A Six-dimensional Riemannian Manifold, Its Applications to Meso-electrodynamics, and a Systematization of Strongly Interacting Particles

POL/45-18-4-7/8

one-parameter group of gauge transformations is used, interpretable as rotations around a distinguished point (cf. Podolański (1950)). In one way, the Minkowski space may be defined as a subspace with $x^5 = x^6 = 0$. The author postulates: Physical laws have to be covariant only under transformations mapping the immediate neighborhood of $x^5 = x^6 = 0$ upon itself. In the other way, the six-dimensional space is understood to be a four-dimensional manifold of such ellipsoids so that the four-dimensional manifold of the points P is to be interpreted as the "Minkowski subspace"; in other words: The laws of physics have to be covariant only within the following subgroups: all transformations in the Minkowski subspace and rotations about the symmetry axes of the ellipsoids. Due to these definitions the author concludes: A charged field is to be interpreted as a six-vector whose only non-vanishing components are φ^5 and φ^6. The electric charge (bosons or fermions) is a unit spin within the electric surface. Geometrization of the electromagnetic

Card 2/4

A Six-dimensional Riemannian Manifold, Its Applications to Meso-electrodynamics, and a Systematization of Strongly Interacting Particles

POL/45-18-4-7/8

field shows that any surface of rotational symmetry (to account for gauge invariance) and with a distinguished point (to account for the privileged role of the points forming the Minkowski subspace) introduces a curvature into the six-dimensional manifold. The third component of the isospin is interpreted by a rotation in the electric subspace. Pions must be ps-scalar as this interaction is the most simple with a ps-scalar meson field. It is furthermore shown that the strongly interacting particles possess three types of intrinsic momenta in the electric subspace, and that the electric charge is a resultant of them. A particle may be characterized simultaneously by two different spins: a space-like spin and a time-like spin. The nucleonic charge is contributed by the isospin ± 1, the baryonic number 1 and the time-like spin (for nucleon $\frac{1}{2}$). After a systematization of strongly interacting particles and discussion of the time-like spin, the author investigates the problem of rest masses of heavy particles and concludes: The particle structure is

Card 3/4

A Six-dimensional Riemannian Manifold, Its Applications to Meso-electrodynamics, and a Systematization of Strongly Interacting Particles

POL/45-18-4-7/8

represented by a three-dimensional rotator in the time-like space, but oriented in such a manner that its rotation takes place only in the plane (5.6). The sense of this rotation is such that it defines a left-handed (right-handed) screw for particles (antiparticles). There are 2 tables and 4 references.

ASSOCIATION: Institute of Theoretical Physics, Jagellonian University, Kraków, Institute of Physics of the Polish Academy of Sciences

SUBMITTED: March 13, 1959

✓

Card 4/4

RAYSKI, J.

The left-handed neutrino and the universal Fermi coupling. p. 127

POSTEPY FIZYKI. (Polskie Towarzystwo Fizyczne) Warszawa, Poland
Vol. 10, no. 2, 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. 9, no. 2,
Feb. 1960

(Incl.

POLAND/Theoretical Physics - Quantum Theory of Fields. B

Abs Jour . Ref Zhur Fizika, No 4, 1960, [illegible]

Author : [illegible]

Inst : Jagiellonian University, Krakow; Institute of Physics, Polish Academy of Sciences, Poland.

Title : A Six-Dimensional Interpretation of Nuclear Forces

Orig Pub : Bull. Acad. polon. Sci. Ser. Sci. Math., Astron. et phys., 1959, 7, No 4, 251-254

Abstract : The author considers the equation for the eight-component wave function Ψ of the nucleon

[illegible]

[illegible]

Card 1/2

82756

P/045/60/019/003/010/010
B022/B070

24.4500

AUTHOR: Rayski, J.

TITLE: Non-linear Equations for Spinor Fields

PERIODICAL: Acta Physica Polonica, 1960, Vol. 19, No. 3, pp. 409 - 411

TEXT: The present paper is devoted to the problem of determining a plausible type of non-linearity for spinor fields. The author recalls that at the present stage of development of theoretical physics gravitation plays a distinguished role. Being completely amalgamated with geometry, the theory of gravitation is free from arbitrary and simplifying assumptions to a degree surpassing by far the other field theories. And just the equations of gravitation are non-linear, and the form of their non-linearity is well determined. This fact is cited in favor of the opinion that the linear equations constitute only the first approximations valid in the limit of weak fields; this gives a hint regarding the problem of determination of the proper form of non-linear field equations since there may exist an analogy between the type of non-linearity encountered in the equation of gravitation and in the

Card 1/2

82756

Non-linear Equations for Spinor Fields

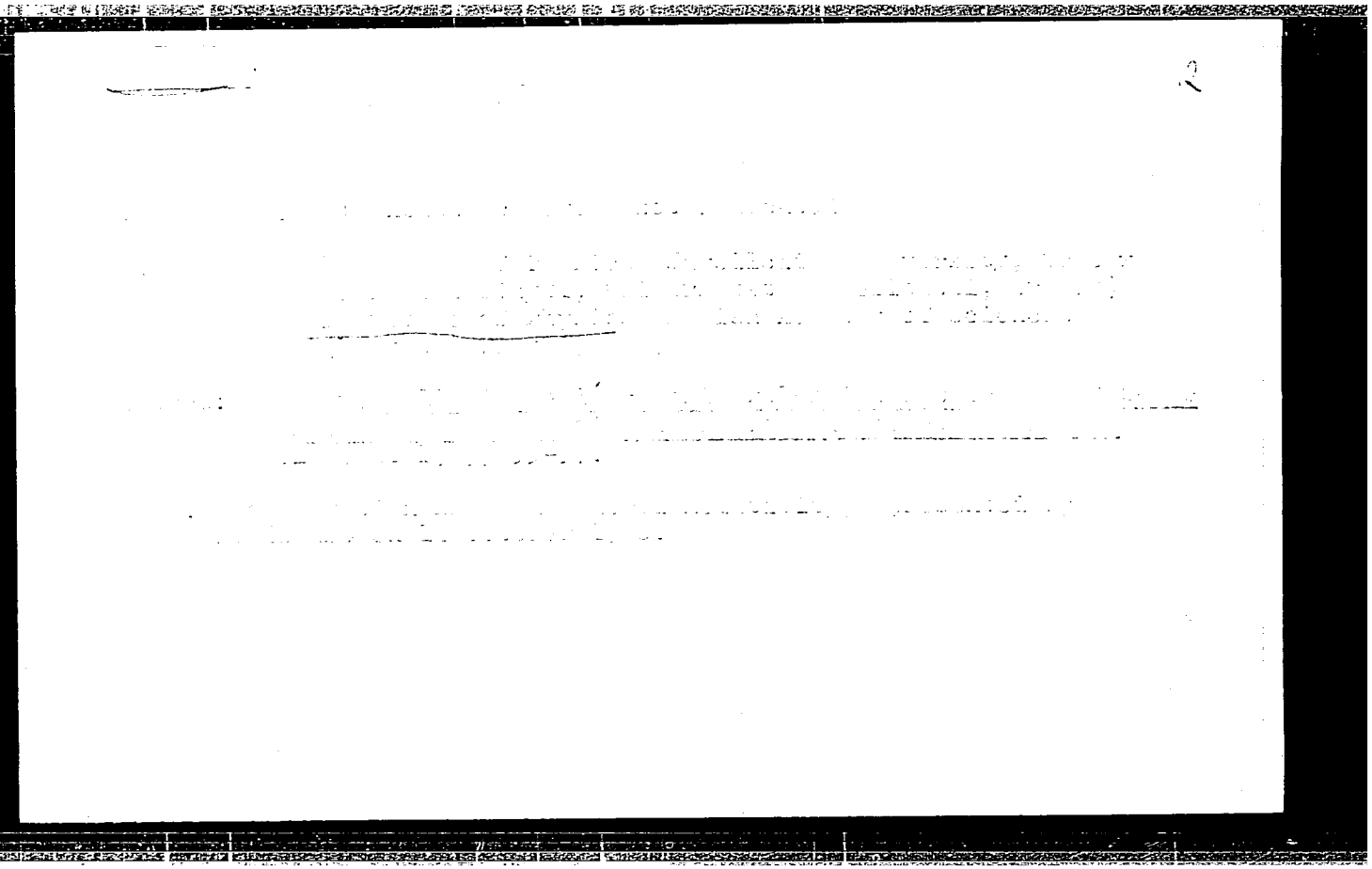
P/045/60/019/003/010/010
B022/B070

equation of other fields. Since Lagrangians for different fields have to be added to the Lagrangian of gravitation, there should exist some relationship, some analogy, between the two Lagrangians, otherwise, their union would be artificial, says the author. Since the curvature is expressible in terms of Christoffel symbols and their first derivatives, the analogy between the Lagrangian of spinor fields and the curvature may consist in the fact that there exist some analogs of these symbols and the Lagrangian for the spinor field is the same function of these analogs as the curvature is of the Christoffel symbols. The author finds that the procedure would be to replace the derivative ∂_μ in the Christoffel symbol by $-\pi\gamma^4\gamma_\mu$ according to the two concepts of velocity for spinor field particles, and a subsequent transition to the densities $\gamma^\nu \to \psi^*\gamma^\nu_{\lambda\mu}\psi$. The plausible form of the spinor field Lagrangian obtained is

$$L(\psi) = 6C\varkappa\left[(\bar{\psi}\gamma_\mu \partial_\mu \psi) + \chi(\bar{\psi}\gamma_\mu\psi)(\bar{\psi}\gamma_\mu\psi)\right]$$

where $6C\varkappa$ is the coupling constant of gravitation and k is another constant with dimension $[cm^{-2}]$ in natural units h = c = 1. There are 2 non-Soviet references: 1 US and 1 Dutch.

Card 2/2



RAYSKI, Jerzy

Conservation laws and fern-equivalence in general relativity. Acta physica Pol 20 no.7:509-515 '61.

1. Institute of Physics, Jagellonian University, Krakow.

RAYSKI, J.

Conservation laws in general relativity. Bul Ac Pol mat 9 no.1: 33-37 '61.

1. Institute of Physics, Jagellonian University, Cracow and Institute of Physics, Polish Academy of Sciences. Presented by L. Infeld.

(Relativity(Physics))

RAYSKI, Jerzy

Localization of energy and quantization of [redacted] gravitational field.
Acta physica Pol 21 no.2:99-109 F '62.

1. Institute of Physics, Jagellonian University, Krakow.

33781
P/045/62/021/002/001/007
B137/B102

9,9467
34,4600

AUTHOR: Rayski, Jerzy

TITLE: Localization of energy and quantization of the gravitational field

PERIODICAL: Acta Physica Polonica, v. 21, no. 2, 1962, 99 - 109

TEXT: By introducing a one-parametric family of space-like minimal hypersurfaces in general relativity a time coordinate is defined so that one and only one hypersurface of the family goes through every point of the manifold. At infinity the hypersurface goes over into a hyperplane. The quasi-inertial frames of reference, defined by those families of hypersurfaces, correspond to the inertial frames of reference in special relativity under the following restrictions: The manifold must be singly-connected, the metric must be sufficiently regular and must become flat sufficiently rapidly when going to infinity in space-like directions. This means a concentration of the sources of the gravitational field in a finite domain and also a spatial restriction of the gravitational wave packets. A family of space-like minimal hypersurfaces is defined by a

Card 1/3

Localization of energy and

parametric equation, where the parameter can be considered to be a time coordinate. This special class of coordinates constitutes a natural generalization of inertial and rectilinear coordinate systems. In order to derive the conservation laws for energy and momentum, the author defines energy-momentum as generators of infinitesimal translations of quasi-planar coordinate systems. Energy and momentum defined in this way possess a covariant meaning and are strictly localizable in general relativity. A canonical formulation and also a quantization of the gravitational field is obtained, where the Lagrangian contains an arbitrary function only of the space coordinates but not of the time coordinate. This means a clear separation of stationary from dynamical effects. The Hamiltonian of the gravitational field is derived, to which further Hamiltonians for electromagnetic, spinor, and other fields can be added. The quantization of the gravitational field is relatively simple when taking advantage of the quasi-inertial coordinate systems. As a consequence of the quantization, the existence of gravitons becomes a physical reality. There are 3 non-Soviet references.

ASSOCIATION: Institute of Physics of the Jagiellonian University

X

33781

P/045/62/021/002/001/007
B137/B102

Localization of energy and ..

SUBMITTED: June 28, 1961

Card 3/3

X

LAYSKI, Jerzy

A program of quantization of the gravitational field. Acta physica Pol 26 no.1:129-134 Jl '64.

1. Institute of Theoretical Physics, Jagiellonian University, Krakow.

RAYSKI, Jerzy

Two kinds of neutrino. Acta physica Pol 22 no.5:429 N '62.

1. Institute of Theoretical Physics, Jagellonian University, Krakow.

RAYSKI, Jerzy

A note on quantization and interpretation of general theory of relativity. Acta physica Pol 22 no.5:431-433 N '62.

1. Institute of Theoretical Physics, Jagellonian University, Krakow.

RAYSKI, Jerzy

Unified field theory and modern physics. Acta physica Pol 27 no.1:89-97 '65.

1. Department of Theoretical Physics of Jagiellonian University, Krakow. Submitted June 9, 1964.

RAYCKI, Jerzy, [illegible]

What are the dimensions in which we live? Problemy 21 no.4: 196-199 '65.

1. Department of Theoretical Physics of the Jagiellonian University, Krakow.

RAYSKI, R., mgr inz.

The problem of deep quays in the seaport combine Szczecin-Swinoujscie. Tech gosp morska 15 no.3:Suppl:Biul techn BPBM no.12:45-46 Mr '65.

1. Main Port Laboratory of the Design Office for Maritime Constructions, Gdansk.

RAYSKI, Ryszard, mgr inz.

Ferryboat harbor in Swinemunde for transportation purposes, Poland-Sweden. Tech gosp morska 14 no. 7:Suppl.:Biul techn BPBM no. 8:29-31 Jl '64.

1. Main Seapor' Laboratory, Design Office of Maritime Construction, Gdansk.

ACC NR: AP7000004 SOURCE CODE: UR/0070/66/011/006/0933/0935

AUTHOR: Sysoyev, L. A.; Timan, B. L.; Gershun, A. S.; Rayskin, E. K.; Konvisar, L. V.; Komar', V. K.

ORG: All-Union Scientific Research Institute of Monocrystals, Scintillators and Extra Pure Chemical Materials (Vsesoyuznyy nauchno-issledovatel'skiy institut monokristallov, stsintillyatsionnykh materialov i osobo chistykh khimicheskikh veshchestv)

TITLE: Growing cadmium sulfide crystals for ultrasonics amplification

SOURCE: Kristallografiya, v. 11, no. 6, 1966, 933-935

TOPIC TAGS: single crystal growth, semiconductor single crystal, cadmium sulfide, ultrasonic amplification, photosensitivity, dark current, annealing, crystal orientation

ABSTRACT: Conditions were determined for growing CdS monocrystals with optimum properties for ultrasonic wave amplification. Equipment was designed for growing crystals from a melt under inert gas at several hundred atmospheres pressure, moving the container with the crystallizing material through a high temperature zone. The cadmium and sulfur to be used contained about 10^{-4}% oxygen and about 10^{-5}% of other impurities; cadmium was used in excess, and most of it was removed by zone purification. Dark resistance and photosensitivity were increased and thermal stresses in the monocrystal were removed by annealing in a bed of fine crystalline CdS powder

UDC: 548.52

Card 1/2

ACC NR: AP7000004

under H_2S at atmospheric pressure for 24 hours at 1323°K. After annealing the dark resistance was 5×10^{10} ohm. cm and could be changed by 10^5-10^6 times by illumination. The quality of the hexagonal CdS crystal of wurtzite structure grown parallel to the C_6 axis depends on its orientation with respect to the melt: surfaces terminating in Cd atoms lead to the desired monocrystal; S atoms result in defective polycrystals. Orientation can be determined by examination of the piezoelectric effect and the type of etch pits of the base planes (0001) and (000$\bar{1}$). Optimum growth was obtained with a temperature gradient of 3-5 degrees/mm at the crystallization front; crystal growth at 10-12 mm/hr. Examination of a CdS crystal grown under these conditions showed it was suitable for amplifying ultrasonic waves. It was established the increased noise level at maximum amplification was not associated with transmission of the ultrasonic waves through the crystal. Orig. art. has: 4 figures.

SUB CODE: 20/ SUBM DATE: 19Jul64/ ORIG REF: 001/ OTH REF: 003

Card 2/2

ACC NR: AP7008529 (A) SOURCE CODE: UR/0363/67/003/002/0390/0391

AUTHOR: Sysoyov, L. A.; Rayskin, E. K.; Gur'yev, V. R.

ORG: All-Union Scientific Research Institute of Single Crystals, Kharkov (Vsesoyuznyy nauchno-issledovatel'skiy institut monokristallov)

TITLE: Measurement of the melting points of zinc and cadmium sulfides, selenides and tellurides

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 3, no. 2, 1967, 390-391

TOPIC TAGS: zinc sulfide, cadmium selenide, cadmium sulfide, cadmium telluride, zinc compound, melting point

ABSTRACT: The authors checked earlier thermographic measurements of the melting and crystallization points of ZnS, ZnSe, ZnTe, CdS, CdSe and CdTe, using a tube compression furnace at pressures of 10-20 Mn/m^2 of argon. An EPP-09-1/10 multirange recording potentiometer with scales from 0 to 50 mV and a precision of 0.05% was employed. The melting points were determined to within ±10°C. Use of the refined data made it possible to grow high-quality single crystals from the melt. Measurement of the melting points of ZnSe, ZnTe and CdTe at different pressures shows only a slight rise of the melting point with increasing pressure and indicates that the specific volume of the materials decreases upon their crystallization. In conclusion, authors thank

UDC: 537.311.33:536.421.1

Card 1/2

ACC NR: AP7008529

V. M. Andreyev for providing various samples of starting materials. Orig. art. has: 1 table.

SUB CODE: 07/ SUBM DATE: 06Jun66/ ORIG REF: 003/ OTH REF: 004

Card 2/2

1. RAISKIN, I. A., ENG.

2. USSR (600)

4. Cranes, Derricks, Etc.

7. Combined use of cable scaffolds and tower crane.
Biul. stroi. tekh. 9 no.20, 1952

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

1. RAYSKIN, I. A. ENG.

2. USSR (600)

4. Scaffolding

7. Combined used of cable scaffolds and to er crane. Biul. stroi. tekh. 9 no. 20, '52.

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

RAYSKIN, I.A., inzh.

Construction of the "2800" rolling mill at the Orsk-Khalilovo Iron and Steel Combine. Prom. stroi. 38 no.8:4-8 '60. (MIRA 13:8)

1. Nachal'nik kompleksa stroitel'stva stana "2800". (Orsk-Khalilovo--Rolling mills)

RAYSKINA, M.

Use equipment to full capacity. Fin. SSSR 37 no.8:20-23 Ag '63. (MIRA 16:9)
(Chemical industries—Industrial capacity)

TRET'YAKOV, Mikhail Nikolayevich; RAYSKIN, I.G., red.; ZHITNIKOVA, O.S., tekhn. red.

[Electronic relays and their applications] Elektronnye rele i ikh primenenie. Moskva, Gosenergoizdat, 1963. 173 p. (Biblioteka po avtomatike, no.87) (MIRA 17:4)

SAMOYLOVA, Z.T.; RAYSKINA, M.Ye.; KHODAS, M.Ya. (Moskva)

Significance of disorders of the heart blood supply in the mechanism of death from myocardial infarct in dogs with atherosclerosis. Pat. fiziol. i eksp. terap. 7 no.4: 22-26 Jl-Ag '63. (MIRA 17:9)

1. Iz kafedry patofiziologii (zav.- prof. S.M. Leytes) TSentral'nogo instituta usovershenstvovaniya vrachey.

RAYSKINA, M. Ye.

Myocardial metabolism. Usp. sovrem. biol. 33 no.2:173-201 Mar-Apr 1952. (CIML 22:2)

1. Moscow.

RAISKINA, M.Ye.

Effect of extracardiac nerves on the heart Part 3. Pavlov's reinforcing nerve. Biul. eksp. biol. i med. 37 no.6:16-24 J' 54. (MLRA 7:8)

1. Iz kafedry patologicheskoy fiziologii (zav. prof. A.M.Charnyy) TSentral'nogo instituta usovershenstvovaniya vrachey (dir. V.I. Lebedeva)

(Heart, innervation, reinforcing nerve regulating force of cardiac contractions)

RAYSKINA, M Ye.

FD-2259

USSR/Biology - Physiology

Card 1/1 Pub 17-10/20

Author : Rayskina, M. Ye.

Title : The electrocardiogram and the cardiac muscle content of glycogen and high energy phosphorus in experimental hypertonia

Periodical : Byul. eksp. biol. i med. 3, 36-40, March 1955

Abstract : Investigated the change in the functional capability of the heart in hypertonia in relation to the cardiac muscle content of glycogen, phosphocreatine, and adenosine triphosphoric acid and compares this data with changes in the electrocardiogram. Tables; graphs; electrocardiograms. Six references; 4 USSR, 2 since 1940

Institution: Chair of Pathological Physiology (Head-Prof. P. D. Gorizontov) of the Central Institute for Improvement of Doctors (Director - V. P. Lebedeva), Moscow

Submitted : July 5, 1954 by S. Ye. Severin, Member of the Academy of Medical Sciences USSR

RAYSKINA, M.Ye., kandidat meditsinskikh nauk (Moskva)

Electrocardiographic changes following stimulation of the great cardiac nerve. Klin. med. 33 no.9:57-63 S '55. (MLRA 9:2)

1. Iz kafedry patologicheskoy fiziologii (zav.-prof. P.D. Gorizontov) TSentral'nogo instituta usovershenstvovaniya vrachey (dir. V.P. Lebedeva)

(HEART, innervation,
Pavlov's reinforcing nerve, eff. of stimulation on ECG)
(ELECTROCARDIOGRAPHY,
eff. of stimulation of Pavlov's reinforcing nerve of heart)

RAYSKINA, M. YE.

Phosphocreatine of the heart in cardiac insufficiency. M. E. Raiskina (Central Post-Graduate Med. Inst., Moscow). *Byull. Eksptl. Biol. i Med.* 39, No. 6, 40-2(1955).—No sharp decrease of phosphocreatine was found in cardiac insufficiency. A. S. Mirkin MD

RAYSKINA, M.E.

Metabolism of phosphorus compounds in the heart by means of radioactive phosphorus. Report no.1: Intensity of phosphorus metabolism in the myocardium of a dog. Biul.eksp.biol. i med. 41 no.3:46-49 Mr '56. (MLRA 9:7)

1. Iz kafedry patofiziologii (zav.-prof. P.D.Gorizontov) TSentral'nogo instituta usovershenstvovaniya vrachey (dir. V.P.Lebedeva), Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR S.Ye.Severinym.

(MYOCARDIUM, metab.
phosphorus, determ. with radioactive phosphorus in dogs)
(PHOSPHORUS, metab.
in myocardium, determ. with radioactive phosphorus in dogs)
(PHOSPHORUS, radioactive
in determ. of phosphorus metab. in myocardium in dogs)

RAYSKINA, M YE

Rayskina, M.

Investigation of phosphorus metabolism in dog heart with the aid of irradiated phosphorus. II. Effect of Pavlov's accelerated nerve upon the speed of resynthesis of phosphorus compounds in dog's heart. M. E. Raiskina (Central Post-Graduate Inst., Moscow). *Byull. Eksptl. Biol. i Med.*, 41, No. 5, 44-7(1956).—Irritation of Pavlov's accelerated nerve causes an increase in the speed of resynthesis of inorg. P, creatine phosphate, and adenosinetriphosphate. A. S. Mirkin

RAYSKINA, M.B.; SAMOYLOVA, Z.T.

Effects of I.P.Pavlov's accelerator nerve on coronary circulation. Biul.eksp.biol.med. 42 no.6:3-7 Je '56. (MLRA 9:9)

1. Iz kafedry patologicheskoy fiziologii TSentral'nogo instituta usovershenstvovaniya vrachey (dir. V.P.Lebedeva) i laboratorii patologicheskoy fiziologii (zav. - prof. V.V.Parin) Instituta terapii AMN SSSR, Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR A.L.Myasnikovym.

(HEART, innervation
Pavlov's accelerator nerve, eff. of stimulation on coronary circ. in dogs, ECG)
(ELECTROCARDIOGRAPHY,
eff. of stimulation of Pavlov's accelerator nerve on coronary circ. in dogs)

BONDARENKO, M.F.; RAYSKINA, M.Ye.

Effect of Pavlov's accelerator nerve on myocardial proteins. Biul. eksp.biol. i med. 42 no.8:39-42 Ag '56. (MLRA 9:11)

1. Iz kafedry patofiziologii (zav. - prof. P.D.Gorizontov) TSentral'nogo instituta usovershenstvovaniya vrachey (dir. V.P.Lebedeva), Predstavlena dystvitel'nym chlenom AMN SSSR S.Ye.Severinym.

(MYOCARDIUM, metabolism,
proteins, eff. of stimulation of Pavlov's reinforcing nerve of heart (Rus))
(HEART, innervation,
Pavlov's reinforcing nerve, eff. of stimulation on myocardial proteins (Rus))
(MUSCLE PROTEINS, metabolism,
myocardium, eff. of stimulation of Pavlov's reinforcing nerve of heart (Rus))

MAYSKINA, M.A., DAMDYLOVA, Z.T., KHODAS, M.Ya.

Effect of adrenaline, noradrenaline and acetylcholine on the oxygen balance of the heart following a ligation of the coronary artery. Pat. fiziol. i eksp. terap. 9 no.3:16-20 My-Je '65. (MIRA 18:9)

1. Kafedra patologicheskoy fiziologii (zav.- prof. S.M. Leytes) Tsentral'nogo instituta usovershenstvovaniya vrachey, Moskva.

RASTOPCHUYEV, B.P.; RAYSKINA, M.Ye.; CHERNCHENKO, N.A.

Measurement and dynamic recording of the pH of the myocardium in in-vivo experiments by the potentiometric method. Biofizika 10 no.3:495-499 '65. (MIRA 18:11)

1. Institut terapii AMN SSSR, Moskva. Submitted Oct. 3, 1964.

ONISHCHENKO, N.A., KOLTUNOV, Yu.B.; [illegible], V.A.; RASTORGUYEV, B.P.;
RAYSKINA, M.Ye.

Measuring and dynamic recording of the activity of Na ions in the myocardium in vivo with the help of selective glass electrodes. Biofizika 10 no.4:645-651 '65. (MIRA 18:8)

1. Institut terapii AMN SSSR, Moskva.

L 53710-65

ACCESSION NR: AP5017146 UR/0221/64/058/003/0346/0366

AUTHOR: Rayakina, M. Ye. (Moscow) 13 B

TITLE: Biochemical paths of regulation of cardiac activity by the nervous system

SOURCE: Uspekhi sovremennoy biologii, v. 58, no. 3, 1964, 346-366

TOPIC TAGS: biochemistry, cardiology, cardiovascular system, nervous system

Abstract: The present-day status of research on the biochemical mechanisms of the regulation of cardiac activity by the nervous system is reviewed with particular attention to experimental work in which various aspects of changes in the metabolism of the heart arising on introduction of acetylcholine or catecholamines were investigated. The action of acetylcholine on the heart is discussed from the standpoint of results obtained by Kh. S. Koshtoyants, et al., to the effect that SH groups participate in the interaction of acetylcholine with effector cells in the myocardium. The correctness of the assumption by W. Raab of an O_2-saving effect of acetylcholine on the heart is disputed in view of the author's own experimental results demonstrating that a negative O_2 balance is established in the myocardium under the action of acetylcholine. It is held by the author that inhibition of the decomposition of glycogen in the

Card 1/2

L 53710-65

ACCESSION NR: AP5017146

myocardium under the action of acetylcholine takes place in the oxidative (respiratory) rather than anaerobic stage of glycogen metabolism.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: LS

NO REF SOV: 036 OTHER: 093 JPRS

Card 2/2

KAYSKINA, M.Ye., doktor med. nauk

Acid-base equilibrium within the organism and its disorders while under anesthesia. Trudy TSIU 59:11-26 '63. (MIRA 17:9)

1. Kafedra patofiziologii TSentral'nogo instituta usovershenstvovaniya vrachey (zav. prof. S.M. Leytes).

KAYSKINA, M.Ye.; SAMOYLOVA, Z.T.; KHODAS, M.Ya.

Effect of acetylcholine on the oxygen balance of the heart.
Farm. i toks. 27 no.4:451-454 Jl-Ag '64.
(MIRA 17:11)

1. Kafedra patofiziologii (zav. - prof. S.M. Leytes) TSentral'nogo instituta usovershenstvovaniya vrachey, Moskva.

RAYSKINA, M.Ye. (Moskva)

Biochemical pathways for the nervous regulation. Usp. sovr. biol. 58 no. 3:346-366 N-D '64. (MIRA 18:1)

RAYSKINA, M.Ye.; SAMOYLOVA, Z.I.; [illegible], M.Ia.

Importance of disorders in the blood supply of the heart in the death mechanism during the acute stage of myocardial infarction. Trudy Inst. klin. i eksper. Kard. AN Gruz. SSR (MIRA 17:?) 3:419-422 '63.

1. Kafedra patofiziologii Tsentral'nogo instituta dlya usovershenstvovaniya vrachey, Moskva.

RAYSKINA, M. Ye.; KHODAS, M. Ya.; SAMOYLOVA, Z.T.

Significance of blood supply disorders of the heart in the mechanism of death during the acute stage of myocardial infarct. Kardiologiia 3 no.4:45-50 Jl-Ag '63 (MIRA 17:3)

1. Iz kafedry patofiziologii (zav. - prof. S.M. Leytes) TSentral'nogo instituta usovershenstvovaniya vrachey.

KHODAS, M.Ya. (Moskva); SHMELIOVICH, L.B. (Moskva); RAYSKINA, M.Ye. (Moskva); SAMOYLOVA, Z.T. (Moskva)

Determination of oxygen tension in the myocardium by polarography. Pat. fiziol. i eksp. terap. 7 no.2:73-76 Mr-Ap'63. (MIRA 16:10)

1. Iz kafedry patofiziologii (zav. - prof. S.M.Leytes) TSentral'nogo instituta usovershenstvovaniya vrachey.
(HEART--MUSCLE) (OXYGEN IN THE BODY)

RAYSKINA, M. Ye.; SAMOYLOV, Z.T.; KHODAS M. Ya. (Moskva)

New data on the effect of adrenaline and noradrenaline on the supply of oxygen to the heart. Pat. fiziol. i eksp. terap. 7 no.2:19-26 Mr-Ap'63. (MIRA 16:10)

1. Iz kafedry patofiziologii (zav. - prof. S.M.Leytes) TSentral'nogo instituta usovershenstvovaniya vrachey.
(HEART—BLOOD SUPPLY) (OXYGEN IN THE BODY)
(ADRENALINE)

RAYSKINA, Mina Yevgen'yevna; GRODZENSKIY, D.E., red.; BEL'CHIKOVA, Yu.S., tekhn. red.

[Biochemistry of the nervous regulation of the heart] Biokhimiia nervnoi reguliatsii serdtsa. Moskva, Medgiz, 1962. 318 p. (MIRA 15:9)

(NERVES, CARDIAC)

CHARNYY, Abram Markovich[deceased]; BLYUMENFEL'D, L.A.; KRASOVITSKAYA, S.E.; USPENSKIY, V.I.; GORIZONTOV, P.D., prof., red.; RAYSKINA, M.Ye., red.; BEL'CHIKOVA, Yu.S., tekhn. red.

[Pathophysiology of hypoxic conditions] Patofiziologiia gipoksicheskikh sostoianii. 2.izd., posmertno perer. Pod obshchei red.P.D.Gorizontova. Moskva, Medgiz,1961. 342 p. (MIRA 15:7)

1. Chlen-korrespondent Akademii meditsinskikh nauk SSSR (for Gorizontov).

(ANOXEMIA) (OXYGEN—THERAPEUTIC USE)

RAYSKINA, M.Ye.; SAMOYLOVA, Z.T.(Moskva)

Nervous influences on the blood coagulation rate in experimental arteriosclerosis. Pat.fiziol.i eksp.terap. 5 no.1:40-46 Ja-F '61. (MIRA 14:6)

1. Iz kafedry patologicheskoy fiziologii (zav. - chlen-korrespondent AMN SSSR prof. P.D.Gorizontov) TSentral'nogo instituta usovershenstvovaniya vrachey.

(ARTERIOSCLEROSIS) (BLOOD—COAGULATION)
(NERVOUS SYSTEM, SYMPATHETIC)

RAYSKINA, M.Ye.

Creatine phosphate in the heart ih cardiac insufficiency. Biul. eksp.biol. i med. 39 no.6:40-42 Je '55. (MLRA 8:10)

1. Iz kafedry patologicheskoy fiziologii (zav.-prof. P.D. Gorizontov) TSentral'nogo instituta usovershenstvovaniya vrachey (dir. V.P. Lebedeva), Moskva.

(MYOCARDIUM, metabolism,
creatine phosphate, in cardiac insuff.)
(CREATINE,
phosphate in myocardium in cardiac insuff.)
(HEART DISEASE,
insuff.,myocardial creatine phosphate in)

RAYSKINA, M. YE.

USSR/Medicine - Cardiovasular System FD-2808

Card 1/1 17, 10/19

Author : Rayskina, M. Ye.

Title : The presence of creatin phosphate in the heart during cardiac insufficiency

Periodical : Byul. eksp. biol. i med. 6, 40-42, June 1955

Abstract : Investigation has shown that the creatin phosphate content varies (decreases) during pathological conditions of the heart. Author also found in her own experiments with experimental hypertension in rabbits that both the creatin phosphate content and the glycogen content decreased in the heart muscles while the content of adenosin-triphosphoric acid remained unchanged. She concludes that cardiac insufficiency is related to a sharp decrease of creatin phosphate in the heart. This is in agreement with the generally accepted findings of other authors, but not with that of A. Wollenberger who claims that cardiac insufficiency is related not to a decrease in the formation of phosphorus compounds in the heart but to decreased utilization of the energy of phosphate bonds. 6 references, 1 USSR, 2 since 195[illegible], graphs, table.

Institution : Chair of Pathological Physiology (Head Prof. P. D. Gorisontov) Central Institute for the Advanced Training of Physicians (Dir. V. P. Lebedeva), Moscow

Submitted : 5 July 54

RAYSKINA, M.Ye.

Studying cardiac metabolism of phosphorus compounds with the aid of radioactive phosphorus. Report No.3. Effect of Pavlov's reinforcing nerve on the rate of metabolism of high-energy phosphorus compounds under normal and pathological conditions of the heart [with summary in English]. Biul.eksp.biol. i med. 44 no.12:62-65 D '57. (MIRA 11:4)

1. Iz kafedry patofiziologii (zav. - prof. P.D.Gorizontov) TSentral'nogo instituta usovershenstvovaniya vrachey (dir. V.P.Lebedeva). Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR S.Ye.Severinym.
(HEART, innervation,
Pavlov's reinforcing nerve, eff. of stimulation on myocardial ATP & phosphoreatine (Rus))
(MYOCARDIUM, metabolism,
ATP & phosphocreatine, eff. of stimulation of Pavlov's reinforcing nerve (Rus))
(ADENYLPYROPHOSPHAGE, metabolism,
myocardium, eff. of stimulation of Pavlov's reinforcing nerve (Rus))
(COENZYMES,
phosphocreatine in myocardium, eff. of stimulation of Pavlov's reinfording nerve (Rus))

RAYSKINA, M.Ye.

Effect of extracardiac nerves on the heart. Part 2; Effect of sympathetic nerves on the functional state of the heart. Biul. eksp.biol. i med. 37 no.4:17-23 Ap '54. (MLRA 7:7)

1. Iz kafedry patologicheskoy fiziologii (zav. prof. A.M.Charnyy) TSentral'nogo instituta usovershenstvovaniya vrachey (dir. V.P. Lebedeva), Moskva.

(HEART, physiology,
*eff. of stimulation of sympathetic nerves)
(SYMPATHETIC NERVOUS SYSTEM, physiology,
*eff. of stimulation on heart)

RAYSKINA, M.Ye.

Effect of extra-cardiac nerves on the heart. Part 1. Effect of the vagus nerve on functional state of the heart. Biul.eksp. biol.i med. 37 no.2:22-28 F '54. (MLRA 7:6)

1. Iz kafedry patologicheskoy fiziologii (zav. prof. A.M.Charnyy) TSentral'nogo instituta usovershenstvovaniya vrachey (dir. V.P. Lebedeva), Moskva.
(HEART, physiology,
*eff. of stimulation of vagus nerve in dogs)
(NERVES, VAGUS, physiology,
*eff. of stimulation on heart in dogs)

HAYSKINA, M.Ye; CHARNYY, A.M., professor, zaveduyushchiy.

Effect of morphine and morphine-hexenal narcosis upon the heart in dogs. Farm.i toks. 16 no.3:15-21 My-Je '53. (MLRA 6:7)

1. Kafedra patologicheskoy fiziologii TSentral'nogo instituta usovershenstvovaniya vrachey. (Narcotics) (Heart)

MAYSKINA, M.Ye; CHAINYY, A.M., professor, zaveduyushchiy.

Effect of morphine and morphine-hexenal narcosis upon the heart in dogs. Farm.i toks. 16 no.3:15-21 My-Je '53. (MLRA 6:7)

1. Kafedra patologicheskoy fiziologii TSentral'nogo instituta usovershenstvovaniya vrachey. (Narcotics) (Heart)

RAYSKINA, M.Ye.

Metabolism of a high-energy phosphorus compounds in the heart.
Vop.med.khim. 5 no.2:83-97 Mr-Ap '59. (MIRA 12:5)

1. Chair of Pathophysiology, Central Institute for Postgraduate Medical Training, Moscow.

(MYOCARDIUM, metab.
ATP & phosphocreatine in exper. animals (Rus))
(ADENYLPYROPHOSPHATE, metab.
heart, in exper. animals (Rus))
(COENZYMES,
phosphocreatine in heart in exper. animals (Rus))

KAYSKINA YE. M.

USSR (600)

Heart

Metabolism of the Cardiac muscle. Usp. sovr. biol 33 No 2, 1952

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

RAYSKINA, M. Ye., Doc Med Sci -- (diss) "Effect of the vegetative nerves on the exchange of matter and on the function of the heart under conditions of normal health and of pathology." Moscow, 1960. 22 pp; (Ministry of Public Health USSR, Central Inst for Advanced Training of Physicians); 250 copies; price not given; list of authors' work on pp 21-22 (15 entries); (KL, 25-60, 138)

SAMOYLOVA, Z.T.; RAYSKINA, M.Ye. (Moskva)

Hemobarostat an apparatus for maintaining arterial pressure at a constant level. Pat.fiziol. i eksp.terap. 3 no.6:65-68 N-D '59.
(MIRA 13:3)

1. Iz laboratorii patologicheskoy fiziologii Instituta terapii AMN SSSR (direktor - deystvitel'nyy chlen AMN SSSR prof. A.L. Myasnikov) i kafedry patofiziologii (zaveduyushchiy - chlen-korrespondent AMN SSSR prof. P.D. Gorizontov) TSentral'nogo instituta usovershenstvovaniya vrachey.

(CARDIOLOGY equip. & supplies)
(BLOOD PRESSURE)

RAYSKINA, M.Ye., kand.med.nauk

Energy pattern of the heart. Zdorov'e 4 no.11:3-5 N '58.
(HEART) (MIRA 11:11)

RAYSKINA, M.Ye. (Moskva)

Effect of the augmentor nerve on a diseased heart [with summary in English]. Pat.fiziol. i eksp.terap. 1 no.6:20-27 N-D '57. (MIRA 11:3)

1. Iz kafedry patologicheskoy fiziologii (zav. - chlen-korrespondent AMN SSSR P.D.Gorizontov) Tsentral'nogo instituta usovershenstvovaniya vrachey (dir. V.P.Lebedeva)
(HEART, innervation,
reinforcing nerve, eff. in pathol. cond. (Rus))

GRIGOR'YEV, N.; KRYLOV, V.; RAYSKIY, A., mekhanik

Preventive maintenance of equipment. Muk.-elev.prom. 25 no.9:27 S '59. (MIRA 12:12)

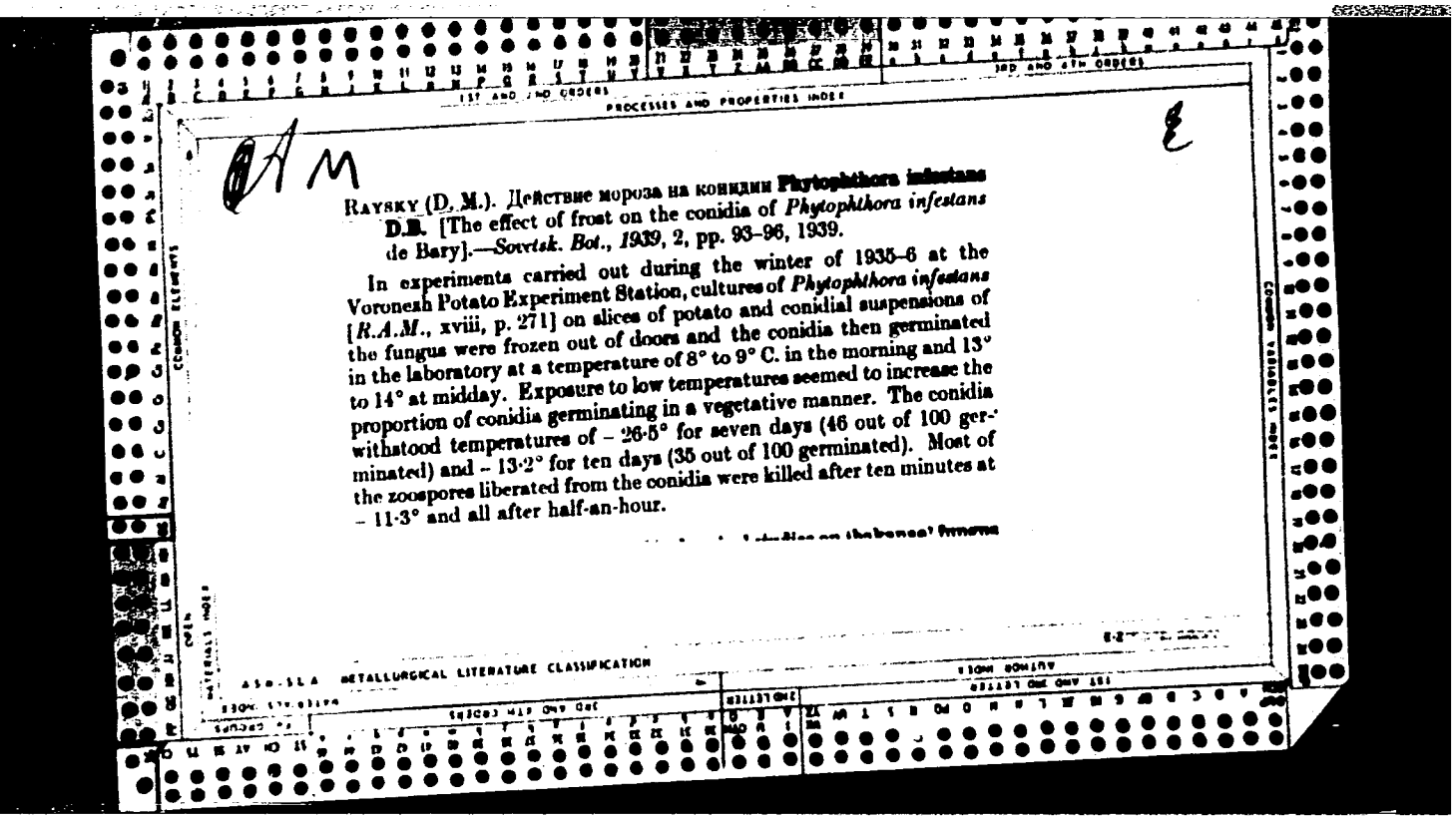
1. Odesskoye oblastnoye upravleniye khleboproduktov (for Grigor'yev, Krylov). 2. TSekh Kuybyshevskogo mel'kombina (for Rayskiy).
(Grain-handling machinery--Maintenance and repair)

RAYSKIY, B.F., kandidat pedagogicheskikh nauk (g. Stalingrad).

The program on the "fundamentals of industry" needs to be revised. (MLRA 10:6)
Politekh. obuch. no.5:16-24 My '57.
(Technical education)

KAYSKIY, Boris Fedorovich; AGAFONOV, A.Ye., red.; KREYS, I.G., tekhn. red.

[Technical and work training of the senior grade students] Politekhnicheskaia i trudovaia podgotovka uchashchikhsia starshikh klassov. Moskva, Uchpedgiz, 1963. 166 p. (MIRA 17:3)



RAYSKY (D. M.). Действие мороза на конидии Phytophthora infestans D.B. [The effect of frost on the conidia of *Phytophthora infestans* de Bary].—*Sovetsk. Bot.*, 1939, 2, pp. 93–96, 1939.

In experiments carried out during the winter of 1935–6 at the Voronezh Potato Experiment Station, cultures of *Phytophthora infestans* [*R.A.M.*, xviii, p. 271] on slices of potato and conidial suspensions of the fungus were frozen out of doors and the conidia then germinated in the laboratory at a temperature of 8° to 9° C. in the morning and 13° to 14° at midday. Exposure to low temperatures seemed to increase the proportion of conidia germinating in a vegetative manner. The conidia withstood temperatures of – 26·5° for seven days (46 out of 100 germinated) and – 13·2° for ten days (35 out of 100 germinated). Most of the zoospores liberated from the conidia were killed after ten minutes at – 11·3° and all after half-an-hour.

RAYSKIY, D. M.

"The Effect of Frost on the Conidia of Phytophthora infestans de Bary," Sovetskaia Botanika, no. 2, 1939, pp. 93-96/ 450 So8

SO: SIRA SI-90-53, 15 Dec. 1953

RAYSKIY, G.

530.145

3947. REMARKS ON THE THEORY OF BILOCAL FIELDS. G.Raiskii (Rayski). Zh. éksper. teor. Fiz., Vol. 31, No. 4(10), 705-6 (1956). In Russian.
Several points of the author's theory are explained, partly in answer to a criticism of Zhirnov (Abstr. 5681/1956) but the question of the introduction of interactions is still an open one. G.E.Brown

MT

RAJSKIJ, G. RAJSKIJ, G.

CARD 1 / 2 PA - 1893

SUBJECT USSR / PHYSICS
AUTHOR RAJSKIJ, G.
TITLE Notes on the Theory of Bilocal Fields.
PERIODICAL Žurn.eksp.i teor.fis, 31, fasc.4, 705-706 (1956)
Issued: 1 / 1957

In connection with the remarks made by V.A. ŽIRKOV, Žurn.eksp.i teor.fis 30, 425 (1956) on bilocal fields the author points out that the bilocal equations of his theory are always compatible with one another, and that their apparent "incompatibility" can occur only in the case of the mechanical use of its formulae without taking their limits of applicability into account or if the denominations for the field quantities in six- or eight-dimensional systems are confused.
The quantities of the bilocal field are functions of two types, χ_μ and r_μ of variables; here χ_μ denotes the center of the particle, and r_μ the interior degrees of freedom. With a FOURIER transformation it is possible to go over from x_μ to the variables p_μ, which represent the energy momentum four-vector. The bilocal manifolds and the bilocal fields are limited by the following conditions: $p_\mu r_\mu = 0(I)$, $p_\mu^2 + r_\mu^2 = 0(II)$. On this occasion the units $c = h = l = 1$ are used, where l denotes the fundamental length; all quantities can then be looked upon as dimensionless. The field quantities φ, which contain only 6 independent variables, must be distinguished from the quantities defined in an eight-dimensional manifold. The quantities φ and Ψ

RAYSKIY, I., inzh.

Autoclave with electrical heating. Obshchestv. pit. no.9 32-33 S '61. (MIRA 14:11)

(Autoclaves)

RAYSKIY, I.

Miraculous properties. Obshchestv.pit. no.1:51-52 Ja '60.
(MIRA 13:5)

1. Nachal'nik laboratorii elektrotekhniki i elektroniki TSentral'nogo konstruktorskogo byuro torgovogo mashinostroyeniya.
(Electric cookery)

RAYSKY, T.

Electrodynamics, Reciprocation

Quantum electrodynamics in formulation of reciprocity. Zhur. eksp. i teor. fiz. 22 no. 4, 1952.

Institut i. Kopernika, Torun', Pol'sha. rcd. 2[illegible] November 1950.

SO: Monthly List of Russian Accessions, Library of Congress, September 1952.[illegible], Uncl.

RAYSKIY, I.

Poland/Physics - Quantum Mechanics Feb 52

"Quantum Electrodynamics in the Formulation of Reciprocity," I. Rayskiy, Inst imeni Copernicus, Torun, Poland

"Zhur Eksper i Teoret Fiz" Vol XXII, No 2, pp 194-199

In accordance with Born's concept of nonlocalization and reciprocity (cf: Proc Roy Soc, Edinburgh, A 92, 470, 1949) and further developed by Yukawa, (Phys Rev, 77, 219, 1950) writer analyzes nonlocal spinor field $\Psi(X,r)$ depending on 2 types of variables X_μ and r_μ, assuming that this field is expressed by Dirac's eq in X_μ. Received 20 Nov 50. 207T79

RAYSKIY, I., inzh.

Automatic electric water heaters. Obshchestv.pit. no.2:39-40 F '59.
(MIRA 12:3)

(Water heaters)

RAYSKIY, I., inzh.

Protection from "running dry." Obshchestv.pit. no.3:43 Mr '59.
(MIRA 12:4)

(Electric cookery)

RAYSKIY, I.

Raĭskiĭ, I. Quantum electrodynamics in a reciprocity formulation. Akad. Nauk SSSR. Zurnal Eksper. Teoret. Fiz. 22, 194–199 (1952). (Russian)

A non-local spinor field theory is developed; its non-localizability is linked up with a constant which characterizes a non-vanishing rest mass. The electromagnetic field is considered localizable. Born's theory of reciprocity [Born and Green, Proc. Roy. Soc. Edinburgh. Sect. A. 62, 470–488 (1949); these Rev. 11, 147] is used in introducing an interaction between the two fields, and in constructing an S-matrix which differs from the S-matrix of quantum electrodynamics by reciprocity factors of the type

$$\int d^4r \exp\{\pm(i/2)k_s r_s\}\rho(p, r)$$

(k_s, p_s energy-momentum four-vectors of photon and electron). The results obtained agree with those of ordinary quantum electrodynamics except when extreme relativistic energies are involved. Self-energy terms turn out to be finite, but, according to the author's opinion, they are still physically meaningless and should be removed by renormalization. *E. Gora* (Providence, R. I.).

Source: Mathematical Reviews, Vol. 13 No. 10

RAYSKIY, I., inzh.

Coffee-making apparatus. Obshchestv.pit. no.7:33-34 Jl '60.
(MIRA 13:8)
(Restaurants, lunchrooms, etc.--Equipment and supplies)

RAYSKIY, Igor' Dmitriyevich; GLAZUNOVA, V.V., red.; KIRAKOZOVA, N.Sh., red.; EL'KINA, E.M., tekhn. red.

[Electric elements of automatic vending machines] Elektricheskie elementy torgovykh avtomatov. Moskva, Gostorgizdat, 1961. 159 p. (MIRA 15:6)

(Vending machines)

[illegible], Vasiliy Il'ich; RAYSKIY, L.D., retsenzent; [illegible], L.G., retsenzent; [illegible], A.L., red.

[Practical study of electrical equipment] Prakticheskie zaniatiia po elektrooborudovaniiu. Moskva, Izd-vo Pishchevaia promyshlennost', 1964. 135 p. (MIRA 17:8)

VYSHELESSKIY, A.N., prof.; CHUKAYEV, D.S., prof.; KOMAROV, N.S., prof.; SEMATOV, I.G., dots.; RYABOV, V.I.; NEUGODOV, Ye.V.; GOROZHANKIN, M.G.; GAN, M.B., dots.,kand. tekhn. nauk; retsenzent; RAYSKIY, I.D., dots., retsenzent; LIKHAREVA, N.V., kand. tekhn. nauk, retsenzent; SHCHEGLOV, V.P., kand. tekhn. nauk, retsenzent; RUDOMETKIN, F.I., inzh., retsenzent; BAULIN, V.A., red.; EL'KINA, E.N., tekhn. red.

[Equipment of public food service establishments; electrical, refrigerating, and sanitary equipment] Oborudovanie predpriiatii obshchestvennogo pitaniia; elektricheskoe, kholodil'noe i sanitarno-tekhnicheskoe oborudovanie. Moskva, Gos.izd-vo torg. lit-ry, 1961. 447 p. (MIRA 15:3)

(Restaurants, lunchrooms, etc.--Equipment and supplies)

RAYSKIY, I.D.

Indicating millivoltmeters with photoelectric regulators. Priborostroenie no.5:25 My '57. (MLRA 10:6)

(Millivoltmeter)

RAYSKIY, Igor' Dmitriyevich; NIKOLAYEVA, N.G., red.; MEDRISH, D.N., tekhn. red.

[Automation in public eating establishments] Avtomatizatsiia na predpriiatiiakh obshchestvennogo pitaniia. Moskva, Gostorgizdat, 1963. 230 p. (MIRA 16:10)
(Restaurants, lunchrooms, etc.) (Automation)

AKULOV, L.S.; ACHIL'DIYEV, U.I.; VOLOSOV, G.D.; GORDON, L.I.; GRIN, G.V.; GROMOV, M.A.; KIRILLOV, A.Ya.; LIFSHITS, N.I.; MITROPOL'SKIY, A.V.; RAYSKIY, I.D.; SMIRNOV, V.B.; FAYVUSOVICH, A.Kh.; FEDOROVA, I.Yu.; TSYPIN, I.M.; CHEKHOVICH, D.I.; ISHKOVA, A.I., red.; KISELEVA, A.A., tekh.red.

[Handbook on equipment for commercial enterprises and public food service] Spravochnik po oborudovaniiu dlia predpriiatii torgovli i obshchestvennogo pitaniia. Izd.2., dop. Moskva, Gos. izd-vo torg. lit-ry, 1960. 333 p. (MIRA 14:10)
(Restaurants, lunchrooms, etc.--Equipment and supplies)

AKULOV, L.S.; ACHIL'DIYEV, U.I.; VOLOSOV, G.D.; GORDON, L.I.; GRIN, G.V.; GROMOV, M.A.; KIRILLOV, A.Ya.; LIFSHITS, N.I.; MITROPOL'SKIY, A.V.; RAYSKIY, I.D.; SMIRNOV, V.B.; FAYVUSOVICH, A.Kh.; FEDOROVA, I.Yu.; TSYPIN, I.M.; CHEKHOVICH, D.I.; ISHKOVA, A.K., red.; SUDAK, D.M., tekhn.red.

[Handbook on equipment for commercial enterprises and public food service] Spravochnik po oborudovaniiu dlia predpriiatii torgovli i obshchestvennogo pitaniia. Moskva, Gos.izd-vo torg.lit-ry, 1959. 322 p. (MIRA 12:12)

1. Inzhenerno-tekhnicheskiye rabotniki Upravleniya torgovogo oborudovaniya i TSentral'nogo konstruktorskogo byuro torgovogo mashinostroyeniya (for all except Ishkova, Sudak).
(Business enterprises--Equipment and supplies)
(Restaurants, lunchrooms, etc.--Equipment and supplies)

[illegible]

[illegible] forage lands and their use in the steppe and forest-steppe regions of Novosibirsk and the Altai Territory. Trudy [illegible] no.6:343-354 '63. (MIRA 17:7)

Rayski, Jerzy

4

Rayski, Jerzy. Remarks on gauge invariance. Studia Soc. Sci. Torun. Sect. A. 3 (1954), 86–91. (Polish summary)

A verbal discussion without mathematical details. It is pointed out that the "gauge invariance of the first kind", i.e. invariance under changes of phase of a complex field by a constant independent of position, is an invariance property of the same kind as invariance under Lorentz transformations. Both invariance-groups are specified by a discrete set of parameters, and both are associated with integral conservation laws (charge and energy-momentum respectively). On the other hand the "gauge-invariance of the second kind", i.e. invariance under a change in phase which is an arbitrary function in space-time, is a quite different kind of invariance, being associated with a group of infinite dimensionality. The author proposes to abandon the requirement of gauge invariance of the second kind, and to look for a new theory of elementary particles which possesses at most an invariance under changes in phase which are linear functions of position (corresponding to constant additions to the electromagnetic potentials). *F. J. Dyson* (Princeton, N.J.).

RAYSKI, JERZY

2

Rayski, Jerzy. On a regular field theory. II. Quantized. Acta Phys. Polonica 13, 15–28 (1954). (Russian summary)

This paper gives the quantized version of the author's regular field theory, which was developed classically in an earlier paper [same Acta 11, 314–327 (1953); these Rev. 15, 82]. To quantize the theory, the author follows the method of J. Schwinger [Physical Rev. (2) 82, 914–927 (1951); these Rev. 13, 520]. The field operators obey the same non-local field equations as in the classical theory. However, the quantum-mechanical state of the system is defined by assigning eigenvalues to the field-operators only when the assignment is made on the initial or on the final hypersurface. On intermediate hypersurfaces the operators have no direct physical meaning and do not obey canonical commutation rules.

The physical consequences of the theory are all contained in the unitary transformation operator U which transforms the field operators on the initial hypersurfaces into the corresponding operators on the final hypersurface. It is shown how U may be calculated as a power series in the coupling constant g. It is proved that, if the form-factor of the theory satisfies certain integrability conditions, the power series for U is convergent for small g, and the theory therefore possesses regular solutions. *F. J. Dyson.*

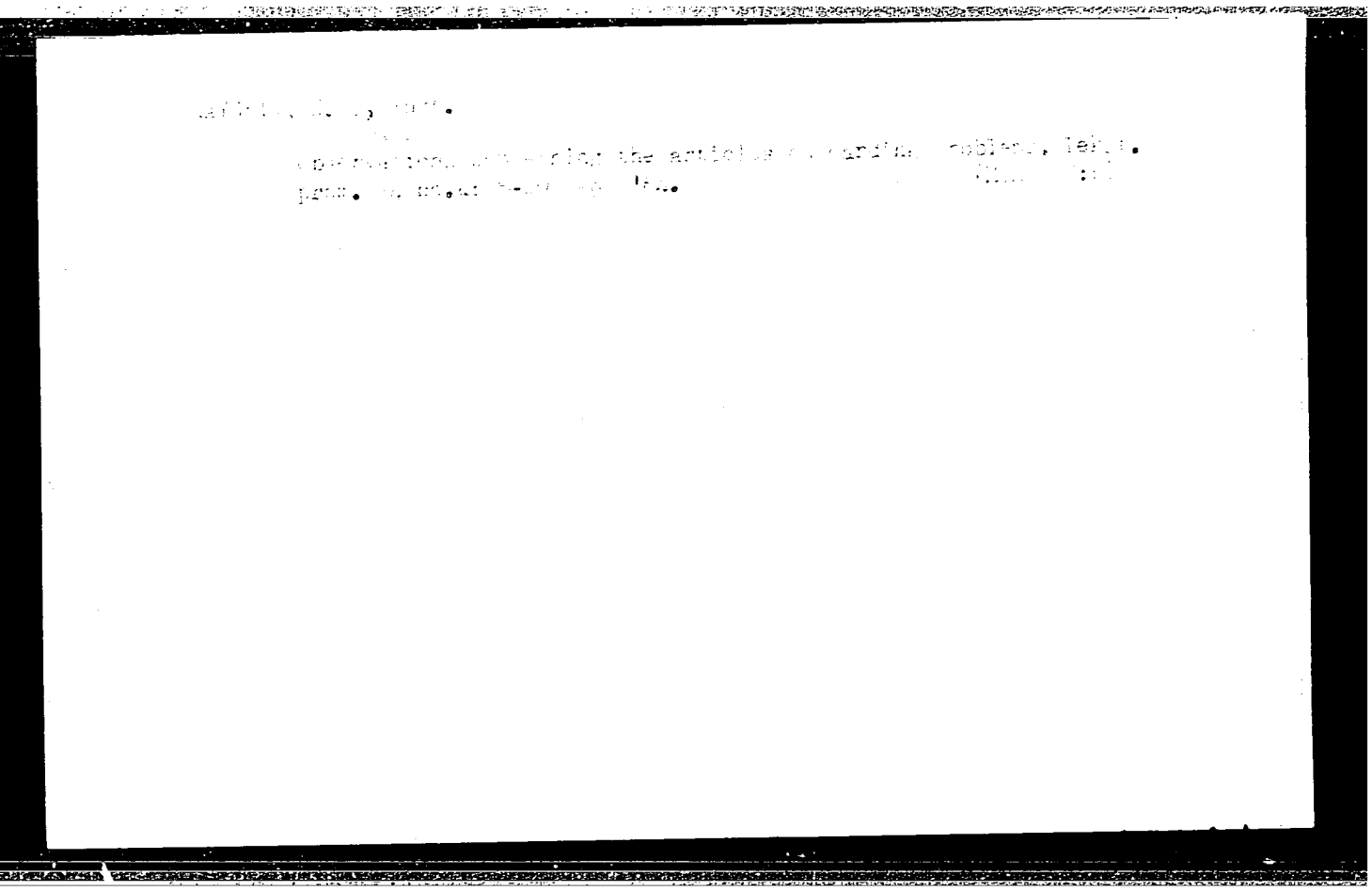
RAYSKIY, M.I.

[Legal medicine; for students and physicians] Sudebnaia meditsina; dlia studentov i vrachei. Moskva, Medgiz, 1953. 466 p. (MLRA 7:1)
(Medical jurisprudence)

RAYSKIY, Mikhail Ivanovich [Rais'kyi, M.I.], zasl. deyatel' nauki; KURDYUMOV, A.P., prof. glav. red.; GITSHEYN, A.D. [Hitshtein, A.D.], tekhn. red.

[Medical jurisprudence] Sudova medytsyna. Vyd.2., vypravlene; pid zahal'noiu red. i z prymitkamy A.P.Kurdiumova. Kyiv, Derzh. med. vyd-vo URSR, 1961. 434 p. (MIRA 14:12)

(MEDICAL JURISPRUDENCE)



RAYSKIY, N.I.

MONASTYRSKIY, A.G.; SOLOV'YEV, A.N., doktor tekhnicheskikh nauk, redaktor; FEDOROV, N.S., retsenzent; RAYSKIY, N.I., retsenzent; ZELENKINA, O.P., redaktor; EL'KINA, E.M., tekhnicheskiy redaktor

[Laboratory exercises in textile testing] Laboratornyi praktikum po ispytaniiu tekstil'nykh materialov. Izd. 2., ispr. i dop. Pod red. A.N.Solov'eva. Moskva, Gos. nauchno-tekhn. izd-vo Ministerstva promyshlennykh tovarov shirokogo potrebleniia SSSR, 1953. 253 p. (MLRA 7:10)

(Textile fabrics--Testing)

MONASTYRSKIY, A.G.; SOLOV'YEV, A.N., doktor tekhnicheskikh nauk, redaktor; FEDOROV, N.S., retsenzent; RAYSKIY, N.I., retsenzent.

[Laboratory manual on the testing of textiles] Laboratornyi praktikum po ispytaniiu tekstil'nykh materialov. Izd. 2., ispr. i dop. Pod red. A.N.Solov'eva. Moskva, Gos. nauchno-tekhn. izd-vo Ministerstva promyshlennykh tovarov shirokogo potrebleniia SSSR, 1953. 253 p. (MLRA 7:7)
(Textile fabrics--Testing)

MILOVIDOV, Nikolay Nikolayevich; RAYSKIY, N.I., retsenzent; SOKOLOVA, V.Ye., redaktor; NEKRASOVA, O.I., tekhnicheskiy redaktor.

[Problems in cotton spinning] Zadachnik po priadeniiu khlopka. Izd.3-e perer. i dop.Moskva, Gos.nauchno-tekhn.izd-vo Ministerstva promyshl.tovarov shirokogo potrebleniia SSSR, 1955. 195 p. (MLRA 8:11)
(Cotton spinning)

UMAROVA, S.I., vrach; RAYSKIY, N.S., vrach; TARTAKOVSKAYA, I., red.; SOKOLOVA, A., tekhn. red.

[Longevity] Dolgoletie. Tashkent, Gos.izd-vo "Sredniaia i vysshaia shkola," UzSSR, 1961. 84 p. (MIRA 14:11)
(LONGEVITY)