LYUBIMOVA, Ye.A.

BALAKINA, L.M.

S/10) PHASE I BOOK EXPLOITATION SOV/1663

Akademiya nauk SSSR. Komitet po geodezii i geofizike.

Tezisy dokladov na XI General'noy assamblyee Mezhdunarodnogo geodezicheskogo i geofizicheskogo soyuza. Mezhdunarodnaya assotsiatsiya seysmologii i fiziki nedr zemli (Abstracts of Reports Submitted to the XI General Assembly of the International Union of Geodesy and Geophysics. The International Association of Seismology and Physics of the Earth's Interior) Moscow, 1957. 102 p. /Parallel texts in Russian and English/ 1,500 copies printed.

No additional contributors mentioned

PURPOSE: This booklet is intended for geophysicists, especially those specializing in seismology.

COVERAGE: This collection of articles deals with the structure and composition of the Earth and phenomena related thereto. The majority of the articles concern studies of earthquakes and seismic waves. Other articles cover the structure of the Earth's crust and mountain roots; the elastic properties of rocks at high pressures; the piezoelectric effect of rocks and the method of modelling in tectonophysics. The collection also contains articles on the Earth's thermal history, the microseismic method of tracing storms and others.

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49-5-13/18

AUTHOR: Lyubimova, Ye. A.

TITLE: On the role of radiation heat exchange in the thermal regime of the Earth. (O roli luchistogo teploobmena v teplovom rezhime zemli).

PERIODICAL: "Izvestiya Akademii Nauk, Seriya Geofizicheskaya" (Bulletin of the Ac.Sc., Geophysics Series), 1957, No.5, pp. 673-676 (U.S.S.R.)

ABSTRACT: In investigating the temperature dependence of the thermal conductivity of the ceramic materials of the type MgO, Al_2O_3, BeO, it was established that for $T < 1500$ to 1800 C thermal conductivity decreases, in agreement with the theory. According to the equation A/T^n where $n \sim 1$ and for T above 1500 to 1800 C, the heat conductivity starts to increase rapidly proportionally with T^3 which cannot be explained by any of the existing heat conductivity theories. An explanation can be sought on the assumption that the heat transfer in solid insulators at very high temperatures is effected not only by molecular thermal conductivity but also by radiation heat exchange between the neighbouring volumes of the substance and this is confirmed by experiment. Since the shell of the Earth consists of substances which are similar to glass and ceramics, it is very likely that

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On the role of radiation heat exchange in the thermal regime of the Earth. (Cont.)

radiation heat exchange plays an important role in the depths of the Earth. In this paper it is shown that for calculations pertaining to the depths of the Earth it is inadmissible to disregard the drop of the molecular heat conductivity with the temperature which takes place in the upper layers of the Earth and prevents considerable removal of heat from the depths of the Earth and, therefore, the Earth cannot solidify quickly. At present the thermal conductivity at a depth of 100 km is about a third of that pertaining to surface rocks and the effective thermal conductivity at a depth of 2000 km increases three to four times. Decrease of the thermal conductivity of the upper layers prevents any appreciable flow of heat from the depths and as a result of that the depths of the Earth continue to heat up even now and the thermal history of the Earth has, generally speaking, the same character as was established in earlier work of the author (19,20) in considering a constant coefficient of thermal conductivity. Acknowledgments are made to B. I. Davidov for his valuable advice and criticism. There are two graphs and 20 references, 7 of which are Slavic.

SUBMITTED: January 29, 1957. 49-5-13/18

ASSOCIATION: Ac.Sc. U.S.S.R. Institute of Physics of the Earth. (Akademiya Nauk SSSR Institut Fiziki Zemli).

AVAILABLE: Library of Congress

Card 3/3

LYUBIMOVA, Ye. A., KEYLIS BOROK, V. I., REZNICHENKO, Yu. V., BELOUSOV, V. V., and MAGNITSKIY, V. A.,

"Seismological Problems and Questions Concerning the Physical Structure of the Earth's Deposits."

paper presented at the XIth General Assembly of the Int'l. Union of Geodesy and Geophysics, Toronto, Canada, 3-14 Sept. 1957 (Izv. Ak Nauk SSSR - Ser. Geog. 1958, No. 2, pp 3-8 [USSR]).

SOV/5-58-4-5/43

AUTHOR: Lyubimova, Ye.A.

TITLE: The Thermic History and Temperatures of the Earth (Termicheskaya istoriya i temperatura Zemli)

PERIODICAL: Byulleten' Moskovskogo obshchestva ispytateley prirody, Otdel geologicheskiy, 1958, Nr 4, pp 39-49 (USSR)

ABSTRACT: The author gives a short review of the latest research results in the field of the thermic history of the Earth, mentioning in this connection the work of the following scientists: **H. P. Coster, H. Hughes, T.** Rikitake, V.A. Magnitskiy, V.N. Zharkov, I. Pomeranchuk, **S.P. Clark,** F. Preston, E. van der Held, V. Gol'dshmidt, V.G. Fesenkov, N.V. Belov, F. **Berch,** K. Bullen, B.I. Davydov, I. Verkhugen, **J.A. Jacobs** D. Allan, O.Yu. Shmidt, B.Yu. Levin, V.S. Safronov, G. **Kuiper,** A. Benfield, Ye.A. Lyubimova, **H.C. Urey,** I.Ye. Starik, M.M. Shats, **W. Rubey, J. Wilson, H. Jeffreys** and G.S. Gorshkov. On the basis of these research studies, the author comes to the conclusion that as a whole the Earth cannot melt as a result of radioactive heat, but that the phenomenon of molten zones is perfectly possible and that it is always independent of variations of the initial data. Thus, the conditions for that differentiation of the matter necessary for the dynamic

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force in the formation of the Earth's crust are given. He states that the secular heat of the Earth's core should lead to a certain expansion of the internal zones of the Earth, but that the external Earth strata show a tendency to cooling off, and that thus their volume should be reduced a little. Consequently, the upper strata lying at the expanding internal sphere should be subject to an expanding tension. Considering this effect on the basis of equations of the theory of elasticity, the conclusion can be drawn that the radius of the Earth should continuously but irregularly become larger. This expansion is at the same time an explanation for the occasional ruptures in the crust. All data given do not contradict the main point of the secular heat of the Earth's core. Whatever the original temperatures of the Earth might have been, the fact of a wide dispersion of radio elements, especially Calium, cannot be denied and

this again leads to quite different consequences than the theory of a secular cooling off of the Earth and its contraction.
There are 6 graphs and 41 references, 21 of which are Soviet and 20 English.

1. Earth--Thermodynamic properties 2. Geophysics

Lyubimova, Ye. A.

24(8) PHASE I BOOK EXPLOITATION SOV/2768

Vsesoyuznoye soveshchaniye po geotermicheskim issledovaniyam. 1st, 1956.

Problemy geotermii i prakticheskogo ispol'zovaniya tepla zemli; trudy, t.1. (Geothermal Problems and the Practical Utilization of Terrestrial Heat; Transactions of the 1st All-Union Conference on Geothermal Investigations, Vol. 1) Moscow, Izd-vo AN SSSR, 1959. 254 p. Errata slip inserted. 1,300 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye geologo-geograficheskikh nauk.

Ed. of Publishing House: L. V. Gessen; Tech. Ed.: I. N. Guseva; Editorial Board: V. I. Vlodavets (Chairman), I. D. Dergunov (Deceased), V. V. Ivanov, F. A. Makarenko, and N. I. Khitarov.

PURPOSE: This book is intended for geologists, hydrogeologists, and geophysicists in general and petroleum and coal geologists in particular.

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COVERAGE: This volume, one of two published on the subject, is a collection of 22 articles based on reports presented at the First All-Union Conference on Geothermal Studies held in March, 1956. The Conference was sponsored and organized by the Laboratory of Vulcanology, the Laboratory of Hydrogeological Problems im. F. P. Savarinskiy, the Institute of Geochemistry and Analytical Chemistry, the Geophysical Institute, and was attended by representatives of more than 60 research organizations. The material presented in this volume may be divided into three general categories: (1) general geothermal problems of the Earth (2) current status and methods of geothermal research (3) regional geothermal problems. References accompany each article.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress

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68236

S/049/59/000/12/017/027
E131/E391

3.9000

AUTHOR: Lyubimova, Ye.A.

TITLE: On the Temperature Gradient in the Upper Layers of the Earth and an Attempt to Explain the Existence of the Low-velocity Layer

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1959, Nr 12, pp 1861 - 1863 (USSR)

ABSTRACT: In addition to the low-velocity layer at 100 km depth, A.N. Tikhonov (Ref 4) found that heat flow also can be distinguished at that depth. The calculations showed that during the last 2×10^9 years the temperature variations in the top layers of the Earth took place very slowly. Therefore, heat flow can be expressed as Eq (1) for the uppermost layer and as Eqs (2) to (5) for n consecutive layers below that. Taking the top layer (10 km deep) as the granite, the second (basalt) 30 km deep and the third - peridotite, the amount of heat generated in these three layers, H_1, H_2 and H_3, respectively, can be found as:

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S/049/59/000/12/017/027
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On the Temperature Gradient in the Upper Layers of the Earth and an Attempt to Explain the Existence of the Low-velocity Layer

$H_1 = 55.10^{-14}$ cal/cm^{3}sec; $H_2 = 15.10^{-14}$ cal/cm^{3}sec;

$H_3 = 0.4 \cdot 10^{-14}$ cal/cm^{3}sec .

The curve of thermal conductivity of the mantle shows a minimum at the depth of 100 km (Figure 1). This minimum causes an increase of the temperature gradient as follows:

x, km	40	50	60	80	100	150	200
$\frac{dT}{dx}$, deg/km	6	13	16	18	19	9	4 .

The temperature distribution in the continental crust is given in Figure 2, which shows that the difference of temperatures under continents and oceans can reach 300 to 400 °C. The horizontal gradient of the temperature is

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68236

S/049/59/000/12/017/027
E131/E391

On the Temperature Gradient in the Upper Layers of the Earth and an Attempt to Explain the Existence of the Low-velocity Layer

considered as the cause of the convective transfer of heat.
There are 2 figures and 12 references, 5 of which are Soviet, 6 English and 1 Italian.

ASSOCIATION: Akademiya nauk SSSR Institut fiziki Zemli
(Institute of Physics of the Earth, Ac.Sc.USSR)

SUBMITTED: January 20, 1959

Card 3/3

Lyubimova, Ye. A.

PHASE I BOOK EXPLOITATION SOV/4490

Akademiya nauk SSSR. Institut fiziki Zemli

Voprosy teoreticheskoy seysmologii i fiziki nedr (Problems in the Theory of Seismology and Physics of the Earth's Interior) Moscow, 1960. [illegible] p. (Series: Its: Trudy, no. 11 (178)) Errata slip inserted. 1,700 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut fiziki Zemli imeni O. Yu. Shmidta

Ed.: Ed.: V.A. Magnitskiy, Doctor of Technical Sciences; Ed. of Publishing House: T.A. Kalinina; Tech. Ed.: S.G. Tikhomirova.

PURPOSE: This collection of articles is intended for astrophysicists, geophysicists, and seismologists.

COVERAGE: This issue of the Transactions of the Institute of Physics of the Earth imeni O. Yu. Shmidt contains articles on theoretical problems in seismology and on recent investigations in the field of earthquake mechanics. References accompany individual articles in the collection have been abstracted.

LYUBIMOVA, YE.A.

On conditions of magmatism origin and role of volcanic actvity in the thermal regime of earth's crust.

Paper presented at the 12th General Assmbly of the IUGG
Helsinki, Finland July 1960

LYUBIMOVA, Ye.A.; LYUSOVA, L.N.; FIRSOV, F.V.; STARIKOVA, G.N.; SHUSHPANOV, A.P.

Determination of surface heat flow in Staraya Matsesta. Izv. AN SSSR. Ser. geofiz. no.12:1806-1811 D '60. (MIRA 13:12)

1. Institut fiziki Zemli AN SSSR.
(Earth temperature)

LYUBIMOVA, Ye.A.

Sources of the internal heat of the earth. Vop.kosm. 8:97-108 '62. (MIRA 15:7)
(Earth temperature)

LYUBIMOVA, Ye.A.

Thermoelastic stresses inside the earth. Trudy Inst. fiz. Zem. no.20:51-56 '62. (MIRA 15:3)
(Earth temperature) (Seismology)

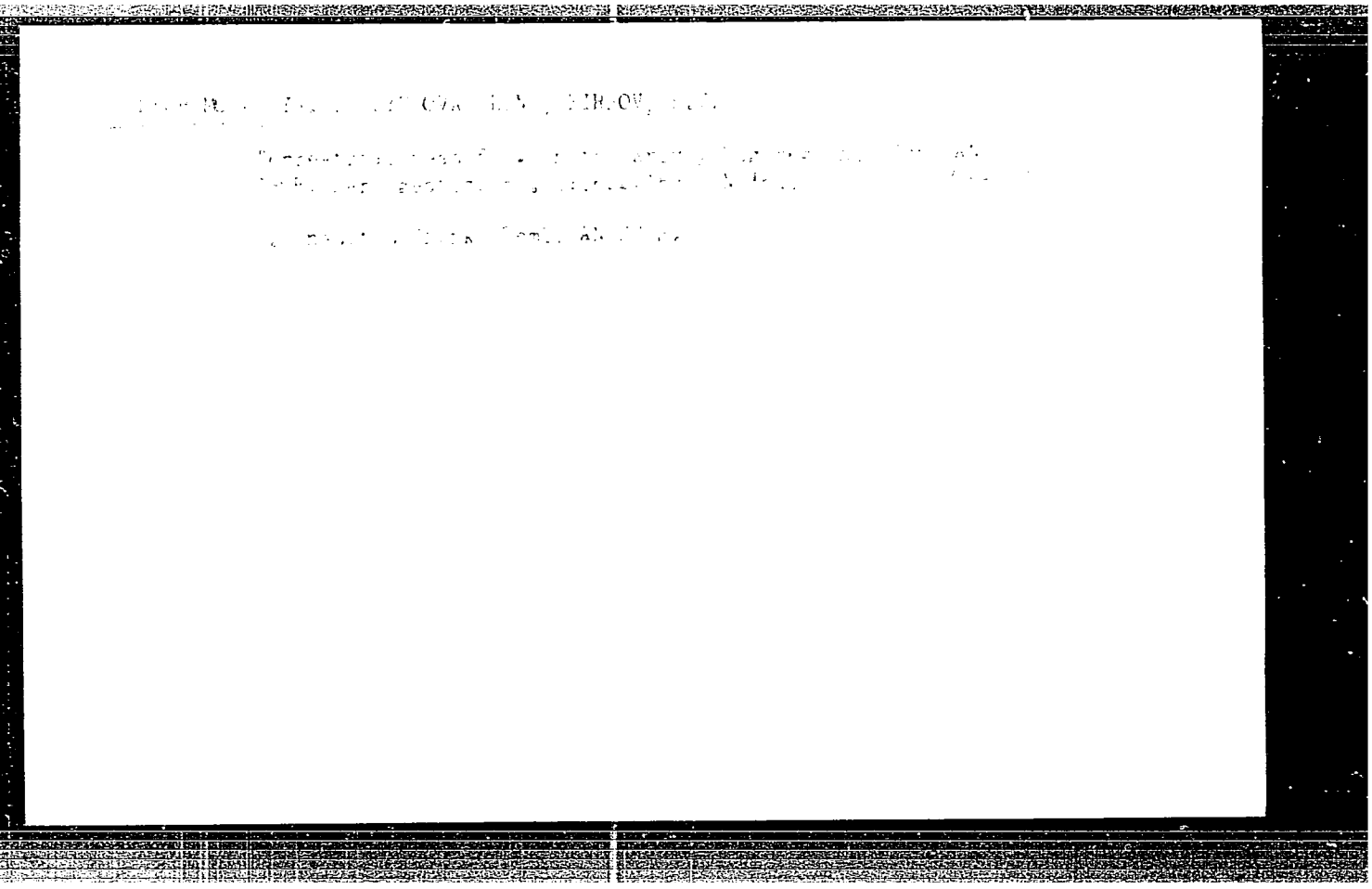
LYUBIMOVA, Ye.A.

Distribution of thermoelastic stresses inside the earth and the speed of their accumulation. Izv. AN SSSR. Ser. geofiz. no.3:385-390 Mr '63. (MIRA 16:3)

1. Institut fiziki Zemli AN SSSR.
(Earth temperature)

LYUBIMOVA, Ye.A., MAGNITSKIY, V.A.

Thermoelastic strains and the energy of earthquakes. Biul.Sov. po seism. no.1[illegible]-10 '63. (MIRA 17:4)



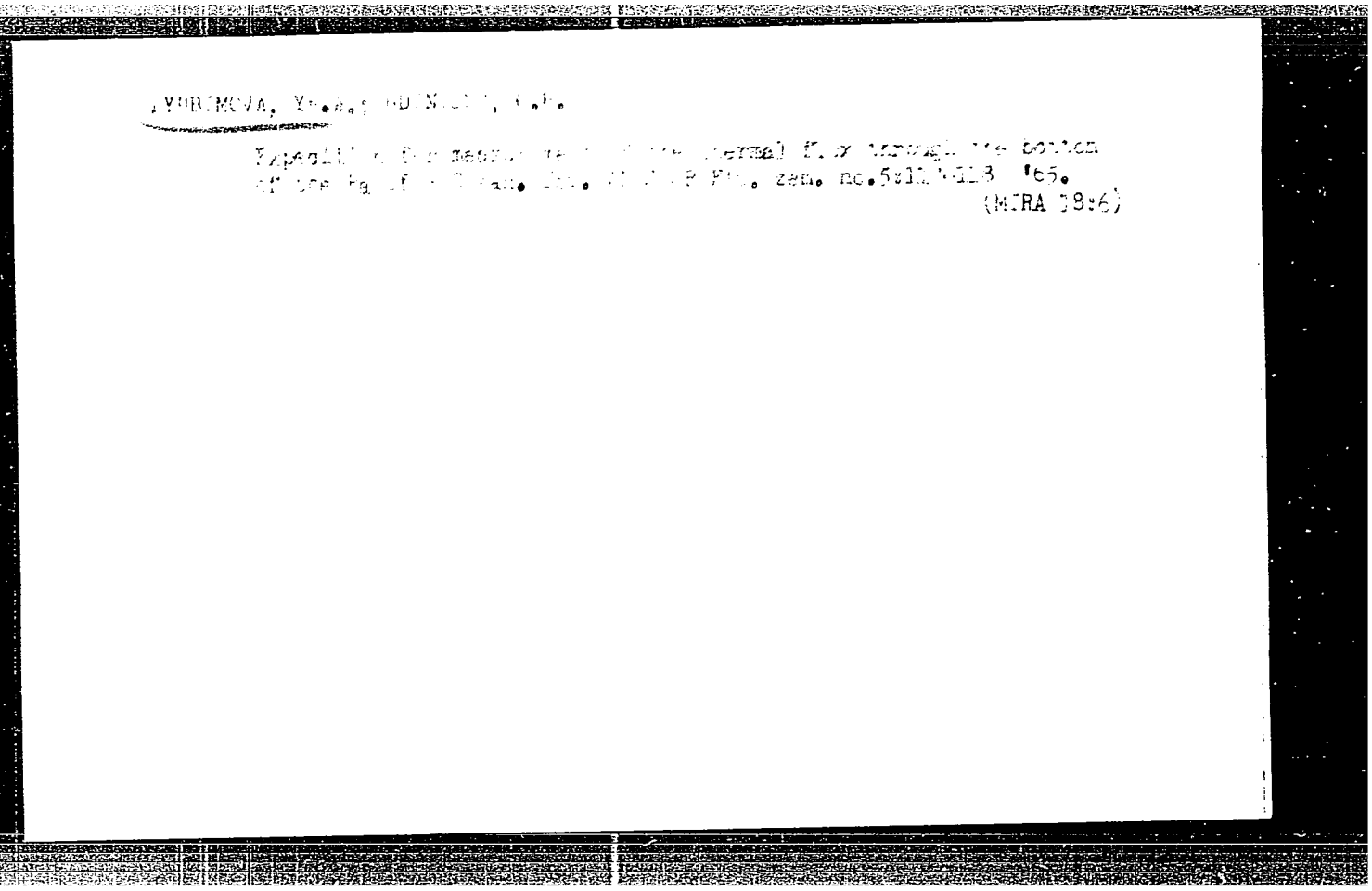
LYUBIMOVA, Ye.A., kand. fiz.-matem. nauk, otv. red.

[Geothermal studies] Geotermicheskie issledovaniia. Moskva, Izd-vo Nauka, 1964. 173 p. (MIRA 17:8)

1. Akademiya nauk SSSR. Institut fiziki Zemli.

LYUBIMOVA, Ye.A., kand. fiz.-matem. nauk; [illegible]INTSEV, G.B., kand. geol.-mineral. nauk

The geothermal expedition "Amphitrite". Vest. AN SSSR 34 no.1: 59-64 Ja '65. (MIRA 18:2)



LYUBIMOVA, Ye.A.; UDINTSEV, G.B.

Expedition on the American scientific research ship "Argo".
Geofiz. biul. no.15:79-83 '65. (MIRA 18:11)

L 46202-66 EWT(1) GW

ACC NR: AP6028797 SOURCE CODE: UR/0033/66/043/004/0837/0845

AUTHOR: Lyubimova, Ye. A.

ORG: Institute of Physics of the Earth, Academy of Sciences, SSSR (In-t fiziki Zemli Akademii nauk SSSR)

TITLE: Distribution of heat flow and thermal processes in the earth's mantle

SOURCE: Astronomicheskiy zhurnal, v. 43, no. 4, 1966, 837-845

TOPIC TAGS: earth mantle, terrestrial heat flow, ~~mantle~~ seismicity, EARTH CRUST, EARTH THERMODYNAMICS

ABSTRACT: Data on the distribution of heat flow in different regions of the earth's crust are analyzed, and regional histograms for the USSR given. The world map depicting heat flow compiled by Lee and Uyeda [Review of Heat Flow Data. Geoph. Monograph, no. 8, Terrestrial Heat Flow, Am. Geophys. Union. Publ., no. 1288, W. 1965] is revised to include pertinent data for the Soviet Union. Heat flow is classified as anomalously low $(0.6—0.9)\cdot10^{-6}$ cal/cm^2·sec in the region of ancient crystalline shields, normal $1.4\cdot10^{-6}$ cal/cm^2. sec in the region of platforms and troughs, and anomalously high $(1.8—3.0)\cdot10^{-6}$ cal/cm^2 sec in active regions of the earth's crust. Fig. 1 shows the distribution of heat-flow stations in the USSR and heat-flow values recorded throughout the country. In magnitude and quantity, annual

Card 1/3 UDC: 525.215

ACC NR: AP6028797

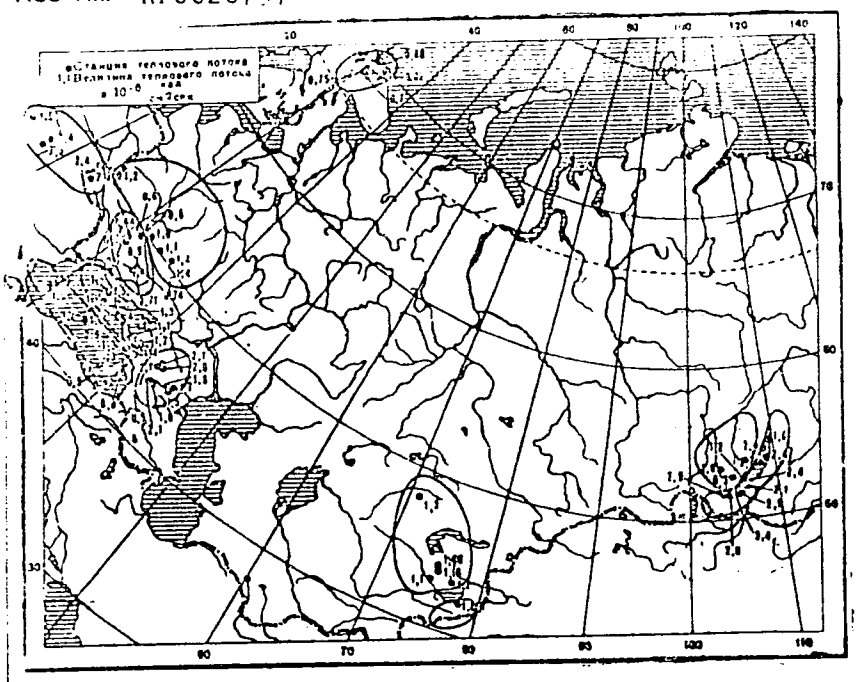


Fig. 1. Map of the distribution of the values of heat flow in the USSR contour lines encircle area of near-Q values.

• - Heat flow station; 1,1 - amount of heat flow in 10^{-6} cal cm^2 sec.

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L 46202-66

ACC NR: AP6028797 O

earthquake records rate the Baykal region as one of the most seismically active regions in the world. The Baykal, Stavropol Trans-Carpathian, and Przheval'sk regions have records of high heat flow; Kazakhstan, the Russian platform, and the Crimean platform have average readings; the Black Sea region shows relatively low values. Anomalies of heat flow are also analyzed. Orig. art. has: 15 figures. [DM]

SUB CODE: 08/ SUBM DATE: 11Dec65/ ORIG REF: 015/ OTH REF: 012

Card 3/3

ACC NR: AT6035091 SOURCE CODE: UR/0000/66/000/000/0107/0132

AUTHOR: Lyubimova, Ye. A.; Shelyagin, V. A.; Shushpanov, A. P.

ORG: none

TITLE: Instrumentation for determination of the plutonic heat flux

SOURCE: AN SSSR. Institut fiziki Zemli. Problemy glubinnogo teplovogo potoka (Problems of heat flow in theearths's interior). Moscow, Izd-vo Nauka, 1966, 107-132

TOPIC TAGS: heat measurement, heat transfer, conduction heat transfer, convection heat transfer, geology, earth crust

ABSTRACT: The article reviews Soviet and foreign literature dealing with equipment and methods for measuring the heat flux from the deep layers of the earth toward its surface. The difficulties connected with these measurements are very considerable because of the minute values of the heat flux; it is of the order of 1μ cal/cm^2 sec (the flux from the sun is about thousand times greater). Recent improvements in methods include the substitution of thermometers (thermocouples) by thermistors (semiconductors), which have the advantage of smaller size, and the elimination of heavy cables for heat transmission (not practicable for depths of several kilometers) and signaling temperature by transmitting ultrasonic waves. Associated problems—heat conductivity and heat capacity of rocks—are approached with a variety of methods used

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ACC NR: AT6035091

both in the laboratory and in nature, and by the sationary and the pulse method. The requirements for accuracy of temperature measurements are high ($\pm$ 0.005°C). Finally, in the measurement of the heat exchange at the bottom of the ocean, heat flux by water convection must also be considered. Orig. art. has: 9 figures and 16 equations.

SUB CODE: 08/ SUBM DATE: 07Apr66/ ORIG REF: 009/ OTH REF: 004

Card 2/2

ACC NR: AP7002934 SOURCE CODE: UR/0020/66/171/006/1321/1324

AUTHOR: Lyubimova, Ye. A.; Shelyagin, V. A.

ORG: Institute of Physics of the Earth, Academy of Sciences, SSSR (Institut fiziki Zemli Akademii nauk SSSR)

TITLE: Heat flow through the bottom of Lake Baykal

SOURCE: AN SSSR. Doklady, v. 171, no. 6, 1966, 1321-1324

TOPIC TAGS: earth thermodynamics, earthquake, heat measurement, SURFACE WATER / LAKE BAIKAL

ABSTRACT: In view of the interest attaching to the region of Lake Baykal, where a large number of earthquakes still occur, the authors have used an oceanographic procedure for determining the heat flow by introducing a thermal-gradient gauge into the bottom of the lake. The work was organized in 1965 by the Institute of Earth Physics AN SSSR in conjunction with the Limnological Institute and the Institute for the Earth's Crust of the Siberian Department of AN SSSR, using the research vessel "G. Yu. Vereshchagin." The construction of the thermal-gradient gauge was described elsewhere (Apparatura dlya opredeleniya teplovogo potoka [Apparatus for Heat-flux Determination], Nauka, 1965). The heat flux was measured at depths greater than 700 meters. The test procedure is briefly described. A table listing the heat flux in different locations is presented, and the arithmetic mean of the flux is found to be 2.6 x 10^{-6} cal/cm^2 sec. Before the true heat flux can be calculated it is necessary to determine the influence of topographic irregularities, the role of the

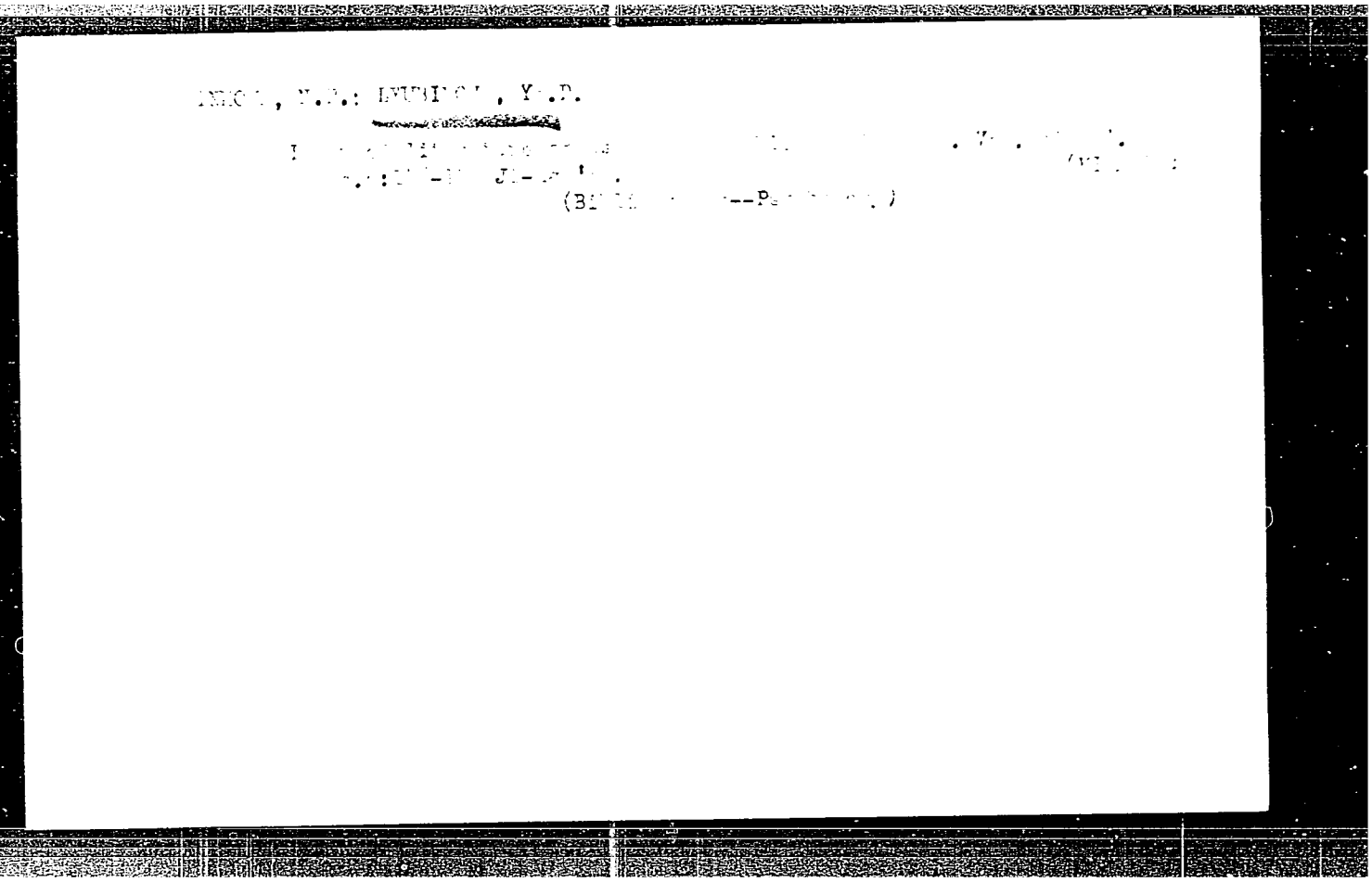
Card 1/2 UDC: 550.361

ACC NR: AP7002934

cold water mass, and the role of the river deposits on the bottom of the lake. It is tentatively estimated that all these factors will increase the average heat flux by 23%, raising it to 3.2×10^{-6} cal/cm^2 sec. This report was presented by Academician A. P. Vinogradov 3 February 1966. Orig. art. has: 3 figures, 2 formulas and 2 tables.

SUB CODE: 08/ SUBM DATE: 17Jan66/ ORIG REF: 009/ OTH REF: 004

Card 2/2



LIN'KOVA, N.P.; LYUBIMOVA, Ye.D.

Index of literature on psychology published in 1959. Vop. psikhol. 6 no.4:149-186 Jl-Ag '60. (MIRA 13:9)
(Bibliography--Psychology)

LYUBIMOVA, Ye.D.

Books on psychology published in 1960. Vop.psikhol. 7 no.2:163-168 Mr-Ap '61. (MIRA 14:6)
(Bibliography--Psychology)

EBREZINA, G.A.; LYUBIMOVA, Ye.D.

Index of literature on psychology published in 1961. Vop. psikhol. 8 no.5:124-162 S-O '62. (MIRA 16:5)
(Bibliography--Psychology)

BEREZINA, G.A.; LYUBIMOVA, Ye.D.

Bibliography of the literature on psychology published in 1963. Vop. psikhol. no.5:153-186 S-O '64 (MIRA 18:1)

LYUBIMOVA, YE. I.

LYUBIMOVA, YE, I.: "Diseases of the sunflower plant under conditions of Moldavia and measures to combat them." Min Higher Education USSR. Khar'kov Order of Labor Red Banner Agricultural Inst imeni V. V. Dokuchayev. Khar'kov, 1956
(Dissertation for the degree of Candidate of Biological Sciences)

SO: Knizhnaya Letopis', No 36, 1956, Moscow.

LYUBIMOVA, Ye.I., kand.biolog.nauk; TSVETKOVA, T.T., laborant-tekhnik

Microflora of the retting liquor in case of the modified two-phase retting of kenaf and jute bast. Nauch.-issl.trudy TSNIILV 17: 36-44 '62. (MIRA 16:10)

LYUBIMOVA, Ye.I., starshiy nauchnyy sotrudnik; RAU, N.V., mladshiy nauchnyy sotrudnik

Biological testing of textile fabrics for resistance to the action of fungi and bacteria. Nauch.-issl.trudy TSNIILV 17:148-153 '62. (MIRA 16:10)

LYUBIMOVA, Ye.L.

Botanical and geographical investigation of the southern area of the subarctic Urals. Trudy Inst.geog. no.64:201-241 '55.
(Ural Mountains--Phytogeography) (MLRA 8:11)

LYUBIMOVA YE. L.

USSR/ Biology - Botany

Card 1/1 Pub. 86 - 42/42

Authors : Lyubimova, Ye. L., Cand., Geog. Sc. (Inst. of Geog., Acad. of Sc., USSR)

Title : The wintering of grassy vegetation

Periodical : Priroda 45/1, page 128, Jan 56

Abstract : The fact that certain plants, mostly varieties of grass, remain green under the snow during the winter is discussed. A comparison is made of the early spring growth of such vegetation as compared with other plants which die above ground retaining life only in the roots or bulbs.

Institution : .....

Submitted : .....

LYUBIMOVA, Ye.L.

Studies on the vegetation of natural zones of Moscow Province. Trudy Inst. geog. no.71:42-82 '57. (MIRA 10:9)
(Moscow Province--Botany)

LYUBIMOVA, Ye.L., kand.geogr.nauk

Snow piles in the Moscow area. Priroda 49 no.5:128 My '60.
(MIRA 13:5)

1. Institut geografii AN SSSR, Moskva.
(Moscow Province--Snow)

LYUBIMOVA, Ye.L., kand.geograficheskikh nauk

Flowering of vegetation in the forest. Priroda 49 no.8:126-127 Ag '60. (MIRA 13:8)

1. Institut geografii AN SSSR, Moskva.
(Forest ecology)

LYUBIMOVA, Yelena L'vovna; RIKHTER, G.D., otv.red.; NIKOL'SKAYA, V.V., otv.red.; STRIGIN, V.M., red.; KONOVALYUK, I.K., mladshiy red.; MAL'CHEVSKIY, G.N., red.kart; KOSHELEVA, S.M., tekhn.red.

[Kamchatka; physicogeographical study] Kamchatka; fiziko-geograficheskii ocherk. Moskva, Gos.izd-vo geogr.lit-ry, 1961. 188 p.
(Kamchatka--Physical geography)

LYUBIMOVA, Ye.L., kand.geograf.nauk

Snow and subalpine vegetation. Priroda 50 no. 2:125-126 F '61. (MIRA 14:2)

1. Institut geografii AN SSSR, Moskva.
(Alpine flora)

LYUBIMOVA, Ye.L., kand.geograficheskikh nauk

In the Siberian steppe. Priroda 50 no.6:125 Je '61. (MIRA 14:5)

1. Institut geografii AN SSSR, Moskva.
(Siberia—Spring)

LYUBIMOVA, Ye.L.

Vertical divisions of the vegetation in the forest zone of the East European Plain. Biul.MOIP.Otd.geol. 37 no.2:168 Mr-Ap '62. (MIRA 15:7)

(East European Plain--Phytogeography)

Lyubimova, Yelena L'vovna

Geography Of Kamchatka. Washington, U.S.JPRS, 1963.
191 P. Illus., Maps (JPRS: 17,536)
Translation Of The Original Russian: Kamchatka
Fiziko-Geograficheskiy Ocherk, Moscow, 1961.
Bibliography: P. 173-191

LYUBIMOVA, Ye.L.; NAZAREVSKIY, O.R.

Conference on the problems of onomastics and toponymy. Izv.AN SSSR.Ser.geog. no.2:153-156 Mr-Ap '63. (MIRA 16:4)
(Names, Geographical--Congresses)

LYUBIMOVA, Ye.L.

Conference on the principles of toponymy. Izv.Vses.geog.ob-va 95 no.1:102-104 Ja-F '63. (MIRA 16:4)
(Names, Geographical--Congresses)

LYUBIMOVA, Ye. L.; MURZAYEV, E. M., Moscow

"Place-name evidence of former geographic conditions on the Russian Plain."

report submitted for presentation at the 20th Intl Geographical Cong, 6 Jul-11 Aug 64, London.

LYUBIMOVA, Yelena L'vovna; YAKOVLEV, A., red.

[Plant kingdom of the Moscow region] Rastitel'nyi mir Podmoskov'ia. Moskva, Moskovskii rabochii, 1964. 86 p.
(MIRA 17:12)

LYUBIMOVA, Ye.L.; KHOTINSKIY, N.A.

Prospects for studying plants as indicators of geological conditions in the insular forest steppe of central Siberia. Trudy MOIP 8:137-140 '64. (MIRA 17:12)

LYUBIMOVA, Ye.M., inzhener.

Mobile unit for repairing stationary batteries. Elek.sta.27 no.2:36-38 F '56. (MLRA 9:6)
(Storage batteries--Repairing)

LYUBIMOVA, Ye.M.

Vertical distribution of organic phosphorus in waters of the Black Sea. Trudy MGI 16:127-160 '59. (MIRA 13:5)
(Black Sea--Phosphorus organic compounds)

LYUBIMOVA, Ye.M.

Arsenic in waters of the Black Sea. Trudy MGI 16:167-173 '59. (MIRA 13:5)
(Black Sea--Arsenic)

LYUBIMOVA, Ye.A.

PHASE I BOOK EXPLOITATION SOV/5342

Akademiya nauk SSSR. Morskoy gidrofizicheskiy institut

Gidrometeorologiya, Gidrokhimiya (Hydrometeorology Hydrochemistry) Moscow, 1959. 173 p. (Series: Its: Trudy, tom 16) Errata slip inserted. 1,200 copies printed.

Resp. Ed.: A.A. Ivanov; Ed. of Publishing House: L.K. Nikolayeva; Tech. Ed.: I.N. Borokhina.

PURPOSE: This publication is intended for meteorologists, hydrologists, and chemists interested in the chemical composition of sea water.

COVERAGE: This volume of the Transactions of the Marine Hydrophysical Institute AS USSR contains articles on problems in hydrometeorology and hydrochemistry. Individual articles deal with the heat balance of the Arctic atmosphere, an experimental study of the types of atmospheric circulation, and the occurrence in sea water of such substances as sulphur, organic phosphorus, and arsenic. No personalities are mentioned. References follow individual articles.

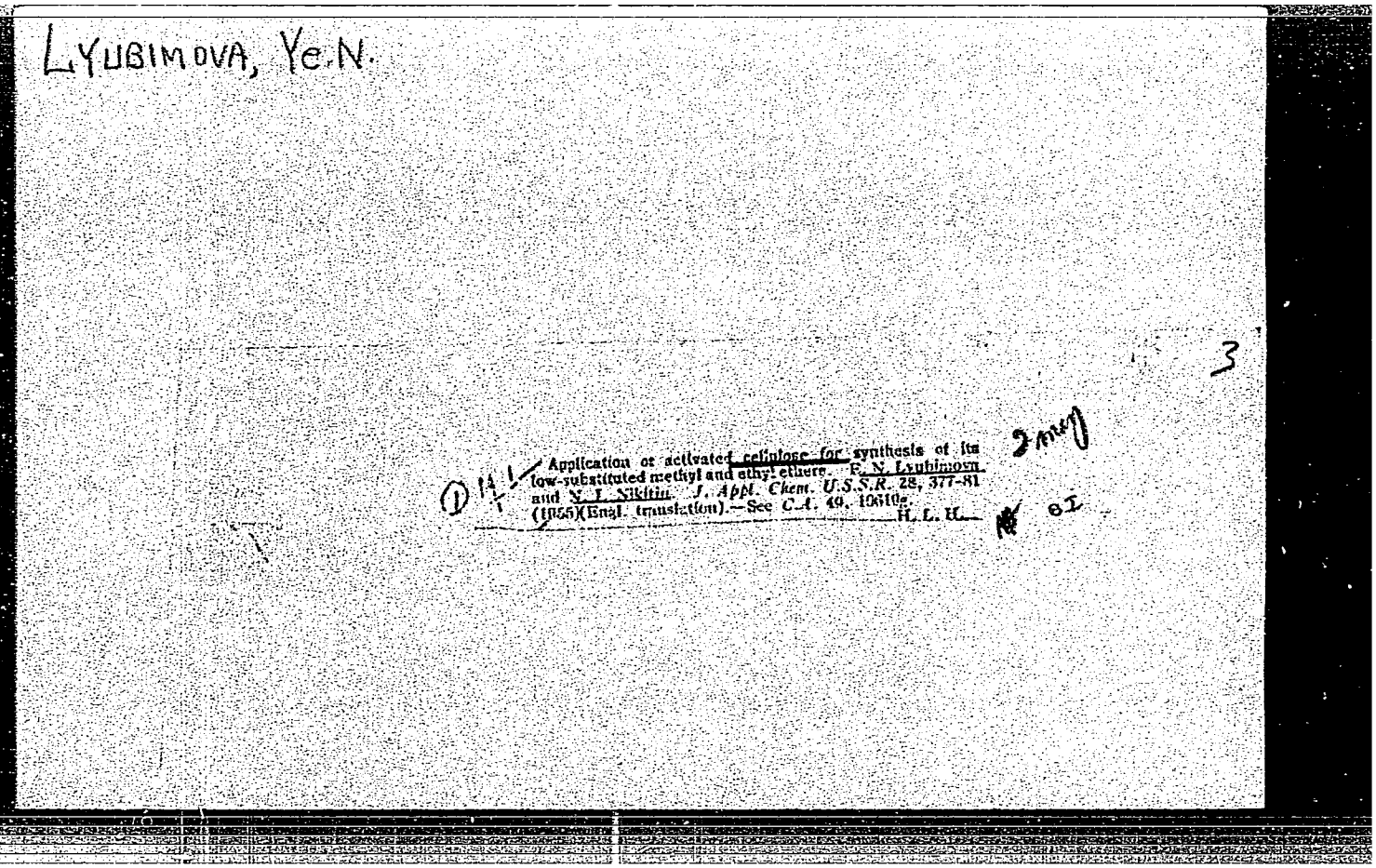
TABLE OF CONTENTS:

AVAILABLE: Library of Congress

LYUBIMOVA, YE. N.

"Experiments in the Activation of Processes of Esterification of Cellulose." Cand Tech Sci, Forestry Engineering Academy, Leningrad , 1953. Dissertation (Referativnyy Zhurnal--Khimiya Moscow, No 2, Jan 54)

SO: SUM 186, 19 Aug 1954



AID P - 2779

Subject : USSR/Chemistry

Card 1/1 Pub. 152 - 7/19

Authors : Lyubimova, Ye. N. and N. I. Nikitin

Title : Use of activated cellulose in the synthesis of methyl and ethyl ethers of low degree of substitution

Periodical : Zhur. prikl. khim. 28, 4, 402-406, 1955

Abstract : Methylation and ethylation of pretreated cellulose is described. Methyl and ethyl iodides, ethyl chloride and dimethyl sulfate were used in the etherification. The solubility of ethyl cellulose containing 2% OC_2H_5 (in 6% NaOH at 20°C) was 94%. Five tables, 9 references (2 Russian: 1941-1951).

Institution : Laboratory of Chemistry of Wood and Cellulose of the Wood Technical Academy im. S. M. Kirov.

Submitted : My 3, 1954

LYUBIMOVA, Ye.N.

Synthesis of cellulose benzyl ethers in the presence of xylene.
Zhur.prikl.khim. 28 no.11:1220-1224 N '55. (MLRA 9:3)
(Cellulose) (Xylene)

LYUBIMOVA, Ye.N.; KUZ'MINA, Z.D.; IZYUMSKAYA, K.P.; KOMAROV, F.P.

Determining the degree of cellulose polymerization for production control. Bum. prom. 32 no.10:7-10 O '57. (MIRA 11:1)

1. TSentral'nyy nauchno-issledovatel'skiy institut tsellyuloznoy i bumazhnoy promyshlennosti.
(Woodpulp) (Polymerization)

YUR'YEV, Yu.K.; SADOVAYA, N.K.; LYUBIMOVA, Ye.N.

Chemistry of selenophene. Part 30: chloromethylation of ketones of the selenophene series. Zhur.ob.khim. 30 no.8:2732-2737 Ag '60. (MIRA 13:8)

1. Moskvoskiy gosudarstvennyy universitet.
(Selenophene) (Chloromethylation)

LYUBIMOVA, Ye.N.

Synthesis of myrtenyl ester of cellulose. Report No.1.
Trudy LTA no.91:135-141 '60. (MIRA 15:12)

1. TSentral'nyy nauchno-issledovatel'skiy institut tsellyuloznoy i bumazhnoy promyshlennosti.
(Cellulose esters) (Myrtenyl chloride)

ACC NR: AP6032904 SOURCE CODE: UR/0062/66/000/009/1607/1613

AUTHOR: Mamayev, V. P.; Lyubimova, Ye. N.

ORG: Novosibirsk Institute of Organic Chemistry, Siberian Branch, Academy of Sciences, SSSR (Novosibirskiy institut organicheskoy khimii Sibirskogo otdeleniya Akademii nauk SSSR)

TITLE: Synthesis of 5,6-dihydrothieno[3,2-b]pyrrol-5-one

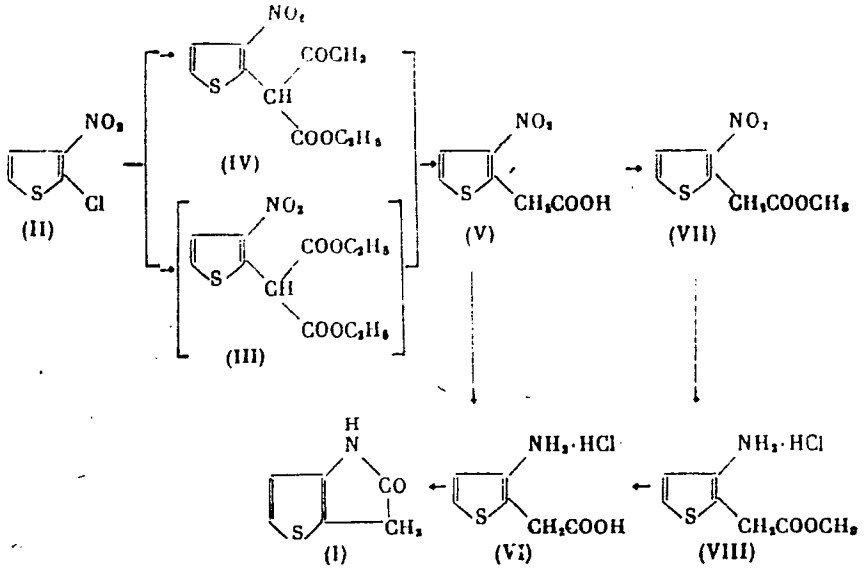
SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 9, 1966, 1607-1613

TOPIC TAGS: organic sulfur compound, organic nitrogen compound, acetic acid

ABSTRACT: 5,6-Dihydrothieno[3,2-b]pyrrol-5-one (I), a sulfur-containing isostere of oxindole, was synthesized from 2-chloro-3-nitrothiophene (II):

Card 1/3 UDC: 542.91+547.74/75+661.719

ACC NR: AP6032904



The boiling range of (I) is 142-149°. The 3-aminothienyl-2-acetic acid obtained cyclyzes with much more difficulty than o-aminophenylacetic acid. Condensation of 2-chloro-3-nitrothiophene with sodium malonate and sodium acetoacetate followed by

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ACC NR: AP6032904

hydrolysis of the condensation products yielded 3-nitrothienyl-2 acetic acid. Orig. art. has: 2 figures and 1 table.

SUB CODE: 07/ SUBM DATE: 18Apr64/ ORIG REF: 003/ OTH REF: 008

Card 3/3

PROSKURYAKOV. N.I.; LYUBIMOVA, Ye.V.

Interaction of disulfides and thiols with the protein complex of wheat flour. Izv. vys. ucheb. sav.; pishch. tekh. no.2:36-39 '63. (MIRA 16:5)

1. Moskovskiy gosudarstvenny universitet imeni Lomonosova, kafedra biokhimii rasteniy.
(Wheat—Analysis and chemistry) (Sulfides) (Proteins)

LYUBIMOVA, Ye. Ye.

"The Experience of Reclaiming Degenerated Meadows into Highly Productive Fodder Land in the Conditions of Tambovskaya Oblast";

dissertation for the degree of Candidate of Agricultural Sciences (awarded by the Timiryazev Agricultural Academy, 1962)

(Izvestiya Timiryazevskoy Sel'skokhozyaystvennoy Akademii, Moscow, No. 2, 1963, pp 232-236)

KAZAKOV, Ye. I.; LARIN, A. Ya.; VORONINA, T. B.; LYUBIMOVA, Z. V.; GOROSHKO, G. K.

Surface-active substances from peat tar hydrocarbons. Trudy IGI 17:157-168 '62. (MIRA 15:10)

(Surface-active agents) (Peat)

KAZAKOV, Ye. I.; LARIN, A. Ya.; VORONINA, T. B.; LYUBIMOVA, Z. V.; GOROSHKO, G. K.

Light oil of a mean temperature brown coal tar as a raw material for the production of surface-active substances. Trudy IGI 17: 169-173 '62. (MIRA 15:10)

(Coal-tar products) (Surface-active agents)

LYUBIMOVA-GERASIMOVA, R.M.

Changes in cerebral circulation during the total-body ionizing irradiation of animals. Med. rad. 5 no.4:24-29 Ap '60.
(MIRA 13:12)

(BRAIN--BLOOD VESSELS) (RADIATION--PHYSICLOGICAL EFFECT)

LYUBIMOVA-GERASIMOVA, E.N.

Regulation of the brain blood supply [illegible] action of ionizing radiations on the animal body. Radiobiologiia v.2 no.1:82-86 Ja '62 (MIRA 18:1)

BIBIKOVA, A.F.; BUSYGIN, V.Ye.; GRIGOR'YEV, Yu.G.; KALYAYEVA, T.V.; LYUBIMOVA-GERASIMOVA, R.M.; TSYPIN, A.B.

Reaction of the organism to massive γ-irradiation. Pat. fiziol. i eksp. terap. 6 no.4:57-62 Jl-Ag '62. (MIRA 17:8)

27.1220

39564
S/205/62/002/003 010 015
I015/I215

AUTHOR: Lyubimova-Gerasimova, R. M.

TITLE: Changes in the cerebral vascular reaction to adrenalin, acetylcholin and hexonium following whole body irradiation

PERIODICAL: Radiobiologiya, v. 2, no. 3, 1962, 455–460

TEXT: The functional changes in the CNS following ionising irradiation have been insufficiently studied until now In the present study the cerebral blood flow rate was investigated with flat thermoelectrodes invented by Marshak The results were recorded photokymographically during the entire course of the radiation sickness 18 male rabbits weighing 2–3 kg. were subjected to a single whole-body x-irradiation of 1000r in 176 experiments. The animals developed acute radiation sickness and died within 1–12 days, except for 3 animals which survived. Adrenalin (4–8γ/kg b.w.) were injected into the marginal vein of the ear during 10–15 sec The reaction was recorded during 15 min. and the time interval between the injections was 20–25 min The reactivity of the cerebral vessels to adrenalin, acetylcholin and hexonium was changed in acute radiation sickness. These changes were dependent on both the severity and stage of radiation sickness Alteration in the neurohumoral regulation of the vascular tonus in radiation sickness was established There are 3 figures

SUBMITTED September 29, 1961

Card 1/1

LYUBIMOVA-GERASIMOVA, R.M.

Some pathogenic mechanisms of acute cerebral circulatory disorder. Biul.eksp.biol.i med. 53 23-28 Je '62. (MIRA 15:10)

1. Nauchnyy rukovoditel' - deystvitel'nyy chlen AMN SSSR A.V. Lebedinskiy. Predstavlena deystvitel'nym chlenom AMN SSSR A.V. Lebedinskim.

(CEREBROVASCULAR DISEASE)

ACCESSION NR: AT4037698 S/2865/64/003/000/0278/0288

AUTHOR: Lebedinskiy, A.V.; Grigor'yev, Yu. G.; Lyubimova-Gerasimov, R. M.; Polyakov, B. I.

TITLE: Vegetative reactions during stimulation of the vestibular analyzer and their possible role in complicating space flight conditions

SOURCE: AN SSSR. Otdeleniye biologicheskikh nauk. Problemy* kosmicheskoy biologii, v. 3, 1964, 278-288

TOPIC TAGS: acceleration, vestibular analyzer, space flight, Coriolis acceleration, rabbit, vegetative reflex

ABSTRACT: The role of angular accelerations and Coriolis accelerations on the vestibular function was studied by means of a BY-2 type accelerator, on which it was possible to produce angular accelerations ranging from 0.05 up to 1200°/sec^2 and any magnitude of angular velocity up to 180°/sec. Vegetative reactions are of special interest since by stimulating the vestibular apparatus, it is possible to observe practically all known vegetative reactions. It has been established that the magnitude of the reaction depends on the duration of the stimulus (acceleration). Data obtained indicate that after whole-body irradiation of the animal,

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ACCESSION NR: AT4037698

more time is required for acceleration to produce an equal reaction. There is reason to believe, in this case, that radiation affects the central nervous system and not the receptor. So far there have been practically no attempts made to evaluate the biological significance of vegetative reflexes which arise during stimulation of the vestibular analyzer. When rabbits were subjected to rocking in the horizontal (duration of acceleration, 0.15 sec), at 66° sec ^{2}, a diminution of respiration amplitude was noted; at $400^{\circ}/sec^{2}$ the diminished amplitude increased in frequency; at $600^{\circ}/sec^{2}$ the amplitude dropped off sharply with no marked frequency increase; and at $1200^{\circ}/sec^{2}$ there was a distinct break in respiration. Reactions of the cardiovascular system to acceleration are complex. Thus, when rabbits are subjected to an acceleration of $0.05^{\circ}/sec^{2}$ for 30 sec, skin temperature rises. But, if accelerations are increased to 1.5 or to $3.2^{\circ}/sec^{2}$ for the same duration of time, skin temperature drops. The depressive reaction appears, apparently, only in response to large accelerations because when rabbits were accelerated in the range from 60 to $800^{\circ}/sec^{2}$ (duration, 0.15 sec), no depressive reaction was observed. When rabbits were exposed to short-term acceleration of $5^{\circ}/sec^{2}$, a diminution of blood circulation in the brain was observed. This effect was distinct if the acceleration lasted 12 or 24 seconds, but indistinct if the duration was only 6 seconds. The authors have stressed the importance of.

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ACCESSION NR: AT4037698

duration of effect of acceleration on appearance of vestibular reactions. Very possibly this indicates the significant role of inclusion of the endocrine mechanism, particularly of the adrenal system, into the complex of vegetative reactions, and the consequent stimulation of the reticular formation. If the appearance of vegetative reflexes observed during stimulation of the vestibular mechanism is tied to the stimulation of the reticular formation, then, in the final analysis, their involvement must be controlled by the cortex of the cerebral hemispheres. It was also noted that stimulation of the vestibular apparatus limits the activity of the cortical component of vegetative reactions.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: PH, LS

NO REF SOV: 010 OTHER: 004

Card 3/3

LUS, Ya.Ya.; MEDVEDEV, N.N.; PROKOF'YEVA-BELGOVSKAYA, A.A.; LYUBIMOVA-LEPINA, V.F.

In memory of Tenis Karlovich Lepin, 1895-1964. Biul. MOIP. Otd. biol. 70 no.2:153-155 Mr-Ap '65. (MIRA 18:5)

LYUBIMSKIY, E. Z., [illegible], S. S., and YAKOV, Yu. P.

"Automatization of Programming," [illegible]

LYUBIMSKIY, E. Z., KAMYNIN, S. S. and SHTARKMAN, V. S.

"Optimum Information Coding in Automation and Multistep Automation Schemes for Production Processes."

report presented at the Conference on Automation and Computation Engineering, Moscow, 5-8 March 1957. Organized by AU Sci. Eng. and Tech. Society for Apparatus Building.

Math. Inst. [illegible]

LYUBIMSKIY, E. Z.: Master Phys-Math Sci (diss) -- "On the automation of programming and the technique of program-writing programs". Moscow, 19[illegible]. [illegible] pp

(Acad Sci USSR, Dept of Applied Math of the Math Inst im V. A. Steklov)

(KL, No 6, 1959, 12[illegible])

9,7000

S/112/59/000/015/031/068
A052/A002

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1959, No. 15, p. 153, # 32053

AUTHORS: Kamynin, S.S., Lyubimskiy, E.Z., Shura-Bura, M.P.

TITLE: Automation of Programming by a Programming Routine

PERIODICAL: V sb.: Probl. kibernetiki, No. 1, Moscow, Gos. izd-vo fiz.-mat. lit., 1958, pp. 135-171

TEXT: Basic information is given on the programming of problem solutions on digital computers. A method of programming by means of generalized commands-operators is described. These command-operators include certain algorithms the representation of which in a form of a sequence of elementary operations can be delegated to the machine itself by a program given once and for ever. The generalized commands-operators are divided into the main and auxiliary ones. To the former belong arithmetic, logical and re-addressing commands-operators; input and preservation commands-operators and a nonstandard command-operator belong to the latter. The task of the programmer consists in giving the arrangement of commands-operators and the information to each of them in form of a line of

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numbered symbols corresponding to the type of machine on which the problem will be solved. One of six letters designating in abbreviated form each command-operator can serve as a symbol. A line of symbols and the information to them is the program scheme. The composition of the program proper according to a program scheme can be performed by the machine itself by means of the programming routine. At the same time the algorithm will become more precise: the positions of commands-orders in the storage unit, the addresses of working cells etc will be determined. A description of the "ПП-2" (PP-2) programming routine is given. The conception of conditional numbers is introduced on which, as well as on the conception of an operator scheme, this method of programming automation is based. An instruction for composing programs by means of the PP-2 programming routine is given in an appendix.

A.V.Sh.

Translator's note: This is the full translation of the original Russian abstract.

LYUBIMSKIY, E.Z. (Moskva)

Arithmetical unit in the programming program No.2. Probl.kib. no.1:178-181 '58. (MIRA 12:4)
(Programming (Mathematics))

S/030/60/000/008/004/013
B021/B054

AUTHOR: Lyubimskiy, E. Z.

TITLE: Problems of Automatized Programming

PERIODICAL: Vestnik Akademii nauk SSSR, 1960, No. 8, pp. 47-55

TEXT: With the introduction of high-speed computers, the fraction of time assigned to programming has relatively increased. Therefore, the problem of automatized programming, i.e. the use of high-speed computers for programming, gains importance. In the present article, the author describes the posing of the problem. For an automation it is necessary to determine the exact form in which the initial information is fed into the computer and the result is presented; to work out the algorithms for the transition from the computing scheme to the programming scheme, and from the programming scheme to the program, respectively; these algorithms for the transition must be programmed in the code of the computer which is to be used for automatic programming. Further, the author describes the automation of the first stage of programming, and explains it with the aid of mathematical formulas. As to the automation

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of the second programming stage, the following available methods are indicated: the method of symbolic addresses; the method of library subroutine; the method of the programming plan. Finally, the author mentions the so-called interpretation systems which may be used both for the automation of the second stage and for the programming as a whole. He briefly outlines the advantages and disadvantages of these systems.

3 512

S/044/62/000/005/067/072
C111/C444

AUTHOR: Lyubimskiy, E. Z.

TITLE: On the probable changes in the language ALGOL-60

PERIODICAL: Referativnyy zhurnal, Matematika, no. 5, 1962, 72, abstract 5V465. ("Zh. vychisl. matem. i matem. fiz.," 1961, 1, no. 2, 361-364)

TEXT: The paper contains a number of proposals concerning the elimination of inaccuracies in the language ALGOL-60. Proposed is a uniform construction of the conditional operators of the type: if < logic term >, then < operator >, else < operator >. In this case the ambiguity of the decoding of the operators of the cycles which contain conditional operators, is eliminated. In the way of the first correction one proposes because of greater uniformity to vary the construction of the conditional terms by admitting after then an arbitrary term instead of just a simple term.

[Abstracter's note: Complete translation.]

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ACCESSION NR: AP4012006 S/0208/64/004/001/0096/0112

AUTHORS: Shura-Bura, M. R. (Moscow); Lyubimskiy, E. Z. (Moscow)

TITLE: Translator for Algol-60

SOURCE: Zhurnal vy*chisl. matem. i matem. fiz., v. 4, no. 1, 1964, 96-112

TOPIC TAGS: translator, input language, computer, function identifier, teletype symbol, Latin letter, meta linguistic formula, magnetic tape, translator TA 2, Algol 60

ABSTRACT: The basic features and the input language used by the translator TA-2, built to exploit computers for translating purposes, are presented. Three constraints are put on Algol-60. These are: 1) labels or signs can be used only as identifiers; 2) the array "own" must have constant cutoff pairs; 3) standard function identifiers may not be actual parameters. It is shown that this input language can be universal (making possible the formal exchange operation concepts) and that it is a refinement of Algol-60 procedure-code. The input alphabet is based on teletype symbols containing 26 lower case Latin letters, a set of special signs, and a "stress" sign. In addition, it contains lower case Greek letters and

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ACCESSION NR: AP4012006

elementary function notations. The program assignment for TA-2 consists of a metalinguistic formula < program > :: = < operator >; |< preliminary commentary for execution >; <operator > . The translator is organized into blocks which operate one after another and are produced on magnetic tapes once only. Each block can be treated independently of the others. A detailed breakdown is given for the input language, including three constraints, the alteration (which in turn includes identifiers such as "sld," "oft," "moz," "mzu," and a commentary), array "own" description which contains a detailed syntax and a note on semantics, the procedure description with several examples, the exchange procedure (including machine-machine and language-machine operations), and the mathematical address system. A short explanation is also given of the operation scheme of the TA-2 which consists of Algol-60 recording input, the recoding process using 15 binary digits, the syntax control block, and the information input for the internal language of the translator. The translator has 20 000 machine words, 3000 of which are tabular in form. It includes 21 zones of magnetic tapes and uses the standard IS-2 program. The TA-2 is a development of the original type TA-1, started in 1961. It was completed in June 1963. I. B. Zady*khaylo, I. Kh. Zusman, S. S. Kamy*nin, D. A. Koryagin, E. S. Lukhovitskaya, V. V. Lutsikovich, V. V. Marty*nyuk, G. M. Oleynik-Ovod, V. A. Semyachkin, V. I. Sobel'man, and L. V. Ukhov took part in producing the

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ACCESSION NR: AP4012006

translator TA-2 and in developing the programming procedures.

ASSOCIATION: none

SUBMITTED: 01Oct63 DATE ACQ: 14Feb64 ENCL: 00

SUB CODE: DP NO REF SOV: 000 OTHER: 001

Card 3/3

L 3458-66 EWT(d)/EWP(l) LJP(c) BB/GG

ACCESSION NR: AP5020296 UR/0208/65/005/004/0699/0708

51:681.14

AUTHORS: Kamynin, S. S. (Moscow); Lyubimskiy, E. Z. (Moscow)

TITLE: Procedure codes in the TA-2 translator

SOURCE: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 5, no. 4, 1965, 699-708

TOPIC TAGS: computer, data processing, computer programming, computer compiler, ALGOL language, programming language

ABSTRACT: The translation of commands into machine language code by means of a syntax-driven compiler, similar to ALGOL, is discussed. The authors give a brief snyopsis of the principle of programming with the use of syntax-driven compilation. Recursive definitions are given for procedure code operator, operator code list, operation code, operation code name, factual operation code variable, break character, and octal number. For example, an octal number is defined syntactically as "an octal digit, or an octal digit followed by an octal number." Details of the manner of storing the translator lists are given. A word length of 45 bits is used, with certain portions of the words reserved for specific purposes. Additional information on required core sizes and addressing methods for list storage are given.

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L 3458-66

ACCESSION NR: AP5020296

After storage of the parameter lists, control is transferred to the start of the compiler. Operation codes are analogous ALGOL-60 language and are stored so that the corresponding section of the compiler may be found after completion of the search for an operation code match. Information describing the use of magnetic tape in storing the numeric code equivalents is given. Examples of the use of the translator are shown. Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 03Apr65 ENCL: 00 SUB CODE: DP

NO REF SOV: 001 OTHER: 000

BVK

Card 2/2

L 31977-66 EWT(d)

ACC NR: AP6010786 (A) SOURCE CODE: UR/0106/66/000/002/0009/0022

61
45
8

AUTHOR: Iontov, L. Ye.; Lyubimtsev, A. A.; Shutov, I. I.

ORG: none

TITLE: Multipurpose equipment for multichannel multiplex systems for cable and radio-relay lines 44

SOURCE: Elektrosvyaz', no. 2, 1966, 9-22

TOPIC TAGS: multiplex, multichannel communication, radio relay, FREQUENCY CONVERSION, OSCILLATION

ABSTRACT: The development of multipurpose oscillator and frequency-conversion equipment for multiplex communication systems is reported; the equipment is mounted in cabinets with swing-out frames; it can operate within +10 +40C. Supply-voltages required: 220 v ± 3% ac; -21.2 v ± 3% dc for transistors; -24 v ± 10% dc for signal circuits; +206 v ± 3% dc for anode circuits. The oscillator equipment is suitable for Soviet-made K-21-2, K-60, K-60P, K-1920, R-600 systems; the frequency-conversion equipment can be used in K-60P, K-300, K-1920, R-600 systems. The oscillator cabinet generates a number of carrier frequencies (among them 120 kc for 12--108 kc linear spectrum and 564 kc for 12--252 spectrum), 64, 84, 104, and 412 kc monitoring frequencies, etc. Block diagrams of some oscillator units are shown. The frequency-conversion equipment is based on standard 12-, 60-, and 300-channel trunks which use

Card 1/2 UDC: 621.395.4