"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

21 (0)

AUTHORS: Belousov, A. S., Rusakov, S. V., Tamm, Ye. I.

SOV/56-35-2-7/60

TITLE: The Photoproduction of Slow π^0-Mesons on Complex Nuclei (Fotoobrazovaniye medlennykh π^0-mezonov na slozhnykh yadrakh)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 2, pp 355-363 (USSR)

ABSTRACT: The authors investigate the dependence of the cross section for the photoproduction of slow pions ($E_\pi \sim 10$ MeV) on the atomic number of the target nuclei. As shown by a number of earlier papers, it holds that $\sigma \sim A^{2/3}$ and $\sigma \approx \sigma_0 \eta [3\lambda/4r_0] A^{2/3}$ (Refs 1 - 8), where σ_0 is the meson-production cross section on the free nucleon; the factor η is specific for the binding of nucleons in the nucleus, and λ is determined by means of experiments concerning the interaction of π^0-mesons with the nucleus. The experiments were carried out on the synchrotron of the FIAN with maximum γ-energies of 265 and 210 MeV. Experimental arrangement: The γ-rays passed through

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a monitor-ionization chamber, through the gap of two lead collimeters, after which they hit the target. Vertical to the direction of the γ-rays there was the telescope system consisting of a carbon filter (of 6 cm thickness), a lead converter (of 5 mm thickness), a scintillation counter, aluminum absorber (2 cm), and a Cherenkov counter. The scintillator had the form of a disk (diameter 7 cm, thickness 3 cm) and consisted of a solution of terphenyl in toluene (4g/l). The radiator of the Cherenkov-counter was a cylindrical vessel (diameter 6 cm, height 12 cm), which was filled with distilled water. All counters were fitted with photomultipliers FEU -33. The measured dependence of the π^0-yield of A is given for the two E_γ^{max}-values in diagrams, viz. for C, Al, Cu, Mo, Cd, and Pb (Figs 4 - 5). Figures 6 and 7 show the dependence of the π^0-yield on E_γ^{max} for C- and Pb-targets. The values measured agree with the $A^{2/3}$-law. In conclusion the authors thank engineers P. N. Shareyko and A. A. Rudenko for the construction of the apparatus used for the experiments, and also Professor P. A. Cherenkov and

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The Photoproduction of Slow π^0-Mesons on Complex Nuclei

SOV/56-35-2-7/60

Professor V. I. Veksler for the interest they displayed and for their advice, and finally also A. D. Makov for his assistance in carrying out the experiments. There are 7 figures and 24 references, 5 of which are Soviet.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute imeni P. N. Lebedev, AS USSR)

SUBMITTED: March 13, 1958

Card 3/3

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24.6700, 16.8100

76976
SOV/56-37-6-16/55

AUTHORS: Belousov, A. S., Rusakov, S. V, Tamm, E. I., and Cherenkov, P. A.

TITLE: Search for Particles with Masses Between 6 and 25 Electron Masses

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 37, Nr 6, pp 1613-1618 (USSR)

ABSTRACT: Experiments were carried out for the purpose of elucidating the question whether γ-quanta generate particles with mass lying between 6 and 25 electron masses according to the production cross sections as predicted by the electromagnetic theory of pair production. For this investigation fast coincidence circuits were used to measure the time of flight of particles with a given momentum between two scintillation counters. The following diagram illustrates the geometry of the setup:

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Search for Particles with Masses Between 6 and 25 Electron Masses

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SOV/56-37-6-16/55

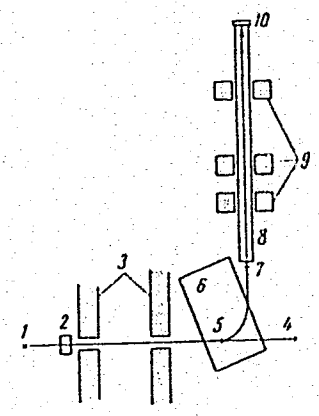

Fig. 1. Geometry of the experiment setup: (1) synchrotron target; (2) monitor chamber; (3) lead collimator; (4) direction of the bremsstrahlung beam; (5) lead target; (6) magnet; (7) scintillation counter; (8) vacuum tube; (9) focusing lenses; (10) scintillation counter.

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Search for Particles with Masses Between 6 and 25 Electron Masses

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SOV/56-37-6-16/55

The irradiation of the lead target by bremsstrahlung produced particles pairs. The separation of particles with a proper momentum was achieved by means of the magnetic field. The counters in the path of the particles at a distance S made it possible to measure the period separating the particles on their passage through the first and the second counter. The difference in the passage time of the particle with mass M and an electron having identical momentum was obtained from the relation $\tau_o = S(1-\beta_m)/c\beta_M$. Particles with mass M can be identified only when $N_{background}/N_e < N_M/N_e$, where, N_M - counting rate at the maximum in the curve of captured collisions for particles with mass M. Experiments were made with Pb target 0.5 thick for M = 8 and 12 m_e and 0.25 mm for M = 16 and 20 m_e. The theoretical coincidence

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Search for Particles with Masses Between 6 and 25 Electron Masses

76976
SOV/56-37-6-16/55

counting rate was compared with the experimental rate obtained for parameters of the experimental setup corresponding to the registration of particles with the expected mass. In each set of experiments the ratio of the electron counting rate to the background was also measured. The results obtained show that the cross sections for the production of particles by γ-quanta with unit charge, spin 1/2 and masses lying between 6 and 25 m_e do not correspond to those predicted by the electromagnetic theory. The work was performed under the guidance of V. I. Veksler; P. N. Shareyko, A. A. Rudenko, A. D. Makov made contributions in the course of this work. There is a schematic diagram of the setup; 2 tables; 2 graphs; and 14 references, 9 Soviet, 3 U.K., 1 French, 1 U.S. The U.S. and U.K. references are: W. Davies, D. Shaw. Proc. Phys. Soc. A64, 1006, 1951; U. Jánossy, C. B. A. Melusner. Nature, 63, 181, 1949; E. W. Cowan. Science, 108, 534, 1948; D. Broadbenf, U. Jánossy.

Card 4/5

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

Search for Particles with Masses Between 6 and 25 Electron Masses

76976
SOV/56-37-6-16/55

Proc. Roy. Soc. 192, 364, 1948.

SUBMITTED: July 29, 1959

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APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

RUSAKOV, S.V.

Rusakov, S. V. - "On the regime of the Dnieper rapids in the zone of the periodic affluence of the Zaporozh'ye dam", Izvestiya In-ta gidrologii i gidrotelyhniki (akad. nauk Ukr. SSR), Vol. IV, 1948, p. 85-94, (In Ukrainian, resume in Russian).

SO: U-3042, 11 March 1953, (letopis 'nykh Statey, No. 10, 1949).

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

RUSAKOV, S. V.

Dnieper River - Sand Bars

Sand bars in the zone of periodic rised of the Dnieper at the Zaporozhe Dan. Met. i gidrol. no. 6, 1948

9. Monthly List of Russian Accessions, Library of Congress, November 1952, Uncl.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

RUSAKOV S.V.

PYSHKIN, B.A., doktor tekhn. nauk; RUSAKOV, S.V., kand. tekhn. nauk.

Method for calculating strength of Dnieper-type shore protection installations. Izv. Inst. gidrol. i gidr. AN URSR 8:3-11 '51.
(Shore protection) (MIRA 11:4)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

KUSAKOV, S.V., kand. tekhn. nauk.

New equipment for studying the surface velocities and relief of river currents. Izv. Inst. gidrol. i gidr. AN URSR 8:12-19 '51
(Stream measurements) (Flowmeters) (MIRA 11:4)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

RUSAKOV, S.V.

PYSHKIN, B.A.; RUSAKOV, S.V., kand. tekhn. nauk.

Calculating the strength and stability of large dikes. Izv. Inst. gidrol. i gidr. AN URSR 9:3-18 '53. (MIRA 11:4)

1. Chlen-korrespondent AN USSR (for Pyshkin).
(Dikes (Engineering)) (Shore protection)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

KUSAKOV, S.V., kand. tekhn. nauk.

Behavior of Dnieper shoals in the zone of periodic backwater from the Zaporozh'ye Dam. Trudy GGI no.37:85-94 '53. (MIRA 11:6)
(Dnieper River)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

PYSHKIN, B.A.; RUSAKOV, S.V., kandidat tekhnicheskikh nauk; SUKHOMEL, G.I., otvetstvennyy redaktor; KHARITONSKIY, M.B., redaktor; SIVACHENKO, Ye.K., tekhnicheskiy redaktor.

[Major stream regulation engineering works of the Dnieper type; design and calculations] Kapital'nye vypravitel'nye sooruzheniia dneprovskogo tipa; konstruktsii i raschety. Kiev, Izd-vo Akademii nauk Ukrainskoi SSR, 1954. 115 p.[Microfilm] (MLRA 8:2)

1. Chlen-korrespondent Akademii nauk Ukrainskoy SSR (for Pyshkin).
2. Deystvitel'nyy chlen Akademii nauk Ukrainskoy SSR (for Sukhomel).
(Rivers--Regulation)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

RUSAKOV, Sergey Vasil'yevich, kandidat tekhnicheskikh nauk; PYSHKIN, B.A., redaktor; KAZANTSEV, B.A., redaktor; ZHUKOVSKIY, A.D., tekhnicheskiy redaktor.

[Development of waterway maintenance work on the Dnieper and other rivers of the Ukraine] Razvitie putevykh rabot na Dnepre i drugikh rekakh Ukrainy. Kiev, Izd-vo Akademii nauk USSR, 1955. 67 p.(MLRA 9:4)

1. Chlen-korrespondent Akademii nauk Ukrainskoy SSR (for Pyshkin)
(Ukraine--Rivers--Regulation)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

RUSAKOV, S.V.

Improving river navigation conditions by channel regulation, Visnyk AN URSR 26 no.7:48-49 Jl'55. (MLRA 8:10)
(Rivers--Regulation)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

112-57-8-16386

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1957, Nr 8, p 53 (USSR)

AUTHOR: Rusakov, S. V.

TITLE: An Experimental Straightening of a Section of the Snov River (Opytnoye vypravleniye uchastka r. Snov)

PERIODICAL: Izv. In-ta gidrol. i gidrotekhn. AN UkrSSR (Bulletin of the Institute of Hydrology and Hydro-Engineering, AS UkrSSR), 1956, Nr 14(21), pp 44-53

ABSTRACT: A method has been developed for controlling sandbars in small rivers that prevent navigation of ships with 50-60 cm draft. The principle of water-constraining and alluvium-controlling structures has been used. The water is constrained by semidikes built in the bar area at an angle 30°-50° horizontal to midstream flow. Building the semidikes increased the waterway depth by 30-50 cm. Single and double-row wattle-type semidikes have been tested. Heavy fascine-type semidikes are recommended as acceptable. The author presents rational layouts of semidikes with respect to midstream flow and various water levels.

V.A.M.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

PYSHKIN, Boris Andreyevich, prof.; RUSAKOV, Sergey Vasil'yevich; MAKSIMCHUK, Vladimir Lukich; SOKOL'NIKOV, Yuriy Nikolayevich. Primimal uchastiye: DOKUKIN, G.B.. TOLMACHOV, A.B., retsenzent; TSIMBERG, I.Ye., retsenzent; PECHKOVSKAYA, O.M., red.; MATVEYCHUK, A.A., tekhn.red.

[Problems in planning channel deepening cuts] Voprosy proektirovaniia dnouglubitel'nykh prorezei. Pod red. B.A.Pyshkina. Kiev, Izd-vo Akad.nauk USSR, 1959. 157 p. (MIRA 12:12)

1. Chlen-korrespondent AN USSR (for Pyshkin). 2. Glavnyy inzhener Dneprovskogo basseynovo upravleniya puti (for Tolmachov). 3.Nachal'nik otdela vodnykh putey Ukrgiprorechtransa (for TSimberg). (Rivers--Regulation)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

RUSAKOV, S.V., kand.tekhn.nauk

Determining amount of affluent by observations made at watergauge posts. (MIRA 12:4)
Rech.transp. 18 no.2:38-40 F '59.
(Hydraulic engineering)
(Water meters)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

PYSHKIN, Boris Andreyevich; PECHKOVSKAYA, O.M., red.izd-va; MONZHERAN, P.F., tekhn. red.; SUKHOMEL, G.I., akademik, retsenzent; SRIBNYY, M.F., retsenzent; RUSAKOV, S.V., kand. tekhn. nauk, retsenzent; ROZOVSKIY, I.L., kand. tekhn. nauk, retsenzent; PECHKOVSKAYA, O.M., red. izd-va; MONZHERAN, P.F., tekhn. red.

[Problems in the dynamics of reservoir banks] Voprosy dinamiki beregov vodokhranilishch. Izd.2., perer. i dop. Kiev, Izd-vo AN Ukr.SSR, 1963. 331 p. (MIRA 16:7)

1. AN Ukr.SSR (for Sukhomel). 2. Chlen-korrespondent AN Ukr. SSR (for Sribnyy).

(Reservoirs)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

BELOUSOV, A.S.; RUSAKOV, S.V.; TAMM, Ye.I.

Low-energy photodeuterons from lithium. Zhur. eksp. i teor. fiz. 43 no.3:813-814 '62. (MIRA 15:10)

1. Fizicheskiy institut imeni P.N.Lebedeva AN SSSR.
(Deuterons) (Lithium)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

RUSAKOV, S.V.; SOKOL'NIKOV, Yu.M.

Results of wind wave studies of the Kakhovka Reservoir near Nikopol'. Visti Inst.hidrol. i kidr. AN URSR 21:30-42 '62. (MIRA 16:4)
(Kakhovka Reservoir—Waves)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

RUSAKOV, Sergey Vasil'yevich; PYSHKIN, B.A., prof., red.; STEPANOV, V.O., nauchnyy red.; DAKHNO, Yu.B., tekhn. red.

[Design, construction and operation of protective structures at the Kakhovka Reservoir]Dosvid proektuvannia, budivnytstva ta ekspluatatsii zakhysnykh sporud Kakhovs'koho vodoskhovyshcha. Pid red. B.A.Pyshkina. Kyiv, Vyd-vo Akad.nauk URSR, 1962. 67 p. (MIRA 16:3)

1. Chlen-korrespondent Akademii nauk Ukr.SSR (for Pyshkin).
(Kakhovka Reservoir--Shore protection)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

BELOUSOV, A.S.; RUSAKOV, S.V.; TAMM, Ye.I.; TATARINSKAYA, L.S.

Photoproduction of π^0-mesons on hydrogen and deuterium in the region of small angles. Zhur. eksp. i teor. fiz. 43 no.4:1550-1552 O '62. (MIRA 15:11)

1. Fizicheskiy institut im. P.N. Lebedeva AN SSSR.
(Photonuclear reactions)
(Mesons) (Hydrogen)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

PYSHKIN, B.A., otv. red.; ARISTOVSKIY, V.V., doktor tekhn.nauk, prof., red.; RUSAKOV, S.V., kand. tekhn. nauk, red.; MAKSIMCHUK, V.L., kand. tekhn. nauk, red.; TSAYTS, Ye.S., kand. tekhn. nauk, red.; PECHKOVSKAYA, O.M., red.; LIBERMAN, T.R., tekhn. red.

[Changes in the banks of reservoirs]Pererabotka beregov vodokhranilishch. Kiev, Izd-vo Akad. nauk USSR, 1962. 140 p. (MIRA 15:11)

1. Akademiya nauk URSR, Kiev. Rada po vyvchenniu produktyvnykh syl. 2. Chlen-korrespondent Akademii nauk Ukr. SSR (for Pyshkin).
(Reservoirs) (Coast changes)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

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S/120/62/000/006/025/029
E073/E435

9,6150

AUTHORS: Belousov, A.S., Rusakov, S.V., Tamm, Ye.I., Tatarinskaya, L.S.

TITLE: Efficiency of a Cherenkov counter with a radiator made of lead glass for recording high-energy gamma-rays

PERIODICAL: Pribory i tekhnika eksperimenta, no.6, 1962, 125

TEXT: The authors measured the efficiency of Cherenkov counters with cylindrical 100 mm diameter, 100 mm long radiators made of heavy flint (3.87 g/cm^3, refractive index 1.548; radiation element 2.38 cm, critical energy 13 MeV). The radiator was placed into an aluminium cylinder with polished internal walls. One of the faces of the radiator was optically connected with the photocathode (sensitivity in excess of 50 μA/lumen) of a photomultiplier. The efficiency was determined by means of monochromatization of a beam of bremsstrahlung; the beam diameter of the γ-quanta was the same as the diameter of the radiator. Comparison of the obtained results with data obtained for the effect of telescopes indicates that, in a number of experiments, counters of this type can reduce appreciably the time necessary

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Efficiency of a Cherenkov ... S/120/62/000/006/025/029
E073/E435

for setting the required statistical accuracy, allowing considerable simplification of the instrumentation. There is 1 figure.

ASSOCIATION: Fizicheskiy institut AN SSSR (Institute of Physics AS USSR)

SUBMITTED: February 21, 1962

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APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

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S/056/62/043/004/056/061
B104/B186

24.6610

AUTHORS: Belousov, A. S., Rusakov, S. V., Tamm, Ye. I., Tatarinskaya, L. S.

TITLE: π^0-meson photoproduction in hydrogen and deuterium within the range of small angles

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 4(10), 1962, 1550-1552

TEXT: Unlike in earlier experiments (ZhETF, 41, 1793, 1961) the authors here measured directly the differential cross sections of the processes

$$\gamma + d \longrightarrow \begin{cases} d + \pi^0 \\ n + p + \pi^0 \end{cases}, \quad \gamma + p = p + \pi^0.$$

With the aid of γ-telescopes, the π^0-mesons were determined from the two γ-quanta occurring in the decay of one π^0-meson. The differential cross sections for mean energies $\varkappa$ of the primary photons and mean angles θ of departure of the meson were determined as the ratios of the measured yield

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$Y(\alpha, \theta_1, \varkappa)$ to the probability of recording one π^0-meson:

$$\frac{d\sigma}{d\Omega}(\bar{\varkappa}, \bar{\theta}_\pi) = Y(\alpha, \theta_1, \varkappa) \Big/ n \int\limits_{\varkappa_{\text{пор}}}^{\varkappa_{max}} \int\limits_{\Omega_\pi} N(\varkappa, \Omega_\pi) f(\varkappa)\, d\Omega_\pi\, d\varkappa; \qquad (1).$$

Here the angles α and θ_1 determine the position of the telescopes, n is the number of nuclei per cm^2 of target, $f(\varkappa)$ is the spectrum of bremsstrahlung, $\varkappa_{max}$ and $\varkappa_{\text{пор}}$ are the maximum and the threshold energies of the photons, $N(\varkappa, \Omega_\pi)$ is the probability of recording one π^0-meson flying off at solid angles of between θ and $\theta + d\theta$ and produced by a meson of the energy of between $\varkappa$ and $\varkappa + d\varkappa$. For the mean values one has

$$\bar{\varkappa} = \int\limits_{\Omega_\pi} \varkappa N(\varkappa, \Omega_\pi)\, d\Omega_\pi \Big/ \int\limits_{\Omega_\pi} N(\varkappa, \Omega_\pi)\, d\Omega_\pi, \qquad (2).$$

$$\overline{\cos\theta_\pi} = \int\limits_{\varkappa_{\text{пор}}}^{\varkappa_{max}} \cos\theta_\pi N(\varkappa, \Omega_\pi) f(\varkappa)\, d\varkappa \Big/ \int\limits_{\varkappa_{\text{пор}}}^{\varkappa_{max}} N(\varkappa, \Omega_\pi) f(\varkappa)\, d\varkappa.$$

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The integrals of the functions here described were computed analytically and by the Monte-Carlo method using a computer. The present results for hydrogen at $\theta_\pi = 0$, 15, and 90° ($\kappa \approx 220$ Mev) agree only with the results of the paper in which the contribution of D-waves was considered (J. S. Ball. Phys. Rev., 124, 2014, 1961). The results for deuterium at $\theta_\pi = 0^\circ$ ($\kappa \approx 200$-250 Mev) agree well with experimental data. If $\kappa < 200$ Mev the experimental data exceed the theoretical by a value which is greater than two standard deviations. This deviation is probably associated with the contribution of π^0-mesons produced by scattering with charge exchange on $\pi^\pm$-mesons. There are 2 tables.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute imeni P. N. Lebedev of the Academy of Sciences USSR)

SUBMITTED: July 19, 1962

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

S/056/62/043/003/012/063
B102/B104

AUTHORS: Belousov, A. S., Rusakov, S. V., Tamm, Ye. I.

TITLE: Low-energy photodeuterons from lithium

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 3(9), 1962, 813-814

TEXT: The photodeuteron-photoproton yield ratio from targets of natural lithium exposed to the bremsstrahlung from a synchrotron was measured. The targets had been placed inside the vacuum chamber and the particles emitted were recorded, after momentum selection, on photograp'ic plates also in the chamber. The measurements were made with maximum bremsstrahlung energies, $E_{\gamma max}$, of 160, 200, 240 and 260 Mev and 3.8 Mev $\leqslant E_d \leqslant$ 9.6 Mev, 7.6 Mev $\leqslant E_p \leqslant$ 10 Mev for emission angles of from 23 to 57°. For these values of $E_{\gamma max}$ the following yield ratios were obtained: 0.061 ± 0.009, 0.074 ± 0.012, 0.098 ± 0.012, 0.092 ± 0.012. The photoproton yield remained constant (±3.6 %) when $E_{\gamma max}$ was changed, i.e. the photodeuteron yield

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Low-energy photodeuterons from... S/056/62/043/003/012/063
B102/B104

grew with $E_{\gamma max}$. There is 1 table.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute imeni P. N. Lebedev of the Academy of Sciences USSR)

SUBMITTED: April 11, 1962

Card 2/2

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

BELOUSOV, A.S.; RUSAKOV, S.V.; TAMM, Ye.I.; TATARINSKAYA, L.S.

Photoproduction of π^0-mesons on deuterium at energies between 170 and 210 Mev. Zhur. eksp. i teor. fiz. 41 no.6:1793-1803 D '61. (MIRA 15:1)

1. Fizicheskiy institut imeni P.N.Lebedeva AN SSSR.
(Photonuclear reactions) (Mesons) (Deuterium)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

RUSAKOV, S.V.

BELOUSOV, A. S.; RUSAKOV, S. V.; TAMM, E. I.; TATARINSKAYA, L. S.

"Photoproduction of π-Mesons from Deuterium"

report presented at the Intl. Conference on High Energy Physics, Geneva, 4-11 July 1962

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

PYSHKIN, Boris Andreyevich; RUSAKOV, Sergey Vasil'yevich; MAKSIMCHUK, Vladimir Lukich; PECHKOVSKAYA, O.M., red. izd-va; MATVEYCHUK, A.A., tekhn. red.

[Design of protective structures on the banks of reservoirs] Proektirovanie zashchitnykh sooruzhenii na vodokhranilishchakh. Pod red. B.A.Pyshkina. Kiev, Izd-vo Akad. nauk USSR, 1962. 134 p. (MIRA 15:5)

1. Chlen-korrespondent Akademii nauk USSR (for Pyshkin).
(Reservoirs) (Shore protection)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

BELOUSOV, A.S.; RUSAKOV, S.V.; TAMM, Ye.I.; CHERENKOV, P.A.

Search for particles with masses between 6 and 25 electron masses.
Zhur.eksp.i teor.fiz. 37 no.6:1613-1618 D '59. (MIRA 14:10)
(Particles (Nuclear physics))

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

31774
S/056/61/041/006/020/054
B102/B138

24.6600

AUTHORS: Belousov, A. S., Rusakov, S. V., Tamm, Ye. I., Tatarinskaya, L. S.

TITLE: π^0 photoproduction on deuterium at energies between 170 and 210 Mev

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 41, no. 6(12), 1961, 1793-1803

TEXT: In experiments carried out at the synchrotron of the Fizicheskiy institut im. P. N. Lebedeva AN SSSR (Physics Institute imeni P. N. Lebedev AS USSR) the differential cross sections of the reactions

$$\gamma + d \begin{cases} \pi^0 + d \\ \pi^0 + p + n \end{cases}$$

were measured. They were compared with those known for the $\gamma + p \to \pi^0 + p$ reaction, in order to get data on π^0 photoproduction on neutrons. Vacuum targets from the fotomezonnaya laboratoriya FIAN (Photomeson Laboratory of the FIAN) were used, filled with liquid deuterium or

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π^0 photoproduction on deuterium ... 7/056/61/041/006/020/054
B102/B138

hydrogen. They had an effective volume of 53 cm^3. The π^0-mesons were recorded through their decay gamma quanta by means of a three-counter scintillation telescope with ФЭУ-33 (FEU-33) photomultipliers. The fast coincidence, anticoincidence and time analyzing circuits where such that resolution was better than 10^{-8} sec. Maximum energies recorded by the five channels were 178, 186, 194, 202 and 210 Mev. The efficiency of the γ-telescope was $\gamma = \begin{cases} 0.0052 - 0.12 & \text{for } E_\gamma \leqslant 110 \text{ Mev} \\ 0.42 & \text{for } E_\gamma > 110 \text{ Mev} \end{cases}$.
Necessary corrections did not exceed 10%. The energy dependence of the quantum yield in π^0 decay was measured at 44, 84 and 124° in the laboratory system. The measurements covered the energy ranges 170 to 210 Mev and 160 to 220 Mev at an angle of 84°. From these data the gamma emission cross sections were calculated by the method of "photon differences". Background due to random coincidences was small but that of the empty target was between 15 and 30% and caused high statistical error. The contribution from Compton effect γ-quanta was very small. The experimental

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S/056/61/041/006/020/054
B102/B138

π^0 photoproduction on deuterium ...

data were compared with theory in two ways: (a) The theoretically determined cross section ratios of reactions I and II in momentum approximation were used to calculate the quantum yield ratio. (b) The angular and energy dependences of I were used to calculate decay quanta distributions. For all angles of π^0-emission the total and elastic cross section ratio of I and II was almost independent of energy. For 44 and 84° the experimental value of this ratio was much higher than the theoretical for 124° it agreed. For angles below 90° and primary gamma energies of 170-210 Mev the elastic π^0 photoproduction cross section was thus much larger than expected from momentum approximation. For a more detailed comparison between experiment and momentum-approximation theory, data of A. I. Lebedev and A. M. Baldin (Otchet FIAN, 1961) were used. All results indicate that around 200 Mev the σ_d/σ_p ratio increases rapidly. The authors thank Engineer P. N. Shareyko for design of the electronic apparatus and A. M. Baldin and A. I. Lebedev for discussions. A paper by A. M. Baldin and B. B. Govorkov (Nucl. Phys. 13, 193, 1959) is mentioned.

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31774

π^0 photoproduction on deuterium ... S/056/61/041/006/020/054
B102/B138

There are 8 figures, 1 table, and 17 references: 8 Soviet and 9 non-Soviet. The four most recent references to English-language publications read as follows: J. C. Keck, A. V. Tollestrup, H. H. Bingham. Phys. Rev., 103, 1549, 1956; A. S. Penfold, J. E. Less. Analysis of Photo Cross Sections, University of Illinois, 1958; L. J. Koester, F. E. Mills. Phys. Rev., 105, 1900, 1957; L. S. Hyman. Ph. D. Thesis, Massachusetts Institute of Technology, 1959.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute imeni P. N. Lebedev of the Academy of Sciences, USSR)

SUBMITTED: July 20, 1961

Card 4/4

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

PETROV, D.A.; RUSAKOV, T.A.; IACHEVA, S.K.

Radial heterogeneity in germanium and silicon crystals.
Godishnik fiz mat 55 no.2:89-103 '60/'61 [publ. '62].

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

41335
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B101/B144

K 9500

AUTHORS: Petrov, D. A., Rusakov, T. A., Yacheva, S. K.

TITLE: Formation of germanium and silicon crystal faces under Czochralski's conditions of growth

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 146, no. 3, 1962, 588-591

TEXT: General rules are established for the formation of crystal faces when growing Ge or Si crystals. (1) Ge or Si crystals develop as regular octahedrons. In the direction of growth [111] the potential growth faces are the horizontal lower face (111), the group of lower side faces $(\bar{1}11)$, $(1\bar{1}1)$, $(11\bar{1})$, and the group of upper side faces $(1\bar{1}\bar{1})$, $(\bar{1}1\bar{1})$, $(\bar{1}\bar{1}1)$. The lower faces form with the direction of growth [111] an angle of $19^{\circ}28'$ measured clockwise, and the upper faces the same angle counterclockwise. (2) If the half-angle of aperture of the upper cone of the pulled crystal is $19^{\circ}28'$, the crystal will show the corresponding genuine, reflecting crystal faces {111}. The following condition to determine the active growth faces is formulated: If an octahedral face is tangent to the interface and if it extends above the contact area outside

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the crystal (thus being directed towards the melt) it will be an active growth face. This makes it possible to determine the active faces for other directions of growth, [100], [112], [110]. (3) Experiments showed that when crystals are grown as described by Czochralski the lower horizontal (111) face also developed. After tearing off a crystal, d~10 mm, a round shining face, d~6 mm, was observed. (4) The observed rise of the melt level near the faces favors their development within the crystal body, while the steep temperature gradient outward leads to the formation of sharp edges. As it is the {111} faces in crystals with diamond structure that have the densest packing and, therefore, the lowest surface energy, their growth is favored at the expense of other faces with higher surface energy. The melt is overheated as compared with the faces richer in energy, and undercooled as compared with those poorer in energy. If, accordingly, the conditions for the development of {111} faces are given in Czochralski growing, the melt adjacent to these faces will be more undercooled than in the neighboring regions. There are 4 figures.

PRESENTED: April 21, 1962, by A. A. Bochvar, Academician

SUBMITTED: March 8, 1962

Card 2/2

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

S/180/62/000/005/010/011
E132/E460

AUTHORS: Petrov, D.A., Rusakov, T.A., Yacheva, S.K.
(Moscow, Sofia)

TITLE: The origin of radial nonuniformities in crystals of germanium and silicon

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Metallurgiya i toplivo, no.5, 1962, 187-190

TEXT: The formation of (111) faces on a crystal of Si or Ge often leads to the presence of a rod-shaped region of nonuniformity along the axis of the crystal which is easily revealed by etching. The crystals are grown typically along [111] at 0.8 mm/min while being rotated round this axis at 1/3 rpm. In a crystal of Ge the disturbed region was shown to have the form of a helix. The defect is associated only with the [111] direction. The disturbed region contains more n-type defects than the bulk of the crystal. It appears that the (111) face grows in a relatively more strongly supercooled melt than the faces near it. The thermal field in the crucible may be eccentric and depart from

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PETROV, D.A.; HUSAKOV, T.A.; YACHEVA, S.K.

Origin of radial nonuniformity in germanium and silicon crystals. Izv. AN SSSR.Otd.tekh.nauk. Met. i topl. no.5:187-190 S-O'62. (MIRA 15:10)

(Metal crystal—Growth)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

PETROV, D.A.; RUSAKOV, T.A.; YACHEVA, S.K.

Formation of faces on germanium and silicon crystals grown by Czochralsky's method. Dokl. AN SSSR 146 no.3:588-591 S '62. (MIRA 15:10)

1. Predstavleno akademikom A.A.Bochvarom.
(Crystals—Growth)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

S/107/61/000/012/006/006
D201/D302

AUTHORS: Gornushkin, Yu., and Rusakov, V., Engineers

TITLE: A pulse tachometer

PERIODICAL: Radio, no. 12, 1961, 47-48

TEXT: The authors describe a simple electronic tachometer for measuring velocities up to 100,000 r.p.m. The tachometer consists of two main parts: A pulse transmitter producing one current pulse for each revolution of the shaft and a counting arrangement, counting the number of pulses per unit time. Pulses from the pick-up are amplified in a two stage voltage amplifier (double triode 6H9C (6N9S)) and then fed into a cathode-follower, used as a matching device for a loop oscillograph, and to a limiter. The cathode follower and the limiter use the 6N9S value, with a diode connected second half for limiting. From the limiter the pulses are applied to a monostable multivibrator using another 6N9S value and shaping the pulses into rectangular pulses of pre-determined duration. The

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S/107/61/000/012/006/006
D201/D302

A pulse tachometer

multivibrator operates satisfactorily down to the repetition frequency of 60 c/s, which corresponds to 3600 r.p.m. Lower frequencies may be used with a proper choice of circuit components. The rectangular pulses from the multi-vibrator are applied to a high slope television pentode 6Ж4 (6Zh4), with a capacitor in the anode cct. The capacitor charges when the pentode is cut-off and discharges through a diode and a meter when the pentode conducts. Every positive current pulse, applied to the pentode input, produces thus one cycle of charge-discharge of the capacitor so that with the constant capacity and constant supply voltage, the current flowing through the meter is proportional to the pulse frequency. A switch connects into the circuit different values of the capacitance in the anode circuit of the pentode thus providing different ranges of measurement. The instrument described has two ranges, 25,000 and 50,000 r.p.m. The time adjustment for a given range is made by means of a variable resistor shunting the meter. The HT supply consists of a full wave bridge rectifier with ДГ-Ц24 (DG-Ts 24) diodes, a condenser input

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

A pulse tachometer

S/107/61/000/012/006/006
D201/D302

filter and a voltage stabilization circuit. The power supply has a mains voltage stabilizing transformer and operates with mains voltage variations of ± 30 V. Total power consumption is 80W. The overall dimensions of the indicating instrument are 300 x 400 x 100 mm. It is connected to the pick-up by a 10 m long cable. The tachometer may be used in conjunction with various pick-ups: contact, inductive, photo-electric, tension gauge etc. The tachometer described was an inductance pick-up, consisting of a magnetic core with a coil of 5,000-10,000 turns of ПЭ-0.03 (PE-0.03) wire. The accuracy of measurements is determined basically by the stability of HT supply and of the capacitance charge-discharge circuit. The lower speed measurement range may be extended by using pick-ups producing two or more pulses per revolution. With proper calibration the tachometer may be used for measuring the pulse repetition frequency and the frequency of the alternating current. There are 3 figures.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

GORNUSHKIN, Yu., inzh.; RUSAKOV, V., inzh.

Impulse-type tachometer. Radio no.12:47-48 D '61. (MIRA 14:12)
(Tachometer) (Electronic measurements)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

RUSAKOV, V.

Bucharest

Bucharest today, Vokrug sveta No. 3, 1953.

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

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

RUSAKOV, V. A.

RUSAKOV, V. A. - "The effect of collodial substances onthe multiplication and fermenting activity of yeasts". Kiev, 1955. Min Higher Education Ukrainian SSR. Kiev Technological Inst of the Food Industry imeni A. I. Mikoyan. (Dissertation for the Degree of Candidate of Technical Sciences).

SO Knizhnaya Letopis' No. 46, 12 November 1955. Moscow

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

RUSAKOV, V.A.

DZHELEPOV, V.P.; KOZODAYEV, M.S.; OSIPENKOV, V.T.; PETROV, N.I.; RUSAKOV, V.A.

Wilson chamber in a pulse magnetic field used in synchrocyclotron nuclear investigations. Prib.i tekh.eksp. no.3:3-9 N-D '56. (MLRA 10:2)

1. Ob"edinennyy institut yadernykh issledovaniy.
(Cloud chamber) (Cyclotron)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

RUSAKOV, V.A.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1852

AUTHOR IVANOV, V.G., PETROV, N.I., RUSAKOV, V.A., BUDAGOV, JU.A., OSIPENKOV, V.T.

TITLE Showers in Lead which are Produced by Electrons with the Energy of 360 ± 30 MeV.

PERIODICAL Žurn. eksp. i teor. fis, 31, fasc. 6, 1095-1096 (1956)
Issued: 1 / 1957

The data on electron showers published by the present report were determined in the course of the investigation of the results obtained by experiments carried out for the purpose of studying the interaction between negative pions and lead nuclei. The experiments were carried out with the synchrocyclotron of the Laboratory for Nuclear Problems by means of a WILSON chamber of 400 mm diameter in a magnetic field having a field strength of 10^4 Ørsted. The pion bundle passing through a lead plate (thickness 4,6 $g.cm^{-2}$) located inside the chamber contained (2 ± 1)% electrons. Therefore, also cases connected with the production of electron showers in the lead were photographically recorded besides acts of nuclear interaction. On this occasion 159 showers were registered which were excited by electrons with energies of from 330 to 390 MeV. An attached photograph shows such a shower. This number (159) does not include a few cases in which primary electrons came to a standstill in the lead plate, for it is practically impossible to separate them from the many pions which came to a standstill. When computing the number of particles contained in the showers only the secondary electrons with E ≥ 8 were considered. By this

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critical selection for secondary electrons such errors were eliminated as are connected with the existence of a background of electrons with low energies in the chamber.
The distribution of the showers over the number of particles, which was found in the course of the experiment, is shown in a table. For reasons of comparison the last column of this table shows the distribution of showers (corresponding to POISSON'S theorem) over the number of electrons. The average number of electrons in a shower according to the data given by the table amounts to 1,77. The energy distribution of the secondary electrons is illustrated by a table. Within the limits of measuring accuracy the average number of secondary electrons in the shower, which was obtained by the above measurements, agrees with the corresponding experimental results obtained by CH.A.O'ANDLAU, Nuovo Cim.,12, 859 (1954)) and also with the value obtained by R.B.WILSON, Phys.Rev.86, 261 (1952) by computing the electron cascade in lead by means of the MONTE CARLO method.
The above is a translation of this short report.

INSTITUTION: United Institute for Nuclear Research (The name of this institute appears here for the first time).

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

RUSAKOV, V.A.

CARD 1 / 2 PA - 1853

SUBJECT USSR / PHYSICS

AUTHOR IVANOV, V.G., OSIPENKOV, V.T., PETROV, N.I., RUSAKOV, V.A.

TITLE The Total Cross Sections of the Nonelastic Interaction of Negative Pions with the Nuclei of C, Al, Cu, Sn, and Pb at an Energy of 225 ± 10 MeV.

PERIODICAL Zurn. eksp. i teor. fis, 31, fasc. 6, 1097-1097 (1956)

Issued: 1 / 1957

By making use of the synchrocyclotron of the Laboratory for Nuclear Problems the authors determined the above mentioned total cross sections. On the occasion of these measurements the losses of particles out of the bundle on the occasion of the passage of the particle through a scatterer made from the material to be investigated were determined. The average loss angle was 30°. The mesons were registered by means of a telescope consisting of three scintillation counters. The first and the second counter contained tolan crystals, and the third contained as scintillator a solution of terphenyl in toluene. With the help of the first two counters the pions inciding upon the scatterer were counted, whilst the third registered the particles passing through the scatterer. In front of the third scatterer there was a lead filter (thickness 5,85 g/cm^2) which was to absorb the heavy charged particles produced on the occasion of the interaction between the pions and the nuclei of the scatterer. For the purpose of determining the number of times that pions were lost out of the bundle, double and triple coincidences were counted at the same time. The energy of the pions inciding upon the scatterer as well as the total admix-

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ture of myons and electrons were determined separately from measuring the curve of the absorption of pions in lead. These measurements were carried out under the same geometric conditions as in the case of the experiment described. The following results were obtained: The energy of the pions in the bundle amounts to 230 ± 6 MeV and the admixture of myons and electrons in the bundle is 12,5 ± 3%. The thickness of the scatterer was on the average 5-6 g/cm^2, and therefore the average energy of the pions, to which measurements of the cross sections refer, amounted to 225 ± 10 MeV.
Into the cross sections measured here corrections were introduced on the basis of the work by V.P.DŽELEPOV et al, Žurn.eksp.i teor.fis,31,fasc.6, 23 (1956), which took account of the following facts: a) the nonelastic scattering of pions into the angular range of from 0° to 30°, b) the elastic scattering of pions into the angular range of 30° to 180°, c) the fast secondary protons registered by the third counter. The total cross sections of the nonelastic interaction between pions and nuclei, which were found in this manner, are shown in a table. At an energy of 225 MeV these cross sections are equal to the geometric cross sections of the corresponding nuclei. Within the limits of measuring accuracy these results agree with those obtained by similar tests carried out by A.E.IGNATENKO et al., Dokl.Akad.Nauk, 103, 209 (1955).

INSTITUTION:

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

KOTLYAREVSKIY, D.M.; MESTVIRISHVILI, A.N.; NYAGU, D.; OKONOV, E.O.; PETROV, N.I.; RUSAKOV, V.A.; CHKHAIDZE, L.V.; U TSZUN-FAN' [Wu Tsung-fan]

Energy spectra and angular correlations of particles in $K^0 \rightarrow \pi^{\pm} + e^{\pm} + \nu$ decays. Iad. fiz. 1 no.6:1035-1044 Je '65.)(MIRA 18:6)

1. Ob"yedinennyy institut yadernykh issledovaniy i Institut fiziki AN Gruzinskoy SSR.

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ANIKINA, M.Kh.; GOGITIDZE, O.N.; ZHURAVLEVA, M.S.; KOZLOV, A.A.; KOTLYAREVSKIY, D.M.; MANDZHAVIDZE, Z.Sh.; MESTVIRISHVILI, A.N.; NYAGU, D.; OKONOV, E.O.; PETROV, N.I.; ROZANOVA, A.M.; RUSAKOV, V.A.; TAKHTAMYSHEV, G.G.; CHKHAIDZE, L.V.; U TSZUN-FAN' [Wu Tsung-fan]; TSERELOV, A.A.

Observation of $K_2^0 \rightarrow \pi^+ + \pi^- + \pi^0$ decays. Zhur. eksp. i teor. fiz. 45 no.3:469-473 S '63. (MIRA 16:10)

1. Ob"yedinennyy institut yadernykh issledovaniy i Institut fiziki AN Gruzinskoy SSR.
(Photography, Particle track) (Mesons)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

CHUMAKOV, Yu.I.; RUSAKOVA, L.A.; MEDNIKOV, A.I.; VIRNIK, R.I.

Nicotinic acid. Metod.poluch.khim.reak. i prepar. no.7:79-82 '63. (MIRA 17:4)

1. Kiyevskiy politekhnicheskiy institut.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

ANIKINA, M.Kh.; ZHURAVLEVA, M.S.; KOTLYAREVSKIY, D.M.; MANDZHAVIDZE, Z.Sh.; MESTVIRISHVILI, A.N.; NYAGU, D.V.; OKONOV, E.O.; PETROV, N.I.; RUSAKOV, V.A.; TAKHTAMYSHEV, G.G.; CHKHAIDZE, L.V.; U TSZUN-FAN' [Wu TSung-fan]

Estimation of the relative probability of $K_2^0 \rightarrow 3\pi^0$ decay. Zhur. eksper. i teor. fiz. 46 no.1:59-66 Ja'64. (MIRA 17:2)

1. Ob"yedinennyy institut yadernykh issledovaniy i Institut fiziki AN Gruzinskoy SSR.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

ACCESSION NR: AP4012523 S/0056/64/046/001/0059/0066

AUTHORS: Anikina, M. Kh.; Zhuravleva, M. S.; Kotlyarevskiy, D. M.; Mandzhavidze, Z. Sh; Mestvirishvili, A. N.; Nyagu, D. V.; Okonov, E. O.; Petrov, N. I.; Rusakov, V. A.; Takhtamy*shev, G. G.; Chkhaidze, L. V.; Wu, Tsung-fan

TITLE: Estimate of the relative possibility of the $K_2^0 \rightarrow 3\pi^0$ decay

SOURCE: Zhurnal eksper. i teoret. fiz., v. 46, no. 1, 1964, 59-66

TOPIC TAGS: K_2 decay, Dalitz pair, neutral kaon decay, CP invariance, selection rules, V sup 0 event, ionization selection rule

ABSTRACT: Continuing an earlier investigation (D. V. Nyagu, E. O. Okonov, N. I. Petrov, A. M. Rozanova, and V. A. Rusakov, ZhETF v. 40, 1618, 1961), the authors registered the $K_2^0 \rightarrow 3\pi^0$ decay by the Dalitz pairs observed in a one-meter cloud chamber placed in a beam of neutral particles from a proton synchrotron, using an experimental

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ACCESSION NR: AP4012523

setup described earlier (ZhETF v. 45, 469, 1963). Applying more stringent selection rules, they found the ratio of the probability of the $K_2^0 \rightarrow 3\pi^0$ decay to the probability of all K_2^0 meson decays to be (0.24 ± 0.08). "We thank the proton synchrotron crew, whose precise work enabled us to set up the project. We are deeply grateful to B. M. Pontecorvo who called attention to the possibility of investigating $K_2^0 \rightarrow 3\pi^0$ decay by means of Dalitz pairs and for numerous discussions. We are grateful to E. L. Andronikashvili, V. I. Veksler, and V. P. Dzhelepov for collaboration, and also to the group of laboratory assistants and particularly student Yu. Luksty*n'sh of Riga University for participating in the measurements." Orig. art. has: 2 figures, 1 formula, and 1 table.

ASSOCIATION: Ob"yedinenny*y institut yaderny*kh issledovaniy (Joint Institute of Nuclear Research); Institut fiziki AN GruzSSR

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

ACCESSION NR: AP4012523

(Physics Institute, AN GruzSSR)

SUBMITTED: 10Jul63 DATE ACQ: 26Feb64 ENCL: 00

SUB CODE: PH NO REF SOV: 004 OTHER: 006

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APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

ANIKINA, M.Kh.; NEAGU, D.; OKONOV, Ye.O.; PETROV, N.I.; ROSANOVA, A.M.; RUSAKOV, V.A.; SARANTSEVA, V.R., tekhn. red.

An experimental investigation of CP-invariance consequences K_2^0 decays. Dubna, Ob"edinennyi institut iadernykh issledovanii, 1961. p.8.

(No subject heading)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

SHABANOV, A.N., prof., red.; RUSAKOV, V.A., red.; KUZ'MINA, N.S., tekhn. red.

[Medical handbook for feldshers]Meditsinskii spravochnik dlia fel'dsherov. Izd.9., ispr. Moskva, Medgiz, 1962. 570 p. (MIRA 15:10)

(MEDICINE—HANDBOOKS, MANUALS, ETC.)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

ANIKINA, M.Kh.; NYAGU, D.V.; OKONOV, E.O.; PETROV, N.I.; ROZANOVA, A.M.
RUSAKOV, V.A.

Experimental study of some consequences of CP-invariance in the decay of K_2^0 mesons. Zhur.eksp.i teor.fiz. 42 no.1:130-134 Ja '62. (MIRA 15:3)

1. Ob"yedinennyy institut yadernykh issledovaniy.
(Mesons--Decay)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

KUSAKOV, V.A.

ANIKINA, M. Kh., KOTLYAREVSKIY, D. M., KOSLOV, A. A., DZURAVLEVA, M. S., MANDZHAVIDZSE S. M., MESTRVIRISHVILI, A. N. NIAGU, D. V., PETROV, N. I. ROZANOVA, A. M., RUSAKOV, V. A. OKONOV, E. O., TAKHTAMYSHEV, G. G., CHKHEIDSE, L. B.

"Decay Properties of K^0-Mesons"

Report presented at the Intl. Conference on High Energy Physics, Geneva, 4-11 July 1962

Joint Inst. for Nuclear Research
Lab. of High Energies, Dubna, 1962

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

NYAGU, D.V.; OKONOV, E.O.; PETROV, N.I.; ROZANOVA, A.M.; RUSAKOV, V.A.

Hyperon production in lead by K_2^0 mesons having a mean energy of $\sim$ 100 Mev. [with summary in English]. Zhur. eksp. iteor. fiz. 42 no.2:435-438 F '62. (MIRA 15:2)

1. Ob"yedinennyy institut yadernykh issledovaniy.
(Hyperons)(Mesons)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

NYAGU, D.V.; OKONOV, E.O.; PETROV, N.I.; ROZANOVA, A.M.; RUSAKOV, V.A.

Experimental verification of the $\Delta I = 1/2$ selection rule for lepton decay of K-mesons. Zhur. eksp. i teor. fiz. 40 no.6:1618-1624 Je '61. (MIRA 14:8)

1. Ob"yedinennyy institut yadernykh issledovaniy.
(Nuclear spin)
(Mesons—Decay)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

RUSAKOV, V.A.

2

34004

S/056/62/042/001/021/048
B104/B102

24.6700

AUTHORS: Anikina, M. Kh., Nyagu, D. V., Okonov, E. O., Petrov, N. I., Rozanova, A. M., Rusakov, V. A.

TITLE: Experimental investigation of some consequences of CP invariance in K_2^0-meson decays

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42, no. 1, 1962, 130-134

TEXT: The application of CP invariance to the decay of neutral K-mesons leads to three conclusions: (1) The decay of a long-lived K^0-meson into two pions is forbidden; (2) in three-particle lepton decays, the ratio between the probabilities of emission of negative and positive pions $R = w(K_2^0 \longrightarrow \pi^- + e^+(\mu^+) + \nu)/w(K_2^0 \longrightarrow \pi^+ + e^-(\mu^-) + \nu) = 1$; (3) only a K_2^0-meson can decay into three π^0-mesons, and the $K_2^0 \longrightarrow \pi^+ + \pi^- + \pi^0$ decay is about hundred times more probable than the relevant decay of a short-lived K^0-meson. At the proton-synchrotron of the Joint Institute of Nuclear Research as much as 649 long-lived K^0-meson decays were recorded

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34004
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B104/B102

Experimental investigation of...

with a cloud chamber in a magnetic field. Of these, 52 were discarded because the resulting particles escaped at nearly 90°, or because the background was too intense. The events were analyzed using the following kinematic criteria of two-particle decay: (a) coplanarity of secondary particles with the direction of the decayed K_2^0-meson: $\varphi_+ = \varphi_- + 180°$; (b) balance of transverse components of the momenta of decayed particles; (c) agreement between the measured momenta of secondary particles and their angle of emission. Among the K_2^0-decays, no decay into two charged pions was detected. This result evidences that the CP invariance is applicable. The equality between the probabilities of lepton K_2^0-decays with emission of π^+ and π^- mesons does not contradict this hypothesis. Previous data indicating the probability of $K_2^0 \longrightarrow 3\pi$ decays also agree with the authors' results. Among the 597 K_2^0-decays, no decay into two charged leptons (μ or e) was detected. L. I. Zinov'yev, head of the proton-synchrotron team, Chief Engineer N. I. Pavlov, section chief K. P. Myznikov, and the operators S. V. Fedukov, I. N. Yalovyy, Ye. N. Kulakova, L. Popinenkova are

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34004

Experimental investigation of... S/056/62/042/001/021/048
B104/B102

thanked for the synchrotron experiments, B. M. Pontekorvo for his interest, V. I. Veksler and V. P. Dzhelepov for cooperation, and P. I. Zhabin, V. A. Smirnov, L. Filatova, and N. Kurilina for help in the measurements. There are 1 table and 10 references: 3 Soviet and 7 non-Soviet. The four most recent references to English-language publications read as follows: M. Bardon, K. Lande, L. Lederman. Ann. of Phys., 5, 156, 1958; F. Muller, O. Piccioni et al., Phys. Rev. Lett., 4, 418, 1960; D. Neagu, E. O. Okonov, N. J. Petrov, A. M. Rosanova, V. A. Rusakov. Phys. Rev. Lett., 6, 552, 1961; T. Lee, C. Yang. Phys. Rev., 119, 1410, 1960.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: September 2, 1961

Card 3/3

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

RUSAKOV, V.A.

34639
S/056/62/042/002/021/055
B108/B104

24.6700

AUTHORS: Nyagu, D. V., Okonov, E. O., Petrov, N. I., Rozanova, A. M., Rusakov, V. A.

TITLE: Production of hyperons in lead by K_2^0 mesons with a mean energy of ~100 Mev

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42, no. 2, 1962, 435 - 438

TEXT: The production of hyperons by K_2^0 mesons from the OIYaI (see Association entry) proton synchrotron striking a thin lead target (5.8 g/cm^2) was studied with the aid of a cloud chamber. Out of 410 Λ^0 events, 39 involving one proton were selected visually. The mean mass of the decaying particles was 1116 ± 8 Mev which agrees well with the Λ^0 hyperon mass. The mean energy of the registrated Λ^0 hyperons was 40 Mev. All 39 events can be attributed to the decay $\Lambda^0 \rightarrow p + \pi^-$. The estimate production cross section of Λ^0 hyperons on Pb nuclei is 200 ± 70 mb. The low number of charged hyperons observed is due to the strong absorption inside the Pb nucleus. In a study

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of the hyperon generation mechanism it is shown that absorption of K_2^0 mesons by two nuclei does not predominate. The ratio of the $K_2^0 \longrightarrow K_1^0$ regeneration and hyperon production cross sections is considerably less than unity (about 5.10^{-2}). The authors thank B. M. Pontekorvo, V. P. Dzhelepov, V. I. Veksler, M. I. Podgoretskiy, and M. Anikina for help and discussions. There are 1 figure, 2 tables, and 8 references: 1 Soviet and 7 non-Soviet. The four most recent references to English-language publications read as follows: F. S. Crawford et al. Phys. Rev. Lett., 2, 361, 1959; O. Dahl et al. Proc. 1960 Ann. Intern. Conf. on High-Energy Physics at Rochester, Publ. Univ. Rochester, 1961, p. 414; Nripendra N. Biswas. Phys. Rev., 118, 866, 1960; R. H. Dalitz, S. F. Tuan. Phys. Rev. Lett., 2, 425, 1959.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: September 26, 1961

Card 2/2

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

OKONOV, E.O.; PETROV, N.I.; ROZANOVA, A.M.; RUSAKOV, V.A.

Four-prong decay of the long-lived K meson. Zhur. eksp. i teor. fiz. 39 no. 1:67-69 Jl '60. (MIRA 13:12)

1. Ob"yedinennyy institut yadernykh issledovanily.
(Mesons--Decay)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

RUSAKOV, V. A.

82601
S/056/60/039/01/10/029
B006/B070

24.6810

AUTHORS: Okonov, E. O., Petrov, N. I., Rozanova, A. M., Rusakov, V. A.

TITLE: Four-pronged Decay of the Long-lived K^0-Meson 19

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 1 (7), pp. 67-69

TEXT: A cloud chamber was exposed to a neutral particle beam of the proton synchrotron at the OIYaI (Joint Institute of Nuclear Research). Out of 140 K_2^0 decays recorded, one four-pronged decay was found (at 8 m distance from the inner target). A photograph of this event is given on an insert between pages 64 and 65. The tracks to be seen on this photograph and denoted by A, B, C, D are discussed in the introduction, and the results obtained from measurements of the tracks are tabulated (momentum, sign of the charge, angles). All possible ways of explaining this event are next considered. The conclusion is that considering all data of measurement as well as the CP-invariance, only the following possibilities remain:

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Four-pronged Decay of the Long-lived K^o-Meson S/056/60/039/01/10/029
B006/B070

(1) $K_2^o \rightarrow \pi^+ + \pi^- + \gamma \rightarrow e^+ + e^-$ and (2) $K_2^o \rightarrow \pi^+ + \pi^- + \pi^o \rightarrow e^+ + e^-$, $\pi^o \rightarrow \gamma$

The subsequent discussion establishes the fact that the decay takes place according to mode (2). The authors thank B. M. Pontekorvo for his interest in the work, M. I. Podgoretskiv for discussions, D. Nyag for help in calculations, and M. Kh. Anikina and P. I. Zhabin for taking part in the measurements. There are 1 figure, 1 table, and 8 references: 2 Soviet, 5 American, and 1 Italian.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: March 18, 1960

Card 2/2

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

PETROV, N.I.; IVANOV, V.G.; RUSAKOV, V.A.

Nonelastic scattering and absorption of π^+-mesons with energies of 195 15 MeV by carbon and lithium nuclei. Zhur. eksp.i teor.fiz. 37 no.4:957-965 O '59.
(MIRA 13:5)

1. Ob"yedinennyy institut yadernykh issledovaniy.
(Mesons)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

21 (7), 21 (1)

AUTHORS: Ivanov, V. G., Osipenkov, V. T., Petrov, N. I., Rusakov, V. A.

SOV/56-37-3-47/62

TITLE: The Cross Sections of Elastic Scattering of Positive π-Mesons With Energies of 195 Mev by Carbon- and Lithium Nuclei

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 37, Nr 3(9), pp 863 - 866 (USSR)

ABSTRACT: Measurements of elastic scattering cross sections by means of a cloud chamber which was located in a magnetic field (13,500 Oe) were carried out on the synchrocyclotron of the Institute mentioned below (cf. the previous paper in reference 1). A polythene block (25g/cm^2), which was exposed to a 670-Mev proton beam, served as a π^+-source. The targets consisting of a natural isotope mixture had a thickness of 1.72 g/cm^2(C) and 0.8 g/cm^2(Li), respectively. The experimental method as well as the method of evaluating the photo records were the same as in reference 1. By taking into account the corrections concerning the accuracy of observation, 410 elastic meson scatterings on C-nuclei and 243 on Li-nuclei were

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recorded within the scattering-angle range of 10-180°. The following was obtained:

Nucleus	Pion Energy [Mev]	Sign of the Pion	σ_{elast} (10°)	πR^2
C	195	+	204 ± 26 mb	325
Li	195	+	156 ± 26 mb	226
C	230	-	200 ± 31 mb	325

The results are briefly discussed. They agree satisfactorily with the data calculated by other authors (among them Osipenkov and Filippov, Ref 3) on the basis of the optical model and square well interaction potential. For carbon the elastic scattering angle distribution measured in the course of the experiments is represented in figure 1, and for lithium in figure 2. The curves traced in full represent the angular distributions calculated according to the optical model in semi-

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

The Cross Sections of Elastic Scattering of Positive π-Mesons With Energies of 195 Mev by Carbon- and Lithium Nuclei SOV/56-37-3-47/62

classical approximation (calculated by means of the formulas taken from the book by Akhiyezer and Pomeranchuk, Ref 4). Calculation of the curves was carried out for a nuclear radius $R = 1.4\ A^{1/2} \cdot 10^{-13}$ cm, the absorption coefficient of the pions in nuclear matter K is assumed to be $0.33 \cdot 10^{13}$ cm, and the real part of the potential V to be zero (Curve A), 30 Mev (Curve B), and for curve V it is assumed that $K = \infty$ and $V = 0$. There are 2 figures, 1 table, and 7 references, 3 of which are Soviet.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: May 28, 1959

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

AVSAKOV, V.A.
DZHELEPOV, V.P.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

RUSAKOV, V.A.

"Showers in Lead Produced by (360 ± 30) Mev Electrons," by V. G. Ivanov, N. I. Petrov, V. A. Rusakov, Yu. A. Budagov, and V. T. Osipenkov, Joint Institute of Nuclear Research, Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 31, No 6 (12), Dec 56, pp 1095-1096

This article describes electron showers observed during an analysis of data from an experiment in which the interaction of negative π-mesons with lead nuclei was studied. The experiments were conducted in the synchrocyclotron of the Laboratory of Nuclear Problems; 159 showers in lead were observed caused by electrons with energies in the interval 330-390 Mev.

A table of the frequency distribution of the showers according to number of particles and a graph of the energy distribution of secondary electrons are given. (U)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

RUSAKOV, V. A.

"Total Cross Sections of the Inelastic Interaction of Negative π-Mesons With C, Al, Cu, Sn, and Pb Nuclei at (225 $\pm$ 10) Mev," by V. G. Ivanov, V. T. Osipenko, N. I. Petrov, and V. A. Rusakov, Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 31, No 6 (12), Dec 56, p 1097

This work reviews results of measurements of the total inelastic scattering cross section for negative π-mesons on carbon, aluminum, copper, tin, and lead nuclei. The synchrocyclotron of the Institute of Nuclear Problems was used for the experiment. The average energy of π-mesons in the beam was (225 $\pm$ 10) Mev.

A table of the cross section values is given. The equality of geometric and measured cross section is noted. (U)

SUM.1345

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RUSAKOV, V. A.

12
1-RML
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Distr: 4E3d/4E4c

3951

TOTAL INELASTIC INTERACTION CROSS SECTIONS OF 225 ± 10 Mev NEGATIVE π-MESONS WITH C, Al, Cu, Sn, AND Pb NUCLEI. V. G. Ivanov, V. T. Osipenkov, N. I. Petrov, and V. A. Rusakov. Soviet Phys. JETP 4, 922-3 (1957) July.

Experiments were carried out with the synchrocyclotron of the Laboratory of Nuclear Problems to determine total cross sections for the inelastic interaction of π mesons with nuclei of carbon, aluminum, copper, tin, and lead. The method employed was the recording of events which result in the removal of a particle from the beam in passing through a scatterer made of the substance under investigation. (A.C.)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

RUSAKOV, K. A.

8
1-RML
1

Distr: 4E3d

3734

SHOWERS IN LEAD PRODUCED BY 360 ± 30 Mev ELECTRONS. V. G. Ivanov, N. L. Petrov, V. A. Rusakov, Iu. A. Budagov, and V. T. Osipenkov (United Inst. for Nuclear Research). Soviet Phys. JETP 4, 934-5(1957) July.

Data on electron showers produced in Pb by 330 to 390 Mev electrons from the interaction of a beam of π mesons with the Pb are reported. (L.T.W.)

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RML

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

BUSAKOV, V.I., prof.

Treatment of impotence by transplantation of costal cartilage into the penis. Urologiia. 29 no.3:54-56 My-Je '64. (MIRA 18:10)

1. Klinika fakul'tetskoy khirurgii Rostovskogo meditsinskogo instituta.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

RUSAKOV, V.I., prof.

Some improved methods to improve the results of transvesical adenomectomy. Klin. khir. no.2:38-42 '65. (MIRA 18:10)

1. Klinika fakul'tetskoy khirurgii Rostovskogo meditsinskogo instituta.

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RUSAKOV, V. I.

"The Analgesic Action of the Blood and the Hemonovocaineblock in Pathogenic Therapy." Cand Med Sci, Novosibirsk State Medical Inst, Novosibirsk, 1953. (RZhBiol, No 1, Sep 54)

SO: Sum 432, 29 Mar 55

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RUSAKOV, V.I. (Altayskiy kray, g. Biysk)

Large dorsal tumor of the skin. Khirurgiia no.9:69 S '54. (MLRA 7:12)
(SKIN--TUMORS)

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RUSAKOV, V.I.

Renal adenosarcoma in children. Urologiia no.4:51-52 O-D '55. (MIRA 9:12)

1. Iz khirurgicheskogo otdeleniya (zav. B.N.Denisov) 1-y Biyskoy gorodskoy bol'nitsy (glavnyy varch A.N.Dynin)

(KIDNEYS, neoplams, adenosarcoma in child.)

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RUSAKOV, V. I.

Rusakov, V. I.

"The interaction of pancreatic fluid and bile in the digestive process." Min Education RSFSR. Leningrad State Pedagogical Inst imeni A. I. Gertse . Chair of the Anatomy and Physiology of Man and Animals. Leningrad, 1956. (Dissertation For the Degree of Candidate in Biological Sciences.)

Knizhnaya letopis'
No 21, 1956. Moscow.

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RUSAKOV, V.I.

USSR / Pharmacology, Toxicology, Local Anesthetics U-5

Abs Jour : Referat Zh.-Biol., No 1, 1958, No 3445

Author : Rusakov, V.I.

Inst : Not given

Title : A Hemonovocaine Blockade and the Analgesic Effects of Blood.

Orig Pub : Khirurgiya, 1956, No 11, 69-71

Abstract : The injection of 3-5 ml of blood, which had been withdrawn from the sub utaneous vein of the posterior surface of the thigh into the lower third of the same rabbit's lower leg, as in a circulatory block, caused a 4-8 fold prolongation of the chronoxie of the tibial nerve. Only after 2-3 days did the chronaxie return to its initial level. After injection of the blood, there

Card : 1/3

USSR / Pharmacology, Toxicology, Local Anesthetics U-5

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Abs Jour : Referat Zh.-Biol., No 1, 1958, 3445

Abstract : was also a retardation of conduction through the homolateral tibial nerve, which was not directly affected. The injection of a red cell mass, hemolyzed blood or a hemoglobin solution had a greater effect on nerve conductivity than the injection of whole blood. Plasma and serum caused no noticeable change in conductivity. Physiologic solution, vaseline oil and weak solutions of chloral hydrate and ether had no effect on conductivity. Novocaine (0.5% solution) caused an hour long disruption of conduction. A mixture of blood and a 0.5% solution of novocaine blocked nerve conduction for 3-6 hours. Histologic studies revealed no morphological alterations in the nerve trunk or its surrounding tissues after injections of blood, hemonovocaine or novocaine. The stimulating action of blood on the nerve trunk probably depends not upon a mechanical factor but rather upon a specific biological factor, characteristic of blood. A mixture of equal amounts of blood (preserved or from

Card 2/3

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RUSAKOV, V.I., kand.med.nauk

One-stage plastic closure of an extensive scalp wound. Ortop., travm. i protez. 18 no.5:79-80 S-O '57. (MIRA 12:9)

1. Iz kliniki fakul'tetskoy khirurgii (zav. - B.Z.Gutnikov) Rostovskogo meditsinskogo instituta (dir. - prof.Ye.M.Gubarev).
(SKIN GRAFTING) (SCALP--WOUNDS AND INJURIES)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

RUSAKOV, V.I., kandidat meditsinskikh nauk; KOMAREVTSEV, N.M.

A case of triorchidism. Urologiia 22 no.2:58-59 Mr-Ap '57. (MLRA 10:7)

1. Iz kliniki fakul'tetskoy khirurgii (zav. - prof. B.Z.Gutnikov) Rostovskogo-na-Donu gosudarstvennogo meditsinskogo instituta i Orlovskoy rayonnoy bol'nitsy (glavvrach N.Komarevtsev).
(TESTES, abnorm.
triorchidism)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110011-2

RUSAKOV, V.I., kandidat meditsinskikh nauk; STARODUBTSEVA, L.N.

Clinical aspects of primary sarcoma of the lungs. Vest.khir. 78 no.5: 117-120 My '57. (MIRA 10:7)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav. - prof. B.Z. Gutnikov) Rostovskogo meditsinskogo instituta. Adres avtorov: Rostov-na-Donu, Nakhichevanskiy pr., d.38, fakul'tetskaya khirugicheskaya klinika.

(LUNG NEOPLASMS, case reports
sarcoma, clin. aspects)
(SARCOMA, case reports
lungs, clin. aspects)

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