

Application of High-intensity Radiation Sources
in Industry

S/170/60/003/02/25/026
B008/B005

organisms, economic problems with respect to processing methods by means of
radiation, etc. were dealt with, ✓

Card 3/3

NISNEVICH, A.I.; SINITSIN, V.I.

Using radioisotopes in solving the problem of increasing the durability of machine parts and mechanisms. Inzh.-fiz.zhur. no.11:113-119 N '60. (MIRA 13:11)
(Radioisotopes--Industrial applications)

S/170/60/003/011/015/016
B019/B056

AUTHORS: Nisnevich, A. I., Sinitsyn, V. I.

TITLE: The Use of Radioactive Isotopes for the Purpose of Solving
the Problem of Increasing the Service Life of Machine Parts
and Mechanisms 14 ✓

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1960, Vol. 3, No. 11,
pp. 113-119

TEXT: In the introduction, the use of radioactive elements as indicators for wear is discussed in a general manner. In this connection, the activation of the parts investigated is described as an essential problem, i.e., irradiation in an atomic reactor and the applying of radioactive substances onto the surfaces under investigation. The advantages of an irradiation in a reactor are compensated by the disadvantages of the change of various physico-mechanical properties of the material under investigation. This method is only very little used in the USSR. The difficulties in the case of the second aforementioned method consist in the fact that the radioactive elements, which are used for this purpose in form of alloys with

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The Use of Radioactive Isotopes for the S/170/60/003/011/015/016
Purpose of Solving the Problem of Increasing B019/B056
the Service Life of Machine Parts and Mechanisms

Fe⁵⁹, Co⁶⁰ or Zn⁶⁵ have a low activity and that the production of equal or similar alloys with these elements is difficult. Another fact of great importance is the quantitative measurement of the radioactive particles, which is mostly carried out with scintillation counters. As an example, an investigation of the operation conditions of a tractor motor with respect to the wear of piston rings is dealt with. A scheme of the experimental setup is shown; the contact surfaces were activated by means of a Co⁶⁰ and Zn⁶⁵-containing alloy. It is found that at a definite number of rotations of the crankshaft wear is the greatest. The investigation of the wear of further motors is partly dealt with, several details are briefly discussed, and finally, testing in practical operation is described as an especial advantage. From the investigation of a tractor of the type ДТ-54 (DT-54) the results obtained are shown in a diagram. Piston rings show the greatest wear among all parts investigated. There are 4 figures and 10 Soviet references.

SUBMITTED: February 8, 1960

Card 2/2

21.6100, 21.7100

77257
SOV/89-8-2-22/30

AUTHORS: Sinitsin, V. I., Grafov, G. I.

TITLE: Conference on the Application of Powerful Radiation Sources In Industry and Especially in Chemical Processes

PERIODICAL: Atomnaya energiya, 1960, Vol 8, Nr 2, pp 164-167 (USSR)

ABSTRACT: The conference was held in Warsaw September 8-12, 1959. More than 200 representatives from 27 countries were present. The representatives of Canada reported on the radiation source and construction of the irradiation unit for irradiation of potatoes. The use of a powerful irradiation unit with cobalt 60 as the radiation source in the rubber and plastics industry was reported by representatives of Czechoslovakia. Several reports were devoted to methods of calculating and designing irradiation units for use in the chemical industry (Denmark, Hungary, USSR, France). The outstanding reports of the representatives of the U.S. were: G. Silverman, on the use of β -radiation of fission products in textile and

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Conference on the Application of Powerful
Radiation Sources In Industry and Especially
in Chemical Processes

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plastics industries; D. George and D. Gregory, on the γ -unit of the research center of the Australian Atomic Energy Commission; G. Oster, on "The Role of Electron Excitation in the Chemical Effect of Irradiation on Plastics"; J. Sederland and A. Allen, on radiolysis of pentane in the crystal lattice of hydrated synthetic zeolites; E. Taylor, on the effect of γ -radiation on the activity of catalysts; A. Henglein, on synthesis of nitric compounds by the reaction of free radicals with nitrogen oxide; E. Pollard and U. Gild, on inactivation curves for certain plants, animals, and bacteriological viruses; Ch. Artandi, on sterilization of pharmaceuticals and hospital equipment with ionizing radiation; P. Ebersold, on main types of industrial application of radiation in the U.S. and future plans for the use of radiation. Several studies conducted at Brookhaven and Oak Ridge National Laboratories were also reported. The reports presented by representatives of Japan are: S. Onisi, on measurements of spectra of the

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Radiation Sources In Industry and Especially
in Chemical Processes

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electron spin resonance of γ -irradiated polymers;
M. Matsumoto, on the effect of radiation on polyvinyl
alcohol; S. Okamura, on polymerization of vinylacetate
in an aqueous medium under the effect of γ -radiation.
The Soviet reports mentioned are: A. K. Breger, on the
principle and general characteristic of indium-gallium
irradiator using short-life isotopes; S. S. Medvedeva,
A. D. Abkina, and P. M. Khomikovskiy, on radiation poly-
merization of ethylene in gaseous phase of organic
solvents. The other reports noted are: S. Pinner (U.K.),
on synthesis of polyvinyl chloride with copolymer chains
cross-linked with allyl bonds; F. Dalton and R. Robetson
(U.K.), on graft-polymerization of polyacrylonitrile and
dimethylsiloxane caused by γ -radiation; H. Heins and
B. Dere (Belgium), on the effect of γ -radiation on
polyethylacrylate of various molecular weights; F. Trenar
and Verrie (France), on the effect of radiation on the
reaction of chlorine with one of its liquid derivatives;
F. Balestic and M. Maga (France), on the effect of radia-
tion on synthesis of some dyes.

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84238

S/089/60/009/004/018/020
B006/B070

21.4100

AUTHORS: Lokhanin, G. N., Sinitsyn, V. I.TITLE: New Hermetic Chambers for Working With α - and β -Active
Substances 19

PERIODICAL: Atomnaya energiya, 1960, Vol. 9, No. 4, pp. 344 - 347

TEXT: The authors give a detailed description of the chamber 1KHЖ (1KNZh), mass-produced in the USSR, in which it is possible to work with α - and β -active substances. In this chamber, which has one working place, it is possible to work at high temperatures, and also with acids and lyes. (A similar chamber of the type 2KHЖ (2KNZh) with two working places is shown in Figs. 4 and 5). The chamber is made of 3 mm thick stainless steel, and is 2320 mm high, 875 mm broad, and, including the antechamber, 1270 mm long. The hermetically sealed space in the chamber is 0.4 m³. The chamber itself stands on a foundation made of carbon steel. Figs. 1 and 2 show the front and the back of the chamber. Chambers of this type are produced with one or two antechambers which are used for introducing and removing the radioactive materials, the vessels, reagents, etc. The

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New Hermetic Chambers for Working With α - and β -Active Substances

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B006/B070

inside of the chamber is lighted with a three-tube lamp (45 w) of the type ЦТЦ-45 (SDS-45). For protection against radioactive aerosols, gases, and other substances in the air, the chamber is equipped with a special two-stage filter system, which is described. A receptacle is inserted in the foundation of the chamber (Fig. 2) to receive solid contaminated waste matter. The solid radioactive waste matter is packed inside the chamber in a plastic material and sealed hermetically. It then comes to the receptacle which is put on a small hand-cart (Figs. 2 and 3). This process is described in detail. The waste container is made of carbon steel, and has a capacity of 10 liters. A container of the type 10KЖО (10KZhO) is used for contaminated water and liquids. It is described in the preceding paper on a wash cabinet (pp. 341 - 344, Fig. 3). It is briefly described also here. There are 5 figures. X

Card 2/2

PIETROV, N.A., red.; PETRENKO, L.I., red.; SAVITSKIY, P.S., red.; SIMITSIN, V.I., red.; KOLOTYRKIN, Ye.M., red.; SYRKUS, N.P., red.; ROMM, R.F., red.; ANTYSHV, P.I., red.; VARTAZAROV, S.Ya., red.; ZAYTSEV, A.I., red.; ZEZYULINSKIY, V.M., red.; ZEDGINIDZE, G.A., red.; MARTYNKIN, F.F., red.; ROGACHEV, V.I., red.; SLATINSKIY, A.N., red.; LEVINA, Ye.S., vedushchiy red.; TITSKAYA, B.F., vedushchiy red.; PERSHINA, Ye.G., vedushchiy red.; IONEL', A.G., vedushchiy red.; ZARETSKAYA, A.I., vedushchiy red.; MUKHINA, E.A., tekhn.red.

[Transactions of the Conference on the Introduction of Radioactive Isotopes and Nuclear Radiation into the National Economy of the U.S.S.R.] Trudy Vsesoiuznogo soveshchaniia po vnedreniiu radioaktivnykh izotopov i iadernykh izlucheni v narodnoe khoziaistvo SSSR. Pod red. N.A.Petrova, L.I.Petrenko i P.S.Savitskogo. Moskva, Gos.nauchno-tekhn.izd-vo nef. i gorno-toplivnoi lit-ry. Vol.1. [General aspects of isotope applications. Instruments with sources of radioactive radiation. Radiation chemistry. Chemical and petroleum refining industry]

(Continued on next card)

PETROV, N.A.---(continued) Card 2.

Obshchie voprosy primeneniia izotopov. Pribory s istochnikami radioaktivnykh izlucheni. Radiatsionnaia khimia. Khimicheskaiia i neftepererabatyvaiushchaia promyshlennost'. 1961. 340 p. Vol.2. [Construction and the industry of construction materials. Light industry. Food industry and agriculture. Medicine] Stroitel'stvo i promyshlennost' stroitel'nykh materialov. Legkaia promyshlennost'. Pishchevaia promyshlennost' i sel'skoe khoziasitvo. Meditsina. 1961. 267 p.

(MIRA 14:4)

1. Vsesoyuznoye soveshchaniye po vnedreniyu radioaktivnykh izotopov i yadernykh izlucheni v narodnoye khozyaystvo SSSR. Riga, 1960.

(Radioisotopes)

(Radiation)

SINITSYN, V.I.; ALAYAB'YEV, A.F., red.; VLASOVA, N.A., tekhn. red.

[Radioactive cobalt] Radioaktivnyi kobal't. Moskva, Gos.izd-vo lit-
ry v oblasti atomnoi nauki i tekhniki, 1961. 56 p. (MIRA 14:6)
(Cobalt—Isotopes)

LOKHANIN, G.N.; SINITSYN, V.I.; SHTAN', A.S.; MATVEYEVA, A.V., red.; BOKSHA, R.V., red.; MAZEL', Ye.I., tekhn. red.

[Protective equipment and devices for working with radioactive substances] Zashchitnoe oborudovanie i prispobleniia dlia raboty s radioaktivnym veshchestvami. Moskva, Gos. izd-vo lit-ry v oblasti atomnoi nauki i tekhniki, 1961. 129 p. (MIRA 14:11)
(Radiation protection)

S/081/62/000/010/049/985
B168/B180

AUTHORS:

Sinitsyn, V. I., Shtan', A. S.

TITLE:

Appliances and apparatus based on the use of radioactive isotopes for the control and regulation of technological processes in the chemical industry

PERIODICAL:

Referativnyy zhurnal. Khimiya, no. 10, 1962, 357-358, abstract 10I177 (Vestn. tekhn. i ekon. inform. N.-i. in-t tekhn.-ekon. issled. Gos. kom-ta Sov. Min. SSSR po khimii, no. 5, 1961, 35-43)

TEXT: Mass-produced Soviet appliances of interest to the chemical industry are briefly described, together with some planned for mass-production in 1961. 1. A level indicator for the interface between two media. Co⁶⁰ radiator, gamma-rays, activity 0.5-60 mg-equiv radium ("Kalugapribor" Factory). 2. Level regulator-indicator with pneumatic outlet PVT-1 (RUP-1), made at the same factory. 3. A series of relay-type appliances, made at the Tallinn Plant, based on the YFAT (URAP) electronic relay unit: level recorder for measuring vessels, with an accuracy of

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Appliances and apparatus based...

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± 2 mm: maximum level recorder РРР-4 (RPRU-4), accuracy ± 5 cm; device РР-4 (RK-4) for regulating the filling of containers on a conveyor, a tracking level-gage РР-6-А (UR-6-A) for storage tanks; continuous density gage РРР-2 (PZHR-2), range 1-1.5 g/cm³, error 0.5 %.

4. Ionization gage РРР-3А (MIR-3A) for inactive gases and steam, range 0.01-10 mm Hg, error ± 5%, alpha-particle source Pu²³⁹ ("Kalugapribor" Factory). 5. Non-contact device ВАС (BIV) for weighing sheet materials in the course of manufacture, range 200-800 g/m², error ± 5 %, source Tl²⁰⁴.

6. Gage for measuring deviation of sheet thickness from a standard РРР-1 (URIT-1), range 50-500 g/m², error ± 3 %, beta-radiation, consisting of 5 units. 7. One- or two-level regulator АРТУ (ARPU) for the interface between two media, difference in densities 10 and 50 %, operating time 10 sec, error ± 40 mm, model В-3Г (V-3G) (Talinn Factory).

8. Thickness gage ВТФ (BTP) for coatings (varnish, paints, electroplating, etc.), range - a few mg/cm², accuracy ± 2 %, source Tl²⁰⁴, 120 μс (Talinn Factory). 9. Pulp density gage ИРР (IPP), range

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Appliances and apparatus based...

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1.0-1.5 and 1.6-2.1 g/cm³, error 1.5 %, gamma-radiation source Cs¹³⁷, 50 mg-equiv. The following are being developed: 10. Potassium concentration gage RKK-B-1 (RKK-B-1) for measuring the intensity of inherent radiation of K⁴⁰, range 0-20 %, error ± 1.5 % (In-t avtomatiki USSR (Institute of Automation UkrSSR)). 11. Densitometer for liquids PZhR-5,4 (PZhR-5.4), range 0.1 to 0.6 g/cm³, error ± 2 %, gamma-radiation source Cs¹³⁷ (NIITeplopribor). 12. Liquid analyzer RAZh-1 (RAZh-1) for determining the concentration of one of the components of a binary mixture, source Sr⁹⁰ (OKBA). 13. Ionization methanometer TM-4 (TM-4) (for atmospheric air), range 0-5 %, error ± 0.2 %, source - tritium. 14. Level indicator compressed cylinder gas IU-3 (IU-3), portable, accuracy ±10 mm, source Co⁶⁰ 1 mg-equiv. [Abstracter's note: Complete translation.]

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22022

S/089/61/010/004/027/027
B102/B205

21.4150

AUTHORS: Lokhanin, G. N., Sinitsyn, V. I.

TITLE: New universal chamber for handling α -, β -, and γ -active materials

PERIODICAL: Atomnaya energiya, v. 10, no. 4, 1961, 420-421

TEXT: A brief description is given of a new Russian universal chamber designed for handling hot substances. It consists of two chambers, one of type 1-KHM (1-KNZh) and the other of type KW (KSh), which are connected by a pre-chamber. The first chamber is used to handle α - and β -active materials, while the second one serves for work with γ -active materials of up to 50 mg-equiv. Ra; it has a biological shield. The first chamber has a volume of 0.4 m³, and the second chamber has one of 0.6 m³. Air can be fully exchanged 25 times per hour. The filter areas of the two chambers are 0.11 and 0.25 m², respectively. Dimensions of the universal chamber: 2970 x 2560 x 2320 mm; weight: 5700 kg (450 kg + 5250 kg). The 1-KNZh chamber has already been described in Ref. 1 (Lokhanin, Sinitsyn).

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22622

S/089/61/010/004/027/027
B102/B205

New universal chamber...

Atomnaya energiya, 2, vyp. 4, str 344 (1960)). Radioactive material is transferred from one chamber into the other through the pre-chamber. The KSh chamber is equipped with manipulators of the type **МШЛ-05** (MShL-05), an instrument box, daylight lamps, a manometer of the type **ТНМ-890** (TNM-890), two-stage filters, several vessels and containers, power supply lines, pipes for hot and cold water, sewers, and waste cans. The KSh chamber has a size of 1700 × 2540 × 2485 mm. Its biological shield consists of cast-iron plates having a thickness of 100 mm (front), 80 mm (sides and bottom), and 50 mm (top, back, and in between), and of several lead glasses (total thickness: 150 mm). The base of the chamber is made of carbon steel and has a size of 1700 × 980 × 940 mm. The two-stage filter used for air cleaning consists of a glass fabric 200 mm thick and four layers of the fabric **ФПП-15-1,7** (FPP-15-1.7). The filter cleans 25 m³ of air per hour. The pre-chamber is made of stainless steel of the type **1Х18Н9Т** (1Kh18N9T) and 450 × 706 × 732 mm large. The operating part of the chamber is made of stainless steel 3 mm thick and has a size of 900 × 706 × 725 mm. The waste containers are of the type 10 **КЖО** (10 KZhO). There are 2 figures and 2 Soviet-bloc references.

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26687
S/056/61/041/005/002/038
B104/B108

26.2321
26.2212

AUTHORS: Klebanov, Yu. D., Sinitsyn, V. I.

TITLE: Injection of plasma from a strong pulsed discharge into a vacuum

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 41, no. 5(11), 1961, 1340-1346

TEXT: The authors describe experiments carried out with two plasma injection devices: a small and a bigger one (Figs. 1 and 2). The bigger device in difference from the smaller has two diaphragms with apertures of 5 and 10 mm separating the observation chamber from the discharge chamber. The injection of plasma from a strong pulsed discharge into hydrogen (0.1-1.0 mm Hg) was studied. The capacitance of the discharge circuit of the small device was 40 μ F, the voltage was 20-30 kv and the maximum discharge current was 400 ka. The capacitance of the discharge circuit of the bigger device was 80 μ F, the voltage was 30-40 kv, and the maximum discharge current was 500 ka. The plasma parameters at different injector conditions were determined photoelectrically together with a temperature-
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S/056/61/041/005/002/038

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Injection of plasma from a ...

scan. It is shown that plasma is ejected in two opposite directions along the discharge axis. The plasma was injected in single pulses (2-5 μ sec). The pinches were 30-40 cm long. By means of photoelectric and calorimetric methods the total number of particles injected by one pulse was determined. The density and velocity of the plasma were estimated too. The authors obtained: $N = 8 \cdot 10^{16}$; $n = 6 \cdot 10^{15} \text{ cm}^{-3}$; $V_z = 2.8 \cdot 10^7 \text{ cm/sec}$. N. V.

Filippov (D. P. Petrov, N. V. Filippov et al., Fizika plazmy i problema upr. termoyadernykh reaktsiy (Plasma Physics and Problems of Thermo-nuclear Reactions), v. 4, Izd. AN SSSR, 1958, p. 170) is mentioned. The authors thank Academician L. A. Artsimovich and S. Yu. Luk'yanov for discussion of results, M. A. Savenkov and V. S. Shumanov for assistance. There are 8 figures, 2 tables, and 19 references: 10 Soviet and 9 non-Soviet. The 3 most recent references to English-language publications read as follows: F. H. Coensgen, A. E. Sherman, W. E. Nexsen, Phys. Fluids, 3, 765, 1960; F. R. Scott, R. F. Wenzel, Phys. Rev., 119, 1187, 1960; J. Marschall, Phys. Fluids, 3, 134, 1960.

SUBMITTED: March 21, 1961

Card 2/4

SINITSYN, V. I.

Industrial use of high-power radiation sources. Atom. energ. 16 no.1:
83-84 Ja '64. (MIRA 17:2)

SINITSYN, V.I.

Use of γ -radiographic control methods in certain countries -
members of the Council of Economic Cooperation. Atom. energ.
16 no.2:174-176 F '64. (MIRA 17:3)

SINITSYN, V.I.

Use of radioisotopes in the metal industries of certain countries,
members of the Council of Economic Cooperation. Atom energ. 16
no.3:279-282 Mr '64. (MIRA 17:3)

SAVOSIN, S.I.; SINITSYN, V.I.

Use of nuclear geophysical methods in the search, prospecting, and
working of mineral deposits. Atom. energ. 18 no.1:81-84 Ja '65.
(MIRA 18:2)

SINITSYN, V.I.

New sanitary rules for the organization and control of high-
power isotope plants. Atom. energ. 18 no.4:435-436 Ap '65.
(MIRA 18:4)

YAKOVLEV, R.V.; YAFIENKO, I.M.; MINININ, V.I.; MASHIN, F.G.;
LITVIN, V.I.; LEBMAN, B.Ya.

Radio chemical sulfonation of kerosine and synthetic kerosene.
Zh. Fiz. Khim. 41:11 Ap '65. (MIRA 18:8)

L 52955-65 ENT(1)/EPF(n)-2/ENG(m)/EPA(w)-2 Pz-6/Po-4/Pab-10/Pi-4 IJP(c)
WW/AT UR/0056/65/048/004/1071/1076

51
50
B

ACCESSION NR: AP5010500

AUTHOR: Osovets, S. M.; Sinitsyn, V. I.

TITLE: Dynamic stabilization of a plasma pinch

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 4, 1965, 1071-1076

TOPIC TAGS: plasma pinch, dynamic stabilization, plasma stability, high frequency plasma stabilization

ABSTRACT: Experiments are described, in which dynamic stabilization of a pinch carrying currents up to 105 A has been observed in a hydrogen plasma. The experimental apparatus is shown in Fig. 1 of the Enclosure and consists of a main discharge circuit and a stabilizing circuit. The parameters of the main circuit are $C_1 = 30\text{--}45 \mu\text{F}$, $U = 5\text{--}10 \text{ kV}$, and $T = 20\text{--}24 \mu\text{sec}$. The discharge chamber is filled with hydrogen to a pressure 0.05--0.1 mm Hg. The stabilizing circuit is made up of six axial copper rods insulated from the electrodes and from the plasma, comprising an inductive load fed from a capacitor bank controlled by a vacuum trigger whose operation can be shifted relative to the initiation of the main discharge by a

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L 52955-65

ACCESSION NR: AP5010500

specified time interval for optimum stabilization. The placement of the stabilizing rods inside the chamber (close to the pinch) represents an attempt to extend the range of dynamic stabilization to higher values of the current. By means of a high-speed framing camera and magnetic probes, it was established that the instabilities inherent to a current-carrying pinch are inhibited if certain conditions with respect to long perturbations are satisfied. These conditions were formulated by one of the authors earlier (Osovets, ZhETF v. 39, 311, 1960). "The authors thank A. M. Andrianov for valuable advice and useful discussions." Orig. art. has: 7 figures and 2 formulas.

ASSOCIATION: None

SUBMITTED: 23Nov64

ENCL: 01

SUB CODE: ME

NR REF SOV: 004

OTHER: 001

Card 2/3

L 52955-65

ACCESSION NR: AP5010500

ENCLOSURE: 01

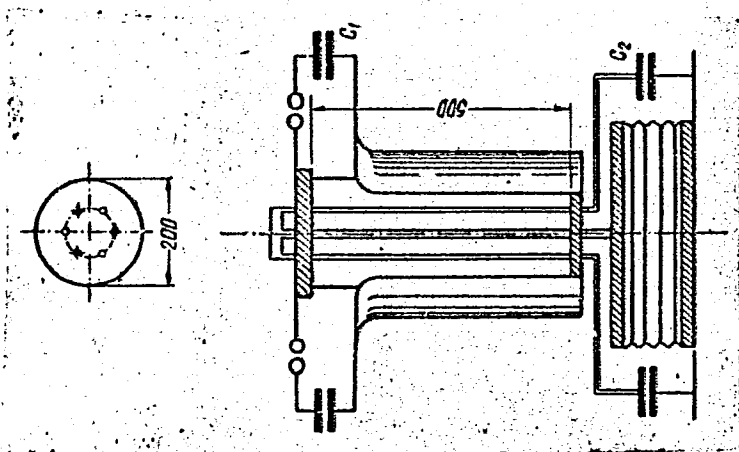


Fig. 1. Diagram of installation

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Card 3/3

L 45105-66 EWT(1) IJP(c) AT

ACC NR: AP6024866

SOURCE CODE: UR/0056/66/051/001/0087/0094

AUTHOR: Pavlov, Ye. I.; Sinitsyn, V. I.

46
B

ORG: none

TITLE: Inhibition of instabilities in a plasma column

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 51, no. 1, 1966, 87-94

TOPIC TAGS: plasma column, plasma instability, plasma stability

ABSTRACT: It is shown experimentally that under certain conditions a straight plasma column carrying a current of 100—120 kA can be stabilized by busbars employing a rapidly varying magnetic field. The stabilizing contour consists of six busbars arranged symmetrically on the outer surface of the discharge chamber, which has a diameter of 20 cm. The conclusion regarding the stabilization effect is drawn on the basis of data obtained by streak photography of the radiation, magnetic probe measurements, and recordings by a magnetic element of the amount of energy escaping to the chamber walls. Orig. art. has: 6 figures. [CS]

SUB CODE: 20/ SUBM DATE: 15Feb66/ ORIG REF: 004/

Card 1/1 mjs

PROCESSES AND PROPERTIES INDEX

8

CA

Gold in the eastern Targatal. V. M. Sinityn and G. M. Gapeeva. *Mim. soc. russ. mineral. Ser. 2, 66, No. 1, 90-103, 1930*; *Khim. Refsal. Zhur. 1930, No. 8, 25*.--The main deposits represented by quartz veins with chalcopyrite and pyrite are not numerous. Au is found in pyrite, chalcopyrite and arsenopyrite which are contained in quartz-like rocks that represent the contact zone of the variscite intrusions. By weathering of the formations Au is transported to the surface deposits along the river banks. The deposits of the rivers Ters-Atryk, Tomyrsk, Dzhalanash, Balatsu and Khigur-Bulak are of the greatest interest.

W. R. Henn

METALLURGICAL LITERATURE CLASSIFICATION

SIGNATURE

SERIALS

USSR/Geology
CHINA/Geology

Apr 1947

"Structural and Orographical Scheme of the Chinese Tien-Shan," V. M. Sinitsyn, 6 pp

"Izv Ak Nauk Ser Geol" No 4

Study of the Tien-shan, showing that most of the ridges shown in topographical maps are not independent units but parts of eleven larger ridges separated by mountainous depressions. The author names and identifies these eleven ridges.

1758

USSR/Geology
Sediment

Mar 1947

"On the Quaternary History of Farin Depression," V. M. Sintsteyn, 11 pp

"Byull Moskov Obsh Isp Pri, Nova Ser, Otdel Geol" Vol XIII, No 3

Jurassic forms of relief continued their development into the Pleistocene era. During this time the Farin depression included only the Kutcharakly and Jarkend Basins. Climate more humid than the contemporary one. Author describes various sediments of the period, and their geological changes. During the last millennium the surface discharge of rivers decreased; ground

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USSR/Geology (Contd)

Mar 1947

waters sunk to greater depth; forests of the Farin Plain perished; and sands covered settlements inhabited between the 3d and 7th centuries. Gives location and types of soils of the period.

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SINITSYN V. M.

10 1947

USSR/Geology
Stratification

Oct 1947

"Mazar-Tag Folds in the Tarim Settled Massif," V. M. Sinitsyn, 4 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 3

Mazar-Tag Mountain Range located in western part of the Tarim depression in sandy wastes of Takla-Makan. Sinitsyn describes some geological details of range. Interest first directed to this range after N. M. Przheval'skiy conducted study of the eastern end of range, in vicinity of Khotan-Dar' River Delta. Submitted by Academician V. A. Obruchev, 26 Apr 1947.

49711

SINITSYN, V. M.

PA 41T41

USSR/Geology

Jan/Feb 1948

"The History of the Tarim Settled Massive," V. M. Sinitayn, 13½ pp

"Izv Akad Nauk SSSR, Ser Geol" No 1

The Tarim settled massive is the western fragment of the Chinese platform, which settled during the period of the Yenisian movement. Discusses history of the development of the Tarim massive and also shows how its development paralleled the development of some settled regions in China.

41T41

SINITSYN, V. M.

USSR/Geology- Geosynclines

"

Some Basic Problems of Geosynclines," A. V. Peyve, V. M. Sinitsyn

"IZ Ak Nauk SSSR, Ser Geol" No 4, pp 28-52

From long personal investigations in Central Asia, Kazakhstan, Urals and Caucasus, authors develop new ideas on origin, development, and structure of geo-synclines and platforms. Before Upper-Proterozoic era they developed a single metamorphic continental shell, "panplatform," common for future geosynclines and platforms. At beginning of era, after sharp change in evolution of all geological processes, geosynclinal stage of development of earth's structure began. Consisted of several qualitatively different stages. Discusses general characteristics of stages of development of geosynclinal regions.

PA 162T43

SINITSYN, V.M.

The geotectonic factor in the change in climate of Central Asia.
Biol. MOIP. Otd. geol. 24 no.5:3-12 '49. (MIRA 11:5)
(Asia, Central--Climate)

SINITSYN, V.M.

USSR/ Geology

Card 1/1 Pub. 46 - 3/24

Authors : Sinitsyn, V. M.

Title : Geological history of the Lobnorsk plain and the Lob Nor Lake

Periodical : Izv. AN SSSR. Ser. geol. 6, 30-42, Nov-Dec 1954

Abstract : Using the data of various investigations the author presents a brief history on the development of the Lob Nor plain and he arrives at the conclusion that the episodic displacements of the Lob Nor Lake are explained by tectonic motions which appear non-uniform in various parts of the Tarimsk depression. The Lob Nor plain is situated at the eastern tip of the Tarimsk depression running along the western regions of Central Asia. Twenty-one references: 11 USSR; 1 French; 2 Swedish; 3 German; 2 English and 2 Chinese (1878-1951). Maps.

Institution :

Submitted : February 17, 1954

SINITSYN, V. M.

USSR/Geology - Volcanoes

Card 1/1 : Pub. 86 - 17/46

Authors : Sinitsyn, V. M., Dr. Geological-Mineralogical Sci.

Title : New knowledge about an active volcano in Central Asia

Periodical : Priroda, 43/9, 89-90, Sep 1954

Abstract : The tendency of volcanoes to be located near coastlines or island groups is noted, so that inland volcanoes constitute objects of special interest. The finding of a new active volcano in the Kunlun Mountains north of Tibet is reported confirming the collateral evidence of subterranean activity in that region. Map.

Institution :

Submitted :

SINITSYN, V.M.

General tectonic system of the great Asian upland. *Biul.MOIP.Otd.geol.*
30 no.2:51-65 Mr-Apr '55. (MLRA 8:8)
(Himalaya mountains)

SINITSYN, V.M.

General physical geographical survey of the Lanchow-Alma-Ata
railroad region (within the borders of the Chinese People's
Republic). Izv.Vses.geog.ob-va 87 no.6:505-515 M-D '55.

(MLRA 9:3)

(China--Physical geography)

SINITSYN, V.M.

Tectonic origin of the Kunlun range. Dokl.AN SSSR 106 no.5:901-903
F '56. (MLRA 9:7)

1.Laboratoriya geologii uglya Akademii nauk SSSR.Predstavleno akademi-
kom V.A.Obruchevym.
(Kunlun--Geology, Structural)

SINITSYN, Vasilii Mikhaylovich; OBRUCHEV, V.A. [deceased], akademik,
otvetstvennyy red.; IVANOV, A.Kh., otvetstvennyy red.; MERGASOV,
G.G., red.izd-va; GUSEVA, I., tekhn.red.

[The Turfan-Kham Depression and the Gashun Gobi; geological
reconnaissance of 1952] Turfan-Khamliskaia vpadina i Gashun'-
skaia Gobi; geologicheskie rekognostsirovki 1952 goda. Moskva,
Izd-vo Akad. nauk SSSR, 1957. 106 p. (MIRA 11:1)
(Gobi--Geology)

SINITSYN, Vasilii Mikhaylovich; OBRUCHEV, V.A., akademik, otvetstvennyy red. [deceased]; IVANOV, A.Kh., otvetstvennyy red.; GALUSHKO, Ya.A., red.izd-va.

[Northwestern part of Tarim Basin; a geological study] Severo-zapadnaia chast' Tarimskogo basseina; geologicheskii ocherk. Moskva, Izd-vo Akad.nauk SSSR, 1957. 248 p. (MIRA 11:3)
(Tarim Basin--Geology)

AUTHOR: Sinitsyn, V.M. 10-58-3-5/29

TITLE: Geographical Observations in **High-altitude Regions of Central Asia**
(**Geograficheskiye nablyudeniya v vysokoy Azii**)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geograficheskaya, 1958,
Nr 3, pp 37 - 47 (USSR)

ABSTRACT: In summer 1956, a team of geologists from the Geological Institute of the Chinese People's Republic Academy of Sciences crossed High Asia (a territory of 2,500,000 square kilometers in Central Asia including the Highland of Tibet surrounded by the mountain chains of Kun'lun' and the Himalayas) along the recently built Tsinkhay-Tibet highway. The only Soviet participant was the author of this article, V.M. Sinitsyn, who gives a detailed description of his observations. The author subdivides his article into the following parts: 1) the latest orographic structure of High Asia, 2) climate, 3) the hydrographic network, 4) glaciations. There are 4 maps and 10 references, 6 of which are Soviet, 3 English and 1 German.

ASSOCIATION: Laboratoriya geologii uglia Akademii Nauk SSSR (Laboratory for the Geology of Coal at the **AS USSR**)

AVAILABLE: Library of Congress
Card 1/1 1. Geology - Asia

SINITSYN, V. M.

AUTHOR: Sinitsyn, N.M., and Sinitsyn, V.M. 11-58-4-1/16

TITLE: Tyan'-Shan'. Major Tectonic Elements (Tyan'-Shan'. Glavneyshiye elementy tektoniki)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya, 1958, ²³Nr 4, pp 3-17 (USSR)

ABSTRACT: Tyan'-Shan', one of the largest mountain systems of Asia, is a huge Paleozoic folding formation, composed of a large number of separate tectonic zones, differing in age, structure, deposits, and magmatic occurrences. The zoning of its tectonics is expressed in the interlocation of structures of Caledonian and Hercynian stages. The caledonites form one fully separated belt which can be traced along the whole length of the range. The hercynites form two belts - southern and northern - which border the Caledonian body. The structure of caledonites is very complicated and has been insufficiently studied. Generally speaking, the whole system of the Lower-Paleozoic folding, with the fragments of pre-Paleozoic structures and large regions of expansion of epi-Caledonian Middle-Paleozoic formations, are attached to the caledonites. The relative importance of fragments of pre-Cambrian structure in the Caledonian structure was taken by one of the authors (Ref. 14) as a criterion for sub-

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Tyan'-Shan'. Major Tectonic Elements

11-58-4-1/16

dividing the Caledonian folding zone into three parts: the Karatau-Talass, Sussamyr and Narat regions. A special feature of the stratigraphic columnar section of the folding zone is a large expanse of thick Lower-Paleozoic strata, an important development of pre-Cambrian strata and secondarily important Middle-Paleozoic deposits. In the Lower-Paleozoic strata, all the Cambrian and Ordovician formations are found, represented mostly by terrigenous deposits and to a lesser part - by carbonaceous and volcanogenous rocks. The magmatism of the Caledonites is exhibited by the domination of granitoids and by the rarity of basic and ultra-basic intrusions. The Hercynites, which form two belts - southern and northern - represent a complex of usually small folding zones of various age, all along the Middle and Upper Paleozoic. There are three distinct age-groups: early Hercynites formed during the Silurian and early Devonian periods; middle Hercynites - of Lower and Middle Carboniferous periods and late Hercynites - of Upper Carboniferous and Permian periods. The northern Hercynian belt is mainly in China. Only the Djungarian (Dzhungarskiy) Alatau range of mountains belongs to the USSR. The folding structure of its central part belongs to the oldest formations. It is formed by thick sand-shistous strata of Devonian age. The southern

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Tyan'-Shan'. Major Tectonic Elements

11-58-4-1/16

belt of the Hercynian folding zone begins at 92nd meridian and extends to the west for 2,000 km reaching the Kyzyl-Kum plain. It is formed by hercynites of three age groups (as above). The early hercynites extend along the southern ranges of Tyan'-Shan' from the Lob-Nor lake to the Fergan range. The middle hercynites form the Chatkal and Kavak zones and the zone of elevated foot-hills of the northern slopes of the Altay range. The Chatkal zone includes the Chatkal, Pskem, partly Ugam, Atoyak and Ferganian mountain ranges. The Kavak zone includes the structures of mountains in the middle part of the Marny River. The late hercynites in the southern branch of Tyan'-Shan' form the South-Gissar, Surmetash, Kara-Chetyr, Karzhan-tau - Kuramin, Dzhambadavan and Aksay (Maydan-Tag) zones, formed in the Upper-Carboniferous and Permian periods. The authors describe in detail all these zones. There are 1 map and 15 Soviet references.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet, Laboratoriya geologii
uglya AN SSSR (The Leningrad State University, Laboratory of
Coal Geology of the AS USSR)

SUBMITTED: August 12, 1957
Card 3/3 1. Geology - Asia

AUTHOR: Sinitsyn, V.M. SOV/12-90-6-3/23

TITLE: ~~The Development of the Ideas of Academician V.A. Obruchev~~
in the Recent Investigations of Central Asia (Razvitiye idey
akad. V.A. Obrucheva v noveyshikh issledovaniyakh tsentral'
noy Azii)

PERIODICAL: Izvestiya Vsesoyuznogo geograficheskogo obshchestva, 1958,
Vol 90, Nr 6, pp 521 - 530 (USSR)

ABSTRACT: This article is based on ideas formulated by the late Aca-
demician V. A. Obruchev who indicated ways of solving
problems of the geology and geography of Central Asia. The
article deals with two main problems to which Obruchev de-
voted much attention, i.e. the origin of loess, and recent
movements of the Earth crust. Obruchev propounded the the-
ory of the eolian origin of Central Asiatic loess and he
considered that loess layers are dissimilar with respect
to their composition, structure, occurrence and origin.
They can be divided into two categories: typical loess, i.e.
unstratified formations originating from dust deposits,
transported by winds from deserts; and loess-like strati-
fied layers, deposited by water. He assumed that loess

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SOV/12-90-6-3/23

The Development of the Ideas of Academician V.A. Obruchev in the Recent Investigations of Central Asia

was accumulated during the glaciation epoch and that the transformation of loess into loess-like layers was caused by the subsequent humidification of the climate in connection with recent movements. There exist three types of loess: loess of mountainous areas, highland loess and loess in alluvial plains. These types are analyzed and the conclusion is made that in mountainous areas eolian loess is prevalent, that the occurrence of proluvial-alluvial loess is developed in high-lands and is also prevalent in the Tarim Plain. Loess accumulation was a continuous process which took place during an extended period of the Quaternary, and in some regions is still going on. The second problem treated by Obruchev was the recent movement of the Earth crust occurring in the Neocene and Quaternary epochs. He proved that these movements have a considerable effect on the development of the actual Earth relief, which can be particularly well observed in the Central Asiatic region. He proved furthermore that recent movements affect the character and structure of the hydro-geographical network, sub-

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SOV/12-90-6-3/23

The Development of the Ideas of Academician V.A. Obruchev in the Recent
Investigations of Central Asia

terrestrial water movements, the climate and the development of organic life. These theories were confirmed by the latest investigations. Obruchev's theories on the movement of the Earth crust explain the tectonic nature and morphology of Central Asiatic mountains. There are 1 map and 10 references, 9 of which are Soviet and 1 German.

Card 3/3

SINITSYN, Vasilii Mikhailovich; ZABIROV, B.Sh., red.; LAVRENT'YEVA,
Ye.V., red.; MAL'CHEVSKIY, G.M., red.kart; NOGINA, N.I..
tekh.n.red.

[Central Asia] TSentral'naya Azia. Moskva, Gos.izd-vo
geogr.lit-ry, 1959. 454 p. (MIRA 12:7)
(Asia, Central--Physical geography)

3(5)

SOV/20-125-6-43/61

AUTHOR:

Sinit'syn, V. M.

TITLE:

Mongolian-Siberian Anticyclone and the Regional Zonality of
Eolian Deposits of Central Asia (Mongolo-sibirskiy antitsik-
lon i regional'naya zonal'nost' eolovykh otlozheniy Tsentral'-
noy Azii)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 6, pp 1326-1328
(USSR)

ABSTRACT:

The Mongolian-Siberian maximum forms in the winter the baric
main centre of Eurasia. It is formed in consequence of an
extremely intense cooling and condensation of the air over
East Siberia and North Mongolia. The known maximum pressure
on the whole globe is bound to this region: Irkutsk 810 mm.
Furthermore, an extremely intense anticyclone air circulation
(like in the title) is related to this maximum which propagates
over Central Asia and South-East Europe. The masses of dense,
dry, and cold air formed in the above-mentioned region become
mobile in the peripheral regions and flow to the regions
with lower pressure. The main current flows to Central Asia
where the air over the deserts is especially heated and thin.
The low Khangay chain as well as the eastern Altay spurs are
easily passed. So this air appears in the Gobi plains and

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Mongolian-Siberian Anticyclone and the Regional Zonality SOV/20-125-6-43/61
of Eolian Deposits of Central Asia

dries and cools them in the extreme. The anticyclone which is only 3,000 m high is now almost turned aside by the chains of the Kuen'-lun' and Nan'shan' (6,000m and more) into the latitudinal direction (the depressions of the 40th parallel), partly towards the east - towards Alashan' and Ordos, partly towards the west - to the Tarim basin. This anticyclone is destroyed in spring, in summer, however, the air over the Central Asiatic deserts is heated. A region of low pressure is formed into which currents of humid air penetrate from the Atlantic and Pacific. The air loses, however, almost its entire humidity on the exterior slopes of the border mountains. Over the Gobi the resultant dry marine air masses assume quickly the properties of local air. Thus, dry continental air is preserved during the whole year over Central Asia. This is the reason of the maximum degree of aridity of its climate. The processes of denudation are very weak here in consequence of the few water courses, they almost stop. Winds are, however, very strong and frequent. They are able to do geological work. Not solidified and weakly cemented sediments are blown away. sands whirled up, loess dust clouds

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Mongolian-Siberian Anticyclone and the Regional
Zonality of Eolian Deposits of Central Asia

SOV/20-125-6-43/61

blown up, and even parent rocks corroded. Therefore the quaternary envelope consists mainly of formations of eolian origin. This work is, however, done by the air currents related to the afore-mentioned anticyclone. This is shown by the zonal distribution of eolian deposits. They lack in the North Mongolia which lies in the region of the formation of the anticyclone and has therefore no considerable atmospheric movements. The air masses in the lake plains of West Mongolia and in the East Gobi depression become more and more mobile till they have assumed the physical properties of local air and the winds die down. Figure 1 shows the zones. A small belt of sand deserts exists in the north where the anticyclone is formed. Vast desert plateaus of stones - hammadas - lie in the following zone where the wind attains its maximum intensity. A broad belt of the southern sand deserts: Takla-Makan, Dzosotyn-Elisu (Dzungaria) and Badanchzhareng (Alaschan') lies on the further way of the anticyclone current. Here the wind is not able to move the sand so that it is accumulated in gigantic quantities. These deserts are followed up by an accumulation zone of eolian loess:

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Mongolian-Siberian Anticyclone and the Regional
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the northern slope of Kuen'lun', East-Kan'su platform,
North Shensi, etc. The dunes reflect the direction of the
anticyclone. Finally, it was detected that the Mongolo-
Sibirskiy anticyclone existed during the whole postglacial
period, i.e. 12-15,000 years. There is 1 figure.

ASSOCIATION: Laboratoriya geologii uglya Akademii nauk SSSR (Laboratory
of Coal Geology of the Academy of Sciences, USSR)

PRESENTED: November 28, 1958, by D. V. Nalivkin. Academician

SUBMITTED: November 27, 1958

Card 4/4

SINITSYN, Nikolay Mikhaylovich [deceased]; SINITSYN, V.M., prof., otv.
red.; MIKLUKHO-MAKLAY, A.D., red.; OGNEV, V.N., red.;
PORSHENYAKOV, G.S., red.; KULAGINA, T.I., red.; VODOLAGINA,
S.D., tekhn.red.

[Tectonics of mountains forming the borders of Fergana] Tektonika
gornogo obramleniia Fergany. Leningrad, Izd-vo Leningr.univ.,
1960. 218 p. (MIRA 14:1)
(Fergana--Geology, Structural)

SINITSYN, V. M.

Some characteristics of the distribution of Tertiary coal areas
in Eurasia. Trudy Lab. geol. ugl. no.10:243-254 '60.

(MIRA 13:9)

(Europe--Coal geology) (Asia--Coal geology)

SINITSYN, V.M., doktor geol.-miner.nauk, otv.red.; KULIKOV, M.V., red.
izd-va; ARONS, R.A., tekhn.red.

[History of the lower Mesozoic coal accumulation in Kazakhstan.
Part 2] Istoriiia Nizhnemezozoiskogo ughlenakopleniia v Kazakhstane.
Part 2. Moskva, Izd-vo Akad.nauk SSSR, 1961. 252 p. 53 plates.
(Akademiia nauk SSSR. Laboratoriia geologii ughlia, Trudy, no.13).
(MIRA 15:4)

(Kazakhstan--Coal geology)

SINITSYN, Vasilii Mikhaylovich; LAVROV, V.V., doktor geol.-mineral.
nauk, otv. red.; SHENGER, I.A., red. izd-va; FINOGRADOVA, N.F.,
tekh. red.

[Paleogeography of Asia]Paleogeografiia Azii. Moskva, Izd-vo
Akad. nauk SSSR, 1962. 266 p. (MIRA 16:1)
(Asia--Paleogeography)

RUKHIN, Lev Borisovich; SINITSYN, V.M., doktor geol.-miner. nauk,
retsenzent; RUKHINA, Ye.V., kand. geol.-miner. nauk, red.;
TOKAREVA, T.N., ved. red.; SAFRONOVA, I.M., tekhn. red.

[Fundamentals of general paleogeography]Osnovy obshchei pa-
leogeografii. Izd.2., perer. i dop. Pod red. E.V.Rukhinoi.
Leningrad, Gostoptekhizdat, 1962. 628 p. (MIRA 15:11)
(Paleogeography)

BALASHOV, Z.G.; VRUBLEVSKIY, M.I.; LEVEDEV, V.I.; SINITSYN, V.M.

Seventieth birthday of S.S.Kuznetsov. Vest.LGU 18 no.6:5-7
'63. (MIRA 16:4)

(Kuznetsov, Sergei Sergeevich, 1892-)

KUZNETSOV, S.S.; LEBEDEV, V.I.; SINITSYN, V.M.

The most important scientific problem. Vest.LGU 18 no.6:8-11
'63. (MIRA 16:4)

(Geology)

SINITSYN, V.M.

"The Kunlun and the Tarim," edited by E.M. Murzaev, Chshou Li-sang.
Reviewed by V.M. Sinitsyn. Izv. Vses. geog. ob-va 94 no.4:354-356
J1-Ag '62. (MIRA 15:9)
(Kunlun--Landforms) (Tarim Valley) (Murzaev, E.M.)
(Chshou Li-sang)

SINITSYN, V.M.

One characteristic of the geological structure of Asia. Trudy
Geol. muz. AN SSSR no.14:170-176 '63. (MIRA 17:11)

VOLKOVA, I.B.; NALIVKIN, D.V.; SLATVINSKAYA, Ye.A.; BOGOMAZOV, V.M.;
 GAVRILOVA, O.I.; GUREVICH, A.B.; MUDROV, A.M.; NIKOL'SKIY, V.M.;
 OSHURKOVA, M.V.; PETRENKO, A.A.; POGREBITSKIY, Ye.O.; RITENBERG,
 M.I.; BOCHKOVSKIY, F.A.; KIM, N.G.; LUSHCHIKHIN, G.M.; LYUBER,
 A.A.; MAKEDONTSOV, A.V.; SENDERZON, E.M.; SINITSYN, V.M.; SHORIN,
 V.P.; BELYANKIN, L.F.; VAL'TS, I.E.; VLASOV, V.M.; ISHINA, T.A.;
 KONIVETS, V.I.; MARKOVICH, Ye.M.; MOKRINSKIY, V.V.; PROSVIRYAKOVA,
 Z.P.; RADCHENKO, O.A.; SEMERIKOV, A.A.; FADDEYEVA, Z.I.; BUTOVA,
 Ye.P.; VERBITSKAYA, Z.I.; DZENS-LITOVSKAYA, O.A.; DUBAR', G.P.;
 IVANOV, N.V.; KARPOV, N.F.; KOLESNIKOV, Ch.M.; NEFED'YEV, L.P.;
 POPOV, G.G.; SHTEMPEL', B.M.; KIRYUKOV, V.V.; LAVROV, V.V.;
 SAL'NIKOV, B.A.; MONAKHOVA, L.P. [deceased]; MURATOV, M.V.;
 GORSKIY, I.I., glav. red.; GUSEV, A.I., red.; MOLCHANOV, I.I.,
 red.; TYZHOV, A.V., red.; SHABAROV, N.V., red.; YAVORSKIY, V.I.,
 red.; REYKHERT, L.A., red. izd-va; ZAMARAYEVA, R.A., tekhn. red

[Atlas of maps of coal deposits of the U.S.S.R.] Atlas kart ugle-
 nakoplenia na territorii SSSR. Glav. red. I.I. Gorski. Zam.
 glav. red. V.V. Mokrinski. Chleny red. kollegii: F.A. Bochkovski
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(MIRA 16:3)

1. Akademiya nauk SSSR. Laboratoriya geologii uglia. 2. Chlen-
 korrespondent Akademii nauk SSSR (for Muratov).
 (Coal geology--Maps)

SINITSYN, V. M.

Role of solar energy in crustal development. Vest LGU 19
no. 6:47-56 '64. (MIRA 17:5)

MATROSOV, P. S.; SINITSYN, V. M.

A new land mark in the geological study of Mongolia.
Izv. AN SSSR. Ser. geol. 29 no. 1:110-111 Ja '64. (MIRA 17:5)

SINITSYN, V.M.

Fundamental investigation of the Upper Paleozoic in Central Asia.
Vest. LGU 19 no.18:127-129 '64. (MIRA 17:11)

VORONTSOV, Valentin Vladimirovich; SINITSYN, V.M., doktor geol.-
miner. nauk, prof., otv. red.

[Structure and conditions governing the formation of Lower
Mesozoic coal measures in the Karaganda Basin] Stroenie i
uslovia obrazovaniia nizhnemezozoiskoi uglenosnoi tolshchi
Karagandinskogo basseina. Moskva, Nauka, 1965. 139 p.
(MIRA 18:3)

SINITSYN, V.M.

Long-period changes of geological processes as revealed by a
study in Asia. Vost. LGU 19 no.24:5-16 '64 (MIRA 18:1)

SIN... ..

... .. of geological processes. Vest. LGU 20 no.18 '65 Serila
geologii i geografii no.3:5-17. (MIRA 18:10)

SINITSYN, Vasilii Mikhaylovich; SKORYNINA, N.P., red.

[Paleoclimatology of Eurasia] Drevnie klimaty Evrazii.
Leningrad, Izd-vo Leningr. univ. Pt.1. 1965. 165 p.
(MIRA 18:12)

SINITSYN V.P.

BRUSOV, I.I.; PERELGIN, N.S.; SINITSYN, V.P.; VISHNYAKOV, V.N., re-
daktor; PETROVA, M.D., tekhnicheskii redaktor.

[Air raid and chemical warfare defense] Protivovozdushnaia i
protivokhimicheskaia zashchita. Moskva, Dobrovol'nos ob-vo so-
deistviia armii, aviatsii i flotu, 1952. 111 p. [Microfilm]
(Air defenses) (MLRA 7:11)

BRUSOV, I.I.; PERELIGIN, N.S.; SINITSIN, V.P.; KUROCHKIN, F., redaktor;
PISARENKO, V., tekhnichnyy redaktor.

[Defense against air bombardments and chemical warfare. Translated
from the Russian] Protypovitrianyi i protykhimichnyi zakhyet. Pe-
reklad z rosiis'koi. Kyiv, Derzhavne vyd-vo tekhnichnoi lit-ry
UESR, 1953. 108 p. (MLRA 8:2)
(Air defenses) (Chemical warfare--Safety measures)

SIMITSIN, V. P., BRUSOV, I. I. and PERELIGIN, N. S.

"Anti-Aircraft and Anti-Chemical Defense," Kiev, 1955

SINITSYN, V.P., kandidat tekhnicheskikh nauk; MALOV, N.F., kandidat tekhnicheskikh nauk; MANDRAZHITSKIY, M.N.; BORKHUNOVA, V.D.; LAVROVSKIY, K.F., redaktor; DZHATIYEV, S.G., tekhnicheskiiy redaktor

[Local air defense; textbook for secondary schools and pedagogical schools] Mestnaia protivovozdushnaia oborona; uchebnoe posobie dlia srednikh shkol i pedagogicheskikh uchilishch. Pod red. Sinitsyna. Moskva, Gos. uchebno-pedagog. izd-vo Ministerstva prosveshchenia RSFSR, 1956. 150 p. [Microfilm] (MLRA 9:12)
(Air defenses)

MOSKALEV, V.D., redaktor; SINITSYN, V.P., redaktor; TERTYCHNYY, A.S.,
redaktor; KANEVSKAYA, M.D., redaktor; KARYAKINA, M.S., tekhnicheskii
redaktor

[Manual on local air defense] Uchebnoe posobie po MPVO. Pod obshchei
red. V.D.Moskaleva, V.P.Sinitsyna, A.S.Tertychnogo. Moskva, Izd-vo
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1. Vsesoyuznoye dobrovol'noye obshchestvo sodeystviya armii,
aviatsii i flotu.
(Air defenses)

PHASE I BOOK EXPLOITATION 1132

Levin, M.Ye., Malinin, G.A., Mandrazhitskiy, M.N., Sinitsyn, V.P. and
Fedorov, V.I.

Zashchita ot sredstv massovogo porazheniya (Defense Against Weapons of Mass
Destruction) Moscow, Uchpedgiz, 1958. 181 p. 100,000 copies printed.

Eds. (Title page): Sinshchyn, V.P. Candidate of Technical Sciences and Malinin, G.A.
Ed. (Inside book): Lavrovskiy, K.F.; Tech. Ed: Natapov, M.I.

PURPOSE: This book is intended for public instructors of the PVO DOSAAF
(Antiaircraft Defense Unit of the All-Union Voluntary Society for the
Promotion of the Army, Aviation and Navy).

COVERAGE: This book includes general information on atomic, chemical and bacteri-
ological weapons and measures for individual and collective protection from them.
The various authors contributed to the text as follows: M.Ye. Levin wrote Chap-
ters 1,2,3,4 and 6; M.N. Mandrazhitskiy - Chapters 7,8 and 9; G.A. Malinin -
Chapter 10; V.P. Sinitsyn - Chapters 11, 12, and 14; and V.I. Fedorov - Chapter 5.
Card 1/3

SINITSYN, V.P

PHASE I BOOK EXPLOITATION

SOV/4103

Levin, Moisey Yevseyevich, Georgiy Andreyevich Malinin, Mikhail Nikolayevich Mandrazhitskiy, Valentin Petrovich Sinit syn, and Valeriy Ivanovich Fedorov

Zashchita ot sredstv massovogo porazheniya (Protection Against Means of Mass Destruction) 2nd ed. Moscow, Uchpedgiz, 1960. 176 p. 50,000 copies printed.

General Ed.: V. P. Sinit syn, Candidate of Technical Sciences, and G. A. Malinin. Ed.: A. A. Korotkiy; Tech. Ed.: R. V. Tsypko.

PURPOSE: This book is intended for the public instructors of PVO DOSAAF (Air Defence Organization under the All-Union Voluntary Society for the Promotion of the Army, Aviation and Navy).

COVERAGE: The book gives fundamental information on atomic, chemical, and bacteriological weapons and on means of individual and collective protection. It states that the problem has been studied sufficiently and that at the present time adequate means of protection exist for a well-organized and trained population. No personalities are mentioned. There are no references.

Card 1/3

Protection Against Means of Mass Destruction

SOV/4103

- Ch. 9. Tasks and Organization of the Local Air Defense Relative to Dwellings, Establishments, Institutions, and State and Collective Farms. Rules of Conduct and Action for the Population According to the Signals of the Local Air Defense 103
- Ch. 10. Reconnaissance of Stricken Areas 110
- Ch. 11. Emergency and Rescuing Operations in Stricken Areas 130
- Ch. 12. Fire Prevention Measures; Extinguishing Fires in Progress and Breaking Out 136
- Ch. 13. Methods and Means of Decontamination; Degassing and Disinfection 145
- Ch. 14. Duties of Personnel of Self-Defense Groups Responding to Signals Given by the Local Air Defense 166

AVAILABLE: Library of Congress (UA926.138 1960)

AC/rn/ec
8-25-60

Card 3/4

L 32610-66 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(1) GD/BC

ACC NR: AT6011924

SOURCE CODE: UR/0000/66/000/000/0028/0031

55
54
B+1

AUTHOR: Sinitsyn, V.S. (Novosibirsk); Senin, A.G. (Novosibirsk)

ORG: none

TITLE: The synthesis of measuring information systems for the extrapolation of random uniform fields

SOURCE: Vsesoyuznaya konferentsiya po avtomaticheskomu kontrolyu i metodam elektricheskikh izmereniy, 5th. Avtomaticheskii kontrol' i metody elektricheskikh izmereniy; trudy konferentsii, t. 2: Izmeritel'nyye informatsionnyye sistemy. Ustroystva avtomaticheskogo kontrolya. Elektricheskiye izmereniya neelektricheskikh velichin (Automatic control and electrical measuring techniques; transactions of the conference, v. 2: Information measurement systems. Automatic control devices. Electrical measurements of non-electrical quantities). Novosibirsk, Izd-vo Nauka, 1966, 28-31

TOPIC TAGS: information processing, measuring ^{system} ~~instrument~~, optimal control, automatic control theory, *random process*

ABSTRACT: Arbitrary dynamical systems are usually under the influence of random interactions, and thus during the analysis and synthesis of measuring systems it is natural to apply statistical methods. Methods developed by the theory of random functions seem to be

Card 1/2

Card 2/2 *20*

SINITSYN, V. V.

Sinitsyn, V. V.

"The biological activity of ultraviolet rays which have passed through light clothing fabrics." State Order of Lenin Inst for the Advanced Training of Physicians imeni S. M. Kirov. Leningrad, 1956. (Dissertation for the Degree of Candidate in Medical Sciences).

Knizhnaya letopis'
No. 21, 1956. Moscow.

USSR / General and Specialized Zoology: Insects. The P
Biological Method for the Control of Harmful
Insects and Acarids.

Abs Jour: Ref Zhur-Biol., No 13, 1958, 59237.

Author : Stativkin, V. G., Peregonchenko, B. I.,
Sinitsyn, V. V.

Inst : Not given.

Title : Our Method of Settling the Pseudaphycus malinus.

Orig Pub: Zashchita rast. ot vredit. i bolezney, 1957,
No 4, 43-44.

Abstract: The propagation of the Comstock mealybug is
checked by the presence in her colonies of
35-50% mummies (M) with the Pseudaphyci malini.
The yield of M from the soil by manual labor is
about 10 thousand M a day per man. It is increased
tenfold through the attraction of M from the mass,

Card 1/2

MARGOLIS, S.Ya., inzh.; SINITSYN, V.V., inzh.

Determining the least radii for turning and the width of the
"clearance corridor" when transporting large ~~articles~~.
Prom. stroi. 39 no.11:42-44 '61. (MIRA 14:12)
(Concrete products)
(Transportation, Automotive)

GORELIK, L.L.; KOVAL'SKIY, N.G.; PODGORNYY, I.M.; SINITSYN, V.V.

Study of the escape of plasma through the magnetic gaps of traps with a field intensifying toward the periphery. Dokl. AN SSSR 147 no.3:576-579 N '62. (MIRA 15:12)

1. Predstavleno akademikom L.A. Artsimovichem.
(Plasma (Ionized gases)) (Magnetic fields)

h2220
S/O57/62/032/011/014/014
B104/B102

240712
AUTHORS: Gorelik, L. L., and Sinitsyn, V. V.

TITLE: The separate measurement of energy losses from a plasma due to radiation and through particles.

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 32, no. 11, 1962, 1406-1408

TEXT: According to the estimates of V. I. Kogan, a 1 cm layer of hydrogen at a pressure of ~ 0.1 mm Hg absorbs practically no radiation from a plasma, whereas it completely absorbs particles having energies between 50 and 100 ev. Here preliminary results of experiments are given in which this effect is used for separately measuring the energy spectrum of the radiation and of the particles, with the help of a bolometer and a gas filter. The experiments were carried out with a toroidal discharge chamber of type "Beta": inner diameter of the discharge chamber 21.6 cm, longitudinal field $H_z = 600$ oersteds, maximum discharge current 65 ka, intensity of the eddy electric field ~ 4 v/cm, pressure $(3-4) \cdot 10^{-3}$ mm Hg, discharge time ~ 0.8 msec. The measuring chamber (Fig. 1) is an aluminum box in the form of a cone enclosing the bolometer. The bolometer is

Card 1/3

The separate measurement of ...

S/057/62/032/011/014/014
B104/B102

mounted on the end of a movable copper rod enabling it to be moved along the axis of the chamber. If E_p is the energy striking a unit area of the bolometer, and E_o the energy striking unit area of the chamber walls, the energy E_k which is incident on the chamber wall is given by $E_k = k(R)E_o(R)$, where $k(R)$ is a factor which takes account of the solid angle between the bolometer surface and the plasma, and R is the distance between the center of the discharge chamber and the bolometer. Information about the energy loss caused by the particles (E_p) is obtained from the dependence of E_k/E_o on R (Fig. 3). After two days of vacuum treatment E_p is found to be $\approx 60\%$; after three days $\approx 40\%$. There are 3 figures.

SUBMITTED: January 29, 1962 (initially)
March 19, 1962 (after revision)

Fig. 1. (a) Measuring chamber. (b) slit of the measuring chamber.

Fig. 3. $E_{\text{relative}} = (E_k/E_o) \cdot 100\%$ as a function of R . Legend: (1) After two days of vacuum treatment, (2) after three days of vacuum treatment.
Card 2/3

ACCESSION NR: AT4025318

S/0000/63/000/000/0270/0273

AUTHORS: Gorelik, L. L.; Koval'skiy, N. G.; Podgorny'y, I. M.;
Sinitsy'n, V. V.

TITLE: Investigation of plasma in an "Orekh" magnetic trap with the
aid of special bolometers

SOURCE: Diagnostika plazmy* (Plasma diagnostics); sb. statey.
Moscow, Gosatomizdat, 1963, 270-273

TOPIC TAGS: plasma magnetic field, magnetic mirror, plasma con-
finement, bolometer, thin film

ABSTRACT: The spatial and time distributions of heat flow from the
wall of a magnetic-trap vacuum chamber with a field that increases
towards the periphery were investigated to ascertain the influence
of the region near the point of zero field in the escape of charged
particles at low plasma concentrations, and also the character of

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ACCESSION NR: AT4025318

time variation of the width of an annular magnetic slot. Several specially developed bismuth bolometers were used to measure the heat flow from an "Orekh" magnetic trap. The bolometer constructions are described. Measurements of the magnetic gap have shown that the width of the gap is larger at small values of the magnetic field, and the experimentally observed broadening of the magnetic gap can be sufficiently well explained by classical diffusion. The escape of plasma particles was measured by introducing a metallic cylinder into the trap and measuring the heat escaping through the magnetic gaps with germanium bolometers. In the case of the first configuration of the magnetic field in the trap it was found that the particle escape from the system is due to loss of the adiabatic invariant on entering the region of weak magnetic field near the center, whereas in the case of the second configuration the plasma is essentially concentrated in the region of the weak magnetic field near the center. Thin film bolometers were also used to measure the escape of heat from the trap for plasma of high density ($\sim 10^{14} \text{ cm}^{-3}$)

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ACCESSION NR: AT4025318

and low density (10^{12} cm^{-3}). The escape times were found to be 60--70 and 150--200 microseconds, respectively. The bolometers described can be used to solve various problems in plasma physics. Orig. art. has: 2 figures.

ASSOCIATION: None

SUBMITTED: 19Oct63

DATE ACQ: 16Apr64

ENCL: 02

SUB CODE: ME

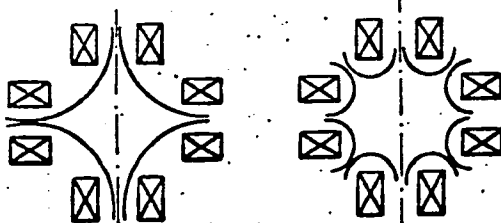
NR REF SOV: 004

OTHER: 000

Card 3/5

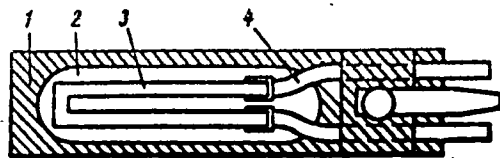
ACCESSION NR: AT4025318

ENCLOSURE: 01



Magnetic field configurations in the 'Orekh' trap

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Construction of bismuth bolometer:

1 - frame, 2 - oxidized-aluminum foil, 3 - thermoresistance of lead-bismuth alloy, 4 - silver leads

Card 5/5

ACCESSION NR: AP4020580

S/0057/64/034/003/0505/0508

AUTHOR: Gorelik, L.L.; Sinitsyn, V.V.

TITLE: New three-layer bolometers for measuring energy losses in plasmas

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.3, 1964, 505-508

TOPIC TAGS: bolometer, three-layer bolometer, high time resolution bolometer, plasma, plasma energy loss, plasma energy loss measurement

ABSTRACT: This paper describes three types of bolometer having sensitivities from 10^{-4} to 10^{-6} Joule/cm² and resolving times of the order of one microsecond. These bolometers are refinements of the three-layer 10^{-3} Joule/cm² 10-microsec bolometers described in detail in an accompanying paper (L.L.Gorelik, ZhTF, 34, No.3, 496, 1964 - see Abstract AP4020579). 1) A bismuth--aluminum oxide--aluminum bolometer is described which has an equilibration time of less than 2 microsec and an electrical time constant (RC product) of about one microsec. This bolometer differs from those described in the accompanying paper chiefly in size (the present bolometer measures 3×0.7 cm²) and in the care with which the components were desiccated at various stages of construction. 2) A germanium--aluminum oxide--aluminum bolometer is des-

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ACC.NR: AP4020580

cribed which has a sensitivity of 10^{-5} to 10^{-6} Joule/cm². The electrical time constant is negligible, but the equilibration time is about 40 microsec. The oxide coated aluminum foil (oxide layer 5 microns thick) was prepared as described in the accompanying paper. The germanium thermal sensitive element was vacuum deposited for 10 to 15 minutes at 1200°C and 3×10^{-4} mm Hg. It is believed that better and more consistent results can be obtained by depositing under a higher vacuum. The resistance of the germanium bolometer varies with the surrounding gas pressure. This does not affect its usefulness for the contemplated plasma measurements (see accompanying article cited above). 3) A bismuth--collodion--silver bolometer is described which has a sensitivity of 10^{-5} to 10^{-6} Joule/cm², an electrical time constant of about 1 microsec, and an equilibration time of less than 0.1 microsec. The bolometer was constructed on a 7 x 15 x 0.7 mm³ oxidized dural frame having a 5 x 10 mm² opening, one side of which was chamfered. A collodion film 0.2 to 0.3 microns thick was deposited on this frame by a process that is not described. A 0.1 micron silver film was vacuum deposited on the side of the collodion film facing the chamfered side of the frame. This serves as the heat collector. The Bi-Pb (0.6% Pb) thermal element was vacuum deposited on the other side of the collodion film. "In conclusion the authors express their gratitude to I.K.Kikoin for his interest in the work and for

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ACC.NR. AP4020580

valuable advice, to V.Kh.Volkov for his interest and assistance in the work, to V.I. Nikolayev for his skillful assistance in constructing the bolometers, and to P.N. Orlov for assistance in mastering the technique of preparing the collodion films."
Orig.art.has: 4 figures.

ASSOCIATION: none

SUBMITTED: 28Apr63

DATE ACQ: 31Mar64

ENCL: 00

SUB CODE: PH, SD

NR REF SOV: 003

OTHER: 000

3/3
Card

GORELIK, L.L.; REDKOBORODYY, Yu.N.; SINITSYN, V.V.

Effect of a magnetic field on the heat conductivity of gases
with nonspherical molecules. Zhur. eksp. i teor. fiz. 48
no.2:761-765 F '65. (MIRA 18:11)

ACCESSION NR: AP4012573

S/0056/64/046/001/0401/0402

AUTHORS: Gorelik, L. L.; Sinitsy*n, V. V.

TITLE: Influence of a magnetic field on the thermal conductivity of gases with nonspherical molecules

SOURCE: Zhurnal eksper. i teoret. fiz., v. 46, no. 1, 1964, 401-402

TOPIC TAGS: nitrogen molecule, paramagnetic gas, diatomic gas, non-spherical molecule, thermal conductivity, effect of magnetic field, effective magnetic moment, nuclear magnetic moment, Senftleben effect, rotational magnetic moment, viscosity

ABSTRACT: Preliminary results of an investigation of the influence of a magnetic field on the thermal conductivity of N_2 are reported.

The apparatus used is similar to the oxygen gas analyzer with magnetic field described by L. L. Gorelik (ZhTF v. 33, no. 12, 1963).

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ACCESSION NR: AP4012573

The change of the thermal conductivity could be judged from the bridge unbalance upon application of the magnetic field. The measurements were in fields up to 340 Oe at a pressure of 3.5×10^{-2} mm Hg. The plot of the relative change ($\Delta\lambda/\lambda$) of the thermal conductivity against H/p (H -- magnetic field, p -- pressure) shows similarity to both the plot of viscosity vs. H/p (J. J. Beenakker et al, Phys. Lett. v. 2, 5, 1962) and to the corresponding plot for oxygen (E. Rieger, Ann. d. Phys. v. 31, 453, 1938), but there is a slight discrepancy between the effective magnetic moment of the nitrogen molecule and that calculated on the basis of the experiment. This suggests that the effect observed in nitrogen is due to rotational as well as to nuclear magnetic moments. More accurate measurements on nitrogen and other gases are planned. "The authors are grateful to I. K. Kikoin, Yu. M. Kagan, A. A. Sazy*kin, and L. A. Maksimov for valuable discussions and advice, to V. Kh. Volkov for interest and help, and to V. I. Nikolayev for constant help in making the instruments and measurements. The authors are also grateful to L. D.

Card 2/4

ACCESSION NR: AP4012573

Puzikov (deceased) for valuable discussions and advice." Orig. art. has:
2 figures.

ASSOCIATION: None

SUBMITTED: 07Sep63

DATE ACQ: 26Feb64

ENCL: 01

SUB CODE: PH

NO REF SOV: 002

OTHER: 006

Card 3/4