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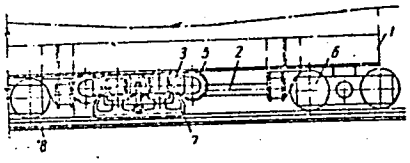
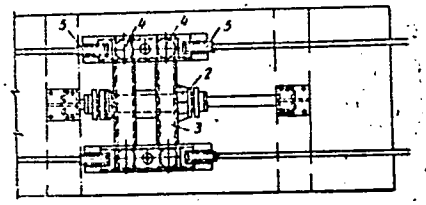
L 05076-67
ACC NR: AP6013318

Fig. 1. 1 - load platform; 2 - double action hydraulic jack; 3 - horizontal frame; 4 - vertical hydraulic jacks; 5 - rollers; 6 - rail ship carriage; 7 - shoe blocks; 8 - heads of the rails





when stopping of the ship transport carriage by means of the vertical hydraulic jacks. Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: 22Jun64

Card 2/2 fv

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

L 24867-66 EWT(m)/T DJ

ACC NR: AP6006410 (N) SOURCE CODE: UR/0413/66/000/002/0151/0151

18

B

AUTHORS: Alekseyev, A. M.; Sokolov, G. M.

ORG: none

TITLE: A device for moving the assemblies of ships. Class 65, No. 178274

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1966, 151

TOPIC TAGS: [redacted], [redacted] marine equipment, marine engineering

ABSTRACT: This Author Certificate presents a device for moving the assemblies of ships. The device has a vertical jack mounted on a carriage (see Fig. 1). The design makes it possible to shift horizontally the assembly of a ship which has been lifted on the vertical jack. The carriage contains a lower bearing plate clad with an elastic material. This plate slips along cylindrical rollers. The carriage has a hydraulic drive in the form of a horizontal double-action hydraulic jack.

2

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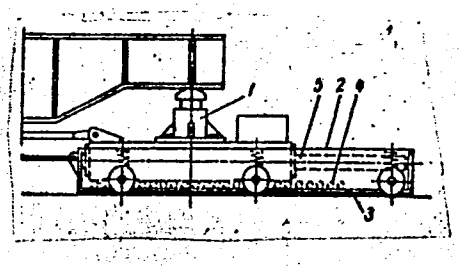
L 24867-66

ACC NR: AP6006410

Fig. 1. 1 - vertical jack; 2 - carriage; 3 - bearing plate; 4 - cylindrical rollers; 5 - horizontal double-action hydraulic jack.



Orig. art. has: 1 figure.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

YEVDOKIMOV, S.A.; SEMENOV, V.V.; SOKOLOV, G.N.; TARASOV, V.A.

Program control in experiments with conditioned reflexes. Fiziol. zhur. 47 no.4:522-524 Ap '61. (MIRA 14:6)

1. From the Pavlov Institute of Physiology and the Institute of Electromechanics, U.S.S.R., Academy of Sciences, Leningrad.
(CONDITIONED RESPONSE)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV G. N.

В. С. Полонов

Современное состояние и перспективы применения телевидения в промышленности, науке и технике в СССР.

Н. Е. Колесс

Разработка унифицированного телевизионного и звукового оборудования различного назначения для телевещания.

Р. Е. Быков,
С. Б. Гуревич

Процессы накопления и коммутации в видиконе в переходном режиме.

Р. Е. Быков,
С. Б. Гуревич

О влиянии апертуры пучка на структуру потенциального рельефа в видиконе.

11 июня

(с 10 до 16 часов)

В. А. Булдаков

Студийная камера цветного телевидения

В. Н. Балетов

Аппаратура цветного телевидения для Московского телецентра

28

В. Н. Ефимкин

Совместимость систем цветного телевидения с одной поднесущей частотой, выполненных для стандартов ОИР и МККР

Г. Н. Соколов

Преобразование стандартов цветного телевидения

11 июня

(с 18 до 22 часов)

О. В. Елисеев-Чекан

Общий комплекс измерений в междугородных каналах цветного телевидения

Л. Н. Шворник,
Д. Д. Сухаревский

Проекционные устройства цветного телевидения.

А. Н. Исаев

Выбор равносигнального белого цвета для системы цветного и черно-белого телевидения

А. Г. Буровов,
В. М. Зусманович

Коррекция искажений цветов в цветном телевизионном изображении при передаче кинофильмов.

29

report submitted for the Centennial Meeting of the Scientific Technological Society of Radio Engineering and Electrical Communications im. A. S. Popov (VNORiE), Moscow, 8-12 June. 1959

"Conversion standards for color television"

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, Georgiy Nikolayevich; SUDRAVSKIY, Dmitriy Dmitriyevich; KUZ'MINOV, A.I., red.; LARIONOV, G.Ye., tekhn. red.

["TSvet-2" color television receiver] TSvetnoi liubitel'-skii televizor "TSvet-2." Moskva, Gosenergoizdat, 1963. 39 p. (Massovaia radiobiblioteka, no.469) (MIRA 17:4)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

KORNITENKO, G.G.; SOKOLOV, S.M.

Device for converting a military code during the rotation of the coordinate axis. Sbor. rab. po vop. elektromekh. no.9:45-53 '63. (MIRA 17:2)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

ZHURAVLEV, Gennadiy Ivanovich, kand.tekhnicheskikh nauk; SOKOLOV, G.N., red.; ZUBRILINA, Z.P., tekhn.red.

[Earth dams and spillway structures] Zemlianye plotiny i vodosbrosnye sooruzheniia. Moskva, Gos. izd-vo sel'khoz.lit-ry, 1957. 191 p. (MIRA 11:4)
(Dams)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, G.N.; MAYZEL', K.I.

Operation of the RS-5 tapeless, rib-glueing machine. Der.prom. 5 no.1:21 Ja '56. (MLRA 9:5)

1. Leningradskaya mebel'naya fabrika "Inturist".
(Leningrad--Veneers and veneering)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SINYAGIN, I.I., doktor sel'skokhozyaystvennykh nauk, red.; DMITRIYEVA, A.I., red.; YEMEL'YANOV, F.V., red.; SOKOLOV, G.N., red.; SUVALOV, I.S., red.; SHLEPANOV, V.M., red.; SHUMKOV, V.A., red.; ANTONOVA, N.M., tekhn.red.

[Papers of the anniversary session of the Lenin All-Union Academy of Agricultural Sciences dedicated to the 40th anniversary of the Great Socialist October Revolution] Materialy iubileinoi sessii Vsesoiuznoi akademii sel'skokhoziaistvennykh nauk imeni V.I.Lenina, posviashchennoi 40-i godovshchine Velikoi Oktiabr'skoi sotsialisticheskoi revoliutsii. Moskva, Izd-vo M-va sel'.khoz.SSSR, 1958. 900 p. (MIRA 13:2)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I. Lenina. 2. Glavnyy uchenyy sekretar' Prezidiuma Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina (VASKhNIL); chlen-korrespondent (for Sinyagin).
(Agricultural research) (Forestry research)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, G.N., red.; ANTONOVA, N.M., tekhn.red.

[Afforestation and agricultural utilization of sandy soils in the Southeast] Oblesenie i sel'skokhoziaistvennoe osvoenie peschanykh zemel' IUgo-Vostoka. Moskva, Izd-vo M-va sel'khoz.SSSR, 1959. 139 p. (MIRA 13:10)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut agrolesomelioratsii.
(Volga Valley--Afforestation)
(Volga Valley--Agriculture)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

VASILENKO, I.F., akademik, red.; SOKOLOV, G.N., red.; ANTONOVA, N.M., tekhn. red.

[Mechanization and electrification of agriculture in the U.S.S.R.] Mekhanizatsiia i elektrifikatsiia sel'skogo khoziaistva v SSSR. Pod red. I.F.Vasilenko. Moskva, Izd-vo M-va sel'skogo khoz.SSSR, 1959. 244 p. (MIRA 12:10)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I. Lenina. 2. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Vasilenko).
(Farm mechanization) (Electricity in agriculture)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

DMITRIYEVA, A.I., red.; YEMEL'YANOV, F.V., red.; KARTASHEVA, N.M., red.; SOKOLOV, G.N., red.; SUVALOV, I.S., red.; ANTONOVA, N.M., tekhn.red.

[Achievements of the Lenin All-Union Academy of Agricultural Sciences and tasks of research institutes in carrying out resolutions of the December Plenum (1959) of the Central Committee of the CSPU; materials of the general assembly of the academicians and corresponding members of the Academy, March 22-25, 1960] Itogi raboty VASKHNIL i zadachi nauchnykh uchrezhdenii po realizatsii reshenii dekabr'skogo (1959 g.) Plenuma TsK KPSS; materialy obshchego sobraniia akademikov i chlenov-korrespondentov VASKHNIL 22-25 marta 1960 g. Moskva, Izd-vo M-va sel'.khoz.SSSR, 1960. 190 p. (MIRA 14:1)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I. Lenina.
(Agricultural research)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

GERASIMOV,N.V., kand.tekhn.nauk; SOKOLOV,G.N., red.; ANTONOVA,N.M., tekhn.red.

[Mechanized harvesting of pulse crops in the U.S.S.R. and abroad] Mekhanizatsiia uborki zernobobovykh kul'tur v SSSR i za rubezhom. Moskva, Izd-vo M-va sel'khoz.SSSR, 1960. 190 p.

(MIRA 14:5)

1.Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I.Lenina.

(Legumes--Harvesting)

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PHASE I BOOK EXPLOITATION SOV/4143

Avtomatizatsiya mekhanicheskoy obrabotki v Leningradskoy promyshlennosti (Automation of Mechanical Machining Processes in Leningrad Industry) Moscow, Mashgiz, 1959. 358 p. Errata slip inserted. 4,000 copies printed.

General Ed.: I.M. Kucher; Reviewers: N.V. Reshetikhin, Candidate of Technical Sciences, Docent, and Ye. V. Miller, Candidate of Technical Sciences, Docent; Eds. of Publishing House: T.L. Leykina and M.A. Chfas; Tech. Ed.: O.V. Speranskaya; Managing Ed. for Literature on Machine-Building Technology (Leningrad Division, Mashgiz): Ye. P. Naumov, Engineer.

PURPOSE: This book is intended for technical personnel.

COVERAGE: The book deals with the automation of mechanical machining processes in small-lot production in Leningrad industry. The use of hydraulic copying slide rests is explained, and practical experience in the introduction of copying slide rests into leading Soviet plants is described. The improvement of such slide rests, the technical and economic effects resulting from their usage, and methods of designing master forms are discussed. New designs of hydraulic slide rests are described. Emphasis is laid upon problems of program control, especially for the simplest control systems, and a number of the original systems are described. Automation problems involved in the group machining method are investigated. No personalities are mentioned. There are 57 references: 46 Soviet and 11 English.

Kutusov, L.M., and A.M. Kate. Experience Gained in the Use of Hydraulic Slide Rests in Lot Production 113

Barskiy, M.E., and V.N. Trutnev. V.N. Trutnev's Hydraulic Copying Slide Rest 127

SECTION II.

NUMERICAL PROGRAM CONTROL

Kucher, I.M. Use of Numerical Program Control for the Automation of Machine Tools in Small-Lot Production 139

Voronov, A.A., G.N. Sokolov, G.G. Kornitenko, and B.L. Yermilov. Numerical Computing Device for Controlling Machine Tools During Machining of Second-Order Curves 167

Razygrayev, A.M., and Z.A. Dvorin. Boring Machine Model 262FR With Numerical Control 189

Vlasov, M.G., Yu. B. Gerasimenko, and M.A. Trzhetsyak. Drilling Machine With Program Control 202

Razi, A.A. The Use of Potentiometric Functional Transducers as Setting Devices in Program Control Systems 215

Shafranskiy, P.F. Numerical Program Control With Relay-Contact Device for Setting the Magnitude of Tool Displacements 232

Pakidov, P.A. Intermittent Single-Coordinate Program Control System for Lathes 243

Razumovskiy, A.P. Experience Gained in the Use of the Spynu Program Control System on Turret Lathes [G.A. Spynu; Candidate of Technical Sciences] 254

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Mitrofanov, S.P. Group Method as the Basis of Automation in Lot Production 268

Kostygov, I.N. The New Model 1140 Single-Spindle Automatic Turret Lathe 314

Vil'davskiy, I.M., and G.V. Borodavchenko. Mechanization of Assembly and Automation of Machining at the Zavod imeni Lepse (Plant imeni Lepse) 331

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AVAILABLE: Library of Congress

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SOKOLOV, G.N.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

VORONOV, A.A.; SOKOLOV, G.N. (Leningrad)

Digital-integrator device for programming second order curves. Avtom.i telem. 20 no.2:176-183 F '59. (MIRA 12:3)
(Milling machines--Numerical control)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

PHASE I BOOK EXPLOITATION SOV/5094

Voronov, Avenir Arkad'yevich, A. R. Garbuzov, B. L. Yermilov, M. B. Ignat'yev, G. G. Kornitenko, G. N. Sokolov and Yang Hsi-Tseng

Tsifrovyye analogi dlya sistem avtomaticheskogo upravleniya; tsifrovyye ramostnyye analizatory (Digital Analogs for Automatic Control Systems; Digital Differential Analyzers) Moscow, Izd-vo AN SSSR, 1960. 195 p. Errata slip inserted. 7,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut elektromekhaniki.

Ed.: A. A. Voronov, Doctor of Technical Sciences; Ed. of Publishing House: I. V. Barkovskiy; Tech. Ed.: V. T. Bochever.

PURPOSE: This book is intended to acquaint scientific and technical personnel with the latest developments in the field of computers.

COVERAGE: Digital differential analyzers are a relatively new development in the field of computers and are not yet well elaborated theoretically. Some of the newest developments in combining universal digital machines

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with nonlinear interpolators, such as the Ferranti interpolator, are as yet unknown to Soviet readers. While the Soviet literature contains several works describing the principles of construction and operation of differential analyzers intended for operation as computers, the main emphasis in this book is on general methods of synthesizing those machines which are intended to work as systems of automatic control, and also on problems of accuracy in operation. At present digital analogs are used mostly for programmed control of metalworking machines, where several operations, such as preparing data for control, feeding them into the computer, the computing process, and the process of control, are involved. The book investigates only the computing units of the control system. The authors state that the error of integration can be reduced by increasing the number of columns of multidigit numbers in the addend registers or by transition to more accurate, though more complicated, algorithms of approximate integrating. However, they find that this complicates the system, and suggest a method which permits simplifying the system while maintaining its accuracy; that is, proceeding from difference, instead of differential, equations. A digital analog based on such principles should be called a digital "difference" analyzer instead of "differential" analyzer. The book discusses problems

Card 2/8

of synthesis and analysis of both difference and differential equations. Ways to reduce errors and simplify the arrangement of such computers are indicated. The book attempts to present certain theoretical developments in this field and as a first attempt does not claim to give a full solution of the problem. It also includes some general information on systems of computation and on their basic units and presents examples of difference analyzers developed at the Institute of Electromechanics, AN USSR. The introduction, pars. 1-6 and 8 of Ch. III, Ch. IV, pars. 1 and 4 of Ch. V, and pars. 3 and 4 of Ch. VIII were written by A. A. Voronov; pars. 1 and 2 of Ch. VIII by A. R. Garbuzov; Ch. I by B. L. Yermilov; par. 7 of Ch. III and Appendix I by M. B. Ignat'yev; Ch. II by G. G. Kornitenko; and Ch. VI by G. N. Sokolov, all coworkers of the Institute of Electromechanics, AN USSR. Pars. 2 and 3 of Ch. V were written by Yang Hsi-Tseng, coworker of the Academy of Sciences, Chinese People's Republic, and Chapter VII was written jointly by A. A. Voronov and B. L. Yermilov. No personalities are mentioned. There are 76 references: 39 Soviet (including 1 in French and 1 translation) and 37 English.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

Sokolov, G. N.

report to be presented at the 1st Intl Congress of the Intl Federation of Automatic Control, 25 Jun-5 Jul 1960, Moscow, USSR.

VORONOV, A. A., YEMILOV, B. L., and SOKOLOV, G. N. - "Some problems of the synthesis and analysis of digital analogues for automatic control"
YEFROYMOVICH, Yu. Ye. - "Complex automation of technological processes of smelting steel in arc furnaces"
ZALMANZON, L. A. - "Bases of the theory and calculation of elements of automatic pneumatic machines"
ZUBMAN, V. G., - "The problem of digital program control of metal-cutting machines"

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16.6800 (1121, 1327, 1329)

AUTHORS: Voronov, A.A., Yermilov, B.L., and Sokolov, G.N. (USSR)

TITLE: Certain problems of synthesis and analysis of digital automatic control analogues

SOURCE: International Federation of Automatic Control. 1st Congress, Moscow, 1960. Statisticheskiye metody issledovaniya. Teoriya struktur, modelirovaniye, terminologiya, obrazovaniye. Moscow, Izd-vo AN SSSR, 1961, 407 - 420

TEXT: The author analyze the following types of function generators: 1) Generation of polynomials. The prototype of this digital analogue may be said to be the circuit of a continuous analogue, with series connected r + 1 integrators. With a $y^r(o)$ = const. input, such a circuit generates a polynomial of t of the r-th degree, whose coefficients depend on the initial values of integrands. By adding a feed-back, an arrangement may be obtained for reproducing

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the inverse function $y = \sqrt[r]{n}$. 2) Generation of function $Axy + Bx + Cy$. This problem may be solved using the circuit of B.L. Yermilov for multiplication by each other of two variables (Fig. 2). 3)Generation of circles. The example of digital analogue as evolved by G. N. Sokolov (Fig. 3) is considered. The generation of a circle may also be obtained by the method of B.L. Yermilov. This circuit (Fig. 4) solves

$$y = \sqrt{R^2 - x^2}. \qquad (19)$$

It is of interest in that the error, due to limiting the digits, does not exist. The cct is actually a combination of the squaring and root extracting circuits suggested by B.L. Yermilov and V.V. Semenov. The circuits described show how, from given properties of a problem, a substantial simplification of circuit and its number of components may be obtained. There are 2 tables, 5 figures and 6 references: 3 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: Anon. Computing machines. Mech. Eng., v. 73, p. 325-327, Apr. 1951; R.E. Sprague, Mathem. Tables and other Aids to Computation, no. 57, p.41-49;

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S/194/62/000/001/034/066
D201/D305

27.1200

AUTHORS: Yevdokimov, S. A., Semenov, V. V., Sokolov, G. N. and Tarasov, V. A.

TITLE: Electronic instruments for analysis of bio-currents

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 1, 1962, abstract 1-5-8 ye (Sb. rabot po vopr. elektromekhan. In-t elektromekhan. AN SSSR, 1961, no. 5, 276-281)

TEXT: Amongst the aperiodic electric oscillations generated by the human brain the following, more or less stable, components may be isolated: e.g. α-rhythm (8-12 c/s, 10 - 25 μV), ß-rhythm (15 - 25 c/s, 5 - 15 μV) or γ-rhythm (50 - 70 c/s). During brain illnesses the character of these rhythms changes. A set of instruments for amplifying, analysis and recording of bio-potential has been developed, consisting of: 1) 4 amplifiers having a frequency range of 0.5 - 1500 c/s and a sensitivity threshold of about 1 μV; 2) 2 filters for the α- and ß-rhythms, in the form of double-T bridge

Card 1/2

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selective amplifiers, with a slope of cut-off characteristics of about 24 db per cycle; 3) integrators of the rhythm activity with electro-mechanical recorders at the output; 4) a 10 and 18 c/s calibrated generator with output signal voltage of 5 - 500 μV; 5) a programming arrangement and a relay bank which make it possible to switch-in the instruments in the required order and combinations. The equipment is in use at the Institut fiziologii im. I.P. Pavlova (Institute of Physiology im. I. P. Pavlov). An example of an 8-channel recording (bio-currents of the head, α-rhythm, the α-rhythm activity, pulse, muscle bio-currents, etc.) is given. 2 references. /Abstracter's note: Complete translation./

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, G.F.; GILLER, S.A., akademik; VORONKOV, M.G.

Reaction of organomagnesium compounds with 2,5-dimethoxy-2,5-dihydrofurans. Dokl. AN SSSR 158 no.3:675-678 S '64. (MIRA 17:10)

1. Institut organicheskogo sinteza AN Latviyskoy SSR. 2. AN Latviyskoy SSR (for Giller).

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, G.P.

Formed elements of the hemolymph of the queen bee (Apis mellifera L.). Zap. Zabaik. otd. Geog. ob-va SSSR no. 24: 122-124 '64 (MIRA 19:1)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

GILLER, S.A., akademik; BAUMANIS, E.A.; SOKOLOV, G.P.; GRINSHTEYN, V.Ya.

Synthesis and antimonoamine oxidase activity of alkyl hydrazides of 3-pyridazine carboxylic acid. Dokl.AN SSSR 145 no.2:440-442 Jl '62. (MIRA 15:7)

1. Institut organicheskogo sinteza AN Latviyskoy SSR. 2. Akademiya nauk Latviyskoy SSR (for Giller).
(Amine oxidase) (Hydrazides) (Pyridazinecarboxylic acid)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

[illegible], M. M.

[illegible] of [illegible]rovosov. 4th ed.
Moscow, 1947.
227p.

Regulations for railroad operations, repairs, maintenance and care since 1941. Peoples' Commisar of Transportation instruction on various tables, directives, orders and injunctions; published by Government Railroad Transportation Publishing House.

(Con'd)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, G. S.

Rabota parovozov. Izd. 4. Moskva, Transzheldorizdat, 1944. 227, (1) p. illus. (incl. plans) diagrs., profiles. (Rabota zhelesnykh dorog zimoi)

(Locomotive performance.)

DLC: TJ607.S7 1944

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, G. S.

Rabota parovoza zimoi. Izd. 6. Moskva, Transzheldorizdat, 1946. 295 p.

(Locomotive performance in winter.)

DLC: Unclass.

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, G.S.

VOLOVICH, N.I.; KRASOVITSKAYA, A.M.; MIKULINSKAYA, R.M.; ZLATOPOL'SKAYA, R.D.; EDEL'SHTEYN, R.I.; SAVITSKAYA, E.K.; PARKHOMENKO, L.I.; DERKACH, V.S., professor, direktor; ZIMINA, O.I.; SOKOLOV, G.S.; ISTOMINA, I.D.; GORDIYENKO, Ye.G.; KLYUCHNIKOVA, L.SH.; NADTOKA, V.L.; KOCHINA, V.N.; AVTONOMOVA, L.V.; BEREZUB, L.G.; GOL'DENBERG, R.A.; BELAYA, O.S.; SAVCHENKO, A.M.

Study of efficacy of the enteral immunization against dysentery. Authors' abstract. Zhur.mikrobiol.epid.i immun. no.8:27 Ag '53. (MLRA 6:11)

1. Ukrainskiy institut epidemiologii i mikrobiologii im. I.I.Mechnikova v Khar'kove. (Dysentery)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, G. T.

Ob odnom svoystve trigonometricheskikh summ. Dan, 1 (1934), 439-44[illegible].

SO: Mathematics in the USSR, 1917-1947
edited by Kurosh, A. G.,
Markushevich, A. I.,
Rashevskiy, P. K.
Moscow-Leningrad, 1948

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

Sokolov, G.T.

2

1

Sokolov, G. T. On solutions of nonlinear equations of hyperbolic type. Dokl. Akad. Nauk Uzbek. SSR. 1953, no. 4, 3–7. (Russian. Uzbek summary)

The problem is

$$Lz \equiv (p(x)z_x)_x - z_{tt} = \Phi(x, t) + \mu f(z) \quad (0 \leq x \leq \pi,\ 0 \leq t \leq 1)$$

$$z(0, t) = 0 = z(\pi, t),\ z(x, 0) = \varphi(x),\ z_t(x, 0) = \psi(x).$$

Essential assumptions: $p(x) \geq b > 0$ and $p''(x)$ is continuous and of bounded variation; Φ_x is continuous and of bounded variation in each argument, and Φ has an expansion in eigenfunctions of the problem $(pX')' + \lambda X = 0$, $X(0) = 0 = X(\pi)$; $f(0) = 0$ and $|f(z') - f(z)| < M|z' - z|$; φ and ψ are sufficiently smooth and sufficiently flat at 0 and π. Conclusion: The problem has a unique solution if $|\mu| < B$; an explicit formula is given for B, one factor of which is the reciprocal of $\sup |f'(z)|$. Starting with the solution z_0 of the problem for $\mu = 0$, for $k = 0, 1, \cdots$, z_{k+1} satisfies $Lz = \Phi + \mu f(z_k)$; convergence is established from explicit formulas for the z_k. *F. A. Ficken.*

1/3

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, [illegible]

Karp, V. N. **On periodic solutions of a nonlinear equation of hyperbolic type.** Dokl. Akad. Nauk Uzbek. SSR. 1953, no. 5, 8–13. (Russian. Uzbek summary)

The problem is

$$Lu \equiv u_{tt} - a^2 u_{xx} = F(\mu, x, t, u, u_t, u_x) \quad (0 \leqq x \leqq 1,\ 0 \leqq t \leqq 1)$$

$$u(0, t) = 0 = u(1, t),\ u(x, 0) = u(x, 1),\ u_t(x, 0) = u_t(x, 1).$$

Essential assumptions: a is an odd number; F is odd in x and satisfies the boundary and periodicity conditions in x and t, and F_x, F_t, F_u, F_{u_t}, and F_{u_x} are Lipschitz continuous in all their arguments together (except the parameter) for $|u| \leqq A$, $|u_t| \leqq A$, and $|u_x| \leqq A$ (whence F is then also Lipschitz continuous);

$$f(\mu, x, t) \equiv F(\mu, x, t, 0, 0, 0) = \sum_{n=1}^{\infty} c_{2n+1}(t) \sin (2n+1)\pi x,$$

where the c's are Fourier coefficients. Conclusion: if $|a| > 3M/2$, where M is the maximum of the Lipschitz constants, then (without restriction on μ) the problem has a unique solution. Starting with the solution u_0 of the problem with right member $f(\mu, x, t)$, for $k = 0, 1, \cdots$, u_{k+1} satisfies the equation with right member $F(\mu, x, t, u_k, u_{kt}, u_{kx})$; convergence is established from explicit expressions for the u_k and an appeal to Arzela's theorem.

F. A. Ficken (Knoxville, Tenn.).

2/3

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, G. T.

Sokolov, G. T. On periodic solutions of a class of partial differential equations. Dokl. Akad. Nauk Uzbek. SSR. 1953, no. 12, 3–7. (Russian. Uzbek summary)

The problem is

$$Lz \equiv z_{tt} - a^2 z_{xx} = \Phi(x, t) + \mu f(z) \quad (0 \leq x \leq 1,\ 0 \leq t \leq 1)$$

$$z(0, t) = 0 = z(1, t),\ z(x, 0) = z(x, 1),\ z_t(z, 0) = z_t(x, 1).$$

Essential assumptions: $\Phi(x, t+1) = \Phi(x, t)$, $\Phi(x, t+\frac{1}{2}) = -\Phi(x, t)$, and $\Phi_t(x, t)$ is continuous, and of bounded variation in x; f is odd and smooth. Conclusion: if $a = 4m/p$, where m and p are integers with p odd, and $|\mu| < \pi|a|/NA$, where $N = \sup |f'(z)|$ and A is a certain constant, then the problem has a unique solution. The method of approximation is similar to those of the two papers reviewed above; here the explicit formulas involve expansions in sines or cosines of $2(2n+1)\pi t$. All three papers refer to work by N. A. Artem'ev [Izv. Akad. Nauk SSSR. Ser. Mat. 1937, 15–50] and P. V. Solov'ev [ibid. 1939, 149–164].

F. A. Ficken (Knoxville, Tenn.).

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, G. T.

"Periodic Solutions of One Class of Partial Differential Equations"
Dokl. AN Uzb. SSR, No 12, 1953, pp 307 (Uzbek resume)

The author investigates the problem of finding conditions for which the non-linear differential equation of hyperbolic type

$$z_{tt} - a^2 \cdot Z_{xx} = F(x,t) + mf(Z)$$

admits of a solution $Z(x,t)$ which is continuous together with its second order partial derivatives with respect to x and t in the region where x and t are between zero and one, and which satisfies the following conditions: $Z(0,t)=Z(1,t)=0$; $Z(x,0) = Z(x,1)$; $[Z_t]_{t=1} = [Z_t]_{t=0}$ (RZhMat, No 11, 1954

SO: W-31187, 8 Mar 55

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

KUZ'MINSKAYA, G., kand.geograf.nauk; SOKOLOV, G.V., red.; DUKHNO, V.I., tekhn.red.

[Black Sea] Chernoe more. Krasnodar, Krasnodarskoe knizhnoe izd-vo, 1960. 56 p. (MIRA 14:4)
(Black Sea)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

USSR/Theoretical Physics - Quantum Mechanics. B-4

Abs Jour : Ref Zhur - Fizika, No 4, 1957, 8414

Author : Sokolov, G.V., Shirokowskiy, V.P.
Inst : Institute of Physics of Metals of the Ural' Branch of the USSR.

Title : Group Theory and Complete Set of Physical Quantities in Quantum Mechanics.

Orig Pub : Fiz. metallov i metallovedeniye, 1956, 3, No 1, 22-25

Abstract : In the absence of a quantum mechanical system, the states of this system can be classified with the aid of the eigenvalues of the Hamiltonian operator. In the case of degeneracy, when one has integrals of motion that do not commute with each other, it is possible to obtain the function of the integrals of motion, which has the same value in all states, corresponding to a definite energy level, so that with the aid of this function it is possible to classify the energy levels of this system. It is

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

USSR/Theoretical Physics - Quantum Mechanics. B-4

Abs Jour : Ref Zhur - Fizika, No 4, 1957, 8414

shown that in the general case there are several such functions, and that they coincide with the classes of conjugate elements of the group that leaves the Hamiltonian invariant. The eigenvalues of the classes together with the eigenvalues of the commuting generating elements of the group comprise a complete set of physical quantities, necessary for the description of the above quantum-mechanical system.

Card 2/2

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

ZHILO, N.L.; SOKOLOV, G.V.; RUDNEVA, A.V.

Calculating the activation energy of viscous flow in connection with studies on physical properties of molten slags. Trudy Inst.met. no.3: 87-97 '58. (MIRA 12:3)
(Viscosity) (Chemical reaction, Rate of) (Slag--Testing)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, G.V., inzh.; SHVETSOVA, S.M., inzh.

Air-entrained silicate products made with mixed binders. Stroi. mat. 5 no.1:29-30 Ja '59. (MIRA 12:1)
(Silicates) (Insulation (Heat))

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, G.V., inzh.; SHEVTSOVA, S.M., inzh.

Wall blocks made with cinders removed from thermoelectric power plants by hydraulic methods. Stroi. mat 6 no.3:29-30 Mr '60. (MIRA 13:6)

(Gorkiy Province--Cinder blocks)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, B. V.

28140

Dvukhkrutochnyye nitki. Tyekstil. Prom-stv. 1949, No 9, S. 12-16

SO: LETOPIS No. 34

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, G. V.

Technology

Proizvodstvo avtokorda (Production of tire fabrics). Moska, Gizlegprom, 1951.

9. Monthly List of Russian Accessions, Library of Congress, November 1952/1953/, Uncl.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, G. V.

"Semifree Breeding of Coypus in the USSR." Sub 5 Mar 51, Moscow Fur and Pelt Inst.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, G. V.

Yarn

Against false concepts of the formation of yarn and twisted threads.
Tekst. prom. 12, No. 9, 1952.

9. Monthly List of Russian Accessions, Library of Congress, December 1952. UNCLASSIFIED.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

1. SOKOLOV, G.V.

2. USSR (600)

4. Coypou

7. Acclimatization of nutria in medium-size runs, Kar.izver. 6 no. 2, 1953.

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

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, Gennadiy Vasil'yevich; SEVOST'YANOV, A.G., nauchnyy redaktor; SOKOLOVA, V.Ye., redaktor; MEDVEDEVA, L.A., tekhnicheskiy redaktor

[The theory of twisting of fibers] Voprosy teorii krucheniia volokni-stykh materialov. Moskva, Gos.nauchno-tekhn.izd-vo M-va legkoi poromyshl. SSSR, 1957. 233 p. (MLRA 10:10)
(Textile fibers) (Spinning)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

Sokolov, Gleb Valer'yevich

PAVLOV, Mikhail Pavlovich; SOKOLOV, Gleb Valer'yevich; FADEYEV, Yevgeniy Vasil'yevich; IL'INA, Ye.D., red.; TROFIMOV, A., tekhn.red.

[Raising coypus; a practical manual on breeding coypus] Razvedenie nutrii; prakticheskoe rukovodstvo po nutrievodstvu. Moskva, Izd-vo TSentrosoiuza, 1958. 229 p. (MIRA 11:5)
(Coypu)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, G.V., inzh.

Theory of twisting. Tekst.prom. 18 no.12:25-31 D '58. (MIRA 11:12)

(Yarn) (Thread)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, G.V., inzh.; LABUZOVA, Z.I.; GENKINA, M.L.; RAKHLINA, S.S., kand.tekhn. nauk; SHATROVA, Ye.S., kolorist 1-y kategorii; TALANINA, A.S., kolorist 1-y kategorii; TANVEL', A.Ya., kand.tekhn.nauk

"Processing of artificial fibers" Translation from the English by D.I.Venediktova, K.K.Lupandina. Book review by G.V.Sokolov and others. Tekst.prom. 19 no.2:71-73 F '59. (MIRA 12:5)
(United States--Textile fibers, Synthetic) (Technology--Translating)
(Venediktova, D.I.) (Lupandina, K.K.)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SKOL'NIK, I.D., inzh.; NESSLER, A.M., inzh.; SOKOLOV, G.V., inzh.

Response to M.M. Moiseenko's article "Changing the structure of sewing threads". Tekst. prom. 19 no.9:60-63 S '59. (MIRA 12:12)

(Thread)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, G.V.

Efficient technology of manufacturing elastic yarn. Khim.volok. no.1:54-60 '60. (MIRA 13:6)

1. Gosudarstvennyy institut po proyektirovaniyu predpriyatiy iskusstvennogo volokna.
(Textile machinery) (Textile fibers, Synthetic)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, G.V.

Advanced type of twisting machine. Tekst.prom. 20 no.3:36-42 Mr '60. (MIRA 14:5)

(Spinning machinery)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SVYAZKIN, Ya.A.; KOSOLAPOVA, A.I.; SOKOLOV, O.V.

Use of lumber transportation machinery with diesel engines. Trudy STI 33:58-66 '64. (MIRA 18:6)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, G. V.

Theory of false twisting in the manufacture of elastic (helanca) yarn. Tekst. prom. 23 no.3:34-39 Mr '63. (MIRA 16:4)

1. Glavnyy spetsialist Gosudarstvennogo instituta po proyektirovaniyu predpriyatiy iskusstvennogo volokna.

(Yarn) (Textile machinery)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, G.V.

Use of synthetic fibers in the manufacture of rope. Tekst. prom. 24 no.2:20-25 F '64. (MIRA 17:3)

1. Glavnyy spetsialist Gosudarstvennogo instituta po proyektirovaniy predpriyatiy iskusstvennogo volokna.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, G.V., inzh.; NAUMOV, V.N., inzh.; [illegible], L.S., inzh.; FISHMAN, Yu.A., inzh.

Cold waterproofing mastics on a base of organic solvents. Stroi. mat. 11 no.7:30-31 Jl '65. (MIRA 18:8)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, G.V., inzh.; PSHCHENITSIN, L.S., inzh.; NAUMOV, V.N., inzh.

Practice in using polystyrene in construction. Prom. stroi. 43 no.9:19-20 '65. (MIRA 18:9)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

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ACC NR: AP6013080 SOURCE CODE: UR/0048/66/030/004/0681/0683

41
B

AUTHOR: Krasnaya, A.R.; Nosenko, B.M.; Yaskolko, V.Ya.; Sokolov, G.V.

ORG: Tashkent State University im. Lenin (Tashkentskiy gosudarstvennyy universitet)

TITLE: Parallel investigation of the luminescence and exoelectronic emission of $CaSO_4$:Mn /Report, Fourteenth Conference on Luminescence held in Riga 16-23 September 1965/

SOURCE: AN SSSR. Izvestiya, Seriya fizicheskaya, v. 30, no. 4, 1966, 681-683

TOPIC TAGS: crystal phosphor, luminescence, calcium sulfate, electron emission, thermoluminescence, beta radiation

ABSTRACT: For the purpose of clarifying the mechanism of exoelectronic emission the dissipation with time of the stored emission sum S_e and of the stored light sum S_l was investigated at constant temperature. Then the storage curves were converted to decay curves by differentiation with respect to time. The experiments were carried out on $CaSO_4$:Mn (0.1 mole percent) phosphor at fixed temperatures in the range from 20 to 60°C. The phosphor was excited by β-particles from an Sr^{90} source. The results are presented in the figure. Similar curves were obtained at other temperatures in the 20 to 50° range. The S_e curve for $CaSO_4$:Mn is rather distinctive: it exhibits an inflexion point, so that the I_e curve has a distinct maximum. The afteremission curve

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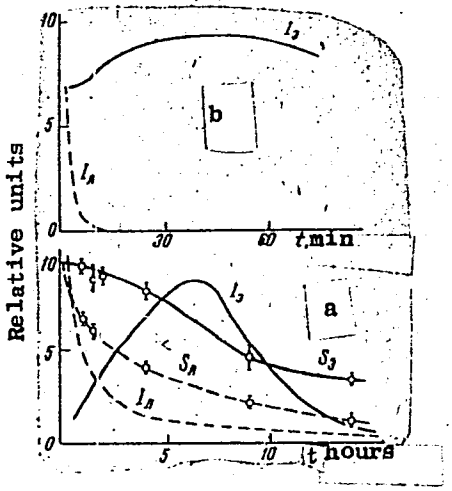

Figure caption: a - time variation of loss of the emission sum S_e and the light sum S_l at 40°C; deduced variation of the afteremission I_e and afterglow I_l. b - curves for I_e and I_l obtained in preliminary experiments employing a new vacuum setup.

is reminiscent of curves characterizing the build-up of the daughter nuclide in radioactive decays. Accordingly, it is hypothesized that in the case of $CaSO_4$:Mn (in which different centers are involved in the exoelectronic emission and in the luminescence), in analogy with radioactive decay, the surface centers emitting the exoelectrons from as a result of disintegration of the "primary" trapping centers. An analytic expression for I_e is adduced; this is consistent with the experimental results. To eliminate some of the shortcomings of the experiments involving measurements of S, there was designed and assembled a more sophisticated vacuum setup for direct measurements of I_e and I_l. The results of preliminary (test) experiments employing the new setup are shown in figure b. The agreement with the earlier results is only qualitative; the possible reasons for the disparity are discussed. Orig. art. has: 4 formulas and 2 figures.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 005/ OTH REF: 004

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APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

MIROSHNICHENKO, L.A.; SOKOLOV, G.Ya.

Effect of various cultivation practices on microbiological processes in turf-carbonaceous soils. Trudy Inst. mikrobiol. no.7:196-204 '60. (MIRA 14:4)

1. Irkutskiy gosudarstvennyy universitet imeni A.A.Zhdanova, kafedra fiziologii i mikrobiologii, Bayandayevskaya sel'skokhozyaystvennaya opytnaya stantsiya.
(SOIL MICRO-ORGANISMS) (TILLAGE)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, G.Ya., inzh.

Trains are going to Pechanga. Transp. stroi. 11 no.1:4 Ja '61. (MIRA 14:1)

(Murmansk Province--Railroads--Construction)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, I., polkovnik

Mass propaganda and an individual approach to each serviceman.
Komm.Vooruzh.Sil 2 no.11:25-29 Je '62. (MIRA 15:5)

1. Nachal'nik otdela propagandy i agitatsii politurpavleniya Ural'skogo voyennogo okruga.
(Russia--Armed forces--Political activity)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

NIKIFOROV, Nikolay Nikolayevich, polkovnik; SOKOLOV, I.A., podpolkovnik, redaktor; MYASNIKOVA, T.F., tekhnicheskiy redaktor

[Mortars] Minomety. Izd. 3-e, perer. Moskva, Voen. izd-vo Ministerstva obor. SSSR, 1956. 247 p. (MLRA 10:1)
(Mortars (Ordnance))

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

LUZHIN, G.A., polkovnik; SOKOLOV, I.A., polkovnik, red.; SOLOMONIK, R.L., tekhn.red.

[Manual on land artillery fire techniques] Nastavlenie po ognevoi sluzhbe nazemnoi artillerii. Moskva, Voen.izd-vo M-va obor.SSSR, 1959. 202 p. (MIRA 13:6)

1. Russia (1923- U.S.S.R.) Ministerstvo oborony. (Russia--Army--Artillery)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SHAYKOV, Viktor Moiseyevich, podpolkovnik; YEVDOKIMOV, Boris Ivanovich, inzh.-podpolkovnik; SOKOLOV, I.A., polkovnik, red.; MEDNIKOVA, A.N., tekhn. red.

[Combat employment of antitank guided missiles; as revealed by foreign press material] Boevoe primenenie protivotankovykh upravliaemykh reaktivnykh snariadov; po materialam zarubezhnoi pechati. Moskva, Voen. izd-vo M-va obor.SSSR, 1961. 53 p. (MIRA 14:11)
(Guided missiles) (Tank warfare)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, Igor' Aleksandrovich, polkovnik; KHORENKOV, Andrey Vasil'yevich, polkovnik; DENISOV, I.I., inzh.-podpolkovnik, red.; KUZ'MIN, I.F., tekhn. red.

[Observation instruments in field artillery] Pribory nabliudeniia nazemnoi artillerii. Moskva, Voen.izd-vo M-va oborony SSSR, 1961. 96 p. (MIRA 15:1)

(Fire control(Gunnery))—Optical equipment)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

KASHEVAROV, Yu.B.; SOKOLOV, I.A., polkovnik, red.; MYASNIKOVA, T.F., tekhn. red.

[Celestial orientation for artillery] Astronomicheskoe orientirovanie v artillerii. Moskva, Voen. izd-vo M-va oborony SSSR, 1961. 114 p. (MIRA 14:10)

(Range finding)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

KHORENKOV, Andrey Vasil'yevich, polkovnik, dotsent, kand.voyennykh nauk; GORDON, Yuriy Aleksandrovich, polkovnik, dotsent, kand. voyennykh nauk; SOKOLOV, I.A., polkovnik, red.; SRIBNIS, N.V., tekhn.red.

[Artillery reconnaissance of targets] Artilleriiskaia razvedka tselei. Moskva,Voen.izd-vo M-va oborony SSSR, 1962. 58 p. (MIRA 15:5)

(Fire control (Gunnery))

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

KUZNETSOV, Ivan Timofeyevich, polkovnik; SOKOLOV, I.A., polkovnik, red.; CHAPAYEVA, R.I., tekhn. red.

[Firing with the aid of a range finder] Strel'ba s dal'nomerom. Moskva, Voen. izd-vo M-va oborony SSSR, 1962. 61 p. (MIRA 15:3)

(Range finding)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

FESENKO, Palladiy Vasil'yevich; SOKOLOV, I.A., polkovnik, red.; MEDNIKOVA, A.N., tekhn. red.

[Firing antiaircraft artillery at aerial targets]Strel'ba zenitnoi artillerii po vozdushnym tseliam. Moskva, Voenizdat, 1962. 70 p. (MIRA 15:10)

(Antiaircraft guns)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

KISELEV, Sergey Petrovich, inzh.-polkovnik; CHUYEV, Yuriy Vasil'yevich, inzh.-polkovnik; SOKOLOV, I.A., polkovnik, red.

[Dispersion of rockets] Rasseivanie raket. Moskva, Voenizdat, 1964. 85 p. (MIRA 17:5)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

STREL'CHENKO, B.I., dots., kand. voyennykh nauk, polkovnik;
SOKOLOV, I.A., polkovnik, red.

[Cooperation of rocket forces and artillery with motorized infantry and tanks] Vzaimodeistvie raketnykh voisk i artillerii s motopekhtoi i tankami. Moskva, Voenizdat, 1965. 100 p. (MIRA 18:3)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SURIKOV, B.T., inzh.-polkovnik; SOKOLOV, I.A., polkovnik, red.

[Combat use of rockets] Boevoe primenenie raket. Moskva, Voenizdat, 1965. 182 p. (MIRA 18:5)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

ANDRIYENKO, Stepan Anisimovich; SOKOLOV, I.A., polkovnik, red.;
MEDCHIKOVA, A.N., tekhn. red.

[Work of the computer in the aritllery]Rabota vychislitelia v artillerii. Moskva, Voenizdat, 1962. 71 p. (MIRA 16:4)
(Artillery--Problems, exercises, etc.)
(Position finders)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

PERESADA, Vladimir Sergeyevich; KREYMERMAN, Abram Moshkovich; PROKHOROV, Aleksandr Mikhaylovich; SOKOLOV, I.A., polkovnik, red.; SLEPTSOVA, Ye.N., tekhn. red.

[Electronics in the service of artillery fire control] Elektronika na sluzhbe upravleniia ognem artillerii. Moskva, Voenizdat, 1963. 74 p. (MIRA 16:10)
(Electronics in military engineering)
(Fire control (Gunnery))

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

BORONIKHIN, Yuriy Vasil'yevich, polkovnik, dots., kand. voyennykh nauk; SOKOLOV, I.A., polkovnik, red.

[Combat security of rocket forces and artillery in modern combat] Boevoe obespechenie raketnykh voisk i artillerii v sovremennom boiu. Moskva, Voenizdat, 1965. 98 p. (MIRA 18:8)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, I.A., red.

[Norms and estimates for repair work on apartment houses and public buildings] Normy i rastsenki na rabotu po remontu zhilykh i obshchestvennykh zdanii. Kiev, Budivel'nyk, 1965. 235 p. (MIRA 18:9)

1. Ukraine. Upravleniye remontno-stroitel'nykh organizatsiy.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

KASPIN, Lev Abramovich; GADASHEVICH, Anna Mikhaylovna; PERNYATIN, Aleksandr Zinov'yevich; GOBERMAN, M.D., spets. red.; SOKOLOV, I.A., red.

[Production norms, estimates, and regulations for construction and assembly operations; general construction operations] Proizvodstvennye normy, rastsenki i pravila na stroitel'no-montazhnye raboty; obshchestroitel'nye raboty. Izd.8., Kiev, Budivel'nyk, 1965. 1075 p. (MIRA 18:8)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

L 00882-67 EWT(d)/EWP(e)/EWP(v)/T/EWP(k)/EWP(l) IJP(c)

ACC NR: AP6019760 (A) SOURCE CODE: UR/0113/66/000/006/0041/0043

53
B

AUTHORS: Shakurin, V. A.; Sokolov, I. A.

ORG: Yaroslavl Motor Works (Yaroslavskiy motornyy zavod)

TITLE: Magnetic flaw detection for parts at the Yaroslavl Motor Works

SOURCE: Avtomobil'naya promyshlennost', no. 6, 1966, 41-43

TOPIC TAGS: engine cylinder, spring, valve, flaw detection, piston engine, magnetic method, engine component

ABSTRACT: Three magnetic flaw detectors used at the Yaroslavl Motor Works are described: 1) for checking valve springs; 2) for checking the primary shaft of transmissions; and 3) for checking the sleeves of cylinder blocks. Magnetic flaw detectors for macroflaws are being designed, built, and successfully used at the present time at the plant. The capacities of the flaw detectors are 280, 150--200, and 150--180 parts/hr, respectively. Orig. art. has: 3 diagrams.

SUB CODE: ~~14~~ 10/ 13/ SUBM DATE: none

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

MUSHTAKOV, Porfiriy Vasil'yevich; KHORENKOV, Andrey Vasil'yevich; SOKOLOV, I.A., polkovnik, red.

[Automation of artillery control] Avtomatizatsiia upravleniia artilleriei. Moskva, Voenizdat, 1965. 95 p. (MIRA 18:12)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

KOGAN, A.V.; SOKOLOV, I.A.

Total energy of the RaC - RaC' β-transition. Zhur. eksp. i teor. fiz. 31 no.5:904 N '56. (MLRA 10:2)

1. Leningradskiy fiziko-tekhnicheskiy institut Akademii nauk SSSR.

(Radium--Spectra)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

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Sokolov, I. A.

Distr: 4E3d 19

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ON THE TOTAL ENERGY OF THE β-TRANSITION RaC-RaC'. 19 A. V. Kogan and I. A. Sokolov (Academy of Sciences, USSR). Soviet Phys. JETP 4, 767-8(1957) June.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

SOKOLOV, I.A.

27

9240. ON A PROBLEM OF OPERATION OF HELIUM-FILLED PROPORTIONAL COUNTERS AT LOW TEMPERATURES

A.V. Kokan, N.M. Reinov, I.A. Sokolov and M.F. Stelmakh.

Zh. tekh. Fiz., Vol. 27, No. 2, 429-31 (1957). In Russian.

Variation of the gas amplification with the voltage on the wire [illegible] the gas amplification is shown to be less for low temperatures and this may be due to a redistribution of potentials caused by a film of helium on the surface of the wire.

J.M. Zarzycki

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

KOGAN, A.V.; REYNOV, N.; SOKOLOV, I.A.; STEL'MAKH, M.F.

Thermoelectron emission of ferroelectric substances. Zhur. tekh. fiz. 27 no.2:432-434 F '57. (MLRA 10:4)

1. Leningradskiy fiziko-tekhnicheskiy institut AN SSSR, Leningrad.
(Thermionic emission) (Ferroelectric substances)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

Sokolov, I. A.

57-27-7-29/40

AUTHORS: Ayrapetyants, A. V., Kogan, A. V., Reynov, N. M., Ryvkin, S. M., Sokolov, I. A.

TITLE: Concerning the Use of Germanium n-p-α-Counters at Low Temperatures (Ob ispol'zovanii germaniyevykh n-p-α-schetchikov pri nizkikh temperaturakh).

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1957, Vol. 27, Nr 7, pp. 1599-1600 (USSR)

ABSTRACT: With reference to the paper in Zhurnal Tekhnicheskoy Fiziki, 1955, Vol. 25, Nr 11 and 1957, Vol. 27, Nr 1 some preliminary results on the investigation of the counter-properties of germanium n-p-counters at helium temperatures are reported here. The scheme of the device is described. From the table of the comparative characteristics of the n-p counters at room temperature and at helium temperature is to be seen that at the temperature of liquid helium the signal-noise ratio strongly increases. At helium temperature (as well as at room temperature) the n-p counters have a good plateau in the counter-characteristic, as well as a saturation in the curve of the dependence of the amount of the impulse on the applied voltage. There are 2 figures, 1 table and 2 references, all of which are Slavic.

Card 1/2

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

Concerning the Use of Germanium n-p-α-Counters at Low Temperatures 57-27-7-29/40

ASSOCIATION: Physico-Technical Institute AS USSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR, Leningrad)

SUBMITTED: January 9, 1957

AVAILABLE: Library of Congress

Card 2/2 1. Radiation counters-Low temperature properties 2. Germanium-Applications 3. Helium (Liquid)-Applications

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

21(3) SOV/56-35-5-42/56

AUTHORS: Kogan, A. V., Kul'kov, V. D., Nikitin, L. P., Reynov, N. M., Sokolov, I. A., Stel'makh, M. F.

TITLE: Measurement of the β-γ-Correlation of Orientated Nuclei (Izmereniye β-γ-korrelyatsii oriyentirovannykh yader)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 5, pp 1295-1296 (USSR)

ABSTRACT: Reference is first made to some earlier papers dealing with this subject. When investigating correlation, the authors constructed a device for the orientation of nuclei and took several measures for the purpose of extending the duration of measurements and improving their statistical accuracy. The main source of heat supply is thermal radiation, which passes through a light pipe, which is used for transmitting the flashes of light produced in a plastic scintillator during the recording of β-particles. The β-radiation asymmetry of Co^{60}-nuclei was measured. These cobalt nuclei were introduced into a thin superficial layer of a cesium-magnesium-nitrate crystal. The authors carried out their measurements

Card 1/2

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SOV/56-35-5-42/56

Measurement of the β-γ-Correlation of Orientated Nuclei

of the β-γ-angular correlation on orientated Co^{60}-nuclei. The provisional data obtained by these measurements are not in contradiction to theoretical calculations which were carried out on the basis of the conservation of combined parity. Further, the investigation of β-γ-angular correlation for Mn^{52} and V^{48} is planned. The authors thank A. I. Alikhanov, Academician, and Professor S. Ya. Nikitin for placing the Co^{58} at their disposal (this element is, by the way, less well suited for measurements of the here described kind); they further express their gratitude to A. Z. Dolginov for many useful discussions, and to O. V. Larionov for the chemical separation of Co^{58}. There are 2 figures and 6 references, 1 of which is Soviet.

ASSOCIATION: Leningradskiy fiziko-tekhnicheskiy institut Akademii nauk SSSR (Leningrad Physico-Technical Institute of the Academy of Sciences, USSR)

SUBMITTED: July 9, 1958

Card 2/2

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

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S/056/60/039/01/06/029
B006/B070

24.2200

AUTHORS: Korsh, A. V., Kul'kov, V. D., Nikitin, L. P., Reynov, N. M., Sokolov, I. A., Stei'nkh, M. P.

TITLE: The Polarization of Sc^{46} Nuclei in Iron

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 1 (7), pp. 47-52

TEXT: B. N. Samoylov, V. V. Sklyarevskiy and Ye. P. Stepanov (Refs. 8-10) succeeded in polarizing the nuclei of a number of weakly magnetic elements alloyed with ferromagnetics. They discovered the possibility of orienting the nuclei of many elements including scandium. In the present paper, the first results found by the authors on the orientation of Sc^{46} introduced into iron are published. Fig. 1 shows a schematic cross section of the apparatus employed for the purpose. Its description is given in the introduction. To check the working of the apparatus, experiments were first made on the orientation of Co^{60} in iron (≈ 0.02% Co) which are described in detail. Fig. 2 shows the asymmetry of the gamma

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radiation of Co^{60} as a function of temperature. The asymmetry is characterized by $\varepsilon = [I(\pi/2)-I(0)]/I(\pi/2)$. Next, the experiments carried out on scandium are described. The neutron irradiated scandium was introduced as a metal into pure iron (Sc concentration ≈ 0.5%). A large number of asymmetry measurements of the gamma radiation from Sc^{46} were made in the temperature range of from 0.05 to 0.015°K. At the lowest temperatures ε = 2.5%. The sign of the asymmetry agreed with the known dipole character of the cascade gamma transitions in Ti^{46}. Fig. 3 shows the asymmetry of gamma radiation for temperatures of the cooling salt between 0.025-0.03°K. ε was also measured for other temperatures. At 0.04-0.05°K, ε was 1%, at ~1.2°K, however, it was 1.6%, showing that the temperature dependence of the asymmetry of gamma radiation for small values of 1/T cannot be determined with sufficient accuracy. The magnetic moment of Sc^{46} was not measured. Still, it can be estimated with sufficient accuracy to be 3.5 nuclear magnetons, from which the effective magnetic field on Sc^{46} nucleus in iron for 1/T = 25 is found to be $H_{eff} \approx 10^5$ oersteds. The

Card 2/3

possible errors in this determination are then discussed. They are related to the errors in the determination of nuclear magnetic moments, ε, and T, and the error resulting from imperfect domain orientation. Taking these into account H_{eff} lies within the limits $3.0\cdot10^5 \leq H_{eff} \leq 4.0\cdot10^5$ oe for Co^{60} and $0.70\cdot10^5 \leq H_{eff} \leq 1.30\cdot10^5$ oe for Sc^{46}. Finally, the possible investigations of $\beta\gamma$-correlation for oriented Sc^{46} nuclei are very briefly discussed. The authors thank Professor N. P. Sazhin for making available metallic scandium, and Professor A. Z. Dolginov for the derivation of the asymmetry formula. G. R. Knutsishvili and L. M. Sheatopalov of Fiziko-tekhnicheskiy institut AN SSSR (Physicotechnical Institute of the AS USSR) are mentioned. There are 5 figures and 21 references: 7 Soviet, 8 American, 1 Canadian, 3 Dutch, and 2 British.

ASSOCIATION: Leningradskiy fiziko-tekhnicheskiy institut Akademii nauk SSSR (Leningrad Physicotechnical Institute of the Academy of Sciences of the USSR)

SUBMITTED: February 20, 1960

Card 3/3

Sokolov, I.A.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

KOGAN, A.V.; KUL'KOV, V.D.; NIKITIN, L.P.; REYNOV, N.M.; SOKOLOV, I.A.
STEL'MAKH, M.F.

Polarization of some radioactive isotopes in alloys containing iron. Zhur. eksp. i teor. fiz. 40 no.1:109-113 Ja '61. (MIRA 14:6)

(Iron alloys) (Magnetic fields)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652010010-5

L 21506-66 EWT(1)/EWA(d) GW

ACC NR: AP6007736 SOURCE CODE: UR/0293/66/004/001/0066/0073

AUTHOR: Konstantinov, B. P.; Bredov, M. M.; Belyayevskiy, A. I.; Sokolov, I. A.

ORG: none

TITLE: Possible antimatter nature of micrometeors

SOURCE: Kosmicheskiye issledovaniya, v. 4, no. 1, 1966, 66-73

TOPIC TAGS: antiparticle, gamma flux, gamma radiation, gamma background, meteor trail, meteor tracking, meteor stream, meteor detection, comet, scintillation counter, radar meteor observation, cosmic radiation, cosmic ray measurement, neutron radiation

ABSTRACT: An experiment was conducted to verify whether meteor showers are the product of cometary disintegration, in which case they would, according to one hypothesis, consist of antimatter dust particles. Theoretically, it appears possible to identify the radiation produced by the disintegration of such antidust particles coming into contact with particles of the earth's atmosphere. It is suggested that the major meteor showers may be formed by the disintegration of comets; the connection between comets and meteor

Card 1/6 UDC: 551.590.25

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ACC NR: AP6007736

showers, therefore, is directly related to the question of the nature of meteors. At this point it should be noted that the problem under discussion does not involve meteors of noncometary origin reaching the earth, the number of which does not change during periods of meteor showers.

The problem is approached on the assumption that comets are macroscopic bodies consisting of antimatter and coming to us from other solar systems of our galaxy which may consist entirely of antimatter. From this, a plausible theory can be derived to explain the extrasolar-system origin of comets. A comet's capture by the sun could, according to calculations, result from a small change in the comet's total energy, adequate to transfer it from a hyperbolic to an elliptical class, due to the annihilation of protons in the solar wind on the comet's surface.

Of the primary and secondary radiation produced during annihilation, the most satisfactory for detecting the investigated phenomenon are hard gamma rays (with an energy exceeding 70 Mev), which can be recorded at a great distance from the point of annihilation. Due to the radiation length in air of gamma rays at this energy level, measurements of average

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ACC NR: AP6007736

gamma radiation flux at sufficiently high altitudes permit several maximum values to be derived for the quantity of antimatter which may enter the earth's atmosphere. The intensity of gamma radiation at an altitude having a residual atmospheric density of about 100—10 g/m^2 was found to be approximately 10^{-1} cm^{-2} · sec^{-1} · sterad^{-1}. Taking the above maximum antinucleon-flux-intensity value, and considering the earth's orbital velocity to be $\sim 3 \times 10^6$ cm/sec, the concentration of antinucleons in space is estimated at about 10^{-7} cm^{-3}.

Measurements of average gamma-radiation intensity at altitudes of 25—30 km during periods of varying meteor activity have shown that variation in the intensity of gamma radiation during a period of maximum meteor shower activity exceeds by not more than 50% the radiation intensity in the absence of a shower. This finding permits maximum values for the mass of antimeteors to be estimated. The number of meteors falling on a given area of earth per unit of time during the heaviest showers is about 10^{-16}—10^{-15} cm^2 · sec^{-1}. Taking, as earlier, the maximum gamma-radiation intensity due to annihilation at 10^{-1} cm^{-2} · sec^{-1} · sterad^{-1},

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with its variation not exceeding this value during a period of meteor-shower activity, a maximum value for the mass of an antimeteor was found to be about 10^{-9} — 10^{-10} g. If such meteors are antiparticles, their mass of 10^{-9} g would release a total energy equivalent to that of a conventional meteor with a mass of 10^{-1} g. The task of registering the annihilation radiation from an individual meteor should be fairly difficult, considering that annihilation would occur at an altitude of about 100 km.

Along with measurements of average intensity at altitudes of 25—30 km, experiments were conducted to detect radiation at altitudes of 13—18 km produced by an individual meteor entering the atmosphere. Gamma rays and neutrons were registered by scintillation counters and proportional gaseous-boron counters; meteors were detected by a radar technique at the 4-m wavelength. The directivity pattern of the radar station, the selection of meteors' radar echoes by distance, and the area in which to expose radiation detectors were coordinated in such a way that it was possible to assume that a given meteor had entered the atmosphere approximately above the detector.

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A number of control experiments were used to reveal any systematic errors which could possibly have occurred. Despite this, and since the experiments were conducted using only one method, the possibility remains that unaccounted-for systematic errors were made; however, actual reasons for their appearance could not be found at that time. With the formation of meteor trails at an altitude of about 100 km, an increase in the intensity of hard gamma radiation and neutrons, amounting to approximately 2% of the background or ~ 1 impulse per meteor, was noted at altitudes of 13—18 km.

Among the possible physical origins of the observed effect, besides the explanation related to the investigated hypothesis, may be suggested the presence of background modulation of cosmic radiation during the entry of a conventional meteor into the earth's atmosphere. Theoretically, such modulation can take place either because of a change in the density of the upper atmospheric layer or because of the influence of the magnetic pole on primary cosmic radiation arising during the formation of a meteor trail.

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Analysis showed that qualitatively the above phenomena cannot account for the investigated effect. There are inherent difficulties involved in interpreting findings within the framework of the proposed hypothesis, i.e., the explanation for the relatively low altitude at which the formation of meteor trails was observed, the great magnitude of the light yielded from a small antimeteor mass, etc. It is indicated that although there are several ways of eliminating the above difficulties, this would be premature without conducting the experiment by an essentially different method. The authors feel that their findings, independent of those of theoretical discussions, can be viewed not as proof of the hypothesis, but as experimental fact testifying to its use and drawing the attention of experimenters to it. The authors thank B.A.Gayev, A.M. Romanov, N.I.Orlov, D.V.Frederikc, L.P. Pakhomov, Yu.A.Gur'yan, L.F.Alekseyev, V.K.Bocharkin, Ye.V.Myakinin, Ye.G. Stepanova, M.P.Konstantinova, and L.V.Chernysheva for assistance in organizing the work, developing the apparatuses, carrying out of the measurements, and the processing of the results. Orig art. has: 3 figures and 3 tables. [ATD PRESS:4195-F]

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PROCESSES AND PROPERTIES INDEX

CA

7

Use of charcoal for the production of high-quality pigiron

I. A. Sokolov. *Stal* 1941, No. 5, 3-0; *Chem. Zentr.* 1942, II, 1627. Because FeO is more nearly completely reduced at 800-1200° by charcoal than by coke and because the soly. of FeO in Fe increases with the temp., the amt. of FeO dissolved in a charcoal blast furnace is smaller. This in turn results in decreased quantities of SiO_2, MnO and Al_2O_3 in the pig Fe, since they are pptd. by FeO. This explains why charcoal pig Fe with the same analysis (except for nonmetallic inclusions) as coke pig Fe is superior in quality.

H. W. Rathmann

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

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MEDZHIBOZHSKIY, Miron Yakovlevich, kandidat tekhnicheskikh nauk; SOKOLOV, I.A. inzhener; YEFANOV, N.I., redaktor; SHAROPIN, V.D., redaktor; SHPAK, Ye.G., tekhnicheskiy redaktor.

[Fast method of computing open-hearth furnace charges] Uskorennyi method rascheta martenovskoi shikhty. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1955. 59 p. (MLRA 9:6)
(Open-hearth process)

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Sokolov, I. A.

Struct

Experience in the Control of Liquid-Steel Temperatures with Thermocouples. S. G. Otlivanov and I. A. Sokolov. (Stal', 1956, (5), 409-415). [In Russian]. The results of prolonged investigations at the Kuznetsk Metallurgical Combine on the use of immersion thermocouples for the determination of steel temperatures in the O.H. and electric furnaces and in ladles are presented and discussed. The design used secured a life of 18–20 measurements, the proportion of measurements with error over ± 10–15% being 3–5%. Based on comparisons of steel quality with results of temperature determinations, recommended temperature ranges for different stages of melting for various steels are listed. Temperature control by regulation of charging and the flow of coke-oven gas, was effective.—S. K.

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Sokolov, I. A.

PA - 2415

AUTHOR MEZHIBOZHSKIY M.Ya., cand.tech.sc., SOKOLOV I.A., eng.

TITLE Rise of Open-Hearth Bath Temperature ~~in the case~~ of Blowing in Compressed Air. (Povysheniye temperatury martenovskoy vanny pri vduvanii szhatogo vozdukha. Russian)

PERIODICAL Stal' 1957, Vol 17, Nr 3, pp 220-227 (U.S.S.R.)

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ABSTRACT The calculation of the heat effects of the reactions on the occasion of the oxidation of carbon were preciody given; up-to-date thermochemical constants were more widely used and relatively exact quantitative data on the influence of air blowing into the open-hearth bath at a rise of the temperature of the metal were obtained by means of a perfected apparatus. The results of theoretical calculations were given i.e. on the oxidation of carbon by gaseous oxygen, on the heating of the trough in connection with this process, and on the cooling effect of additions of ore and calcium. The experimental results are then dealt with. The temperature measurements of the metal by means of a thermo-element showed that a much more intense rise of temperature occurs when compressed air is blown into the open-hearth bath than is the case of usual boiling. The rate of the temperature rise

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