"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

The Conservability of a Latent Image and of Sensitivity in Nuclear Photo-emulsions Sensitized by Triethanolamine

SOV/20-123-5-29/50

some details of the mechanism of the sensitizing of triethylamine. The experiments wer carried out at temperatures of 5°-6° on various specimens of the emulsion NIKFI type R which were irradiated by relativistic electrons. The first table gives data concerning the regression and the degree of conservation of 2 specimens of emulsions. An increase of triethanolamine in concentration does not cause an essential increase in density of the track. The track increases slightly (~10%) in density. The data of the first table make it possible to draw the following conclusion: The sensitivity and the latent image of emulsions sensitized by triethanolamine are totally conserved within the investigated time intervals and within the corresponding experimental errors. This property of triethanolamine is as essential as its sensitizing effect. The second table gives data which confirm the conclusion (Ref 4) that the sensitizing effect of triethanolamine is not due to its presence in the emulsion

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The Conservability of a Latent Image and of Sensitivity in Nuclear Photoemulsions Sensitized by Triethanolamine SOV/20-123-5-29/50

during the irradiation(and especially not due to the absorption of the halogen separated out by the radiolysis of AgHal). Beginning with the formation of subcenters, the presence of triethanolamine in the emulsion is not of essential importance and the subsequent variation of the properties of the emulsion is determined by the presence of subcenters in the crystals. The decrease of triethanolamine in alkalinity (by adding acids which do not react with AgHal) diminishes its sensitizing effect. The experiments discussed in the present paper prove the sensitizing and also the stabilizing effect of triethanolamine in complete agreement with the mechanism of its interaction with the crystals of the photoemulsion. There are 3 tables and 7 references, 5 of which are Soviet.

ASSOCIATION: Radiyevyy institut im. V. G. Khlopina Akademii nauk SSSR (Radium Institute imeni V. G. Khlopin of the Academy of Sciences, USSR)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

ZHDANOV, A. P.

MULTIPLE PRODUCTION OF PARTICLES IN THE INTERACTION OF COSMIC RADIATION WITH EMULSION NUCLEI

A.P. Zhdanov, N.V. Skirda

1. The study of disintergrations caused in emulsions by high energy ($E=10^{10} \div 10^{12}$ ev) singly-charged particles of cosmic radiation revealed jets with abnormally high multiplicity from the point of view of Landau's hydrodynamic theory or Fermi's theory (using the tunnel model). These jets, as a rule, are accompanied by a large number of grey and black tracks ($N_{h+g} \geq 15 \div 20$ per jet). In addition to the "abnormal" jets, other jets were detected whose multiplicities are within the limits of the above-mentioned theories, although the number of grey and black tracks per jet in this case was also great - $N_{h+g} > 15 \div 20$.

2. In order to determine the origin of the above mentioned "anomaly", the angular distribution data of the jet shower particles for both types were studied and compared.

3. Based on analysis results, certain conclusions are drawn regarding the assumed mechanism of multiple particle production in the energy range from 10^{10} to 10^{12} ev.

The V.G. Khlopin Radius
Institute of the USSR
Academy of Sciences

Report presented at the International Cosmic Ray Conference, Moscow, 6-11, July 1959

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21(7)

SOV/56-37-3-3/62

AUTHORS: Berkovich, I. B., Zhdanov, A. P., Lepekhin, F. G., Khokhlova, Z. S.

TITLE: Mesonless Decays of Hyperfragments

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 37, Nr 3(9), pp 604 - 610 (USSR)

ABSTRACT: It was the aim of the investigations, which form the subject of this report, to identify some hyperfragments, which had been found in part of a G-5 emulsion pile irradiated by 4.5 Bev pions. In a systematically investigated emulsion surface of 47 cm^3 eight double stars were found, in which the connecting track narrowed down, one of the secondary tracks having a range $> 5000\mu$. These stars are ascribed to mesonless decays of hyperfragments. Microprojections of the individual stars are shown by figures 1-8, and some particular features are discussed. A table shows the data determined from all these stars. The following is shown: Figure 1; (case Nr 264), primary star 18 + 3π, presumed reaction: $\Lambda_0 Li^8 \rightarrow H^1 + H^3 + H^3 + n$, $E_n = 90$ Mev, H^1-range 9900μ. Figure 2: (case

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

Nr 3o13), primary star 14 + 0π, presumed reaction: $\lambda B^{10} \rightarrow H^4+H^1+2H^2+n$, E_n=72 Mev, H^1-range 16500μ. Figure 3: (Nr 3o21) primary star 12 + 2π, presumed reaction: $\lambda C^{12} \rightarrow 2He^4+H^1+H^2+n$, E_n=42 Mev, H^1-range <25000μ. Figure 4: (Nr 312), primary star: 11+3π, presumed reaction: $\lambda_0 He^5 \rightarrow H^2+H^2+n$, E_n=99Mev, H^2-range 5900μ. Figure 5: (Nr 338), primary star 13 + 0π, presumed reaction: $\lambda_0 C^{12} \rightarrow Be^9+2H^1+n$ or: $\lambda_0 C^{13} \rightarrow Be^{10}+2H^1+n$, E_n= 1o8 Mev, H^1-ranges 821 and 6o9μ. Figure 6: (Nr 284): primary star 7 + 0π, presumed reaction: $\lambda_0 Be^9 \rightarrow H^1+H^2+He^4+2n$ or: $\lambda_0 Be^{10} \rightarrow H^1+H^2+He^5+2n$, H^1-range 3746μ and H^2-range 2983μ; E_n=72 Mev. Figure 7: (Nr 2711): primary star 15 + 0π, presumed reaction: $\lambda_0 He^5 \rightarrow H^1+H^3+n$, E_n=89 Mev, H^1-range <15000μ. Figure 8: (Nr 275): primary star 17 + 0π, presumed reaction: $\lambda_0 Li^6 \rightarrow H^1+He^4+n$, E_n=77 Mev, H^1-range >23000μ.

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Mesonless Decays of Hyperfragments SOV/56-37-3-3/62

The ranges of the hypernuclei (in the same order): 87, 16, 94.5, 50, 55, 28.5, 77.7 and 181μ. T. I. Ukolova and S. N. Meleshchenko took part in these experiments. There are 8 figures, 1 table, and 3 references.

ASSOCIATION: Radiyevyy institut Akademii nauk SSSR (Radium Institute of the Academy of Sciences, USSR)

SUBMITTED: March 12, 1959 (initially) and June 2, 1959 (after revision)

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05461

SOV/120-59-3-32/46

AUTHORS: Zhdanov, A. P. and Fedotov, P. I.

TITLE: The Use of a Diamond Dust Suspension in the Study of Nuclear Disintegrations on Carbon (Primeneniye suspenzii iz almaznoy pyli dlya izucheniya yadernykh rasshchepleniy na uglerode)

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 3, p 133 (USSR)

ABSTRACT: Zhdanov et al. (Ref 1) have suggested that the interaction of various particles with the nuclei of different elements may be studied by introducing these elements in the form of suspensions into nuclear emulsions. The size of such particles is usually 5-12 μ. However, this method involves a number of difficulties due to the fact that the dust particles are opaque so that some of the disintegrations which take place on the nuclei of the emulsion itself may be taken as disintegrations on the nuclei of the suspension. This effect can be reduced by using spherical particles and by soaking the emulsion in the vicinity of the surface of the particles (Ref 2). However, disintegrations which take place in the immediate vicinity of the suspension particles are

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The Use of a Diamond Dust Suspension in the Study of Nuclear Disintegrations on Carbon

still impossible to separate from disintegrations on nuclei of the element under investigation, since the centre of a particular event cannot be seen against the background of the opaque suspended particles. The present authors have used a suspension of diamond dust in their investigations of proton-carbon interactions. Diamond particles 5-10 μ in diameter are quite transparent so that the above effect is removed. Any doubtful events which take place under one of these diamond particles can be looked at from the glass side of the plate using a long focus objective (31 x 0.6). Several hundred disintegrations have been found which are definitely due to disintegrations in the diamond particles. There are 2 Soviet references.
(Note: This is a complete translation)

ASSOCIATION: Radiyevyy institut AN SSSR (Radium Institute of the Ac.Sc., USSR)

SUBMITTED: February 24, 1958

Card 2/2

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21(7) SOV/56-37-2-10/56

AUTHORS: Zhdanov, A. P., Fedotov, P. I.

TITLE: Results of an Investigation of the Disintegration of Carbon Nuclei Caused by Protons With Energies of 660 MeV

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 37, Nr 2(8), pp 392-398 (USSR)

ABSTRACT: In the introduction the authors discuss the method of investigating the interaction of high-energy particles with light nuclei (C, N, O) by means of nuclear emulsions and the difficulties occurring hereby. The results obtained by several earlier papers are mentioned. Like in a previous paper (Ref 6) the authors used a diamond dust suspension for the purpose of investigating the (p,C) interaction. They used three-layer emulsions (layer thickness 15-20 μ, size of particles 5-7 μ). Two types of emulsion were used - the type D for recording protons with 16-20 Mev, and type S (relativistic emulsion). Irradiation with 660 Mev-protons was carried out on the phasotron of the Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research). Investigation results are shown by 2 tables and 4 diagrams. 540 disintegrations of carbon nuclei

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

Results of an Investigation of the Disintegration of Carbon Nuclei Caused by Protons With Energies of 660 MeV SOV/56-37-2-10/56

were found: 190 in S-emulsions and 350 in D-emulsions. The average number of secondary tracks in C^{12}-stars was determined as 3 in consideration of the absorption of short tracks (mainly α-particles). The correction was made by using the formula $N/N_{true} = (3l/4\bar{R}^3)(\bar{R}^2 - \frac{1}{12} l^2)$, where N denotes the number of recorded tracks with a length l, N_{true} - the true number of tracks with the range l $(0 \leq l \leq 2\bar{R})$, $\bar{R}$ - the mean radius of the diamond particles (3 μ). The distribution of disintegrations according to the number of prongs and the nature of the reaction is shown by 2 tables. Table 1 shows the number of tracks (1-8), the percentage of the total number of disintegrations in each case, and the corresponding cross section. Five-track disintegrations (34%) are the most frequent, next range the 4-, 6, 1, 2, 3, 7, 8 track ones. The maximum cross section is 78±8 mb. Table 2 shows the distribution of stars according to the nature of the reaction and the respective cross sections. The absorption cross section given as amounting to σ_a = 227±12 mb for

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Results of an Investigation of the Disintegration of Carbon Nuclei Caused by Protons With Energies of 660 MeV SOV/56-37-2-10/56

650 Mev protons was obtained from a paper by Moskalev and Gavrilovskiy (Ref 9). The following kinds of disintegration are contained in table 2: $C_6^{12}(p, {}^{pn}_{p2n})C_6^{11,10}$, $C_6^{12}(p, {}^{2p}_{2pn})B_5^{11,10}$, 2p2α, 4pα, 3α, pαLi, 2pBe, 6p, 2p2απ^+, 3pLi, 5pαπ^-; the highest percentage is attained by the type 2p2α with 32.6%. The data contained in the table are discussed more in detail with respect to particles with $Z \geqslant 3$. Energy- and angular distribution of secondary particles are shown by 2 diagrams respectively (Figs 1,2). The forward-backward ratio for α-particles is given as amounting to 1.77±0.2 and for protons to 1.55±0.2. The velocity of the recoil nucleus was calculated as amounting to $v = (2.7 \pm 0.6).10^8$ cm/sec. The authors finally thank M. G. Meshcheryakov and V. P. Dzhelepov, who made it possible for the experiments to be carried out, G. M. Subbotina for her help in evaluating the experimental material, and I. M. Kuks for discussions. There are 2 figures, 2 tables, and 15 references, 6 of which are Soviet.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

Results of an Investigation of the Disintegration of Carbon Nuclei Caused by Protons With Energies of 660 MeV SOV/56-37-2-10/56

ASSOCIATION: Radiyevyy institut Akademii nauk SSSR (Radium Institute of the Academy of Sciences, USSR)

SUBMITTED: March 21, 1959

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P.2

PHASE I BOOK EXPLOITATION SOV/3503

Akademiya nauk SSSR. Radiyevyy institut

Trudy, t. IX (Transactions of the Radium Institute, Academy of Sciences USSR, Vol. 9) Moscow, Izd-vo AN SSSR, 1959. 287 p. Errata slip inserted. 1,700 copies printed.

Ed.: N.A. Perfilov, Doctor of Physical and Mathematical Sciences; Ed. of Publishing House: G.M. Aron; Tech. Ed.: A.V. Smirnova.

PURPOSE: The volume is intended for physicists.

COVERAGE: The book represents volume 9 of the Transactions of the Radium Institute and contains the results of studies conducted at the Institute chiefly from 1955 to 1956. There are a number of articles dealing with the study of nuclear reactions occurring with particles of different energies ranging from several eV up to hundreds of MeV. Others treat different problems of the physics of neutrons. Results of studies of various neutron sources, neutron energy distribution in a moderator (water), and other problems connected with the theory of neutron interaction with matter are presented. The majority of the articles

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are concerned with problems of method. The authors provide a complete description of the construction of equipment and of the results of tests performed under laboratory conditions. No personalities are mentioned. References accompany individual articles.

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Zhdanov, A.P.

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B006/B011

AUTHORS: Berkovich, I. B., Zhdanov, A. P., Lepekhin, F. G., Khokhlova, Z. S.

TITLE: Meson-free Decays of Hyperfragments 19

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 38, No. 2, pp. 423-425

TEXT: Several authors had already been concerned with the experimental investigation of meson-free hyperfragment decay, and above all, with the ratio of the number of hyperfragment decays released by (Λ^0,n) interaction to the number of those released by (Λ^0,p) interaction: R = N/P. The authors offer a contribution to these problems and publish the numerical results of an investigation of a G-5 emulsion pile irradiated with 4.5-Bev pions. In the analysis of all two-pronged stars found in 47 cm^3 of emulsion, the authors selected 18 cases satisfying the following criteria: 1) length of the linking F-track > 20μ; 2) the linking F-track becomes thinner toward the end of the range. Hyperfragments were divided into two classes. One covers the decays in which a single-charged particle

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Meson-free Decays of Hyperfragments

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occurs with a range >3 mm, and the other all the decays in which the secondary particles were slow. The ratio of the decay number of the second type N to the first type P was 10/8 = 1.25. A comparison of results with those from Ref. 1 shows that in all probability the interaction between Λ^0 particles and nucleons does not take place via the virtual Σ-state. Investigations were also extended to the angular distribution of hyperfragments with respect to the primary pion flux. The forward/backward ratio was equal to 2.6, whereas 2.2±0.5 had been found in Ref. 2. The forward/backward ratio for lithium fragments was also determined. For Li fragment energies comparable with hyperfragment energies it was equal to unity. A table contains all measured data concerning the kinematic characteristics of the particles. There are 1 table and 3 non-Soviet references.

ASSOCIATION: Radiyevyy institut Akademii nauk SSSR (Radium Institute of the Academy of Sciences, USSR)

SUBMITTED: August 28, 1959

Card 2/2

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

ZHDANOV, A.P.; KUKS, I.M.; SKIRDA, N.V.; YAKOVLEV, R.M.

Multiple production of particles in the interaction of nucleons with energies $> 10^{11}$ ev. and photographic emulsion nuclei. Zhur.eksp.i teor.fiz. 39 no.5:1177-1185 N '60. (MIRA 14:4)

1. Radiyevyy institut AN SSSR.
(Nucleons) (Photography, Particle track)

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AUTHORS: Zhdanov, A. P., Kuks, I. M., Skirda, N. V., Yakovlev, R.M.

TITLE: Multiple Production of Particles in the Interaction Between Nucleons of Energies $>10^{11}$ ev and Emulsion Nuclei

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 5(11), pp. 1177 - 1185

TEXT: The authors analyzed 80 events of meson production observed in an emulsion chamber consisting of 180 layers of НИКФИ-Р (NIKFI-R) emulsions (area, 10·10 cm^2; thickness, 400 μ). This chamber was irradiated for 9 hours at an altitude of 24 km. 120 nuclear interactions with more than five relativistic particles were found. In each of these stars, the number of thin (N_s), gray (N_g), and black (N_h) tracks was counted, and by means of a goniometer the angle $\theta_{1/2}$ was estimated, which included half the amount of relativistic particles. The grains in the tracks were counted by means of microscopes of the types МБИ-8 (MBI-8),

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Multiple Production of Particles in the Interaction Between Nucleons of Energies $> 10^{11}$ ev and Emulsion Nuclei

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B029/B079

МБИ-8М (MBI-8M), and Kyk 4005 (Kuk 4005). The number l of nucleons of the target nucleus, which were involved in meson production, was calculated from the formulas $N_s = (21)^{1/4}(l + 1)\gamma_c^{1/2}$ and $\gamma_c = \left[1-(v_c/c)^2\right]^{-1/2}$ which are valid in Landau's hydrodynamic theory; v_c denotes the velocity of the center-of-mass system of the primary nucleon and of the nucleons of the nucleus. The correlation coefficient is $r = -0.33 \pm 0.18$. These results may be explained as follows: At energies of $10^{11} \div 10^{12}$ ev, the factor γ_c is small, and considerable part of the energy of the primary nucleon may be transferred to the nucleus which is located behind the cylindrical tube. When the energy of the primary nucleon is increased, two processes will compete in meson production: The average multiplicity per nucleon increases, and the number of excited nucleons of the target nucleus decreases. For energies of up to 10^{12} ev the second effect is stronger. The anisotropy in the angular distribution of the shower

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86887

Multiple Production of Particles in the Interaction Between Nucleons of Energies $>10^{11}$ ev and Emulsion Nuclei

S/056/60/039/005/001/051
B029/B079

particles may be described by $\varkappa_i = \log \tan \theta_i$. For constant energies of the primary particle, the anisotropy of nucleon-nucleon showers and showers caused by central collisions of a primary nucleon with a heavy nucleus differ largely. D. S. Chernavskiy (Ref.7) has given a hypothesis concerning the existence of a special type of inhomogeneities in nucleon-nucleon collisions. The present paper leads to the following conclusions: 1) When studying interactions of high-energy nucleons (up to 10^{12} ev) with heavy nuclei, one must take into account the expansions of the nuclear matter tube when striking this matter out of the nucleus. 2) The anisotropy in the angular distribution of nucleon-nuclear showers does not decrease with increasing number of excited nucleons. This holds, at least, for energies of up to $5 \cdot 10^{12}$ ev. 3) In this energy range, the relative probability of accompanying showers as predicted by Chernavskiy does not exceed 0.04. The "accompanying tube" must not be investigated independently of the principal one. 4) The angular distributions of relativistic particles in the showers are homogeneous and can be

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86887

Multiple Production of Particles in the Interaction Between Nucleons of Energies $>10^{11}$ ev and Emulsion Nuclei

S/056/60/039/005/001/051
B029/B079

exactly described by Gauss functions in the variables $\varkappa = \log \tan \theta$. The authors thank A. A. Blyudzin, D. M. Samoylovich, A. N. Charakhch'yan, V. P. Grigor'yev, Ye. L. Feynberg, and G. A. Milekhin for assistance and discussions. There are 8 references: 5 Soviet, 1 Dutch, and 1 Italian.

ASSOCIATION: Radiyevyy institut Akademii nauk SSSR (Radium Institute of the Academy of Sciences USSR)

SUBMITTED: April 6, 1960

Card 4/4

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

S/058/61/000/010/012/100
A001/A101

3.24/0

AUTHORS: Zhdanov, A.P., Kuks, I.M., Skirda, N.V., Yakovlev, R.M.

TITLE: On the form of angular distribution of shower particles in jets of nucleon - nuclear origin

PERIODICAL: Referativnyy zhurnal, Fizika, no. 10, 1961, 95-96, abstract 10B493 ("Tr. Mezhdunar. konferentsii po kosmich. lucham, 1959, v. 1", Moscow, AN SSSR, 1960, 87 - 92)

TEXT: The authors present preliminary results of investigating distributions of shower particles over polar and azimuth angles. The study of 65 jets generated in interactions of high-energy ($E_0 = 10^{10} - 10^{13}$ ev) single-charged particles with nuclei of the emulsion has shown that: 1) Angular distributions of shower particles of these jets possess azimuthal symmetry; they are symmetrical relative to angle $\pi/2$ in the center-of-mass system; 2) Multiplicity of anomalous jets can be apparently easily explained from the viewpoint of a single meson production, without resorting to the concept of intranuclear cascade.

[Abstracter's note: Complete translation] L. Dorman

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

S/120/61/000/001/012/062
E032/E114

AUTHORS: Zhdanov, A.P., and Kuks, I.M.

TITLE: A Devive for the Identification of Multiply-Charged Particles Stopping in Nuclear Emulsions

PERIODICAL: Pribory i tekhnika eksperimenta, 1961, No.1, pp.45-47

TEXT: A photoelectric device for the measurement of the width of charged particle tracks is described. The device is based on the ordinary biological microscope МБИ-3 (MBI-3) with a special stage and the МФ-1 (MF-1) attachment. Fig.1 illustrates the optics of the device. After passing through the objective, light rays from the object enter either the eyepiece of the attachment so that the position of the track can be observed visually or are reflected by the mirror 3 into the slit of a photomultiplier. The plane of observation and the plane of the photomultiplier slit are optically conjugate and the cross wire in the plane of observation coincides with the position of the photomultiplier slit on the real image plane. The mirror 3 is adjustable with the aid of the magnet M and is used to displace the image of the track relative to the slit. The electromagnet is mains operated and the

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S/120/61/000/001/012/062
E032/E114

A Device for the Identification of Multiply-Charged Particles Stopping in Nuclear Emulsions

windings on the electromagnets include crystal diodes so that the image of the track can be periodically displaced relative to the slit at a repetition frequency of 100 cps. The effective slit size on the plane of the emulsion is 0.15 x 6 μ^2 while the width of the band "examined" by the slit while the mirror is vibrating is 4 μ. The basic idea on which the measurement of the halfwidth of the track is based consists in the transformation of the photomultiplier pulses into rectangular pulses of fixed amplitude and a length equal to the halfwidth of the photomultiplier pulse. The circuit employed is shown in Fig.2. The 100 cps voltage pulses from the anode of the photomultiplier represent the form of the transverse profile of the track. These pulses are amplified by an amplifier mounted on the photomultiplier container 6Н3П (6N3P) tubes and two additional amplification stages 6Ж1П (6Zh1P) and 6П1П (6P1P). Negative voltage pulses (some tens of volts) are then fed through a limiter to the control grid of the squaring tube 6Ж4 (6Zh4). The discriminator (in the dashed box in Fig.2) is

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E032/E114

A Device for the Identification of Multiply-Charged Particles Stopping in Nuclear Emulsions

similar to that described by I.M. Kuks in Ref.3. The discriminator threshold is set up by the 47 kohm potentiometer and is independent of the magnitude of the signal and always corresponds to one half of its amplitude. For this reason the length of the pulse at the output of the discriminator is equal to the halfwidth of the pulse at its input. The time average of the signal at the anode of the squaring valve 6Zh4 is shown on an output meter. Tests have shown that changes in the amplitude of the signal at the input of the discriminator in the range 20-60 V produce a change of not more than 2% in the output meter M1 (M1). Fig.3 shows the results obtained for Li and H tracks (track width as a function of residual range, 30 divisions = 1 μ on the vertical axis; the residual range is in microns along the horizontal axis). Lithium hammer tracks and proton tracks identified by other methods, and having dip angles smaller than 7°, were used.

There are 3 figures and 3 references: 2 Soviet and 1 non-Soviet.

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S/120/61/000/001/012/062
A Device for the Identification... E032/E114

ASSOCIATION: Radiyevyy institut AN SSSR (Radium Institute, AS USSR)

SUBMITTED: February 28, 1960

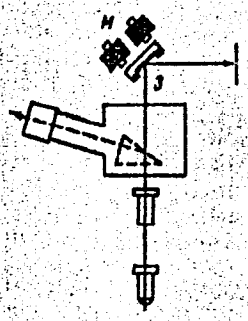

Fig. 1

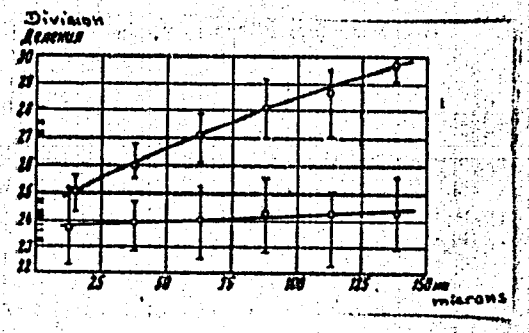

Fig. 3

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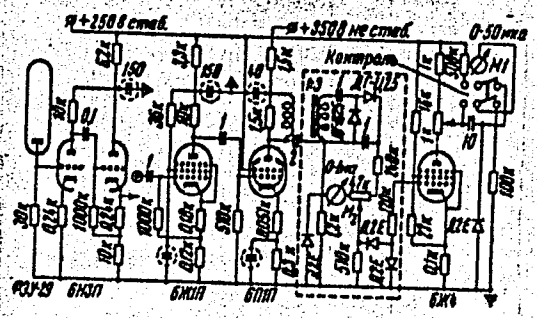
S/120/61/000/001/012/062
E032/E114

A Device for the Identification of Multiply-Charged Particles Stopping in Nuclear Emulsions

Fig.2



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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

BERKOVICH, I.B.; ZHDANOV, A.P.; LEPEKHIN, F.G.; KHOKHLOVA, Z.S.

Cross section of the production of hypernuclei in photoemulsions by 9 bev. protons. Zhur.eksp.i teor.fiz. 41 no.1:75-77 Jl '61. (MIRA 14:7)

1. Radiyevyy institut AN SSSR.
(Photography, Particle track) (Nuclei, Atomic) (Protons)

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31785
S/056/61/041/006/033/054
B125/B102

24.6600

AUTHORS: Zhdanov, A. P., Fedotov, P. I.

TITLE: Inelastic interaction of 660-Mev protons with carbon nuclei

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 41, no. 6(12), 1961, 1870-1878

TEXT: This article deals with the applicability of the nuclear model of R. Serber (Phys. Rev., 72, 1114, 1947) and M. Goldberger (Phys. Rev., 72, 1469, 1948) to the calculation of an intranuclear cascade in light nuclei. The most important differences between inelastic interactions of high-energy particles with light and heavy nuclei are as follows: In cascade processes in a light nucleus, both nucleons and complex particles (presumably alpha particles) participate. This assumption will be discussed in detail in a later paper. The resonance effect can be neglected when calculating the intranuclear cascade, since the excitation cross section of levels with U >10 Mev is not greater than 1% of the total inelastic scattering cross section. The "losses in range" of a nucleon in the nucleus are studied for different collision parameters. The nuclear

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cascade was calculated using the distribution found by the Meshcheryakov group (L. S. Azhgirey, I. K. Vzorov, et al., ZhETF, 36, 63, 1959) and allowing for the production, absorption, and scattering of pions from nuclear nucleons. About 500 interaction events of 660-Mev protons were evaluated by the Monte-Carlo method for constant and variable densities of nuclear matter in the C_6^{12} nucleus. The absorption cross section for a nucleus of constant density was 220 millibarns, and that for a nucleus of variable density was 235 millibarns. These theoretical values correspond best to the experimental cross sections of V. I. Moskalev and B. V. Gavrilovskiy (DAN SSSR, 110, 972, 1956) for the interaction of 650-Mev protons with various nuclei. The quasi-elastic pp and np scattering cross sections, calculated by the model of radially variable nuclear density, agree with experimental cross sections. According to M. G. Meshcheryakov et al. (L. S. Azhgirey et al., ZhETF, 36, 63, 1959), the proton energy spectra obtained when bombarding various nuclei, such as carbon, exhibited a distinct maximum at high energies, which corresponds to single quasi-elastic collisions of protons with nuclear nucleons. The angular distribution calculated for C_6^{12} is not essentially changed by allowing for

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B125/B102

radially variable nuclear density. When comparing theoretical and experimental energy and angular distributions, it should be considered that (1) interactions in calculated spectra, in which the excitation energy U of the residual nucleus after the emission of one or two cascade protons does not suffice for the emission of at least one proton or alpha particle, are to be neglected; (2) charged pions must be taken into account in calculated spectra. Under these circumstances, the total number of cascade protons and the general shape of the experimental spectrum for $Q \neq$ const are in satisfactory agreement with the theoretical spectrum. This is confirmed by a comparison of experimental and theoretical yields of residual nuclei with the distributions among the excitation energies following from an analysis of spallations on carbon nuclei. V. V. Chavchanidze is thanked for comments, G. M. Subbotina for assistance, L. I. Shur and I. V. Ryzhkova for photoemulsions, as well as V. N. Kuz'min and I. M. Kuks for discussions. There are 5 figures, 2 tables, and 22 references: 8 Soviet and 14 non-Soviet. The four most recent references to English-language publications read as follows: M. Rotenberg, L. Wilets. Phys. Rev., 110, 1126, 1958; H. F. Ehrenberg, R. Hofstadter, U. Meyer-Berkhout, S. F. Sobbotka. Phys. Rev., 113, 666,

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Inelastic interaction of ... 31786
S/056/61/041/006/033/054
B125/B102

1959; J. D. Dowell, W. R. Friskin, G. Martelli, B. Musgrave. Proc. Roy. Soc., 75, 24, 1960; N. Metropolis et al. Phys. Rev. 110, 204, 1958.

ASSOCIATION: Radiyevyy institut Akademii nauk SSSR (Radium Institute of the Academy of Sciences USSR)

SUBMITTED: June 24, 1961

Table 1

Сечение	$\sigma^{\text{н.у.}}_{pp}$, мбн	$\sigma^{\text{н.у.}}_{pn}$, мбн
Эксперимент	46±10	54±12
Расчет (ρ = const)	17±3	19±3
Расчет ($\rho \neq$ const)	33±5	33±5

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24650

37546

S/048/62/026/005/010/022
B108/B104

AUTHORS: Zhdanov, A. P., and Kuks, I. M.

TITLE: Particularities of the angular distributions of relativistic particles in α-nuclear showers

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 5, 1962, 618-621

TEXT: In the coordinates $x_i = \log \tan \vartheta_i$, most nucleon-nucleus showers have a Gaussian angular distribution. An inhomogeneous distribution of α-nuclear showers would prove that the processes of meson emission from excited systems are not interdependent. 28 inelastic scattering events ($g_c > 3$, $n_s > 25$) of alphas and nuclei of a photoemulsion were studied. These showers can be divided into three groups: (1) nucleon-nucleus showers with Gaussian distribution; (2) showers with one or two particles collimated in the direction of the primary alpha; without such particles, the distribution of the remaining showers would be as Gaussian as that of the showers of group (1); (3) showers with a distribution indicating super-

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position of two Gaussian distributions with different statistical weights and different maxima. A close correlation between the polar and azimuthal angles has been established, which is probably related to the law of conservation of transverse momentum of the system of particles. There are 2 figures and 1 table.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

ZHDANOV, A.P.; FEDOTOV, P.I.

Cascade α-particles from carbon nuclei split by 660 Mev. protons. Zhur. eksp. i teor. fiz. 43 no.3:835-838 '62. (MIRA 15:10)

1. Radiyevyy institut AN SSSR.
(Alpha rays) (Protons) (Carbon)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

S/056/62/043/003/016/063
B102/B104

AUTHORS: Zhdanov, A. P., Fedotov, P. I.

TITLE: Cascade alpha particles from carbon nuclei disintegrated by 660-Mev protons

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 3(9), 1962, 835-838

TEXT: The energy and angular distributions of α-particles produced in C_6^{12} disintegration induced by 660-Mev protons are compared with the spectra as calculated for intranuclear α-cascades. The number of cascade α-particles per disintegration was experimentally determined to be 0.15 ± 0.02, theoretically 0.09 was obtained. This divergence is attributed to the difference in the number of α-particles emmitted between 0 and 30°. In this angular interval more than 50 % of all cascade α-particles are emitted (calculation: almost isotropic distribution between 0 and 90°). An analysis of the spectra shows that about 70 % of the cascade α-particles of the experimental spectrum are due to direct

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Cascade alpha particles from... S/056/62/043/003/016/063
B102/B104

interaction between the cascade nucleons and the intranuclear α-substructure. There are 3 figures.

ASSOCIATION: Radiyevyy institut Akademii nauk SSSR (Radium Institute of the Academy of Sciences USSR)

SUBMITTED: April 14, 1962

Card 2/2

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

ZHDANOV, A.F.; FEDOTOV, P.I.

Decay of residual nuclei producted in the interaction of 660 Mev. protons with carbon nuclei. Zhur. eksp. i teor. fiz. 45 no.3:455-459 S '63. (MIRA 16:10)

(Nuclear fission) (Protons) (Carbon)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0"

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L 19649-63 BDS/EWT(m) AFFTC/ASD

ACCESSION NR: AP3007061 S/0056/63/045/003/0455/0459

AUTHORS: Zhdanov, A. P.; Fedotov, P. I.

TITLE: Decay of residual nuclei produced in the interaction of 660 MeV protons with carbon nuclei

SOURCE: Zh. eksper. i teoret. fiziki, v. 45, no. 3, 1963, 455-459

TOPIC TAGS: carbon nuclei, disintegration induced by protons, residual mucleus decay, cascade process

ABSTRACT: The experimental and calculated excitation yields and energies of residual nuclei produced after termination of the cascade process in the C^{12} nucleus have been obtained from an analysis of disintegrations produced on diamond particles introduced in emulsions. The analysis is based on the assumption that the possible final states have a frequency of occurrence that is proportional to their statistical weights. The calculations agree well with experi-

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ACCESSION NR: AP3007061

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ment. "The authors are grateful to G. M. Yanchilenko for great help in performing the measurements and calculations, to L. I. Shur for preparing the emulsions, and to V. N. Kuz'min and I. M. Kuks for discussions." Orig. art. has 1 figure, 3 formulas, and 2 tables.

ASSOCIATION: None

SUBMITTED: 22 Mar 63 DATE ACQ: 08Oct63 ENCL: 03

SUB CODE: PH NO REF SOV: 005 OTHER: 003

Card 2/2

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

ZHDANOV, A. P.; KUZ'MIN, B. N.; YAKOVLEV, R. M.

"Knock-out of Alpha Particles from Nuclei if Li, N, and O, by Protons with 660 MeV Energy."

report submitted for All-Union Conf on Nuclear Spectroscopy, Tbilisi, 14-22 Feb 64.

Radium Inst.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

ACCESSION NR: AP4026817 S/0077/64/009/002/0111/0114

AUTHORS: Zhdanov, A. P.; Shur, L. I.; Marty*sh, G. C.

TITLE: Increasing the discriminating capacity of nuclear emulsions by superproportional amplification

SOURCE: Zhurnal nauchnoy i prikladnoy fotografii i kinematografii, v. 9, no. 2, 1964, 111-114

TOPIC TAGS: discrimination capacity, nuclear emulsion, amplification, alpha radiation, recoil neutron, potassium bromide, exposure time

ABSTRACT: Superproportional mercury amplifiers, consisting of bleaching and blackening solutions, were used to study and discriminate ionization trails. The bleach solution contained 100 ml water, 5 g mercuric chloride, and 5 g potassium bromide. The darkening solution had sodium sulphide, hydroquinine, potassium bromide, and water. For optimum results both solutions were used in a 1:1 concentration ratio. Curves were obtained of blackening density as a function of exposure to α- and β-radiation. In all cases a superproportional increase in blackening density was noticed. To study the intensification effect on various ionization trails of particles, the plates were irradiated with α-particles from Po^{210} and protons recoiling from neutrons. A plot was also obtained for track width N versus

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ACCESSION NR: AP4026817

ENCLOSURE: 01

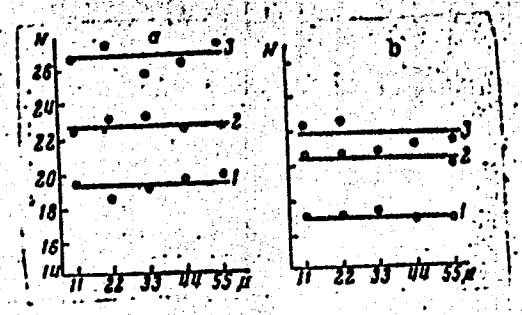

Fig. 1. Track width N versus depth of layer on the surface (a).

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

SOURCE: AN SSSR Izvestiya. Seriya fizicheskaya v. 29, no. 2, 1964, 233-241

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

ZHDANOV, A.P.; SHUR, L.I.; MARTYSH, G.G.

Increasing the discriminating power of a nuclear emulsion by means of ultraproportional intensification. Zhur.nauch. i prikl.fot. i kin. 9 no.2:111-114 Mr-Ap '64. (MIRA 17:4)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

VEPRIK, Ya.M.; GUSEVA, I.A.; ZHDANOV, A.P.; MARTYSH, G.G.; SHUR, L.I.

Nuclear emulsions developable in water-alkali solutions.
Zhur. nauch. i prikl. fot. i kin. 9 no.3:207-208 My-Je '64.
(MIRA 18:11)

1. Leningradskiy institut kinoinzhenerov i Radiyevyy institut imeni Khlopina, Leningrad. Submitted December 16, 1963.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

ZHDANOV, A.P., agronom; PETROV, G.I., kand.sel'skokhoz.nauk; SELETSKIY, V.I.

Clean and green fallows in Stavropol Territory. Zemledelie 27 no.3:15-20 Mr '65. (MIRA 19:1)

1. Vostochnaya sel'skokhozyaystvennaya opytnaya stantsiya (for Zhdanov, Petrov). 2. Stavropol'skiy nauchno-issledovatel'skiy institut sel'skogo khozyaystva (for Seletskiy).

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ZHDANOV, A.P.; KUZ'MIN, V.N.; YAKOVLEV, R.M.

Knocking out alpha particles from Be nuclei by 660 Mev. protons.
IAd. fiz. 1 no.4:625-628 Ap '65. (MIRA 18:5)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0"

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BERKOVICH, I.B.; ZHDANOV, A.F.; MARTYSH, G.G.; SHUR, L.I.

Injection of radioactive nuclei into a photographic emulsion. Prib. i tekh. eksp. 9 no.6:63-64 N-D '64.

(MIRA 18:3)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0"

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ZHDANOV, A.P.; KUZ'MIN, V.N.; YAKOVLEV, R.M.

Knocking out of α-particles from lithium, oxygen, and nitrogen by 660 Mev. protons. Izv. AN SSSR Ser. fiz. 29 no.2:239-241 F '65. (MIRA 18:3)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

ZHDANOV, A.P.; KARTUZHANSKIY, A.L.; MARTYSH, G.G.; SHUR, L.I.

Effect of polyethylene glycols on the nuclear photographic emulsions. Zhur.nauch. i prikl.fot. i kin. 9 no.4:300-302 Jl-Ag '64. (MIRA 17:10)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

ZHDANOV, A.P.; SKIRDA, N.V.

Stopping power of nuclear photographic emulsions produced in the U.S.S.R. Zhur. nauch. i prikl. fot. i kin. 10:330-343 S-O '65. (MIRA 18:9)

1. Radiyevyy institut imeni Khlopina, Leningrad.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

Zhdanov, A. Ye.

USSR/General Problems - Problems of Teaching

A-3

Abst Journal : Referat Zhur - Fizika, No 12, 1956, 33584

Author : Zhdanov, A Ye.

Institution : None

Title : Problems in Polytechnic Instruction in the Physics Courses of the Eighth and Ninth Classes

Original Periodical : Sb.: Iz praktiki politekh. obucheniya, Moscow, Academy of Pedagogical Sciences RSFSR, 1955, 19-38

Abstract : To avoid cluttering up the physics courses with technical material and overloading the students, it is recommended that one be guided by the following considerations: employ in the lectures only examples and information closely related to the program material, and illustrating the principal aspects of the most important fields of manufacture, without discussing details. In order to systematize technical information review lectures of physical-technical contents are recommended at the end of the school year. Notice is taken of

Card 1/2

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

USSR/General Problems - Problems of Teaching

A-3

Abst Journal : Referat Zhur - Fizika, No 12, 1956, 33584

the great significance in polytechnic instruction of the solution of a physical problem with technical contents and a formulation is made of the methodical requirements imposed on the teacher's work relative to preparing such problems. It is recommended that problems of a qualitative nature, problems with incomplete data, and problems with data obtained on field trips be made up; it is also suggested that, as technical problems are being solved, cursory investigations of these problems be made with respect to various particular cases.

Card 2/2

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

Journal of Experimental and Theoretical Physics, USSR, Vol. 18, No. 6

Zhdanov, B. and Tikhonova, L. (Siberian Physico-technical Institute, Tomsk State University), Stability of crystallographic lattices, 552-8

"The stability of atomic cubic face-centered crystal lattice is examined under the influence of a one-sided elongation and a compression. It is shown that the destructions of the lattice on elongation and compression have essentially different characters, and that the lattice resists compression less than elongation."

Source: GTRSPL, Vol. 1, No. 5

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3

1562. Stability of Crystallographic Lattices, by B. Zhdanov and L. Tikhonova. Zhurnal Eksperimental'noi i Teoreticheskoi Fiziki 18, p. 552-558, 1948. (In Russian)

The stability of the atomic cubic face-centered crystal lattice is examined under the influence of a one-sided elongation adn a expression. It is shown that the destructions of the lattice on elongation and compression have essentially different characters, and that the lattice resists compression less than elongation.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

ZHDANOV, B.

Elektrooborudovanie Mostovykh Kranov (Electrical Equipment for Bridge Cranes - Handbook for Design, Installation and Operation)

225 p. 2.25

SO: Four Continent Book List, April 1954

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ZHDANOV, B. A.

Montazh i Ekspluatatsiya Kranovogo Elektrooborudovaniya [Installation and Exploitation of Electrical Hoisting Equipment] Moskva, Mashgiz, 1952. 253 p. illus., diagrs., tables. "Literatura": P. [252]

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741.53
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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

1. ZHDANOV, B. A.

2. USSR (600)

4. Voronezh Province - Ponds

7. Effectiveness of anti-seepage measures in ponds of Voronezh Province. Gidr. i mel. 5, No. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953. Unclassified.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

CHERNENKOV, A. D.; ZHDANOV, B. A.

Beets and Beet Sugar

Mechanized ridge cultivation of sugar beets in the non-chernozem zone.
Sakh. prom. 27, No. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Unclassified.

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1. ZHDANOV, B.A.

2. USSR (600)

4. Cultivators

7. Cross cultivation of sugar best fields, Sakh.prom. 27 no. 5, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

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ZHDANOV, B.A.

Cross cultivation of sugar beets. Sakh.prom. 29 no.1:34-38 '55.
(MLRA 8:4)

1. Vsesoyuznyy institut mekhanizatsii sel'skogo khozyaystva.
(Sugar beets) (Agricultural machinery)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

ZHDANOV, B.A.

Letters to the editor. Rech.transp. 18 no.3:52 Mr '59.
(MIRA 12:4)

(Motorships)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

AFANAS'YEVA, A.L., kand.biol.nauk; BAYERTUYEV, A.A., kand.sel'skokhozyaystvennykh nauk; BAL'CHUGOV, A.V., kand.sel'skokhozyaystvennykh nauk; BELOZEROVA, N.A., agronom; BELOZOROV, A.T., kand.sel'skokhozyaystvennykh nauk; MAKSIMENKO, V.P., agronom; BERNIKOV, V.V., doktor sel'skokhozyaystvennykh nauk; BOGOMYAGKOV, S.T., kand.sel'skokhozyaystvennykh nauk; VOLYNETS, O.S., agronom; BODROV, M.S., kand.sel'skokhozyaystvennykh nauk; BOGOSLAVSKIY, V.P., kand.tekhn.nauk; KHRUPPA, I.F., kand.tekhn.nauk; VEPNER, A.R., doktor biol.nauk; VOZBUTSKAYA, A.Ye., kand.sel'skokhozyaystvennykh nauk; VOINOV, P.A., kand.sel'skokhozyaystvennykh nauk; VYSOKOS, G.P., kand.biol.nauk; GALDIN, M.V., inzhener-mekhanik; GERASIMOV, S.A., kand.tekhn.nauk; GORSHENIN, K.P., doktor sel'skokhozyaystvennykh nauk; YELENEV, A.V., inzhener-mekhanik; GERASKEVICH, S.V., mekhanik [deceased]; ZHARIKOVA, L.D., kand.sel'skokhozyaystvennykh nauk; ZHEGALOV, I.S., kand.tekhn.nauk; ZIMINA, Ye.A., agronom; BARANOV, V.V., kand.tekhn.nauk; PAVLOV, V.D.; IVANOV, V.K., kand.sel'skokhozyaystvennykh nauk; KAPLAN. S.M., kand.sel'skokhozyaystvennykh nauk; KATIN-YARTSEV, L.V., kand.sel'skokhozyaystvennykh nauk; KOPYRIN, V.I., doktor sel'skokhozyaystvennykh nauk; KOCHERGIN, A.Ye., kand.sel'skokhozyaystvennykh nauk; KOZHEVNIKOV, A.R., kand. sel'skokhozyaystvennykh nauk; KUZNETSOV, I.N., kand.sel'skokhozyaystvennykh nauk; LAMBIN, A.Z., doktor biol.nauk; LEONT'YEV, S.I., kand.sel'skokhozyaystvennykh nauk; MAYBORODA, N.M., kand.sel'skokhozyaystvennykh nauk; MAKAROVA, G.I., kand.sel'skokhozyaystvennykh nauk; MEL'NIKOV, G.A., inzhener; ZHDANOV, B.A., kand.sel'skokhozyaystvennykh nauk; MIKHAYLENKO, M.A., kand.sel'skokhozyaystvennykh nauk; MAGILEVTSEVA, N.A., kand.sel'skokhozyaystvennykh nauk;

(Continued on next card)

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AFANAS'YEVA, A.L.... (continued) Card 2.

NIKIFOROV, P.Ye., kand.sel'skokhozyaystvennykh nauk; NEMASHEV, N.I., lesovod; PERVUSHINA, A.N., agronom; PLOTNIKOV, N.A., kand.biol.nauk; L.G.; kand.sel'skokhozyaystvennykh nauk; PAVLOV, V.D., kand.tekhn. nauk; PRUTSKOVA, M.G., kand.sel'skokhozyaystvennykh nauk; GURCHENKO, V.S., agronom; POPOVA, G.I., kand. sel'skokhozyaystvennykh nauk; PORTYANKO, A.F., agronom; RUCHKIN, V.N., prof.; RUSHKOVSKIY, T.V., agronom; SAVITSKIY, M.S., kand.sel'skokhozyaystvennykh nauk; BOLDIN, D.T., agronom; NESTEROVA, A.V., agronom; SHRAFIMOVICH, L.B., kand. tekhn.nauk; SMIRNOV, I.N., kand.sel'skokhozyaystvennykh nauk; SEREBRYANSKAYA, P.I., kand.tekhn.nauk; TOKHTUYEV, A.V., kand. sel'skokhozyaystvennykh nauk; FAL'KO, O.S., iznh.; FEDYUSHIN, A.V., doktor biol.nauk; SHEVLYAGIN, A.I., kand.sel'skokhozyaystvennykh nauk; YUFEROV, V.A., kand.sel'skokhozyaystvennykh nauk; YAKHTENFEL'D, P.A., kand.sel'skokhozyaystvennykh nauk; SEMENOVSKIY, A.A., red.; GOR'KOVA, Z.D., tekhn.red.

[Handbook for Siberian agriculturists] Spravochnaia kniga agronoma Sibiri. Moskva, Gos. izd-vo sel'khoz. lit-ry. Vol.1. 1957. 964 p. (Siberia--Agriculture) (MIRA 11:2)

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ZHDANOV, B.P., ordinator

Antibiotics in mastitis in cows. Veterinariia 35 no.5:107-108 My '58. (MIRA 12:1)

1. Veterinarnyy fakul'tet Ukrainskoy akademii sel'skokhozyaystvennykh nauk.
(Udder--Diseases) (Antibiotics)

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GRIGORYAN, A.V.; ZHDANOV, B.G.; CHUMAKOV, A.A.; KIPRENSKIY, Yu.V.

Appearance of a sarcoma at the site of a throphic ulcer and after gunshot wounds. Khirurgiia 36 no.11:122-125 N '60. (MIRA 13:12)

1. Iz kafedry obshchey khirurgii (zav. - prof. V.I. Struchkov) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova i patologoanatomicheskogo otdeleniya (zav. - deystvitel'nyy chlen AMN SSSR prof. I.V. Davydovskiy) bol'nitsy imeni Medsantrud (glavnyy vrach A.P. Timofeyeva).
(ULCER) (GUNSHOT WOUNDS) (TUMORS)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0"

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KARPACHEVA, S.M., doktor khimich. nauk; CHEMARIN, N.G., kand.tekhn.nauk; BYCHKOV, A.Ye., inzh.; ZAKHAROV, Ye.I., inzh.; DEVYATKIN, V.I., inzh.; ZHDANOV, B.V., inzh.

Study of the operation of a pulsating extraction sieve plate column. Khim. i neft. mashinostr. no.1:24-27 Ja '65.

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ZHDANOV, D. A.

"Surgical Anatomy of the Chest Duct and the Chief Lymphatic Collectors and Centers of the Trunk," 1945

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ZHDANOV, D. A. (TOMSK)

"New Dat Upon the Anatomy and Physiology of Lymph Circulation in the Thoracal Cavity" (p.415) by Zhdanov, D. A.

SO: Advances in Modern Biology (Uspekhi Sovremennoi Biologii) Vol. XXI, No. 3, 1946

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

ZHDANOV, D. A.

"The Comparative Morphology Of The Main Lymphatic Ducts And Nodes In The Body Of Primates". (p. 127) by Zhdanov, D. A.

SO: Journal of General Biology, Vol. VIII, No. 2, (Issues 1-6 for 1947)

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ZHDANOV, D. A.

"Anatomy of Lymph Nodes and Vessels of the Mediastimum," Trudy v Plenuma Uchen. Med. Soveta M-va Zdravookhranennya RSFSR, V.9, Tomskye, 1947

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ZHDANOV, D. A.

"On the anatomy of lymphatic vessels in the human esophagus" Sbornik trudov. posvyashch. prof. Savinykh, Tomsk, 1948, p. 76-79.

So: U-3261, 10 April 1953 (leptopis 'Zhurnal 'nykh Statey, No. 12, 1949).

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

ZHDANOV, D. A., Prof.

PA 12/49T94

USSR/Medicine - Cerebrospinal Fluid, Circulation Jul 48

Medicine - Dura Mater

"Directions and Routes of Circulation of Cerebrospinal Fluid," D. A. Zhdanov, Prof, Active Mem Acad Med Sci USSR, Laureate of the Stalin Prize, Chair of Normal Anat, Tomsk Med Inst imeni V. M. Molotov, 7 3/4 pp

"Klinicheskaya Meditsina" Vol XXVI, No 7

General discussion of subject. Concludes that course of fluid is into the venous sinuses of the dura mater through the arachnoid granulations, into the vena occipitolis of the leptomeninges and into

12/49T94

USSR/Medicine - Cerebrospinal Fluid, Circulation (Contd) Jul 48

the venous plexus forming the outlets of the nerve radicles from the dura mater. Course of the fluid into the lymphatic system is of less importance.

12/49T94

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

ZHDANOV, D. A.

27892. PAVLITSKAYA, S. S. K INNERVATSII STENKI GRUDNOGO PROTOKA. TRUDY LENIGR. SANGIGIYEN. MED. IN-TA, T. P. 1949, S. 5 - 8. - BIBLIOGR: 9 NAZV.

SO: KNIZHAYA LETOPIS: Vol. 1, 1955

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ZHDANOV, D. A.

24249 ZHDANOV, D. A. K istorii issled-ovaniya glavnykh limfaticheskikh stvolov. Trudy Leningr. san.-gigien. Med. IN-TA, T. III, 1949, S. 14-28. Bibliogr: S. 26-28.

SO: Letopis, No. 32, 1949.

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24250 ZHDANOV, D. A. Anomal'nyy korotkiy razgibatel' pal'tsev kisti. Trudy Leningr. san.-gigien. med. IN-TA, T. III, 1949, S. 71-76. -Bibliogr: 6 Nazv.

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ZHDANOV, D. A.

35451. O svyazyakh limfaticheskoy sistemy zhelvdka s limfaticheskimi sosvdami sosednikh organóv. Vracheb. delo, 1949, No 11, stb. 1015-20.

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ZHDANOV, D. A.

Biologicheskiye Antiseptiki, Bakteriofagi, Antitela, Antibiotika (Biological antiseptics. Bacteriophage, anti-tela, antibiotics), Vol. 5, 278 pp., State Publ. of Med. Lit. Leningrad Dept., 1950.

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ZHDANOV, D.A.

ZHDANOV, D.A., prof.

New data on the anatomy of the lymphatic system of human skin. Trudy LSGMI 9:5-14 '51. (MIRA 11:1)

1. Kafedra normal'noy anatomii Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav. kafedroy - chlen-korrespondent AMN SSSR prof. Zhdanov D.A.)
(SKIN)(LYMPHATICS)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

ZHDANOV, D. A.

"General Anatomy and Physiology of the Lymphatic System"

335 pages, Medgiz, Moscow, 1952

IR 1850-52 18 Dec 1952

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

MONASTYRSKAYA, B.I. (Leningrad); TSINZERLING, V.D., chlen-korrespondent Akademii meditsinskikh nauk SSSR, zaveduyushchiy; ZHDANOV, D.A., chlen-korrespondent Akademii meditsinskikh nauk SSSR, direktor.

Certain problems of morphology and course of atherosclerosis in various ages. Arkh.pat. 15 no.4:47-52 Jl-Ag '53. (MLRA 6:11)

1. Kafedra patologicheskoy anatomii Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (for TSinzerling and Monastyrskaya). 2. Leningradskiy sanitarno-gigiyenicheskiy meditsinskiy institut (for Zhdanov). 3. Akademiya meditsinskikh nauk SSSR (for TZinzerling and Zhdanov). (Arteriosclerosis)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

RAKOV, A.N. (Leningrad); SVECHNIKOV, V.A., professor, direktor; ZHDANOV, D.A., chlen-korrespondent Akademii meditsinskikh nauk SSSR, direktor.

Arteriosclerosis of the pulmonary artery. Arkh.pat. 15 no.4:84-85 Jl-Ag '53. (MLRA 6:11)

1. Gospital'naya terapevticheskaya klinika Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (for Svechnikov and Rakov). 2. Leningradskiy sanitarno-gigiyenicheskiy meditsinskiy institut (for Zhdanov). 3. Akademiya meditsinskikh nauk SSSR (for Zhdanov).
(Arteriosclerosis) (Pulmonary artery)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620001-0

ZHDANOV, D.A., professor

Anastomoses and junctions of the lymphatic system of the stomach and duodenum in man. Trudy LSGMI 17:103-111 '53. (MIRA 10:8)

1. Kafedra normal'noy anatomii Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav. kafedroy - chlen-korrespondent AMN SSSR, prof. D.A.Zhdanov)

(STOMACH, anastomy and hitology,
lymphatic system, anastomoses with duodenal system)
(DUODENUM, anastomy and histology,
lymphatic system, anastomoses with gastric system)
(LYMPHATIC SYSTEM,
duodenum, anastomoses with gastric system)

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ZHDANOV, D.A., professor

Relation of the perineural spaces of the autonomic ganglia of the intestinal tube to the lymphatic system. Trudy LSGMI 17:112-115 '53. (MLRA 10:8)

1. Kafedra normal'noy anatomii Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav. kafedroy - chlen-korrespondent AMN SSSR, prof.D.A.Zhdanov)

(GASTROINTESTINAL SYSTEM, innervation,
Auerbach's plexus, relation to lymphatic system)
(LYMPHATIC SYSTEM, physiology,
relation to Auerbach's plexus)

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IZMAYLOVA, I.V.; PRIVES, M.G., professor, zaveduyushchiy; ZHDANOV, D.A., professor, chlen-korrespondent Akademii meditsinskikh nauk SSSR, zaveduyushchiy.

Arteries of the cerebral dura ~~matter~~ mater in man. Arkh.anat.gist.i embr. 30 no.3:41-47 My-Je '53. (MLRA 6:6)

1. Akademiya meditsinskikh nauk SSSR (for Zhdanov). 2. Laboratoriya normal'noy i sravnitel'noy anatomii Tsentral'nogo rentgenologicheskogo, radiologicheskogo i rakovogo instituta Ministerstva zdravookhraneniya SSSR (for Izmaylova and Prives). 3. Kafedra normal'noy anatomii Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta Ministerstva zdravookhraneniya RSFSR (for Izmaylova and Zhdanov).

(Brain--Blood vessels)

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ZHADANOV, D. A.

USSR/Medicine - Morphology Nov/Dec 53

"Plenary Session of the All-Union Scientific Society of Anatomists, Histologists, and Embryologists, in Leningrad," D.A. Zhadanov and E. Sh. Gerlovin

Usp Sov Biol, Vol 36, No 3(6), pp 380-389

This session was held 23-27 Jun 53 in Leningrad to discuss the role of morphology in the USSR, new methods and techniques of morphological research, and plans for making anatomical and histological work in higher institutes of learning serve a more practical purpose. The key speech was made by A.N. Studitskiy and "The Tasks of

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Soviet Morphology." He only mentioned the existence of tasks and then launched into a theoretical discussion of the Soviet concept of morphology. This speech was discussed, then other reports were read, among them "Electron Microscopy in Cytohistological Research" by Prof. G.M. Frank (Moscow), and a report on Radioautography by A.M. Kuzin (Moscow). The article does not disclose any new organizational plans.

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