SKVORTSOV, V. V.

Frozen Ground; Pile-Driving

Self-propelled pile driver for breaking up frozen ground. Elek. sta., No. 1, 1952.

SO: Monthly List of Russian Accessions, Library of Congress, March 1952 x1953, Uncl.

SKVORTSOV, V.V. (Kazan')

Possibility for the introduction of the "gallery method" of operating oil fields. Izv.AN SSSR.Otd.tekh.nauk.Mekh.i mashinostr. no.3:199-201 My-Je '61. (MIRA 14:6)

(Petroleum engineering)

SKVORTSOV, V. V.

Cand Phys-Math Sci - (diss) "Solution of several tasks of underground hydromechanics with the aid of electronic computers." Kazan', 1961. 7 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Kazan' Order of Labor Red Banner State Univ imeni V. I. Ul'yanov-Lenin); 120 copies; price not given; (KL, 7-61 sup, 220)

SKVORTSOV, V. V.

(5)

KONOBEYEVSKIY, S. T., PRAVDYUK, N. F., ASTRAKHANTSEV, S. M., KARPUKHIN, V. I., SKVORTSOV, V. V., NIKOLAYENKO, V. A.,

"Investigation of Certain Processes in UO_2 Dispersed in a Matrix"

Report submitted for the Conference on New Nuclear Materials Technology including Non-Metallic Fuel Elements (IAEA), Prague, 1-5 July 1963

SKVORTSOV, V.V.

PHASE I BOOK EXPLOITATION SOV/3572

Nebesnyy, Andrey Danilovich, Engineer, Vasiliy Vasil'yevich Skvortsov, Engineer, and Dmitriy Vladimirovich Sokolov, Engineer

Mekhanizatsiya i industrializatsiya elektromontazhnykh rabot (Mechanization and Industrialization in Electrical Assembly Work) Moscow, Gosstroyizdat, 1959. 218 p. 5,000 copies printed.

Ed. of Publishing House: G. M. Shirokova; Tech. Ed.: L. M. Osenko.

PURPOSE: This book is intended for technical personnel engaged in electrical assembly work.

COVERAGE: The book presents the fundamentals of installation practices of power-generating and distributing equipment. Devices used in the installation jobs and problems of mechanization are surveyed. Methods applied to such operations are described and evaluated. The material presented in this book reflects the most advanced practices as applied, for example, by the Glavelektromontazh (Main Administration for Power-Equipment Installation) of the Ministry for Civil Engineering and Industrial Construction of the RSFSR and by the

Card 1/6

GUMANSKIY, G.A.; SKVORTSOV, V.V.

Pulsed high-frequency ion source with impact excitation. Nauch. trudy TashGu no.221.Fiz. nauki no.21:180-183 '63. (MIRA 17:4)

SAVORTSOV, V. V. (Kazan')

Effect of the random orientation of impermeable sections on the average hydraulic conductivity of a stratum. Izv. AN SSSR. Mekh. i mashinostr. no.3:178-182 My-Je '64. (MIRA 17:7)

SKVORTSOV, V.V.; OSADCHIYEVA, A.L.; EYDINOVA, G.G.; ABRAMOVA, N.I.; IVANOV, V.M.; SMIRNOV, V.D.

Reviews, criticism and bibliography. Zhur. mikrobiol., epid. i immun. 33 no.7:145-152 Jl '62. (MIRA 17:1)

DANILOV, V.L. (Moskva); SKVORTSOV, V.V. (Kazan')

Calculating displacements of the water-oil contact and the time of water flooding of wells with an electronic digital computer. Izv. AN SSSR. Otd. tekh. nauk. Mekh. i mashinostr. no.4:182-184 Jl-Ag '60. (MIRA 13:8)

(Oil field flooding)

S/194/62/000/007/023/160
D222/D309

AUTHOR: Skvortsov, V.V.

TITLE: Investigation of the regularities in the movement of oil profiles using electronic computers

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 7, 1962, abstract 7-1-123 m (Neft. Kh-vo, 1961, no. 11, 31 - 35)

TEXT: Using the example of solving hydrodynamic problems, the possibility and the advantages of using digital computers both for the theoretical investigation of problems of underground hydromechanics and also for the planning of the exploitation of oil deposits are shown. An infinite horizontal layer of constant permeability with a given thickness and porosity in a water-pressure regime and linear filtration law is considered. The flow is assumed to be laminar and the boundary dividing the oil and the water, i.e. the oil deposit contour (OK), is assumed to be a straight line. The displacement of OK for three infinite series of hydrodynamically produced wells for various ratios between the viscosity of water and oil $\mu = \mu_V/\mu_N$ is

Card 1/2

SKVORTSOV, V. V. (Kazan')

Use of an electronic computer in calculating the movement of a nearly circular oil-water interface. PMTF no.2:139-141 Mr-Ap '62. (MIRA 16:1)

(Petroleum geology)

L 2761-66 EWT(d)/FSS-2/EWT(l)/EEC(k)-2 GW/AST

ACCESSION NR: AP5021261

UR/0293/65/003/004/0660/0662
551.508.94:629.192.2:550.3

AUTHOR: Shvarts, Ya. M.; Markchev, N. T.; Petunin, A. N.; Rudakov, V. P.; Skvortsov, V. V. 44,55

TITLE: Testing of rocket electrostatic fluxmeter 12,44,55

SOURCE: Kosmicheskiye issledovaniya, v. 3, no. 4, 1965, 660-662

TOPIC TAGS: electric field, spaceborne ionization measurement, ionization detector, radiation detection

ABSTRACT: Laboratory tests of an electrostatic fluxmeter of the rotary type with thin wire meshes and a synchronous detector are reported. The meter is designed for measuring the electric field intensity at the surface of a probing rocket and, indirectly, the external electric field of the upper atmosphere. The sensor was placed in a chamber under vacuum of 10^{-4}—10^{-5} mm Hg and subjected to bombardment of argon ions with energies of 1000 ev or less. Determinations were made of mesh permeability for streams of charged particles and of the effectiveness of the screen plates and synchronous detector as noise suppressors. The coefficient of optical transparency of the screen was 0.87, while the electrical permeability for an ion

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L 2761-66
ACCESSION NR: AP5021261

flux of 10^{-9}—10^{-7} amp/cm^2 was 0.82—0.86. The noise suppressing capabilities of the device are such that a noise current density of 1.1 x 10^{-7} amp/cm^2 and an electric field intensity of 8 v/cm are needed to make the signal to noise ratio 1. [BD]
Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 18Mar65 ENCL: 00 SUB CODE: EM, NP

NO REF SOV: 005 OTHER: 000 ATD PRESS: 4102

Card 2/2

SKVORTSOV, V.V.; MUKHAMETZHANOV, F.M.

Determining the optimal production distribution in nonuniform strata. Nauch.-tekh. sbor. po dob. nefti no.24:26-34 '64. (MIRA 17:10)

1. Fiziko-tekhnicheskiy institut Kazanskogo filiala AN SSSR.

SKVORTSOV, V.V.

Conditions for modeling banded pools and the dependence of gallery production on the location of nonuniform sections. Nauch.-tekh. sbor. po dob. nefti no.24:54-57 '64. (MIRA 17:10)

1. Fiziko-tekhnicheskiy institut Kazanskogo filiala AN SSSR.

SKVORTSOV, V.V., inzh.; STEPANENKOV, I.A., inzh.

Placing of reinforced concrete spans by a GEK-80 crane with transverse movement of blocks by joint expanders. Transp. stroi. 14 no.9:19-20 S '64 (MIRA 18:1)

SKVORTSOV, V.V.; SHATROV, I.I.; OSADCHIYEVA, A.L.; EYDINOVA, G.G.; ABRAMOVA, N.I.

Review of "Course in epidemiology" by V.V. Skvortsov and others. Zhur.mikrobiol.,epid.,i immun. 30 no.12:131-133 D '59. (MIRA 13:5)

(EPIDEMIOLOGY)

SKVORTSOV, Vitaliy Vasil'yevich, KIKTENKO, Vasiliy Sil'vestrovich; KUCHERENKO, Vasiliy Dorofiyevich; ROZHDESTVENSKIY, V.M., red.; SENCHILO, K.K., tekhn. red.

[Viability and detection of pathogenic microbes in an external medium]Vyzhivaemost' i indikatsiia patogennykh mikrobov vo vneshnei srede. Moskva, Medgiz, 1960. 348 p. (MIRA 16:1)
(BACTERIA, PATHOGENIC)

SKVORTSOV, V.V., prof.

First All-Union Congress of Epidemiologists, Microbiologists and Infectious Disease Specialists. Biul. Uch. med. sov. 2 no.6:33-36 N-D '61. (MIRA 15:1)
(EPIDEMIOLOGY--CONGRESSES) (MICROBIOLOGY--CONGRESSES)
(COMMUNICABLE DISEASES--CONGRESSES)

SKVORTSOV, V.V., prof.

Interepidemic period is an important phase in the control of dysentery. (MIRA 14:3)
Sov.med. 25 no.3:13-16 Mr '61.
(DYSENTERY)

SKVORTSOV, V.V.; EYDINOVA, G.G.; LUPINA, M.I.; YAKUBOVA, G.R.; SINAY, A.Ya.; GOLUBEVA, T.V.; MIKHAYLOVA, A.M.; KRASNOVA, F.M.; KOBETSOVA, A.D.

Epidemiology of intestinal infections in children's institutions. Zhur. mikrobiol. epid. i immun. 32 no.6:47-51 Je '61. (MIRA 15:5)

1. Iz II Moskovskogo meditsinskogo instituta imeni Pirogova i sanitarno-epidemiologicheskoy stantsii Leningskogo rayona Moskvy.
(INTESTINES--DISEASES)

SKVORTSOV, V.V.; OSADCHIYEVA, A.L.; EYDINOVA, G.G.; SOLNTSEVA, L.Ya.

Increased attention to the prevention of intestinal infections in children. Vop. okh. mat. i det. 7 no.3:3-5 Mr '62. (MIRA 15:5)

1. Iz kafedry epidemiologii II Moskovskogo meditsinskogo instituta imeni N.I.Pirogova i sanitarno-epidemiologicheskoy stantsii Oktyabr'skogo rayona Moskvy.
(INTESTINES--DISEASES) (CHILDREN--DISEASES)

SKVORTSOV, V.V., prof.

First All-Russian Congress of the Scientific Society of Epidemiologists, Microbiologists and Infectious Disease Specialists (May 23-29, 1961 in Kazan). Sov.med. 25 no.1:148-152 Ja '62. (MIRA 15:4)

1. Zamestitel' predsedatelya pravleniya Vserossiyskogo nauchnogo obshchestva epidemiologov, mikrobiologov i infektsionistov. Sov. med. 25 no.1:148-152 Ja '62. (MIRA 15:4)
(COMMUNICABLE DISEASES--CONGRESSES)

SKVORTSOV, V.V.

First All-Russian Congress of the Scientific Society of Epidemiologists, Microbiologists and Infectious Disease Specialists. Zhur. mikrobiol., epid.i immun. 33 no.4:157-160 Ap '62. (MIRA 15:10)
(EPIDEMIOLOGY--CONGRESSES)
(MEDICAL MICROBIOLOGY--CONGRESSES)

SKVORTSOV,V.V. (Kazan')

"The dependence of the inflow on the random position of areas with essentially different permeabilities"

Report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow 29 Jan - 5 Feb 64.

Activity of the Scientific-Technical Society of the Shipbuilding Industry (Papers Presented at the Tenth Scientific-Technical Conference on Ship Theory

Sudostroyeniye, No 1, 1960 G. A. Firsov, Cand Tech Sci
I. I. Nikolvich, Dr. Tech Sci

Papers presented:

K. K. Fedyayevskiy, Dr Tech Sci, "The Influence of Froude Number on the Radius of Cyrnation of a Ship in the Case of Large Shifts of Rudder Position."

A. G. Stepanov, Engineer, "Some Results of Statistical Study of Ship-pitches and the Rolling of the Expeditionary Ship 'Mikhail Lomonosov'".

K. K. Fedyayevskiy, Dr Tech Sci and L. Kh. Blyumina, Cand Tech Sci, "Approximate Determination of Nonstationary Hydrodynamic Characteristics of Bodies of Small Elongation (Wings, Bodies of Rotation) at Large Angles of Attack."

V. Ya. Shvortsov, Engineer, "Calculation of Ship Drift During Steady-State Cyrnation Taking into Account the Influence on Drift Moment Magnitude of the Form of the Underwater Part of the Hull and the Angle of Inclination."

B. A. Bubnov-tarb, Cand Tech Sci, "Structure of Flow Around Oscillating Wings of Low Elongation."

Th. V. Moser, Cand Tech Sci, "Longitudinal Stability of a Ship on Hydrofoils."

V. G. Sizov, "General Theory of Wave Resistance of a Ship on Calm Water."

- 2 -

SKVORTSOV, V. Ya.) Cand Tech Sci -- "Calculation of a ship's heeling in steady circulation on the basis of the application of discontinued-circulation theory of a wing of [redacted] permissible elongation." Len, 1960 (Len Inst of Water Transport), (KL, 1-61, 197)

SKVORTSOV, V.Ye.(g.Chkalov)

Efficient method of combating snowdrifts. Zhel.dor.transp.37 no.11: 55-59 N '55. (MLRA 9:2)

1.Glavnyy inzhener slushby puti Orenburgskoy dorogi.
(Railroads--Snow protection and removal)

SKVORTSOV, YE. A.

2

35987
S/641/61/000/000/014/033
B104/B102

24.6600

AUTHORS: Bonyushkin, Ye. K., Zamyatin, Yu. S., Kirin, I. S., Martynov, N. P., Skvortsov, Ye. A., Ushatskiy, V. N.

TITLE: Fragment yields of fast neutron fission of U^{235} and U^{238}

SOURCE: Krupchitskiy, P. A., ed. Neytronnaya fizika; sbornik statey. Moscow, 1961, 224-234

TEXT: Results of fragment yield measurements carried out in 1953-1955 are dealt with. U^{235} and U^{238} were fissioned by 14.5-Mev neutrons and fission neutrons. The relative fragment yield with respect to the Mo^{99} yield and the absolute yield in Mo^{99} were determined. Pressed 10-50 g U_3O_8 tablets were put into a hermetically sealed container.

A U^{235} multiplication system without a moderator, and a converter which transformed thermal neutrons into fission neutrons were used as fission neutron sources. The specimen was bombarded by an integral neutron flux of $2 \cdot 10^{13}$. A tritium-saturated zirconium target which was bombarded with

Card 1/8 3

32,67
S/641/61/000/000/014/033
B104/B102

Fragment yields of fast ...

150-kev protons served as 14.5-Mev neutron source. The integral neutron flux onto the specimen was $2 \cdot 10^{14}$. The irradiation time was 6 to 10 hrs. The fission fragments were separated from the irradiated samples by isotope dilution. The fragment yields were determined from their β-activity by end-window counters with a 15-20 μ thick mica window having a diameter of 20 mm. The results are summarized in Table 2. The relative probability of a symmetrical fission largely depends on the excitation energy of the compound. For U^{235} the ratio r between the fragment yield of a symmetrical fission and the maximum yield increased from 0.001% in thermal-neutron fission to 0.0052 in fission induced by fission neutrons, and to 0.2 in the fission with 14.5-Mev neutrons. An increase in excitation energy of the compound nucleus to 14.5 Mev increases the relative probability of a symmetrical fission by a factor of 125. The variation of r for U^{235}, U^{236}, U^{234}, and Pu^{239} is studied as a function of Z^2/A. The distribution of the fragment yields of these isotopes as a function of A of the fragments is asymmetric. The authors thank A. A. Malinkin, M. I. Pevzner, L. B. Poretskiy and Ye. T. Sirotinin for irradiating the uranium samples with neutrons, V. V. Spektor and L. S. Andreyeva for help in the measurements, V. N. Zapyatnina, A. A. T...abanko, Ye. P.

Card 2/4 3

Fragment yields of fast ...

Krasheninnikova, V. N. Negina, N. V. Shuvanova, S. Ye. Sanina and E. A. Konyreva for the radiochemical separation. A. N. Protopopov (Atomnaya energiya, 5, vyp. 2,.1958) is mentioned. There are 6 figures, 2 tables, and 19 references: 5 Soviet and 14 non-Soviet. The four most recent references to English-language publications read as follows: Fong P., Phys. Rev., 102, 434 (1956); Katcoff S., Nucleonics, 16, 4 (1958); Bunney L. R., Scadden E. M., Abriam J., Ballou N. O., report no. 643, held at the Second International Conference on the Peaceful Uses of Atomic Energy, Geneva, 1958; Hemmendinger A., report no. 663, held at the Second International Conference on the Peaceful Uses of Atomic Energy, Geneva, 1958.

Table 2. Total fragment yield, %.
Legend: (1) isotope, (2) fission spectrum, (3) 14.5 Mev.

Card 3/4

BONYUSHKIN, Ye.K.; ZAMYATNIN, Yu.S.; KIRIN, I.S.; MARTYNOV, N.P.; SKVORTSOV, Ye.A.; USHATSKIY, V.N.;

[Yields of fragments of U^{235} and U^{238} fission by fast neutrons] Vykhody oskolkov deleniia U^{235} i U^{238} bystrymi neitronami. Moskva, Glav. upr. po ispol'zovaniiu atomnoi energii, 1960. 19 p. (MIRA 17:3)

SKVORTSOV, Ye. F. - (Deceased)

PHASE I TREASURE ISLAND BIBLIOGRAPHICAL REPORT AID 373 - I

BOOK Call No.: AF596897

Author: The Late Prof. SKVORTSOV, YE. F.
Full Title: ASTRONOMY
Transliterated Title: Astronomiya

Publishing Data
Originating Agency: Academy of Sciences, U.S.S.R.
Publishing House: State Educational and Pedagogical Publishing House of the Ministry of Education, R.S.F.S.R.
Date: 1952 No. pp.: 301 No. copies: 25,000
Editorial Staff
Editor: Prof. Parenago, P. P. Tech. Ed.: None
Editor-in-Chief: Committee: Appraiser: None
Mikhaylov, A. A., Corr. Mem., Acad. of Sci., USSR
Vorontsov-Vel'yaminov, B. A., Corr. Mem., Acad. of Pedagog. Sci., R.S.F.S.R. and Prof. Dubrovskiy, K. K.
Others: Shorygin, S. A. compiled the references and bibliography and made the greater part of the diagrams and figures.

Text Data
Coverage: The table of contents completely covers the text. The items which could not be found in English texts, such as R. H. Baker's Astronomy (1950) and J. C. Duncan's Astronomy (1946) and others, or which have been given

Astronomiya

AID 373 - I
PAGES

Purpose: Approved by the Ministry of Higher Education of SSSR as a textbook in geographical departments of pedagogical institutes.

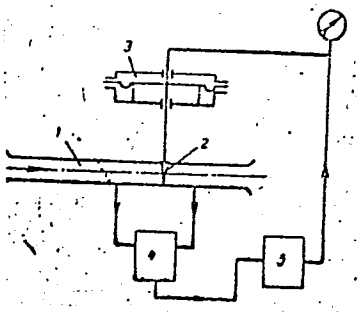
Facilities: Pedagogical Institute, Crimea

No. of Russian and Slavic References: 165, after 1939.

Available: A.I.D., Library of Congress.

8/8

ACC NR: AP6015686



1—pipeline; 2—control element; 3—actuator; 4—differential manometer; 5—regulator

SUB CODE: 13/ SUBM DATE: 14Feb64

Card 2/2

KOMAROVA, Ye. S., SKVORTSOV, Ye. S.

Grapes

Early Zolotistyi is a valuable variety for production of dessert wines. Vin. SSSR 12 no. 8, 1952.

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

Skvortsov, Ye. S.

USSR/Chemical Technology - Chemical Products and Their Application. Fermentation Industry, I-27

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 63591

Author: Skvortsov, Ye. S.

Institution: None

Title: Improving Quality of Wine from Hybrids

Original Periodical: Byul. nauch.-tekhn. inform. Ukr. n.-i. in-t vinogradarstva i vinodeliya, 1955, No 1, 14-17

Abstract: For the best hybrid grapes Zeybel' No 1, 14, 128, 1000, 4986 (Zolotoy luch), Kuderk No 7120, Gayyar No 157, Bako No 1, Terras No 20, Kastel' No 120, Noa, Lidiya, Izabella, are reported the aspects of each variety and procedures for producing table and fortified wine products and wines.

Card 1/1

1. SKVORTSOV, YU. A.

2. USSR (600)

4. Sedimentation and Deposition-Tien Shan

7. Geomorphology and the Quaternary deposits of western Tien Shan and the neighboring foothills (history of the development of the relief during the Cenozoic era).
[Abstract.] Izv. Glav. upr. geol. fon. No. 2, 1947

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

SKVORTSOV, Yu. A.

SKVORTSOV, Yu. A. "Methods of geomorphological analysis and mapping", Trudy In-ta geografii (Akad. nauk SSSR), Issue 39, 1946, p. 265-73.

SO: U-3042, 11 March 53, (Lotopis 'Zhurnal 'nykh Statey, No. 7 1949).

SKVORTSOV, Yu.A., professor, doktor geologo-mineralogicheskikh nauk; UMAROV, S.U., redaktor; KORZHENEVSKIY, N.L., redaktor.

[Elements of the most recent tectonic movements in Uzbekistan; geomorphological structure and Cenozoic deposits in the mountains and piedmonts] Elementy noveishikh tektonicheskikh dvizhenii Uzbekistana; geomorfologicheskoe stroenie i kainozoiskie otlozheniz gornoi i predgornoi chastei. Tashkent, Izd. Sredneaziatskogo gos. univ., 1949. 32 p. (Tashkent. Universitet. Trudy Sredneaziatskogo gosudarstvennogo universiteta, no.12, Geologo-geograficheskie nauki, no.1) (MLRA 9:2)

1.Deystvitel'nyy chlen AN UzSSR (for Umarov).2.Chlen-korrespondent AN UzSSR (for Korzhenevskiy)
(Uzbekistan--Geology, Stratigraphic) (Uzbekistan--Physical geography)

SKVORTSOV, Yu.A., otvetstvennyy redaktor; SHIPUKHIN, A.Ya., redaktor izdatel'stva; SHEPEL'KOV, A.T., tekhnicheskiy redaktor

[Transactions of the all-Union working congress on the results of the study of the Quaternary Period, in Tashkent in 1948] Trudy vsesoiuznogo rabochego soveshchaniia po itogam izucheniia chetvertichnogo perioda v gor. Tashkente v 1948 g. Tashkent, 1953. 283 p. (MLRA 9:10)

1. Akademiya nauk Uzbekskoy SSR, Tashkent. Institut geologii.
(Soviet Central Asia--Geology, Stratigraphic)

SKVORTSKOV, Yu.A.; RATSEK, V.I.; RYABCHIKOV, A.M.

Role of N.L.Korzhenevskii in the exploration of Central Asia (75th birthday). Izv.Vses.geog.ob-va 86 no.4:359-362 Jl-Ag '54. (MLRA 7:9)

(Korzhenevskii, Nikolai Leopol'dovich, 1879-)
(Soviet Central Asia--Description and travel)

SKVORTSOV, Yu.A.

Genetic types of Quaternary formations in river valleys. Izv. Uzb. fil. Geog. ob-va 2:11-34 '56. (MIRA 11:4)
(Uzbekistan--Geology, Stratigraphic)

COUNTRY : USSR
CATEGORY :

ABS. JOUR. : RZBiol., No. 19, 1958, No. 87134

AUTHOR : Ukharskov, Yu. A.
INST. : Academy of Sciences Uzbek SSR
TITLE : The Problem of Putting to Use Golodnaya Steppe.

ORIG. PUB. : Izv. AN UzSSR, ser. biol., 1957, No 1, 7-14

ABSTRACT : Discussion of the problem of evolving a set of measures for the control of secondary salination, and of a system of agricultural technology for cotton and other farm crops.

CARD: 1/1

PA - 3615

Vacuum Devices in Machine Building.

The introduction of such vacuum devices offers new possibilities for the mechanization of working processes.
(With 7 Illustrations).

ASSOCIATION: Not given
PRESENTED BY:
SUBMITTED:
AVAILABLE: Library of Congress

Card 2/2

SOV/12-91-1-15/22

3(5)

AUTHORS: Ryabchikov, A.M., Skvortsov, Yu.A., Ratsek, V.I.

TITLE: N.L. Korzhenevskiy: In Memoriam (Pamyati Nikolaya Leopol'dovicha Korzhenevskogo)

PERIODICAL: Izvestiya Vsesoyuznogo geograficheskogo obshchestva, Vol 91, Nr 1, pp 91-93 (USSR). 1959

ABSTRACT: This is an obituary on Professor N.L. Korzhenevskiy, scientist and explorer of polar regions and Central Asian deserts, Honorary Member of the Geograficheskoye obshchestvo SSSR (USSR Geographical Society) and President of its Uzbek branch, **Corresponding Member** of the Uzbek Academy of Sciences, and Head of the Kafedra fizicheskoy geografii Sredneaziatskogo universiteta im. V.I. Lenina (Department of Physical Geography of the Central Asian University imeni V.I. Lenin)

Card 1/1

GUSSAK, Veniamin Borisovich; NASYROV, Yakh'ya Mirsaidovich; SKVORTSOV, Yuriy Aleksandrovich; BOYKO, A.N., red.; SOROKINA, Z.I., tekhn. red.

[Soil formation on loess accumulations of various ages and the fertility of Sierozems] Pochvoobrazovanie na lessovykh akkumuliatsiiakh raznogo vozrasta i plodorodie serozemov. Tashkent, In-t pochvovedeniia, 1961. 159 p. (MIRA 15:7)
(Uzbekistan—Sierozem soils)
(Uzbekistan—Loess)

SKVORTSOV, Yu.A.

Materials on the preliminary stratigraphic scheme of Quaternary sediments in Uzbekistan. Sov.geol. 5 no.1:146-155 Ja '62. (MIRA 15:2)
(Uzbekistan--Geology, Stratigraphic)

KORZHENEVSKIY, N.L.; DONTSOVA, Z.N.; KHASANOV, Kh.Kh., dots.; VASIL'KOVSKIY, N.P.; [redacted]; POSLAVSKAYA, O.Yu.; KOGAY, N.A., dots.; MAMEDOV, [redacted]; AKULOV, V.V.; BABUSHKIN, L.N., prof.; SHUL'TS, V.L., prof.; GORBUNOV, B.V.; GRANITOV, I.I.; KOSTIN, V.P.; SMIRNOV, N.V., dots.; TSAPENKO, N.G., dots.; DEGTYAR', V.I.; CHERNOV, P.N.; MUKMINOV, F.G.; SELIYEVSKAYA, A.A.; RYABCHIKOV, A.M.; DALIMOV, N.D., dots.; LOBACH, Kh.S.; TADZHIMOV, T.; ARKAD'YEVA, A.N.; GAL'KOV, Ch.V.; SHTARKLOVA, S.I.; BESSONOV, M., red.; BAKHTIYAROV, A., tekhn. red.

[The Uzbek S.S.R.] Uzbekskaia SSR. Tashkent, Gos.izd-vo UzSSR, 1963. 483 p. (MIRA 16:8)
(Uzbekistan)

SKVORTSOV, Yu.A.

Geomorphology of the Angren valley. Nauch. trudy TashGU no.236 Geog. nauki no.28:289-309 '64. (MIRA 18:7)

SKVORTSOV, Yu.I.; KOROLEV, Yu.G.

Effect of iron ore additions on the properties of coke obtained from fat coal. Trudy MKHTI no.28:79-83 '59. (MIRA 13:11)
(Coke) (Iron)

SKVORTSOV Yu. M.

Name: SKVORTSOV, Yu. M.

Dissertation: Obtaining formed metallurgical coke from the poorly sintering coals of the Irkutsk Basin

Degree: Cand Tech Sci

Defended At ~~Affiliation~~: Acad Sci USSR, Inst of Mineral Fuels

Publication ~~Defense~~ Date, Place: 1956, Moscow

Source: Knizhnaya Letopis', No 47, 1956

SPERANSKAYA, G.V., kandidat tekhnicheskikh nauk; SKVORTSOV, Yu.M.

New coking method for producing metallurgical fuel from coals with low caking power of the Cheremkhovo deposits. Koks i khim. no.7:3-6 '56. (MLRA 9:12)

1. Institut goryuchikh iskopayemykh Akademii nauk SSSR.
(Coal--Carbonization)

SPERANSKAYA, G.V.; SKVORTSOV, Yu.M.

Use of a new coking method for the preparation of metallurgical fuel from Cheremkhovo deposit low-coking coals. Trudy IGI 10:51-59 '59. (MIRA 12:12)

(Cheremkhovo--Coal) (Coke)

SHOSTAKOVSKIY, M.F.; VLASOV, V.M.; SKVORTSOV, Yu.M.; L'VOV, A.I.

Synthesis of vinyl ethers of acetylenic alcohols by indirect vinylation. Zhur. org. khim. 1 no.8:1514-1515 Ag '65. (MIRA 18:11)

1. Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya AN SSSR.

MOSKALEV, V.A.; FILIPPOV, M.F.; SKORIKOV, A.G.; SKVORTSOV, Yu.M.

High-current pulse stereobetatron. Izv. vys.ucheb.zav.; fiz. no.5:35-44 '59. (MIRA 13:4)

1. Tomskiy politekhnicheskiy institut imeni S.M.Kirova.
(Betatron)

MOSKALEV, V.A.; SKVORTSOV, Yu.M.

Two-chamber betatron for medicinal use. Med. rad. 6 no.1:62-64 '61. (MIRA 14:3)

(BETATRON)

KALECHITS, I.V.; STRAKHOVA, K.A.; SKVORTSOV, Yu.M.

Composition of the products of destructive hydrogenation of benzene in presence of high-temperature catalysts. Trudy Vost.-Sib.fil.AN SSSR. no.3:88-93 '55. (MLRA 9:4)
(Benzene) (Hydrogenation)

KOSOLAPOV, V.I.; SKVORTSOV, Yu.M.; DEM'YANCHUK, A.S.; KISELEVA, K.V.; MIKHALENKO, V.N.

Exchange of experience. Zav.lab. 28 no.11:1388-1389 '62. (MIRA 15:11)

1. Institut khimii Sibirskogo otdeleniya AN SSSR (for Kosolapov, Skvortsov). 2. Institut elektrosvarki imeni Ye.O.Patona AN UkrSSR (for Dem'yanchuk). 3. Fizicheskiy institut imeni P.N.Lebedeva (for Kiseleva, Mikhalenko).
(Scientific apparatus and instruments)

ACCESSION NR: AR4022437 S/0058/64/000/001/A036/A037

SOURCE: RZh. Fizika, Abs. 1A331

AUTHORS: Moskalev, V. A.; Okulov, B. V.; Otrubyannikov, Yu. A.; Skvortsov, Yu. M.; Skorikov, A. G.; Shestakov, V. G.

TITLE: Results of starting a pulsed two-chamber stereo betatron for 25 MeV

CITED SOURCE: Izv. Tomskogo politekhn. in-ta, v. 122, 1962, 50-53

TOPIC TAGS: stereo betatron, pulsed stereo betatron, two channel stereo betatron, ionization measurement, radiation dose power, optimal gamma ray intensity, stereo betatron radiation yield, bremsstrahlung pulse

TRANSLATION: A two-channel pulsed stereo-betatron for 25 MeV with increased radiation intensity was started and put in operation at

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ACCESSION NR: AR4022437

the Tomsk Polytechnic Institute in 1960. The electromagnet of the apparatus was fed with 2760 A current pulses at 7.5 kV and at a repetition frequency of 0.2 cps. The injection voltage and current were 300--400 kV and 1.6 A. A special system for dropping the electrons on the target made it possible to obtain bremsstrahlung pulses not exceeding 0.2 microsecond in duration. (For details see RZhFiz, 1963, 1A381, 382.) To register the radiation pulses, a standard "Kaktus" x-ray meter was used with an aluminum one-liter DIG-1 ionization chamber. It was impossible, however, to measure the radiation dose with the available instruments. Consequently, a rough qualitative estimate of the radiation dose power per pulse was made using a method in which a radiation pulse was transmitted through a lead layer of maximum possible thickness. It was found that at optimal gamma-radiation intensity a pulse from one accelerator chamber can pass through a lead 14-cm layer located 1 meter away from the accelerator target. This corresponds to an approximate dose of 50 roentgens. If it is assumed that during one acceleration cycle the

ACCESSION NR: AR4022437

dose in the stereo-betatron beam amounts to only 5 roentgens, then the radiation yield of the stereo-betatron is 250--300 times larger than in existing betatrons of the same energy. The dimensions of the focus spot did not exceed 4 x 2 mm in the right-hand accelerator chamber, and 10 x 1 mm in the left. The number of accelerated electrons is ~5 x 10^{11}. V. Voronin.

DATE ACQ: 03Mar64 SUB CODE: PH, SD ENCL: 00

Card 3/3

ACCESSION NR: AP4041009 S/0120/64/000/003/0032/0033

AUTHOR: Moskalev, V. A.; Shestakov, V. G.; Okulov, B. V.; Skvortsov, Yu. M.

TITLE: Method for measuring accelerated charge in a betatron

SOURCE: Pribory* i tekhnika eksperimenta, no. 3, 1964, 32-33

TOPIC TAGS: betatron, betatron measurements, betatron accelerated charge

ABSTRACT: A combined -- direct and indirect -- method for measuring a charge developed by the authors (registration no. 34311, priority of 01Feb63) is briefly described. The target current pulse is recorded simultaneously with a signal induced in a special "indicating electrode." At an energy under 1 Mev, the electrode signal is calibrated directly and then the calibration is used for measuring the charge with any energy. Two oscillograms taken at 0.5 and 25 Mev illustrate the method. Orig. art. has: 2 figures.

ASSOCIATION: none

SUBMITTED: 07Jun63 ENCL: 00

SUB CODE: NP NO REF SOV: 005 OTHER: 002

Card 1/1

SKVORTSOV, YU. V.

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-- PA - 2665
spheric Cosmic Ray Showers.

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 pro-duseing 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.

PRESENTED BY:

SUBMITTED:

AVAILABLE: Library of Congress.

Card 2/2

Yu. V. SKVORTSOV, (V.S. Komelkov), Yu.E. Nesterikin)

"CREATING OF STRONG DISCHARGES IN DEUTERIUM" by V. S. Komelkov,

Yu. E. Nesterikhin, Yu. V. Skvortsov

Report presented at 2nd UN Atoms-for-Peace Conference, Geneva, 9-19 Sept 1958

SKVORTSOV, YU. V.

21(0) PHASE I BOOK EXPLOITATION SOV/2081

International Conference on the Peaceful Uses of Atomic Energy, 2d., Geneva, 1958

Doklady sovetskikh uchenykh; yadernaya fizika (Reports of Soviet Scientists; Nuclear Physics) Moscow, Atomizdat, 1959. 552 p. (Series: Its: Trudy, Vol. 1) 8,000 copies printed.

Eds. (Title page): A.I. Alikhanov, Academician; V.I. Veksler, Academician; and N.A. Vlasov, Candidate of Physical and Mathematical Sciences; Ed. of this volume: S.I. Brovedev and D.F. Zaretskiy, Candidates of Physical and Mathematical Sciences; Ed. (Inside book): G.L. Smolyan; Tech. Ed.: Ye.I. Mazel'.

PURPOSE: This collection of articles is intended for scientific research workers and other persons interested in nuclear physics. The volume contains 43 papers presented by Soviet Scientists at the Second Conference on Peaceful Uses of Atomic Energy, held in Geneva in September 1958.

COVERAGE: It is divided into two parts. Part I contains 17 papers dealing with plasma physics and controlled thermonuclear reactions, and Part II contains 26 papers on nuclear physics, including problems of particle acceleration and of cosmic ray physics. The first paper by L.A. Artsimovich presents a review of Soviet work on controlled thermonuclear reactions. The remaining papers in Part I deal with particular problems in this field. papers in Part II deal in detail with various problems in nuclear physics, such as the fission of heavy atoms and their isotopes, and with the study of cosmic radiation by means of artificial earth satellites and rockets, described in a paper by S.N. Vernov. The Russian-language edition of the proceedings of the conference is published in 16 volumes. The first 6 volumes contain all the papers presented by Soviet scientists as follows: Volume (1), Yadernoye fizika (Nuclear Physics); Volume (2), Yadernyye reaktory i yadernaya energetika (Nuclear Reactor and Nuclear Power); Volume (3), Yadernoye goryucheye i metally (Nuclear Fuel and Reactor Metals), Volume (4), Khimiya radioelementov i radiatsionnykh prevrashcheniy (Chemistry of Radioelements and of Radiation Transformations); Volume 5, Radiobiologiya i radiatsionnaya meditsina (Radiobiology and Radiation Medicine); Volume (6) Polucheniye i primeneniye izotopov (Production and Use of Isotopes). The other 10 volumes contain selected papers presented at the Conference by non-Soviet scientists. In the present volume discrepancies between the English and Russian language edition of the proceedings have been noted in three articles where the texts are not identical; viz; Andrianov, et al, "High Current Pulsed Discharge"; Akhiyezer, et al, "High Frequency Plasma Oscillation"; and Bogolyubov, "Investigations of the Many-body Problem". The serial numbers of reports 2302 and 2504 are reversed in the English edition. Report 2211, by Simelnikov, et al, is numbered 2536 in the English edition.

TABLE OF CONTENTS:

Reports of Soviet Scientists; Nuclear (Cont.) SOV/2081

PART I. PLASMA PHYSICS AND THE PROBLEM OF CONTROLLED THERMONUCLEAR REACTIONS

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68157
SOV/20-129-6-20/69

AUTHORS: Komel'kov, V. S., Skvortsov, Yu. V.

TITLE: The Widening of the Channel of a Powerful Spark in a Liquid

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 129, Nr 6, pp 1273 - 1276 (USSR)

ABSTRACT: The authors investigated the primary stages of the widening of a spark channel in a liquid (first period of current passage), for it is just at this stage that high pressures and temperatures may be determined. The discharge occurred in water along the axis of a cylindrical transparent glass vessel. The circuit had a capacity of from 2.7 to 260 μf, a voltage of U_0 = 20 to 40 kv, and an inductance of L = 7.10^{-6} to 10^{-7} henries. Amperage and voltage at the spark channel were recorded by means of a pulsed oscilloscope of the type OK-17 M. The amperage amplitudes attained 720 ka, and the greatest steepness was $2.1.10^{11}$ a/sec. The motion of the shock-wave front in correspondingly weak discharges could be observed only if the chamber was illuminated by the light of an air discharger. In powerful discharges the motion of shock waves is distinctly visible. The

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The Widening of the Channel of a Powerful Spark in a Liquid SOV/20-129-6-20/69

spark channel widens considerably more slowly than the front of the shock wave. In the initial stage repeated breakdowns and the formation of from 2 to 4 parallel channels may be observed. Behind the wave front relatively weak disturbances are observed, which, for a certain time, move with the front of the main shock wave. A characteristic feature is the constancy of the velocity v_{sh} of the shock waves during the time of observation T/2. The same holds also for the spark channel, which widens with nearly constant velocity during the first semiperiod. The constancy of the shock-wave velocity may be explained by the energy transfer from the channel to the front by means of the small disturbances, the velocity of which, by the way, exceeds v_{sh}. With increasing maximum amperage $\mathring{I}_m$ the following quantities increase: 1) Damping of amperage in the discharge circuit. 2) The mean gradients in the channel in the first and second quarter of the period. 3) The current density j(t). 4) The energy liberated in the channel during the first semiperiod. The energy transported away by the radiation of the channel in the visible part of the spectrum may be neglected for the here discussed estimations. The channel temperature is proportional to the energy of its

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The Widening of the Channel of a Powerful Spark in a Liquid

unit of volume. In the strong sparks produced by the authors the temperature is at least 3.7 times as high as in the weak ones. Between the hot and the cold region there is apparently a layer of rather large excited particles, and the regions of conductivity differ noticeably from one another. The authors thank N. M. Kuznetsov for a useful discussion and for his advice. Reference is made to S. L. Mandel'shtam and N. K. Sukhodrev in this paper. There are 4 figures, 1 table, and 5 references, 4 of which are Soviet.

PRESENTED: August 2, 1959, by L. A. Artsimovich, Academician

SUBMITTED: July 10, 1959

Card 3/3

VASIL'YEV, V.I., KOMEL'KOV, V.S., SKVORTSOV, Yu.V., TSEREVITINOV, S.S.

Stable dynamic current flux. Zhur. tekh. fiz. 30 no.7:756-768 Jl '60. (MIRA 13:8)

(Electrical discharges in gases)

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10.6121
26.2311

S/057/60/030/010/004/019
B013/B063

AUTHORS: Skvortsov, Yu. V., Komel'kov, V. S., and Kuznetsov, N. M.

TITLE: Expansion of a Spark Channel in a Liquid

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1960, Vol. 30, No. 10, pp. 1165-1177

TEXT: The work reported on here was conducted in the years from 1956 to 1958 and dealt with initial stages of expansion of a strong spark channel after breakdown. The electric circuit of the experimental setup (Fig. 2) is shown in Fig. 1, its design has been described in Ref. 6. Figs. 3 and 4 provide examples of oscillograms of voltage and discharge current. Some of the results obtained from the oscillograms are collected in Table 1. Oscillograms of current I(t) and voltage V(t) permit calculating the energy W liberated at a given instant: $W(t) = \int_0^t I(t)V(t)dt$.

Results obtained by such a calculation are given in Fig. 5 a,b; Fig. 6 illustrates the dependence of the initial rate of energy liberation W_n on the initial gradient $\dot{I}$ of the current. Fig 7 shows the time dependence

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Expansion of a Spark Channel in a Liquid

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B013/B063

of current density j (a/cm^2), Fig. 8 that of conductivity. The discharge pictures of Figs. 9 and 10 show three characteristic sections, namely, the spark channel, the shock wave front, and an intermediate region. Minor perturbations propagating from the channel to the shock wave front are distinctly discernible in the latter. The dependence of the channel radius r_k on time is shown in Figs. 9 and 11, while the modification of the radius of the shock wave front r_f in time is shown in Fig. 12. Table 2 contains values of V_k (expansion of discharge channel) and D (rate of motion of shock wave front) for various growths of current. A striking aspect is the little dependence of these quantities on the initial conditions in the discharge chain. Experiments have shown that the energy liberated in the spark channel, the pressure and the expansion rate of the channel, the velocity of the shock wave arising on a discharge in a liquid, mainly depend on the parameters of the discharge chain. The initial gradients in the channel attain 10^4 v/cm. Energy liberation is protracted over the whole half-period, and attains $2.5 \cdot 10^4$ joules at $\dot{I} = 2 \cdot 10$ a/sec and $t = \frac{T}{4}$. At a steeper growth of current, the energy maximum in the unit volume of the channel shifts with time toward the beginning of spark

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L 9885-63 EFR/EPA(b)/EWT(l)/EEC(b)-2/ES(w)-2/BDS--AFFTC/ASD/
SSD--Ps-4/Pd-4/Pab-4--WW/IJP(C)
ACCESSION NR: AP3001332 S/0057/63/033/006/0719/0723

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74

AUTHOR: Komel'kov, V. S.; Skvortsov, Yu. V.; Tereshchenko, V. N.

TITLE: Directed shock waves in powerful sparks

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 33, no. 6, 1963, 719-723

TOPIC TAGS: shock waves from sparks, directed plasma shock waves, plasma stream shock waves, plasma shock-wave generation

ABSTRACT: Discharge of 600 kamp-current in the air at atmospheric pressure was investigated in order to create a directed movement of gas formed by a plasma "piston" in the required direction. The plasma piston in this case was realized by the use of rod-and-ring electrodes. A 130-microfarad condenser battery at 30 to 35 kv served as the energy source. The current period was 30 microseconds. The maximum diameter of the hot part of the plasma beam was about 6 cm; the coincidence of the shock wave front and the plasma was observed at about 15 cm from the electrodes. The maximum speed in the direction of the axis of the electrodes was 1.38 x 10 sup 6 cm/sec during the first half-period. Separation of the shock wave occurred at a front velocity of 5.5 x 10 sup 5 cm/sec. The gas temperature behind the front was estimated

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ACCESSION NR: AP3001332

roughly at 8000K. During the second half-period the speed of the luminescent front reached 1.8 x 10 sup 6 cm/sec. Analysis of the results indicates that the speed attenuation is much smaller in the axial than in the transverse direction and that the length of the beam exceeds the diameter of the ring electrode by 2 to 3 times prior to the separation of the shock wave. The intensities of the shock waves and the power from the input circuit can be increased substantially by the use of simple adapters to make the electrodes axially longer. Adapters 5 to 15 cm long, for instance, eliminated the radial bulging of the stream and concentrated the entire energy on acceleration and heating in the axial direction, while increasing the average current density in the stream. With 5-cm adapters, the speed of the shock front increased 1.5 to 2 times, while the length of the stream reached 36 cm. At a shock velocity of 9 x 10 sup 5 cm/sec the pressure and temperature in the front of the wave reached the values of 1000 atm and 14,000K. "The authors take this opportunity to express their gratitude to P. T. Shevtsov for help in the experiments." Orig. art. has: 4 figures.

ASSOCIATION: none
SUBMITTED: 17May62 DATE ACQ: 01Jul63 ENCL: 00

SUB CODE: 00 NO REF SOV: 009 OTHER: 000

Card 2/2

ACCESSION NR: AP4040296 S/0057/64/034/006/0965/0973

AUTHOR: Skvortsov, Yu.V.; Komel'kov, V.S.; Tserevitinov, S.S.

TITLE: Structure of the magnetic fields in a plasma jet with internal currents

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.6, 1964, 965-973

TOPIC TAGS: plasma, plasma jet, plasma magnetic field interaction

ABSTRACT: This paper reports results of investigations conducted from 1959 to 1961 concerning the magnetic fields and currents in plasma jets. The jets were produced by discharge of a 130-microfarad capacitor bank at 5 to 30 kv between two coaxial cylindrical electrodes 2 cm long, 3 cm in external diameter, and 18 cm in internal diameter, respectively. The period of the electrical system was 22 microsec. The electrodes were located at one end of and coaxial with a glass tube 1 m long and 19 cm in diameter containing hydrogen at a pressure of 0.5 to 10 mm Hg. All three components of the magnetic field were measured with movable probes, and high-speed frame and streak photographs were made. Extensive data were collected and are discussed in considerable detail. The velocity of the plasma jets was about 7×10^6 cm/sec and did not vary greatly with changing gas pressure and discharge potential.

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L 10743-65 EWT(1)/EWG(k)/EPA(sp)-2/EPA(w)-2/EEC(t)/T/EEC(b)-2/EWA(m)-2 Pi-4/
Po-4/Pz-6/Pab-24 IJP(c)/AEDC(b)/SSD/AFETR/ASD(p)-3/ESD(si)/AFWL/ESD(t)/ESD(gs)
AT

ACCESSION NR: AP4046338 S/0057/64/034/010/1790/1797

AUTHOR: Skvortsov, Yu.V.; Komel'kov, V.S.; Tereshchenko, V.N.

TITLE: Radiation from plasma jets

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.10, 1964, 1790-1797

TOPIC TAGS: plasma jet, plasmoid, plasma temperature, plasma radiation, x-ray emission

ABSTRACT: The optical and x-radiation from plasma jets produced by a short-electrode coaxial accelerator were examined. The apparatus has been described elsewhere (V.I.Vasil'yev, V.S.Komel'kov, Yu.V.Skvortsov and S.S.Tserevitnov,ZhTF 30,756,1960). The plasma source contained hydrogen at 0.1 to 1 mm Hg. Currents from 200 to 850 kA with a period of 22 microsec were obtained by discharging a 130 microfarad capacitor bank charged to 10 to 30 kV. The spectrum from 2000 to 7000 Å was investigated by means of three spectrographs. Several line widths were measured with a dispersion of 2 Å/mm. Time-resolved spectra (resolution 0.55 microsec) in the region from 4500 to 6600 Å were recorded with the aid of a rotating mirror. These spectra were obtained for regions located 4 to 30 cm from the electrodes. Monochromatic streak

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photographs (time resolution 0.5 microsec) were recorded in H_α and Si II 6347 and 6371 Å light and in the neighboring continuum. The total luminous intensity was observed photoelectrically and was displayed on an oscillograph. The x-radiation from different small regions was recorded both photographically and by means of a scintillator. The experimental techniques are discussed briefly, and the results are discussed in somewhat more detail. Many lines of neutral and singly ionized Al, Si, O and other impurities were observed. The impurity lines appeared 1 to 1.5 microsec later than the hydrogen lines, and as the burst moved down the tube a plasmoid separated in which hydrogen was predominant. In the impurity region, neutral hydrogen was concentrated at the walls of the chamber. Temperature of 10^5 °K was derived from the width of the N II 3995 Å line (5% N_2 was added to the hydrogen for this purpose). The electron temperature was estimated to be considerably lower: around 10^4 °K. Two distinct groups of x-rays were observed. The first occurred at the beginning of the discharge, originated at the central electrode, and lasted only 0.3 microsec; the quantum energy of these x-rays corresponded to the potential to which the capacitor bank had been charged. The second group of x-rays appeared only when the current reached its maximum and lasted for several microseconds. The mean energy of these x-rays was 80 keV, and quanta of over 200 keV energy were present. These

hard x-rays originated in or near the plasma filament at the axis of the tube. Possible mechanisms by which the electrons might have been accelerated to the corresponding energies are discussed and it is concluded that the electrons were probably accelerated by the induced field due to the changing longitudinal magnetic field.
"In conclusion, the authors thank V.Kondrat'yev, D.I.Vasil'yev and M.V.Zol'nikov for assistance in conducting the experiments, and V.Strizhanova for drawing the graphs and figures." Orig.art.has: 3 formulas, 7 figures and 3 tables.

ASSOCIATION: none

SUBMITTED: 15Jan64 ENCL: 00

SUB CODE: ME,OP NR REF SOV: 012 OTHER: 011

APPROVED FOR RELEASE: 08/24/2000 CIA-RDP86-00513R001651220010-3"

ACC NR: AP6033415 SOURCE CODE: UR/0057/66/036/010/1808/1815

AUTHOR: Skvortsov,Yu.V.

ORG: none

TITLE: Current distribution along the electrodes of a coaxial plasma injector

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 10, 1966, 1808-1815

TOPIC TAGS: hydrogen plasma, plasma gun, plasma acceleration, plasma magnetic field

ABSTRACT: The author has measured with magnetic probes the azimuthal component of the magnetic field between the electrodes of a coaxial plasma gun at different points along the axis and at different times after initiation of the discharge. The plasma gun was 39 cm long and the radii of the annular space between the copper electrodes were 5.5 and 2.5 cm. Hydrogen was admitted through a ring of openings in the inner electrode located 14 cm from the flange and 25 cm from the mouth of the gun. The magnetic probes were introduced through slots in the outer electrode. The gun was powered by the 20 kV discharge of a 33.5 microfarad capacitor; the short circuit inductance and resistance of the circuit were 230 cm and 0.01 ohm. The gun was operated under two different conditions: in the "high pressure regime" the hydrogen pressure in the 1 cm^3 chamber of the fast electrodynamic valve was 4 atm and the discharge was delayed for 150 microsec after admission of the gas; in the "low pressure regime", these quantities were 1 atm and 50 microsec. The total discharge

Card 1/2 UDC: 533.9

ACC NR: AP6033415

current was measured with a Rogovskiy belt, and the electrode potential differences was measured with the aid of an ohmic voltage divider. The results of the measurements are presented graphically; in particular, the longitudinal distribution of the azimuthal magnetic field is given for each regime at seven different times, between 0.55 and 9 microsec after initiation of the discharge. The azimuthal magnetic field distributions show that during acceleration of the plasma the current is not confined to a thin sheet, as is frequently assumed, but is distributed along the length of the gun, and that closed current loops appear in the plasma in the early stages of acceleration. Possible reasons for the observed behavior of the accelerating plasma are discussed at some length. The author thanks M.V.Zol'nikov and V.N.Tereshchenko for assistance with the work and V.A.Strizhanova for preparing the illustrations. Orig. art. has: 3 formulas and 4 figures.

SUB CODE: 20 SUBM DATE: 07Aug65 ORIG. REF: 008 OTH REF: 005

Card 2/2

L 25069-65 EWT(m)/EPA(w)-2/EWA(m)-2 Pab-10/Pt-10 IJP(c)

ACCESSION NR: AR4045745 S/0275/64/000/007/A051/A051

SOURCE: Ref. zh. Elektronika i yeye primeneniye. Svodnyy tom, Abs. 7A298 36 B

AUTHOR: Moskalev, V. A.; Skvortsov, Yu. Zh.; Okulov, B. V.; Shestakov, V. G. 19

TITLE: Measurement and recording of fall current in a 25-Mev stereobetatron

CITED SOURCE: Sb. Elektron. uskoriteli. M., Vyssh. shkola, 1964, 204-209

TOPIC TAGS: betatron, stereobetatron

TRANSLATION: Results of a study of acceleration process and beam characteristics are reported. Possibility is considered of determining the charge of accelerated electrons by a direct measurement of the charge of the electrons that struck the target. For measuring the accelerated-electron charges, a combination circuit is used which records simultaneously the target current and the signal induced in a special indicating electrode; the circuit can operate at any particle energy. Stereobetatron potentialities as a pulse flow detector were assessed by using it for examination of a lead bar having artificial defects. The circuits are supplied, and the experimental results are discussed.

SUB CODE: NP ENCL: 00

Card 1/1

CHU, SHUN-YU, SKVORTSOV-TATARIN, T. [translator]; KHVOSTOVA, D.M., redaktor; RAKOV, S.I., tekhnicheskiy redaktor

[Always work creatively. Translated from the Chinese] Vsegda rabotat' tvorcheski. [Perevod s kitaiskogo T.Skvortsova-Tokarina] [Moskva] Izd-vo VTsSPS Profizdat, 1956. 41 p. (MLRA 9:10)

1. Zamestitel' nachal'nika tsekha turbinnykh lopatok Shankhayskogo gosudarstvennogo turbostroitel'nogo zavoda (for Chu, Shun-yu)
(Efficiency, Industrial)

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USSR / Farm Animals. Cattle. Q

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Author : Skvortsova, A. A.
Inst : AS USSR.
Title : The Effect of Planned Raising upon the Milk's Fat Content

Orig Pub : V sb.: Vopr. fiziol. s.-kh. zhivotnykh. M.-L., AN SSSR, 1957, 130-137

Abstract : As 10 heifers of the Ostfriesland breed were nursed with fatter milk and raised on rations with an increased fat content (30-40 percent higher than normal), a marked effect upon their milk's fat content and their development did not occur. -- A. D. Musin

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