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JULY - SEPTEMBER 1975

Stuart G. Hibben, et al

Informatics, Incorporated

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Principal Investigator:

Stuart G. Hibben

Tel: (301) 770-3000

Program Manager:

Ruth Ness

Tel: (301) 770-3000

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informatics inc

Information Systems Company
6000 Executive Boulevard
Rockville, Maryland 20852
(301) 770-3000

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This is the Soviet Laser Bibliography for the third quarter of 1975 and is No. 21 in the 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; crystal growing; theoretical aspects of advanced lasers; and general laser theory. Laser applications are listed under biological effects; communications; computer technology; holography; laser-induced chemical reactions; instrumentation and measurements; beam-target interaction; and plasma generation and diagnostics.		

Introduction

This bibliography has been compiled by the staff of Informatics Inc. in response to a continuing contractual assignment to monitor current Soviet-bloc developments in the quantum electronics field. Of all material reviewed, the major yield has been from the approximately 30 periodicals which are known to report the most advanced and interesting findings in Soviet laser technology.

The period covered is the third quarter of 1975, and includes all significant laser-related articles received by us during that interval. The structure and selection criteria are basically those used in the preceding reports.

For convenience we have abbreviated frequently cited source names; a source abbreviation list is included. Unless indicated by a parenthesized (RZh, KL) notation, all cited sources are available at Informatics Inc. The numbers in parentheses following the authors' names in the text refer to the Cumulative Affiliations List which includes all author affiliations from 1969 to the present.

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I. BASIC RESEARCH

A. SOLID STATE LASERS

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IV. SOURCE ABBREVIATIONS

APP	-	Acta physica polonica
BAPS	-	Bulletin de l'Academie Polonaise des Sciences. Serie des Sciences Techniques
DAN SSSR	-	Akademiya nauk SSSR. Doklady
DAN Tadzh	-	Akademiya nauk Tadzhikskoy SSR. Doklady
DBAN	-	Bulgarsk adademiya na naukite. Doklady
EOM	-	Elektronnaya obrabotka materialov
FAiO	-	Akademiya nauk SSSR. Izvestiya. Fizika atmosfery i okeana
FGiV	-	Fizika gorenija i vzryva
FiKhOM	-	Fizika i khimiya obrabotki materialov
FTP	-	Fizika i tekhnika poluprovodnikov
FTT	-	Fizika tverdogo tela
GiK	-	Geodeziya i kartografiya
IAN Arm	-	Akademiya nauk Armyanskoy SSR. Izvestiya. Fizika
IAN B	-	Akademiya nauk Belorusskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk
IAN Fiz	-	Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya
I-FZh	-	Inzhenerno-fizicheskiy zhurnal
IT	-	Izmeritel'naya tekhnika
IVUZ Fiz	-	Izvestiya vysshikh uchebnykh zavedeniy. Fizika
IVUZ Geol	-	Izvestiya vysshikh uchebnykh zavedeniy. Geologiya i razvedka
IVUZ Priboro	-	Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye
IVUZ Radioelektr	-	Izvestiya vysshikh uchebnykh zavedeniy. Radioelektronika
IVUZ Radiofiz	-	Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika

KE	-	Kvantovaya elektronika
KL	-	Knizhnaya letopis'
KLDV	-	Knizhnaya letopis'. Dopolnitel'nyy vypusk
Kristal	-	Kristallografiya
KSpF	-	Kratkiye soobshcheniya po fizike
LC	-	Received at Library of Congress
NM	-	Akademiya nauk SSSR. Izvestiya. Neorganicheskiye materialy
OiS	-	Optika i spektroskopiya
OMP	-	Optiko-mekhanicheskaya promyshlennost'
Otkr izobr	-	Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki
PF	-	Postepy fiziki
PTE	-	Pribory i tekhnika eksperimenta
RiE	-	Radiotekhnika i elektronika
RZhElektr	-	Referativnyy zhurnal. Elektronika i yeye primeneniye
RZhElektrotekh	-	Referativnyy zhurnal. Elektrotehnika i energetika
RZhF	-	Referativnyy zhurnal. Fizika
RZhFoto	-	Referativnyy zhurnal. Fotokinotekhnika
RZhKh	-	Referativnyy zhurnal. Khimiya
RZhMekh	-	Referativnyy zhurnal. Mekhanika
RZhMetrolog	-	Referativnyy zhurnal. Metrologiya i izmeritel'naya tekhnika
RZhRadiot	-	Referativnyy zhurnal. Radiotekhnika
Sbl	-	Sbornik. Monokristally i tekhnika, no. 2, Khar'kov, 1975.
Sb2	-	Ukrainskaya respublikanskaya konferentsiya po elektronnoy optike i yeye primeneniyam, posvyashchennaya 250-letiyu AN SSSR. 3rd. Tezisy dokladov. Part 2, Khar'kov, 1974.
Sb3	-	Effekty pamyati i fotoprovodimosti v neodnorodnykh poluprovodnikakh. Kiyev, 1974.

- Sb4 - Aerofizicheskiye issledovaniya, no. 3,
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- Sb5 - Otchet o nauchno-issledovatel'skikh
 rabotakh, vypolnennykh v 1973. Institut
 mekhaniki Moskovskogo universiteta.
 Moskovskiy universitet, 1974.
- Sb6 - Voprosy radioelektroniki, seriya Tekhnika
 televideniya, no. 4, 1974.
- Sb7 - Vsesoyuznaya konferentsiya. Fizicheskiye
 protsessy v geteroperekhodakh, 1974.
 Tezisy. Kishinev, 1974.
- Sb8 - Novyye poluprovodnikovyye soyedineniya
 i ikh svoystva. Kishinev, Shtiintsa, 1975.
- Sb9 - Sposoby zapisi informatsii na besserebr-
 anykh nositelyakh, no. 6, 1975.
- Sb10 - Golograficheskiye metody i apparatura,
 primenyayemaya v fizicheskikh issled-
 ovaniyakh. Moskva, 1974.
- Sb11 - Magnitnyye plenki. Minsk, Vysheysh.
 shkola, 1974.
- Sb12 - Lektsii po elektronike SVCh. 3-ya Zimnaya
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 Saratov, Saratovskiy universitet, 1974.
- Sb13 - Problemy golografii, no. 4, 1974.
- Sb14 - Vsesoyuznaya shkola po golografii. 6th.
 Materialy. Leningrad, 1974.
- Sb15 - Kazanskiy universitet. Tochnyye nauki.
 Fizika. Sbornik aspirantskikh rabot.
 Kazan', 1974.
- Sb16 - Avtomatizirovannoye proizvodstvo i
 kontrol' v mashinostroyenii. Omsk, 1974.
- Sb17 - Primeneniye spektral'nogo analiza v
 narodnom khozyaystve i nauchnykh issled-
 ovaniyakh. No place of publication, 1974.
- Sb18 - Poluprovodnikovaya tekhnika i mikroelektronika, no. 20, 1975.
- Sb19 - Fizicheskaya elektronika, no. 8, 1974.
- TKiT - Tekhnika kino i televideniya
- Tr1 - Trudy metrologicheskikh institutov SSSR.
 VNII metrologii no. 163(223), 1974.

- Tr2 - Moskovskiy fiziko-tehnicheskiy institut.
Trudy. Seriya Radiotekhnika i elektronika,
no. 7, 1974.
- Tr3 - Moskovskiy fiziko-tehnicheskiy institut.
Trudy. Seriya Radiotekhnika i elektronika,
no. 8, 1974.
- Tr4 - Leningradskiy institut tochnoy mekhaniki
i optiki. Trudy, no. 79, 1975.
- Tr5 - Institut mekhaniki Moskovskogo universiteta.
Nauchnyye trudy, no. 32, 1974.
- Tr6 - Tashkentskiy universitet. Nauchnyye trudy,
no. 459, 1974.
- Tr7 - Tallinskiy politekhnicheskiy institut. Trudy,
no. 358, 1974.
- Tr8 - Leningradskiy elektrotekhnicheskiy institut.
Izvestiya, no. 163, 1975.
- Tr9 - Tomskiy institut avtomatizirovannykh
sistem upravleniya i radioelektroniki.
Trudy, no. 9, 1974.
- Tr10 - Novocherkasskiy politekhnicheskiy institut.
Trudy, no. 314, 1975.
- Tr11 - Tsentral'naya aerologicheskaya observ-
atoriya. Trudy, no. 109, 1975.
- Tr12 - Kazanskaya gornaya astronomnaya observ-
atoriya. Trudy, no. 40, 1974.
- Tr13 - Institut eksperimental'noy meteorologii.
Trudy, no. 6(44), 1974.
- Tr14 - Yerevanskiy universitet. Yestestvennyye
nauki. Uchenyye zapiski, no. 3(127), 1974.
- Tr15 - VNII transportnogo stroistva. Sbornik
nauchnykh trudov, no. 64, 1975.
- Tr16 - TsNII svyazi. Sbornik nauchnykh trudov,
no. 2, 1974.
- Tr17 - Trudy uchebnykh institutov svyazi.
Ministerstvo svyazi SSSR, no. 68, 1974.
- Tr18 - Moskovskiy energeticheskiy institut.
Trudy, no. 214, 1974.
- Tr19 - Leningradskiy elektrotekhnicheskiy institut.
Izvestiya, no. 142, 1974.

Tr20	-	Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 161, 1975.
Tr21	-	Trudy metrologicheskikh institutov SSSR. VNII metrologii, no. 148(208), 1974.
Tr22	-	Radiotekhnicheskiy institut AN SSSR. Trudy, no. 20, 1974.
Tr23	-	Moskovskoye vyssheye tekhnicheskoye uchilishche. Trudy, no. 180, 1973(1975).
TVT	-	Teplofizika vysokikh temperatur
UFN	-	Uspekhi fizicheskikh nauk
UFZh	-	Ukrainskiy fizicheskiy zhurnal
VMU	-	Moskovskiy universitet. Vestnik. Seriya fizika, astronomiya
ZhETF	-	Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhETF P	-	Pis'ma v Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhNiPFIK	-	Zhurnal nauchnoy i prikladnoy fotografii i kinematografii
ZhPMTF	-	Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki
ZhPS	-	Zhurnal prikladnoy spektroskopii
ZhTF	-	Zhurnal tekhnicheskoy fiziki
ZhTF P	-	Pis'ma v Zhurnal tekhnicheskoy fiziki
ZL	-	Zavodskaya laboratoriya

V. CUMULATIVE AFFILIATIONS LIST

NS. Non-Soviet

0. Affiliation not given
1. Physics Institute im. Lebedev, AN SSSR, Moscow (Fizicheskiy institut im. Lebedeva AN SSSR).
2. Moscow State University (Moskovskiy gosudarstvennyy universitet).
3. Institute of Physics, AN BSSR, Minsk (Institut fiziki, AN BSSR).
4. Leningrad Physical-technical Institute im. Ioffe (Fiziko-tehnicheskiy institut im. Ioffe).
5. Institute of Physics, AN UkrSSR, Kiev (Institut fiziki, AN UkrSSR).
6. Institute of Semiconductors, AN UkrSSR, Kiev (Institut poluprovodnikov, AN UkrSSR).
7. State Optical Institute im. Vavilov, Leningrad (Gosudarstvennyy opticheskiy institut im. Vavilova).
8. Radiophysics Scientific Research Institute at Gorkiy State University (Gor'kovskiy nauchno-issledovatel'skiy radiotekhnicheskiy institut pri Gor'kovskom gos. universitete).
9. Institute of Radiophysics and Electronics, Siberian Branch AN SSSR, Novosibirsk (Institut radiotekhniki i elektroniki, Sibirskoye otdeleniye AN SSSR).
10. Institute of Semiconductor Physics of the Siberian Branch, AN SSSR, Novosibirsk (Institut fiziki poluprovodnikov, Sib., otdel AN SSSR).
11. Kazan' State University (Kazenskiy gos. universitet).
12. Leningrad State University (Leningradskiy gos. universitet).
13. Institute of Crystallography, AN SSSR, Moscow (Institut kristallografiya, AN SSSR).
14. University of Friendship Among Nations im. Lumumba, Moscow (Universitet druzhby narodov im. Lumumby).
15. Institute of Radio Engineering and Electronics, AN SSSR, Moscow (Institut radiotekhniki i elektroniki, AN SSSR).
16. Moscow Engineering Physics Institute (Moskovskiy inzhenerno-fizicheskiy institut).
17. Institute of Mechanical Problems, AN SSSR, Moscow (Institut problem mehaniki, AN SSSR).
18. Institute of General and Inorganic Chemistry im. Kurnakov, AN SSSR, Moscow (Institut obshchey i neorganicheskoy khimii im. Kurnakova, AN SSSR).
19. Moscow Power Engineering Institute (Moskovskiy energeticheskiy institut).
20. All Union Scientific Research Institute of Physicotechnical and Electronic Measurements, Moscow (Vsesoyuznyy nauchno-issled. institut fiziko-tehnicheskikh i elektronnykh izmerenii).
21. Acoustics Institute, AN SSSR, Moscow (Akusticheskiy institut, AN SSSR).
22. Institute of metallurgy im. Baykov, Moscow (Institut metallurgii im. Baykova).
23. Institute of Atomic Energy im. Kurchatov, Moscow (Institut atomnoy energii im. Kurchatova).
24. Moscow Higher Technical College im. Beuman (Moskovskoye vyscheye tekhnicheskoye uchiliashche im. Baumana).
25. Moscow Scientific Research Institute of Instrument Manufacture (Moskovskiy nauchno-issled. institut instrumental'nogo proizvodstva).
26. Central Scientific Research Institute of the Ministry of Defense, Moscow (Tsentral'nyy nauchno-issled. institut Ministerstva oborony).
27. All Union Scientific Research Institute of Textile and Light Machinery, Moscow (VNII tekstil'nogo i lekogo mashinostroyeniya).
28. Leningrad Optomechanical Society (Leningradskoye optiko-mekhanicheskoye obshchestvo).
29. Leningrad Polytechnic Institute (Leningradskiy politekhnicheskiy institut).
30. Leningrad Institute of Precision Mechanics and Optics (Leningradskiy institut tochnoy mehaniki i optiki).
31. Institute of Semiconductors, AN SSSR, Leningrad (Institut poluprovodnikov AN SSSR).

32. Physics Scientific Research Institute at Leningrad State University (Fizicheskiy NII pri Leningradskom gos. universitete).
33. Institute of Silicate Chemistry im. Grebenevchikov, AN SSSR, Leningrad (Institut khimii silikatov im. Grebenevchikova AN SSSR).
34. Khar'kov State University (Khar'kovskiy gos. universitet).
35. Khar'kov Institute of Radioelectronics (Khar'kovskiy institut radioelektroniki).
36. Physicotechnical Institute of Low Temperatures, AN UkrSSR, Kher'kov (Fiziko-tehnicheskiy institut niskikh temperatur AN UkrSSR).
37. Yerevan State University (Yerevanskiy gos. universitet).
38. Kazan' Physicotechnical Institute (Kazanskiy fiziko-tehnicheskiy institut).
39. Institute of Cybernetics, AN GruzSSR (Institut kibernetiki AN GruzSSR).
40. Tbilisi State University (Tbilinskiy gos. universitet).
41. Rostov-on-Don State University (Rostovskiy-na-Donu gos. universitet).
42. Ural Polytechnic Institute im. Kirov, Sverdlovsk (Ural'skiy politekhnicheskiy institut im. Kirova).
43. Ural State University, Sverdlovsk (Ural'skiy gos. universitet).
44. Institute of Applied Physics, AN MSSR, Kishinev (Institut prikladnov fiziki AN MSSR).
45. Saratov State University (Saratovskiy gos. universitet).
46. Novosibirsk State University (Novosibirskiy gos. universitet).
47. Siberian Physicotechnical Institute im. Kuznetsov, Tomsk (Sibirs'kiy fiziko-tehnicheskiy institut im. Kuznetsova).
48. Tomsk Institute of Radio Engineering and Electronics (Tomskiy institut radiotekhniki i elektroniki).
49. Vilnius State University (Vil'nyuaskiy gos. universitet).
50. Institute of Semiconductor Physics, AN LitSSR, Vilnius (Institut fiziki poluprovodnikov, AN LitSSR).
51. Kiev State University (Kyivskiy gos. universitet).
52. Joint Institute of Nuclear Research, Dubna (Ob'yedinenyyj institut yedernykh issledovanij).
53. Chernovtsy State University (Chernovitskiy gos. universitet).
54. Taganrog Radio Engineering Institute (Taganrozhskiy radiotekhnicheskiy institut).
55. Physicotechnical Institute, AN TurkSSR, Ashkhabad (Fiziko-tehnicheskiy institut AN TurkSSR).
56. Nezhin State University (Nerzhinskiy gos. universitet).
57. All Union Machine Construction Institute, Kramatorsk (Vsesoyuznyy mashinostroitel'nyy institut).
58. Kemerovo State Pedagogical Institute (Kemerovskiy gos. pedagogicheskiy institut).
59. Institute of Physics Research, AN ArmSSR (Institut fizicheskikh issledovanij AN ArmSSR).
60. Institute of Physics, AN AzSSR (Institut fiziki AN AzSSR).
61. Institute of Physics and Astronomy, AN EstSSR (Institut fiziki i astronomii AN EstSSR).
62. Institute of Geophysics, AN GruzSSR (Institut geofiziki AN GruzSSR).
63. Institute of Physics, AN LatSSR (Institut fiziki AN LatSSR).
64. Institute of Atmospheric Physics, AN SSSR (Institut fiziki atmosfery AN SSSR).
65. Institute of Problems of Physics, AN SSSR (Institut fizicheskikh problem AN SSSR).
66. Institute of Solid State Physics, AN SSSR (Institut fiziki tverdogo tela AN SSSR).
67. Institute of Physics of Chemistry, AN SSSR (Institut khimicheskoy fiziki AN SSSR).
68. Institute of Space Research, AN SSSR (Institut kosmicheskikh issledovanij Aif SSSR).
69. Institute of Oceanography, AN SSSR (Institut okeanologii AN SSSR).
70. Institute of Organic and Physical Chemistry, AN SSSR (Institut organicheskoy i fizicheskoy khimii AN SSSR).

71. Institute of Applied Mathematics, AN SSSR (Institut prikladnoy matematiki AN SSSR).
72. Institute of Spectroscopy, AN SSSR (Institut spektroskopii AN SSSR).
73. Institute of Theoretical Physics im. Landau, AN SSSR (Institut teoretičeskoy fiziki im. Landau AN SSSR).
74. Institute of High Temperatures, AN SSSR (Institut vysokikh temperatur AN SSSR).
75. Institute of Automation and Electronic Measurements, Siberian Branch AN SSSR (Institut avtomatiki i elektronika SOAN).
76. Institute of Hydrodynamics, Siberian Branch AN SSSR (Institut gidrodinamiki SOAN).
77. Institute of Inorganic Chemistry, Siberian Branch AN SSSR (Institut neorganicheskoy khimii SOAN).
78. Institute of Atmospheric Optics, Siberian Branch AN SSSR (Institut optiki atmosfery SOAN).
79. Institute of Nuclear Physics, Siberian Branch AN SSSR (Institut yadernoy fiziki SOAN).
80. Computer Center, Siberian Branch AN SSSR (Vychislitel'nyy tsentr SOAN).
81. Physicomechanical Institute, AN UkrSSR (Fiziko-mekhanicheskiy institut AN UkrSSR).
82. Physicotechnical Institute, AN UkrSSR (Fiziko-tehnicheskiy institut AN UkrSSR).
83. Institute of Problems in Material Studies, AN UkrSSR (Institut problem materialovedeniya AN UkrSSR).
84. Institute of Radiophysics and Electronics, AN UkrSSR (Institut radiofiziki i elektroniki AN UkrSSR).
85. Institute of Nuclear Physics, AN UzSSR (Institut yadernoy fiziki AN UzSSR).
86. Azerbaydzhan State University (Azerbaydzhanskiy gos. universitet).
87. Belorussian State University (Belorusskiy gos. universitet).
88. Dagestan State University (Dagestanskiy gos. universitet).
89. Donetsk State University (Donetskiy gos. universitet).
90. Electrotechnical Institute of Communications (Elektrotechnicheskiy institut svyazi).
91. Power Institute im. Kremizhanovskiy (Energeticheskiy institut im. Kremizhanovskogo).
92. Physicochemical Institute im. Karpov (Fiziko-khimicheskiy institut im. Karpova).
93. Gorkiy Physicotechnical Research Institute at Gorkiy State University (Gor'kovskiy issledovatel'skiy fiziko-tehnicheskiy institut pri Gor'kovskom gos. universitete).
94. Gorkiy State University (Gor'kovskiy gos. universitet).
95. State Scientific Research and Planning Institute of the Rare Metals Industry (GIREDMET, Gos. NI pryeystruyy institut zerk. metali chernoy promyshlennosti).
96. State Scientific Research Institute of Photochemical Planning (GOSNIKHMOPROYECT).
97. Georgian Polytechnical Institute (Gruzinskiy politekhnicheskiy institut).
98. Institute of Nuclear Physics at Moscow State University (Institut yadernoy fiziki pri Moskovskom gos. universiteite).
99. Institute of Mechanics and Physics, Saratov (Institut mehaniki i fiziki).
100. Institute of Oncology im. Petrov (Institut onkologii im. Petrova).
101. Ivanovo State Medical Institute (Ivanovskiy gos. meditsinskiy institut).
102. Ivanovo Chemicotechnological Institute ((ivanovskiy khimiko-tehnologicheskiy institut).
103. Ivanovo Pedagogical Institute (Ivanovskiy pedagogicheskiy institut).
104. Kaunas Polytechnic Institute (Kaunasskiy politekhnicheskiy institut).
105. Kazan' Civil Engineering Institute (Kazanskiy inzhenerno-stroitel'skiy institut).
106. Kiev Polytechnic Institute (Kyivskiy politekhnicheskiy institut).
107. Khar'kov State Scientific Research Institute of Metrology (Khar'kovskiy gos. NII metrologii).
108. Khar'kov Polytechnic Institute (Khar'kovskiy politekhnicheskiy institut).
109. Latvian State University (Latvijskiy gos. universitet).

110. Leningrad Electrotechnical Institute (Leningradskiy elektrotexnicheskiy institut).
111. Leningrad Mining Institute (Leningradskiy gornyy institut).
112. Leningrad Institute of Soviet Trade (Leningradskiy institut Sovetskoy torgovli).
113. Leningrad Mechanical Institute (Leningradskiy makhinicheskiy institut).
114. Lvov State University (Lvovskiy gos. universitet).
115. Lvov Polytechnic Institute (Lvovskiy politekhnicheskiy institut).
116. Moscow Aviation Institute (Moskovskiy aviatcionnyy institut).
117. Moscow Mining Institute (Moskovskiy gornyy institut).
118. Moscow Physicotachnical Institute (Moskovskiy fiziko-tehnicheskiy institut).
119. Moscow Institute of Electronic Engineering (Moskovskiy institut elektronny tekhniki).
120. Moscow Institute of Engineers of Geodesy, Aerial Photography and Cartography (Moskovskiy institut inzhenerov geodezii, aerofotosyemki i kartografii).
121. Moscow Institute of Chemical Machinery (Moskovskiy institut khimicheskogo maehinostroyeniya).
122. Scientific Research Institute of Physicochemistry im. Karpov (NI fiziko-khimicheskiy institut im. Karpova).
123. Novosibirsk Institute of Automation and Electrometallurgy (Novosibirskiy institut avtomatiki i elektrometallurgii).
124. Odessa Scientific Research Institute of Eye Diseases and Tissue Therapy (Odesskiy NII glaznykh bolezney i tkanevoy terapii).
125. Odessa Technological Institute of Refrigeration Industry (Odesskiy tekhnologicheskiy institut kholodil'nuy promyshlennosti).
126. Omsk Polytechnic Institute (Omskiy politekhnicheskiy institut).
127. Rostov Civil Engineering Institute (Rostovskiy inzhenerno-stroitel'nyy institut).
128. Ryazan' Radiotecnical Institute (Ryazanskiy radiotekhnicheskiy institut).
129. Siberian State Scientific Research Institute of Metrology (Sibiretskiy gos. NII metrologii).
130. Tadzhik State University (Tadzhikskiy gos. universitet).
131. Tartu State University (Tartuetskiy gos. universitet).
132. Tomsk State University (Tomskiy gos. universitet).
133. Central Aerohydrodynamic Institute im. Zhukovskiy (Tsentral'nyy aerogidrodinamicheskiy institut im. Zhukovskogo).
134. Central Aerological Observatory (Tsentral'naya aerologicheskaya observatoriya).
135. Central Scientific Research Institute of Communications (Tsentral'nyy NII svyazi).
136. Uzhgorod State University (Uzhgorodskiy gos. universitet).
137. Voronezh State University (Voronezhskiy gos. universitet).
138. Voronezh Polytechnic Institute (Voronezhskiy politekhnicheskiy institut).
139. All Union Electrotechnical Institute (Vsesoyuznyy elektrotekhnicheskiy institut).
140. All Union Scientific Research Institute of Physicotechnical and Radiotecnical Measurements (VNII fiziko-tehnicheskikh i radiotekhnicheskikh izmereniy, VNIFTRI).
141. All Union Scientific Research Institute of Opticophysical Measurements (VNII optiko-fizicheskikh izmereniy).
142. All Union Scientific Research Institute for Synthesis of Mineral Ora (VNII sinteza mineral'nogo ora).
143. All Union Scientific Research Institute of Synthetic Rubber (VNII sinteticheskogo kauchuka).
144. All Union Scientific Research Institute of Television and Radio Broadcasting (VNII televiziya i radioveschchaniya).
145. All Union Correspondence Electrotechnical Institute of Communications (Vsesoyuznyy zaochnny elektrotekhnicheskiy institut svyazi).
146. Yerevan Physics Institute (Yerevanskiy fizicheskiy institut).

147. Moscow Highway Institute (Moskovskiy avtodorozhnyy institut, MADI).
148. Institute of Terrestrial Magnetism, the Ionosphere and Radiowave Propagation, AN SSSR (Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiuvoln AN SSSR, IZMIRAN).
149. Leningrad Shipbuilding Institute (Leningradskiy korablenstroitel'nyy institut).
150. Dnepropetrovsk State University (Dnepropetrovskiy gos universitet).
151. Kishinev State University (Kishinevskiy gos universitet).
152. Moscow Institute of Steel and Alloys (Moskovskiy institut stali i splavov, MISI).
153. Kiev Civil Engineering Institute (Kiyevskiy inzhenerno-stroitel'skiy institut, KISI).
154. Marine Hydrophysical Institute, AN UkrSSR (Morskoy gidrofizicheskij institut AN UkrSSR).
155. North Ossetian State University (Severo-Osetinskij gos universitet).
156. Mountain Agricultural Institute (Gorskiy sel'skokhozyaystvennyy institut).
157. All Union Scientific Research, Planning and Design Institute of Electric Equipment, Khar'kov (VNI i proyektno-konstruktorskij institut elektroaparato).
158. Military Medical Academy, Leningrad (Voyenno-meditsinskaya akademija).
159. Institute of Thermophysics, Siberian Branch, AN SSSR, Novosibirsk (Institut teplofiziki SOAN).
160. Scientific Research Institute of Hydrometeorological Instrument Manufacture (NII gidrometeorologicheskogo priborostroyeniya).
161. Moscow Institute of Radio Engineering, Electronics and Automation (Moskovskiy institut radiotekhnika, elektroniki i avtomatiki).
162. Moscow State Pedagogical Institute (Moskovskiy gos pedagogicheskij institut).
163. All Union Scientific Research Institute of Metrology im. Mendeleyev (VNII metrologii im Mendeleyeva).
164. Special Design Bureau for Analytical Instrument Manufacture, AN SSSR (Spetsial'noye konstruktorskoye byuro analiticheskogo priborostroyeniya AN SSSR).
165. Kazan' Command Engineering College (Kazanskoye vysheye komandno-inzhenernoye uchiliashche).
166. Riga Polytechnic Institute (Rizhskiy politekhnicheskij institut).
167. Institute of Petrochemical Synthesis im. Topchiyev, AN SSSR, Moscow (Institut neftekhimicheskogo sinteza im Topchiyeva AN SSSR).
168. Institute of Electric Welding im. Paton, AN UkrSSR, Kiev (Institut elektrosvarki im Patona AN UkrSSR).
169. Department of Telecommunications of the All Union State Planning, Surveying and Scientific Research Institute of Power Systems and Electric Power Networks (Otdel dal'nykh peredach Vsesoyuznogo gosudarstvennogo proyektno-izyskatel'skogo i NII energeticheskikh sistem i elektricheskikh setey, Energoset'projekt).
170. Moscow Machine Tool Institute (Moskovskiy stankoinstrumental'nyy institut).
171. Leningrad Institute for the Advanced Training of Physicians (Leningradskiy institut usovershenstvovaniya vrachej).
172. Main Astronomical Observatory, AN UkrSSR (Glavnaya astronomicheskaya observatoriya AN UkrSSR).
173. Ul'yanovsk Polytechnic Institute (Ul'yanovskiy politekhnicheskij institut).
174. Scientific Research Institute of Organic Intermediates and Dyestuffs, Moscow (NII organicheskikh poluproduktov i krasiteley).
175. Arctic and Antarctic Scientific Research Institute, Leningrad (Arkticheskij i antarkticheskij NIU).
176. Moscow Geological Prospecting Institut im. Ordzhonikidze (Moskovskiy geologorazvedochnyy institut im Ordzhonikidze).
177. Riga Institute for Civil Aviation Engineers (Rizhskiy institut inzhenerov grazhdanskoy aviatcii).
178. Moscow Institute of Chemical Technology im. Mendeleyev (Moskovskiy khimiko-tehnicheskij institut im Mendeleyeva).
179. Moscow Institute of Fine Chemical Technology im. Lomonosov (Moskovskiy institut tonkoy khimicheskoy tekhnologii im Lomonosova).
180. Institute of Heat and Mass Exchange, AN BSSR (Institut teplo- i massoobmena AN BSSR).
181. Institute of Nuclear Research, AN UkrSSR, Kiev (Institut yadernykh issledovanij AN UkrSSR).

182. Kiev Communications College of Military Engineering (Kievskoye vysheye voyennoye inzhenernoye uchilishche svyazi).
183. Physico-technical Institute, AN BSSR (Fiziko-tehnicheskiy institut AN BSSR).
184. Institute of Geochemistry and Analytical Chemistry im. Vernadskiy, AN SSSR, Moscow (Institut geokhimii i analiticheskoy khimii im Vernadskogo AN SSSR).
185. Gor'kiy Polytechnic Institute (Gor'kovskiy politekhnicheskiy institut).
186. Kishinev Pedagogical Institute (Kishinevskiy pedagogicheskiy institut).
187. Institute of Epidemiology and Microbiology im. Gamaleya, AMN SSSR, Moscow (Institut epidemiologii i mikrobiologii im Gamalei AMN SSSR).
188. All Union Scientific Research Institute of Single Crystals, Khar'kov (VNII monokristallov).
189. Novocherkassk Polytechnic Institute (Novocherkasskiy politekhnicheskiy institut).
190. Central Scientific Research Institute of the Maritime Fleet (Tsentral'nyy NII morskogo flota).
191. Karaganda Polytechnic Institute (Karagandinskiy politekhnicheskiy institut).
192. Belorussian Technological Institute (Belorusskiy tekhnologicheskiy institut).
193. Institute of Theoretical and Applied Mechanics, Siberian Branch, AN SSSR, Novosibirsk (Institut teoreticheskoy i prikladnoy mehaniki SOAN).
194. VIOGEM
195. Northwest Correspondence Polytechnic Institute (Severo-Zapadnyy zauchnyy politekhnicheskiy institut).
196. Institute of Organic Chemistry im. Zelenskiy, AN SSSR (Institut organicheskoy khimii im Zelinskogo AN SSSR).
197. Tomsk Polytechnic Institute (Tomskiy politekhnicheskiy institut).
198. Institute of Mineral Fuels, Moscow (Institut goryuchikh iskopayemykh).
199. Moscow Institute of Electronic Machinery (Moskovskiy institut elektronnogo mashinostroyeniya).
200. Khar'kov Aviation Institute (Khar'kovskiy aviationsionnyy institut).
201. Institute for Problems of Information Transmission, AN SSSR, Moscow (Institut problem peredachi informatsii AN SSSR).
202. Institute of Electronics, AN UzSSR, Tashkent (Institut elektroniki AN UzSSR).
203. Institute of General and Inorganic Chemistry, AN ArmSSR, Yerevan (Institut obshchey i neorganicheskoy khimii AN ArmSSR).
204. Institute of General Genetics, AN SSSR, Moscow (Institut obshchey genetiki AN SSSR).
205. Moscow X-ray Radiological Scientific Research Institute (Moskovskiy NI rentgeno-radiologicheskiy institut).
206. Institute of Geology and Geophysics, Siberian Branch, AN SSSR, Novosibirsk (Institut geologii i geofiziki SOAN).
207. Main Geophysical Observatory (Glavnaya geofizicheskaya observatoriya).
208. Tula Polytechnic Institute (Tul'skiy politekhnicheskiy institut).
209. Moscow Institute of Precision Mechanics and Computer Technology (Moskovskiy institut tochnoy mehaniki i vychislitel'nnoy tekhniki).
210. Institute of Physics, Siberian Branch, AN SSSR (Institut fiziki SOAN).
211. Kalinin Polytechnic Institute (Kalininskiy politekhnicheskiy institut).
212. Kuban' State University (Kubanskiy gos universitet).
213. Leningrad Technological Institute (Leningradskiy tekhnologicheskiy institut).
214. Kazan' Pedagogical Institute (Kazanskiy pedagogicheskiy institut).
215. Physico-technical Institute, AN TadzhSSR (Fiziko-tehnicheskiy institut AN TadzhSSR).
216. Kazan' Aviation Institute (Kazanskiy aviationsionnyy institut).
217. Poltava Civil Engineering Institute (Poltavskiy inzhenerno-stroitel'nyy institut).
218. Second Moscow State Medical Institute im. Pirogov (Vtoroy Moskovskiy meditsinskiy institut im Pirogova).

219. Belarusian Polytechnic Institute, Minsk (Belorusskiy politekhnicheskiy institut).
220. Institute of Experimental Meteorology (Institut eksperimental'noy meteorologii).
221. All Union Scientific Research Institute of Hydraulic Engineering (VNII gidrotekhniki).
222. Institute of Surgery im. Vishnevskiy, AMN SSSR (Institut khirurgii im Vishnevskogo AMN SSSR).
223. Central Institute for the Advanced Training of Physicians (Tsentral'nyy institut usovershenstvovaniya vrachey).
224. Yerevan Polytechnic Institute (Yerevanskiy politekhnicheskiy institut).
225. Institute for Problems of Oncology, AN UkrSSR (Institut problem onkologii AN UkrSSR).
226. Leningrad Branch of the Mathematical Institute, AN SSSR (Leningradskoye otdeleniye Matematicheskogo instituta AN SSSR).
227. Tashkent State University (Tashkentskiy gos universitet).
228. Institute of Theoretical Physics, AN UkrSSR (Institut teoreticheskoy fiziki AN UkrSSR).
229. Moscow Aviation Technological Institute (Moskovskiy aviatcionnyy tekhnologicheskiy institut).
230. Novosibirsk Institute for Engineers of Geodesy, Aerial Surveying and Cartography (Novosibirskiy institut inzhenerov geodezii, aerofotos'yemki i kartografii).
231. Scientific Research Institute of Motion Pictures and Photography (NI kinofotoinstitut, NIKFI).
232. State Scientific Research Institute of Glass (Gosudarstvennyy NI stekla).
233. Ivanovo-Frankov Pedagogical Institute (Ivanovo-Frankovskiy pedagogicheskiy institut).
234. Scientific Research Institute of Civil Aviation (NI grazhdanskoy aviatsii).
235. Tashkent State Pedagogical Institute (Tashkentskiy gos pedagogicheskiy institut).
236. All Union Scientific Research Institute of Mining Geomechanics and Surveying (VNII gornoy geomehaniki i marksheyderskogo dela).
237. Department of the Physics of Nondestructive Control, AN BSSR (Otdel fiziki nerazrushayushchego kontrolya AN BSSR).
238. Institute of High Pressure Physics, AN SSSR (Institut fiziki vysokikh davlenii AN SSSR).
239. All Union State Planning, Surveying and Scientific Research Institute of Power Systems and Electric Power Networks (Vsesoyuznyy gosudarstvennyy proyektno-izyskatel'skiy i NII energeticheskikh sistem i elektricheskikh setey, ENERGOSET'PROYEKT).
240. Odessa State University (Odesskiy gos universitet).
241. Sverdlovsk State Pedagogical Institute (Sverdlovskiy gos pedagogicheskiy institut).
242. Kazakh State University, Alma Ata (Kazakhskiy gos universitet).
243. Radio Engineering Institute, AN SSSR (Radiotekhnicheskiy institut AN SSSR).
244. Moscow Scientific Research Institute of Television (Moskovskiy NI televizionnyy institut).
245. Novosibirsk State Pedagogical Institute (Novosibirskiy gos pedagogicheskiy institut).
246. Main Astronomical Laboratory, AN SSSR (Glavnaya astronomicheskaya laboratoriya AN SSSR).
247. Scientific Research Institute of Electrophysical Equipment im. Yefremov, Leningrad (NI elektrofizicheskoy apparatury im Yefremova).
248. Institute of Mechanics at Moscow State University (Institut mekhaniki pri Moskovskom gos universitete).
249. Omsk Agricultural Institute (Omskiy sel'skokhozyaystvennyy institut).
250. Sverdlovsk Mining Institute (Sverdlovskiy gornyy institut).
251. Tomsk Institute of Automatic Control Systems and Radioelectronics (Tomskiy institut avtomatizirovannykh sistem upravleniya i radioelektroniki).
252. Leningrad Institute of Nuclear Physics, AN SSSR (Leningradskiy institut yadernoy fiziki AN SSSR).
253. Kirghiz State University (Kirgizskiy gos universitet).
254. Moscow Civil Engineering Institute (Moskovskiy inzhenerno-stroitel'skiy institut).
255. Tallinn Polytechnical Institute (Tallinskiy politekhnicheskiy institut).

256. Far Eastern State University, Vladivostok (Dal'nevostochnyy gos universitet).
257. Comprehensive Institute of Natural Sciences, AN UkrSSR, Nukus (Kompleksnyy institut yestestvennykh nauk AN UkrSSR).
258. Institut of Theoretical Astronomy, AN SSSR (Institut teoretičeskoy astronomii AN SSSR).
259. Institut of Physics and Mathematics, AN LitSSR (Institut fiziki i matematiki AN LitSSR).
260. Kazan' Institute of Chemical Technology im. Kirov (Kazanskiy khimiko-tehnologicheskiy institut im Kirova).
261. Rybinsk Evening Technological Institute (Rybinskiy vecherniy tekhnologicheskiy institut).
262. Physicotechnical Institute, AN UkrSSR (Fiziko-tehnicheskiy institut AN UkrSSR).
263. Astrophysical Institute, AN KazSSR (Astrofizicheskiy institut AN KazSSR).
264. Institute of Radiophysics and Electronics, AN ArmSSR (Institut radiofiziki i elektroniki AN ArmSSR).
265. Irkutsk Polytechnical Institute (Irkutskiy politehnicheskiy institut).
266. Leningrad Forestry-Technical Academy (Leningradskaya lesnoutekhnicheskaya akademiya).
267. Laboratory of Electronics, AN BSSR, Minsk (Laboratoriya elektroniki AN BSSR).
268. Scientific Research Institute of Applied Mathematics and Mechanics at Tomsk State University (NII prikladnoy matematiki i mehaniki pri Tomskom gos universitete).
269. Dnepropetrovsk Metallurgical Institute, Zaporozh'ye Branch (Dnepropetrovskiy metallurgicheskiy institut, Zaporozhskiy filial).
270. Special Astrophysical Observatory, AN SSSR, Leningrad Branch (Spetsial'naya astrofizicheskaya observatoriya AN SSSR, Leningradskiy filial).
271. Ul'yanovsk State Pedagogical Institute im Ul'yanov (Ul'yanovskiy gos pedagogicheskiy institut im Ul'yanova).
272. Military Engineering Radio Engineering Academy of Air Defense im Govorov (Voyennno-inzhenernaya radiotekhnicheskaya akademiya protivovozduennuy oborony im Govorova).
273. Military Command Academy of Air Defense (Voyennaya komandnaya akademiya protivovozduchnoy oborony).
274. Donetsk Physico-technical Institute, AN UkrSSR (Donetskiy fiziko-tehnicheskiy institut AN UkrSSR).
275. Moscow Electrotechnical Institute of Communications (Moskovskiy elektrotehnicheskiy institut svyazi).
276. Institute of Physics of the Earth im. Shmidt, AN SSSR (Institut fiziki Zemli im. Shmidta AN SSSR).
277. Leningrad Institute of Aviation Instruments (Leningradskiy institut aviatcionnogo priborostroyeniya).
278. Samarkand State University (Samarkandskiy gos universitet).
279. Moscow Institute of the Petrochemical and Gas Industry im. Gubkin (Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti im Gubkina).
280. Moscow Scientific Research Institute of Eye Diseases im. Gel'mgol'tsa (Moskovskiy NII glaznykh bolezney im. Gel'mgol'tsa).
281. Institute for Improving the Qualifications of Supervisory Workers and Specialists (Institut povysheniya kvalifikatsii rukovodistyashchikh rabotnikov i spetsialistov).
282. Scientific Research Institute of Physics, Odessa (NII fiziki, Odessa).
283. Institute of Physics of Metals, AN UkrSSR, Kiev (Institut metallofiziki AN UkrSSR).
284. Dnepropetrovsk Metallurgical Institute (Dnepropetrovskiy metallurgicheskiy institut).
285. Institute of Problems of Control (Institut problem upravleniya).
286. Institute of Biological Physics, AN SSSR, Pushchino (Institut biologicheskoy fiziki AN SSSR).
287. Institute of Physical Chemistry, AN SSSR (Institut fizicheskoy khimii AN SSSR).
288. Moscow Electrovacuum Instruments Plant (Moskovskiy zavod elektrovakuumnykh priborov).
289. Central Scientific Research Institute of Geodesy, Aerial Surveying and Cartography (Tsentral'nyy NI geodezii, aerosyezki i kartografii).
290. All Union Scientific Research Institute of Medical Instrument Manufacture (VNII meditsinskogo priborostroyeniya).

291. Rostov-on-Don Institute of Railroad Transportation Engineers (Rostovskiy-na-Donu inzhenerov zheleznodorozhnogo transporta).
292. Naval Academy, Leningrad (Voyenno-morskaya akademiya).
293. Moscow Institute of Transportation Engineers (Moskovskiy institut inzhenerov transporta).
294. Institute of Chemistry, Bashkir Branch, AN SSSR (Institut khimii Bashkirskego filiala AN SSSR).
295. Institute of Chemical Kinetics and Combustion, Siberian Branch, AN SSSR, Novosibirsk (Institut khimicheskoy kinetiki i goreniya SOAN).
296. Tbilisi Branch of the All Union Correspondence Electrotechnical Institute of Communications (Tbiliskiy filial Vsesoyuznogo zaochnogo elektrotekhnicheskogo instituta svyazi).
297. Institute of Chemistry, AN SSSR, Gor'kiy (Institut khimii AN SSSR).
298. Institute of Electrodynamics, AN UkrSSR (Institut elektrodinamiki AN UkrSSR).
299. Institute of Electronics, AN BSSR (Institut elektroniki AN BSSR).
300. Institute of Cybernetics, AN UzSSR (Institut kibernetiki AN UzSSR).
301. All Union Scientific Research Institute of Luminescophores and High Purity substances (VNII lyuminoforov i osobovo chistykh veshchestv).
302. State Scientific Research Institute of Radio (Gosudarstvennyi NI radio).
303. Lvov Branch of Mathematical Physics of the Institute of Mathematics, AN UkrSSR (Lvovskiy filial matematicheskoy fiziki Instituta matematiki AN UkrSSR).
304. Institute of Organic Chemistry, AN UkrSSR, Kiev (Institut organicheskoy khimii AN UkrSSR).
305. Central Construction Bureau of Motion Picture Equipment (Tsentral'noye konstruktorskoye byuro kinoparatury).
306. State Oceanographic Institute (Gosudarstvennyi okeanograficheskiy institut).
307. Institute of Thermophysics and Electrophysics, AN EstSSR (Institut termofiziki i elektrofiziki AN EstSSR).
308. Moscow Institute of R.R. Railroad Transport Engineers (Moskovskiy institut inzhenerov zheleznodorozhnogo transporta).
309. Pervomayskugol' combine (Kombinat "Pervomayskugol'").
310. Kadiyevka Branch of the Kommunarsk Mining-Metallurgical Institute (Kadiyevskiy filial Kommunarskogo gorno-metallurgicheskogo instituta).
311. All Union Scientific Research Institute of Mineral Resources, Moscow (VNII mineral'nogo sry'ya).
312. Kiev Institute of Civil Aviation Engineers (Kievskiy institut inzhenerov grazhdanskoy aviatiki).
313. Scientific Research Institute of Applied Physics at Irkutsk State University (NII prikladnoy fiziki pri Irkutskom gos universitete).
314. Moscow Oncological Scientific Research Institute im Gertsen (Moskovskiy NI onkologicheskiy institut im Gertsena).
315. Tbilisi Branch of the All-Union Scientific Research Institute of Metrology im Mendeleyev (Tbiliskiy filial VNII metrologii im Mendeleyeva).
316. Dagestan Polytechnic Institute, Makhachkala (Dagestanskiy politekhnicheskiy institut).
317. Saratov Polytechnic Institute (Saratovskiy politekhnicheskiy institut).
318. Scientific Research Institute of Direct Current (NII postoyannogo toka).
319. Alma-Ata State Medical Institute (Alma-Atinskiy gosudarstvennyi meditsinskiy institut).
320. Kaliningrad State University (Kaliningradskiy gos universitet).
321. Mogilev Branch of the Institute of Physics, AN BSSR (Mogilevskiy filial Instituta fiziki AN BSSR).
322. Lower Volga Civil Engineering Surveys Trust (Nizhne-Volzhskiy trest inzhenerno-stroitel'skikh izyskanii).
323. Leningrad Institute of Motion Picture Engineers (Leningradskiy institut kinozhenerov).

324. Physicotechnical Institute, Sukhumi (Fiziko-tehnicheskiy institut).
325. Scientific Research Institute of Physics, Rostov-on-Don (NII fiziki, Rostov-na-Donu).
326. Institute of Radioelectronics, AN SSSR (Institut radioelektroniki AN SSSR).
327. Novosibirsk Electrotechnical Institut (Novosibirskiy elektrotehnicheskiy institut).
328. All-Union Civil Engineering Correspondence Institut, Moscow (Vsesoyuznyy zaochnyy inzhenerno-stroitel'nyy institut).
329. Leningrad Scientific Research and Planning Institute of the Basic Chemical Industry (Leningradskiy NI i proyektnyy institut osnovnoy khimicheskoy promyshlennosti).
330. Microbiology Sector, AN AzSSR (Sektor mikrobiologii AN AzSSR).
331. Rovenskiy Pedagogical Institute im Manuil'skiy (Rovenskiy pedagogicheskiy institut im Manuil'skogo).
332. Frunze Polytechnic Institute (Frunzinskiy politekhnicheskiy institut).
333. Chernorechenskiy Chemical Combine, Dzerzhinsk (Chernorechenskiy khimicheskiy kombinat).
334. Scientific Research Institute of Applied Physical Problems at Belorussian State University (NII prikladnykh fizicheskikh problem pri Belorusskom gos universiteete).
335. Institute of Electrochemistry, AN SSSR (Institut elektrokhimi AN SSSR).
336. Scientific Research Institute of Nuclear Physics, Electronics and Automation at Tomsk Polytechnic Institute (NII yadernoy fiziki, elektroniki i avtomatiki pri Tomskom politekhnicheskem institut).
337. Computer Center, AN SSSR (Vychislitel'nyy tsentr AN SSSR).
338. Ministry of Geology, USSR (Ministerstvo geologii SSSR).
339. Computer Center, AN ArmSSR (Vychislitel'nyy tsentr AN ArmSSR).
340. All-Union Scientific Research Institute of Light and Textile Machine Building, Moscow (VNII lekogo i tekstil'nogo mashnostroyeniya).
341. All-Union Scientific Research Institute of Heat Engineering in Metallurgy, Sverdlovsk (VNII metallurgicheskoy teplotekhniki).
342. Scientific Research, Design and Technological Institute of Heavy Machine Building, Ural Heavy Machinery Plant (NI konstruktorsko-tehnologicheskiy institut tyazhelogo mashnostroyeniya Ural'skogo zavoda tyazhelogo mashnostroyeniya, NIITYaAhMASH 'ralmashzavoda').
343. North Caucasus Scientific Center of Higher Education (Severo-Kavkazskiy nauchnyy tsentr vysshey shkoly).
344. All-Union Scientific Research Institute of Economics of Mineral Raw Materials and Geological Exploration (VNII ekonomiki mineral'nogo sryva i geologorazvedochnykh rabot, VIEMS).
345. Institute of Physical Problems, Siberian Branch AN SSSR (Institut fizicheskikh problem SOAN).
346. Chuvash State University (Chuvashskiy GU).
347. Ukrainian Hydrometeorological Scientific Research Institute (Ukrainskiy NI gidrometeorologicheskij institut).
348. Volgograd State Pedagogical Institute im Serafimovich (Volgogradskiy gosudarstvennyy pedagogicheskiy institut im Serafimovicha).
349. Donetsk Physicotechnical Institute (Donetskiy fiziko-tehnicheskiy institut).
350. Institute of Applied Geophysics, AN SSSR (Institut prikladnoy geofiziki AN SSSR).
351. All-Union Scientific Research Institute of Physicochemical and Radiotechnical Measurements (VNII fiziko-khimicheskikh i radiotekhnicheskikh izmereniy).
352. Moscow Department of the Scientific Research Institute of Direct Current (Moskovskoye otdeleniye NII postoyannogo toka).
353. First Leningrad Medical Institute (Pervyy Leningradskiy meditsinskiy institut).
354. Moscow Medical Stomatological Institute (Moskovskiy meditsinskiy stomatologicheskiy institut).
355. All-Union Correspondence Institute of Mechanical Engineering (Vsesoyuznyy zaochnyy mashinostroitel'nyy institut).
356. All-Union Scientific Research Institute of Autogenous Machine Building (VNII avtogenного mashinostroyeniya).

357. Ukrainian Scientific Research Institute of Metals, Khar'kov (Ukrainskiy NII metallov).
358. Institute of Problems of Strength, AN UkrSSR, Kiev (Institut problem prochnosti AN UkrSSR).
359. All-Union Scientific Research Institute of Transportation Construction (VNII transportnogo stroitel'stva).
360. Kazan' Mountain Astronomical Observatory (Kazanskaya gornaya astronomicheskaya observatoriya).

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