

ACCESSION NR: AT4028294

claims that rare earth elements, satellite elements in general, as well as the predominant elements, obviously have a differential motion in the circulation of ore bearing compounds. The process of ore formation in that region took place within a wide temperature range at the beginning of which a quartz-pyrite-chalcopyrite association was formed with structures of decay of the solid solution of cubanite-chalcopyrite. The regular decrease of the rare earth element content in ores, as they are removed from the main ore supply channel, may be explained by the filtration effect and other phenomena caused by a shift of solutions through a complicated system of closed fissures and pores. Orig. art. has: 2 figures and 5 tables.

ASSOCIATION: Institut minerologii, geokhimii i kristalokhimii redkikh elementov, AN SSSR (Institute of Mineralogy, Geochemistry and the Chemistry of Crystals)

SUBMITTED: 00

DATE ACQ: 16Apr64

ENCL: 00

SUB CODE: ML, EL

NO REF SOV: 016

OTHER: 001

Card 2/2

BARANOV, V.F.; KHREKOV, P.A.

Problem of "adaptation" of schizophrenia patients to aminazine.  
Vop.klin., patog. i lech. shiz. no.1:13-15 '64.

(MIRA 18:5)

1. Otdel psikhofarmakologii (zav. - kand.med,nauk G.Ya.Avrutskiy)  
Gosudarstvennogo nauchno-issledovatel'skogo instituta psikiatrii  
Ministerstva zdravookhraneniya RSFSR i Moskovskaya oblastnaya  
psikhiatricheskaya bol'nitsa No.2 imeni V.I.Yakovenko (glavnyy  
vrach - G.F.Moskalenko).

*BARANOV, V.F.*

PHASE I BOOK EXPLOITATION

SOV/5717

Moscow. Inzhenerno-fizicheskiy institut.

Prilozheniye k metodam analiza izlucheniya; sbornik nauchnykh rabot, vyp. 2. (Apparatus and Methods for the Analysis of Radiation; Collection of Scientific Papers, no. 2) Moscow, Atomizdat, 1960. 166 p. 4000 copies printed.

Sponsoring Agency: Ministerstvo vysshogo i srednego spetsial'nogo obrazovaniya RSFSR. Moskovskiy inzhenerno-fizicheskiy institut.

Ed. (Title page): Ye. L. Stolyarova, Candidate of Physics and Mathematics;  
Tech. Ed.: S. M. Popova.

PURPOSE: This collection of articles is intended for specialists in nuclear physics, dosimetry of nuclear radiations, and shielding.

COVERAGE: The articles were prepared by scientists of MIPI (Moscow Physics and Engineering Institute) and presented at the 1957 conference of the Institute. Brief annotations to the articles have been included in the Table of Contents. No personalities are mentioned. References follow each article.

Card 1/8

Apparatus and Methods for the Analysis (Cont.)

SOV/5717

the case of a cylindrical chamber is presented. The equation makes it possible to determine the true ionization density by the value of the ionization current, as well as to determine the optimum dimensions of the ionization chamber under given experimental conditions.

Baranov, V. F. Determination of the Spectral Composition of Screened Electron Radiation by the Absorption Method

117

Formulas for calculating the spectral composition of screened electron radiation by the absorption curve are presented. A comparison of the results with experimental data obtained by a beta spectrometer with a thin magnetic lens showed that the method is suitable for practical purposes.

Baranov, V. F., V. M. Kolobashkin, and Ye. A. Kramer-Ageyev. Energy Calculation of a Beta-Ray Spectrometer With a Transverse Magnetic Field and Without an Iron Component

121

The beta-ray spectrometer, designed for measuring beta radiation to 3 Mev, is compact and requires a maximum power of 7 kw for operation.

Card 5/8

BARANOV, V.F.

Determining the spectral composition of shielded electron radiation by the absorption method. Sbor. nauch. rab. MIFI no.2:117-120'60. (MIRA 13:3)

(Electrons) (Shielding(Radiation))

~~BARANOV~~, V.F.; KOLOBASHKIN, V.M.; ~~KRAMER~~-AGEYEV, Ye.A.

Energy calculation of a beta spectrometer containing no iron  
and a transverse magnetic field. Sbor. nauch. rab. MIFI no.2:121-  
125 '60. (MIRA 14:3)

(Beta-ray spectrometer)

BARANOV, V.D.

Structural-geological position of ore fields in the Zyryanovsk  
region of the Altai. Dokl.AN SSSR 132 no.6:1378-1381  
Je '60. (MIRA 13:6)

1. Krasnoyarskiy institut tsvetnykh metallov im. M.I.Kalinina.  
Predstavleno akademikom D.I.Shcherbakovym,  
(Zyryanovsk region--Ore deposits)

BARANOV, V.F., mashinist

Are there any advantages in using weakened field conditions on electric sections. Elek.i tepl.tiaga 4 no.2:6 F '60.

(MIRA 13:6)

1. Depo Panki Moskovskoy dorogi.  
(Electric railroads)



BARANOV, V.F., mashinist

Practical advice to young engineers. Elek.i tepl.tiaga  
no.7:36-38 J1 '60. (MIRA 13:8)

1. Depo Panki Moskovskoy derozi.  
(Locomotive engineers)

BARANOV, V. F.

BARANOV, V. F. -- "A Beta Spectrometer with Dual Focusing of the Electron Bundle in a Magnetic Field Using a System of Round Coils not Containing Iron." Min Higher Education USSR. Moscow Engineering-Physics Inst. Moscow, 1955. (Dissertation for the Degree of Candidate of Technical Sciences.)

SO: Knizhnaya letopis', No. 4, Moscow, 1956

Baranov, V. I.

AUTHOR: BARANOV, V. F.

89-8-18/20

TITLE: An ironless B-Spectrometer with Double Focussing. (Bezzheleznyy B-spektrometr s dvoynoy fokusirovkoj, Russian)

PERIODICAL: Atomnaya Energiya, 1957, Vol 3, No 3, pp 170 - 171 (U.S.S.R.)

ABSTRACT: A B-spectrometer of the  $\parallel \lambda 2$  - type was built from a number of coils without iron cores. The field produced by the coils causes spatial focussing of the first grade as well as that of the second grade, which is characterized by the coefficients  $1/8, 1/4, 3/8$ . As the field is created without iron, there exists a rigorous even proportionality between the energy of the electrons to be focussed and the coil current.

The electron orbit has a radius of 100 mm. The broadning of the electron beam amounts to  $\pm 10\%$  in a radial direction and to  $\pm 6\%$  in axial direction. As a maximum electron can be measured up to 0,3 MeV. The F-line of Th B has a half width of 0,58% in the case of a fully utilized solid angle of 0,6%. The width of the source is here 1,5 mm, and the rectangular aperture before the hanger is 1,2 mm.

The spectrometer has a maximum  $\phi$  of 400 mm, a hight of 200 mm, and a weight of 40 kg.

Card 1/2

89-8-13/26

An Ironless  $\beta$ -Spectrometer with Double Focussing.

(With 1 illustration )

ASSOCIATION: Not given

PRESENTED BY:

SUBMITTED:

AVAILABLE: Library of Congress

Card 2/2

OV-120-50-3-2/33

AUTHOR: Baranov, V. P.

TITLE: A Beta-Spectrometer with Double Focussing and Not Containing Iron (Beta-Spektrometr s dvoynoy fokussirovkoj bez zheleza)

PERIODICAL: Priroda i Tekhnika Eksperimenta, 1956, No. 7, p. 15-21 (USSR)

ABSTRACT: A description is given of the construction of a beta-spectrometer with a double focussing of the electron beam ( $\pi\sqrt{2}$ ) in a magnetic field produced by a system of circular coils not containing iron. The magnetic field in the radial plane corresponds to the field calculated by Pavinskiy (Ref. 15) and is characterized in the approximate theory of double focussing by the coefficients  $\beta = 1/4, 1/4$  and  $3/8$ . The radius of the stable orbit is 100 cm and the maximum angles of divergence of the beam in the radial and axial directions are  $\pm 10$  and  $\pm 6^\circ$  respectively. The relative line half-width is 0.55% with a solid angle of 0.3%. The instrument will analyse electrons with an energy of up to 0.5 Mev. The system of coils employed is shown in Fig. 1 and the values of

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SOV-11-5-3-2/53

A Beta-Spectrometer with Double Focussing and Not Containing Iron

the various dimensions indicated in that figure are given by Eq.(4). The magnetic field was measured by means of a rotating search coil with an electronic compensating circuit as described in Ref.18. The accuracy of relative measurement was not less than 0.1%. The various types of fields corresponding to the different values of the coefficient  $\beta$  are obtained by altering the position of the coils relative to the mean plane. A sectional drawing of the instrument is given in Fig.3. An example of a spectrum of conversion electrons (P) for the  $TaB$  line is given in Fig.4. Another instrument which has been designed on the basis of the experience gained with the present spectrometer has a stable orbit radius of 200 cm and is designed for work up to 3 Mev. Work is being carried out to extend the range of the spectrometer towards lower energies. The following persons collaborated: Ye. L. Stolyarova, A. V. Zolotavin, V. M. Kolobashkin and Ye. A. Karava-Ageyev. There are

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DDV-120-55-3-2/55

A Beta-Spectrometer with Double Focussing and Not Containing Iron  
3 figures and 18 references (5 Soviet, 1 Swedish, 1 French  
and the rest English) and 2 tables.

ASSOCIATION: Moskovskiy inzhenerno-fizicheskii institut (Moscow  
Physics and Engineering Institute)

SUBMITTED: September 25, 1957.

1. Beta ray spectrum analyzers--Design 2. Beta ray  
spectrum analyzers--Equipment 3. Beta ray spectrum  
analyzers--Performance

Card 3/3

PEYSAKHZON, L.B., kand.ekonocheskikh nauk, dotsent; ALEKSEYEVA, L.L., kand.  
tekh.nauk; MESEZHNIKOV, G.Sh., kand.ekon.nauk; BARANOV, V.P.,  
inzh.; AFANAS'YEV, A.A., kand.tekh.nauk, dotsent

Some potentialities for better use of time and equipment in cutting  
artificial leather in footwear enterprises. Izv.vys.ucheb.zav.;  
tekh.leg.prom. no.6:16-21 '60. (MIRA 14:1)

1. Kiyevskiy tekhnologicheskii institut legkoy promyshlennosti.  
Rekomendovana kafedroy ekonomiki promyshlennosti i organizatsii  
proizvodstva.

(Shoe industry)

(Leather, Artificial)



15153

S/022/62/000/001/016/022

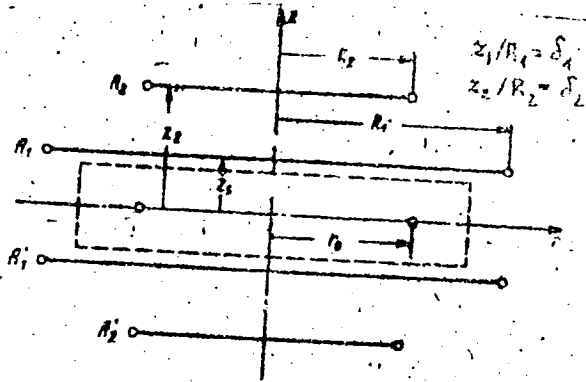
B102/3166

AUTHORS: Baranov, V. F., Kolobashkin, V. M., Dmitriyevskiy, I. M.  
TITLE: An iron-free beta-spectrometer with  $r_0 = 200$  mm  
SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Voprosy dozimetrii i zashchity ot izlucheniya, no. 1, 1962. 109-112

TEXT: The iron-free magnetic beta-spectrometer with double electron focusing ( $\pi\sqrt{2}$ ), designed, constructed and tested by Baranov, was analyzed, and on the basis of the data obtained an enlarged instrument of the same type was built. Its stable-orbit radius of 200 mm is twice that of the first model; the other parameters are the same. It is designed for electrons of  $E \leq 3$  Mev. The maximum angular divergence of the beam is  $\pm 11.4^\circ$  (axial) and  $\begin{matrix} +11.4^\circ \\ -16.2^\circ \end{matrix}$  (radial) if the solid angle is 1.5% of  $4\pi$ . The water-cooled magnet coils have a total resistance of 12.5ohms. On application, the instrument shows a relative half-width of the Cs<sup>137</sup> K-conversion line of 1% in the case of a  $\beta$ -3/8 field, 2 mm source diameter, and a 2 mm input slit. There are 3 figures.

An iron-free beta-spectrometer ...

S/892/62/000/001/016/027  
B102/R186



- 1)  $\gamma_1 = 0,9131$      $\gamma_2 = 1,9910$     ( $\gamma = 1,58$ )
- 2)  $\gamma_1 = 0,2911$      $\gamma_2 = 0,0982$     ( $\gamma = 3,8$ )
- 3)  $\gamma_1 = 0,1281$      $\gamma_2 = 0,8667$     ( $\gamma = 6,9$ )

$$\gamma_1 = \frac{r_0}{R_1} = 0,6002; \quad \gamma_2 = \frac{r_0}{R_2} = 1,9403;$$

$$r_2/r_1 = 1,827$$

Fig. 1  
Diagram of electromagnet

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15454

S/892/62/000/001/017/022  
B102/B186

29, 650

AUTHORS: Baranov, V. F., Dmitriyevskiy, I. M., Zhenin, Yu. S.

TITLE: A beta-gamma-coincidence spectrometer

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Voprosy dozimetrii i zashchity ot izlucheniy, no. 1, 1962, 113-120

TEXT: The authors have designed, constructed and tested an iron-free lens spectrometer with a thick magnetic lens; the chamber size is 1000 · 120 mm, the resolution is  $\delta = 1.6\%$  and the relative solid angle is  $\omega_p = 0.2\%$ . Source and counter are arranged symmetrically in relation to the spectrometer field. It is designed for  $E \leq 3.4$  Mev; the electrons are recorded by a plastic scintillation counter connected through a 50-mm Plexiglas light pipe with an  $\text{ФЭУ -11Б}$  (FEU-11B) photomultiplier. The gammas are recorded with a 30·30 mm NaI(Tl) counter crystal, connected with the same multiplier. The relative aperture of the gamma spectrometer is adjusted by varying the distance between source and transmitter, the magnetic field being compensated by shifting the magnetic shield. The negative pulses induced at the FEU anode by

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A beta-gamma-coincidence spectrometer

S/892/62/000/001/017/022  
B102/B186

electrons are fed via cathode follower and УВ-2 (УШ-2) amplifier to the fast-coincidence circuit; those induced by gammas are fed via a two-stage pre-amplifier, an ААДО-1 (ААДО-1) pulse-height analyzer and also a "Kashtan"-type amplifier to the fast-coincidence circuit. A diode limiter at the input of the coincidence unit limits the positive pulses to a height above 10 v. The subsequent stages are a flip-flop oscillator, a phase inverter, a differentiating RC-circuit with diode, a positive-overriding discriminator and a Rossi-type fast-coincidence circuit. Its time resolution can be varied between  $3 \cdot 10^{-7}$  and  $3 \cdot 10^{-8}$  sec. Finally the pulses are fed via a control unit to the counter radiometer, type ПС-5 (PS-5M) "Volna". The instrument was tested by measuring and comparing the photo-peaks of the Hf<sup>181</sup>, Cs<sup>137</sup>, and Co<sup>60</sup> gamma lines. The deviation from linearity was less than 1%; the half-width of the photopeak of the Cs<sup>137</sup> gamma line was 11%. For graduation, the Cs<sup>137</sup> K-conversion line was used. As an example the spectra obtained for Cs<sup>144</sup>+Pr<sup>144</sup> are given. There are 6 figures.

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S/796/62/000/003/016/019

**AUTHORS:** Baranov, V. F., Dmitriyevskiy, I. M., Titov, B. G.

**TITLE:** Alignment and calibration of a longitudinal magnetic  $\beta$ -spectrometer.

**SOURCE:** Moscow. Inzhenerno-fizicheskiy institut. Pribory i metody analiza izlucheniya. no.3. 1962. 156-163.

**TEXT:** A magnetic nonferrous lens-type  $\beta$ -spectrometer (SM) was constructed for certain spectroscopic tasks, e.g., for the identification of radioactive isotopes. A general-view photo and a cross-section are shown. The device was designed for minimum energy consumption consistent with acceptable electronic-optical characteristics. The SM vacuum chamber (VC) was fashioned from a 120-mm ID seamless Cu pipe and was lined with Al. At the center of the axis a Pb block protects the detector from the  $\gamma$ -rays of the source. Source and detector are placed symmetrically relative to the central plane of the lens, 1,000 mm apart. Vacuum:  $10^{-6}$  mm Hg. A pressure-lock arrangement permits exchange of sources with very little vacuum loss. The external lens diam is 520 mm, the internal diam is 200 mm, thickness 250 mm. The lens consists of 5 identical sections, each comprising 825 coils of Cu bus of  $4.01 \text{ mm}^2$  cross-section, insulated by fiberglass. The sections are water-cooled. The in-series resistance of the 5 sections is 16 ohm. Total power rejection with water cooling: 5 kw. A 150-amp.hr battery feeds the magnetic

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Alignment and calibration...

S/796/62/000/003/016/019

lens (ML) of the SM. The lens focuses 3-mev electrons with an 8.5-a current. The ML is fixed; alignment consists in changing the position and inclination of the VC relative to the ML. Alignment is highly critical and affects primarily the resolution of a SM. The literature on alignment is scant, and a method was developed independently. Preliminary alignment was performed by measurement of the longitudinal component of the magnetic-field strength in two planes perpendicular to the geometric lens axis. The second step brings the geometric axis of the VC and of the diaphragms bounding the electron beam into coincidence with the magnetic axis of the lens. The accuracy of the preliminary alignment is verified by photographing the beam of conversion electrons of the K-line of  $Cs^{137}$ . Concentricity of the central spot (electrons of the continuous  $\beta$ -spectrum) with the geometric axis of the VC and the diaphragm system, and concentric circularity of the monochromatic electron beam are the alignment criteria. The remaining ellipticity of the beam is produced by a misalignment which results in an additive broadening of the spectral line (calculation per Pratt, W., et al., Rev.Sci.Instrum., v.22, no.2, 1951, 92). The resolution was improved by the introduction of an annular diaphragm in the region of the annular focus. The experimental method for the identification of the location of the annular focus is described. The dependence of the resolution and transmission of the spectrometer on the diameter of the counter window, the aperture of the electron beam, and the width of the slit in the annular diaphragm was also

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Alignment and calibration...

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investigated. The calibration of the  $\beta$ -spectrometer was performed at the maxima of the K- and L-lines of the  $\text{Cs}^{137}$  conversion electrons. At the maximum of the K-line ( $H_p = 3381 \text{ e} \cdot \text{cm}$ ) the current through the lens  $I = 2.491 \pm 0.002 \text{ a}$ . Since the  $H_p = f(I)$  in nonferrous spectrometers is a straight line, the electrons recorded at  $I = 1 \text{ a}$  have an impulse  $H_p = 1359 \pm 2 \text{ e} \cdot \text{cm}$ . The calibration was verified by reading the  $\beta$  spectrum of  $\text{P}^{32}$  and the spectrum of the photoelectrons knocked out from a Bi converter ( $3 \text{ mg/cm}^2$ ) by  $\text{Hf}^{181}$   $\gamma$ -rays. A calibration curve was drawn through the test points, viz., a straight line with a slope of  $1359 \pm 3 \text{ e} \cdot \text{cm/a}$ . There are 7 figures and 5 references (1 Russian-language Soviet and 4 English-language, of which one is cited in Russian translation).

ASSOCIATION: None given.

Card 3/3

ACCESSION NR: AT4021260

S/2892/63/000/002/0125/0132

AUTHOR: Baranov, V. F., Dmitriyevskiy, I. N.

TITLE: Determination of partial concentrations of radioactive gases in a mixture with a known isotope composition

SOURCE: Voprosy\* dozimetrii i zashchity\* ot izlucheniya, no. 2, 1963, 125-132

TOPIC TAGS: radioactive gases, argon, krypton, xenon, fission product,  $\beta$  active gas, ionization chamber,  $\beta$  counter, scintillation counter, STS-5, mass spectrometer, scintillation spectrometer, magnetic  $\beta$  spectrometer

ABSTRACT: Methods of determining the partial concentrations of components in the composition of the gaseous wastes of a reactor are studied. The following spectrometric methods of gas analysis are used: 1) absorption method; 2) magnetic  $\beta$  spectrometer; 3) mass spectrometer; 4) scintillation spectrometer. The values for each method are given and means for increasing sensitivity are proposed. Argon 41 concentrations on the order of 0.1 are detected. The value of effectiveness of the counters can be determined by means of straight calibration with a standard gas. The gas calibration to a tolerance of 1% in determining the activity can be accomplished with the aid of a proportional or Geiger counter with a geometry of  $4\pi$ . Orig. art. has: 8 formulas and 2 tables.

Cont. 1/1



BARANOV, V.F.; DMITRIYEVSKIY, I.M.

Determining the partial concentrations of radioactive gases in a  
mixture of known isotope composition. Vop. doz. i zashch. ot izluch.  
no.2:125-132 '63.  
(MIRA 17:3)

L 1308-66 EWT(m) DIAAP

ACCESSION NR: AT5023158

UR/2892/65/000/004/0117/0119

AUTHOR: Baranov, V. F.

TITLE: Absorption corrections to absolute activity measurements by beta radiation

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Voprosy dozimetrii i zashchity ot izlucheniya, no. 4, 1965, 117-119

TOPIC TAGS: beta radiation, radiation counter, radioactivity measurement, radiation dosimetry

ABSTRACT: In absolute measurements of the activity of preparations by their beta radiation using end-window counters, a correction for absorption in the window of the counter is introduced by extrapolation of the absorption curve to zero thickness of the absorber, assuming that absorption of beta radiation in the substance takes place according to an exponential law. However, this absorption takes place according to a law which diverges sharply from " addition, the ..."

L 1309-66 EWT(m) DIAAP

ACCESSION NR: AT5023159

UR/2892/65/000/004/0120/ 0127

AUTHOR: Baranov, V. F.

TITLE: Absorption of monoenergetic electrons and beta spectrum electrons in aluminum <sup>36</sup>/<sub>34</sub>

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Voprosy dozimetrii i zashchity ot izlucheniya, no. 4, 1965, 120-127

TOPIC TAGS: beta spectrum, radiation source, aluminum, beta radiation, radiation dosimetry

ABSTRACT: In the general case, the form of the absorption curve for <sup>19</sup>beta radiation diverges from the exponential and depends on the geometry of the experiment, the type of detector and absorber, the end point energy of the beta spectrum and its form, and also on the atomic number.

L 1303-66 EWT(m) DIAAP

ACCESSION NR: AT5023158

UR/2892/65/000/004/0117/0119

AUTHOR: Baranov, V. F.

TITLE: Absorption corrections to absolute activity measurements by beta radiation

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Voprosy dozimetrii i zashchity ot izlucheniya, no. 4, 1965, 117-119

TOPIC TAGS: beta radiation, radiation counter, radioactivity measurement, radiation dosimetry

ABSTRACT: In absolute measurements of the activity of preparations by their beta radiation using end-window counters, a correction for absorption in the window of the counter is introduced by extrapolation of the absorption curve to zero

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ACCESSION NR: AT5023158

which must be introduced in the extrapolation of the mean exponential portion of the absorption curve to zero thickness to obtain the true velocity in the absence of an absorber. A table shows the dependence of the values of the half value layer on the end point energy. Orig. art. has: 1 formulas, 1 figure and 2 tables

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: NP

NR REF SOV: 002

OTHER: 001

Card 2/2

L 1309-66 EWT(m) DIAAP

ACCESSION NR: AT5023159

UR/2892/65/000/004/0120/ 0127

AUTHOR: Baranov, V. F.

TITLE: Absorption of monoenergetic electrons and beta spectrum electrons in aluminum 26  
341

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Voprosy dozimetrii i zashchity ot izlucheniya, no. 4, 1965, 120-127

TOPIC TAGS: beta spectrum, radiation source, aluminum, beta radiation, radiation dosimetry

ABSTRACT: In the general case, the form of the absorption curve for beta radiation diverges from the exponential and depends on the geometry of the experiment, the type of detector and absorber, the end point energy of the beta spectrum and its form, and also on the atomic number of the beta radiation. Measurements were made of the absorption of monoenergetic electrons in aluminum over a wide range of energies from 0.1-1.5 Mev. Electron sources were preparations of P<sup>32</sup> and Cs<sup>137</sup>. Results (given in graphic and tabular form) were averaged over different energies of the monoenergetic electrons and the maximum mean free

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L 1309-66

ACCESSION NR: AT5023159

path of the monoenergetic electrons was determined. It was found that the form of the absorption curve for monoenergetic electrons, with an accuracy of  $\pm 3\%$ , does not depend on the energy of the electrons. Curves were calculated for absorption in aluminum for the following beta radiation sources: W<sup>185</sup>, P<sup>32</sup>, Ar<sup>41</sup>, Kr<sup>85</sup>, Xe<sup>133</sup>. Orig. art. has: 4 formulas, 6 figures and 4 tables

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: NP

NR REF SOV: 003

OTHER: 004

*mlr*  
Card 2/2

BARANOV, V.F.

Dependence of energy losses averaged over the electron spectrum on the end-point energy of the beta spectrum, the atomic number of the beta emitter, and the type of transition. Atom. energ. 19 no.5:450-451 N 165. (MIRA 18:12)



BARANOV, V. G.

Changes in sensitivity to insulin during insulin therapy in diabetes. V. G. Baranov. *Byull. Vsesoyuz. Inst. Ekspil. Med. U. S. S. R.* No. 6, 37(1936). Prolonged administration of insulin to diabetic patients, doses are used which would keep the blood sugar below 150 mg. led to an increase in sensitivity to insulin. In some cases administration of insulin could be completely dispensed with. Similar results were obtained on a completely de-pancreatized dog. S. A. Corson

ASB 51A METALLURGICAL LITERATURE CLASSIFICATION



BARANOV, V. G.; FYSHINA, S. P.; and SPERANSKAYA, Ye. N.

"Disturbances of the Higher Nervous System Due to Induced Insulin Hypoglycemia."  
Report Nos. I and II. Fiziol Zhur SSSR, Vol. 34, No. 6, 1948.

Report No I. :Experimental data showed: (1) Pronounced, but brief hypoglycemia led to regular two-phase changes in the cerebral cortex. (2) On day of recovery from hypoglycemia, all conditioned reflexes disappeared but returned through two (subnormal and above normal) phases, 8-10 days in duration. (3) Analogous conditions were of shorter duration in milder hypoglycemia with corresponding periods of reduced reflex action.

Report No 2. In these experiments, one or several small doses in several days produced a mild degree of hypoglycemia without external symptoms. Sugar content curves indicated the intensity of these conditions. Role of sympathetic nerve system in changes in the cerebral system due to hypoglycemia is only one link in a chain of physiological disturbances:

Lab of Endocrinol, Inst of Evolutionary Physical and Path of Higher Nervous Syst in Acad I. P.Pavlov, Lab of Endocrinol Inst of Experimental Med, Acad Med Sci USSR.

BARANOV, V. G.

Abstracts of World Medicine Vol 7 1950

1155. So-called Menopausal Hypertension. 1. Does Menopausal Hypertension Exist? (К вопросу о так называемой климактерической гипертензии. 1. Существует ли климактерическая гипертония?)  
 V. G. BARANOV and V. M. ДИДАН. Клиническая Медицина [Klin. Med., Mosk.] 27, No. 7, 38-45, July, 1949. 30 refs.

The authors studied the blood pressure in a series of Leningrad women, aged 40 to 49, some still menstruating and some menopausal. The systolic and diastolic arterial pressure were higher in the latter group than in the former. The increase in systolic pressure was considered significant by the authors, who have applied statistical tests. [Although several other relevant figures are quoted, the numbers of cases in the groups are omitted.]

Jeffrey Bous

BARANOV, V.G.

Present problems in endocrinology in relation to Pavlov's teaching.  
Ter. arkh. 23 no.1:3-10 Jan-Feb 51. (CML 20:8)

1. Doctor Medical Sciences. 2. Of the Laboratory of Neural Regulation  
of the Endocrine Functions of the Institute of Physiology imeni I.P.  
Pavlov of the Academy of Sciences USSR.

BARANOV, V. G.

USSR

The use of folliculin in climacteric associated with hypertension. V. G. Baranov and E. I. Gorovaya (I. Med. Pavlov-Inst. Acad. Med. Sci., U.S.S.R., Leningrad). *Terap. Arkh.* 23, No. 3, 15-25(1951); *Chem. Zentr.* 1952, 1679.—In cases of the simultaneous presence of hypertension and menopause, the administration of 10,000-50,000 units of folliculin (I) daily did not essentially affect the blood pressure. This was true whether the hypertension developed simultaneously with the onset of menopause or before or after its onset. I, therefore, has no specific depressor effect on hypertension developing during menopause.  
M. G. Moore

BARANOV, V. G.

Problem of nervosism in endocrinology. Ter. arkh., Moskva  
23 no. 6:88-89 Nov-Dec 1951. (CLML 21:3)

1. Professor.

BARANOV, V. G.; SUKHODAROVA, A. D.

Articular complications in the treatment of adrenal insufficiency with desoxycorticosterone acetate. Klin. med., Moskva 29 no.7:22-24 July 1951. (CIAML 21:1)

1. Of the Laboratory for the Nervous Regulation of Endocrine Functions (Head -- Prof. Ye. N. Speranskaya), Institute of Physiology imeni I. P. Pavlov (Director -- Academician K. M. Bykov) of the Academy of Sciences USSR, and of the Faculty Therapeutic Clinic (Acting Director -- Prof. T. S. Istamnova), First Leningrad Medical Institute imeni I. P. Pavlov and of the Hospital imeni Kuybyshev, Leningrad.



1. BARANOV, V. G., Prof.
  2. USSR (600)
  4. Shereshevskiy, Nikolai Adol'Fovich, 1885
  7. Thyrotoxicoses (Basedow's disease and hyperthyreosis). N. A. Shereshevskiy. Reviewed by Prof. V. G. Baranov. Terap. arkh. 24, No. 4, 1952.
- 
9. Monthly List of Russian Accessions, Library of Congress, January 1953, Unclassified.

BARANOV, V.G.; SPERANSKAYA, Ye.N., professor, zaveduyushchiy; BYKOV, K.M., akademik, direktor.

Problem of classification of diseases of the thyroid gland which occur during overactivity. Terap.arkh. 25 no.3:15-17 My-Je '53. (MLRA 6:9)

1. Laboratoriya nervnoy regulyatsii endokrinnykh funktsiy Instituta fiziologii imeni I.P.Pavlova Akademii nauk SSSR (for Speranskaya and Baranov). 2. Institut fiziologii imeni I.P.Pavlova Akademii nauk SSSR (for Bykov).  
(Thyroid gland--Diseases) (Nosology)

BARANOV, V.G.

Principles of management and method of therapy of diabetes mellitus.  
Ter. arkh., Moskva 25 no.4:3-12 July-Aug 1953.      (GIML 25:4)

1. Corresponding Member AMS USSR. 2. Of the Laboratory of Nervous Regulation of Endocrine Functions (Head -- Prof. Ye. N. Speranskiy) of the Institute of Physiology imeni I. P. Pavlov (Director -- K. M. Bykov) of the Academy of Sciences USSR and the Faculty Therapeutic Clinic (Acting Director -- Prof. T. S. Istamanova) of First Leningrad Medical Institute imeni I. P. Pavlov.

BARANOV, V.G.

Role of the central nervous system in pathogenesis of thyrotoxicosis.  
Trudy Inst. fiziol. 3:565-575 '54. (MLRA 8:2)

1. Laboratoriya nervnoy regulyatsii endokrinnykh funktsiy. Zaveduyushchiy Ye.N.Speranskaya.  
(HYPERTHYROIDISM, etiology and pathogenesis,  
pathogen. role of CNS)  
(CENTRAL NERVOUS SYSTEM, in various diseases,  
hyperthyroidism, pathogen. role)

ДАНТИВУ, V. G.

Baranov, V. G.: *Bolezni endokrinnol sistemy i obmena  
veshchestv (Diseases of the Endocrine System and Me-  
tabolism)*. Moscow: Medgiz, 1955. Reviewed in *Voprosy  
Pitaniya* 15, No. 6, 50-8 (1956).

+Leningrad (MLRA)

U.S.S.R.

✓ Influence of small doses of thyroïdin on the higher nervous system activity in dogs. V. G. Baranov, E. N. Speranskaya, and D. S. Tendler (I. P. Pavlov Inst. Physiol., Acad. Sci. U.S.S.R., Leningrad). *Problemy Endokrinol. i Gormonoterap.* 1, No. 1, 28-33(1955).—An alteration in the conditioned reflex activity of dogs was obtained by the administration of small doses of thyroïdin which did not affect the O consumption, indicating the influence of small doses of thyroïdin on the nerve cells. Oxygen-consumption measurements are not always a reliable criteria of excess of thyroxine in the organism, as they do not detect the early effects of thyroxine on the nerve cells. This may have a bearing on various diseases, such as neurosis, in which no visible or measurable changes in the thyroïd gland or its activity can be detected. J. A. Stekol

BARANOV, V.G., professor,

Present status and prospects in endocrinological research.  
Vest. AMN SSSR no.4:30-36 '55.

(MIRA 9:2)

1. Chlen-korrespondent AMN SSSR.  
(ENDOCRINOLOGY,  
in Russia, research)

BARANDV, V.G.

Higher nervous activity in thyrotoxicosis and in hypothyreosis.  
Zhur.vys.nerv.deiat.5 no.3:336-343 My-Je '55. (MLRA 8:10)

1. Institut fiziologii im. I.P.Pavlova Akademii nauk SSSR.  
(HYPOTHYROIDISM, physiology,  
higher nervous funct.)  
(HYPERTHYROIDISM, physiology,  
higher nervous funct.)  
(CENTRAL NERVOUS SYSTEM, in various diseases,  
hyperthyroidism. & hypothyroidism, higher nervous funct.)



BARANOV, V.G..

.....

Glands of internal secretion. Nauka i zhizn' 22 no.1:26-28  
Ja '55. (MLRA 8:2)

1. Chlen-korrespondent Akademii meditsinskikh nauk SSSR.  
(Glands, Ductless)

BARANOV, V.G., glavnyy veterinarnyy vrach.

Veterinary service at the "Kuban'" (Order of Lenin) State Farm.  
Veterinariia 32 no.7:32-36 J1 '55. (MLRA 8:9)

1.Krasnodarskiy trest zernovykh sovkhovov.  
(VETERINARY MEDICINE)

U.S. / Medicine - Pharmacology

Card 1/2

17, 1/19

FD-2799

Author : Baranov, V. G.; \*Speranskaya, Ye. N.; Tendler, D. S.

Title : Effect of small doses of thyroïdin on the higher nervous activity of dogs.

Periodical : Byul. eksp. biol. i med. 6, 3-7, June 1955

Abstract : This article covers clinical and experimental studies of the effect of the cerebral cortex and subcortical formations on the activities of the thyroid gland, and of changes in the functional conditions of the latter on the activities of the higher division of the central nervous system. Author administered thyroïdin to dogs in doses small enough not to affect the basal metabolism. Results showed that, even in small doses, thyroïdin affects the activity of the cerebral cortex. This made revision of the problem of the physiological limits of the thyroid gland functions mandatory. Data obtained closely parallel those of V. G. Baranov and V. M. Dil'myan obtained from patients with hypothyreosis after use of small doses of thyroïdin: decrease to normal of sharply increased cholesterolin

Card 2/2

FD-2799

Abstract : content in the blood and preservation of low basel metabolis.  
11 USSR references, 3 since 1940, graphs.

Institution : Laboratory of Nervous Regulation of Endocrine Function (Head\*)  
Institute of Physiology imeni I. P. Pavlov (Dir: Academician  
K. M. Bykov), Academy Sciences USSR, Leningrad

Submitted : 20 Jun 1954

BARANOV, V.G.(Leningrad); DIL<sup>o</sup>MAN, V.M. (Leningrad)

Treatment with small doses of thyroxin for thyroid hypofunction complicated by coronary atherosclerosis. Probl. endok. i gorm. 2 no.1:13-19 Ja-F 1956. (MLRA 9:10)

1. Iz laboratorii vozrastnoy fiziologii i patologii cheloveka (zav. - chlen-korrespondent AMN SSSR prof. V.G.Baranov) Instituta Fiziologii imeni I.P.Pavlova AN SSSR (dir. - akad. K.M.Bykov) i iz fakul<sup>o</sup>tetskoj terapevticheskoj kliniki (dir. - prof. T.S. Istamanova) I Leningradskogo meditsinskogo instituta imeni akad. I.P.Pavlova.

(HYPOTHYROIDISM, complications,  
coronary arteriosclerosis, ther., thyroxin (Rus))  
(CORONARY DISEASE,  
arteriosclerosis, with hypothyroidism, ther.,  
thyroxin (Rus))  
(ARTERIOSCLEROSIS,  
coronary, with hypothyroidism, ther., thyroxin (Rus))  
(THYROXIN, therapeutic use,  
hypothyroidism in coronary arteriosclerosis (Rus))

BARANOV, V.G., doktor meditsinskikh nauk.

Trip to Pakistan. Vest.AN SSSR 26 no.8:69-71 Ag '56. (MLRA 9:9)  
(PAKISTAN--MEDICINE)

BARANOV, V.G.

EXCERPTA MEDICA Sec.2 Vol.9/9 Physiology, etc. Sept 56

4189. BARANOV V.G. and ROSOVA E.I. Lab. of growth Physiol. and Pathol.,  
I.P. Pavlov Inst. of Physiol., AN, SSSR, Leningrad. \*Changes of  
conditioned and unconditioned vasomotor reflexes in  
old people (Russian text) FIZIOL. Ž. 1956, 42/2 (203-209)  
Illus. 5

Vasoconstriction in the forearm (plethysmographically recorded), produced by  
immersion in cold water (6-7°) for 30 sec., was well maintained in 12 healthy  
people aged 59 to 69 yr., but conditioned reflexes on this basis (unconditioned  
stimulus: cold application; conditioned stimulus: metronome beat) could be ob-  
tained in only 2 of the subjects. In contrast, in all 10 subjects of a control group  
from 18 to 40 yr. conditioned reflexes were obtained which were essentially  
identical with those to the direct cold application.

Simonson - Minneapolis, Minn.

BARANOV, V.G., professor; DRACHINSKAYA, Ye.S.; DAVIDOVSKIY, N.M.

Preoperative care of patients with toxic goiter [with summary in English p.153] Vest.khir. 77 no.12:86-91 D '56. (MLRA 10:2)

1. Iz laboratorii vozrastnoy fiziologii i patologii cheloveka (zav. - prof. V.G.Baranov) Instituta fiziologii im. I.P.Pavlova (dir. - akad. K.M.Bykov) Akademii nauk SSSR, fakul'tetskoy khirurgicheskoy kliniki (zav. - prof. A.V.Mel'nikov) i fakul'tetskoy terapevticheskoy kliniki (zav. - prof. T.S.Istamanova) 1-go Leningradskogo meditsinskogo instituta im. I.P.Pavlova. 2. Chlen-korrespondent AMN SSSR (for Baranov)  
Adres Baranova: Leningrad, pr.Dobrolyubova, d.13, kv.5.

(HYPERTHYROIDISM, surg.  
preop. care)

(PREOPERATIVE CARE, in various dis.  
hyperthyroidism)



USSR / Human and Animal Physiology. Growth Physiology.

T

Abs Jour : Ref Zhur - Biol., No 15, 1958, No. 69755

Author : Baranov, V. G.

Inst : Not given

Title : Certain Peculiarities of Human Physiology and Pathology  
in the Transitional Period of Development to Old Age

Orig Pub : Klinich, meditsina, 1957, Vol 35, No 9, 54-61

Abstract : Changes of development arising in the transitional period to old age, both in the higher divisions of the CNS and in the glands of internal secretion, are discussed. On the basis of findings in the literature and earlier-published original data, the author discusses the influence of developmental heightening of reactivity of the hypothalamus on the onset of hypertension in middle-aged people, as well as obesity and climacteric neurosis; age changes in the functions of the cerebral cortex and their interaction with hormonal factors in the development of the menopause, climacteric neurosis, and elevations of cholesterol in the blood; and the use of estrogens and thyroid hormone in prophylaxis and treatment of atherosclerosis. Bibliography contains 48 titles. -- M. N. Kovalova

~~Card 1/e~~

BARANOV, V.G.

"Certain Problems of the Physiology and Pathology of the Climacteric."

Theses of the Proceedings of the Annual Scientific Sessions 23-26 March 1959  
(All-Union Institute of Experimental Endocrinology)

From the Laboratory of Age Physiology and Human Pathology (Head--Corresponding Member of the Academy of Medical Sciences USSR V. G. Baranov) of the Institute of Physiology imeni I. P. Pavlov of the Academy of Medical Sciences USSR (Director -- Academician K. M. Bykov)

BARANOV, V.G.

Report on the Third Congress of the International Diabetic Federation.  
Vest. AMN SSSR 14 no.2:59-64 '59. (MIRA 12:4)

1. Chlen-korrespondent AMN SSSR.  
(DUSSELDORF--DIABETES--CONGRESS~~ES~~)

BARANOV, V.G., glavnyy vetvrach

Utilization of the LSD the apparatus in Krasnodar Territory.  
Veterinariia 36 no.4:71-72 Ap '59. (MIRA 12:7)

1. Krayevoye upravleniye sel'skogo khozyaystva.  
(Krasnodar Territory--Disinfection and disinfectants

BARANOV, V.G.

The hygienic condition of the farm is a guarantee of the health of animals and of an increase in their productivity. Veterinariia 36 no.6:14-18 Je '59. (MIRA 12:10)

1. Glavnyy veterinarnyy vrach Krasnodarskogo krayevogo upravleniya sel'skogo khozyaystva.  
(Kuban--Veterinary hygiene)

BARANOV, V.G.; BLAGOCHKIANNAYA, Ya.V.; DAVDOVSKIY, R.R.; LOSKUNOVA, Ye.A.; and  
NIKOLAYENKO, N.V.

"The Nervous Factor in Pathogenesis of Thyrotoxicosis."

report to be submitted at the 4th Intl Goiter Conference, London, England, 5-8 Jul 1965

BARANOV, V.G.; PODOL'SKAYA, I.Yu.; ROZOVSKAYA, I.T.

Function of the adrenal cortex in women during the course of aging  
and in menopause. Probl. endok. i gorm. 6 no. 3:95-103 My-Je '60.  
(MIRA 14:1)

(ADRENAL CORTEX) (AGING) (CLIMACTERIC)

BARANOV, V.G.; BLAGOSKLONNAYA, Ya.V.; NIKOLAYENKO, N.F.

Relation between neuroses and thyrotoxicosis. Terap.arkh. 32  
no.12:24-29 '60. (MIRA 14:2)

1. Iz laboratorii vozrastnoy fiziologii i patologii cheloveka  
(zav. - deystvitel'nyy chlen AMN SSSR prof. V.G. Baranov) Insti-  
tuta fiziologii imeni I.P. Pavlova AN SSSR.  
(NEUROSES) (HYPERTHYROIDISM)



BARANOV, V.G., prof. (Leningrad)

Climateric and some complications. Klin.med. 38 no.12:18-23  
D '60. (MIRA 14:2)

1. Iz Instituta fiziologii imeni I.P. Pavlova AN SSSR (dir. --  
chlen-korrespondent AN SSSR deystvitel'nyy chlen AMN SSSR prof.  
V.N. Chernigovskiy) i iz Instituta akusherstva i ginekologii  
AMN SSSR (dir. - chlen-korrespondent AMN SSSR prof. P.A. Belo-  
shanko [deceased]). Deystvitel'nyy chlen AMN SSSR (for Baranov).  
(CLIMATERIC)

BARANOV, V.G.

Some problems in the pathogenesis and treatment of diffuse toxic goiter. Vest. AMN SSSR 16 no.2:47-52 '61. (MIRA 14:10)

1. Institut fiziologii imeni I.P.Pavlova AN SSSR i Akademicheskaya endokrinologicheskaya gruppa AMN SSSR.  
(GOITER)

VOLYNSKIY, Z.M., prof.; GILYAREVSKIY, S.A., prof.;  
GEFTER, A.I., prof.; DEMIN, A.A., prof.; ZELENIN, V.F., prof.;  
ISTAMANOVA, T.S., prof.; KEDROV, A.A., prof.; MESHALKIN, Ye.N.,  
prof.; KEDROV, A.A., prof.; MESHALKIN, Ye.N., prof.; SAVITSKIY,  
N.N., prof.; FOGEL'SON, L.I., prof.; KHVILIVITSKAYA, M.I., prof.;  
LUKOMSKIY, P.Ye., prof., red. toma; MYASHNIKOV, A.L., prof., otv.  
red.; TAREYEV, Ye.M., prof., zam. otv. red.; BAGDASAROV, A.A.,  
prof.[deceased], red.; BARANOV, V.G., prof., red.; VOVSI, M.S.,  
prof., red.[deceased]; IVANOV, V.N., prof., red.[deceased];  
KURSHAKOV, N.A., prof., red.; MOLCHANOV, N.S., prof., red.;  
NESTEROV, A.N., prof., red.; SPERANSKIY, I.I., prof., red.  
[deceased]; ZAMYSLOVA, K.N., prof., red.; PERCHIKOVA, G.Ye.,  
kand. med. nauk, red.; ERINA, Ye.V., kand. med. nauk, red.;  
LYUDKOVSKAYA, Yu.S., tekhn. red.; BEL'CHIKOVA, Yu.S., tekhn.red.

[Multivolume manual on internal diseases]Mnogotomnoe rukovodstvo  
po vnutrennim bolezniam. Otv. red. A.L.Miasnikov. Moskva,  
Medgiz. Vol.1. [Diseases of the cardiovascular system]Bolezni  
serdechno-sosudistoi sistemy. Red. toma: P.E.Lukemskii i N.N.  
Savitskii. 1962. 686 p. (MIRA 15:12)

(Continued on next card)

BARANOV, V.G.

~~Importance of the endocrine factor~~ in adaptation and compensation in  
the genesis of some pathological states. Vest.AMN SSSR 17 no.4:38-44  
'62. (MIRA 15:8)  
(ENDOCRINOLOGY) (ADAPTATION(PHYSIOLOGY)) (ADAPTATION(BIOLOGY))

В.И.ИВ, В.И.: ...

...  
...  
... (1988-1989)

1. ...

BAPANOV, V.G.

review of L.N. Babanov's book "Bioscience". *Trudi. Seriya. Estestvo-*  
*9 no.6:119-120. R-U. 1963. (MIRA 10:11)*

BARANOV, V.G., prof.; LESHCHENSKAYA, A.F.; LIBERMAN, I.L., kand. med. nauk;  
SAMSONOVA, N.K.; SHNEIDERMAN I.M.

Prevalence of diabetes mellitus according to a survey of the Leningrad  
population. Sov. med. 28 no.4:57-61 Ap '64.

(MIRA 17:12)

1. Laboratoriya vozrastnoy fiziologii i patologii cheloveka Instituta  
fiziologii AN SSSR i endokrinologicheskoy otel Instituta akusherstva  
i ginekologii AMN SSSR, Leningrad. 2. Deystvitel'nyy chlen AMN SSSR  
(for Baranov).

BARANOV, V.G., prof.; ARSEN'YEVA, M.G.; RASKIN, A.M.; RAFAL'SKIY,  
Ya.D.; SAVCHENKO, O.N.; STEPANOV, G.S.; ALIPOV, V.I., red.

[Physiology and pathology of the female climacteric] Fizio-  
logiia i patologiia klimakteriia zhenshchiny. Leningrad,  
Meditsina, 1965. 269 p. (MIRA 18:9)

1. Deystvital'nyy chlen AMN SSSR (for Baranov).



BARANOV, V.G.; LIBFEMAN, I.I., SOLODOVNIKOVA, I.M.

Some fundamental problems of the pathogenesis of a certain disease.  
Vest. AN SSSR 20 no.10:36-47 1965.

(MIRA 18-20)

I. Institut fiziologii imeni I.P.Pavlova AN SSSR; Institut  
akusherstva i ginekologii AN SSSR, Leningrad.

BARANOV, V.G.; NIKOLAYENKO, H.F.; STEPANOV, G.S.

Treatment of diffuse toxic goiter with potassium perchlorate combined with reserpine. Probl. endok. i gorm. 11 no.1:3-9  
Ja-F '65. (MIRA 18:5)

1. laboratoriya vozrastnoy fiziologii i patologii endokrinnoy sistemy cheloveka (zav. - prof. V.G. Baranov) Instituta fiziologii imeni Pavlova (dir. - akademik V.N. Chernigovskiy) AN SSSR i kafedra endokrinologii (zav. - prof. V.G. Baranov) Instituta usovershenstvovaniya vrachey imeni Kirova, Leningrad.

BARANOV, V.G.; BOKHOLOVA, I.M.

Model of latent experimental diabetes mellitus in rats and factors favoring its change to manifest diabetes. Probl. endok. i ginek. 11 no.2:50-56 Mr-Apr '65.

1. laboratoriya voprastnoy fiziologii i patologii funktsionnoy sistemy cheloveku (zav. - prof. V.G.Baranov) Institut fiziologii imeni I.P.Pavlova (direktor - akademik V.R. Chernyshevskiy) i otдел endokrinologii (nauchnyy konsultant - prof. A. A. Gerasimov) Instituta akusherstva i ginekologii (direktor - prof. A. A. Maslakov) AMN SSSR, Leningrad.

ACC NR: AP7000032

SOURCE CODE: UR/0051/66/021/005/0610/0619

AUTHOR: Baranov, V. G.

ORG: none

TITLE: Scattering of polarized light by large anisotropic particles

SOURCE: Optika i spektroskopiya, v. 21, no. 5, 1966, 610-619

TOPIC TAGS: polymer, light polarization, light scattering, molecular crystal, crystal anisotropy, crystalline polymer

ABSTRACT: The article deals with relationships between the supra-molecular formations in polymers in the process of their crystallization from melt or solution and the optical models of such formations. The models can be classified, from the optical viewpoint, as follows: 1) formations with spherical or cylindrical symmetry; 2) formations without order or symmetry; 3) formations with correlation order; and 4) formations with definite crystallographic order. The analysis, which proceeds from certain findings of Western authors (Keith, J. Polymer Sci., A2, 1964, 4339; Stein and Powers, *ibid*, 1962, 163; Rhodes and Stein, J. Appl. Phys., 32, 1961, 2344; Stein and Wilson, *ibid*, 1962, 1914), involves investigation of the scattering of polarized light on the following elementary anisotropic optical models: a) a sphere; b) a rectangular

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UDC: 535.361-4

ACC NR: AP7000032

parallelepiped; c) a cylinder; and d) a disk. Formulas for the distribution of scattering intensities are deduced for these models. A comparison of analytical findings with experimental data shows a correspondence between the theoretical intensity distribution patterns and those actually observed. The formulas also make it possible to calculate the linear dimensions of the scattering elements from the data of the observed diffractograms. The scattering from spherulite-type elements, as modeled by optically anisotropic spheres by Stein and Rhodes (J. Appl. Phys., 31, 1960, 1873), is related and compared to the modeling by disks, which yields qualitatively similar results. Conditions under which the relatively weak secondary maxima of scattering intensity can be observed (and were actually observed by Plaza and Stein [J. Polymer Sci., 40, 1959, 267]) are explained. Orig. art. has: 6 figures and 7 formulas. [WA-72]

SUB CODE: 20/ SUBM DATE: 19May65/ ORIG REF: 008/ OTH REF: 008

Card 2/2

L 60263-65 EPF(c)/EWP(j)/EWT(m)/T Pc-4/Pr-4 JAJ/RM

ACCESSION NR: AP5013060

UR/0190/65/007/005/0854/0859  
678.01:53

37  
36  
6

AUTHORS: Frenkel', S. Ya.; Volkov, T. I.; Baranov, V. G.; Shaltyko, L. G.

TITLE: Polarization optical method for studying structural transitions in polymeric solutions and films

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 5, 1965, 854-859

TOPIC TAGS: polymer, resin, molecular structure, polarized light, polypropylene, spherulite, fusion kinetics

ABSTRACT: A relatively simple method for studying structural transitions in <sup>1</sup>polymers has been developed. It extends currently available methods based on electron microscopy, x-ray analysis, IR and radio spectroscopy. The new method is based on observation of samples and specimens in polarized light. The installation is shown in Fig. 1 on the Enclosure. The possibilities of the new method are illustrated on four examples: determination of the size of spherulites in polypropylene films, study of fusion kinetics in linear and branched chain polyethylene films, orientation of semicrystalline polyethylene film, and formation of colloids in aqueous solutions of Bombyx mori fibroin. It is suggested that the method should prove

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ACCESSION NR: AP5013060

useful in the study of appearance and destruction of supermolecular structure in laminar capillary flow, the nature of transition states associated with critical opalescence, as well as in the determination of molecular weight and size of macromolecules. Orig. art. has: 4 graphs and 7 photographs.

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy, AN SSSR (Institute of High-Molecular Compounds, AN SSSR)

SUBMITTED: 13Jul64

ENCL: 01

SUB CODE: OC, OP

NO REF SOV: 008

OTHER: 007

Card 2/3

L 60263-65

ACCESSION NR: AP5013060

ENCLOSURE: 01

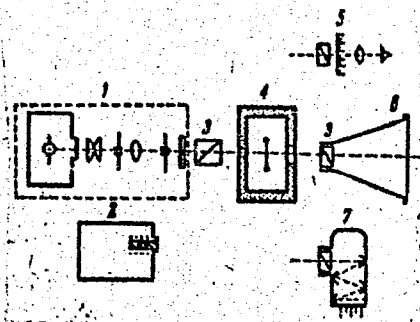


Fig. 1. Schematic of the installation. 1- light source (mercury lamp or laser 2 of type OKG-L-1); 3- polaroids; 4- thermostat; 5- microscope; 6- photogoniometer; 7- photomultiplier

Card 3/3



PARANOV, V.G.; VOLKOV, T.I.; FRENKEL', S.Ye.

Interpretation of the scattering of polarized light by concentrated solutions of polymer films. Vysokom. soed. 7 no.9:1505-1520  
S 165. (MIRA 18:10)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.

BARANOV, V.G.; MAGARIK, S.Ya.

Flow birefringence of polystyrene solutions in bromoform. Vysokom.soad. 5 no.7:1072-1079 J1 '63. (MIRA 16:9)

1. Institut vysokomolekulyarnykh soyedineniy AN S.S.R.  
(Styrene polymers—Optical properties)  
(Bromoform)

SHALTYKO, L.G.; BARANOV, V.G.; VOLKOV, T.I.; LUTSENKO, V.V.;  
FRENKEL', S.Ya.

Theory of heterophase polymerization. Part 2: Comparison  
of molecular weight distributions of polymers obtained under  
conditions of homophase and heterophase polymerization.  
Vysokom. soed. 5 no.10:1527-1533 0 '63. (MIRA 17:1)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR i  
Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskikh  
volokon.

L 11351-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-l/Pr-l/Ps-l RFL WW/RM

ACCESSION NR: AP4047223

S/O190/64/006/010/1917/1917

AUTHOR: Frankel', S. Ya.; Baranov, V. G.; Bal'nikovich, N. G.;  
Panov, Yu. N. 6

TITLE: Orientation mechanism of solid-phase formation in polymer  
solutions subjected to a longitudinal hydrodynamic field 1

SOURCE: Vy\*sokomolekulyarny\*ye soyedineniya, v. 6, no. 10, 1964,  
1917

TOPIC TAGS: solid phase formation, polymer solution, elongation,  
fiber formation, polymethyl methacrylate, fibroin

ABSTRACT: A new mechanism of solid phase formation in a liquid  
polymer-solution thread during orientation has been discovered. Liq-  
uid threads of 15% fibroin solution in water or 3% poly(methyl methac-  
rylate) solution in dimethylformamide were stretched. In all cases,  
even with moderate elongations, there was irreversible solvent dis-  
placement from the thread, forming a slightly swollen fiber. It is  
suggested that the new mechanism is a primitive simulation of the  
formation process of natural silk and cobwebs. The mechanism may be of

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ACCESSION NR: AP4047223

significance in gaining an understanding of the formation process of oriented polymer systems from solutions. Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 22Jun64

ATD PRESS: 318

ENCL: 00

SUB CODE: GC

NO REF SOV: 002

OTHER: 002

Card 2/2

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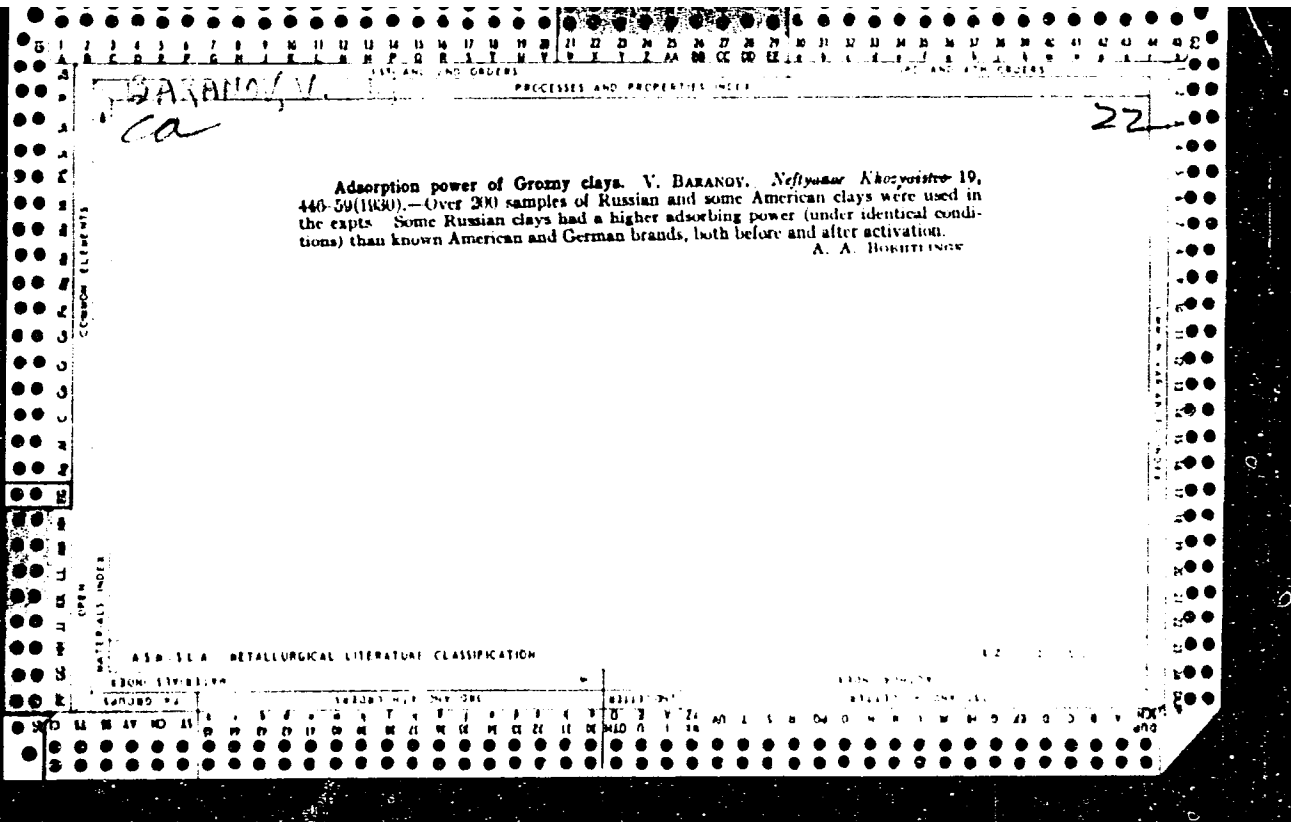


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The radium content of the petroleum waters in Grozny. V. I. BARANOV AND I. M. KURBATOV. *Compt. rend. acad. sci. U. R. S. S.* 1931A, 1713. With Wolf's 2 filament electrometer the values found for the ionization of the air near petroleum and water reservoirs were 2000-3000 ions per cc., rather higher than normal.  $\gamma$  Radiation expressed in cc. per sec. varied between 0.72 and 4.41. The Ra content deduced through its emanation was  $0.826 \cdot 10^{-10}$  g. according to locality. G. S. S.

BARANOV

ASB 35.4 METALLURGICAL LITERATURE CLASSIFICATION

CA

3

6

Radioactive content of water and of its sedimentations  
 in pit-hole No. 1 of Oukhta region. V. I. Baranov and  
 I. D. Kurbatov. *Trac. inst. <sup>226</sup>Radium* (U. S. S. R.) 2,  
 139-55 (in German 196) (1933).—The water in the pit-hole  
 No. 1 of Oukhta region contains on the av.  $7.48 \times 10^{-9}$  g.  
 Ra and  $2.1 \times 10^{-11}$  g. MsTh I per l. The amt. of RaTh  
 here corresponds to its equil. amt. in the presence of MsTh.  
 The sediments from this water analyze as follows: 68.01  
 Fe<sub>2</sub>O<sub>3</sub>, 0.37 BaO, 3.44 CaO, 3.20 SiO<sub>2</sub> + Al<sub>2</sub>O<sub>3</sub>, 9.84 loss on  
 heating and 14.54% H<sub>2</sub>O. They contain  $4.08 \times 10^{-9}$  g.  
 Ra and  $1.03 \times 10^{-11}$  g. MsTh per g. of dry material. The  
 RaTh present in the sediments comes mainly from the  
 deposited MsTh I.  $\gamma$ -Radiation from MsTh I is equal  
 to about 80% of that from Ra. S. L. Madorsky

ASB 5514 METALLURGY RE LITERATURE CLASSIFICATION



BARANOV, V.

*ca*

22

The application of sodium tannate in the repair of cave-  
ins. A. Chubarov, V. Baranov and Z. Buks. *Geotekhnicheskoe Neftostroyeniye* 4, No. 6-7, 11-17(1934).— The addn. of  
tanning exts. and water glass to mud solns. permits the  
required viscosity and sp. gr. to be maintained. The  
introduction of blends of cracked residues and gas oil  
mixed with dry powdered clays yields a product which is  
hydrophobic after forming an emulsion with water, but  
which has an excessive viscosity. The exps. carried out  
in lake and oil fields are discussed. A. A. Boshtingk

ASB-55A METALLURGICAL LITERATURE CLASSIFICATION

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