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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOV, Ya., inzh.

The GAZ-51P saddle-type tractor and PAZ-744 semitrailer. Avt. transp. 37 no.2:37-41 F '59. (MIRA 13:1)
(Tractors) (Truck trailers)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

PROSVIRNIN, A.D.; VAVILOV, Ya.I.

New designs for truck trailers. Avt. i trakt. prom. no.1:8-11 Ja '56. (MLRA 9:6)

1.Gor'kovskiy avtozavod imeni Moloteva.
(Automobiles--Trailers)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

INOZEMTSEV, S.N.; VAVILOV, Ya.I.; DUL'NEV, V.P., tekhnicheskiy redaktor

[Catalog of spare parts for the GAZ-51 automobile] Katalog zapasnykh chastei avtomobilia GAZ-51. Izd. 2-oe, ispr. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1951. 295 p. [Microfilm] (MLRA 10:2)

1. Gor'kovskiy avtomobil'nyy zavod imeni Molotova, Gorki.
(Automobiles--Apparatus and supplies)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

ACCESSION NR: AP4026842 S/0102/64/000/002/0042/0049

AUTHOR: Vavilov, Ye. M. (Kiev); Osy*ns'ky*y, L. M. (Osinskiy, L. M.) (Kiev)

TITLE: Structural synthesis of automata operating with additional cycles

SOURCE: Avtomaty*ka, no. 2, 1964, 42-49

TOPIC TAGS: automatic control, automaton, additional cycle automaton, finite automaton

ABSTRACT: A method of simplifying the structural schemes of finite automatons by introducing additional internal clock-cycles is considered. Elementary automatons having two types of output signals (determined by their internal state and by transition from one state into another) are called "Moor-Mili automatons"; the peculiarities of automatic systems constructed with such automatons are considered. These two examples illustrate the structural synthesis method: (1) a 3-digit binary pulse counter and (2) same, with a scaling factor of 5.

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

ACCESSION NR: AP4026842

Orig. art. has: 3 figures, 12 formulas, and 3 tables

ASSOCIATION: none

SUBMITTED: 04Jun62 DATE ACQ: 17Apr64 ENCL: 00

SUB CODE: DP, IE NO REF SOV: 001 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

L 12486-63 BDS S/102/63/000/002/003/007

46

AUTHOR: Vavilov, Ye. M. and Osins'kyy

TITLE: A method of structural synthesis of finite automatic controllers

PERIODICAL: Avtomatyka, no. 2, 1963, 20-30

TEXT: The article considers methods of designing elementary control systems which permit radical simplification of the structural synthesis process of finite automatic controllers as compared with those which appear in literature. In the first part of this article the authors consider the design of elementary control systems. In the second part, the structural synthesis of automatic control systems are considered. The article treats one of the possible methods of design of elementary control systems. This method is based on the introduced transition operators pÜ, which permit designation of input matrices of elements. The article contains 11 tables and a 2 item bibliography.

SUBMITTED: June 4, 1962.

Card 1/1

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOV, Ye.N.; PORTNOY, G.P. Prinimali uchastiye: BARKOV, A.A.; OSINSKIY, L.M.; LYUBIMOVA, T.M., red.; SVESHNIKOV, A.A., tekhn. red.

[Synthesis of the circuits of electronic digital] Sintez skhem elektronnykh tsifrovykh mashin. Moskva, "Sovetskoe radio," 1963. 439 p. (MIRA 17:3)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOV, Ye.N. [Vavilov, IE.M.] (Kiyev); OSINSKIY, L.M. [Osyns'kyi, L.M.] (Kiyev)

Structural synthesis of automatons operating with additional cycles. Avtomatyka 9 no. 2:42-49 '64. (MIRA 17:5)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOV, Ye.N. [Vavilov, IE.M.] (Kiyev); OSINSKIY, L.M. [Osyns'kyi, L.M.] (Kiyev)

Method for structural synthesis of finite automatons. Avtomatyka 8 no.2:20-30 '63. (MIRA 16:5)

(Automatic control)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

L 07053-67

ACC NR: AP6028541

SOURCE CODE: UR/0280/66/000/003/0113/0125

AUTHOR: Yavilov, Ye. N. (Kiev); Lobanov, L. P. (Kiev)

ORG: none

35
B

TITLE: A method of presetting automatons

SOURCE: AN SSSR. Izvestiya. Tekhnicheskaya kibernetika, no. 3, 1966, 113-125

TOPIC TAGS: difference equation, automaton, computer technology

ABSTRACT: A method is examined for presetting automatons with systems of difference equations. Methods are presented for deriving the dependence of the number of input words converting the automaton to an arbitrary internal state on the length of these words. The possibility is elicited of finite automatons generating integral power functions. The formulation of the problem of synthesis for the proposed method of presetting automatons is discussed. The examined methods permit determining the number of words converting the automaton from the initial state to internal states. An important advantage of the methods described is that the transition and output functions are represented as certain quantitative relationships and

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L 07055-67

ACC NR: AP6028541

thus the method is convenient for various transformations of the automatons. With the proposed method of presetting the automatons their analysis reduces to a solution of basic systems of difference equations. The problem of synthesis involves a search of the automaton realizing a preset system of functions which are presented as explicit dependences on the argument. Orig. art. has: 21 formulas and 7 figures.

SUB CODE: 09/ SUBM DATE: 29Dec65/ ORIG REF: 002

Card 2/2 vmb

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

DOBROLENSKIY, Yuriy Pavlovich, doktor tekhn. nauk, prof.; IVANOVA, Valentina Ivanovna, kand. tekhn. nauk, dots.; POSPELOV, Germogen Sergeyevich, doktor tekhn. nauk, prof.; Prinimal uchastiye BODUNOV, N.K., kand. tekhn.nauk, dots.; SOLODOVNIKOV, V.V., doktor tekhn. nauk, prof., retsenzent; CHERTOK, B.Ye., doktor tekhn. nauk, retsenzent; VAVILOV, Yu.A., kand. tekhn. nauk, dots., red.; SHEYNFAYN, L.I., red.izd-va; NOVIK, A.Ya., tekhn. red.

[Automation of guided missiles] Avtomatika upravliaemykh snariadov. Moskva, Oborongiz, 1963. 548 p. (MIRA 16:12)
(Guided missiles) (Automatic control)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOV, Yu.I.; NIKOL'SKIY, S.I.; TUKISH, Ye.I.; SKOBEL'TSYN, D.V., akademik.

Spatial distribution of charged particlesin the vicinity of the axis of an extensive atmospheric shower of cosmic rays. Dokl.AN SSSR 93 no.2:233-236 N '53. (MLRA 6:10)

1. Fizicheskiy institut imeni P.N.Lebedeva Akademii nauk SSSR. 2. Akademiya nauk SSSR (for Skobel'tsyn). (Cosmic rays)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOV, Yu. N.

B. T. R.
Vol. 3 No. 4
Apr. 1954
Geophysics

2028 Spatial Distribution of Charged Particles Close to the Axis of the Broad Atmospheric Shower of Cosmic Rays. (Russian.) Yu. N. Vavilov, S. I. Nikol'skii, and E. I. Tukish. *Doklady Akademii Nauk SSSR*, v. 93, no. 2, Nov. 11, 1953, p. 233-236.

Experiments were conducted at an altitude of 3860 m. over sea level. Shows that experimental results do not agree with predictions arising from Fermi's theory. Graphs. 7 ref.

6-14-54

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

Vavilov, Yu. N.

DISTRIBUTION OF NUCLEAR-ACTIVE PARTICLES IN WIDE ATMOSPHERIC SHOWERS OF COSMIC RAYS. Yu. N. Vavilov, S. I. Nikol'skiĭ, and V. P. Sarantsev. Translated by V. Beak from Zhur. [illegible]

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

Vavilov, Yu. N.

Study of nuclear-active component of broad atmospheric showers of cosmic rays. S. I. Nikol'skiĭ, Yu. N. Vavilov, and V. V. Batov. *Doklady Akad. Nauk S.S.S.R.* 111, 71-3 (1956). [illegible]

2

particles was detd. for 1-40 m. from the axis of the shower and it was found that [illegible]

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of formation and the recording of showers induced by

the total number of according to

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOV, YU.N.

PA - 2665

AUTHOR: ANTONOV, YU.N., VAVILOV, YU.N., ZATSEPIN, G.T., KUTUZOV, A.A., SKVORTSOV, YU.V., KHRISTIANSEN, G.B.

TITLE: Structure of the Periphery of Extensive Atmospheric Cosmic Ray Showers. (Struktura periferii shirokikh atmosfernykh livney kosmicheskikh luchey, Russian).

PERIODICAL: Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol 32, Nr 2, pp 227-240, Russian)

Received: 5 / 1957 Reviewed: 6 / 1957

ABSTRACT: The present paper investigates the spatial distribution of the different components of a broad atmospheric cosmic ray shower at great distances from its axis (200 - 800 m). For a detailed study of this problem the Pamir-Expedition of the Academy of Science of the U.S.S.R. (summer and autumn 1950 and 1951) used a new method: In different places of the observation plain the flux density of all charged particles (and separate from it that of penetrating particles) was simultanously determined with hodoscopic devices. (Method of correlated hodoscopes).

Summary of results: The shower domain investigated here consists of an electron-photon component and of a penetrating component (apparently myons). With increasing distance from the shower axis the relative share of the penetrating component increases considerably and at a distance r = 800 m the flux density of penetrating particles and of electrons is equal. The spatial distribution of the

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Structure of the Periphery of Extensive Atmo-- spheric Cosmic Ray Showers. PA - 2665

total flux density of electrons and of penetrating particles is determined by the formula $\rho(r) \sim 1/r^n$ with $n \sim 2,0$. On account of the relatively slow decrease of flux densities of shower particles the periphery of the shower plays an essential part in the general balance of the flux of the shower particles. The mechanism of the transition of electrons to the periphery of the shower is reduced to the Coulomb scattering of these electrons by the nuclei of air atoms. The transition of Myons to the periphery of the shower is effected by their Coulomb scattering and also apparently at the expense of the emission angle in the elementary acts of the nucleus cascade process of the positive and negative myons producing these myons. Finally, data on the intensity of primary cosmic particles with extremely high energies of 10^{16} up to 10^{17} eV are given. (10 illustrations)

ASSOCIATION: Physical Institute "P.N.Lebedev" of the Academy of Science of the U.S.S.R.

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SUBMITTED:

AVAILABLE: Library of Congress.

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APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOV, Yu.N.

Interpretation of the spatial distribution of nuclear-active particles in extensive air showers [with summary in English]. Zhur. eksp. i teor. fiz. 33 no.1:179-182 Jl '57. (MLRA 10:9)

1. Fizicheskiy institut im. P.N. Lebedeva Akademii nauk SSSR.
(Cosmic rays) (Particles, Elementary)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOV, Yu. N., Master Phys-Math Sci —(diss) "A study of penetrating active and passive nuclear components of vast cosmic-ray showers in the atmosphere." Moscow, 1957. 11 pp, (AS USSR. Inst of Physics im. P. N. Lebedev), 125 copies. (KL, No 40, 1957, 90)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOV, YU.N.

USSR/Nuclear Physics - Cosmic Rays C-7

Abs Jour : Ref Zhur - Fizika, No 1, 1958, 568

Author : Vavilov, Yu.N., Yevstigneyev, Yu.F., Nikol'skiy, S.I.

Inst : Physics Institute, Academy of Sciences, USSR

Title : Investigation of the Penetrating Component of Extensive Atmospheric Showers of Cosmic Radiation.

Orig Pub : Zh. eksperim. i teor. fiziki, 1957, 32, No 6, 1319-1327

Abstract : An investigation was made of the lateral distribution of μ mesons in extensive atmospheric showers, due to primary particles at various energies. It was established that the function of lateral distribution of μ mesons in the shower, within the measurement accuracy, is independent of the energy of the primary particles causing the shower. The dependence of the number of μ mesons on the energy of a particle that forms an extensive

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

Vavilov, Yu.N.

ANTONOV, Yu.N.; VAVILOV, Yu.N.; ZATSEPIN, G.T.; KUTUZOV, A.A.; SKVORTSOV, Yu.V.; KHRISTIANSEN, G.B.

Structure of the periphery of extensive atmospheric cosmic-ray showers [with summary in English]. Zhur. eksp. i teor. fiz. 32 no.2:227-240 F '57. (MLRA 10:6)

1. Fizicheskiy institut im. P.N. Lebedeva Akademii nauk SSSR. (Cosmic rays)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOV, YU.N.

AUTHOR: VAVILOV, Yu.N. 56-7-25/66

TITLE: On Interpretation of the Spatial Distribution of Nuclear-Active Particles in Extensive Air Showers. (Ob interpretatsii prostranstvennogo raspredeleniya yadernoaktivnykh chastits v shirokikh atmosfernykh livnyakh, Russian)

PERIODICAL: Zhurnal Eksperim. i Teoret.Fiziki, 1957, Vol 33, Nr 7, pp 179-182, Russian)

ABSTRACT: The experimental data on the spatial distribution function of nuclear-active particles which are formed along the axis of an extensive shower are sorted out. They indicate that the average angle of flight of the nuclear-active particles is insignificant. ($< 3\text{-}4.10^{-3}$ radian). It is shown that LANDAU'S theory of the multiple forming of particles permits such a small angle only in that case in which a flying-off particle transfers a high energy concentration to the secondary particle in the elementary act of the nuclear cascade process. (With 11 Slavic References).

ASSOCIATION: Physical Institute "P.N.LEBEDEV" of the Academy of Sciences of the U.S.S.R. (Fizicheskiy institut im, P.N.Lebedeva Akademii nauk SSSR)

PRESENTED BY:

SUBMITTED: 30.12.1956

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

56-6-8/56

AUTHOR VAVILOV, Yu.N., YEVSTIGNEYEV, Yu.F., NIKOL'SKIY, S.I.

TITLE Investigation of the Penetrating Component of Extensive Cosmic Ray Air Showers (-Russian)
(Issledovaniye pronikayushchey komponenty shirokikh atmosfericheskikh livney kosmicheskogo izlucheniya -Russian)

PERIODICAL Zhurnal Eksperim. i Teoret.Fiziki, 1957, Vol 32, Nr 6, pp 1319-1327 (U.S.S.R.)

ABSTRACT The present paper investigates the spatial distribution of myons in broad atmospheric showers, which are caused by primary particles with different energy. These measurements were carried out in an altitude of 3860 m (Pamir) in the summer and fall of 1954.
Experimental order: The spatial distribution of the charged particles was investigated by the method of the individual investigation of the showers by means of numerous counters (which were connected with a hodoscopic device). The general scheme of the experimental order is illustrated by means of a drawing.
The spatial distribution of Myons in the shower: The density of the myon flux in the showers investigated did not suffice for measuring them in an individual shower if detectors with the usual surface area are used. The mean value of the density of the myon flux in the showers with assumed number of particles was determined by counting the myon passages through the detector. The varying influence exercised by the angle of emission of the pions upon the spatial distribution of the soff and the penetrating component of the broad atmo-

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

56-6-8/56

Investigation of the Penetrating Component of Extensive Cosmic Ray Air Showers.

[redacted]

spheric showers is obviously connected with two factors. Firstly, the myons have considerably longer ranges than the electron-photon avalanches. On the other hand the form of the function of the spatial distribution of the electrons near the axis of the shower indicates a considerable influence exercised by neutral pions with an energy of $>10^{10}$ EV upon the production of the electron-photon component in the depth of the atmosphere.
The last chapter deals with the dependence of the number of myons in a broad atmospheric shower on the energy of the primary particle causind the shower.
(5 illustrations and 2 tables).

ASSOCIATION Not Given.
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SUBMITTED 12.1.1957
AVAILABLE Library of Congress.
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APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOVA, A.S., inzh.; LISOV, V.P.; ROKHLIN, I.A.; TROYANOV, A.V.; DOBRO-SMYSLOV, V.I., inzh., red.; STUPIN, A.K., red.izd-va; KORABLEVA, R.M., red.izd-va; TIKHANOV, A.Ya., tekhn.red.

[Catalog of parts of calculating perforator machines with 80 column outfit] Katalog detalei schetno-perforatsionnykh mashin 80-kolonnogo komplekta. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 163 p. (MIRA 12:12)

1. Nauchno-issledovatel'skiy institut schetnogo mashinostroyeniya.
(Calculating machines)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

ZHDANOV, G.B., glav. red.; IVANENKO, I.P., pom. glav. red.; DORMAN, L.I., red. toma; TULINOV, V.F., pom. red. toma; GERASIMOVA, N.M., red.; NIKISHOV, A.I., red.; ZATSEPIN, V.I., red.; KHRENOV, V.A., red.; SYROVATSKIY, S.I., red.; FEDOROV, V.M., red.; VAVILOV, Yu.N., red.; ABROSIMOV, A.T., red.

Proceedings of the Moscow Cosmic Ray Conference, July 6-11, 1959. Moscow. Vol.14. Variations of cosmic-ray intensity. 1960. 365 p.

(No subject heading)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

ZHDANOV, G.B., glav. red.; IVANENKO, I.P., pom. glav. red.; GERASIMOVA, N.M., red. toma; NIKISHOV, A.I., pom. red. toma; ZATSEPIN, V.I., red.; KHRENOV, V.A., red.; DORMAN, L.I., red.; TULINOV, V.F., red.; SYROVATSKIY, S.I., red.; FEDOROV, V.M., red.; VAVILOV, Yu.N., red.; ABROSIMOV, A.T., red.;

Proceedings of the Moscow Cosmic Ray Conference. July 6-11, 1959. Moscow. Vol.1. 1960. 333 p.
(No subject heading)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

ZHDANOV, G.B., glav. red.; IVANENKO, I.P., pom. glav. red.; SYROVATSKIY, S.I., red. toma; GERASIMOVA, N.M., red.; NIKISHOV, A.I., red.p ZATSEPIN, V.I., red.; KHRENOV, V.A., red.; DORMAN, L.I., red.; TULINOV, V.F., red.; FEDOROV, V.M., red.; VAVI'OV, Yu.N., red.; ABROSIMOV, A.T., rod.

Proceedings of the Moscow Cosmic Ray Conference, July 6-11, 1959. Moscow. Vol.3. 1960. 253 p.

(No subject heading)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

ZHDANOV, G.B., glav. red.; IVANENKO, I.P., pom. glav. red.; ZATSEPIN, V.I., red. toma; KHRENOV, V.A., pom. red. toma; GERASIMOVA, N.M., red.; NIKISHOV, A.I., red.; DORMAN, L.I., red.; TULINOV, V.F., red.; SYROVATSKIY, S.I., red.; FEDOROV, V.M., red.; VAVILOV, Yu.N., red.; ABROSIMOV, A.T., red.

Proceedings of the Moscow Cosmic Ray Conference, July 6-11, 1959. Moscow. Vol.2. Extensive air showers and cascades process. 1960. 331 p.
(No subject heading)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

ZHDANOV, G.B., glavnyy red.; IVANENKO, I.P., zam.glavnogo red.; SYROVATSKIY, S.I., otv.red.toma; KHRENOV, B.A., zam.red.toma; GERASIMOVA, N.M., red.; NIKISHOV, A.I., red.; ZATSEPIN, V.I., red.; DORMAN, L.I., red.; TULINOV, V.F., red.; FEDOROV, V.M.; VAVILOV, Yu.N., red.; ABRASIMOV, A.T., red.; FRADKIN, M.I., red.izd-va; BRUZGUL', V.V., tekhn.red.

[Radiation belts of the earth. Primary cosmic radiation and its properties and origin] Radiatsionnyi poias Zemli. Pervichnoe kosmicheskoe izluchenie, ego svoistva i proiskhozhdenie. Moskva, Izd-vo Akad.nauk SSSR, 1960. 258 p. (Trudy Mezhdunarodnoi konferentsii po kosmicheskim lucham, no.3) (MIRA 14:2)

1. International Conference of Cosmic Radiation. (Cosmic rays)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

ZHDANOV, G.B., glavnyy red.; IVANENKO, I.P., zam.glavnogo red.; ZATSEPIN, V.I., otv.red.toma; KHRENOV, B.A., zam.red.toma; GERASIMOVA, N.M., red.; NIKISHOV, A.I., red.; DORMAN, L.I., red.; TULINOV, V.F., red.; SYROVATSKIY, S.I., red.; FEDOROV, V.M., red.; VAVILOV, Yu.N., red.; ABROSIMOV, A.T., red.; GUROV, K.P., red.izd-va; BERKGAUT, V.G., red.izd-va; BRUZGUL', V.V., tekhn.red.

[Extensive air showers and cascade processes] Shirokie atmosfernye livni i kaskadnye protsessy. Moskva, Izd-vo Akad.nauk SSSR, 1960. 351 p. (Trudy mezhdunarodnoy konferentsii po kosmicheskim lucham, no.2). (MIRA 13:12)

1. International Conference of Cosmic Radiation.
(Cosmic rays)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

ZHDANOV, G.B., glavnyy red.; IVANENKO, I.P., zam.glavnogo red.; DORMAN, L.I., otv.red.toma; TULINOV, V.F., zam. redaktora toma; GERASIMOVA, N.M., red.; NIKISHEV, A.I., red.; ZATSEPIN, V.I., red.; KHRENOV, B.A., red.; SYROVATSKIY, S.I., red.; FEDOROV, V.M., red.; VAVILOV, Yu.N., red.; ABROSIMOV, A.T., red.; GUS'KOV, G.G., red.izd-va; BRUZGUL', V.V., tekhn.red.

[Transactions of the International Conference on Cosmic Rays] Trudy Mezhdunarodnoi konferentsii po kosmicheskim lucham. Moskva, Izd-vo Akad.nauk SSSR. Vol.4. [Variations in the intensity of cosmic rays] Variatsii intensivnosti kosmicheskikh luchei. 1960. 362 p. (MIRA 13:10)

1. Mezhdunarodnaya konferentsiya po kosmicheskim lucham. Moscow, 1959. 2. Magnitnaya laboratoriya AN SSSR, Moskva (for Dorman).
(Cosmic rays)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

GERASIMOVA, N.M., otv.red.toma; NIKISHOV, A.I., zamestitel' red.toma; ZHDANOV, G.B., glavnyy red.; IVANENKO, I.P., zamestitel' glavnogo red.; ZATSEPIN, V.I., red.; KHRENOV, B.A., red.; DORMAN, L.I., red.; TULINOV, V.F., red.; SYROVATSKIY, S.I., red.; FEDOROV, V.M., red.; VAVILOV, Yu.N., red.; ABROSIMOV, A.T., red.; GUROV, K.P., red.izd-va; BRUZGUL', V.V., tekhn.red.

[Transactions of the International Conference on Cosmic Rays] Trudy Mezhdunarodnoi konferentsii po kosmicheskim lucham. Moskva, Izd-vo Akad.nauk SSSR. Vol.1. [Nuclear interactions at energies of 10^{11}-10^{14} ev.] Iadernye vzaimodeistviia pri energiiakh 10^{11}-10^{14} ev. 1960. 335 p. (MIRA 13:9)

1. Mezhdunarodnaya konferentsiya po kosmicheskim lucham. Moscow, 1959. (Nuclear reactions)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOV, Yu.N.; FEDOROV, V.M.

Research on the physics of cosmic rays. Vest. AN SSSR 31 no.10:126-128 O '61. (MIRA 14:9)

(Cosmic rays--Congresses)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOV, Yu.N.; PRAGER, I.A.

Investigating the performance of some types of pulse-fed gas-discharge counters. Prib.i tekh.eksp. no.2:41-44 Mr-Ap '60. (MIRA 13:7)

1. Fizicheskiy institut AN SSSR.
(Nuclear counters)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

82879

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S/120/60/000/02/010/052
E032/E414

AUTHORS: Vavilov, Yu.N. and Prager, I.A.

TITLE: A Study of Certain Types of Gas-Discharge Counters Under Pulsed Supply Conditions

PERIODICAL: Pribory i tekhnika eksperimenta, 1960, Nr 2, pp 41-44 (USSR)

ABSTRACT: A study was made of the characteristics of the mass-produced gas-discharge counters Si8g and Si5g in hodoscopic systems under pulsed conditions. The diameter of the Si8g counters is 3 cm and the length of the cathode 28.5 cm. In the case of the Si5g counters the diameter is 6 cm and the length of the cathode is 55 cm. The diameter of the central tungsten wires in both types is 0.1 mm. The gas mixture consists of 85% argon and 15% isopentane at a pressure of 80 to 100 mm Hg. The counter investigated under pulsed-supply conditions was placed between two MS-9 counters, thus forming a three-counter vertical telescope. The MS-9 counters were connected in coincidence with a resolving time of about 2 μsec, the arrangement being triggered by cosmic rays passing vertically through the

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A Study of Certain Types of Gas-Discharge Counters Under Pulsed Supply Conditions

three counters. The pulse from the coincidence circuit triggered a TG 1-0.1/1.3[32] thyratron producing a 300 V pulse. This pulse in turn triggered a hydrogen thyratron (TGI 1-90/8)[33] as shown in Fig 1, which enabled a large number of counters to be simultaneously included in the circuit. The device can be used to produce a rectangular high-voltage pulse having a duration of 1 μ sec and a leading edge $\lesssim$ 0.1 μ sec. The capacitor C' was included during a part of the measurements in order to imitate the capacitance corresponding to a large number of hodoscopic counters simultaneously connected to the control unit. The high-voltage pulse was applied to the anode of the counter. A negative constant voltage was applied to the cathode of the counter under investigation and the magnitude of this voltage could be varied by means of a potentiometer. Provision was made for delaying the high-voltage pulses relative to the times of entry of cosmic-ray particles into the counters. This delay

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A Study of Certain Types of Gas-Discharge Counters Under Pulsed Supply Conditions

could be varied between 0.7 and 21.7 μ sec approximately in steps of 1 μ sec. The results obtained may be summarized as follows. The Si8g counters can be used in hodoscopic systems under pulsed-supply conditions with pulse amplitudes of 2 to 2.5 kV, whenever spontaneous pulse probability of about 0.1% can be tolerated (provided about 30% of the counters are rejected owing to their high probability for spurious pulses). The efficiency of these counters in the working region of the high-voltage pulses is not less than about 95%. The resolving time and the permissible values of the delay of the high-voltage pulses depend on the constant voltage applied to the counter and may vary between one and a few tens of μ sec. The lifetime of Si8g counters under pulsed conditions is very long since it was shown that after 10^5 pulses at V = 2.5 kV, the probability for spurious counts did not increase. The Si5g counters, on the other hand, cannot be easily used under pulsed conditions since most of them have a high

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E032/E414

A Study of Certain Types of Gas-Discharge Counters Under Pulsed Supply Conditions

probability for spurious pulses. Acknowledgment is made to O.I.Dovzhenko, L.N.Korablev and I.V.Shtranikh for valuable advice and O.F.Ogurtsov for assistance in the present work. There are 5 figures and 2 Soviet references.

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

SUBMITTED: February 10, 1959

Card 4/4

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

S/056/62/043/003/041/063
B108/B102

AUTHOR: Vavilov, Yu. N.

TITLE: The energy of muons in muon beams of cosmic radiation

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 3(9), 1962, 1009 - 1011

TEXT: Underground muon absorption was studied in order to estimate the energy of "nontrivial"-muon beams (S. N. Vernov et al. ZhETF, 37, 1252, 1959; 42, 758, 1962), i.e. the energy of muons reaching the detector otherwise than as a result of random statistical fluctuations. Experimental data were taken from papers by S. Higashi et al. (Proceedings of the International Conference on Cosmic Radiation, Japan, 1961), P. Barret et al. (Rev. Mod. Phys., 24, 133, 1952) and J. Kessler, R. Maze (Nuovo Cim., 5, 1540, 1957). These data, relating to muon beam intensities down to 1600 m of water-equivalent underground, justify the conclusion that the mean muon energy on the Earth's surface is $\gtrsim 10^{12}$ ev. This high value confirms the hypothesis that the muons are produced in elementary events at energies of $\gtrsim 10^{13}$ ev. There is 1 table.

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

The energy of muons in muon... S/056/62/043/003/041/063
B108/B102

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

SUBMITTED: April 3, 1962

Card 2/2

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

S/056/63/044/002/017/065
B102/B106

AUTHORS: Vavilov, Yu. N., Pugacheva, G. I., Fedorov, V. M.

TITLE: The muon groups near the axis of extensive air showers

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44, no. 2, 1963, 487-492

TEXT: An arrangement of hodoscope and G-M counters, a cloud chamber with seven brass plates (120 g/cm^2 each) as muon detector and a Cherenkov counter (5 m high, basic diameter 6.5 m) for better location of the shower axis, was exposed to extensive air showers ($10^3 \leq N \leq 10^5$) at sea level (Moscow). The Cherenkov counter was filled with water which served both as radiator and as filter. Between this counter and the cloud chamber there was a 16.5-cm thick lead plate to absorb the electron-photon avalanches due to π^0 decays in the water. Thus the matter above the cloud chamber amounted to 700 g/cm^2. A total of 1940 hodoscope counters (0.01 m^2 each) arranged topmost, served for determining the power and position of the shower axis and two other groups of 48 counters each were arranged 8 m distant from the center of the apparatus. The detection units

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were connected in triple and double coincidence. The following results were obtained:

number of muons per group (n_μ)	2	3	4
number of groups with given n_μ intensity	20	5	2
mean of the shower	$1.8 \cdot 10^4$	$2.2 \cdot 10^4$	$1.5 \cdot 10^4$
mean distance of group center from shower axis, m	4.8	1.7	3.9

The results of an analysis of the spatial distributions of the shower axes and of the muon groups are compared with results obtained by S. N. Vernov et al. (ZhETF, 37, 1193, 1959; 39, 510, 1960). It was found that if muon groups with a diameter of $\leqslant 8$ cm exist, their probability of appearance is at least 70 times smaller than that according to Vernov et al. The lowest energy of muons contained in one of the 27 groups selected was $\geqslant 3.5$ Bev when entering the cloud chamber. If this limit is re-extrapolated to the top of the Cherenkov counter a value of $\geqslant 5$ Bev is

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obtained. The distribution of the distances between the muon trajectories in groups with two or more parallel tracks was analyzed in order to find out if there is a genetic relation between such muons. It was found that none exists for muons with track distances of $\geqslant 0.3$ m. There are 6 figures and 1 table.

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

SUBMITTED: September 13, 1962

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOV, Yu.N.; PUGACHEVA, G.I.; FEDOROV, V.M.

Importance of underwater measurements of μ-meson intensity at great depths. Izv. AN SSSR. Ser. fiz. 28 no.11:1857-1860 N '64. (MIRA 17:12)

1. Fizicheskiy institut im. P.N. Lebedeva AN SSSR.

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

L 27825-65 EWT(j)/EWT(m) ... 026/000/001/0117
ACCESSION NR: AT4049...

AUTHOR: ... Nesterova, N.M.; Nikol'skiy, S.I.; Pomans...

TITLE: Extensive cosmic ray air showers 19 B+1

SOURCE: AN SSSR. Fizicheskiy institut. Trudy*, v. 26, 1964. Kosmicheskiye luchi (Cosmic rays), 17-117

TOPIC ... secondary particle nuclear cas-

ABSTRACT ... length on the basis of work done ... extensive air showers. The method used by the 1952 Pamir expedition is described. Individual sections ... of the following: the method of correlated hodoscopes used in the measurement of shower particle flux at the observation level; hodoscope detectors of μ-mesons and nuclear-active particles ... of ionization chambers for the study of air showers, observation of Cerenkov radiation ... counters in the study of air showers ... deal with the composition of extensive air showers

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L 2 [illegible]

ACCESSION NR: AT4049951

Individual sections are devoted to radial distribution of charged particles, shower spectra with regard to number of particles at observation height (3860 meters); energy spectra of electrons; [illegible] of [illegible] particles at observation level, energy and composition of active particles; radial distribution of μ-mesons and their number in extensive air showers with various numbers of charged particles; μ-meson energy spectra; radial distribution of Cerenkov radiation; energy expended [illegible] deal with air-shower cores and high-energy nuclear-active particles with individual sections devoted [illegible] particles, fluctuations of energy [illegible]

be made to explain the change in characteristics of an extensive air shower with a total number [illegible] tion [illegible] charge

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ACCESSION NR: AT4049951

in or appearance of new auxiliary elementary processes during collision of $10^{14} - 10^{15}$ ev nucleons may be postulated. "Yu. Vavilov, O. Dovzhenko, I. Ivanovskaya, S. Nikol'skiy, Yu. Prokhorov, V. Sarantsev, Ye. Tukish, L. Bilibin, L. Vasil'ev, V. Grishin, B. Zhurkin, V. Kologrivov, A. Kuznetsov, G. Ly*mar', Yu. Pl[illegible]kov, A. Smagin and V. Filonov participated in making the measurements in the Pamirs in 1952. The measurements in 1955 and 1957 were carried out by A. Ye. Chudakov, N. M. Nesterova, V. I. Zatsepin, P. V. Vakulov, Ye. I. Tukish, Yu. N. Konovalov and V. Ya. Markov (members of the FIAN), as well as Y. D. Volkov, [illegible] Dadykin, A. S. K[illegible], V. L. Makarevich and other students at M[illegible]. The [illegible] radiation [illegible] atmospheric showers at sea level was measured by members of FIAN and MGU under the guidance of V. I. Zatsepin. The energy of nuclear active particles was calculated by Ye. A. Murzina, while Ye. P. Yudin took part in the calculation of the A2 variant. Orig. art. has: 55 figures, 13 tables and 7 formulas.

ASSOCIATION: Fizicheskiy institut AN SSSR (Physics Institute, AN SSSR)

SUBMITTED: [illegible] SUB CODE: [illegible]

NO REF SOV: 094 OTHER: 040

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

L 41016-65 EWT(m)/T/EWA(m)-2

AUTHOR: [illegible]

TITLE: The analysis of [illegible] in matter at large depths

SOURCE: Yaderna[illegible] fizika, v. 1, no. 1, 1965, 80-83

TOPIC TAGS: [illegible]
Mu meson energy spectrum, high energy muon, cosmic ray, photon cross section

[illegible] the intensity of cosmic ray [illegible]-mesons at large depths are of importance [illegible] spectrum. Best known at the present

muons through thick layers of matter. [illegible] has been found by comparing the of the muon photonuclear losses can be determined
curves of the intensity of the muons against the depth in earth and in water

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ACCESSION NR: AP5007109

[illegible]

nuclear losses, one can theoretically find the photonuclear cross section of [illegible] Assuming the applicability [illegible]

evaluation of the problem. [illegible] formula and 2 tables.

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

SUBMITTED: 27Jun64 ENCL: 00 SUB CODE: NP

NO REF SOV: 001 OTHER: 003

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

L 36936-66 EWT(1)/FCC GW

ACC NR: AT6023555 SOURCE CODE: UR/3095/66/036/000/0031/0036

AUTHOR: Vavilov, Yu. N.; Nelepo, B. A.; Pugacheva, G. I.; Fedorov, V. M.

ORG:

TITLE: Device for measuring cosmic-ray intensity at great depths

SOURCE: AN UkrSSR. Morskoy gidrofizicheskiy institut. Trudy, v. 36, 1966. Metody i pribory dlya issledovaniya fizicheskikh protsessov v okeane (Methods and instruments for studying physical processes in the ocean), 31-36

TOPIC TAGS: cosmic ray, Cherenkov counter, bremsstrahlung, photonuclear energy, electromagnetic field, atomic nucleus, COSMIC RAY INTENSITY, OCEAN PROPERTY

ABSTRACT: Ten times less cosmic rays than γ-rays are absorbed in water. Cosmic rays recorded in ground with a water equivalent of 20-m depth consist of μ-mesons as particles with the most penetrating ability. The absorption of μ-mesons by matter during interaction may be computed by the energy loss using the formula

$$\frac{dE}{dx} = a + (b_t + b_p + b_{ya})E,$$

where E is the energy of a μ-meson, x is the depth of the absorber, expressed in

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ACC NR: AT6023555

g/cm^2, and a characterizes the loss of speedy particles by ionization; a increases according to a logarithmic law of energy, b_t expresses the loss of μ-mesons by bremsstrahlung, b_p expresses the energy loss by generation of electron and positron pairs by a μ-meson, b_{ya} expresses the loss of photonuclear energy of a μ-meson generating electron nuclear showers. The electromagnetic field of a μ-meson is able to interact with atomic nuclei. Cherenkov counters are used for measurements of μ-meson intensity of great depths. The counter is spherically shaped and filled with water; the inside paint diffuses light and has a reflection coefficient of 90%. As a μ-meson crosses the diameter of the sphere, it generates $2 \cdot 10^4$ photons of Cherenkov radiation in the spectral range 2900—6000 Å, which is recorded by the Cherenkov counter. The addition of a little fluorescent salt to the water in the counter transfers photons of Cherenkov radiation from the 2900—3500-Å range to the 4500—5500-Å range, in which the maximum sensitivity of photocathodes is found. The effectiveness of recording single μ-mesons entering the counter was 99%, as was determined by a special experiment. Data on the intensity of cosmic rays at sea level and preliminary data at greater depths are given in a table in the original article. The authors express thanks to Professor A. G. Kolesnikov for permission to work in FIAN and MGIANUSSR and also to the heads of the Departments of Physics and Physics of the Sea of Moscow State University, for their help. Orig. art. has: 1 table, 2 figures, and 2 formulas. [EG]

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 002/ ATD PRESS: 5038

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOVA, A.S., inzh.

Use of calculating machines in national economy. Priborostroenie no.11:25-28 N '57. (MIRA 10:10)
(Calculating machines)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOVA, Anastasiya Sergeyevna; ZHEVELEVA, Inna Semenovna; ZHUCHKOV, D.A., red.; AKIMOVA, A.G., red. izd-va; GORDEYEVA, L.P., tekhn. red.

[Electronic computers in foreign countries]Elektronnye vychislitel'nye mashiny za rubezhom. Pod red. D.A.Zhuchkova. Moskva, Mashgiz, 1962. 235 p. (MIRA 15:12)
(Electronic computers)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOVA, Anastasiya Sergeyevna; ZHEVELEVA, Inna Semenovna; ZHUCHKOV, D.A., red.; AKIMOVA, A.G., red.izd-va; EL'KIND, V.D., tekhn. red.; GORDEYEVA, L.P., tekhn. red.

[Electronic computers abroad] Elektronnye vychislitel'nye mashiny za rubezhom. Pod red. D.A.Zhuchkova. Moskva, Mashgiz, 1962. 235 p. (MIRA 16:8)

(Electronic computers)

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOVA, A. S.

119-11-6/7

AUTHOR: Vavilova, A. S., Engineer

TITLE: The Technique of Calculation in National Economy (Vychislitel'naya tekhnika v narodnom khozyaystve)

PERIODICAL: Priborostroyeniye, 1957, Nr 11, pp. 25-28 (USSR)

ABSTRACT: At present machines of the following three types are produced or developed in the USSR: key-type machines (with hand supply of main data), calculation-perforation machines and automatic speed calculation machines.

Key-Type Machines with Hand Supply. The production in series of a lever-arithmometer "Felix", of a key-arithmometer "WK-1", of a ten-key calculation machine with motor drive "WK-2" as well as of an adding calculation-listing ten-key machine "SDU-138" has begun. The following machines are planned and are prepared for production: full-key calculation machine "WMM-2" with motor drive and the calculation text machine (for invoices) "WA-346" with electric mechanic principle. This machine types the text, adds, subtracts, multiplies, and calculates percents, discounts and overcharges.

Calculation-Perforation Machines. One set of these machines carries out the mass-specialized operation for the working of

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perforated cards (punched cards) on which the values of numbers in a special kind of punched holes are registered. The machines carry out the documentary treatment with automatic control in a complex way.

Automatic Electronic Speed Calculation Machines. Two different types are produced and developed: modelling machines and number machines. They are mainly used for the solution of the systems of simple differential equations. The number-calculating machines can be used for the solution of great complexes of calculation operations which are connected with scientific research problems, problems of economic analyses and the solution of technical problems.

The construction of specialized machines for the purposes of economic analysis and statistics is of great importance for national economy. By their means the existing mechanized system of experience can be transformed into a system of calculation centers (centralized and territorial centers) for the working

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The Technique of Calculation in National Economy. 119-11-6/7

up of mass information.
Further problems of the developed of calculation technique in the USSR are:
1.- Increase the efficiency of their use.
2.- Development of a number of new machines which secure calculation operations of the most different branches of national economy.
(There are 3 illustrations)

AVAILABLE: Library of Congress.

CARD 3/3

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BC

B-I-5

Colorimetric determination of manganese and molybdenum in steel. N. M. MILOSLAVSKI and E. G. VAVILOVA (Zavod. Lab., 1936, 5, 12—16).—0·2 g. of steel is dissolved in 12 ml. of HNO_3, N oxides are eliminated, 40 ml. of 0·17% $AgNO_3$ and 4—5 ml. of 30% $(NH_4)_2S_2O_8$ are added, the vol. is made up to 250 ml., and the coloration compared with that given similarly by steel of known [Mn]. 1 g. of steel is dissolved in HNO_3, 40 ml. of 20% NaOH are added, to ppt. Fe, and the solution is diluted to 250 ml. and filtered. 50—100 ml. of filtrate are evaporated to 10—15 ml., and excess of H_2SO_4 is added, followed by 6—8 ml. of 5% $2N_2H_4,H_2SO_4$. The solution is heated at 100° for 15 min., diluted to 50 ml., and the coloration compared with that given by standard Mo steel. R. T.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

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1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

Colorimetric determination of manganese and molybdenum in steel. N. M. Miloslavskii and E. G. Vavilova. *Zavodskaya Lab.* 5, 12-16(1936). -Dissolve 0.2 g. of steel in 12 ml. of HNO_3, eliminate N oxides, add 40 ml. of 0.17% $AgNO_3$ and 4-5 ml. of 50% $(NH_4)_2S_2O_8$, make up the vol. to 250 ml., and compare the color with that given similarly by steel of known Mn concn. Dissolve 1 g. of steel in HNO_3, add 40 ml. of 20% NaOH to ppt. Fe, dil. the soln. to 250 ml. and filter. Evap. 50-100 ml. of filtrate to 10-15 ml., and add an excess of H_2SO_4 and 6-8 ml. of 5% $2N_2H_4.H_2SO_4$. Heat the soln. at 100° for 15 min., dil. to 50 ml., and compare the coloration with that given by standard Mo steel.

B. C. A.

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1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

1

Colorimetric and nephelometric methods for determining phosphorus in cast iron and steels. N. M. Miloslavskii and E. G. Yavilova. *Zavodskaya Lab.* 4, 1450-6 (1935).—In the Mo-V colorimetric detn. of P (Kleinman, *J. Biol. Chem.* 36, 335(1919)) the MnO_2 formed in the reaction is reduced with $NaNO_2$. The nephelometric detn. of P by the formation of the strychnine-P-molybdate complex by the Hartmann method (*C. A.* 28, 5778[1]) gave superior results. Chas. Blanc

COMMON ELEMENTS

OPEN

MATERIALS INDEX

COMMON VARIABLES INDEX

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

Determination of iron in blast-furnace slag by the photo-colorimetric method. N. M. Miloslavskii, E. G. Vavilova and I. Dalkhes. *Novosti Tekhniki* 1939, No. 7, 14.—Dissolve 0.1 g. of slag with 10-12 cc. of concd. HCl under CO_2. Dil. to 100 cc., mix an aliquot (2-4 cc.) of this soln. with 0.2-0.3 cc. of HCl (1:1), dil. to about 75 cc. with distd. water, add 2 cc. 2 *N* NH_4Cl and 2 cc. 20% Na sulfosalicylate and dil. to 100 cc. Prep. in the same way another soln. in a 100-cc. flask, but after adding HCl, oxidize Fe^{++} with 0.03 *N* $KMnO_4$; then proceed as above. Compare the colored solns. contg. Fe sulfosalicylate complex in a photocolorimeter. A. A. P.

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1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

B6

16-I-4

Photo-nephelometric determination of calcium, and its application to analysis of slags. N. M. MILOSLAVSKI and E. G. VAVILOVA. (Zavod. Lab., 1937, 6, 28—33). 0·02—0·04 g. of slag is brought into solution, SiO_2, Fe, and Al are removed by the usual methods; Ca is ppted. as CaC_2O_4, and the ppt. calcined to give $CaCO_3$. This is dissolved in dil. HNO_3, the solution evaporated to dryness, the residue dissolved in H_2O, and the solution diluted to 50—100 ml., of which a vol. containing 0·02—0·6 mg. of Ca is taken, diluted to 10 ml., and 40 ml. of reagent [made by dissolving 4 g. of stearic acid and 0·5 ml. of oleic acid in 425 ml. of 95% EtOH, adding 20 g. of $(NH_4)_2CO_3$ in 100 ml. of H_2O, followed by 425 ml. of EtOH, 50 ml. of H_2O, and 20 ml. of conc. aq. NH_4, and filtering the solution] are added. The turbidity obtained is compared with that given by standard Ca solution. R. T.

COMMON ELEMENTS

OPEN

MATERIALS INDEX

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

CA

Photonephelometric determination of calcium in slags. N. M. Miloslavskii and R. O. Vavilova. *Zavodskaya Lab.* 6, 28-33(1937); cf. C. A. 30, 2521[6]. In the nephelometric detn. of Ca by the Ca stearate method, a greater dispersion uniformity and stability of the turbidity are obtained by the use of a modified Leiman reagent (cf. Kober, C. A. 12, 1028). To prep. the reagent, dissolve 4 g. stearic acid with 0.5 g. oleic acid in 425 cc. of 95% alc. on a water bath at a moderate temp. Introduce into the soln. 20 g. $(NH_4)_2CO_3$ in 100 cc. H_2O, cool, add 425 cc. alc., 50 cc. H_2O and 20 cc. NH_4OH (d. 0.0) and filter. To det. Ca in slags, ppt. Ca with oxalic acid in the filtrate from the trivalent hydroxides. Ignite the Ca oxalate gently in a Pt crucible, dissolve the CaO in a few drops of HNO_3 and H_2O, evap. the soln. to dryness and dissolve the residue in 50 cc. H_2O. To a small aliquot part of the soln., add 10 cc. H_2O and the reagent to a 50 cc. vol., digest the mixt. at 30-40° for 15 min., cool and proceed with the detn. in the photonephelometer as usual. The best results are obtained at concns. of 0.02-0.6 mg. Ca in 50 cc. H_2O. Curves for computing the results are shown.

Chas. Blanc

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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TUCHNY, Petr [Tucny, P.] (Chekhoslovatskaya Sotsialisticheskaya Respublika). VAVILOVA, G. [translator]

Make way, old practices! Okhr. truda i sots. sots. strakh. 3 no. 10:77-79 O '60. (MIRA 13:11)
(Tools) (Psychology, Physiological)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOVA, G.

Good aid for trade-union activists. Okhr.truda i sots.strakh. 3 no.6:77-79 Je '60. (MIRA 13:7)
(Czechoslovakia--Industrial hygiene--Periodicals)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOVA, G.

Militant organ of the trade-union press. Okhr. truda i sots. strakh. 3 no.8:78-79 Ag '60. (MIRA 13:9)
(Poland--Industrial hygiene--Periodicals)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOVA, G. [translator]

Standards for colors in industry. Okhr. truda i sots. strakh. 4 no.6:46-47 Je '61. (MIRA 14:7)
(Factories--Design and construction)
(Color--Psychology)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

SVINAREV, G.A.; VAVILOVA, G.F.

Determining the pressure on blades on an exial-flow hydraulic turbine. Sbor.trud.Lab.gidr.mash.AN URSR no.10:111-121 '62. (MIRA 15:12)

(Hydraulic turbines—Blades)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

SVINAREV, G.A.; VAVILOVA, G.F.

Testing a curved dual-flow suction pipe. Sbor.trud.Lab.gidr.mash. no.9:27-36 '61. (MIRA 15:3)
(Volga Hydroelectric Power Station (22d Congress of the CPSU)--
Hydraulic turbines)

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOVA, G.F.

Effect of the profile shape of the blade of an axial-flow hydraulic turbine on its characteristics. Trudy Lab.gidr.mash.AN USSR no.11: 103-115 '64. (MIRA 17:10)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

LEONT'YEVA, N. N. and VAVILOVA, G. N. (Moscow)

"Concerning the (Izbytochnosti) of Flections of Russian Application."

Theses - Conference on Machine Translations, 15-21 May 1958, Moscow.

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

REKSIN, V.E.; NECHAYEVA, R.L.; VAVILOVA, G.S.; PAK, G.V., red.; SELEZNEVA, A.D., ml. red.

[Supply of materials and equipment abroad] Material'no-tekhnicheskoe snabzhenie za rubezhom. Moskva, Ekonomika, 1965. 214 p. (MIRA 18:8)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

BARAM, A.A.; KOKUSHKIN, O.A.; MISHCHENKO, K.P.; FLIS, I.Ye.; ARKHIPOVA, Z.V.; VAVILOVA, I.I.; MONAKHOVA, Ye.V.; SHCHUTSKIY, S.V.

Recovery of complex catalysts from dispersions of polyethylene by means of methanol in a rotary apparatus. Plast. massy no.11:58-59 '63. (MIRA 16:12)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

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3

L 5297-66 EWT(m)/EPF(c)/EWP(j)/T RM
ACC NR: AP5025033 SOURCE CODE: UR/0286/65/000/016/0083/0083

AUTHORS: Verkhorubov, B. A.; Fridman, A. N.; Olerinskiy, B. I.; Monakhova, Ye. V.; Chaplin, Yu. V.; Petrova, L. V.; Vavilova, I. I.

ORG: none

47
B

TITLE: A method for obtaining polyolefin. Class 39, No. 173945

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 16, 1965, 83

TOPIC TAGS: polyolefin, monomer, organometal, catalyst

ABSTRACT: This Author Certificate presents a method for obtaining polyolefin by high-pressure circulation of gaseous monomer through a polymerizer filled with a solvent and an active complex, and containing an organometallic catalyst. To prevent polyolefin, formed in the early stage of the reaction, from sticking to the walls of the polymerizer, the latter is first filled with pure solvent. The active complex is then added to the solvent.

SUB CODE: MT, GC/ SUBM DATE: 23Jan63/ ORIG REF: 000/ OTH REF: 000/

Card 1/1 UDC: 678.742

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

9,1912

24873. S/109/61/006/007/013/020
D262/D306

AUTHORS: Bakhrakh, L.D., and Vavilova, I.V.

TITLE: Spherical two-mirror antennae

PERIODICAL: Radiotekhnika i elektronika, v. 6, no. 7, 1961, 1146 - 1156

TEXT: In the present article the authors consider problems arising in the design of a two-mirror spherical antenna system, with special attention paid to questions of decreasing the dimensions of the small mirror and of the accuracy of installation influencing the directional properties of the antenna. Two design methods are analyzed. The first is based on the use of focal curves of

$$X = \cos\varphi\left(1 - \frac{\cos 2\varphi}{2}\right),$$
$$Y = \sin^3\varphi R_0. \qquad (7)$$

in which symbols are as given in Fig. 6 and R_0 is the large mirror-

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radius. Hence the small mirror profile is determined assuming one point at the small mirror surface and the position of radiator. This method is said to be very useful for graphical design of the small mirror profile. The second method discussed is the method of small mirror design based on wave fronts (Ref. 8: Kellecher, J. Appl. Phys. 1950, 21, 6, 573) of Hamilton. In this case the small mirror is a surface of rotation and the problem reduces to determining the profile in a plane, assuming unity radius of the large mirror and using polar system of coordinates. The small mirror profile coordinates in this case are given as

$$R_{xsm} = Y_x - \cos 2\theta P, \qquad R_{ysm} = Y_y - \sin 2\theta P, \qquad (15)$$

in which symbols are as given in Fig. 7 and where P is given by

$$P = \frac{C^2 - [(Y_x - d)^2 + Y_y^2]}{2[C - \cos 2\theta\,(Y_x - d) - \sin 2\theta Y_y]}. \qquad (16)$$

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24873

Spherical two-mirror antennae

S/109/61/006/007/013/020
D262/D306

in which C is the distance between $\bar{Y}_1$ and $\bar{X}_1$. The wave front method permits not only simple design of the small mirror but also a rational disposition of the other system elements. Certain peculiarities of design are discussed. Numerical analysis has shown that the ratio of the small mirror aperture to the actual large mirror aperture should not exceed 0.25 and at the same time that of the small mirror should not be less than 4-5 λ. The magnitude of actual aperture D_{ap} in a spherical two mirror system is closely related to its geometrical dimensions, namely to the position of the small mirror aperture R_{xap}, its magnitude $2R_{y\ ap}$ and the position of the radiator. Formulae (15) permits the establishment of the dependence of angle θ the sine of which is given by the ratio D_{ap}/D of the actual aperture to the D diameter of the large mirror and the values of R_{xap} and R_{yap}. In designing antennae of large dimensions the allowable errors in positioning the structure elements have to be known, because this positioning will eventually determine the directional

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properties of the antennae. The problem is solved by again using the method of wave fronts, since it permits the determination of the shape of the wave front at the antenna output with the displacement of the radiator and of the small mirror position with respect to the design values. The distortion of the wave front at the antennae output will depend ultimately on parameters m, n, a_1, b_1, φ, where m, n - displacement of the radiator along the x and y axis respectively with respect to the design value of its position. a and b - the respective displacement of the mirror along x and y - the angle of rotation of the mirror with respect to the x-axis. By determining the coordinates of the displaced mirror R'_{xM} and R'_{yM}

$$R'_{xM} = (R_{xM} - a)\cos\varphi + (R_{yM} - b)\sin\varphi,$$
$$R'_{yM} = (a - R_{xM})\sin\varphi + (R_{yM} - b)\cos\varphi, \qquad (20)$$

where R_{xM}, R_{yM} are calculated coordinates, graphs can be drawn, showing new various ratios, if the practical to theoretical values

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24873

Spherical two-mirror antennae

S/109/61/006/007/013/020
D262/D306

influence the performance and the tolerances in positioning the elements can be hence determined. There are 13 figures and 8 references: 3 Soviet-bloc and 5 non-Soviet-bloc. The references to the 4 most recent English-language publications read as follows: A.K. Head, Nature, 1957, 179, 6; W. Rotman, IRE Trans., 1958, AP 6, 1; J.A. Jackson, E.C. Goodall, Marconi Rev., 1st Quarter, 1958, 21, 128, 30; J.M. Flaherty, E. Kadak, IRE Nat. Convention Record, Part 1, 1958, 21, 128, 30.

SUBMITTED: October 28, 1960

Card 5/7

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

TIMOFEYEV, V. N.; FEVRALEVA, I. A.; VAVILOVA, M. A.

Convective heat transfer to plates from a gas flow out of burner nozzles. Sbor. nauch. trud. VNIIMT no.8:454-471 '62. (MIRA 16:1)

(Heat—Convection) (Gas flow)

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

TIMOFEYEV, V. N.; FEVRALEVA, I. A.; VAVILOVA, M. A.; Prinimali uchastiye: GERASIMOV, G. I., laborant; RUZHENTSEVA, T. M., laborant; CHEKMAYEVA, L. A., laborant; YASAKOVA, T. M., laborant

Investigating convective heat transfer to plates in a flow of gases. Sbor. nauch. trud. VNIIMT no.8:431-453 '62. (MIRA 16:1)

(Heat—Convection) (Gas flow)

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOVA, M.D.

Catamneses of patients with hysteria. Vop. psikh. i nevr. no.5: 273-275 '59. (MIRA 14:5)

1. Iz Nevropsikhiatricheskogo dispansera Vyborgskogo rayona Leningrada (glavnyy vrach N.D.Bulkin).
(HYSTERIA)

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VAVILOVA, M. A. Cand Agr Sci -- "Selection of potatoes on the Kola Peninsula." Len, 1960 (Min of Agr RSFSR. Len Agr Inst). (KL,1-61, 200)

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOVA, M.P.

On the fiftieth anniversary of the scientific, pedagogical, and public activity of academician E.N.Pavlovskii. Izv.AN Uz.SSR.Ser.med. no.3:67-68 '59. (MIRA 12:8)
(PAVLOVSKII, EVGENII NIKANOROVICH, 1884-)

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOVA, M.P.

Experimental infection of dogs with two types of Borovskii's disease (cutaneous leishmaniasis). Med.paraz.i paraz.bol. 29 no.6:660-665 '60. (MIRA 14:2)

1. Iz Tashkentskogo nauchno-issledovatel'skogo instituta vaktsin i syvorotok (dir. A.B. Inogamov).
(DELHI BOIL)

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M

Country : USSR
Category : CULTIVATED PLANTS. POTATOES, Vegetables. Cucurbits.

Abs. Jour. : REF ZHUR-BIOL., 21, 1958, NO-95982

Author : Vavilova, M.A.
Institut. : Sci.Res. Inst. of Agriculture in the Extreme North
Title : The Effect of the Parental Potato Varieties on the Hybrid Offspring

Orig. Pub. : Byul nauchno-tekhn. inform. N.-i. in-t s.kh.Krayn. Severa, 1957, No.3, 42-43

Abstract : At the Polar Station of the All-Union Plant Cultivation Institute the larger number of potato varieties have sterile pollen and not many of them can be taken into breeding as paternal forms. Ten existant fertile varieties were evaluated according to the hybrid offspring in crosses with the Imandra variety. The Earlaine, Katahdin and Priyekyl'skiy Rannii used as pollinators produced the greatest amount of early maturing and productive hybrids. Starkeragis, Ust'bez and

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Country :
Category : CULTIVATED PLANTS. POTATOES, Vegetables. Cucurbits.

Abs. Jour. : REF ZHUR-BIOL.,21.1958, NO-95982

Author :
Institut. :
Title :

Orig. Pub. :

Abstract : Smyslovskiy varieties yielded late-maturing progeny with a broadened hill and degenerated tubers. --M.F. Sokolova

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOVA, M.P.

Course of development of experimental Leishmania canis infection in dogs. Med. paraz. i paraz. bol. 27 no.4:390-396 Jl-Ag '58. (MIRA 12:2)

1. Iz otdela parazitologii Tashkentskogo nauchno-issledovatel'skogo instituta vaktsin i syvorotok (dir. instituta A.B. Inogaliyev).
(LEISHMANIASIS, experimental,
canis (Rus))

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOVA, M.P.; ALIMOV, V.A.

Some pathomorphological changes in experimental leishmaniasis in Cricetulus auratus infected with the Central Asian strains of Leishmania canis and Leishmania tropica major. Med. paraz. i paraz. bol. 32 no.6:648-655 N-D '63 (MIRA 18:1)

1. Iz Tashkentskogo nauchno-issledovatel'skogo instituta vaktsin i syvorotok.

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOVA, M. P., LEYMAN, M. Zh., SOFIYEV, N. S. and GEORGIYEVSKAYA, N. A.

"The Rational Times for Spring Antirelapse Treatment for Malaria in Connection With Variations for Incidence in Uzbekistan", Med. Paraz. i Paraz. Bolez., Vol. 17, No. 5, pp 412-19, 1948.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOVA, M. P.

"The Experimental Infection of Dogs with the Two Types of the Borovskiy Disease (Cutaneous Leishmaniasis)."

Tenth Conference on Parasitological Problems and Diseases with Natural Reservoirs, 22-29 October 1959, Vol. II, Publishing House of Academy of Sciences, USSR, Moscow-Leningrad, 1959.

Tashkent Scientific Research Institute of Vaccines and Sera

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859110001-5

VAVILOVA, M.P., kand.med.nauk

Reduction of the virulence of strains of Leishmania tropica var. major as a result of prolonged cultivation on artificial media. Med. zhur. Uzb. no.8:59-62 Ag '61. (MIRA 15:1)

1. Iz Tashkentskogo nauchno-issledovatel'skogo instituta vaktsin i syvorotok (direktor - A.B.Inogamov).
(DELHI BOIL) (LEISHMANIA)

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VAVILOVA, N. M.

VAVILOVA, N. M.: "The development of trace conditioned reflexes in the ontogenesis of dogs". Leningrad, 1955. Acad Sci USSR. Inst. of Physiology imeni I. P. Pavlov. (Dissertations for the degree of Candidate of Biological Sciences.)

SO: Knizhnaya Letopis' No. 50 10 December 1955. Moscow.

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USSR/Human and Animal Physiology (Normal and Pathological). T-12
Nervous System. Higher Nervous Activity. Behavior.

Abs Jour : Ref Zhur - Biol., No 11, 1958, 51292

Author : Vavilova, N.M.
Inst : -
Title : The Development of Conditioned Reflexes of Tracing in the Ontogenesis of Dogs.

Orig Pub : Zh. vyssh. nervn. deyat-sti, 1957, 7, No 3, 416-424.

Abstract : The conditioned reflexes of tracing (CRT) were developed in 25 puppies, 3, 7, and 12 months old, with a bell of 50 db [decibel] in intensity ringing for 20 seconds. The classic secretory method was used here. Most successful were methods which developed CRT on the basis of the already existing CRT by gradually increasing the intervals between the ringing of the bell to 10 seconds, and then to 20 and 30 seconds. With this method it was possible to obtain CRT with an interval of up to 40-60 seconds in

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3-month old puppies, with an interval of up to 2-2½ minutes in 7-month old puppies, and with an interval of 3½-4 minutes in 1-year old puppies. With advancing age the mean speed of CRT development rose as follows: CRT developed in 3-month old puppies with a 30 seconds long interval at the 72nd reinforcement, in 7-month old puppies it developed at the 63rd reinforcement, and in 1-year old puppies at the 46th reinforcement. In 3-month old puppies the motor component of the food reflex appeared earlier and was more stable than the secretory component. In the second series of tests, when the intervals were abruptly increased to 60 seconds immediately following the development of CRT in question, CRT in 3- and 7-month old puppies were very unstable. Only 1-year old puppies displayed stable CRT. Not even in one single case was it possible to develop CRT directly if the first interval was at once

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