ZHUZE, V.P.; SHELYKH, A.I.

Hall effect in nickel oxide. Fiz. tver. tela 5 no.6:1756-1759 Je '63. (MIRA 16:7)

1. Institut poluprovodnikov AN SSSR, Leningrad.

5

Semiconducting properties of nickious oxide. V. P. Zhuze, A. I. Shelykh.

Mobility of current carriers in ferro-and antiferro-magnetic material Ya. M. Ksendzov.

Electrical properties of chalcogenides of rare earth elements. A. V. Golubkov, Ye. V. Goncharova, V. P. Zhuze, V. M. Sergeyeva.

Report presented at the 3rd National Conference on Semiconductor Compounds, Kishinev, 16-21 Sept 1963

BOGOMOLOV, V.N.; ZHUZE, V.P.

Some modern methods of measuring the Hall effect. Poroshk. met. 2 no.6:89-95 N-D '62. (MIRA 15:12)

1. Institut poluprovodnikov AN SSSR, Leningrad.
(Hall effect)

S/226/62/000/006/014/016
E073/E535

AUTHORS: Bogomolov, V.N. and Zhuze, V.P.

TITLE: Some modern methods of measuring the Hall effect

PERIODICAL: Poroshkovaya metallurgiya, no.6 , 1962, 89-95

TEXT: Published methods, particularly an a.c. method developed by the authors and their team, of measuring the Hall effect in nondegenerated and degenerated semiconductors are discussed. Difficulties in obtaining a.c. magnetic fields with low electromagnetic emission were overcome to a considerable extent by using mechanical magnetic field modulators in which the d.c. field is modulated by rotating the toothed end-pieces inside the gap (between the poles) of a permanent- or electromagnet. The a.c. component of the magnetic field is utilised for measuring the Hall effect and this can be measured in substances with mobilities up to $5 \cdot 10^{-3}$ $cm^2/V \cdot sec$. For the measurements, a single narrow-band amplifier suffices, since the current to be fed through the specimen can be taken direct from the network and the modulator can be driven by a synchronous motor. Since the mechanical modulator does not change the polarity

Card 1/2

L 18567-63 EWT(l)/EWP(q)/EWT(m)/BDS AFFTC/ASD/ESD-3/IJP(C) Pad JD/WB

ACCESSION NR: AP3001311 S/0181/63/005/006/1756/1759

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AUTHORS: Zhuze, V. P.; Shely*kh, A. I.

TITLE: Hall effect in nickel oxide

SOURCE: Fizika tverdogo tela, v. 5, no. 6, 1963, 1756-1759

TOPIC TAGS: Hall effect, Ni, O, conductivity, current, carrier, hole, mobility, Li, crystal, polycrystalline, magnetic field, diffusion, mean free path

ABSTRACT: The authors studied this phenomenon because of contradictory conclusions of other investigators concerning the mechanism of conduction in NiO. Single crystals of NiO were prepared at the Institut kristallografii AN SSSR (Institute of Crystallography, Academy of Sciences USSR). Samples for measurement were cut from these by a magnetostrictive cutter. Polycrystalline samples of $Li_xNi_{1-x}O$, with various values of x, were prepared from analytical-grade $NiCO_3$ and Li_2CO_3. The electrical conductivity and the Hall effect were measured with direct current, and the Hall effect was determined in a steady magnetic field at strengths up to 30 000 oersteds. The electrical conductivity was found to increase and the Hall effect decrease with rise in temperature in both NiO

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ACCESSION NR: AP3001311

(single crystals and polycrystalline aggregates) and NiO alloyed with Li, indicating an increase in concentration of current carriers. The Hall mobility of holes in NiO and NiO alloyed with Li was found to fall with temperature increase. Measurements in the 700-1000C range indicate this mobility to be less than 1.0 cm^2/volt-sec. The low mobility and its drop with rise in temperature are grounds for believing that current carriers in NiO probably move through a narrow band and not by activated diffusion along local levels, as previously suggested. This low mobility is due to the large effective mass of the carrier--not to short mean free path. Orig. art. has: 2 figures.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of Semiconductors, Academy of Sciences, USSR)

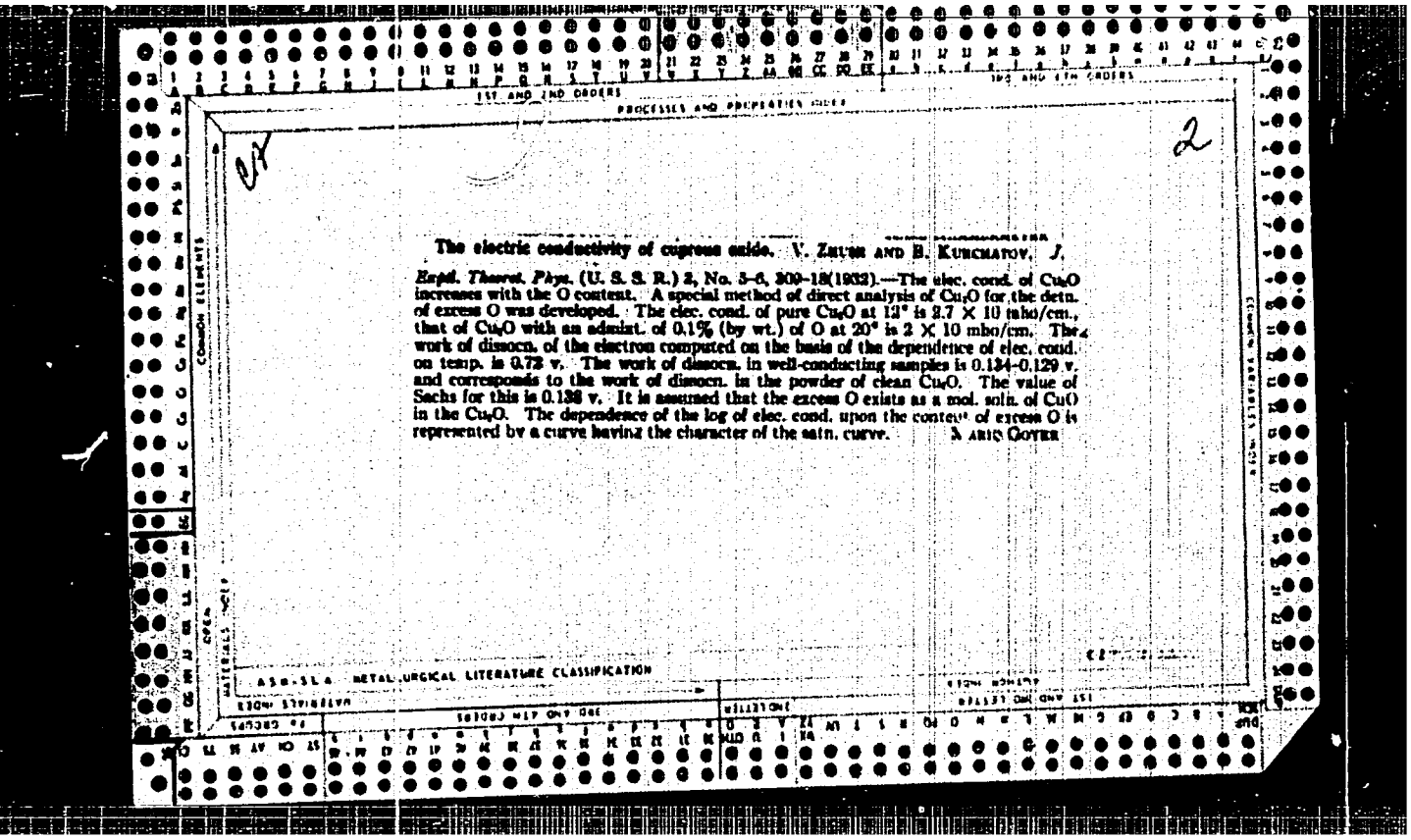
SUBMITTED: 11Mar63 DATE ACQ: 01Jul63 ENCL: 00

SUB CODE: PH NO REF SOV: 006 OTHER: 011

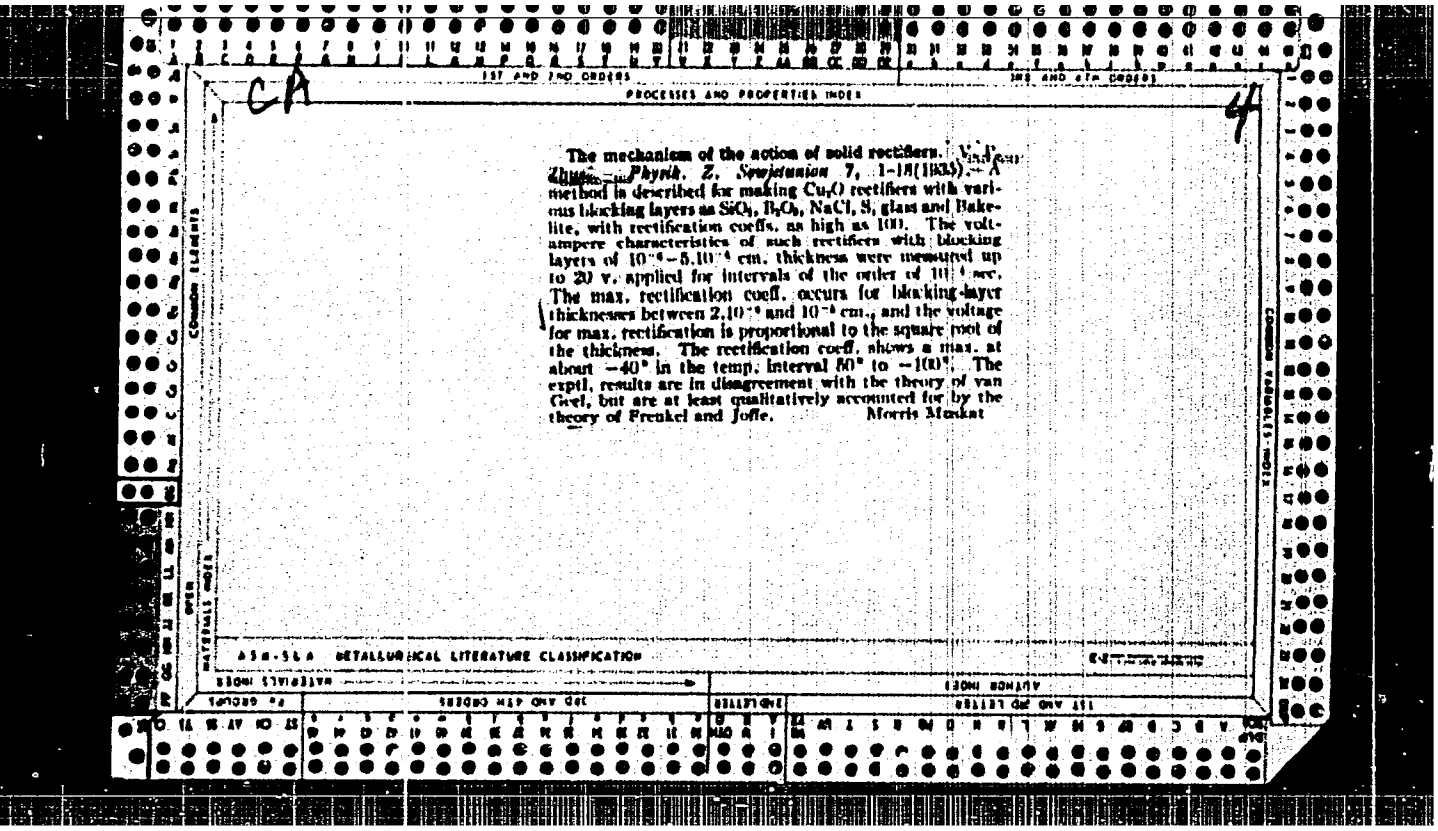
Card 2/2

ZHUZE, Vladimir Panteleymonovich; GUSENKOVA, Yelena Ivanovna; ARON, G.M., red.izd-va; ZENDEL', M.Ye., tekhn. red.

[Bibliography on thermoelectricity; thermoelectric generators and coolers]Bibliografiia po termoelektrichestvu; termoelektrogeneratory i okhlazhdaiushchie ustroistva. Moskva, Izd-vo Akad. nauk SSSR, 1963. 249 p. (MIRA 16:2)
(Bibliography--Thermoelectricity)



The electric conductivity of cuprous oxide. V. Zeltser and B. Kurchatov. *J. Exptl. Theoret. Phys.* (U. S. S. R.) 2, No. 3-6, 309-18(1932).—The elec. cond. of Cu_2O increases with the O content. A special method of direct analysis of Cu_2O for the detn. of excess O was developed. The elec. cond. of pure Cu_2O at 15° is 2.7 × 10 mho/cm., that of Cu_2O with an admixt. of 0.1% (by wt.) of O at 20° is 2 × 10 mho/cm. The work of dissocn. of the electron computed on the basis of the dependence of elec. cond. on temp. is 0.72 v. The work of dissocn. in well-conducting samples is 0.134-0.129 v. and corresponds to the work of dissocn. in the powder of clean Cu_2O. The value of Sachs for this is 0.138 v. It is assumed that the excess O exists as a mol. soln. of CuO in the Cu_2O. The dependence of the log of elec. cond. upon the conten' of excess O is represented by a curve having the character of the satn. curve. A. Joffe



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PROCESSES AND PROPERTIES INDEX

The mechanism of the action of solid rectifiers. V. P. Zhuze. *Physik. Z. Sowjetunion* 7, 1-18(1935).—A method is described for making Cu_2O rectifiers with various blocking layers as SiO_2, B_2O_3, NaCl, S, glass and Bakelite, with rectification coeffs. as high as 100. The volt-ampere characteristics of such rectifiers with blocking layers of 10^{-6}–5.10^{-4} cm. thickness were measured up to 20 v. applied for intervals of the order of 10^{-4} sec. The max. rectification coeff. occurs for blocking-layer thicknesses between 2.10^{-6} and 10^{-4} cm., and the voltage for max. rectification is proportional to the square root of the thickness. The rectification coeff. shows a max. at about −40° in the temp. interval 50° to −100°. The exptl. results are in disagreement with the theory of van Geel, but are at least qualitatively accounted for by the theory of Frenkel and Joffe. Morris Muskat

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

D-I-3

Determination of sp. heat of crude oil products at elevated temperatures. V. I. Tikhomirov and V. P. Zavoev (Neft. Choz., 1929, 16, 74—79).—The following values were obtained: kerosene distillate, b.p. 26·84—144·10°, 0·4416—0·5936; gas oil, *d* 0·8649, 39·07—204·00°, 0·434—0·6293; gas oil, *d* 0·8845, 24·41—196·32°, 0·4236—0·6367; gas oil, *d* 0·8916, 24·13—221·94°, 0·4307—0·6603. CHEMICAL ABSTRACTS.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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ZHUBE, V. P.

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TIKHOMIROV, V. I. and ZHUBE, V. P.
Neftyanoe Khozyaistvo 16, 74-9 (1929)
Specific- heat determination of crude oil products at elevated temperature.

CA: 23-4807/1

L 6320-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG

ACCESSION NR: AP5019861 UR/0181/65/007/008/2430/2436

AUTHOR: Golubkov, A. V.; Goncharova, Ye. V.; Zhuze, V. P.; Mamoylova, I. G. 71 69

TITLE: On the mechanism of transport phenomena in samarium sulfide 5

SOURCE: Fizika tverdogo tela, v. 7, no. 8, 1965, 2430-2436 27

TOPIC TAGS: samarium compound, Hall effect, electron mobility, temperature dependence, activation energy, transport phenomenon, electron transition, thermoelectric power, conduction band, forbidden zone width

ABSTRACT: The authors investigated the temperature dependence of the Hall emf in several samples of SmS in the interval 300--1000K. The synthesis of the material and the procedure for preparing the samples for the measurements, as well as the method for measuring the conductivity and the differential thermoelectric power were described by the authors elsewhere (FTT v. 6, 268, 1964). The Hall emf was measured on dc in a constant magnetic field at ~10^{-4} mm Hg, a maximum current density through the sample 10 a/cm^2, and a maximum magnetic field intensity 30 kOe. The activation energy of transition of the electrons from the 4f state into the conduction bands is estimated from these measurements and from the measured temperature dependences of the electric conductivity and the differential thermoelectric power. A value of 0.23 ev was obtained for the activation energy, and was in good

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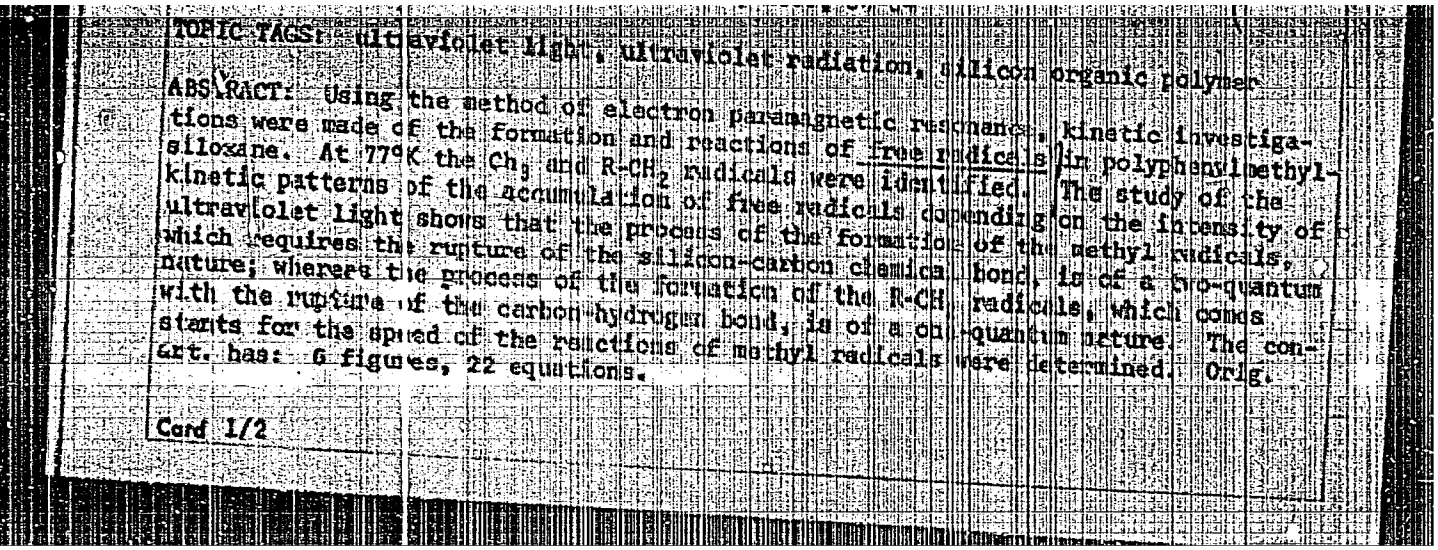

TOPIC TAGS: ultraviolet light, ultraviolet radiation, silicon organic polymer

ABSTRACT: Using the method of electron paramagnetic resonance, kinetic investigations were made of the formation and reactions of free radicals in polyphenylmethylsiloxane. At 77°K the CH_3 and $R-CH_2$ radicals were identified. The study of the kinetic patterns of the accumulation of free radicals depending on the intensity of ultraviolet light shows that the process of the formation of the methyl radicals, which requires the rupture of the silicon-carbon chemical bond, is of a bi-quantum nature; whereas the process of the formation of the R-CH radicals, which comes with the rupture of the carbon-hydrogen bond, is of a one-quantum nature. The constants for the speed of the reactions of methyl radicals were determined. Orig. art. has: 6 figures, 22 equations.

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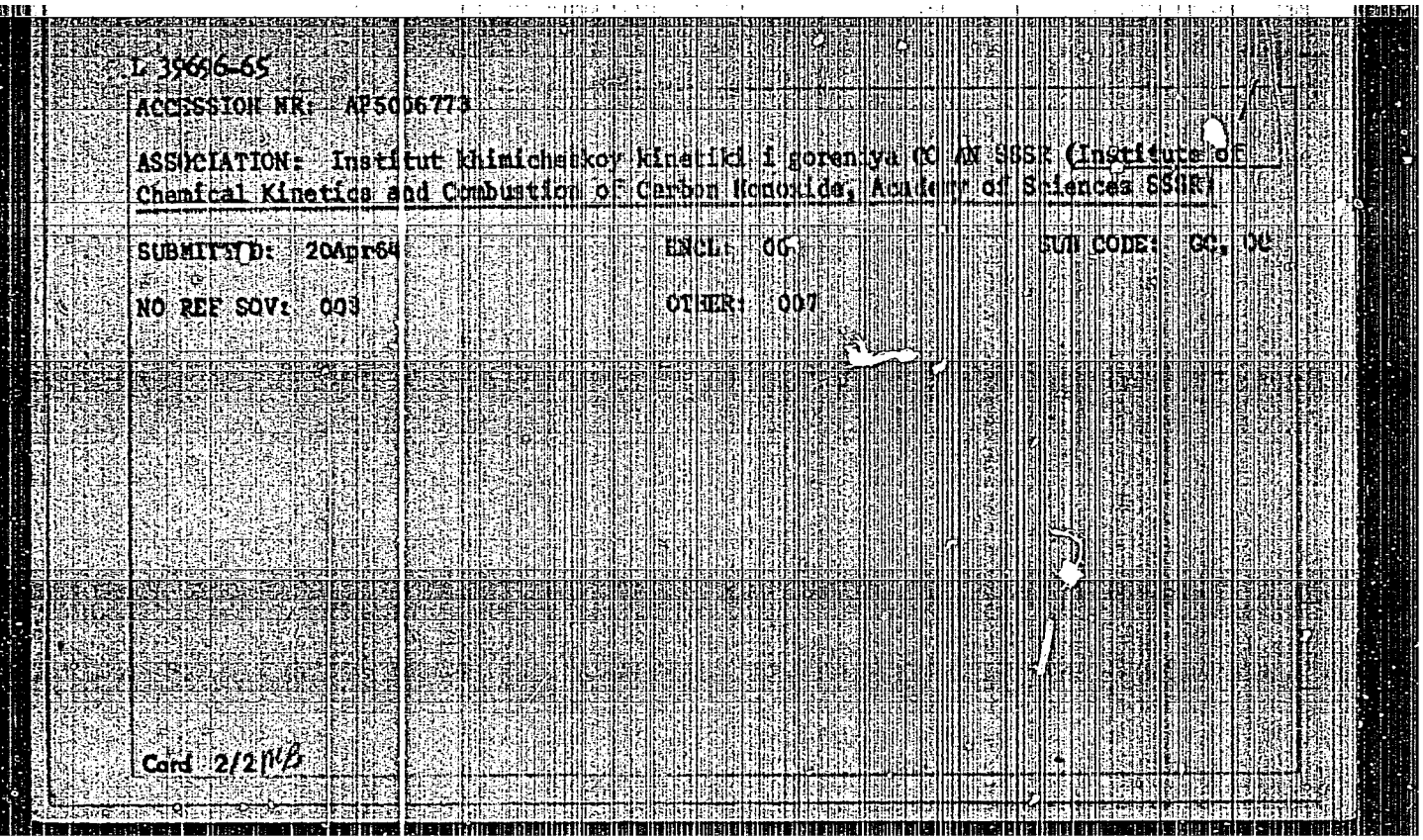

L 39696-65

ACCESSION NR: AP5006773

ASSOCIATION: Institut khimicheskoy kinetiki i goreniya CO AN SSSR (Institute of Chemical Kinetics and Combustion of Carbon Monoxide, Academy of Sciences SSSR)

SUBMITTED: 20Apr64 ENCL: 00 SUB CODE: GC, OC

NO REF SOV: 003 OTHER: 007

Card 2/2 nlb

ZHUZGOV, L. N.

29(2) PHASE I BOOK EXPLOITATION SOV/2894

Akademiya nauk SSSR

Iskusstvennyye sputniki zemli. vyp. 2: Rezul'taty nauchnykh issledovaniy, poluchennyye pri pomoshchi tret'yego iskusstvennogo sputnika zemli (Artificial Earth Satellites. No. 2: Results of Scientific Studies Obtained by the Third Earth Satellite) Moscow, Izd-vo AN SSSR, 1958. 82 p. 3,500 copies printed.

Ed.: L. V. Kurnosova; Ed. of Publishing House: D. M. Alekseyev; Tech. Ed.: Yu. V. Rylina.

PURPOSE: [illegible] scientific and technical personnel engaged in space exploration and research.

COVERAGE: This collection of articles contains certain of the scientific findings recorded by the third Soviet space satellite. Much corroborating data from other rocket and satellite investigations are included. The articles are based on papers originally read at the Fifth Assembly of the

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of the Special IGY Committee held in Moscow in August, 1958. Individual articles discuss the ionic composition and density of the atmosphere, the thermodynamic parameters of the stratosphere, and questions dealing with the motion of the satellite. References accompany each article.

Krasovskiy, V.I. Soviet Research of the Ionosphere by Means of Rockets and Artificial Earth Satellites 36

Dolginov, S.Sh., L.N. Zhuzgov, and N.V. Pushkov. Preliminary Report on Geomagnetic Measurements on the Third Soviet Artificial Earth Satellite 50

Nazarova, T.N. Studies of Micrometeorites by Rockets and Satellites 54

Krasovskiy, V.I., Yu.M. Kushnir, G.A. Bordovskiy, G.F. Zakharov, and Ye.M. Svetlitskiy. Detection of Corpuscles by the Third Artificial Earth Satellite 59

Vernov, S.N., P.V. Vakulov, Ye.V. Gorchakov, Yu.I. Logachev, and A.Ye. Chudakov. Study of the Soft Component of Cosmic Rays Beyond Atmospheric Limits 61

Kurnosova, L.V., L.A. Razorenov, and M.I. Fradkin. Heavy Nuclei in Primary Cosmic Radiation 70

Artificial Earth Satellites (Cont.) SOV/2894

Vavilov, V.S., A.F. Landsman, and V.K. Subashiyev. Solar Batteries 75

Izakovich, N.L. and N. A. Roy. Acoustical Method of Measuring the Mechanical Parameters of Meteorites 81

AVAILABLE: Library of Congress

Card 4/4

MM/fal
12-18/59

SOV/35-59-11-9272

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1959, Nr 11, p 91 (USSR)

AUTHORS: Dolginov, S.Sh., Zhuzgov, L.N., Pushkov, N.V.

TITLE: The Preliminary Report About Geomagnetic Measurements on the 3rd Soviet Artificial Earth Satellite

PERIODICAL: Sb. Iskusstv. sputniki Zemli. Nr 2, AS USSR, 1958, pp 50 - 53

ABSTRACT: Geomagnetic measurements were carried out on the 3rd artificial earth satellite, which were accomplished with the aid of a magnetometer with magneto-saturated pick-ups. The obtained experimental data will be utilized in the following ways: 1) The comparison of the values of the field measured by the magnetometer and calculated according to the potential theory. 2) The comparison of the isolation of the full strength of the magnetic field and the intensity of the cosmic rays measured on the sputnik. 3) The analysis of the area over the Eastern-Siberian magnetic anomaly, in order to check the hypotheses on the depth of occurrence of its sources. 4) Investigation into the true existence of an atmospheric dynamo.

G.A. Kokin

Card 1/1

ZHUZGOV, L. N., PUSHKOV, N. V., TYURMINA, L. O., DOLGINOV, S. Sh., YEROSHENKO, Ye. G.

"Studies of the Magnetic Field of the Earth and the Moon."

report presented at the XI International Astronautical Congress, Stockholm, Sweden, 15-20 August 1960.

Zhuzgov, L.N.

PHASE I BOOK EXPLOITATION SOV/4281

Akademiya nauk SSSR

Iskusstvennyye sputniki zemli, vyp. 4 (Artificial Earth Satellites, No. 4) Moscow, 1960. 205 p. Errata slip inserted. 6,500 copies printed.

Resp. Ed.: L.V. Kurnosova; Ed. of Publishing House: M.I. Fradkin; Tech. Ed.: T.P. Polenova.

PURPOSE: This collection of articles is intended to disseminate data collected in investigations performed by means of artificial earth satellites.

COVERAGE: The collection consists of 15 articles dealing with scientific data on Soviet artificial earth satellites (AES) and cosmic rockets. The topics discussed include measurements of the density of the upper atmosphere, motion of AES, measurements of micrometeorites and meteoric matter, magnetometric measurements of cosmic rays, electrical potential, and spectrum of positive ions. The collection is part of a series published regularly. References follow each article.

Iatrunskiy, I.M. Determination of the Conditions of Illumination and the Time Intervals in Which the Satellite Remains in Sunlight and in Shadow 35

The article discusses one of the possible methods of determining the conditions of illumination of satellites. The relative motion of the first, second, and third Soviet AES to the earth is briefly analyzed.

Eneyev, T.M., A.K. Platonov, and R.K. Kazakova. Determining Orbital Parameters of AES According to Ground Measurements 43

An abbreviated method of orbital parameter determination and forecasting of satellite motions is given. The method is based on data from the processing of optical and radiotechnical observations.

Taratynova, G.P. Methods of Numerical Solution of Equations in Finite Differences and Their Application to the Calculation of AES Orbits 56

The finite difference method is applied in the calculation of certain problems of celestial mechanics in the solution of systems of nonlinear differential equations determining the motion of AES in larger time intervals.

Lur'ye, A.I. Equation of Disturbed Motion in Kepler's Problem 82

Stanyukovich, K.P. Elements of the Shock Theory of Solid Bodies at High (Cosmic) Velocities 86

The author discusses the problems of shocks of meteorites at high (cosmic) velocity against the surface of a planet. This problem is related to the study of shocks of micrometeorites against the surface of AES

Mirtov, B.A. Meteoric Matter and Some Problems of Geophysics of the Upper Atmospheric Layers 118

The author attempts to connect phenomena occurring in the upper atmosphere with the presence there of particles of meteoric origin [illegible]

Dolginov, Sh.Sh., L.N. Zhuzgov, and V.A. Selyutin. Magnetometric Equipment of the Third Soviet AES 135

The working principle and installation of the magnetometric equipment on the AES are described. Characteristics of materials and the stability and praction of operation are discussed.

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ZHUZGOV, L. N.

PHASE I BOOK EXPLOITATION SOV/4282

Akademiya nauk SSSR

Iskusstvennyye sputniki zemli, vyp. 5 (Artificial Earth Satellites, No. 5) Moscow, Izd-vo AN SSSR, 73 p. Errata slip inserted. 7,000 copies printed. 1960

Resp. Ed.: L. V. Kurnosova; Ed. of Publishing House: M. I. Fradkin; Tech. Ed.: O. M. Gus'kova.

PURPOSE: The booklet is intended for scientists and engineering and scientific personnel working in the field of space travel and satellite flight.

COVERAGE: The collection of 10 articles deals with problems of satellite orbits, magnetic measurements, radiation, the visibility of space vehicles, the upper atmosphere, and meteoric substances. No personalities are mentioned. References accompany some of the articles.

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Sedov, L. I. Space Rocket Orbits in the Direction of the Moon 3

Dolginov, Sh., Ye. G. Yeroshenko, L. N. Zhuzgov, N. V. Pushkov, and L. O. Tyurmina. Magnetic Measurements on the Second [Soviet] Space Rocket 16

Vernov, S. N., A. Ye. Chudakov, P. V. Vakulov, Yu. I. Logachev, and A. G. Nikolayev. Radiation Measurement in the Flight of the Second Space Rocket 24

Kurnosova, L. V., V. I. Logachev, L. A. Razorenov, and M. I. Fradkin. Investigation of Cosmic Radiation in the Flight of the Second Space Rocket to the Moon 30

Nazarova, T. N. Results of the Investigation of Meteoric Substance With the Help of Instruments Mounted in Space Rockets 38

Raushenbakh, B. V., and Ye. N. Tokar'. Some Problems of Control in Interplanetary Space 41

Gurko, O. V. Determination of the Visibility Conditions of Space Rockets 54

Danilov, A. D. Concerning the Problem of the Formation of NO^+ in the Upper Atmosphere 50

Kuperov, L. F. Observations of Signals From the Third Soviet Artificial Earth Satellite From Cape Chelyuskin 66

Yatsunskiy, I. M., and O. V. Gurko. Change of the Albedo of the First Artificial Earth Satellite Resulting From the Action of External Factors 71

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Card 3/3

AC/pw/ml
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DOLGINOV, S.Sh.; ZHUZGOV, L.N.; SELYUTIN, V.A.

Magnetometering equipment of the third Soviet artificial earth satellite. Isk.sput.Zem. no.4:135-160 '60.
(MIRA 13:5)

(Artificial satellites)(Magnetometer)

DOLGINOV, S.Sh.; YEROSHENKO, Ye.G.; ZHUZGOV, L.N.; PUSHKOV, N.V.; TYURMINA, L.O.

Magnetic measurements with the second cosmic rocket. Isk. sput. Zem. no.5:16-23 '60. (MIRA 13:5)
(Lunar probes) (Magnetic measurements)

ZHUZGOV, L. N

a. Radar Contact with Venus - V. A. Kotelnikov

b. Some Results of the Constant Geomagnetic Field Measurements Carried Out from Sputnik III over the Territory of the USSR - S. Sh. Dolginov, L. N. Zhuzgov, N. V. Pushkov, Tyurmina, L. O., I. V. Fryazinov

c. Some Results of Physiological Reactions to Space Flight Conditions - O. G. Gazenko, V. T. Yazdovsky

d. On The Motion of the Body of the Variable Mass With the Constant Power Consumption in the Gravitational Field - G. L. GROZDOVSKIY, Y. N. IVANOV, V. V. Itkarev

e. On The Hardest Solar Corpuscles - V. I. Krassovsky

f. Optimum Contour Heat Rejection Fins Cooled by Radiation - G. L. Grodzovsky

g. Investigation of Interplanetary Plasma and Planetary Ionospheres by Means of Charged Particle Traps on Space Rockets - K. I. Gringauz

h. Rocket and Satellite Meteoric Dust Investigations - T. N. Nazarova

i. On Investigation of Cosmic Radiation on Spaceships-Satellites. - S. N. Vernov, Y. E. Nesterov, N. F. Pisarenko, I. A. Savenko, P. I. Shavrin.- UNCLASSIFIED

reports to be presented at the XIIth International Astronautical Congress, Washington D. C. 1-7 October 1961

(19)

Name : ZHUZGOV, L. N.

Remarks : L. N. ZHUZGOV is co-author of the paper entitled "Magnetometric Equipment of the Third Soviet Artificial Earth Satellite" with V. A. SELYUTIN and Shmay Shlemovich DOLGINOV, who is Head of the Magnetics Laboratory of the Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Propagation of the USSR Academy of Sciences and member of the Soviet scientific delegation to Washington.

Source : Background Material Release on Soviet Delegation and Authors of Soviet Papers by the Press Office of the XIIth International Astronautical Congress, Washington, D. C., October 2-8, 1961.

73 10

29718 S/169/61/000/008/034/053
A006/A101

3,2500 (1080)

AUTHORS: Dolginov, Sh. Sh., Yeroshenko, Ye. G., Zhuzgov, L. N., Pushkov, N. V.

TITLE: Investigation of the magnetic lunar field

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 8, 1961, 12, abstract 8G80 ("Geomagnetizm i aeronomiya", 1961, v. 1, no. 1, 21-29)

TEXT: Information is given on experimental problems and data about the lunar field, obtained during the flight of the second Soviet space rocket. An analysis was made of the sensitivity threshold of the measuring instruments from data of measurements in the weak terrestrial magnetic field at 45-60 thousand km distance from the Earth's center. The noise level in the lunar orbit space was analyzed, and measurements were made directly near the Moon down to 55 km distance from its surface. As a result no indications of a noticeable lunar magnetic field were detected. It was estimated that the dipole magnetic moment of the Moon can be only less than 1/10,000 of the magnetic moment of the Earth.

The authors' summary

[Abstracter's note: Complete translation]

Card 1/1

ZHUZGOV, L. N., PUSHKOV, N. V., TYURMINA, L. O., FRYAZINOV, I. V. and DOLGINOV, Sh. Sh.

"Some of the Constant Geomagnetic Field Measurements Carried out from Sputnik III over the Territory of the USSR"

Soviet Papers Presented at Plenary Meetings of Committee on Space Research (COSPAR) and Third International Space Symposium, Washington, D. C., 23 Apr - 9 May 62.

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S/203/62/002/001/002/019
I023/I223

AUTHORS: Dolginov, Sh.Sh., Yeroshenko, Ye.G., Zhuzgov, L.N., and Pushkov, N.V.

TITLE: Magnetic measurements of an automatic interplanetary station to Venus

PERIODICAL: Geomagnetizm i Aeronomiya, v.2, no.1, 1962, 38-40

TEXT: A three-component magnetometer to measure the magnetic field near Venus and a magnetic variometer to measure the field during the voyage were installed on the automatic interplanetary station (AIS) to Venus. The threshold sensitivity of the variometer was 2γ, the range - 0 to 50γ. Data from the variometer were obtained on February 12 and 17, 1961. The magnetograms for February 12 (distance from Earth: 165000-175000km) are given together with data from the Moscow observatory ($\varphi = 55^{o}$). The variations of the two magnetograms were approximately the same. Data of February 17 (distance from Earth: 1.9×10^{6}km, duration of

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Magnetic measurements...

measurements: 22 min.) show almost constant values. During the same period variations on Earth were quite big: 20-25 γ. On February 17, 1961, the AIS was in the corpuscular stream (assumption based on data from a particle trap). The magnetic field of the stream was less than 9 γ in the direction of the axis of the transducer. From data on the neutron component of cosmic rays it can be deduced that the field of the stream was weak also on Earth. Geomagnetic disturbances can be explained by a direct interaction of the corpuscular stream with the geomagnetic field. There are 3 figures.

ASSOCIATION: Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR (Institute of Terrestrial Magnetism, Ionosphere, and Radio wave Propagation, AS USSR)

SUBMITTED: December 6, 1961

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S/203/62/002/006/004/020
A160/A101

AUTHORS: Dolginov, Sh. Sh., Zhuzgov, L. N., Pushkov, N. V., Tyurmina, L. O., Fryazinov, I. V.

TITLE: Some results of measuring the constant magnetic field of the Earth with the third artificial sputnik of the Earth above the territory of the USSR

PERIODICAL: Geomagnetizm i aeronomiya, v. 2, no. 6, 1962, 1061 - 1075

TEXT: The author presents some results of measuring the constant magnetic field of the Earth with the help of the third Soviet sputnik above the territory of the USSR from May to June 1958. A brief description is given of the metrological properties of the used equipment and of the method of eliminating magnetic board noises from the sputnik magnetograms. It was determined that the deviation may be represented by three harmonics whose mean amplitude values equal $U_{1m} = 1{,}500$, $U_{2m} = 500$ and $U_{3m} = 200\,\gamma$. A comparison of the measured values of the geomagnetic field intensities with the values of this intensity permitted to establish their agreement within the limits of 0.1 - 1% above a

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major part of the USSR territory, including the Siberian world magnetic anomaly. The conclusion is illustrated by a limited number of typical magnetograms obtained on the segments of the trajectories traversing the whole territory of the USSR. The material yielded by the magnetic investigations with the third Soviet sputnik permits to fully determine the possibilities of carrying out special magnetic experiments. 1) The main harmonics of the Gaussian series can be determined with a precision of 0.1%. 2) With the help of a long-lasting sputnik the real existence of the exterior sources of the magnetic field has to be found out, not taking into consideration the theoretical values of the field, computed from the ground data. 3) Regular work should be done on the secular variation of the geomagnetic field. 4) In order to obtain highly accurate data, the requirements for the complex of auxiliary equipment should be determined. There are 12 figures and 1 table.

ASSOCIATION: Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR (Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Propagation, AS USSR)

SUBMITTED: July 10, 1962

L 1285-66 FSS-2/EWT(1)/FS(v)-3/FCC/EWA(d)/EWA(h) TT/GS/GW
ACCESSION NR: AT5023604 UR/0000/65/000/000/0342/0356

AUTHOR: Dolginov, Sh. Sh.; Yeroshenko, Ye. G.; Zhuzgov, L. N.

TITLE: Investigation of the earth's magnetosphere in the radiation belt zone ($3-6R_e$) in February-April 1964

SOURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. Moscow, 1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii. Moscow, Izd-vo Nauka, 1965, 342-356

TOPIC TAGS: geomagnetic field, geomagnetism, magnetic storm, artificial earth satellite, radiation belt, satellite data analysis

ABSTRACT: The authors give a detailed report on the "Elektron-2" satellite including orbital information and telemetered observations in the region of the outer radiation belt at distances of $3-6R_e$. Magnetometric measurements indicate that there is an outer magnetic field during the calm of the day associated with the protons and electrons of the radiation belt. This conclusion is made on the basis of comparatively limited observation time. Further observations by the "Elektron-4" at other orbital positions with respect to the line between the sun and the earth

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L 1285-66

ACCESSION NR: AT5023604

should give more definite information on the extent to which the observed effects may be attributed to the radiation zone. Peculiarities observed in the dynamics of the magnetosphere far from the boundary zone, and effects observed during polar storms may be connected with the mysterious mechanism responsible for magnetic storms. "The authors consider it their pleasant duty to thank those who assisted in analyzing the materials during preparation and conduction of the experiment." Orig. art. has: 9 figures. [14]

ASSOCIATION: none

SUBMITTED: 02Sep65 ENCL: 00 SUB CODE: ES, SV

NO REF SOV: 010 OTHER: 025 ATD PRESS: 4102

Card 2/2

L 23434-66 FSS-2/EWT(1)/FCC IT/GW

ACC NR: AP6012835 SOURCE CODE: UR/0293/66/004/002/0302/0310

AUTHOR: Aleksanyan, L. M.; Yeroshenko, Ye. G.; Zhuzgov, L. N.; Fastovskiy, U. V.

ORG: none

TITLE: Magnetometric apparatus of the Electron-2 space station

SOURCE: Kosmicheskiye issledovaniya, v. 4, no. 2, 1966, 302-310

TOPIC TAGS: magnetometer, magnetic field measurement

ABSTRACT: Two search-coil magnetometers capable of independently measuring three components of the magnetic field in the outer radiation belt were mounted on Electron-2. One had a measurement range of ±120 γ, and the other, a range of ±1200 γ. A block diagram of the basic magnetometer is shown in the figure. It consists of a 2-kc signal generator with associated low-pass filter for suppressing the second harmonic, a tuned amplifier (voltage gain, 12×10^3, bandwidth at 3 db, ±100 cps) tuned to the second harmonic with associated input filter to attenuate the first and third harmonics by 40 db, a synchronous phase detector, and a d-c current amplifier (gain, 20). Two telemetry channels are utilized for each magnetic-field coordinate, one channel for positive values and the other for negative values. A diode gate

Card 1/3

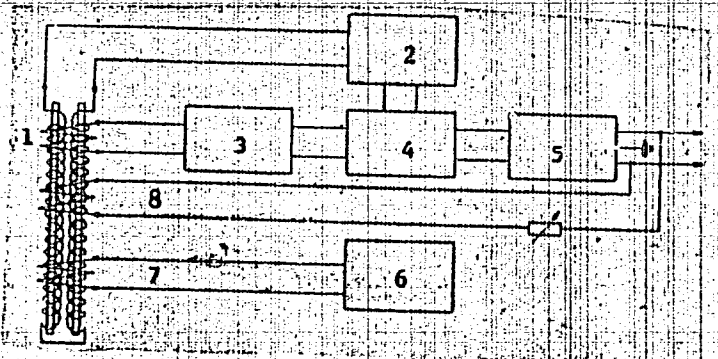

Fig. 1. Magnetometer

1 - Search coil; 2 - generator; 3 - amplifier; 4 - phase detector; 5 - dc amplifier; 6 - reference voltage; 7 - calibration loop; 8 - feedback loop.

in the d-c amplifier unit diverts the information to the appropriate channel. The inclusion of a heavy voltage feedback confines the magnetometer nonlinearity to 2—3%. The sensitivities of two magnetometers are 2—3 γ and 20—30 γ; the temperature stability measured at -3C, +18C, and +55C did not exceed 0.2 γ/C for the first and 0.7 γ/C for the second. A special unit for sensitivity calibration with the use of a reference voltage source is also included. The average error in measuring the scalar magnetic field was ±4 γ and ±40 γ. The zero drift did not exceed 2—3 γ per day. The 14-v power supply for the magnetometers was stabilized by a P203 transistor and a D811 Zener diode. All other transistors used were the P103 type. Power consumption for each magnetometer was 2.2 w. "In conclusion, the authors are indebted to A. V. Klimovskiy, A. I. Konnov, Ye. Ye. Kanonidi, L. I. Ulanov, V. M. Agafonnikov, and V. G. Ryzhov for their active participation during the manufacturing, calibration, and testing of equipment." Orig. art. has: 1 formula and 4 figures. [BD]

SUB CODE: 09, 17/ SUBM DATE: 05Jun64/ ORIG REF: 003/ ATD PRESS: 4235

L 02976-67 EWT(1)/FSS-2/FCC TT/GW

ACC NR: AP6032857 SOURCE CODE: UR/0020/66/170/003/0574/0577

AUTHOR: Dolginov, Sh. Sh.; Yeroshenko, Ye. G.; Zhuzgov, L. N.; Pushkov, N. V.

ORG: Institute of Terrestrial Magnetism, Ionosphere, and Radiowave Propagation, Academy of Sciences, SSSR (Institut Zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln Akademii nauk SSSR)

TITLE: Measurement of the magnetic field in the vicinity of the moon by the Luna-10 artificial satellite

SOURCE: AN SSSR. Doklady, v. 170, no. 3, 1966, 574-577

TOPIC TAGS: magnetic field, lunar orbit, lunar satellite, LUNAR ENVIRONMENT, MAGNETIC FIELD MEASUREMENT

ABSTRACT: The magnetic field intensity in the vicinity of the moon was measured by a three-component magnetometer carried on Luna-10. The magnetometer measurement range and its threshold of sensitivity in each direction were 50 γ (1 γ = 10^{-5} Oe) and 1 γ, respectively. During the lunar orbital flight the satellite rotated around a given axis. The magnetic field components parallel ($T_{\parallel}$) and perpendicular ($T_{\perp}$) to this axis were measured. The absolute and relative errors in measuring the resultant magnetic field were estimated to be ±10 γ and ±5 γ, respectively. During the observation period (3 April to 4 May 1966), the total magnetic field and its components fluctuated in the following ranges: T = 23—40 γ, $T_{\parallel}$ = 18—38 γ, and $T_{\perp}$ = 12—16 γ. A correlation was established between variations in T and $T_{\parallel}$

Card 1/2 UDC: 538.7

ACC. NR: AP7007600

SOURCE CODE: UR/0293/66/004/006/0880/0899

AUTHOR: Zhuzgov, L. N.; Dolginov, Sh. Sh.; Yeroshenko, Ye. G.

ORG: none

TITLE: Investigation of the magnetic field from the satellite "Luna-10"

SOURCE: Kosmicheskiye issledovaniya, v. 4, no. 6, 1966, 880-899

TOPIC TAGS: lunar satellite, magnetic field, solar wind / Luna-10 lunar satellite

SUB CODE: 22,03,20

ABSTRACT:

change of the index of magnetic activity at the earth's surface. The error of the absolute scalar value of the field is estimated at ±10 γ. Comparison of the measured field values in the region of the pericenter and apocenter and evaluation of possible distortions of the field by the solar wind indicate that the moon does not have a field of a dipole nature. The authors discuss the problem of whether the observed field can be identified with the interplanetary field of solar origin, deformed or trapped by a moon having finite conductivity and permeability. Comparison of measurements in periods of the full and new moons fails to indicate a direct extent of the earth's magnetic field on the nighttime side to distances 60 Rg.

This is a report on observations of the magnetic field of regular structure in the neighborhood of the moon whose intensity during the time of observations varied in the range 24–40 γ, in agreement with the

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UDC: 629.195.3:523.36:621.317.444

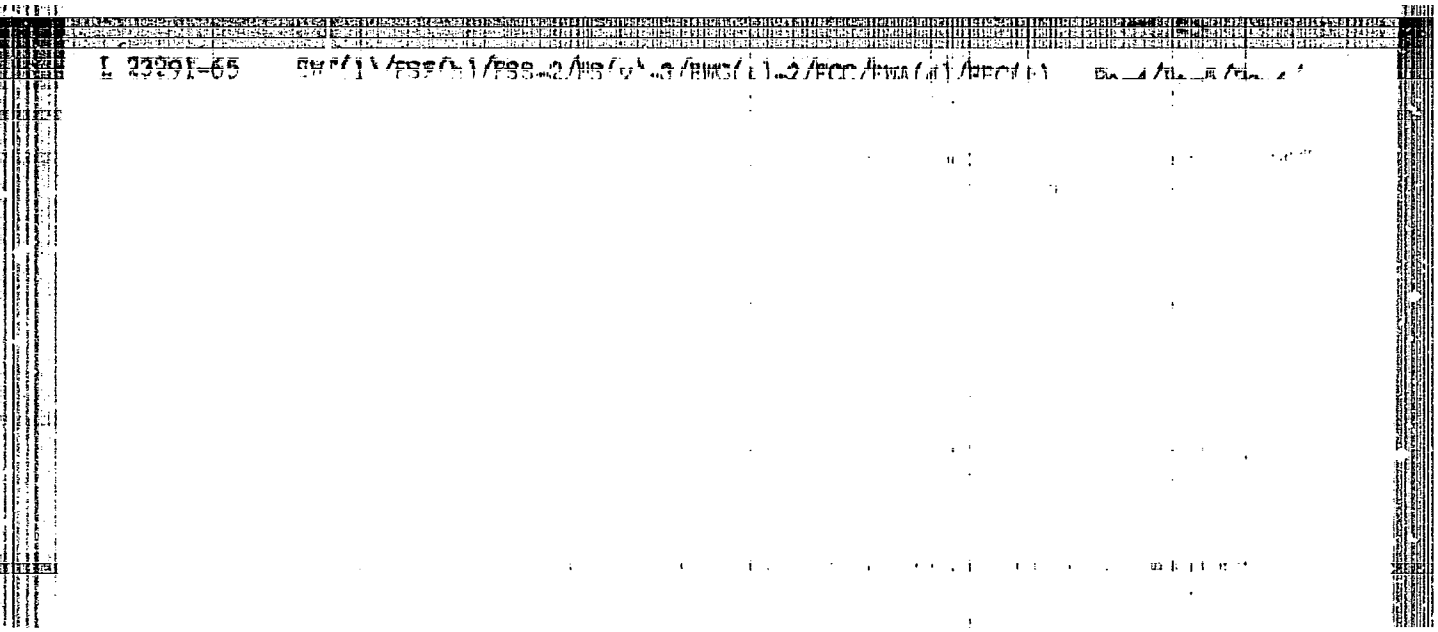
The authors thank Yu. V. Afanas'yev, V. P. Lyulik, and G. N. Alekseyeva for participating in the preparation of the apparatus. Orig. art. has: 3 formulas, 12 figures and 1 table. [JPRS: 39,718]

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R002065110002-4"

GRINGAUZ, K.I.; DOLGINOV, Sh.Sh.; BEZRUKIKH, V.V.; YEROSHENKO, Ye.G.; ZHUZGOV, L.N.; MUSATOV, L.S.; SOLOMATINA, E.K.; FASTOVSKIY, U.V.

Relation between magnetic field variation and fluxes of positive ions within the earth's magnetosphere as observed with the aid of an Electron-2 satellite. Dokl. AN SSSR 159 no.6:1272-1275 D '64 (MIRA 18:1)

1. Predstavleno akademikom A.L. Mintsem.



Card 1/2

L 23291-65
ACCESSION NR AP5001986

[illegible] of flares of positive ions and the magnetic

[illegible] with magnetic disturbances. Numerous negative ion fluxes

has: 4 figures;

YEROSHENKO, Ye. G.; DOLGINOV, Sh. Sh.; ZHUZGOV, L. N.; FASTOVSKIY, U. V.; ALEKSANYAN, L. M.

"Magnetic Investigations on the Electron 2 Satellite."

report presented at the 5th Intl Symp on Space Science, Florence, Italy, 12-16 May 64.

L 2885-66 FSS-2/EWT(1)/FS(v)-3/FCC/EWA(d)/EWA(h) IJP(c)/BS/GW

ACCESSION NR: AT5023603 UR/0000/65/000/000/0336/0341

AUTHOR: Gringauz, K. I.; Dolginov, Sh. Sh.; Bezrukikh, V. V.; Yeroshenko, Ye. G.; Zhuzgov, L. N.; Musatov, L. S.; Solomatina, E. K.; Fastovskiy, U. V. 81

TITLE: Comparison of simultaneous measurements of magnetic field and positive ion flux within the Earth's magnetosphere recorded by the Elektron-2 satellite

SOURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. Moscow, 1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii. Moscow, Izd-vo Nauka, 1965, 336-341

TOPIC TAGS: space environment, ionospheric physics, electron density, ion density, earth magnetic field/Elektron 2 satellite

ABSTRACT: Measurements of charged-particle flux and magnetic field at a height of 6—11.6 R (R, Earth's radius) were made by Elektron-2. The particle trap used was capable of recording positive ion flux with ion energy in excess of the potential difference of the satellite with respect to its environment and electron flux with electron energy in excess of 100 ev. The magnetometer, with orthogonally arranged sensors, was capable of measuring the magnetic field in the range of ±120 x 10^{-5} erg

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L 2885-66

ACCESSION NR: AT5023603

in each component direction. Its threshold was 2 x 10^{-5} erg. The satellite measurements, when compared with solar activity data in the form of K_p indexes recorded via ground observatories, show inconsistencies in the correlation between the variation of magnetic activity on the Earth's surface and the variation of the geomagnetic field intensity and charged particle flux as measured by the satellite. It is uncertain whether these observations can be explained by the solar wind penetrating the magnetosphere or by near-earth plasma due to charged particles accelerated by a yet unknown mechanism. Orig. art. has: 6 figures. [BD]

ASSOCIATION: none

SUBMITTED: 02Sep65 ENCL: 00 SUB CODE: ES,SV

NO REF SOV: 003 OTHER: 008 ATD PRESS: 4109

Card 2/2

ZHUZH, A.D.

MATSKIN, L.A.; KOVALENKO, K.I.; BABUKOV, V.G.; KONSTANTINOV, N.N.; PONOMAREV, G.V.; PAL'CHIKOV, G.N.; PELENICHKO, L.G.; SHAMARDIN, V.M.; GLAIKOV, A.A.; BRILLIANT, S.G.; SHEVCHUK, V.Ya.; SOSHCHEN-KO, Ye.M.; ALEKSANDROV, A.M.; BUNCHUK, V.A.; KRUPENIK, P.I.; MAYEVSKIY, V.Ya.; YELSHIN, K.V.; GAK, Kh.A.; POTAPOV, G.M.; KARDASH, I.M.; STEPURO, S.I.; KAPLAN, S.A.; SELIVANOV, T.I.; YEREMENKO, N.Ya.; ZHUZH, A.D.; USTINOV, A.A.; GIRKIN, G.M.; VOLOBUYEV, P.P.; CHERNYAK, I.L., nauchnyy red.; DESHALYT, M.G., vedushchiy red.; GENNAD'YEVA, I.M., tekhn.red.

[Combating losses of petroleum and petroleum products; materials of the All-Union Conference on Means of Combating Losses of Petroleum and Petroleum Products] Bor'ba s poteriami nefti i nefteproduktov; po materialam Vsesoiuznogo soveshchaniia po bor'be s poteriami nefti i nefteproduktov. Leningrad, Gos.nauchno-tekhn. izd-vo neft. i gorno-toplivnoi lit-ry, 1959. 157 p. (MIRA 13:2)

1. Nauchno-tekhnicheskoye obshchestvo neftyanoy i gazovoy promyshlennosti.

(Petroleum industry)

ZHURZHA, M.Ye., kand.tekhn.nauk

Equipment for hydraulic haulage and hoisting of coal and rock in the Donets Basin mines. Ugol' Ukr. no.6:12-14 Je '61. (MIRA 14:7)

1. Donetskiy nauchno-issledovatel'skiy ugol'nyy institut.
(Donets Basin--Coal mines and mining--Hydraulic equipment)
(Mine hoisting) (Mine haulage)

ZHURZHI, M.Ye., kand.tekhn.nauk; PODOLICH, Yu.S., inzh.

Power evaluation of the expediency of hydraulic hoisting systems with chamber feeders. Ugol' Ukr. 6 no.9:14-15 S '62. (MIRA 15:9)

1. Donetskiy nauchno-issledovatel'skiy ugol'nyy institut.
(Mine hoisting) (Hydraulic conveying)

CHETVERTAK, A.M. inzh.; ZHUZHA, S.M., inzh.

Machine for making small angle irons. Mekh. stroi. 15 no.6:29-30 My '58. (MIRA 11:6)

(Machine tools) (Steel, Structural)

AUTHOR: Chetvertak, A.M., Engineer SOV/ 100-58-5-10/15
Zhuzha, S.M., Engineer.

TITLE: Machine for Small Angles. (Mashina dlya ugolkov melkogo profilya.)

PERIODICAL: Mekhanizatsiya Stroitel'stva, 1958, Nr 5, pp 29-30.

ABSTRACT: The authors of this article designed and made a special machine for straightening out angles of small profile in the workshops of the Yuzhelektromontazh Trust in Zaporozh'ye.The advantage of this machine is its simplicity since it could be made in every machine shop. The working system of the machine is illustrated in Figure 2. It is powered by a dynamo of 20k.W with a speed of 1,450 rotations per minute. The individual working parts are described in detail. The weakness of this machine lies in the difficulty of adjustment to accommodate larger angles. There are three figures.

Card 1/1 1. Machine tools--Design

KATYUKHIN, N.Ya.; ZHUZHZHALKIN, A.P.

Some results of the work under new conditions. Zdrav. Ros. Feder. 4 no.3:19-22 Mr '60. (MIRA 13:5)

1. Iz Amurskogo oblzdravotdela.
(TAMBOV DISTRICT (AMUR PROVINCE)--PUBLIC HEALTH, RURAL)

ZHUZHZE AIKIN, A.P.

Experience in Tambov District. Zdrav.Ros.Feder. 4 no.11:29-31 '60.
(MIRA 13:11)

1. Glavnyy vrach Tambovskogo rayona Amurskoy oblasti.
(TAMBOV DISTRICT (AMUR PROVINCE)--PUBLIC HEALTH)

SHUTSKAYA, Yekaterina Konstantinovna; ZHUZHCHENKO, B.P., red.; FILIMONOVA, A.G., vedushchiy red.; FEDOTOVA, I.G., tekhn.red.

[Lower Paleogene stratigraphy and facies of Ciscaucasia] Stratigrafiia i fatsii nizhnego paleogena Predkavkaz'ia. Moskva, Gos. nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1960. 102 p. (MIRA 13:7)

(Caucasus, Northern--Geology, Stratigraphic)

ZHUZHGIN, I.I'.

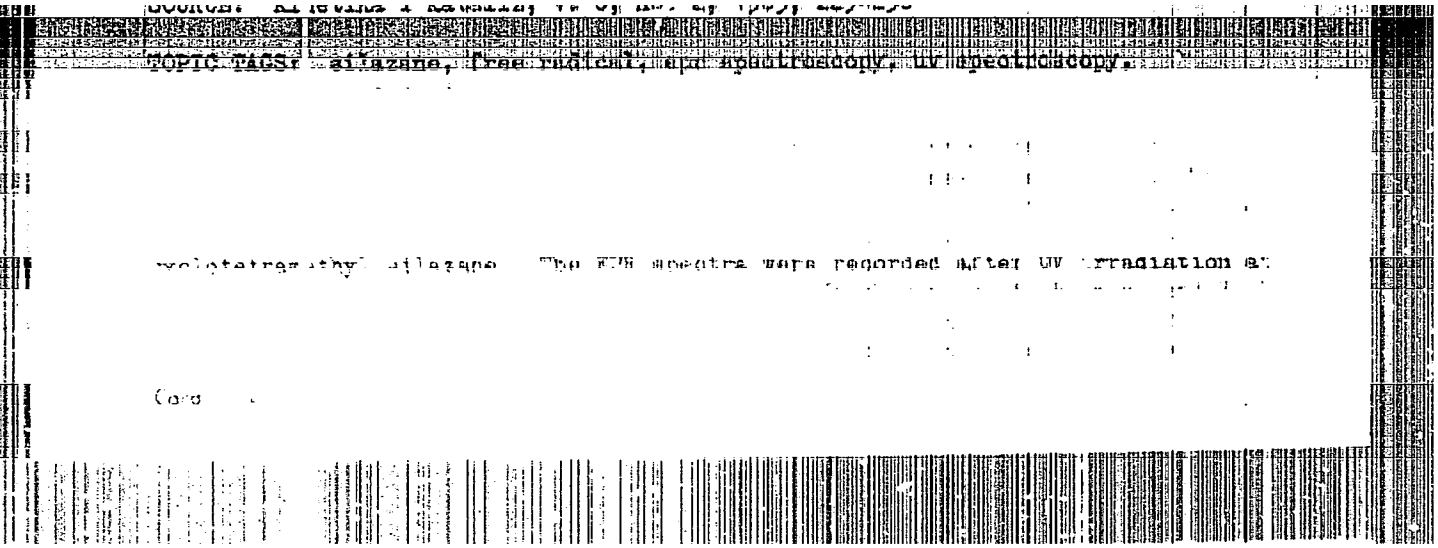
Kak ia dobivalius' vysokoi vyrabotki konservov [How I attain high yields in canning]. Murmansk, Murmanryba, 1952. 12 p.

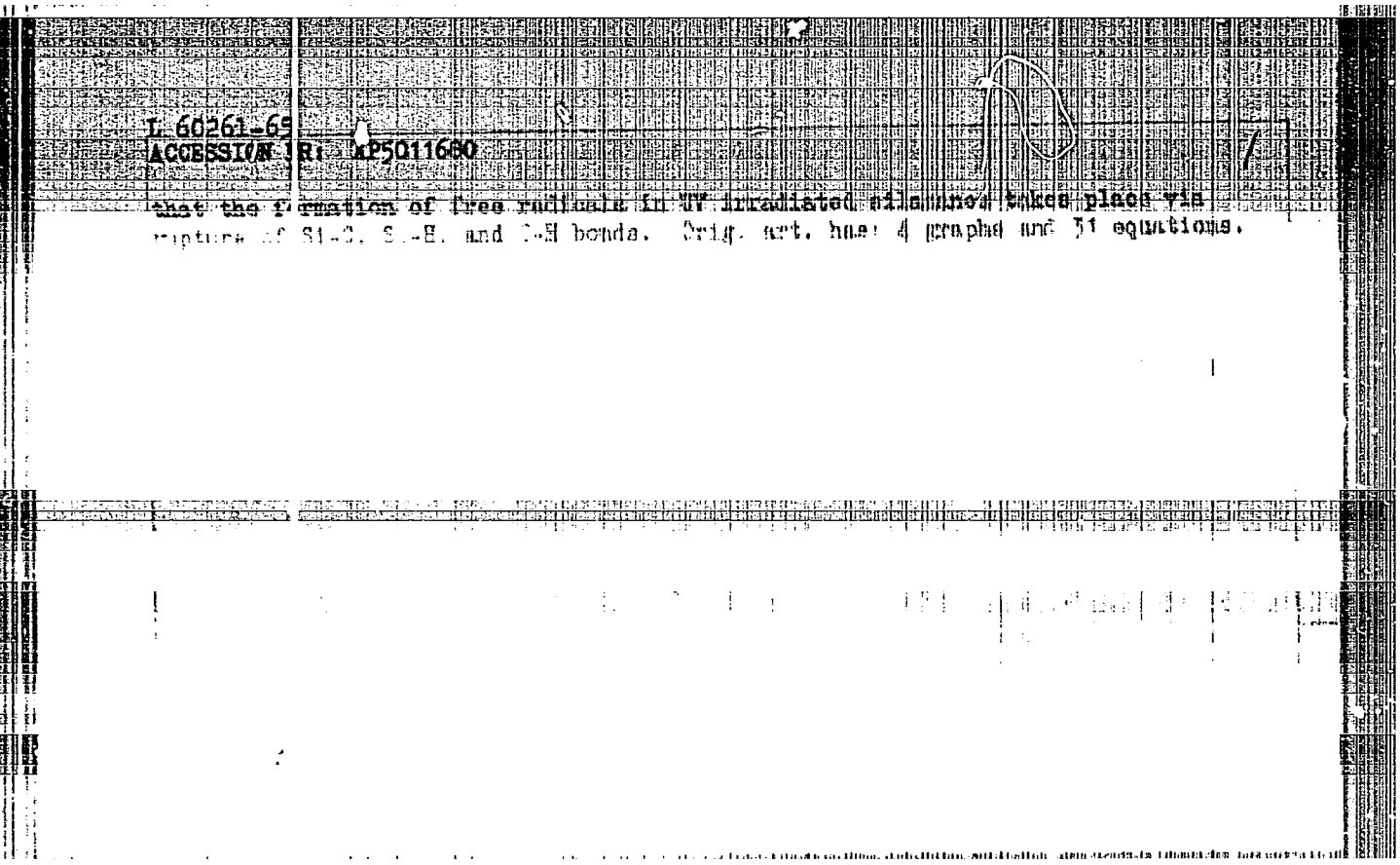
SO: Monthly List of Russian Accessions, Vol. 6, No. 2, May 1953

EPSHTEYN, F.G., SOROKINA, Ye.Yu., TITOVA, G.V., LESHCHINSKAYA, Ye.V., NIYAZEVA, L.D., SEMASHKO, S.A., DUBNYAKOVA, A.M., ZHUZHGINA, M.A., MARTYNOVA, G.D.

Clinical and laboratory data on influenza A, in adults according to finding during the 1953-1954 epidemic. Zhur.mikrobiol. epid. i immun. 29 no.9:29-33 S '58 (MIRA 11:10)

1. Iz Instituta virusologii imeni Ivanovskogo AMN SSSR.
(INFLUENZA, epidemiology,
A1, in Russia (Rus))





L 60261-65
ACCESSION NR: AP5011680

that the formation of free radicals in UV irradiated alkanes takes place via rupture of Si-C, Si-H, and C-H bonds. Orig. art. has: 4 graphs and 31 equations.

ZHUZHGOV, E.L.; BUBNOV, N.N.; VOYEVODSKIY, V.V.

Formation and reactions of free radicals in organosilicon compounds subject to ultraviolet irradiation. Part 1: Polyphenylmethylsiloxane. Kin. i kat. 6 no.1:56-64 Ja-F '65. (MIRA 18:6)

1. Institut khimicheskoy kinetiki i goreniya Sibirskogo otdeleniya AN SSSR.

ZHUZHIKOV, D.P.

Functions of the housefly intestine prior to the onset of feeding. Nauch.dokl.vys.shkoly; biol.nauki no.2:23-27 '63. (MIRA 16:4)

1. Rekomendovana kafedroy entomologii Moskovskogo gosudarstvennogo universiteta im. M.V.Lomonosova.

(FLIES) (DIGESTIVE ORGANS--INSECTS)

ZHUZHIKOV, D.P.

Simple device for oriented imbedding of small objects in paraffin. Arkh.anat.,gist.i embr. 44 no.1:101-102 Ja '63. (MIRA 16:5)

1. Kompleksnaya laboratoriya (nauchnyy rukovoditel' - prof. N.P. Naumov) biologo-pochvennogo fakul'teta Moskovskogo gosudarstvennogo universiteta. Adres avtora: Moskva, V-234, Leninskiye gory, Moskovskiy gosudarstvennyy universitet, biologo-pochvennyy fakul'tet, kompleksnaya laboratoriya.
(MICROSCOPY--TECHNIQUE)

ZHUZHIKOV, D.P.

Formation of the peritrophic membrane in the mosquito Aedes aegypti L. Nauch.dokl.vys.shkoly; biol.nauki no.4:25-27 '62.
(MIRA 15:10)

1. Rekomendovana kafedroy entomologii Moskovskogo gosudarstvennogo universiteta im. Nauch.dokl.vys.shkoly; biol.nauki no.4:25-27 '62.
(MIRA 15:10)

1. Rekomendovana kafedroy entomologii Moskovskogo gosudarstennogo universiteta im. M.V.Lomonosova.
(MOSQUITOES) (DIGESTIVE ORGANS--INSECTS)

ZHUZHIKOV, D.P.

Structure of the peritrophic membrane in Diptera. Vest. Mosk. un. Ser. 6: Biol., pochv. 18 no.1:24-35 Ja-F '63. (MIRA 16:12)

1. Kafedra entomologii Moskovskogo universiteta.

ZHUZHIKOV, D.P.

Possibility of bacteria surviving the metamorphosis of the housefly. Med. paraz. i paraz. bol. 32 no.5:558-562 S-O '63 (MIRA 16:12)

1. Iz kompleksnoy laboratorii biologo-pochvennogo fakul'teta Moskovskogo gosudarstvennogo universiteta (nauchnyy rukovoditel' - prof. N.P. Naumov).

AVDEYEVA, Ye.V.; ZHUZHIKOV, D.P.; ZOLOTAREV, Ye.Kh.; SAGITULLIN, R.S.

Insecticidal properties of some pyrazolyl carbamates. Vest. Mosk. un. Ser. 6: Biol., pochv. 16 no.6:19-25 N-D '61. (MIRA 15:1)

1. Kompleksnaya laboratoriya po izucheniyu sredstv i sposobov bor'by s vrednymi zhivotnymi i boleznyami rasteniy Moskovskogo universiteta.
(Insecticides) (Carbamic acid)

ZOLOTAREV, Ye.Kh.; ZHUZHIKOV, D.P.; AVDEYEVA, Ye.V.

Dependence of the quality of Dalmatian pyrethrum on the methods of harvesting. Vest. Mosk. un. Ser. 6: Biol., pochv. 18 no.2: 40-42 Mr-Ap '63. (MIRA 17:10)

1. Kompleksnaya laboratoriya po izucheniyu sredstv i sposobov bor'by s vrednymi zhivotnymi i boleznyami rasteniy.

ZHUZHIKOV, E.

Reversivno-puskovye ustroistva sovremennykh sudovykh dizelei. Moskva, Gosmorizdat, 1940. 35 p. diagrs.

Reversible starters of modern marine Diesel engines.

DLC: VM770.Z5

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

KRASOVITSKIY, Yu.V.; ZHUZHIKOV, V.A.

Some regularities of the separation process in dust-containing gas stream by filtration at a constant rate. Khim. prom. no.2: 129-132 F '63. (MIRA 16:7)

(Filters and filtration)
(Gases—Purification)

ZHUZHIKOV, V.A., kand.tekhn.nauk

Law governing the filtration when suspensions separate into layers on a filter. Khim.prom. no.4:315-323 Je '60. (MIRA 13:8)
(Filters and filtration)

06227
SOV/64-59-6-19/28

5(1)
AUTHOR: Zhuzhikov, V. A.

TITLE: Laws Governing Filtration in the Case of a Separation of Condensed Suspensions at the Filter

PERIODICAL: Khimicheskaya promyshlennost', 1959, Nr 6, pp 528 - 529 (USSR)

ABSTRACT: Although the subject mentioned in the title would be of great practical value, it has so far not been investigated. The particles in suspension move freely in the liquid, while the movement of particles is greatly impaired in a condensed suspension at the filter, which suggests that there may possibly be a difference between the filtration of a condensed suspension and that of a non-condensed. In order to clarify this problem, the author investigated the filtration of condensed aqueous suspensions of the hydroxides of aluminum, chromium, copper, and iron, as well as of calcium carbonate and talc. The experiments were carried out by means of a vacuum filter with transparent sides. It was shown that in the separation of condensed suspensions by filtration the liquid does not flow through between the solid particles. Experiments on the dependence of the amount of the filtrate obtained on the filtration time in the case of a condensed chromium hydroxide

Card 1/2

suspension (Fig 1) showed that there is no difference between the laws governing the filtration of condensed and non-condensed suspensions, which was also confirmed by experiments concerning the specific resistance of the precipitate (Fig 2). There are 2 figures.

ZHUZHIKOV, V.A.

"Reference guide on solubility. Vol.1: Binary systems". Reviewed by V.A.Zhuzhikov. Khim.prom. no.9:698 S '62. (MIRA 15:11)
(Solubility) (Systems (Chemistry))

ZHUZHIKOV, V.A., kand.tekhn.nauk

Methods of determining the specific resistance of filtration residues at a constant pressure difference. Khim.mash. no.2:17-21 Mr-Ap '60. (MIRA 13:6)

(Filters and filtration)

ZHUZHIKOV, V.A.

Regularities of filtration during the separation of demixing suspensions on a filter. Khim. prom. no.5:371-373 My '63.
(MIRA 16:8)

KRASOVITSKIY, Yu.V.; ZHUZHIKOV, V.A.

Role of the frontal layers of the filtering plate in the process of the separation of solid particles from gases. Khim. prom. 40 no.8:620-621 Ag '64. (MIRA 18:4)

25(1)
AUTHOR: Zhuzhikov, V. A.

SOV/64-59-1-16/24

TITLE: Selecting the Operating Cycle of an Evaporator (O vybore prodolzhitel'nosti raboty vyparnogo apparata)

PERIODICAL: Khimicheskaya promyshlennost', 1959, Nr 1, pp 71-72 (USSR)

ABSTRACT: Methods applied for determining the operating cycle of periodically working filters (Refs 1, 2) can be applied, in analogy, to evaporators taking into account the periodic cleaning of the heating surface from deposits. On the basis of this analogy, equations for the evaporation taking into account the changing thermal resistivity of the deposit layer (1) - (8) are derived in the present case. Subsequently, computations for determining the evaporation time with reference to the maximum efficiency of the evaporator are made with an example of computation in order to ascertain the economy of the whole plant. On account of a graphic representation (Fig) it is found that also in the case of less frequent cleaning - neglecting the conditions of maximum efficiency - the average rate of heat transfer only suffers a slow decrease. There are 1 figure and 8 references, 5 of which are Soviet.

Card 1/1

ZHUZHIKOV, V.A.

KASATKIN, A.G., professor, doktor tekhnicheskikh nauk, redaktor; ZHUZHIKOV, V.A., redaktor; KAFAROV, V.V., redaktor; KAGAN, S.Z., redaktor; LUR'YE, M.S., tekhnicheskiy redaktor

[Processes and apparatus used in chemical technology] Protsessy i apparaty khimicheskoi tekhnologii; sbornik rabot. Pod red. A.G. Kasatkina. Moskva, Gos. nauchno-tekhn. izd-vo khimicheskoi lit-ry, 1953. 115 p. [Microfilm] (MLRA 7:10)

1. Russia (1923- U.S.S.R.) Ministerstvo khimicheskoy promyshlennosti.

(Chemistry, Technical)

ZHUZHIKOV, V.A.

Some principles for designing filters for the separation of demixing suspensions. Khim.prom. no.12:854-860 D '61. (MIRA 15:1)

(Suspensions (Chemistry)) (Filters and filtration)

ZHUZHIKOV, V.A.

Essence of similitude criteria. Khim. prom. 41 no.8:561-565 Ag '65. (MIRA 18:9)

ZHUZHIKOV, Viktor Aleksandrovich; RAMM, V.M., red.; SHPAK, Ye.G., tekhn. red.

[Filtration; theory and practice of the separation of suspensions] Fil'trovanie; teoriia i praktika razdeleniia suspenzii. Moskva, Gos. nauchno-tekhn. izd-vo khim. lit-ry, 1961. 303 p. (MIRA 14:9)
(Filters and filtration) (Suspensions (Chemistry))

L 06088-67

ACC NR: AP6021203 (A) SOURCE CODE: UR/0314/66/000/003/0029/0031

AUTHOR: Zhuzhikov, V. A. (Doctor of technical sciences)

ORG: none

TITLE: Methods for determining the specific resistance of filter cakes

SOURCE: Khimicheskoye i neftyanoye mashinostroyeniye, no. 3, 1966, 29-31

TOPIC TAGS: filtration, specific resistance

ABSTRACT: The article starts with a tabular listing of results given in previously published literature for a variety of substances being filtered. In these articles, measurements were made in two ways (details of methods not given): A--with a constant thickness of the filter cake; B--with increasing thickness of the filter cake. A second table lists the deviations recorded in the value of the specific resistance in the filtering of aluminum, chromium, iron, and copper hydroxides, with measurements by the two methods. The data are treated by statistical theory. Based on the calculated results, a figure shows the dependence of the deviation of the value of the specific resistance on the pressure drop through the cake. It was found that the tendency of the cakes toward further densification during additional filtration is less, the larger the pressure drop at which they were originally formed. If the consideration is limited to a range of pressure drops of 4000-8000 kg/m^2, the specific resistance of the

Card 1/2 UDC: 66.067.1:620.10

L 06088-67

ACC NR: AP6021203

strongly compressed cakes, determined by method A, is greater than that determined by method B by not more than 20%. For practical purposes, it is concluded that measurement of the specific resistance with increasing thickness of the filter cake has undoubted advantages. Orig. art. has: 2 figures and 1 table.

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 005

Card 2/2 JS

ZHUZHIKOVA, Z. M., Cand of Agric Sci -- (diss) "Sowing Norms and the Methods of Sowing Districally Divided Types of Flax," Moscow, 1959, 18 pp (Moscow Agricultural Academy im Timiryazev) (KL, 5460, 128)

ZHUZIN, V. N.

Veprintsev, I. I. and Zhuzin, V. N. - "Carnosine in the muscles of rabbits along with insulin and strychnine cramps", Trudy Astrakh. gos. med. in-ta, Vol. IX, 1948, p. 9-11.

SO: U-3042, 11 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 8,1949).

KIRILLOV, S.A., kand.med.nauk; ZHUZHKOVA, I.F. (Moskva)

Rare case of the cardiovascular form of rheumatic fever. Klin.med. 37 no.10:120-123 O '59. (MIRA 13:2)

1. Iz 6-y klinicheskoy bol'nitsy Mosgorzdravotdela (glavnyy vrach I.N. Kurgannikov).
(RHEUMATIC HEART DISEASE pathol.)

NESMEYANOV, Nik.A.; ZHUZHLIKOVA, S.T.; REUTOV, O.A.

Sulfuration of phosphorylides. Sulfobetaines. Dokl. AN SSSR 151 no.4:856-858 Ag '63. (MIRA 16:8)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
2. Chlen-korrespondent AN SSSR (for Reutov).
(Phosphorus organic compounds) (Sulfuration) (Betaine)

NESMEYANOV, Nik.A.; ZHUZHLIKOVA, S.T.; REUTOV, O.A.

Interaction of phosphorylides with diphenyl iodonium salts.
Izv. AN SSSR Ser. khim. no.1:194-196 '65.
(MIRA 18:2)

1. Moskovskiy gosudarstvennyy universitet.

L 23582-66 EWT(m)/EWP(j)/T RM

ACC NR: AP6005283 (A) SOURCE CODE: UR/0413/66/000/001/0025/0025

INVENTOR: Khaylov, V. S.; Artem'yev, A. A.; Ovakimyan, G. B.; Zhunhikov, V. A.; Nosov, G. P.

ORG: none

TITLE: Method of preparing E-caprolactam, Class 12, No. 177421

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1966, 25

TOPIC TAGS: caprolactam nitration

ABSTRACT: An Author Certificate has been issued describing a method for preparing E-caprolactam for cyclohexane by liquid-phase nitration with nitric acid and hydrogen reduction of the nitrocyclohexane on metallic copper in a medium of cyclohexane and liquid ammonia. To reduce processing time, the tubular reactor is pressure-fed cyclohexane (50-150 atm) plus 25 -- 45% nitric acid in a 1.4 -- 0.5 molar ratio. At the reactor outlet, the reaction mixture is rapidly cooled to 25 -- 30C without lowering the pressrue the nitrocyclohexane is then separated from the mixture by conventional methods and reduced, within 40 -- 45 min at 180 -- 200 atm and a temperature which is gradually increased from 80 -- 85C to 115 -- 120C, to cyclohexanonoxime which is subsequently converted to E-caprolactam by conventional methods. To ensure a constant temperature of 200 -- 250C, the reactor walls at the inlet are washed

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L 23582-66

ACC NR: AP6005283

with a cold liquid circulated from the point of the outlet of the hot reaction mixture to the point of admission of the cold mixture. [LD]

SUB CODE: 07/ SUBM DATE: 21Jul54/

Card 2/2

ZHVACHKIN, D.I

94-3-11/26

AUTHORS: Zhvachkin, D.I., Boberchuk, V.E., Gordenkov, Yu.A., Levenson, L.I., Kiss, T.N., Rogachev, K.I.

TITLE: A High-output Device for Gauging Holes by Means of a Sphere (Vysokoproizvoditel'noye prisposobleniye dlya kalibrovki otverstiya sharikom)

PERIODICAL: Promyshlennaya Energetika, 1958, Vol.13, No.3, p. 19 (USSR).

ABSTRACT: This is a suggestion that received fifth premium in an All-Union competition for the economy of electric power. Manufacture of the bushing for the pressure device of a spinning machine entails particularly accurate machining of the internal diameter. The authors developed a method of gauging this diameter by means of steel balls and introduced it at the Tashkent Textile Machinery Works (Tashtekstil'mash). The device includes a jig to hold the bushing and a pneumatic cylinder which pushes the ball through the hole; the ball then returns to the initial position. The device can be used to calibrate 5 000 bushes per shift with considerable economy of electricity.

There is 1 figure..

AVAILABLE: Library of Congress

Card 1/1

NIKOLYUK, V.F.; ZHVACHKINA, A.A.

Selective feeding of Protozoa on soil bacteria. Izv.Akad.Nauk SSSR. Ser.biol.nauk no.1:63-66 '57. (MIRA 13:6)
(PROTOZOA) (SOILS--BACTERIOLOGY)

KVASNIKOV, Ye.I.; ZHVACHKINA, A.A.; MIKHAYLOVA, Ye.K.

Lactobacillus in the alfalfa rhizosphere. Izv.AN Uz.SSR 3:27-37 '56. (MIRA 12:6)

(Lactobacillus) (Alfalfa)
(Rhizosphere microbiology)

ZHVAGO, A. V.

USSR/ Scientific Organization - Conferences

Card 1/1 Pub. 45 - 14/15

Authors : Aref'yeva, V. A., and Zhvago, A. V.

Title : Scientific conference in Vilnyus

Periodical : Izv. AN SSSR. Ser. geog. 5, 93 - 95, Sep - Oct 1954

Abstract : An account is given of a conference held in the city of Vilnyus in Lithuania in which 20 reports were read dealing with the subjects of geophysics, climatology, hydrology and oceanography. The institutions represented were, the Lithuanian Academy of Sciences, the Geographic Institute of the Soviet Academy of Sciences, the Institute of Oceanography of the Soviet Academy of Sciences, the Directorate of the Hydrometeorological Service of Latvia, the Chair of Climatology of the Vilnyus State University and the Kaunas Polytechnical Institute. The conference lasted from the 10th to the 13th of May, 1954.

Institution: .....

Submitted: .....

S/112/59/000/014/071/085
A052/A001

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1959, No. 14, pp. 244-245, # 30278

AUTHOR: Zhvakin, Yu. I.

TITLE: Measurement of Magnetic Permeability of Ferrites on Radio-Frequencies

PERIODICAL: Tr. Taganrogsk. radiotekhn. in-ta, 1957, 3, No. 2, pp. 59-65

TEXT: A method of measuring magnetic permeability and the tangent of angle of ferrites in the 100 kc-20 Mc band is described. The measurements are carried out by means of a transformer the primary winding of which is a toroidal coil wound on a core of a high-quality dielectric and the secondary winding is a coaxial brass socket with the investigated toroidal sample of ferrite inserted in its field. The parameters of ferrite are determined from the parameters of the transformer measured with a "Q"-meter under the following operational conditions: an open secondary winding, a closed secondary winding without the ferrite sample and a closed secondary winding with the ferrite sample. The calculation relations and the results of measurements are given. Ye. B. Z.

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

Card 1/1

FAVER, I.L., kand. med. nauk; ZHVAKINA, F.N.

Early diagnosis of intracranial injuries in newborn infants.
Akush. i gin. 39 no.4:111-113 Jl-Ag'63 (MIRA 16:12)

1.Iz rodil'nogo otdeleniya bol'nitsy (glavnyy vrach I.V.Kol'tsov) Cherepovetskogo metallurgicheskogo zavoda.

ZHVALEVSKIY, A.S. [Zhvalevskiy, A.S.]; BERSHADSKIY, G.Yu. [Bershads'kyi, H.IU.]

Electromagnetic feeder of SKO (canned food container) lids.
Khar. prom. no.3:46-47 Jl-S '65. (MIRA 18:9)

STANISLAVSKIY, Ye.S.; ZHVANETSKAYA, M.I.

Toxicity and immunogenicity of cellular structures of Escherichia coli. Zhur. mikrobiol., epid. i immun. 41 no.1:66-72 Ja '64.
(MIRA 18:2)

1. Moskovskiy institut vaktsin i syvorotok imeni Mechnikova.

AVALIANI, L.V.; ZHVANIYA, G.A.; RUSADZE, U.S.; KHITSURIANI, D.S.

Treatment and late results of suppurative diseases in newborn infants. Soob. AN Gruz. SSR 38 no.2:491-496 My '65.
(MIRA 18:9)

1. 1-ya gorodskaya detskaya ob"yedinennaya bol'nitsa, Tbilisi.
Submitted December 23, 1964.

L 32190-66 EWT(1) IJP(c) AT

ACC NR: AP6013932 SOURCE CODE: UR/0207/66/000/002/0119/0121

AUTHOR: Zhvaniya, I. A. (Sukhumi); Kucherov, R. Ya. (Sukhumi); Rikenglaz, L. E. (Sukhumi)

ORG: none

55
B

TITLE: Stability of a nonhomogeneous electron beam

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 2, 1966, 119-121

TOPIC TAGS: electron beam, plasma instability, perturbation

ABSTRACT: The authors consider development of perturbation in a nonhomogeneous periodic electron beam to determine whether plasma instability in a limited space is an absolute or a convective process. Theoretical expressions are derived for the perturbations in the electron beam in terms of the density, velocity, charge and mass of the electrons, ion density and potential. The criterion for determining whether the perturbation will increase or decrease is discussed. It is shown that the increment in perturbation is proportional to the square of the amplitude for weak disturbances. Orig. art. has: 15 formulas.

SUB CODE: 20/ SUBM DATE: 25Feb65/ ORIG REF: 003/ OTH REF: 005

LS

Card 1/1

ERISTAVI, K.D.; ZHVANIYA, T.O.

Five years' experience in the use of radioactive iodine in treating thyrotoxicosis. Trudy Inst. eksp. i klin. khir. i gemat. AN Gruz. SSR 11:81-86 '63. (MIRA 17:8)

BOGOSLOVSKIY, Yu.N.; ZHVAKINA, L.D.; KUDRYASHOV, V.I.; MAKAROV, G.N.

Simultaneous measurement of the thermal effects and the viscosity of coal during heating. Zav. lab. 31 no.11:1362-1363 '65.
(MIRA 19:1)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni Mendeleyeva.