2119
- Consequences of an avalanche striking an ice-covered lake.  
Williams, M.W., et al (1990, p.51-60, eng) 45-2121
- Method of narrowing the water supply forecast range.  
Stein, R.E., (1990, p.92-98, eng) 45-2126
- Calculating maximum and minimum water supply  
forecasts. Huber, A.L., (1990, p.99-109, eng) 45-2127
- Snow in mountain watersheds. Sommerfeld, R.A., et al,  
(1990, p.122-129, eng) 45-2129
- Snow sensors in wilderness areas. Brandow, C.A., (1990,  
p.145-149, eng) 45-2133
- Timing and magnitude of high and low flows. Fedora,  
M.A. (1990, p.150-153, eng) 45-2134
- Snowmelt runoff modeling in an Adirondack watershed.  
Mellander, M.K., et al, (1990, p.65-72, eng) 45-2187
- Modeling runoff in semiarid rangeland watersheds.  
Heydarpour, J., (1989, p.210-215, eng) 45-2403
- Evapotranspiration from a small Alaskan arctic watershed.  
Kane, D.L., et al, (1990, p.253-272, eng) 45-2526
- Use of satellite data for water resources modelling—a  
Canadian example. Kite, G.W., (1991, p.21-29, eng) 45-2796
- River valleys in the area of the main watershed in Asia.  
Endrikhinskiĭ, A.S. (1990, p.90-96, rus) 45-2823
- Effects of climate change on discharges and snow cover in  
Finland. Vehviläinen, B., et al, (1991, p.109-121, eng) 45-2989
- Dynamic-stochastic models of rainfall and snowmelt runoff  
formation. Kuchment, L.S., et al, (1991, p.153-169,  
eng) 45-2990
- Effects of CO<sub>2</sub>-induced climatic changes on snowpack and  
streamflow. Cooley, K.R., (1990, p.511-522, eng) 45-2992
- Water yield models for snow-covered Iranian watersheds.  
Moussavi, M., et al, (1990, p.535-546, eng) 45-2993
- Snow hydrology of a headwater arctic basin. 1. Physical  
measurements and process studies. Kane, D.L., et al,  
(1991, p.1099-1109, eng) 45-3550
- Snow hydrology of a headwater arctic basin. 2.  
Conceptual analysis and computer modeling. Hinzman,  
L.D., et al, (1991, p.1111-1121, eng) 45-3551
- Proceedings of the Workshop on Applications of Remote  
Sensing in Hydrology, (1990, 386p., eng) 45-3797
- Application of remotely sensed data in a distributed-  
parameter watershed model. Leavesley, G.H., et al,  
(1990, p.47-68, eng) 45-3799
- Determination of characteristics for hydrological modelling  
using remote sensing. Whiting, J., (1990, p.79-92,  
eng) 45-3801
- Modelling the Kootenay watershed with satellite data.  
Kite, G.W., (1990, p.123-134, eng) 45-3803
- Updating hydrological model forecasts. Assaf, H., et al,  
(1990, p.149-175, eng) 45-3804
- HYDROTEL, a hydrological model designed to make use  
of remotely sensed and GIS data. Fortin, J.P., et al,  
(1990, p.177-185, eng) 45-3805
- Qualitative evaluation of data networks for streamflow  
simulation in Manitoba. Warkentin, A.A., (1990,  
p.215-223, eng) 45-3806
- Microwave satellite spring runoff correlations.  
Wankiewicz, A., (1990, p.331-344, eng) 45-3812
- Wave propagation**
- Wave evolution in the marginal ice zone. Liu, A.K., et al,  
(1989, p.1520-1523, eng) 45-273
- Millimeter-wave radar scattering from terrain: data  
handbook. Haddock, T.F., et al, (1990, 133p., eng) 45-313
- Low-frequency acoustic wave-scattering phenomena under  
ice cover. Kuo, E.Y.T., (1990, p.361-372, eng) 45-366
- Experimental study of microwave transmission in  
snowpack. Abe, T., et al, (1990, p.915-921, eng) 45-369
- Eastern Arctic ambient noise. Pritchard, R.S., (1989,  
p.1246-1251, eng) 45-439
- Generation of electromagnetic fields by fracture of the ice  
cover of marine areas. Kachurin, L.G., et al, (1989,  
p.815-817, eng) 45-483
- Measurements of under-ice broadband coherence.  
Merredith, R.W., (1990, p.1003-1010, eng) 45-656
- Dynamics of the elastic ice sheet. Kajaste-Rudnitskiĭ, J.,  
(1990, 60p., eng) 45-827
- Two-dimensional numerical modelling of large motions of  
floating bodies in waves. Sen, D., et al, (1989, p.257-  
277, eng) 45-967
- Radiometeorological studies in marine conditions.  
Mikhailov, N.F., et al, (1990, 206p., rus) 45-1090
- Transform equations of long flexural-gravity waves in an  
ice-covered sea. Iakovlev, V.V., (1990, p.107-113,  
rus) 45-1121
- Cylindrical flexural-gravity waves in an ice-covered sea.  
Tkachenko, V.A., et al, (1990, p.114-120, rus) 45-1122
- Modelling of particle distribution in the melting layer. De  
Wolf, D.A., et al, (1990, p.389-395, eng) 45-1427
- Electro-physical and physical-mechanical properties of ice.  
Bogorodskii, V.V., ed. (1989, 256p., rus) 45-1483
- Measuring the velocity of electromagnetic wave  
propagation in a glacier. Sheremet'ev, A.N., (1989,  
p.59-64, rus) 45-1490
- Sea ice concentration estimated from Geosat waveforms.  
Chase, J.R., et al, (1990, p.18.015-18.025, eng) 45-1607
- Acoustic emission generated by moving loads on sea ice:  
preliminary results. Langhorne, P.J., et al, (1990,  
p.337-342, eng) 45-1623
- Sea ice noise-generating processes. Pritchard, R.S.,  
(1990, p.2830-2842, eng) 45-2291
- Directionality of ice cracking events. Zakarasukas, P., et  
al, (1991, p.722-734, eng) 45-2402
- Observation and inversion of seismo-acoustic waves in a  
complex arctic ice environment. Miller, B.E., et al,  
(1991, p.1668-1685, eng) 45-2666
- Predictions of wave propagation in the marginal ice zone.  
Liu, A.K., et al, (1991, p.4605-4621, eng) 45-2674
- Wave structure in the seas off an ice edge. Squire, V.A.,  
et al, (1990, p.21-32, eng) 45-2719
- Detection of waves in frazil ice in synthetic aperture radar  
imagery. Wadhams, P., et al, (1991, p.8835-8852,  
eng) 45-3019
- Modeling acoustic propagation beneath ice. Clark, J.H.,  
et al, (1991, p.327-329, eng) 45-3043
- Ice motions forced by boundary layer turbulence.  
DiMarco, R.L., et al, (1991, p.10,617-10,624, eng) 45-3311
- Acoustic propagation in the western Greenland Sea frontal  
zone. Mellberg, L.E., et al, (1991, p.2144-2156, eng) 45-3379
- Acoustical radiation from thermally stressed sea ice. Xie,  
Y., et al, (1991, p.2215-2231, eng) 45-3380
- Model for the complex reentrancy of ice at frequencies  
below 1 THz. Hufford, G., (1991, p.677-682, eng) 45-3381
- Internal waves and velocity fine structure in the Arctic  
Ocean. D'Asaro, E.A., et al, (1991, p.12,725-12,738,  
eng) 45-3559
- Mathematical modelling of icebreaking pattern based on  
the elastic wave theory. Wang, S.L., et al, (1990,  
p.811-820, eng) 45-3631
- Diffraction of VLF radio waves by polar ice caps. Wait,  
J.R., (1991, p.1030-1032, eng) 45-3700
- Waves**
- See *also*: Detonation waves; Elastic waves; Microwaves;  
Ocean waves; Radio waves; Shock waves; Sound waves;  
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- Meteorology source book. Parker, S.P., ed, (1988, 304p.,  
eng) 45-527
- See *also*: Meteorology
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- See *also*: Artificial precipitation; Climate control; Cloud  
dissipation; Cloud seeding; Fog dispersal; Hail prevention;  
Weather modification
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- NWS verification of precipitation type and snow amount  
forecasts. (1990, 33p., eng) 45-315
- Meteorology source book. Parker, S.P., ed, (1988, 304p.,  
eng) 45-527
- Forecasting of snowfall and snow accumulation. (1989,  
187p., jpn) 45-531
- Meteorological and sea ice forecasts to arctic region  
military units. Cianflone, R.E., et al, (1989, p.223-243,  
eng) 45-540
- VIII International PIARC Winter Service Congress at  
Tromsø. Durth, W., et al, (1990, p.200-204, ger) 45-555
- Very short range forecast of wet snow. Strauss, B., et al,  
(1988, p.57-60, eng) 45-1311
- Heavy snowfall within a mesoscale convergence zone.  
Sanderson, R.M., et al, (1990, p.41-52, eng) 45-1519
- Atmospheric processes and weather forecasting in the  
Arctic. Dmitriev, A.A., et al, (1989, 253p., rus) 45-1573
- Wind profiler and RASS measurements in the vicinity of  
lake-effect snowbands: some preliminary findings. Penc,  
R.S., et al, (1991, p.69-72, eng) 45-1591
- Use of mobile radiosonde systems to observe the  
environments of Lake Ontario winter storms. Byrd,  
G.P., et al, (1991, p.1142-1145, eng) 45-1600
- Kinematics and dynamics of heavy snowfall bands over  
European territory. Gromova, G.G., et al, (1989, p.3-  
12, rus) 45-1848
- Forecasting the amount of winter precipitation. Litvin,  
N.N., (1989, p.132-138, rus) 45-1850
- Northeast snowstorms. Horne, T.A., (1991, p.86-87,  
eng) 45-1901
- Preprint volume. (1991, 436p., eng) 45-1933
- Diagnosing snow band air circulations via simulation.  
Hakim, G.J., et al, (1991, p.90-96, eng) 45-1935
- Evolution of a freezing rain storm, part 1: synoptic and  
mesoscale conditions. Zamora, R.J., et al, (1991,  
p.258-263, eng) 45-1941
- Objective guidance for 1- and 2-day mesoscale forecasts of  
lake-effect snow. Burrows, W.A., (1990, p.121-134,  
eng) 45-2192
- Lake Ontario winter storms (LOWS) project. Niziol,  
T.A., et al, (1990, p.175-187, eng) 45-2197
- Provision of meteorological information for safe navigation  
in the southern ocean. Lutsenko, E.I., (1990, p.35-40,  
rus) 45-2569
- Hydrometeorological information distribution to ships from  
Bellingshausen Station in 1986. Leon'ev, E.B., (1990,  
p.32-36, rus) 45-3078
- Forecasters handbook for the arctic. Sechrist, F.S., et al,  
(1989, 364p., eng) 45-3092
- Influence of atmospheric pressure gradient variations on  
polar atmosphere simulation. Simmons, A.J., et al,  
(1991, p.29-58, eng) 45-3478
- Forecasting the snow accretion. Ito, H., (1986, p.170-  
180, eng) 45-3711
- Practical methods of snow accretion forecast. Kurashige,  
K., (1986, p.181-195, eng) 45-3712
- See *also*: Frost forecasting; Ice forecasting; Long range  
forecasting
- Weather maps**
- See *also*: Meteorological charts
- Weather modification**
- Meteorology source book. Parker, S.P., ed, (1988, 304p.,  
eng) 45-527
- Experimental study of the production of ice crystals by a  
twin-turboprop aircraft. Kelly, R.D., et al, (1991,  
p.217-226, eng) 45-2554
- New methods of influencing hail processes. Burtsev, I.I.,  
(1990, p.23-33, eng) 45-2931
- Aircraft-produced ice particles in a highly supercooled  
altocumulus cloud. Sassen, K., (1991, p.765-775, eng) 45-3209
- See *also*: Artificial precipitation; Climate control; Cloud  
dissipation; Cloud seeding; Fog dispersal; Hail prevention
- Weather observations**
- Meteorology source book. Parker, S.P., ed, (1988, 304p.,  
eng) 45-527
- Frost forecasting from local weather reports. Fujita, T., et  
al, (1990, p.95-100, jpn) 45-746
- Japanese automatic weather stations in Antarctica.  
Kikuchi, T., et al, (1990, p.179-183, jpn) 45-781
- Significant phenomena of the winter of 1989-1990. (1990,  
p.19-21, fre) 45-1129
- Best flying season. Collins, R.L., (1991, p.51-55, eng) 45-1900
- Road weather information systems: a strategy and  
guideline. Doore, G.S., (1991, p.15-22, eng) 45-1914
- December to remember. Heim, R., et al, (1990, p.329-  
332, eng) 45-2049
- Recommended cold regions meteorological  
instrumentation. Bates, R.E., (1991, p.772-783, eng) 45-2387
- Effect of cloud cover on UV radiation over the Antarctic  
Peninsula. Lubin, D., et al, (1991, p.478-493, eng) 45-2841
- Vernal atmospheric mixing in the Antarctic. Murphy,  
B.B., et al, (1991, p.494-507, eng) 45-2842
- Oceanographic and meteorological appendices Tarsuit Gulf  
1982-83. (1984, n.p., eng) 45-2854
- Operations report Tarsuit Gulf 1982-83. (1984, n.p., eng) 45-2855
- Weather stations**
- Automatic meteorological station in the Kunlun  
Mountains. Ohata, T., et al, (1990, p.73-85, eng) 45-200
- Handbook on climate of the USSR. (1989, 268p., eng) 45-309
- Humidity of air, atmospheric precipitation, snow cover in  
the USSR. (1989, 288p., eng) 45-310
- Arctic region temperature mapping by integration of  
automated station data. Jacobs, J.D., (1990, p.84-96,  
eng) 45-362
- Preliminary study of an advanced automatic station for  
marine data acquisition in Antarctica. Gasparoni, F., et  
al, (1989, p.1646-1651, eng) 45-722
- Japanese automatic weather stations in Antarctica.  
Kikuchi, T., et al, (1990, p.179-183, jpn) 45-781
- Antarctic automatic weather station data for the calendar  
year 1989. Keller, L.M., et al, (1990, 354p., eng) 45-939
- Katabatic winds in the Adélie Coast sector. Wendler, G.,  
(1990, p.226-228, eng) 45-1439
- Antarctic automatic weather stations: austral summer  
1988-1989. Stearns, C.R., et al, (1990, p.242-243,  
eng) 45-1440
- Weathering**
- Soil and rock temperatures in discontinuous permafrost.  
King, L., (1990, p.177-188, eng) 45-1297
- Note on biological weathering on nunataks of the Juneau  
Icefield, Alaska. Hall, K., et al, (1990, p.189-196,  
eng) 45-1298
- Chemical weathering of a watershed in CO. Mast, M.A.,  
et al, (1990, p.2971-2978, eng) 45-2079
- Mechanical weathering rates on Signy Island, maritime  
Antarctic. Hall, K., (1990, p.61-67, eng) 45-2235
- Comment on "Enhanced boulder weathering under late-  
lying snow patches". McCarroll, D., (1990, p.467-469,  
eng) 45-2258
- Use of the Schmidt test hammer to detect enhanced  
boulder weathering under late-lying snowpatches.  
Ballantyne, C.K., et al, (1990, p.471-474, eng) 45-2259

- Finnish building technique in cold regions, part 10. Kääriäinen, H., et al, (1990, 58p., fin) 45-3880  
 See *also*: Frost weathering; Permafrost weathering
- Wedges**  
 Soil wedge polygons in northern Quebec: description and paleoclimatic significance. Jetchick, E., et al, (1990, p.353-367, eng) 45-2414  
 See *also*: Ice wedges
- Welding**  
 Immersion tests of high-strength steels for icebreakers. Inoue, T., et al, (1990, p.178-187, eng) 45-132  
 Corrosion of welds in high-strength steels for icebreakers. Inoue, T., et al, (1990, p.188-196, eng) 45-133
- Well casings**  
 Clay mortar and cement reinforcement rings for gas wells in permafrost. Gavril'ev, R.I., et al, (1990, p.72-76, rus) 45-1202  
 Drilling in the permafrost. Kudriashov, B.B., et al, (1990, 318p., eng) 45-1854  
 Prevention of oil well collapse in permafrost. Medvedskii, R.I., et al, (1989, p.74-82, eng) 45-2585
- Well logging**  
 Drilling in the permafrost. Kudriashov, B.B., et al, (1990, 318p., eng) 45-1854
- Wells**  
 Surface water supplies. Ryan, W.L., (1990, p.301-316, eng) 45-411  
 Flowing artesian wells in permafrost regions. Wheaton, S.R., (1990, p.721-737, eng) 45-425  
 Results of an aquifer test for a proposed water supply at Anchor Point, Alaska. Petrik, W.A., et al, (1991, 13p., eng) 45-2843  
 See *also*: Gas wells; Oil wells
- Wet snow**  
 Observations relating to wet snow stability. Conway, H., et al, (1989, Appendix C. 12p., eng) 45-815  
 Radar reflections from wet snow at weather radar wavelengths. De Wolf, D.A., et al, (1990, p.1843-1847, eng) 45-1016  
 Using discriminant analysis to forecast wet snow avalanches. Kharitonov, G.G., et al, (1990, p.369-380, rus) 45-1124  
 Wet snow on overhead lines: state-of-art. Admirat, P., et al, (1988, p.7-13, eng) 45-1301  
 Space-time model of a wet snowstorm. Maccagnan, M., et al, (1988, p.14-18, eng) 45-1302  
 Risk of wet snow sticking on power lines. Admirat, P., et al, (1988, p.24-29, eng) 45-1304  
 Power failures from wet snow. Baldit, M., et al, (1988, p.39-43, eng) 45-1307  
 Very short range forecast of wet snow. Strauss, B., et al, (1988, p.57-60, eng) 45-1311  
 Observation of natural wet snow accretion. Sakamoto, Y., et al, (1988, p.79-83, eng) 45-1316  
 Accretion of wet snow on power lines. Tachizaki, S., et al, (1988, p.175-179, eng) 45-1334  
 Thermodynamic simulation of wet snow accretion under wind-tunnel conditions. Sakamoto, Y., et al, (1988, p.180-185, eng) 45-1335  
 Classification of snow and frozen ground surfaces with SSM/I signatures. Neale, C.M.U., et al, (1990, p.345-355, eng) 45-3813  
 See *also*: Slush
- Wetlands**  
 Hydrologic processes in a southern Ontario wetland. Gehrels, J., et al, (1990, p.221-234, eng) 45-2942  
 Effects of an altered water regime on Great Lakes coastal wetlands. Mortsch, L., (1990, p.217-224, eng) 45-3299  
 Hydrologic and thermal properties of the active layer in the Alaskan Arctic. Hinzman, L.D., et al, (1991, p.95-110, eng) 45-3417  
 White phosphorous linked as cause of waterfowl deaths at Alaskan firing range. (1991, p.5, eng) 45-3455  
 Scientists solve mystery of duck deaths. (1991, p.S11, eng) 45-3734  
 Utilization of SAR data in the monitoring of snowpacks and wetlands. Leconte, R., et al, (1990, p.233-258, eng) 45-3807
- Wettability**  
 Thermodynamics of the liquid-like layer on an ice sphere. Takagi, S., (1990, p.446-455, eng) 45-795
- Wharves**  
 Concrete wharves in tidal zones. Gilbride, P., et al, (1988, p.199-225, eng) 45-1813  
 Study on ice control at fishing harbor by air-bubble method. Mizuno, Y., et al, (1990, p.697-708, eng) 45-3620  
 See *also*: Docks; Ice wharves; Piers
- Wheels**  
 See *also*: Vehicle wheels
- Wind direction**  
 Chemical compositions of aerosol particles and snowfalls in Alta, northern Norway. Lee, D.-I., et al, (1989, p.169-178, eng) 45-829  
 Satellite observations of katabatic winds: Marie Byrd Land to Ross Ice Shelf. Bromwich, D.H., (1990, p.218-221, eng) 45-1436  
 Beaufort Sea hindcast study 1970 to 1982. Final report. (1983, 41p., eng) 45-2848
- Beaufort Sea hindcast update. Interim report. (1983, 289p., eng) 45-2849  
 Haistorm over Telangana. Pandharinath, N., et al, (1990, p.433-438, eng) 45-3050  
 Polar lows over the Gulf of Alaska in conditions of reverse shear. Bond, N.A., et al, (1991, p.551-572, eng) 45-3272
- Wind erosion**  
 Effect of erosion and deflation on the structure of soil cover. Dzhaneisov, R.D., et al, (1990, 91p., rus) 45-2244  
 Oxygen isotope profiles of deposited snow in different environments. Ageta, Y., et al, (1991, p.39-46, jpn) 45-3394
- Wind factors**  
 Ice edge motion during MIZEX'87. Sandven, S., et al, (1989, p.1535-1538, eng) 45-277  
 Lake-effect snowstorms over Lake Michigan. Hjelmfelt, M.R., (1990, p.138-150, eng) 45-307  
 Water from the alpine: Colorado. Berg, N.H., (1990, p.641-667, eng) 45-423  
 Snow accumulation and topography in Wilkes Land katabatic zone. Goodwin, I.D., (1990, p.235-242, eng) 45-468  
 Dangerous wind velocities and glaze icing in mountainous regions. Podrezov, O.A., (1990, 222p., rus) 45-983  
 Dune development in an Alaskan subarctic environment. Dijkmans, J.W.A., et al, (1990, p.93-109, eng) 45-1191  
 Wind profiler and RASS measurements in the vicinity of lake-effect snowbands: some preliminary findings. Penc, R.S., et al, (1991, p.69-72, eng) 45-1591  
 Transport of snow by wind in mountains. Castelle, T., et al, (1990, p.1/65-1/83, fre) 45-1784  
 Study on transportability conditions of snow at a high mountain site. Guyomarc'h, G., et al, (1990, p.1/84-1/92, fre) 45-1785  
 Two-phase wind-tunnel study on snow transport by wind. Naaim, F., (1990, p.1/93-1/103, fre) 45-1786  
 Numerical modeling of ocean circulation and ice cover over the continental shelf. Ikeda, M., (1991, p.97-117, eng) 45-1807  
 Measuring water flow using ultrasound. Zatylnikov, A.I., (1988, p.13-19, rus) 45-1857  
 Role of sublimation in particle supply for aeolian transport in cold environments. Neuman, C.M., (1990, p.329-335, eng) 45-2032  
 Two-layer wind-driven coastal circulation model. Poon, Y.K., et al, (1991, p.2535-2548, eng) 45-2041  
 Mechanics of aeolian transport of snow and sand. Kind, R.J., (1990, p.855-866, eng) 45-2097  
 Snow transport as a function of wind speed and height. Tabler, R.D., (1991, p.729-738, eng) 45-2382  
 Impacts of Hudson Bay on the terrestrial climate of the Hudson Bay Lowlands. Rouse, W.R., (1991, p.24-30, eng) 45-2469  
 Wind-induced mesoscale features in a coupled ice-ocean system. Ikeda, M., (1991, p.4623-4629, eng) 45-2675  
 Aircraft observations of the arctic atmospheric boundary layer. Walter, B., et al, (1991, p.4663-4673, eng) 45-2678  
 Analysis of ice island dynamics. Lu, M.C., et al, (1990, p.241-256, eng) 45-2735  
 Study of the cold wave phenomenon in Quebec as a natural catastrophe. Lacroix, J., et al, (1990, p.138-157, fre) 45-2754  
 Variations of water isotope content with altitude in a mountain environment. Holdsworth, G., et al, (1991, p.7483-7494, eng) 45-2800  
 Explanation for the existence of supercooled water at the top of cold clouds. Rauber, R.M., et al, (1991, p.1005-1023, eng) 45-3273  
 Ice motions forced by boundary layer turbulence. DiMarco, R.L., et al, (1991, p.10,617-10,624, eng) 45-3311
- Wind (meteorology)**  
 Measuring blowing snow with a photo-electric particle counter at Pole Station, Antarctica. Wendler, G., (1989, p.9-16, eng) 45-393  
 Numerical models of wind. Solignac, C., (1990, p.1/19-1/26, fre) 45-1779  
 Anemography of nocturnal cold air. Verreault, R., et al, (1990, p.1/34-1/42, fre) 45-1781  
 Impact of biogenic sulphur on sulphate aerosols at Mawson Station. Prospero, J.M., et al, (1991, p.221-223, eng) 45-2264  
 Observational evaluation of the snow breeze. Segal, M., et al, (1991, p.412-424, eng) 45-3271  
 Cold air drainage in the Arctic. Hanssen-Bauer, I., (1990, p.99-110, eng) 45-3786  
 See *also*: Avalanche wind
- Wind power generation**  
 Wind power in Antarctica: case histories of the North Wind HR3 wind turbine. Coleman, C.J., (1991, p.765-771, eng) 45-2386
- Wind pressure**  
 Mean annual cycle in global ocean wind stress. Trenberth, K.E., et al, (1990, p.1742-1760, eng) 45-1259
- Wind tunnels**  
 Advanced instrumentation for aircraft icing research. Bachalo, W.D., et al, (1990, 100p., eng) 45-597  
 Heat transfer of an airfoil in flight and in an icing wind tunnel. Poinatte, P.E., (1990, 184p., eng) 45-603  
 Comparison of drop size distributions from two droplet sizing systems. Oldenburg, J.R., et al, (1990, 15p., eng) 45-604  
 Flow in the diffuser of an icing wind tunnel. Addy, H.E., Jr., et al, (1990, 9p., eng) 45-607  
 Overview of icing research at ONERA. Guffond, D., et al, (1988, p.186-191, eng) 45-1336  
 Wind tunnel modeling of time-dependent drift topography. Iversen, J.D., et al, (1991, p.685-697, eng) 45-2378
- Wind velocity**  
 Potential of radar echoes from ice sheets for wind measurement. Remy, F., et al, (1990, p.133-142, eng) 45-54  
 Data report on the Weddell Ice Dynamics Experiment. Crane, D.R., et al, (1990, n.p., eng) 45-944  
 Dangerous wind velocities and glaze icing in mountainous regions. Podrezov, O.A., (1990, 222p., rus) 45-983  
 Satellite observations of katabatic winds: Marie Byrd Land to Ross Ice Shelf. Bromwich, D.H., (1990, p.218-221, eng) 45-1436  
 Katabatic winds at Terra Nova Bay. Parish, T.R., et al, (1990, p.221-223, eng) 45-1437  
 Strong katabatic wind event at Terra Nova Bay. Bromwich, D.H., et al, (1990, p.223-225, eng) 45-1438  
 Three-dimensional measurement of the wind velocity vector. Gay, M., et al, (1990, p.1/43-1/49, fre) 45-1782  
 Estimating snow transport from wind speed records. Tabler, R.D., et al, (1990, p.61-72, eng) 45-2122  
 Arctic hurricanes. Businger, S., (1991, p.18-33, eng) 45-2788  
 Beaufort Sea hindcast study 1970 to 1982. Final report. (1983, 41p., eng) 45-2848  
 Beaufort Sea hindcast update. Interim report. (1983, 289p., eng) 45-2849  
 Cold air drainage in the Arctic. Hanssen-Bauer, I., (1990, p.99-110, eng) 45-3786
- Windbreaks**  
 Testing of windbreak models under natural blowing snow conditions in Quebec. Verreault, R., et al, (1990, p.1/12-1/18, fre) 45-1778
- Windows**  
 In-situ measurement of window performance. Carpenter, S., (1991, p.14-18, eng) 45-2142  
 Calibration transfer standards for fenestration systems. Goss, W.P., et al, (1991, p.251-260, eng) 45-2662
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 Antifrost system of windshield. Takada, H., (1989, p.171-178, eng) 45-1231
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 Significant phenomena of the winter of 1989-1990. (1990, p.19-21, fre) 45-1129  
 Analysis of winter low-flow rates in New Hampshire streams. Melloh, R.A., (1990, 12p., eng) 45-1260  
 Preprint volume. (1991, 436p., eng) 45-1933  
 Great Lakes winter of 1990. Assel, R.A., et al, (1990, p.143-154, eng) 45-2194  
 Comparisons between lakes and seas during the arctic winter. Welch, H., (1991, p.11-23, eng) 45-2468  
 Effect of abiotic factors on vole winter survival. Courtin, G.M., et al, (1991, p.45-52, eng) 45-2472  
 Classification system of winter conditions of small-craft harbor design for the Great Lakes. Wortley, C.A., (1990, p.821-834, eng) 45-3632
- Winter concreting**  
 Portland cement concrete materials manual. (1989, 208p., eng) 45-317  
 Simplification of cold weather concreting with new antifreeze admixtures (Part 4). Watanabe, H., et al, (1989, p.14-21, jpn) 45-906  
 Simplification of winter concreting with a new type of antifreeze admixture (Part 3). Watanabe, H., et al, (1988, p.1-17, jpn) 45-910  
 Study on simplification of winter concreting using the new type antifreeze admixtures (Part 2). Watanabe, H., et al, (1987, p.14-38, jpn) 45-921  
 Study on simplification of winter concreting using the new type of antifreeze admixtures. Watanabe, H., et al, (1986, p.27-36, jpn) 45-925  
 Antifreeze admixtures for cold regions concreting: a literature review. Korhonen, C.J., (1990, 14p., eng) 45-974  
 Tuthill concrete symposium, Nov. 1987. (1987, 350p., eng) 45-1818  
 Controlling concrete during hot and cold weather. Scanlon, J.M., (1987, p.241-259, eng) 45-1822  
 Antifreeze admixture developed in Japan. Sakai, K., et al, (1991, p.26-30, eng) 45-1982  
 Antifreeze admixtures for cold weather concreting. Korhonen, C.J., et al, (1991, p.38-41, eng) 45-1983  
 Control of plastic shrinkage cracking in cold weather. Senbetta, E., et al, (1991, p.49-53, eng) 45-1984  
 New admixtures for cold weather concreting. Korhonen, C.J., et al, (1991, p.200-209, eng) 45-2334

**Winter concreting (cont.)**

- High-performance concrete in all-weather deck pours.  
Strand, G.W., [1991, p.210-229, eng] 45-2335

**Winter construction**

See *also*: Cold weather construction

**Winter maintenance**

- Specific luminance of dry road markings during different seasons. Lundkvist, S.O., [1990, 21p., swe] 45-209

- Selecting antiskid materials applied to ice- and snow-covered roadways. [1990, 135p., eng] 45-319

- Road conditions and accidents in winter. Hagiwara, T., et al, [1990, p.442-453, eng] 45-324

- Culverts. Ashton, W.S., et al, [1990, p.557-577, eng] 45-421

- Sealing cracks in flexible pavements in cold regions. Chong, G.J., et al, [1988, p.12-19, eng] 45-525

- VIII International PIARC Winter Service Congress at Tromsø. Durth, W., et al, [1990, p.200-204, ger] 45-555

- Use of central vehicle wash facilities in cold weather. Gerdes, G.L., et al, [1990, 22p., eng] 45-1973

- Work report on special pavements; status of paved road surfaces in winter. Nakamura, T., et al, [1988, p.149-154, jpn] 45-2510

- Treatment of cracks in paved road surfaces. Ueno, M., et al, [1988, p.155-158, jpn] 45-2511

- Sound absorption and winter performance of porous asphalt pavement. Camomilla, G., et al, [1990, p.1-8, eng] 45-3058

- Winter maintenance. Pearson, D., [1990, p.337-379, eng] 45-3470

- Improvement of icing on main road 21; construction and monitoring. Lehtonen, J., [1990, 60p., fin] 45-3873

- Finnish cold climate construction. Part 3. Traffic and arteries. Laukkanen, K., et al, [1990, 58p. + appends, fin] 45-3875

See *also*: Snow removal

**Winter operation**

See *also*: Cold weather operation

**Winter performance**

See *also*: Cold weather performance

**Winter road service**

See *also*: Road maintenance; Snow removal; Winter maintenance

**Wood**

- Finnish cold climate construction technology. Part 4. Timber construction. Kanko, T., ed, [1991, 62p. + appends., fin] 45-3876

**Wooden structures**

- Geometrically nonlinear finite element analysis of a glulam timber dome. Davalos, J.F., [1989, 289p., eng] 45-481

- Effect of snow and constant loads on the flexural strength of wooden structures. Denesh, N.D., [1990, p.16-20, rus] 45-1587

- Ice-rink roof structures and the "stalagmite" effect. Bloudek, K., [1989, p.151-153, eng] 45-3466

- Finnish cold climate construction technology. Part 4. Timber construction. Kanko, T., ed, [1991, 62p. + appends., fin] 45-3876

**X ray analysis**

- X-ray study of high-density amorphous water. Bosio, L., et al, [1986, p.460-463, eng] 45-779

- Examination of dislocations in ice. Final report. Baker, I., et al, [1991, 8p., eng] 45-2141

**Young ice**

- Bending and compression properties of young sea ice. Lau, P.A., et al, [1989, p.1292-1297, eng] 45-447

- Field observations of stresses in young ice. Perovich, D.K., et al, [1991, p.191-198, eng] 45-3169