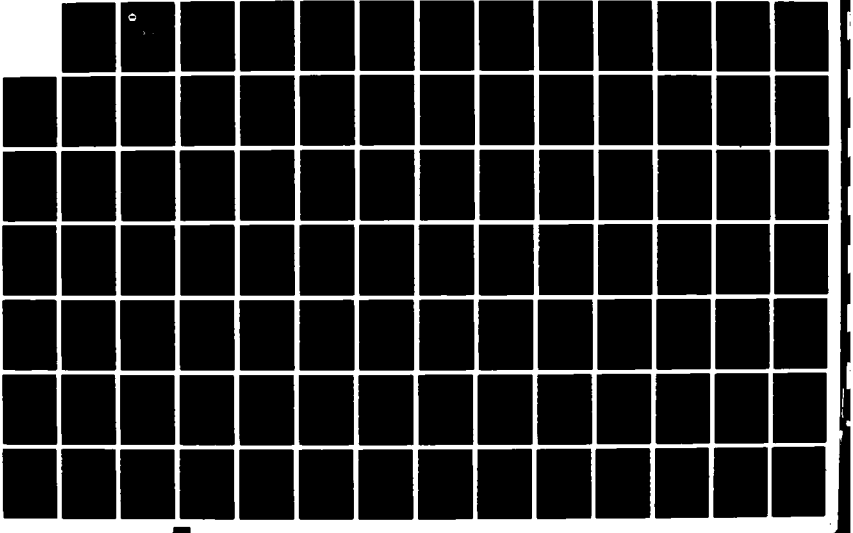

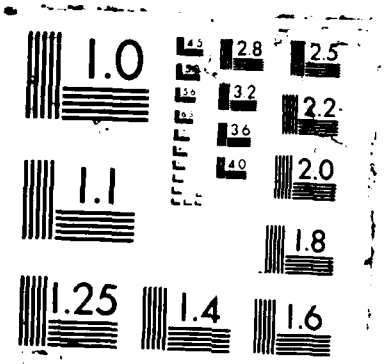
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Bibliography of Soviet Laser Developments (U)

March-April 1984

DST-2700Z-004-85

BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS

No. 70

MARCH - APRIL 1984

Date of Report

June 12, 1985

Vice Director for Foreign Intelligence
Defense Intelligence Agency

This document was prepared for the Defense Intelligence Agency under an intragovernment agreement. It is intended to facilitate access of government researchers to Soviet laser literature.

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20. ABSTRACT

This is the Soviet Laser Bibliography for March-April 1984, and is No. 70 in a continuing series on Soviet laser developments. The coverage includes basic research on solid state, liquid, gas, and chemical lasers; components; nonlinear optics; spectroscopy of laser materials; ultrashort pulse generation; theoretical aspects of advanced lasers; and general laser theory. Laser applications are listed under biological effects; communications; beam propagation; adaptive optics; computer technology; holography; laser-induced chemical reactions; measurement of laser parameters; laser measurement applications; laser-excited optical effects; laser spectroscopy; beam-target interaction; and plasma generation and diagnostics.

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INTRODUCTION

This bibliography has been compiled under an interagency agreement as a continuing effort to document current Soviet-bloc developments in the quantum electronics field. The period covered is March-April 1984, and includes all significant laser-related articles received by us in that interval. The bulk of the entries come from the approximately 30 periodicals which are known to publish the most significant findings in Soviet laser technology. Citations from the Soviet Reference Journals are also included. Laser items from the popular or semipopular press are generally omitted. All sources cited with no parenthetical notation are available at the Library of Congress. A parenthetical entry indicates the secondary source in which the citation was found as a bibliographic entry or abstract, but for which the original source is not currently available at the Library.

We are now producing the entire bibliography on computer. To make our bibliography compatible with other data bases, we have converted the source abbreviations from our previous practice of those used in the Soviet Union to the letter codens generally used in our own government. Likewise, we have converted the affiliations designations from numbers to letter codens. The authors' affiliations are indicated in parentheses after the authors' names in the text. Empty parentheses indicate the affiliation was not given. A source abbreviations list, authors' affiliations list, and author index are included in the back of the bibliography.

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H. LASER MEASUREMENT APPLICATIONS

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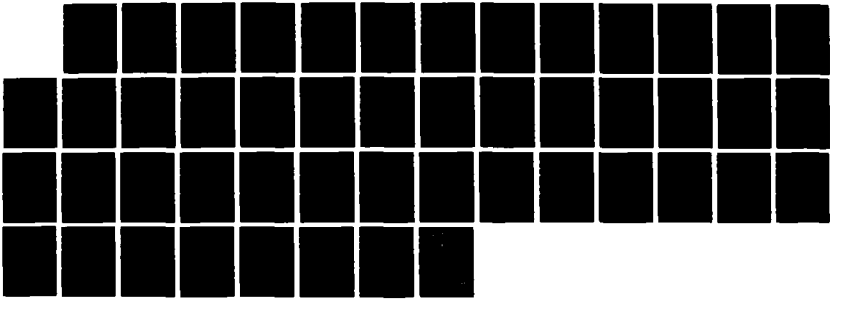

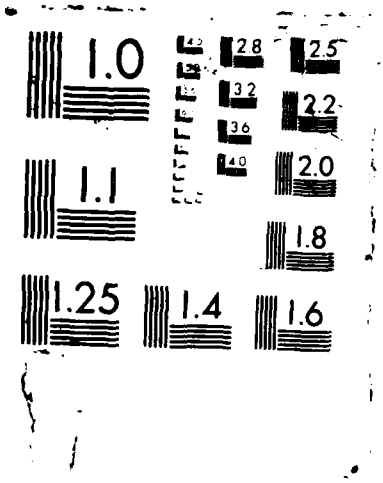
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IV. SOURCE ABBREVIATIONS

(Note: CTC = cover-to-cover translation available)

AENGA	Atomnaya energiya (CTC)
AKZHA	Akusticheskiy zhurnal (CTC)
ANPYA	Annalen der Physik (Leipzig)
APAHA	Acta physica academiae scientiarum hungaricae
APTTB	Acta polytechnica. Rada 4. Technicko-teoreticka (Prague)
ASZHA	Astronomicheskiy zhurnal (CTC)
AVMEB	Avtometriya (CTC)
BWATA	Biuletyn Wojskowej akademii technicznej imeni Jaroslawa Dabrowskiego
CIWKIlme	Internationales wissenschaftliches Kolloquium, Ilmenau
CKMUMFTI	Konferentsiya molodykh uchenykh Moskovskogo fiziko-tekhnicheskogo instituta
CVNSPLBi	Vsesoyuznoye nauchnoye soveshchaniye: Primeneniye lazerov v biologii
CVNTKMOI	Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya: Metrologicheskoye obespecheniye izmereniy bol'shikh dlin.
CVNTKVFM	Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya: Vysokoskorostnaya fotografiya i metrologiya bystroprotekayushchikh protsessov
CVSFTPPA	Vsesoyuznoye soveshchaniye: Fizika i tekhnicheskoye primeneniye poluprovodnikov A(II)B(VI)
CVSRVEle	Vsesoyuznyy seminar po relyativistskoy vysokochastotnoy elektronike
CVSUZCha	Vsesoyuznoye soveshchaniye po uskoritelyam zaryazhennykh chastits

DANKA	Akademiya nauk SSSR. Doklady (CTC)
DANUA	Akademiya nauk Uzbekskoy SSR. Doklady
DBLRA	Akademiya nauk BSSR. Doklady
DERUD	Deponirovannyye nauchnyye raboty (formerly: Deponirovannyye rukopisi. Bibliograficheskiy ukazatel'. Yestyesvennyye i tochnyye nauki, tekhnika)
EAAED	Electrotehnica, electronica si automatica. Automatica si electronica series (Bucharest)
EEAED	Electrotehnica, electronica si automatica. Electrotehnica series (Bucharest)
ELKCA	Elektrotechnicky casopis
EOBMA	Elektronnaya obrabotka materialov (CTC)
ETFMB	Akademiya nauk Estonskoy SSR. Izvestiya. Fizika, matematika
EXPPA	Eksperimentelle Technik der Physik
FGRTA	Feingeraetetechnik
FIPLD	Fizika plazmy (Moskva, AN SSSR) (CTC)
FISZA	Fizikai szemle (Budapest)
FKOMA	Fizika i khimiya obrabotki materialov
FKSTD	Fizika i khimiya stekla (CTC)
FTPPA	Fizika i tekhnika poluprovodnikov (CTC)
FTVTA	Fizika tverdogo tela (CTC)
FZELA	Fizicheskaya elektronika (sbornik, L'vov)
GOZHA	Gornyy zhurnal
GZKGA	Geodeziya i kartografiya (CTC)
IAAFA	Akademiya nauk Armyanskoy SSR. Izvestiya. Fizika
IANFA	Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya (CTC)

IFAOA	Akademiya nauk SSSR. Izvestiya. Fizika atmosfery i okeana (CTC)
IMZGA	Akademiya nauk SSSR. Izvestiya Mekhaniki zhidkostey i gazov (CTC)
INFZA	Inzhenerno-fizicheskiy zhurnal (CTC)
IVNMA	Akademiya nauk SSSR. Izvestiya. Neorganicheskiye materialy (CTC)
IVUBA	Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye (CTC)
IVUFA	Izvestiya vysshikh uchebnykh zavedeniy. Fizika (CTC)
IVUSA	Izvestiya vysshikh uchebnykh zavedeniy. Mashinostroyeniye
IVUZB	Izvestiya vysshikh uchebnykh zavedeniy. Radioelektronika
IVYRA	Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika (CTC)
IZTEA	Izmeritel'naya tekhnika (CTC)
KFKKA	Kozponti fizikai kutato intezet kozlemenyek (Budapest)
KHVKA	Khimiya vysokikh temperatur (CTC)
KLDVA	Knizhnaya letopis'. Dopolnitel'nyy vypusk. Avtroreferaty dissertatsii
KNKTA	Kinetika i kataliz (CTC)
KNLTA	Knizhnaya letopis'
KRISA	Kristallografiya (CTC)
KRSFA	Kratkiye soobshcheniya po fizike (CTC)
KVEKA	Kvantovaya elektronika (journal, Moskva) (CTC)
LFSBA	Litovskiy fizicheskiy sbornik (CTC)
LZFTA	Akademiya nauk Latviyskoy SSR. Izvestiya. Seriya fizicheskikh i tekhnicheskikh nauk

MGKLA	Magyar kemikusok lapja
MKETA	Mikroelektronika (CTC)
NASRD	Nauka v SSSR
OIPOB	Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki (now in two separate journals: OTIZD and POTZD)
OPMPA	Optiko-mekhanicheskaya promyshlennost' (CTC)
OPSPA	Optika i spektroskopiya (CTC)
OTIZD	Otkrytiya, izobreteniya (formerly included in OIPOB)
OTPIA	Otbor i peredacha informatsii. Fiziko-mekhanichekiy institut AN UkrSSR. Respublikanskiy mezhvedomstvennyy sbornik nauchnykh trudov. Kiyev, Naukova dumka
PIFLD	Problemy yadernoy fiziki i kosmicheskikh luchey (sbornik, Khar'kov)
PIMZA	Prace Instytutu maszyn przeplywowych PAN
PNIFA	Prace naukowe Instytutu fizyki technicznej Politechniki wroclawskiej (Breslau)
POTZD	Promyshlennyye obraztsy, tovarnyye znaki (formerly included in OIPOB)
PRTEA	Pribory i tekhnika eksperimenta (CTC)
PSSAB	Physica status solidi (A). Applied Research (GDR)
PSSBB	Physica status solidi (B). Basic Research (GDR)
PZTFD	Zhurnal tekhnicheskoy fiziki. Pis'ma (CTC)
PZTKA	Przeglad telekomunikacyjny
RAELA	Radiotekhnika i elektronika (CTC)
RATEA	Radiotekhnika (journal, Moskva) (CTC)
RRPQA	Revue Roumaine de Physique
RTKHA	Radiotekhnika (sbornik, Khar'kov)

RZASA	Referativnyy zhurnal. Astronomiya
RZETA	Rozprawy elektrotechniczne
RZFZA	Referativnyy zhurnal. Fizika
RZRAB	Referativnyy zhurnal. Radiotekhnika
SAKNA	Akademiya nauk Gruzinskoy SSR. Soobshcheniya
SCEFA	Studii si cercetari de fizica
SDTEA	Sdelovaci technica
SUFGA	Godishnik na Sofiiskaya universitet. Fizicheski fakultet
SVETA	Svetotekhnika
TKTEA	Tekhnika kino i televideniya
TVYTA	Teplofizika vysokikh temperatur (CTC)
UFNAA	Uspekhi fizicheskikh nauk (CTC)
UFZHA	Ukrainskiy fizicheskiy zhurnal (CTC)
VANSA	Akademiya nauk SSSR. Vestnik (CTC)
VBBKA	Belorusskiy universitet. Vestnik. Seriya 2. Biologiya, khimiya, gelogiya, geografiya
VBMFA	Belorusskiy universitet. Vestnik. Seriya 1. Matematika, fizika, mekhanika
VBSFA	Akademiya nauk Belorusskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk
VEOFA	Vestnik oftal'mologii
VMUFA	Moskovskiy universitet. Vestnik. fizika, astronomiya (CTC)
ZAACA	Zeitschrift fuer anorganische und allgemeine chemie
ZAKHA	Zhurnal analiticheskoy khimii (CTC)
ZETFA	Zhurnal eksperimental'noy i teoreticheskoy fiziki (CTC)

ZFKHA	Zhurnal fizicheskoy khimii (CTC)
ZFPRA	Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma (CTC)
ZNPFA	Zhurnal nauchnoy i prikladnoy fotografii i kinematografii (CTC)
ZPSBA	Zhurnal prikladnoy spektroskopii (CTC)
ZRBEA	Zarubezhnaya radioelektronika
ZTEFA	Zhurnal tekhnicheskoy fiziki (CTC)
ZVDLA	Zavodskaya laboratoriya (CTC)
ZVMFA	Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki (CTC)

V. AUTHOR AFFILIATIONS

AFI
Astrofizicheskiy institut AN Kaz SSR
Astrophysical Institute, Academy of Sciences Kazakh SSR

AKIN
Akusticheskiy institut AN SSSR
Acoustics Institute, Academy of Sciences USSR

BelNIINTI
Belorusskiy NII nauchno-tekhnicheskoy informatsii i tekhniko-ekonomicheskikh issledovaniy Gosplana BSSR
Belorussian Scientific Research Institute of Scientific and Technical Information and of Technical Economic Studies of the State Plan of the Belorussian SSR, Minsk

BGU
Belorusskiy gos universitet
Belorussian State University

BiGPI
Birskiy gos pedagogicheskiy institut
Birsk State Pedagogical Institute

ChGU
Chernovitskiy gosudarstvennyy universitet
Chernovitsy State University

ChPI
Chelyabinskiy politekhnicheskiy institut
Chelyabinsk Politechnical Institute

ChuGU
Chuvashskiy gos universitet
Chuvash State University

DGU
Dnepropetrovskiy gosudarstvennyy universitet
Dnepropetrovsk State University

ENIMS
Eksperimental'nyy NII metallorezhushchikh stankov
Experimental Scientific Research Institute of Metal Cutting Machine Tools, Moscow

FIAN
Fizicheskiy institut im Lebedeva AN SSSR
Physics Institute imeni Lebedev, Academy of Sciences USSR, Moscow

FTI
Fiziko-tekhnicheskiy institut im Ioffe AN SSSR
Physicotechnical Institute im Ioffe, Academy of Sciences USSR, Leningrad

FTIANTadzh
Fiziko-tekhnicheskiy institut AN TadzhSSR
Physicotechnical Institute, Academy of Sciences Tadzhik SSR, Dushanbe

FTIANUk
Fiziko-tekhnicheskiy institut AN UkrSSR
Physicotechnical Institute, Academy of Sciences Ukrainian SSR, Khar'kov

FTIANUz
  Fiziko-tekhnicheskiy institut AN UzSSR
  Physicotechnical Institute, Academy of Sciences
    Uzbek SSR, Tashkent
FTINT
  Fiziko-tekhnicheskiy institut nizkikh temperatur AN UkrSSR
  Physicotechnical Institute of Low Temperature Physics,
    Academy of Sciences Ukrainian SSR, Khar'kov
GGU
  Gor'kovskiy gos universitet
  Gor'kov State University
GIFTI
  Gor'kovskiy gosudarstvennyy universitet. Gor'kovskiy
    issledovatel'skiy fiziko-tekhnicheskiy institut.
  Gor'kiy Sstate University. Gor'kiy Physicotechnical Research
    Institute [SAME AS: NIFTI].
Giredmet
  Gos NI i proyektnyy institut redkometallicheskoy
    promyshlennosti
  State Scientific Research and Planning Institute of the
    Rare Metals Industry
GOI
  Gosudarstvennyy opticheskiy institut im Vavilova
  State Optical Institute imeni Vavilov, Leningrad
GPI
  Gor'kovskiy politekhnicheskiy institut.
  Gor'kiy Polytechnical Institute.
IAE
  Institut atomnoy energii im Kurchatova
  Institute of Atomic Energy imeni Kurchatov, Moscow
IAESOAN
  Institut avtomatiki i elektrometrii SOAN
  Institute of Automation and Electronic Measurements,
    Siberian Branch Academy of Sciences USSR
IEANBel
  Institut elektroniki AN BSSR
  Institute of Electronics, Academy of Sciences
    Belorussian SSR, Minsk
IELAN
  Institut elektrokhimii AN SSSR
  Institute of Electrochemistry, Academy of Sciences
    USSR
IEM
  Institut eksperimental'noy meteorologii
  Institute of Experimental meteorology, Obninsk
IFANAz
  Institut fiziki AN AzSSR
  Institute of Physics, Academy of Sciences
    Azerbaydzhan SSR
IFANB
  Institut fiziki AN BSSR
  Institute of Physics, Academy of Sciences
    Belorussian SSR, Minsk

IFANBMO
Mogilevskiy filial Instituta fiziki AN BSSR
Mogilev Branch of the Institute of Physics, Academy of Sciences Belorussian SSR

IFANEst
Institut fiziki AN EstSSR
Institute of Physics, Academy of Sciences Estonian SSR

IFANLa
Institut fiziki AN LatSSR
Institut of Physics, Academy of Sciences Latvian SSR, Salaspils

IFANLi
Institut fiziki AN LitSSR
Institute of Physics, Academy of Sciences Lithuanian SSR

IFANUk
Institut fiziki AN UkrSSR
Institute of Physics, Academy of Sciences Ukrainian SSR, Kiev

IFI
Institut fizicheskikh issledovaniy AN ArmSSR
Institute of Physics Research, Academy of Sciences Armenian SSR

IFM
Institut fiziki metallov Ural'skogo nauchnogo tsentra AN SSSR
Institute of Physics of Metals, Ural Scientific Center, Academy of Sciences USSR, Sverdlovsk

IFoto
Institut fotosinteza AN SSSR
Institute of Photosynthesis, Academy of Sciences USSR, Pushchino

IFPSOAN
Institut fiziki poluprovodnikov SOAN
Institute of Semiconductor Physics, Siberian Branch Academy of Sciences USSR, Novosibirsk

IFSOAN
Institut fiziki SOAN
Institute of Physics, Siberian Branch Academy of Sciences USSR

IFTT
Institut fiziki tverdogo tela AN SSSR
Institute of Solid State Physics, Academy of Sciences USSR, Chernogolovka

IGeokhSOAN
Institut geokhimii im Vinogradova SOAN
Institute of Geochemistry imeni Vinogradov, Siberian Branch Academy of Sciences USSR

IKAN
Institut kristallografii AN SSSR
Institute of Crystallography, Academy of Sciences USSR, Moscow

IKatAN
Institut kataliza SOAN
Institute of Catalysis, Siberian Branch Academy of Sciences USSR, Akademgorodok in Novosibirsk

IKhAN
Institut khimii AN SSSR
Institute of Chemistry, Academy of Sciences USSR, Gor'kiy

IKhF
Institut khimicheskoy fiziki AN SSSR
Institute of Physics of Chemistry, Academy of Sciences USSR, Chernogolovka

IKhKG
Institut khimicheskoy kinetiki i goreniya SOAN
Institute of Chemical Kinetics and Combustion, Siberian Branch Academy of Sciences USSR, Novosibirsk

IKI
Institut kosmicheskikh issledovaniy AN SSSR
Institute of Space Research, Academy of Sciences USSR

IMF
Institut metallofiziki AN UkrSSR
Institute of Physics of Metals, Academy of Sciences Ukrainian SSR, Kiev

IMFS
Institut mekhaniki i fiziki
Institute of Mechanics and Physics, Saratov

Informsvyaz'
Tsentr nauchno-tekhnicheskoy informatsii i propagandy po svyazi "Informsvyaz'", Ministerstvo svyazi SSSR
Center for Scientific and Technical Information and Propaganda on Communications, USSR Ministry of Communications, Moscow

INKhS
Institut neftekhimicheskogo sinteza AN SSSR
Institute of Petrochemical Synthesis, Academy of Sciences USSR, Moscow

IOA
Institut optiki atmosfery SOAN
Institute of Atmospheric Optics, Siberian Branch Academy of Sciences USSR

IOF
Institut obshchey fiziki AN SSSR
Institute of General Physics, Academy of Sciences USSR, Moscow

IOKhK
Institut organicheskoy khimii AN UkrSSR
Institute of Organic Chemistry, Academy of Sciences Ukrainian SSR, Kiev

IPANUk
Institut poluprovodnikov AN UkrSSR
Institute of Semiconductors, Academy of Sciences Ukrainian SSR, Kiev

IPF
Institut prikladnoy fiziki AN SSSR
Institute of Applied Physics, Academy of Sciences USSR, Gor'kiy

IPFANM
Institut prikladnoy fiziki AN MSSR
Institute of Applied Physics, Academy of Sciences Moldavian SSR, Kishinev

IPM
Institut prikladnoy matematiki AN SSSR
Institute of Applied Mathematics, Academy of Sciences USSR

IPMe
Institut problem mekhaniki AN SSSR
Institute of Problems of Mechanics, Academy of Sciences USSR, Moscow

IPOnk
Institut problem onkologii AN UkrSSR
Institute for Problems of Oncology, Academy of Sciences Ukrainian SSR

IRE
Institut radiotekhniki i elektroniki AN SSSR
Institute of Radioengineering and Electronics, Academy of Sciences USSR, Moscow

IRFEANArm
Institut radiofiziki i elektroniki AN ArmSSR
Institute of Radiophysics and Electronics, Academy of Sciences Armenian SSR

IRFEANUk
Institut radiofiziki i elektroniki AN UkrSSR
Institute of Radiophysics and Electronics, Academy of Sciences Ukrainian SSR

ISAN
Institut spektroskopii AN SSSR
Institute of Spectroscopy, Academy of Sciences USSR

ISE
Institut sil'notochnoy elektroniki SOAN
Institute of High-Current Electronics, Siberian Branch Academy of Sciences USSR, Tomsk

ITEF
Institut teoreticheskoy i eksperimental'noy fiziki
Institute of Theoretical and Experimental Physics, Moscow

ITF
Institut teplofiziki SOAN
Institute of Thermophysics, Siberian Branch Academy of Sciences USSR, Novosibirsk

ITFL
Institut teoreticheskoy fiziki im Landau AN SSSR
Institute of Theoretical Physics imeni Landau, Academy of Sciences USSR, Chernogolovka

ITMO
Institut teplo- i massoobmena AN BSSR
Institute of Heat and Mass Exchange, Academy of Sciences Belorussian SSR
IVTAN
Institut vysokikh temperatur AN SSSR
Institute of High Temperatures, Academy of Sciences USSR
IYaFSOAN
Institut yadernoy fiziki SOAN
Institute of Nuclear Physics, Siberian Branch Academy of Sciences USSR, Novosibirsk
KaGU
Kazanskiy gos universitet
Kazan' State University
KaPI
Kaunasskiy politekhnicheskiy institut
Kaunass Polytechnic Institute
KazFTI
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KazGU
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Kazakh State University, Alma Ata
KGU
Kiyevskiy gos universitet
Kiev State University
KhaPI
Khabarovskiy politekhnicheskiy institut
Khabarovsk Polytechnic Institute
KhGU
Khar'kovskiy gos universitet
Khar'kov State University
KhIRE
Khar'kovskiy institut radioelektroniki
Khar'kov Institute of Radioelectronics
KhPI
Khar'kovskiy politekhnicheskiy institut
Khar'kov Polytechnic Institute
KIIGA
Kiyevskiy institut inzhenerov grazhdanskoy aviatsii
Kiev Institute of Civil aviation Engineers
KPIA
Kiyevskiy politekhnicheskiy institut`
Kiev Polytechnic Institute
KuAI
Kuybyshevskiy aviatsionnyy institut
Kuybyshev Aviation Institute
KubU
Kubanskiy gos universitet
Kuban' State University

LatGU
Latviyskiy gos universitet
Latvian State University
LenKino
Leningradskiy institut kinoinzhenerov
Leningrad Institute of Motion Picture Engineers
LenMI
Leningradskiy mekhanicheskiy institut
Leningrad Mechanical Institute
LETI
Leningradskiy elektrotekhnicheskiy institut
Leningrad Electric Engineering Institute
LGU
Leningradskiy gos universitet
Leningrad State University
LITMO
Leningradskiy institut tochnoy mekhaniki i optiki
Leningrad Institute of Precision Mechanics and Optics
LitNIINTI
Litovskiy NII nauchno-tekhnicheskoy informatsii i tekhniko-ekonomicheskikh issledovaniy Gosplana LitSSR
Lithuanian Scientific Research Institute of Scientific and Technical Information and of Technical Economic Studies for the State Plan of the Lithuanian SSR, Vilnius
LIYaF
Leningradskiy institut yadernoy fiziki AN SSSR
Leningrad Institute of Nuclear Physics, Academy of Sciences USSR
LPI
Leningradskiy politekhnicheskiy institut
Leningrad Polytechnic Institute
LSAO
Leningradskiy filial Spetsial'noy astrofizicheskoy observatorii
Leningrad Branch of the Special Astrophysical Observatory
LSGPI
Lesosibirskiy gos pedagogicheskiy institut
Lesosibirsk State Pedagogical Institute
LvGU
L'vovskiy gos universitet
L'vov State University
MEI
Moskovskiy energeticheskiy institut
Moscow Power Engineering Institute
MEISF
Smolenskiy filial Moskovskogo energeticheskogo instituta
Smolensk Branch of the Moscow Power Engineering Institute

MFTI
Moskovskiy fiziko-tekhnicheskiy institut
Moscow Physicotechnical Institute
MGU
Moskovskiy gos universitet
Moscow State University
MIAN
Matematicheskiy institut im Steklova AN SSSR
Mathematics Institute imeni Steklov, Academy of Sciences USSR, Moscow
MIEM
Moskovskiy institut elektronnogo mashinostroyeniya
Moscow Institute of Electronic Machinery
MIFI
Moskovskiy inzhenerno-fizicheskiy institut
Moscow Engineering Physics Institute
MIIGAiK
Moskovskiy institut inzhenerov geodezii, aerofotos"yemki i kartografii
Moscow Institute of Engineers of Geodesy, Aerial Photography and Cartography
MIREA
Moskovskiy institut radiotekhniki, elektroniki i avtomatiki
Moscow Institute of Radio Engineering, Electronics and Automation
MISIS
Moskovskiy institut stali i splavov
Moscow Institute of Steel and Alloys
MNII
Moskovskiy NII glaznykh bolezney im Gel'mgol'tsa
Moscow Scientific Research Institute of Eye Diseases imeni Gel'mgol'ts
MRI
Minskiy radiotekhnicheskiy institut
Minsk Radio Engineering Institute
MTI
Moskovskiy tekstil'nyy institut
Moscow Textile Institute
MVTU
Moskovskoye vyssheye tekhnicheskoye uchilishche im Baumana
Moscow Higher Technical College imeni Bauman
NIFKhI
NI fiziko-khimicheskiy institut im Karpova
Scientific Research Institute of Physicochemistry imeni Karpov
NIIEA
NII elektrofizicheskoy apparatury im Yefremova
Scientific Research Institute of Electrophysical Equipment imeni Yefremov, Leningrad

NIIFL
NII fiziki pri Leningradskom gos universitete
Scientific Research Institute of Physics at Leningrad State University

NIImash
NII informatsii po mashinostroyeniyu Ministerstva stankostroitel'noy i instrumental'noy promyshlennosti
Scientific Research Institute of Information on Machine Building, Ministry of the Machine Tool Manufacturing and Instrument Industry, Moscow

NIIPFI
NII prikladnoy fiziki pri Irkustskom gos universitete
Scientific Research Institute of Applied Physics at Irkutsk State University

NIIPFP
NII prikladnykh fizicheskikh problem pri Belorusskom gos universitete
Scientific Research Institute of Applied Physics Problems at Belorussian State University

NIKFI
NI kinofotoinstitut
Scientific Research Institute of Motion Pictures and Photography, Moscow

NPSOArmstanok
Nauchno-proizvodstvennoye stankostroitel'noye ob"yedineniye "Armstanok"
Armstanok Scientific Production machine Tool Manufacture Association

NSPGAN
Nauchnyy sovet AN SSSR po probleme "Gologrfiya"
Scientific Council on Holography, Academy of Sciences USSR

OGU
Odesskiy gos universitet
Odessa State University

OIYaI
Ob"yedinennyy institut yadernykh issledovaniy
Joint Institute of Nuclear Research, Dubna

ONIITEkhim
Otdeleniye NII tekhniko-ekonomicheskikh issledovaniy khimicheskoy promyshlennosti
Department of Scientific Research Institute of Technical Economic Studies of the Chemical Industry, Cherkassy

OPI
Odesskiy politekhnicheskiy institut
Odessa Polytechnic Institute

PetGU
Petrozavodskiy gos universitet
Petrozavodsk State University

PGU
Permskiy gos universitet
Perm' State University

SGI
  Sverdlovskiy gornyy institut
  Sverdlovsk Mining Institute
SimGU
  Simferopol'skiy gos universitet
  Simferopol State University
SKBIRE
  Spetsial'noye konstruktorskoye byuro Instituta radiotekhniki i elektroniki AN SSSR
  Special Design Bureau of the Institute of Radioengineering and Electronics, Academy of Sciences USSR
SKBOptika
  Spetsial'noye konstruktorskoye byuro nauchnogo priborostroyeniya "Optika" SOAN
  "Optika" Special Design Bureau for Scientific Instrument Manufacture, Siberian Branch Academy of Sciences USSR
TbGU
  Tbilisskiy gos universitet
  Tbilisi State University
TGU
  Tomskiy gos universitet
  Tomsk State University
TIASUR
  Tomskiy institut avtopmatizatsii sistem upravleniya i radioelektroniki
  Tomsk Institute for Automation of Control Systems and Radioelectronics
ToPI
  Tomskiy politekhnicheskiy institut
  Tomsk Polytechnic Institute
TsAGI
  Tsentral'nyy aerogidrodinamicheskiy institut
  Central Institute of Aerohydrodynamics, Ramenskoye
TsNIIGAiK
  Tsentral'nyy NII geodezii, aerofotos"yemki i kartografii
  Central Scientific Research Institute of Geodesy, Aerial Photography and Cartography, Moscow
TsNIITEIlegpishchemash
  TsNII informatsii i tekhniko-ekonomicheskikh issledovaniy mashinostroyeniya dlya legkoy i pishchevoy promyshlennosti i bytovykh priborov
  Central Scientific Research Institute of Information and Technical Economic Studies on machine Building for Light Industry, the Food Industry, and Household Appliances, Moscow

TsNIITEIpriboro
  TsNII informatsii i tekhniko-ekonomicheskikh issledovaniy priborostroyeniya, sredstv avtomatizatsii i sistem upravleniya
  Central Scientific Research Institute of Information and Technical Economic Studies on Instrument Manufacture, Means of Automation, and Control Systems, Moscow
TsNILChGUMinzdrav
  Tsentral'naya NI laboratoriya Chetvertogo glavnogo upravleniya pri Ministerstve zdravookhraneniya SSSR
  Central Scientific Research Laboratory of the Fourth Main Administration at the USSR Ministry of Health
TulPI
  Tul'skiy politekhnicheskiy institut
  Tula Polytechnic Institute
UEIIZhT
  Ural'skiy elektromekhanicheskiy institut inzhenerov zheleznodorozhnogo transporta
  Ural Electromechanical Institute for Railroad Transport Engineers, Sverdlovsk
UkrIIVKh
  Ukrainskiy institut inzhenerov vodnogo khozyaystva
  Ukrainian Institute of Water Management Engineers, Rovno
UkrNIINTI
  Ukrainskiy NII nauchno-tekhnicheskoy informatsii i tekhniko-ekonomicheskikh issledovaniy Gosplana UkrSSR
  Ukrainian Scientific Research Institute of Scientific and Technical Information and of Technical Economic Studies for the State Plan of the Ukrainian SSR, Kiev
VGU
  Voronezhskiy gos universitet
  Voronezh State University
VilGPI
  Vil'nyusskiy gos pedagogicheskiy institut
  Vilnius State Pedagogical Institute
VilGU
  Vil'nyusskiy gos universitet
  Vilnius State University
VINITI
  Vsesoyuznyy institut nauchnoy i tekhnicheskoy informatsii
  All-Union Institute of Scientific and Technical Information, Moscow
VNIFTRI
  VNII fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy
  All-Union Scientific Research Institute of Physico-technical and Radiotechnical Measurements, Moscow

VNIIMono
VNII monokristallov, stsintillyatsionnykh materialov i osobo chistykh khimicheskikh veshchestv
All-Union Scientific Research Institute of Single Crystals, Scintillation Materials and Extra Pure Chemical Substances, Khar'kov

VNIIOFI
VNII optiko-fizicheskikh izmereniy
All-Union Scientific Research Institute of Optophysical Measurements, Moscow

VNIIYaGG
VNII yadernoy geofiziki i geokhimii
All-Union Scientific Research Institute of Nuclear Geophysics and Geochemistry, Moscow

VNITsISPiV
VNI tsentr po izucheniyu svoystv poverkhnosti i vakuuma
All-Union Scientific Research Center for Studying the Properties of Surfaces and Vacuums, Moscow

VNPObumprom
Vsesoyuznoye nauchno-proizvodstvennoye ob"yedineniye tsellyulozno-bumazhnoy promyshlennosti
All-Union Scientific Production Association og the Wood Pulp and Paper Industry, Leningrad

VOIFTP
Vitebskoye otdeleniye Instituta fiziki tverdogo tela i poluprovodnikov AN BSSR
Vitebsk Branch of the Institute of Solid State and Semiconductor Physics, Academy of Sciences Belorussian SSR

VPI
Voronezhskiy politekhnicheskiy institut
Voronezh Polytechnic Institute

VSTI
Vostochno-Sibirskiy tekhnologicheskiy institut
East Siberian Technological Institute, Ulan Ude

VZISI
Vsesoyuznyy zaochnyy inzhenerno-stroitel'nyy institut
All-Union Civil Engineering Correspondence Institute, Moscow

VZMI
Vsesoyuznyy zaochnyy mashinostroitel'nyy institut
All-Union Correspondence Institute of Mechanical Engineering

YeGU
Yerevanskiy gos universitet
Yerevan State University

VI. AUTHOR INDEX

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