MOSTOVOY A. S.

Call Nr: 1053995

AUTHORS: Shul'zhenko, M. N., Mostovoy, A. S.

TITLE: Course in Aircraft Design (Kurs konstruktsiy samoletov)

PUB. DATA: Oborongiz, Moscow 1956, 528 pp., 11,500 copies

ORIG. AGENCY: None

EDITOR: Reviewer: Grigor'yev, V. L., Eng.; Editor: Burakova, O. N.; Managing Editor: Sokolov, A. I., Eng.; Publ. House Editor: Poseva, G. F.; Tech. Ed.: Gladkikh, N. N.

PURPOSE: The book was intended as a textbook for aviation tekhnikums. It may also serve as a manual for students of aviation schools and colleges and for members of the Air Force and Civil Air Fleet with a secondary technical education.

COVERAGE: The book represents the first attempt to create a systematic course in aircraft design. The authors do not

Card ~~1/13~~

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124-58-9-9660

Translation from: Referativnyy zhurnal, Mekhanika 1958 Nr 9, p 28 (USSR)

AUTHOR: Mostovoy, A.S.

TITLE: How to Standardize the Degree of Longitudinal Stability of High-speed Aircraft (O vozmozhnosti normalizatsii stepeni prodol'noy ustoychivosti skorostnykh samoletov)

PERIODICAL: Tr. Kuybyshev. aviats. in-t, 1957, Nr 3, pp 247-257

ABSTRACT: In order to ensure throughout a wide range of Mach numbers that the degree of longitudinal stability of an aircraft be satisfactory relative to load factor and speed, it is proposed that, in addition to the elevator, the stabilizer be employed, wherein it be deflected by means of a special automatic control, the setting of which would depend on the load factor, the Mach number, and the altitude of flight. The law governing the stabilizer deflection would be determined by the known characteristics of longitudinal stability and control of the aircraft with fixed stabilizer. A calculation method is set forth for the deflection angles for the stabilizer required to accomplish a specified degree of stability. Formulas are provided for the determination of the control force for the possible inclusion of the automatic control

Card 1/2

124-58-9-9660

How to Standardize the Degree of Longitudinal Stability of High-speed Aircraft

into the normal reversible control system. Certain peculiarities of the degree of longitudinal stability of an aircraft equipped with the automatic control are indicated. Bibliography: 3 references.

Yu. I. Sneshko

1. Airplanes--Stability (Longitudinal) 2. Airplanes--Control systems
3. Stabilizers (Horizontal tail surface)--Controls

Card 2/2

13.2000

S/123/59/000/006/024/025
A005/A001

Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1959, No. 6, p. 29, # 22235

AUTHOR: Mostovoy, A. S.

TITLE: The Dynamical Longitudinal Aircraft Stability With an Automatic Controller of the Stability Degree

PERIODICAL: Tr. Kuybyshevsk. aviats. in-t, 1958, No. 5, pp. 35-42

TEXT: The author analyzes the motion equations of an aircraft with an automatic controller of longitudinal stability. It affects the characteristics of stability with respect to velocity and load factor by varying the stabilizer's setting angle. The effects of the "ideal" and delayed automatic control of the stability degree are considered. It is shown that it is possible to consider separately the equations of aircraft motion and automatic control. The influence of delay of the automatic control is studied, as well as the influence of the gear ratio of the servomechanism on the short- and long-periodic motions. The analysis of the limits of the longitudinal stability of the aircraft with automatic control is presented.

P. D. M.

Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

MOSTOVOY, A. S. Cand Tech Sci -- (diss) "On the possibility of normalizing the degree of [redacted] longitudinal stability of aircraft." Kazan', 1959. 16 pp (Min of Higher Education USSR. Kazan' Aviation Inst), 150 copies (KL, 46-59,138)

SHUL'ZHENKO, Mikhail Nikitich; MOSTOVOY, Anatoliy Solomonovich; GRIGOR'YEV, V.L., inzh., retsenzent; SPEKHOV, A.I., inzh., red.

[A course in the construction of airplanes] Kurs konstruktsii samoletov. 2. izd., dop. i perer. Moskva, Mashinostroenie, 1965. 562 p. (MIRA 18:6)

L 3528-66 EWT(d)/EWT(m)/EWP(w)/EPF(c)/FA/EWA(d)/EWP(i)/T-2/EWP(k)/EWP(h)/EWP(z)/
AM5018665 EWP(b)/EWA(h)/EIC(m)/ BOOK EXPLOITATION UR/
EWP(t) JD/WW/EM/DJ/WE/JT/RM 629.13(075)

Shul'zhenko, Mikhail Nikitich; Mostovoy, Anatoliy Solomonovich

Course in aircraft design (Kurs konstruktsiy samoletov) 2d ed., rev. and enl. Moscow, Izd-vo "Mashinostroyeniye", 1965. 562 p. illus., biblio., tables. 9000 copies printed.

TOPIC TAGS: aircraft design principles, aircraft subassembly, aircraft reliability estimate

PURPOSE AND COVERAGE: This monograph is a textbook to be used by students attending aviation engineering schools and may be a helpful guide to technical personnel working in the aircraft industry. The second enlarged and revised edition of a Course in Aircraft Design was written in accordance with the curriculum prescribed for aviation engineering schools. The book consists of three parts. Part I explains the principles of structural mechanics to the extent needed for an approximate calculation of the structural strength of an aircraft. Part II discusses the principles of aircraft design and contains some general information on aircraft: Aircraft components such as wings, tail, fuselage, power plants (including

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fuel and lubrication systems), controls, and landing gear are discussed in Part III. There are 116 formulas, 366, figures, 6 tables, and 22 references, all Russian.

TABLE OF CONTENTS:

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AM5018665

SUB CODE: AS SUBMITTED: 01Mar65 NO REF SOV: 022

OTHER: 000

Card 4/4

MOSTOVOY, B.

Remodeling sections of the packing house. Mias. ind. SSSR 29 no.5:28 '58. (MIRA 11:10)

1. Odesskiy myasokombinat.
(Odessa--Packing houses--Equipment and supplies)

MOSTOVOY, G.A. (Vladivostok)

Nomogram for calculating steel girders. Stroi. mekh. i rasch. soor. 2 no.6:53-54 '60. (MIRA 13:12)

(Girders)

MOSTOVOY, I.Ye.

Providing for labor safety in the operation of coke ovens. Koks i khim. no.4:32 '62. (MIRA 16:8)

1. Bagleyskiy koksokhimicheskiy zavod.
(Coke ovens—Safety measures)

CZECHOSLOVAKIA/Plant Physiology - Photosynthesis. I-1

Abs Jour : Ref Zhur - Biol., No 5, 1958, 19923

Author : Mostovoy, K..
Inst : -
Title : The Photosynthesis Problem and On the Relation of Science to Practice.

Orig Pub : Ceskosl. biol., 1956, No 6, 360-362

Abstract : No abstract.

Card 1/1

MOSTOVOY, M.A. (Magadan)

Council of nurses at our hospital. Med.sestra 17 no.7:45-46 Jl '58 (MIRA 11:7)

(NURSES AND NURSING)

KOSTOVOY, M.G.

Analysis of cases of death in the home. Vrach.delo no.2: 179-181 F '59. (MIRA 12:6)

1. Pervaya Podol'skaya bol'nitsa Kiyeva i kafedra terapii stomatologicheskogo fakul'teta (zav. - dotsent G.I.Burchinskiy) Kiyevskogo meditsinskogo instituta.
(DEATH--CAUSES)

MOSTOVOY, M.G.

Analysis of cases of death occurring at home from myocardial infarct. Vrach.delo no.1:79-81 '60. (MIRA 13:6)

1. Pervaya bol'nitsa Podol'skogo rayona Kiyeva i kafedra terapii (zav. - dotsent G.I. Burchinskiy) stomatologicheskogo fakul'teta Kiyevskogo meditsinskogo instituta.
(DEATH) (HEART--INFARCTION)

ACCESSION NR: AP4010052 S/0062/64/000/001/0199/0201

AUTHOR: Mikhaylov, B. M.; Dorokhov, V. A.; Mostovoy, N. V.

TITLE: The effect of allylamine on tetraalkyldiboranes

SOURCE: AN SSSR. Izvestiya. Ser. khim., no. 1, 1964, 199-201

TOPIC TAGS: allylamine, tetraalkyldiboranes, (3-aminopropyl)-di-n-alkylborons, asymmetric borotrialkyls, addition compounds, nucleophilic reagents, NH sub 2 deformation, NH sub 2 valence vibration

ABSTRACT: Adding 1 M tetra n-butyldiborane to a 2 M ether solution of allylamine with subsequent boiling yielded (3-aminopropyl)-di-n-butylboron and twice as much allylamino-di-n-butylboron. Reversing the order of mixing the reagents yielded 65% of the first compound and insignificant amounts of the second compound. Similar results were obtained for the other tetralkyldiboranes. This reaction was also carried out with butylmercapto-di-n-butylboron. IR spectra of the (3-aminopropyl)-dialkylborons (N-H absorption bands at 3292 and 3350

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ACCESSION NR: AP4010052

cm^{-1}, NH_2 deformation band at 1590 cm^{-1}) and their unusual stability to air and to temperatures up to 200 C. are indicative of intracomplex structure. The laboratory procedures are described, as are end products and yields for the propyl and butyl compounds. Their probable structure is discussed. Reaction formulas for the first and the reversed sequence of mixing are presented. "The authors wish to thank I. P. Yakovlev for determining the IR spectra." Orig. art. has: 5 formulas.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii Nauk SSSR (N.D. Zelinski Institute of Organic Chemistry AN SSSR)

SUBMITTED: 19Jul63 DATE ACQ: 14Feb64 ENCL: 00

SUB CODE: CH NO REF SOV: 002 OTHER: 000

Card 2/2

ACCESSION NR: AP4042884 S/0062/64/000/007/1358/1359

AUTHOR: Mikhaylov, B. M.; Mostovoy, N. V.; Dorokhov, V. A.

TITLE: Thiaborolanes — new heterocyclic boron compounds

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 7, 1964, 1358-1359

TOPIC TAGS: thioborolane, borolane derivative, thiaborolane derivative

ABSTRACT: Three new heterocyclic boron compounds, 1-phenyl-2-thiaborolane (I), 1-butyl-2-thiaborolane (II), and 2-aminoethyl (3-mercaptopropyl)butylborinate (III), have been prepared. I (mp, 38—41C) was obtained in 50% yield by reacting allylmercaptan with 1,2-diphenyldiborane(6) in benzene solution. II (bp, 48—50C at 2 mm Hg), was synthesized in 34% yield from tributylborane, diborane(6) and allylmercaptan. III (mp, 65—73C) was prepared in 87% yield by the reaction of ethanolamine with II. III has an inner complex structure. Orig. art. has: 3 formulas.

Card 1/2

ACCESSION NR: AP4042884

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry, Academy of Sciences SSSR)

SUBMITTED: 23Apr64	ATD PRESS: 3075	ENCL: 00
SUB CODE: IC, OC	NO REF SOV: 000	OTHER: 000

Card 2/2

L 36992-66 EWP(j)/EWT(m) RM/WW/JW

ACC NR: AP6008502 SOURCE CODE: UR/0062/66/000/001/0090/0096

AUTHOR: Mostovoy, N. V.; Dorokhov, V. A.; Mikhaylov, B. M.

ORG: Institute of Organic Chemistry im. N. D. Zelinskiy, Academy of Sciences, SSSR (Institut organicheskoy khimii Akademii nauk SSSR)

TITLE: Organoboron compounds. Communication 162. Chelate Gamma-aminopropyl boron compounds

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 1, 1966, 90-96

TOPIC TAGS: chemical synthesis, organoboron compound, chelate compound, boron compound

ABSTRACT: In this investigation the authors synthesized a number of new organoboron chelate compounds in order to further study their properties, in particular, to elucidate the effect of substitutes in the presence of boron and nitrogen atoms on the strength of the coordination bond B←N. The authors describe the synthesis of 12 new organoboron compounds containing the γ-aminopropyl grouping. The dipole moments of some of the compounds synthesized are measured to compare the strength of the internal coordination bonds. It was found that the replacement of hydrogen atoms in the presence of nitrogen by alkyl groups lowers the strength of the coordination linkage between the boron and nitrogen atoms.

Card 1/2 UDC: 541.49+661.718.4

The authors also point out that the introduction of the alkoxy group to the boron atom in γ-aminopropyl compounds weakens the donor-acceptor interaction between the boron and nitrogen atoms. It is demonstrated that the strength of the internal coordination bond between the boron and nitrogen atoms is determined by the same factors as the strength of the usual coordination bond in complex boron compounds. The boron trialkyls have a higher complexing capacity than the esters of boric and thioboric acids, and the basicity of tertiary amines with respect to the organoboron compounds decreases with an increase in the volume of the alkyl groups at the nitrogen atom. The authors thank A. N. Nikitina and V. Smorchkov for determining the dipole moments. Orig. art. has: 13 formulas.

SUB CODE: 07/ SUBM DATE: 29Jul65/ ORIG REF: 007/ OTH REF: 002

L 18905-66 EWT(m)/EWP(j)/T WW/JW/WE/RM

ACC NR: AP6008082 SOURCE CODE: UR/0020/66/166/005/1114/1117

AUTHOR: Mikhaylov, B. M. (Academician); Dorokhov, V. A.; Mostovoy, N. V.

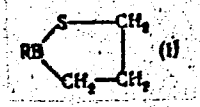
ORG: Institute of Organic Chemistry im. N. D. Zelinskiy, Academy of Sciences, SSSR (Institut organicheskoy khimii Akademii nauk SSSR)

TITLE: Synthesis and properties of thiaborolanes

SOURCE: AN SSSR. Doklady, v. 166, no. 5, 1966, 1114-1117

TOPIC TAGS: organoboron compound, organic sulfur compound, heterocyclic base compound, organic synthetic process

ABSTRACT: The article describes some reactions of thiaborolanes, five-membered heterocyclic compounds with a boron and a sulfur atom in the ring, having the formula



(I)

UDC: 661.718.4

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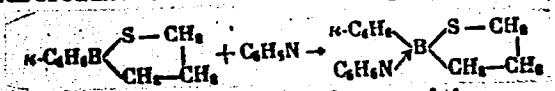
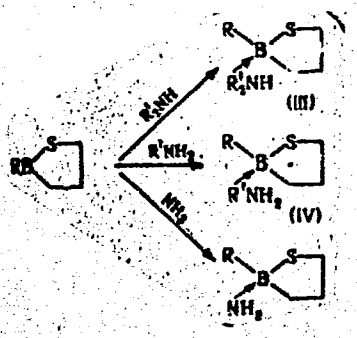
L 18905-66

ACC NR: AP6008082

2-n-Butyl-1,2-thiaborolane forms a stable liquid complex with pyridine:



Alkylthiaborolanes also form stable complexes with secondary and tertiary amines and ammonia:



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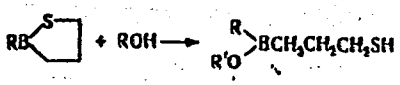
L 18905-66
ACC NR: AP6008082

In contrast, the action of alcohol on 2-alkyl-1,2-thiaborolanes splits the B-S bond to form compounds of trivalent boron, esters of (γ-mercaptopropyl)alkylboronic acids:



Infrared spectra showed the association of amine complexes of thiaborolanes due to intermolecular hydrogen bonds. The paper was presented by Academician B. A. Kazanskiy, 20 July 1965. Orig. art. has: 8 formulas.

SUB CODE: 07/ SUBM DATE: 00/ ORIG REF: 008/ OTH REF: 002

Card 3/3 mc

KOLOMIYCHENKO, A.I., zasluzhennyy deyatel' nauki, prof.; KOSTOVOY, S.I., dotsent

Report on the activities of the Ukrainian Republic Society of Otorhinolaryngologists in 1956. Vest.oto-rin. 19 no.4:116-120 Jl-Ag '57. (MIRA 10:11)

1. Predsedatel' Ukrainskogo nauchnogo obshchestva oto-rino-laringologov (for Kolomiychenko). 2. Sekretar' Ukrainskogo nauchnogo obshchestva oto-rino-laringologov (for Kostovoy).
(OTORHINOLARYNGOLOGY)

MOSTOVOY, S.; KURILIN, I.

Professor Aleksei Isidorovich Kolomiichenko; 30 years of medical, scientific, pedagogical and social activity. Vest. oto-rin. 16 no.6:78-79 N-D '54. (MLRA 8:1)

1. Po poruchemiyu kollektiva kliniki bolezney ukha, gorla i nosa Kiyevskogo instituta usovershenstvovaniya vrachey
(KOLOMIICHENKO, ALEKSEI ISISOROVICH, 1898-)

KHARSHAK, Ye.M.; MOSTOVOY, S.I.

Conference ot otorhinolaryngologists of the Ukrainian S.S.R.
Vest.oto-rin 17 no.4:88-92 Jl-Ag '55. (MLRA 8:10)
(OTORHINOLARYNGOLOGY)

Mostovoy, S.I.

KHARSHAK, Ye.M., professor; MOSTOVOY, S.I.

Report on the conference of district otorhinolaryngologists of Kiev Province. Vest.oto-rin. 18 no.6:89 N-D '56. (MLRA 10:2)
(KIEV PROVINCE—OTORHINOLARYNGOLOGISTS)

MOSTOVOY, S.I., kandidat meditsinskikh nauk

Persistent disability of collective farm workers in connection with ear diseases. Vrach. delo no.1:79-81 Ja '57 (MLRA 10:4)

1. Kafedra bolezney ukha, gorla i nosa (zav.-zasl. deyatel' nauk, prof. A.I. Kolomiychenko) Kiyevskogo instituta usovershenstvovaniya vrachey.

(EAR--DISEASES) (AGRICULTURAL LABORERS--DISEASES AND HYGIENE)

BRATUS', V.D., MOSTOVOY, S.I., KHARSHAK, Ye.M., CHERNDNIK, A.M.

Professor Aleksei Isidorovich Kolomiichenko; in memory of his 60th birthday and 35 years as a physician, teacher, and public figure. (MIRA 11:7)
Vest.oto.-rin. 20 no.4:116-117 Jl-Ag'58
(KOLOMIICHENKO, ALEKSEI ISIDOROVICH, 1898-)

MOSTOVYY, S.I., kand.med.nauk, dots.

Plastics help to restore hearing. Znan.ta pratsia no.3:15 Mr '60. (MIRA 13:6)
(Ear--Surgery)

MOSTOVOY, S.I., dotsent

Some morphological changes in the larynx and the surrounding tissues in cancer. Zhur. ush., nos. i gorl. bol. 20 no.6:73-76 N-D '60. (MIRA 15:2)

1. Iz kliniki bolezney ukha, gorla i nosa (zav. - zasluzhennyy deyatel' nauki prof. A.I.Kolomiychenko) i kafedry patologicheskoy anatomii (rukovoditel' raboty - doktor med.nauk V.L.Byalik) Kiyevskogo instituta usovershenstvovaniya vrachey.
(LARYNX--CANCER)

MOSTOVOY, S. I.

"Methods put forward for operative procedures of lymphatic metastatic ganglions of cancer of the larynx."

report submitted for the Seventh Intl. Congress of Otorhinolaryngology, Paris, 23-29 July 1961

Kiev, USSR

MOSTOVOY, S.I., dotsent

Surgical treatment of regional metastases of laryngeal cancer without removal of the primary focus. Zhur. ush., nos. i gorl. bol. 21 no.3:14-17 My-Je '61. (MIRA 14:6)

1. Iz kliniki bolezney ukha, gorla i nosa (zav. - zasluzhennyy deyatel' nauki prof. A.I.Kolomiychenko) Kiyevskogo instituta usovershenstvovaniya vrachey.
(LARYNX--CANCER)

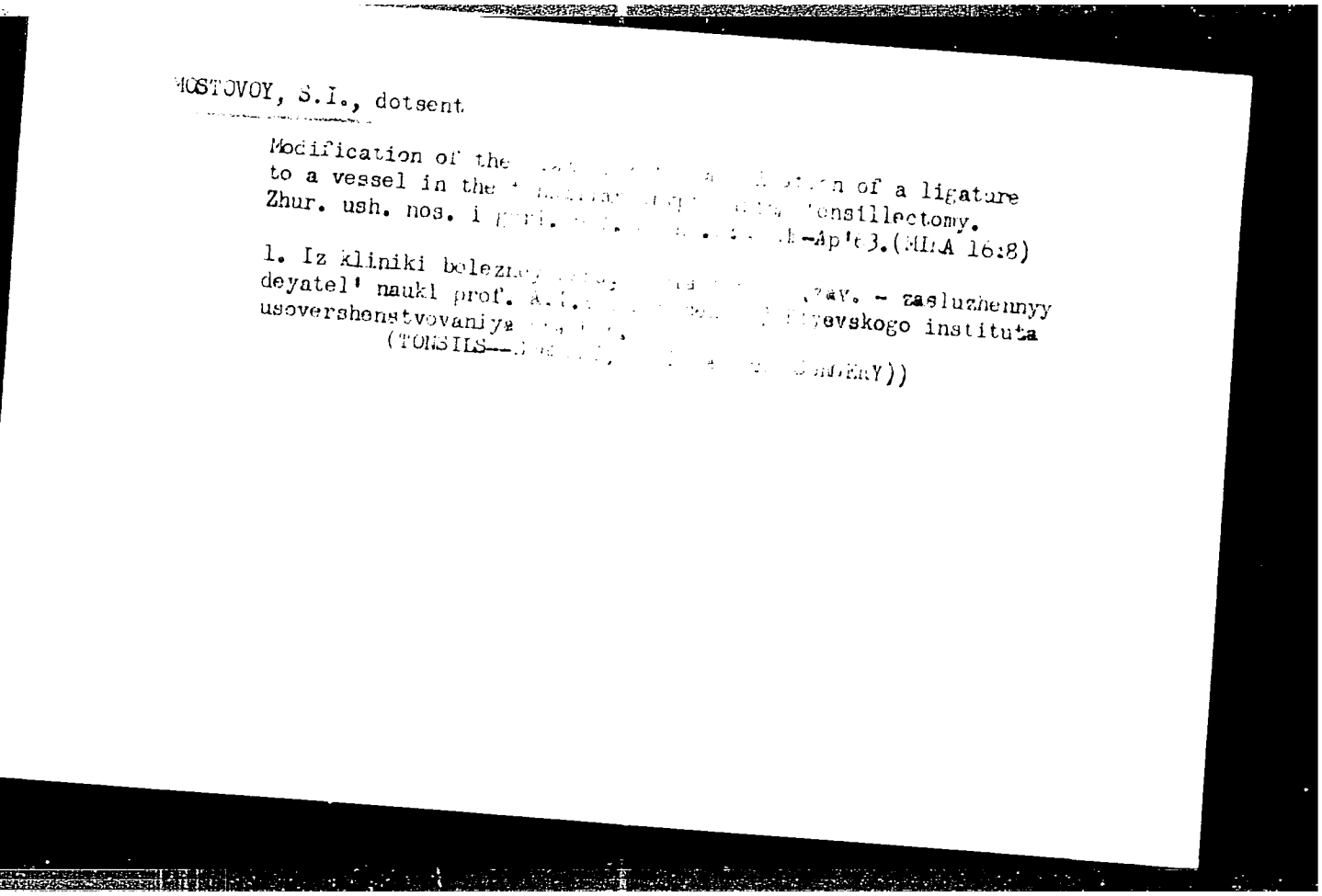
MOSTOVOY, S.I., dotsent

Use of fluorescein in the removal of metastasized regional cervical lymph nodes in laryngeal cancer. Zhur. ush. nos. i gorl. bol. 21 no.4: 34-36 Jl-Ag '61. (MIRA 15:1)

1. Iz kliniki bolezney ukha, gorla i nosa (zaveduyushchiy - zasluzhennyy deyatel' nauki prof. A.I.Kolomiychenko) Kiyevskogo instituta usovershenstvovaniya vrachey.
(LARYNX--CANCER) (FLUORESCEIN)

MOSTOVOY, S.I.; GINZBURG, V.Z.

Conference of otolaryngologists of the Ukrainian S.S.R. for the exchange of advanced work experience. Zhur.ush.,nos.i gorl.bol. 22 no.4:92-96 Jl-Ag '62. (MIRA 16:2)
(OROTHINOLARYNGOLOGY—CONGRESSES)



MOSTOVOY, S.I., dotsent

Modification of the [illegible] of a ligature to a vessel in the [illegible] tonsillectomy. Zhur. ush. nos. i [illegible] 1-Ap'63.(MIRA 16:8)

1. Iz kliniki bolezn[illegible]ay. - zasluzhennyy deyatel' nauki prof. A.I. [illegible] Kiyevskogo instituta usovershenstvovaniya [illegible]
(TONSILS—[illegible] SURGERY))

KOLOMIYCHENKO, A.I., prof., Laureat Leninskoy premii, zasl. deyatel' nauki, red .; LUKOVSKIY, L.A., prof., red.; ZARITSKIY, L.A., prof., zasl. deyatel' nauki, red.; PITENKO, N.F., prof., red.; GLADKOV, A.A., prof., red.; KURILIN, I.A., prof., red.; MOSTOVOY, S.I., doktor med. nauk, red.; BARLYAK, R.A., prof., red.; SHPARENKO, B.A., dots., red.; ROZENGAUZ, D.Ye., dots., red.; KHARSHAK, B.M., dots., red.; CHERNOVA, I.A., kand.med. nauk, red.

[Current problems of clinical and experimental otolaryngology] Aktual'nye voprosy kliniko-eksperimental'noi otolaringologii. Kiev, Zdorov'ia, 1964. 350 p. (MIRA 18:2)

1. Nauchno-issledovatel'skiy institut otalaringologii. 2. Otdel profpatologii Nauchno-issledovatel'skogo instituta otolaringologii (for Pitenko).

KOLOMIYCHENKO, A.I., prof. zasluzhennyy deyatel' nauki; ZARITSKIY, L.A., prof. zasluzhennyy deyatel' nauki; SHVARTSBERG, Ya.A., prof. zasluzhennyy deyatel' nauki; PITENKO, N.F., prof.; MOSTOVOY, S.I., doktor med. nauk; TYTAR', G.M., otolaringolog.

Professor Leon Antonovich Lukovskii; 1903 - ; on his 60th birthday. Zhur. ush., nos. i gor. bol. 24 no.2:92-93 Mr-Ap '64 (MIRA 18:1)

MOSTOVOY, Saveliy Ivanovich; KHARSHAK, Ye.M., red.

[X-ray diagnosis of tracheal and bronchial scleroma] Rentgenodiagnostika skleromy trakhei i bronkhov. Kiev, Zdorov'ia, 1965. 90 p. (MIRA 18:9)

MOSTOVOY, V., inzh.

Scientific seminar on reinforced concrete. Prom. stroi. i inzh. soor. 2 no. 1:63 Ja '60. (MIRA 14:1)

1. Ural'skiy Dom tekhniki.
(Reinforced concrete)

MOSTOVOY, V.A.; KUTYAYEV, V.N.

Automatic block systems should hve dependable rail networks.
Avtom., telem.i sviaz' 4 no.3:26-27 Mr '60. (MIRA 13:7)

1. Nachal'nik sluzhby signalizatsii i svyazi Privolzhskoy dorogi (for Mostovoy). 2. Nachal'nik laboratorii signalizatsii i svyazi Kalininskoy dorogi (for Kutyayev).
(Railroads--Signaling--Block system)
(Railroads--Rails)

[illegible], [illegible]. A.

Windbreaks, Shelterbelts, Etc.

[illegible]

no. [illegible], 19[illegible].

9. Monthly List of Russian Accessions, Library of Congress, [illegible] 1958, Uncl.

MOSZDOVOV, V. A.

Windbreaks, Shelterbelts, Etc.

Regulate the work of setting out gully and ravine plantings.
Les i step' 5, No. 2, 1953

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

MOSTOVOY, V.I.; PEVZNER, M.I.; TSITOVICH, A.P.

[Mechanical neutron velocity selector] Mekhanicheskii selektor neitronov. Moskva, 1955. 24 p.
(Neutrons—Measurement) (MIRA 14:7)

MOSTOVOY,V.I., PEVZNER, M.I., CHERNYSHOV,A.A., TSETOVICH, A.P., ALAMCHUK,YU.E., GERASIMOV,V.F., YEFIMOV,B.V., ZAMEVICH,V.S.

"Fission and Total Cross-Sections of Some Heavy Nuclides for Monochromatic Neutrons as Measured by a Mechanical Neutron Velocity Selector," a paper presented at the "Atoms-for-Peace" Conference, Geneva, Switzerland, 1955.

MOSTOVOY, V. I.

"Survey of Native and Foreign Works on the Measurement of the Cross Sections of Heavy Fissioning Nuclei for Monochromatic Slow Neutrons," a report presented at the Conference on the Physics of Nuclear Fission, 19-21 January 1956 Atom Energ., No. 1, 1956.

MOSTOVOI, V. I.

"Fission Fragments Energy Spectra."

paper to be presented at the 2nd UN Intl. Conf. on the peaceful uses of Atomic Energy, Geneva, 1 - 13 Sep 58.

MOSTOVOY, V. I., DIKAREV, V. S., YEGIAZAROV, M. B. and SALTYKOV, U. S.

"Neutron Spectrum Measurement in Uranium-Water Lattices."

paper to be presented at the 2nd Un Intl. Conf. on the peaceful uses of Atomic Energy, Geneva, 1 - 13 Sep 58.

NOSTOVOY, Vladimir Iosifovich

"Changes in Mechanical Properties of Structural Materials Under Irradiation" (a paper to be presented at 1958 UN "Atoms-for-Peace" Conference, Geneva, Switzerland.).

AUTHORS: Vlasov, N., Groshev, L., Mostovoy, V., Pevzner, M., 89-1-2o/29

TITLE: Interaction Between Neutrons and Nuclei (Vzaimodeystviye neytronov s yadrami).

PERIODICAL: Atomnaya Energiya, 1958, Vol. 4, Nr 1, p. 96 - 1o1 (USSR)

ABSTRACT: From September 9, to September 13, 1957 an International Conference took place at New York Columbia University, which was attended by more than 2oo physicists. A total of 7o lectures was delivered. The most important results are the following:
The reaction cross section for $B^{1o}(n,\alpha)$, $Li^{6}(n,\alpha)$ and $He^{3}(n,p)$ must be measured with much greater accuracy.
Description of a neutron spectrometer with a pulsating neutron source from a synchrocyclotron. Resolving power obtained:
$>$o,o1 μs/m with a flying distance of 35 m.
A mechanical selector which attains a ray-resolution of o,o1 to o,o15 μs/m
At Nd^{143} a negative point of resonance was uniquely found:

$$E_o = -1,5 \pm o,5 \text{ eV}; \quad \sigma_o\Gamma_n^2 = 415 \text{ b(eV)}^2.$$

Determination of the yields of various isotopes at the fission of U^{233} with E_n = 1,8 eV and the fission of U^{235} with $E_n > 2$ eV.
A three-fold fission of U^{235} with neutrons in the energy range of from o,o2 to o,2 eV was not found.

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Interaction Between Neutrons and Nuclei.

89-1-20/29

A magnetic spectrograph was built for the purpose of measuring the energy of fission fragments.
For Pu^{240} resonances at E_n = 1,056 eV; 20,4 eV and 38,2 eV were found. For Pu^{242} only resonances at 2,65 and 53,6 eV were found up to 1 KeV. For I^{129} and Zr^{93} no resonance was found within the range of from 1 to 100 eV.

$\frac{\sigma_f(U^{233})}{\sigma_f(U^{235})}$ = 0,9323±0,0013

$\frac{\sigma_f(Pu^{239})}{\sigma_f(U^{235})}$ = 1,4056±0,0009 for neutrons with Maxwell distribution and T = 20°C

$\frac{\sigma_f(Pu^{239})}{\sigma_f(U^{235})}$ = 1,5048±0,0009

$\frac{\sigma_f(Pu^{241})}{\sigma_f(Pu^{239})}$ = 1,351± 0,0006

σ_0 for Au : 98,8 ± 0,3 b E_n = 2200 m/sec

$T_{1/2}$ of U^{233} = (1,611 ± 0,008) . 10^5a

σ_f for U^{233} : 524 ± 4 b E_n = 2200 m/sec

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Interaction Between Neutrons and Nuclei.

89-1-20/29

$\frac{\int \sigma_c \frac{dE}{E}}{\sigma_c \ 2200 \ m/sec} = 25,5 \pm 5,0\%$ for Pu^{240}

The following reactions are described:

$U^{235}(d,p)$; $U^{235}(d,pf)$; $U^{238}(d,p)$; $U^{238}(d,pf)$ E_d = 14 MeV

$U^{238}(n,n')$; $U^{235}(n,n')$; $Pu^{239}(n,n')$ E_n = 0,55; 1,0 and 2,0 MeV

$Fe^{56}(n,n')$; $I^{127}(n,n')$ $E_n \sim 1,5$ MeV

$F(n,\gamma)$ - 15 resonances from 2 to 15 eV were found

(n-p), (n-α), (n-2n) reactions on various elements

$D(p,n)$ E_d = 3,5 up to 3,9 MeV.

Furthermore, the γ- spectra of the most varied n-γ processes were measured. There are 2 figures.

AVAILABLE: Library of Congress

Card 3/3

Mostovoy, V.I.

21(4) PHASE I BOOK EXPLOITATION SOV/2583

International Conference on the Peaceful Uses of Atomic Engergy. 2nd, Geneva, 1958.

Doklady sovetskikh uchenykh; yadernyye reaktory i yadernaya energetika. (Reports of Soviet Scientists; Nuclear Reactors and Nuclear Power) Moscow, Atomizdat, 1959. 707 p. (Series: Its: Trudy, vol. 2) Errata slip inserted. 8,000 copies printed.

General Eds.: N.A. Dollezhal, Corresponding Member, USSR Academy of Sciences, A.K. Krasin, Doctor of Physical and Mathematical Sciences, A.I. Leypunskiy, Member, Ukrainian SSR Academy of Sciences, I.I. Novikov, Corresponding Member, USSR Academy of Sciences, and V.S. Fursov, Doctor of Physical and Mathematical Sciences; Ed.: A.P. Alyab'yev; Tech. Ed.: Ye. I. Mazel'.

PURPOSE: This book is intended for scientists and engineers engaged in reactor designing, as well as for professors and students of higher technical schools where reactor design is taught.

COVERAGE: This is the second volume of a six-volume collection on the peaceful use of atomic energy. The six volumes contain the reports presented by Soviet scientists at the Second International Conference on Peaceful Uses of Atomic Energy, held from September 1 to 13, 1958 in Geneva. Volume 2 consists of three parts. The first is devoted to atomic power plants under construction in the Soviet Union; the second to experimental and research reactors, the experiments carried out on them, and the work to improve them; and the third, which is predominantly theoretical, to problems of nuclear reactor physics and construction engineering. Yu. I. Koryakin is the science editor of this volume. See SOV/2081 for titles of all volumes of the set. References appear at the end of the articles.

21 (8)

AUTHORS: Mostovoy, V. I., Mostovaya, T. A., Sovinskiy, M., Saltykov, Yu. S.

SOV/89-7-4-10/28

TITLE: The Distribution of the Kinetic Energy of the Fragments in the Triple Fission of U^{235} by Thermal Neutrons

PERIODICAL: Atomnaya energiya, 1959, Vol 7, Nr 4, pp 372-374 (USSR)

ABSTRACT: K. Allen and J. Dewan were the first to investigate the distribution of the kinetic energy of fragments in the fission of U^{235} with emission of one α-particle with a long range. According to the results they obtained, the distribution of the kinetic energy of the fragments in a triple fission is similar to the distribution usually found in double fission. The present paper gives exact data concerning the distribution of the kinetic energy of fragments in a triple fission. A double ionization chamber with a grid was used for the purpose of detecting the fragments and α-particles with long ranges. The apparatus and the measuring method are briefly described. These measurements were carried out in the neutron beam of a VVR-reactor. A diagram shows the distribution of the kinetic energy of the fragments in a triple fission. Altogether, 17,644 cases of

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triple fission were recorded. For purposes of comparison, also the distribution for double fission, which was measured under the same conditions, is given. Even if, in counting, the "geometric conditions 2π" are used, the areas of the two groups of fragments produced in a triple fission differ considerably from each other. The ratio of these surfaces for light and heavy fragments amounts to 0.82. The simple geometric conditions of this counting chamber permitted a reliable determination of the influence exercised by the angular distribution of long range α-particles upon the efficiency of fragment recording. The ratio between the recording probabilities for a light and a heavy fragment (in consideration of the angular distribution of α-particles with long focal distance) amounts to $P_{heavy} : P_{light} = 1.20$, which explains the observed difference between the areas. The third diagram shows the kinetic energy distribution of the fragments in the case of a triple fission in consideration of fragment recording. The most probable energies of the heavy and light fragments are less by 5.7 ± 0.5 and 0.1 ± 0.3 Mev

respectively than in the case of a double fission. This decrease in kinetic energy by 13.8 Mev can, however, not be explained by a decrease in the charge of the fragments due to the departure of an α-particle. The most probable value of the total kinetic energy liberated in a triple fission is less by 1 Mev than in double fission. On the basis of this result the authors evaluated the excitation energy of the fragments in triple and double fissions of U^{235} by thermal neutrons. Under the conditions made here the average excitation energy of fragments in triple fission must be lower by 5.87 Mev than in double fission. This also agrees well with the results obtained by V. F. Apalin on the number of secondary neutrons in the case of a triple fission of uranium. The half-widths of kinetic energy distribution in a triple fission are less by 1.1 ± 0.5 and 4.3 ± 1.0 Mev respectively than the corresponding half-widths in double fission. There are 3 figures and 8 references, 1 of which is Soviet.

The Distribution of the Kinetic Energy of the Fragments in the Triple Fission of U^{235} by Thermal Neutrons

SOV/89-7-4-10/28

SUBMITTED: May 4, 1959

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MOSTOVOY, V.I.; DIKAREV, V.S.; YEGIAZAROV, M.B.; SALTYKOV, Yu.S.

Measurement of neutron spectra in lattices of uranium - water and uranium - monoisopropylbiphenyl. Atom.energ. 13 no.6:547-555 D '62. (MIRA 15:12)

(Neutrons--Spectra) (Uranium) (Biphenyl)

ACCESSION NR: AP4006818 S/0120/63/000/006/0055/0060

AUTHOR: Mostovaya, T. A.; Mostovoy, V. I.; Osochnikov, A. A.; Tsitovich, A. P.

TITLE: Measurement of the mass distribution of heavy fission fragments using a pulse-amplitude analyzer

SOURCE: Pribory* i tekhnika eksperimenta, no. 6, 1963, 55-60

TOPIC TAGS: ionization chamber, pulse-amplitude analyzer, fission fragment, fission fragment mass, fragment, mass distribution, thermal neutron fission, heavy nucleus fission, thermal neutron, heavy nucleus, nuclear fission, fission

ABSTRACT: An instrument that can measure the height ratio of two pulses formed in an ionization chamber by fission fragments is described. Layers of fissionable material 10-15 microgr/cm^2 thick were placed on the central electrode of an ionization chamber filled with 95% Ar and 5% CO_2. The chamber

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ACCESSION NR: AP4006818

performance was checked by measuring the spectra of alpha particles and fission-fragment energy of an U^{235} layer. The pulse-height-ratio analyzer is based on recording pulses on a two-beam-tube screen operating as a memory tube. The recording beam is activated when the pulses reach their maximum height; the spiral-scanning readout beam measures the pulse-height ratio by a time difference between two appropriate pulses. The analyzer comprises a recording unit and a readout unit, both connected with the cathode-beam tube. One beam records two simultaneous fragment-generated pulses as a dot on the screen; the other beam reads the dot and sends information into the appropriate channel of the time analyzer, depending on the fragment-mass ratio. A frequency-and-amplitude-stabilized sine-wave RC-oscillator generates 1,300-1,500 cps for the readout scheme. The pulse-height-ratio analyzer can handle up to 30 pulses per sec. It was tested by measuring the fragment-mass distribution of U^{235} fission by thermal neutrons. The joint resolution of the ionization chamber with the analyzer, measured as a ratio of the peak-to-valley ordinates on the mass-yield curve, is found to be 330 ± 55. It can be improved by reducing

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ACCESSION NR: AP4006818

the energy loss in the layer and the backing, and by improving the characteristics of the linear amplifiers and the ratio analyzer. "V. A. Smolin took part in the early period of the project." Orig. art. has: 5 figures and 4 formulas.

ASSOCIATION: none

SUBMITTED: 19Nov62 DATE ACQ: 24Jan64 ENCL: 00

SUB CODE: NS, AS NO REF SOV: 002 OTHER: 006

Card 3/3

MOSTOVOY, V. I. et al.

"Experimental studies in neutron thermalization."

report presented at the 3rd Intl Conf, Peaceful Uses of Atomic Energy, Geneva, 31 Aug-9 Sep 64.

PASECHNIK, M. V.; BARCHUK, I. F.; VERTEBNYY, V. P.; VLASOV, M. F.; KOLOTIY, V. Y.; MAYSTRENKO, A. N.; MOSTOVOY, V. I.; NAZARCHUK, M. M.; PILIPETS, D. T.

"The parameters of the WWR-M reactor at the Inst of Physics, AS USSR and its application in nuclear physics research."

report submitted for 3rd Intl Conf, Geneva, Uses of Atomic Energy, Aug 71, 31 Aug-9 Sep 64.

MOSTOVOY, V. I.; DIKAREV, V. S.; YEREMEYEV, I. P.

"Experimental work on neutron thermalization."

report submitted for 3rd Int'l Conf, Peaceful Uses of Atomic Energy, Geneva, 31 Aug-7 Sep 64.

L 40828-65 EPA(s)-2/EWT(m)/EPF(c)/EPF(n)-2/EWG(m)/EPR/EWP(j) Pc-4/Pr-4/Ps-4/
Pu-4 RM/GS
ACCESSION NR: AT5007911 S/0000/64/000/000/0211/0235 40
B+1

AUTHOR: Mostovoy, V. I.; Sadikov, I. P.; Chernyshov, A. A.; Yeremeyev, I. P.

TITLE: Scattering of slow monochromatic neutrons on monoisopropylbiphenyl at 17 + or -2C

SOURCE: Moscow. Institut atomnoy energii. Issledovaniya po primeneniyu organicheskikh teplonositeley-zamedliteley v energeticheskikh reaktorakh (Research on the use of organic heat-transfer agents and moderators in power reactors). Moscow, Atomizdat, 1964, 211-235

TOPIC TAGS: organic reactor coolant, nuclear power plant, thermal reactor, power reactor, monochromatic neutron, organic moderator, neutron scattering, isopropylbiphenyl

ABSTRACT: The results of measurements of the cross sections of inelastic scattering of neutrons on monoisopropylbiphenyl at room temperature are presented. The purpose of this investigation was to determine the thermalizing properties of monoisopropylbiphenyl and to compare them with the thermalizing properties of water. The results are given in the form of graphs which represent the ratio of the second derivative of the cross section to the total scattering cross sections of free atoms, which are molecules of monoisopropylbiphenyl. In addition, the

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L 40828-65
ACCESSION NR: AT5007911

mean characteristics of neutron scattering on monoisopropylbiphenyl are also calculated. It is shown that the general character of scattering on monoisopropylbiphenyl is similar to that of scattering on water. The thermalizing capacity of monoisopropylbiphenyl, however, is less than that of water. The mean cosine for moniisopropylbiphenyl is also shown to lie considerably below that of water. The authors conclude by calculating the generalized frequency spectrum, which is also shown in a graph. On the whole, the energy of the generalized spectrum in moniisopropylbiphenyl is less than that in water. Orig. art. has: 44 figures, 2 tables and 4 formulas.

ASSOCIATION: None

SUBMITTED: 01Aug64 ENCL: 00 SUB CODE: NP

NO REF SOV: 001 OTHER: 013

Card 2/2

L 10829-65 EPA(s)-2/EWT(m)/EPF(c)/EPF(n)-2/EWG(m)/EPR/EWP(j)/EWP(t)/EWP(b)
Pc-4/Pr-4/Ps-4/Pu-4 IJP(c) JD/WW/JG/GS/RM
ACCESSION NR: AT5007912 S/0000/64/000/000/0236/0244

45
BH

AUTHOR: Dikarev, V. S.; Mostovoy, V. I.

TITLE: Measurement of the spectra of thermal neutrons in a uranium-monoisopropylbiphenyl lattice

SOURCE: Moscow. Institut atomnoy energii. Issledovaniya po primeneniyu organicheskikh teplonositeley-zamedliteley v energeticheskikh reaktorakh (Research on the use of organic heat-transfer agents and moderators in power reactors). Moscow. Atomizdat, 1964, 236-244

TOPIC TAGS: organic reactor coolant, thermal reactor, nuclear power plant, power reactor, thermal neutron, neutron spectrum heat transfer agent, isopropylbiphenyl, uranium reactor, organic moderator

ABSTRACT: The results of an investigation of the space-energy distribution of thermal neutrons in the core of a uranium-monoisopropylbiphenyl lattice at different temperatures are presented. A comparison is made between these results and the results obtained on a uranium-water lattice. Graphs are given showing the distribution of the neutron "temperature" through the core, the spectrum of neutrons in uranium, the spectrum of neutrons in the moderator, the spectrum of neutrons in uranium in a uranium-monoisopropylbiphenyl lattice, the spectrum of

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L 40829-65
ACCESSION NR: AT5007912

neutrons in the moderator in a uranium-monoisopropylbiphenyl lattice, and the dependence of the neutron "temperature" on the temperature of the medium. The results show that the neutron distribution in a uranium-isopropylbiphenyl lattice is essentially the same as in uranium-water lattice, and that the moderating effect of monoisopropylbiphenyl is essentially independent of the temperature. Orig. art. has: 7 figures and 5 formulas.

ASSOCIATION: None

SUBMITTED: 01Aug64 ENCL: 00 SUB CODE: NP

NO REF SOV: 005 OTHER: 001

Card 2/2

ACCESSION NR: AP4012258 S/0089/64/016/001/0003/0008

AUTHORS: Mostovaya, T. A.; Mostovoy, V. I.; Yakovlev, G. V.

TITLE: The probability of monochromatic neutron triple fission of U-235 in the energy region of 0.06-10 Ev.

SOURCE: Atomnaya energiya, v. 16, no. 1, 1964, 3-8

TOPIC TAGS: triple fission, heavy fragments, long-range particle, fission probability, double fission, argon, carbon dioxide, electron pulses, time analyzer, ionizing chamber, a-particles

ABSTRACT: A number of experiments have been made in recent years in the so-called triple nuclear fission, that is the fission into two heavy fragments and a long-range a-particle. An investigation into the triple fission is the slow neutron resonance region could produce additional information essential to an understanding of the triple fission process. The relationship between the triple fission probability of U-235 and the neutron energy was measured by the flight-time method in a linear electron accelerator at the Kurchatov institute of atomic energy. A device consisting of seven ionization

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ACCESSION NR: AP4012258

chambers was used to record the triple and double fission. It appears that the permissible levels in the double fission (0.282; 1.138; 3.6 and 8.8 ev) are manifested also in the triple fission. But the data produced by the measurements of the probable U-235 triple fission are contradictory. One of the reasons for that is that the longer the lifetime of the compound nucleus, the greater the probability of triple fission.

"In conclusion, we consider it our pleasant duty to thank M. I. Pevzner for offering the use of a linear accelerator to make the measurements, and for his useful discussion of the work. We are also thankful to A. S. Kolsanov and the group of accelerator operators for their assistance in the work."

Orig. art. has: 4 Figures, 1 Formula and 1 Table.

ASSOCIATION: Institut atomnoy energii im. I. V. Kurchatova (The I. V. Kurchatov institute of atomic energy)

SUBMITTED: 26May63 DATE ACQ: 14Feb64 ENCL: 00

SUB CODE: PH NR REF SOV: 005 OTHER: 012

Card 2/2

L 2283-66 EWT(m)/EPF(n)-2/EWA(h) DM

ACCESSION NR: AP5016927 UR/0089/65/018/006/0588/0593
621.039.519.22

AUTHORS: Tikhonov, A. N.; Arsenin, V. Ya.; Dumova, A. N.; Mayorov, L. V.; Mostovoy, V. I.

TITLE: New method of reconstruction of true spectra

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B

SOURCE: Atomnaya energiya, v. 18, no. 6, 1965, 588-593

TOPIC TAGS: neutron spectrum, neutron energy distribution, nuclear reactor characteristic, integral equation, Fredholm equation

ABSTRACT: The article presents two examples of the use of a new method of solving problems based on incomplete experimental data, which arise in the reduction of results of experiments on nuclear reactors. This method was developed by one of the authors (Tikhonov, DAN SSSR v. 149, 529, 1963) for Fredholm equations of the first kind. The first example considers the reconstruction of the true energy spectrum of epithermal neutrons in a uranium block of a reactor from the results of measurements with the aid of a mechanical selector.

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L 2283-66

ACCESSION NR: AP5016927

The second example is devoted to the calculation of the scalar energy flux of thermal neutrons in a heterogeneous lattice moderator, from measurements of the directional flux. The examples illustrate the possibility of solving some problems in reactor physics in which the experimentally obtained spectra are distorted because of shortcomings of the measurement apparatus or of the method. Orig. art. has: 4 figures and 9 formulas

ASSOCIATION: None

SUBMITTED: 15Jun64 ENCL: 00 SUB CODE: NP

NR REF SOV: 004 OTHER: 003

Card 2/2 DP

ACC NR: AT6012089 SOURCE CODE: UR/3136/65/000/977/0001/0016

AUTHOR: Ishmayev, S. N.; Mostovoy, V. I.; Nozik, V. Z.; Sadilov, I. P.; Chernyshov, A. A.; Yudevich, M. S.

ORG: State Committee on the Use of Atomic Energy SSSR, Institute of Atomic Energy im. I. V. Kurchatov, Moscow (Gosudarstvennyy komitet po ispol'zovaniyu atomnoy energii SSSR, Institut atomnoy energii)

TITLE: Study of nonstationary neutron spectra in zirconium hydride 19

SOURCE: Moscow. Institut atomnoy energii. Doklady, no. 977, 1965. Izucheniye nestatsionarnykh spektrov neytronov v gidride tsirkoniya, 1-16

TOPIC TAGS: neutron spectrum, zirconium compound, hydride, nuclear reactor moderator, scattering cross section

ABSTRACT: This is a continuation of earlier work (Report at the Symposium on Investigations with Pulsed Neutron Sources, Karlsruhe, 1965) dealing with the nonstationary spectra of $ZrH_{1.86}$ systems of different dimensions in a wide range of moderation times. In the present paper the experimental results are compared with calculations based on the use of double-differential cross sections calculated from the spectrum of the normal oscillations of the hydrogen atoms in the [illegible]

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L 39776-66
ACC NR: AT6012689

lattice with different ratios of the acoustic and optical branches. The time-dependent neutron spectra were measured with an experimental setup described by the authors earlier (Paper P/367 at the 1964 Geneva Conference; Paper at the Karlsruhe Symposium), with a moderation-time resolution of 3.5 μsec. The average neutron energy in the investigated moderation-time range ($T > 30$ μsec) turns out to be lower than the energy of the first optical level of the zirconium hydride (0.13 ev), so that the energy exchange between the neutron gas and the moderator is due essentially to excitation of the acoustic vibrations of the $ZrH_{1.8}$ lattice. The time necessary to establish the equilibrium spectrum is of the order of μsec in a "large" system (30 x 28 x 25 cm, $B^2 = 3.8 \times 10^{-2}$ cm^{-2}). In a "small" system (25 x 25 x 7 cm, $B^2 = 0.2$ cm^{-2}) strong diffusion cooling is observed, and the time necessary to establish the equilibrium energy distribution increases with decreasing system dimensions. The nonstationary neutron spectra were calculated in the P-1 approximation using a computer program described by L. V. Gapurov et al. (Paper P/360 at the Third Geneva Conference, 1964). The agreement between the calculations and the experiment is satisfactory. The best agreement between the measured and calculated spectra is obtained if it is assumed that the amplitudes of the acoustic and optical vibrations in $ZrH_{1.88}$ have a ratio 1/300. Orig. art. has: 3 figures, 2 formulas, and 2 tables.

SUB CODE: 18/ SUBM DATE: 00/ ORIG REF: 002/ OTH REF: 009

Card 2/2 mlf

BURDE, A.I.; MOSTOVOY, V.K.

Structural-facies zones in the middle part of the main synclinorium of the Sikhote-Alin' Range. Geol. i geofiz. no.4:164-168 '65. (MIRA 18:8)

. Yuzhno-Primorskaya ekspeditsiya, g. Vladivostok.

MOSTOVOY, V.M.; PAZNIKOV, I.M.

Effect of the inclination angle of main cutting edge on the deformation of chips. Izv.TPI 85:281-287 '57. (MIRA 10:12)

1.Predstavleno prof. doktorom tekhn.nauk A.M. Rozenbergom.
(Metal cutting)

NEKRICH, M.I.; MOSTOVOY, Ya.P.

Glass and ware from soda slag. Steklo i Keram. 9, No.4, 9 '52. (MLRA 5:5)
(CA 47 no.18:9580 '53)

[illegible], [illegible]; [illegible]
DZHIN[illegible], [illegible]

Using refractory [illegible] for [illegible] the [illegible] of a slag-melting tank furnace. [illegible] 29 [illegible]

.. Sovet narodnogo khozyaystva Gruzinskoy SSR (for [illegible]). [illegible] skiy zavod mineralovatnykh izdeliy (for Loksadze, [illegible]), (Chirunadze). 3. [illegible] gosudarstvennyy [illegible] skiy institut [illegible] [illegible]).

L 3209-66 EWT(d)/EWT(m)/EWP(w)/EA/EA(b)/EWP(v)/T-2/EWP(k)/EWP(h)/EWA(h)/ETC(m)
ACCESSION NR: AP5013027 WW/EM UR/0084/65/000/005/0029/0029

AUTHOR: Mostovoy, Yu. (Engineer)

TITLE: Aviation of tomorrow

SOURCE: Grazhdanskaya aviatsiya, no. 5, 1965, 29

TOPIC TAGS: jet aircraft, STOL aircraft, VTOL aircraft, helicopter, aeronautic engineering

ABSTRACT: Modern jet airliners have shortened transatlantic flying time from 14 to 7 hours. By 1970, the supersonic airliner may again reduce the flying time by one-half. It is expected that long-range passenger transports of the future will fly at speeds of up to 3000 km/hr. Further increases in cruising speed appear unjustified in view of the fact that the time required for loading passengers, takeoff, reaching altitude, descending, and landing would remain essentially unchanged.

According to statistics, the ratio of overall load (payload plus fuel) to takeoff weight (weight loading factor) increases only to a certain point. In

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the case of turboprop engines, for example, the weight loading factor increases much faster within the takeoff weight increments of 15 to 45—50 tons than it does within the 50—80 ton increments. A further increase in takeoff weight results in a lower weight loading factor, which means that a larger fraction of the thrust must be diverted to overcome drag.

It is apparent that an increase in tonnage and speed greatly complicates the takeoff and landing problem. Longer runways surfaced with thick pavement will be needed along with stronger tires to withstand the increased pressure exerted upon the wheels during high-speed landings.

There are several ways of solving the landing problem: arresting gear, liquid-cooled brakes, ceramic brake shoes, etc. The takeoff problem is much more difficult. One way of solving it for supersonic aircraft is by using a variable-geometry design. Another approach involves the building of VTOL aircraft.

Different methods can be used to generate vertical thrust, e.g., pivoting the engines or the wing to a 90° angle relative to the horizon, mounting the fuselage vertically, using ducted fans mounted in the wing, and special wing

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ACCESSION NR: AP5013027

6

mechanics. The Soviet AN-14 ("Pchelka") light-weight airplane is an example of an STOL aircraft. Designed by O. K. Antonov, this airplane needs 45 m of runway for takeoff and 65 m for landing. 44 55

Another type of aircraft which has lately been the subject of continuing development is the helicopter. To make the helicopter competitive with VTOL aircraft, the most pressing requirements include a higher thrust-to-drag ratio, greater horizonal speed, and a wider range of operation. The horizontal speed record, 358 km/hr, is said to have been set in 1964 by the Soviet-built Mi-6 helicopter.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: AC

NO REF SOV: 000 OTHER: 000 ATD PRESS: 3254-F

GC

Card 3/3

L 11496-67 EWT(m) IJP(c)
ACC NR: AP6031256 SOURCE CODE: UR/0057/66/036/009/1523/1535

AUTHOR: Budker,G.I.; Medvedev,P.I.; Mostovoy,Yu.A.; Nozhovenko,O.A.; Nolidov,A.B.; Ostreyko,G.N.; Panasyuk,V.S.; Samoylov,I.M.

ORG: none

TITLE: The BSB iron-free single turn synchrotron

SOURCE: Zhurnal tekhnicheskoy fiziki, v.36, no. 9, 1966, 1523-1535

TOPIC TAGS: electron accelerator, synchrotron

ABSTRACT: This paper is concerned with the type BSB iron-free single turn synchrotron developed at the IYaF CO AN SSSR for injection of up to 180 MeV electrons into a storage ring. A general description of the machine has been given elsewhere by Ye.A. Abramyan and 22 other authors (Transactions of the International Conference on Accelerators, Dubna, 1963, p.1065, Atomizdat, M., 1964). In the present paper certain features of the accelerator are described in somewhat more detail, including the magnet, the magnet power supply, and the injector, and the adjustment of the machine is discussed. The magnet winding consists of two concentric duralumin rings between which the beam circulates. The outer ring is capable of withstanding a magnetic pressure of 50 atm, and the geometry is such that the inner ring is in equilibrium under the magnetic forces, being subjected only to a hydrostatic pressure. The magnet is powered by a 0.045 F capacitor bank charged to 10 kV. The maximum magnet current is about

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ACC NR: AP6031256

10^6 A, corresponding to an electron energy of 180 MeV. There are two auxiliary capacitor banks which are discharged at selected phases of the cycle to control the time dependence of the magnetic field. Injection of 600 kV electrons is accomplished during a single revolution of the captured electrons. The discharge of the auxiliary and main capacitor banks is so timed that the field is approximately constant during injection. The rf accelerating voltage is frequency modulated from 103.5 to 116 MHz, and is applied to the beam with the aid of a single resonator with a Q of 200. Some difficulties were encountered in the adjustment of the machine, but none that could not be overcome. It was possible to inject about 1.2 A of 600 kV electrons into the approximately constant field, and to accelerate some 20 % of the injected electrons. The maximum beam current was found to be limited by longitudinal space charge effects (the negative mass effect), rather than by transverse space charge effects. It is suggested that higher currents might be achieved with a strong focusing iron-free pulsed machine. The authors thank A.A.Naumov for his interest and discussion, A.A. Fedchenko for organizing the fabrication of the main parts of the accelerator, and A.I.Kordyukhin, A.A.Ivshitn, and P.G.Kharchenkov for participating in the development of certain parts of the accelerator. Orig. art. has: 3 formulas and 6 figures.

SUB CODE: 20/ SUBM DATE: 27Sep65/ ORIG REF: 009/ OTH REF: 001

Card 2/2 bib

YEROZOLIMSKIY, B.G.; BONDARENKO, L.N.; PRIKHOD'KO, V.P.; MOSTOVOY, Yu.A.; SHEVCHENKO, A.K.; MATVEYEV, Yu.G.

Generator of single nanosecond high-voltage pulses. Prib. i tekh. eksp. 8 no.2:93-97 Mr-Ap '63. (MIRA 16:4)

1. Institut yadernoy fiziki Sibirskogo otdeleniya AN SSSR.
(Oscillators, Electron-tube)

ACCESSION NR: AP4033103 S/0120/64/000/002/0039/0042

AUTHOR: Yerozolimskiy, B. G.; Mostovoy, Yu. A.; Obinyakov, B. A.

TITLE: Errors in measuring slow-neutron-beam polarization by the shim method

SOURCE: Pribory* i tekhnika eksperimenta, no. 2, 1964, 39-42

TOPIC TAGS: neutron, slow neutron, neutron polarization, shim neutron, polarization measurement

ABSTRACT: Methodic errors of shim polarization measurements are discussed. Results of experiments which permitted a direct evaluation of the shim-introduced disturbance are reported. Tests were conducted in a neutron beam with an intensity of 2×10^6 neutr/sec of an IRT-1000 reactor; an 85%-polarized beam was obtained by reflection from a 110 x 220-mm cobalt mirror. By placing a cadmium slot instead of the shim, a beam was shaped and directed to a slot-type detector. The variation in the counting rate, upon introducing the shim, was determined by

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ACCESSION NR: AP4033103

the loss of neutrons due to small-angle scattering. The degree of polarization was measured by (a) the counting rate in the maximum second-reflection beam and (b) the beam shape (narrow slot) and integration of all neutrons reflected from the analyzer. An evaluation of error in the general case is found to be impractical since it depends on the imperfection of the mirrors, insufficient magnetization of the cobalt surface, depolarizing fringe effects, etc. Orig. art. has: 2 figures and 6 formulas.

ASSOCIATION: none

SUBMITTED: 01Jun63 DATE ACQ: 11May64 ENCL: 00

SUB CODE: NS NO REF SOV: 003 OTHER: 001

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L 4237-66 EWT(m)/EPA(w)-2/EWA(m)-2 LJP(c) OS

ACCESSION NR: AT5007979 S/0000/64/000/000/1065/1072

AUTHOR: Abramyan, Ye. A.; Bender, I. Ye.; Bondarenko, L. N.; Budker, G. I.; Glagolev, G. B.; Kadymov, A. Kh.; Meshkov, I. N.; Naumov, A. A.; Pal'chikov, V. Ye.; Panasyuk, V. S.; Popov, S. G.; Protopopov, I. Ya.; Rodionov, Yu. I.; Samoylov, I. M.; Skrinskiy, A. N.; Yudin, L. I.; Kon'kov, N. G.; Mostovoy, Yu. A.; Nezhevenko, O. A.; Ostreyko, G. N.; Petrov, V. V.; Sokolov, A. A.; Timoshin, I. Ya.

TITLE: Work on the strong-current accelerators of the Nuclear Physics Institute, SO AN SSSR. (I) Strong-current pulse accelerators with spiral storage of the electrons. (II) Strong-current accelerators with one-revolution capture of the injected electrons

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963. Trudy. Moscow, Atomizdat, 1964, 1065-1072

TOPIC TAGS: high energy accelerator, electron accelerator, electron beam, betatron, plasma

ABSTRACT: The work on developing strong-current electron ring accelerators was begun in 1965 by the authors at the Nuclear Physics Institute, Siberian Department, Academy of Sciences SSSR, with the object of studying the possibility of

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ACCESSION NR: AT5007979

forming relativistic stabilized beams. In the laboratories of the Institute experimental studies were carried out on the four methods for obtaining large ring currents of relativistic electrons: (1) spiral method of storing the electrons in installations of the betatron type with subsequent betatron synchrotron acceleration (Budker G. I. CERN Symposium 1, 68 (1956); (2) obtaining of limiting electron currents by means of the injection of electrons from a strong-current linear accelerator into a ring chamber of large aperture with subsequent synchrotron acceleration; (3) storage of electrons in tracks (parking orbits) with constant magnetic field by means of the multiple injection of electrons from another less strong-current accelerator; this method is utilized for the storage of electrons and positrons in experiments with colliding beams (expounded in detail by G. I. Budker in the present collection, p. 274); (4) obtaining of large electron currents by means of the acceleration of electrons by a ring plasma. The present report discusses the first two methods under the following topics: (I) pulsed iron-less betatron with preliminary charge storage (B-2 device); strong-current pulsed synchrotron B-2S; pulsed strong-current betatron with spiral storage (B-3 device). (II) iron-less one-turn strong-current synchrotron (BSB); strong-current pulsed synchrotron B-3M. Orig. art. has: 7 figures.

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L 4237-66
ACCESSION NR: AT5007979

ASSOCIATION: Institut yadernoy fiziki SO AN SSSR (Nuclear Physics Institute, SO AN SSSR)

SUBMITTED: 26May65 ENCL: 00 SUB CODE: NP.

NO REF SOV: 001 OTHER: 001

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L 47071-65 EWT(m)/EWA(h)

ACCESSION NR: AP5007022 S/0120/65/000/001/0050/0051

AUTHOR: Yerozolimskiy, B. G.; Mostovoy, Yu. A.; Obinyakov, B. A.

TITLE: Direct method for measuring the polarization of a slow-neutron beam

SOURCE: Pribory i tekhnika eksperimenta, no. 1, 1965, 50-51

TOPIC TAGS: neutron beam, neutron beam polarization, slow neutron

ABSTRACT: The effect of a neutron-beam division in a strong magnetic field (F. Sherwood et al., Phys. Rev., 1954, 96, 1546; H. G. Hasler et al., At. Energy, 1962, 5, 170) was used for higher-accuracy measurement of the beam polarization. By measuring the intensities of the divided beam components, the polarization could be determined with an accuracy limited only by statistical errors. In an actual experiment, a neutron beam reflected from a polarizing mirror had a horizontal divergence of ± 0.4'; passed through a strong-magnet gap with an 8-koe field, the beam was definitely divided (deflected by 0.8'). The degree of polarization was measured as 80 ± 1.5%. Orig. art. has: 2 figures and 1 formula.

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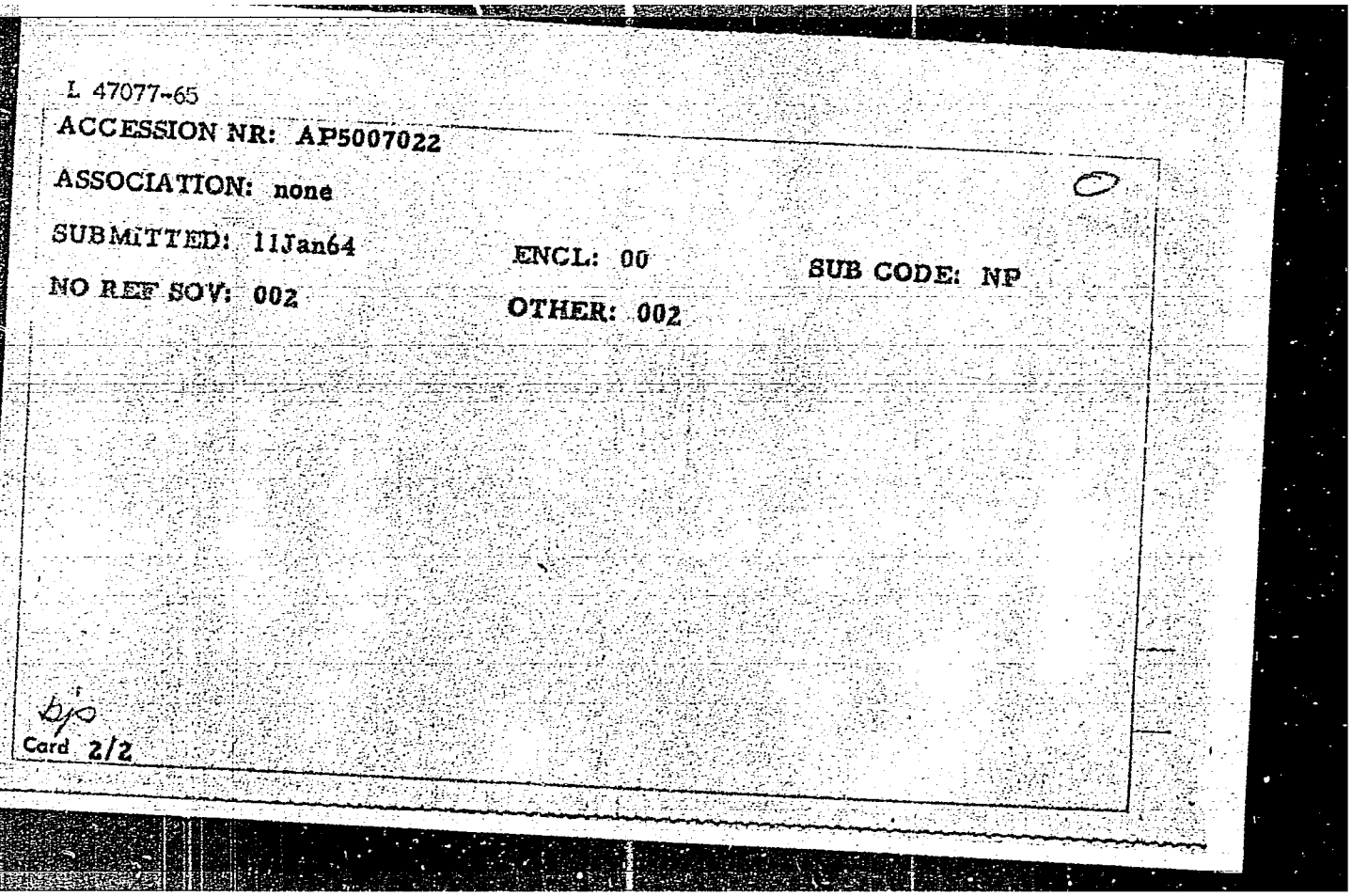

L 47077-65

ACCESSION NR: AP5007022

ASSOCIATION: none

SUBMITTED: 11Jan64 ENCL: 00 SUB CODE: NP

NO REF SOV: 002 OTHER: 002

Card 2/2

ACC NR: AP6031259 SOURCE CODE: UR/0057/66/036/009/1550/1559

AUTHOR: Mostovoy, Yu. A.; Samoylov, I.M.; Sokolov, A. A.

ORG: None

TITLE: Single-revolution injection system of the BSB iron-free synchrotron

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 9, 1966, 1550-1559

TOPIC TAGS: electron accelerator, synchrotron, electron injection, spark gap, nanosecond pulse

ABSTRACT: The authors discuss the injection system employed in the BSB iron-free electron synchrotron described elsewhere by G.I.Budker et al. (ZhTF 36, 1523, 1966/ see Abstract AP6031256/). In this machine injection is accomplished during a single revolution of the electrons in the 41 cm radius orbit. Single-revolution injection was adopted because the efficiency of many-revolution injection is low in small machines in which the decrease per revolution of the radius of the instantaneous orbit is small. With single-revolution injection, on the other hand, it is in principle possible to capture practically 100% of the injected particles and to reduce the amplitude of the residual betatron oscillations to zero by proper design and positioning of the inflector. The conditions to be satisfied by the inflector for maximum capture efficiency are derived in an appendix; one such condition is that the traject-

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ory of the injected particles in the absence of the inflector be tangent to the equilibrium orbit at the center of the inflector. In the present machine the inflector is excited by up to 50 kV square pulses of 5 microsec duration applied through a pulse transformer. At the close of the 10 nanosec injection period the inflector is short circuited by the breakdown of two gaps, the breakdown being initiated by a trigger pulse applied to a third electrode in each gap. The design of these gaps, which should be useful for other applications, is discussed in detail in an appendix. The scatter in the breakdown time of these gaps ranged from 2 nanosec to less than 1 nanosec, depending on the height of the trigger pulse. Measurements on a 70 keV injected beam showed that at least 70 % of the injected electrons were captured in an equilibrium orbit and that the amplitude of the betatron oscillations of 50 % of the captured electrons was less than 2 cm. Analogous measurements at the operating injection energy of 600 keV could not be made because of noise from the injector. It is concluded that single-revolution injection is entirely feasible for accelerators in which the period of the equilibrium orbit is as short as 5 nanosec. The authors thank G.I. Budker and A.A. Naumov for their interest in the work, and P.I. Medvedev, V.N. Sachavelin, and M.Ya. Rogutskiy for their participation in the development of different parts of the inflector system.

SUB CODE: 20/ SUBM DATE: 27Sep65/ ORIG REF: 005/ OTH REF: 000

COUNTRY : USSR
CATEGORY : Pharmacology, Toxicology. Chemotherapeutic Preparations. Anthelmintnic Substances
ABS. JOUR. : RZhBiol., No. 12 1958, No. 56842
AUTHOR : Kostovskaya, ..A.
INST. : -
TITLE : A Method of Dehelmintnization of Tapeworms

ORIG. PUB. : Sov. Zdravookhr. Kirgizii, 1957, No.1, 54-55

ABSTRACT : 56 patients with tenia infestation were treated with acriquine (I; 0.8 gm), extract of male fern (II; 3 gm), and I and II. Treatment with I produced a therapeutic effect in 14.3 of patients. Treatment with II gave a therapeutic effect in 33.3 of patients. Combined treatment was effective in 45.4% of patients when II was given 1 hour after the administration of I and in 61.5% of patients when II was given 30 minutes after administration of I. -- F.G. Sivashinskaya

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AUTHORS: Mostovskiy, A. I., Vorob'yeva, O. B., Mayskaya, K. A. 48 22 5-11/22

TITLE: Some Properties of Poly-Alkali Photocathodes (Nekotoryye svoystva mnogoshchelochnykh fotokatodov) (Data From the VIIIth All-Union Conference on Cathode Electronics, Leningrad, October 17-24, 1957)(Materialy VIII Vsesoyuznogo soveshchaniya po katodnoy elektronike, Leningrad, 17-24 oktyabrya 1957 g.)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1958, Vol. 22, Nr 5, pp. 561-565 (USSR)

ABSTRACT: In the last years several types of efficient photocathodes appeared; of them bismuth-silver-cesium photocathodes have already obtained far-reaching application in engineering. Their properties have been investigated to a great degree. Less known are the photocathodes mentioned in the title, which came out 2 years ago (Ref. 1, 2). In this work their properties are described on the basis of proper investigations. Production methods are discussed and a comparison with the photocathodes known until now, which mainly were antimony-cesium photocathodes, is made. The working of an antimony layer first by potassium, then by

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Some Properties of Poly-Alkali Photocathodes (Data From the VIIIth All-Union Conference on Cathode Electronics, Leningrad, October 17-24, 1957)

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sodium or cesium has proved to be the most effective one By replacement of potassium by lithium no advantage is obtained. The dosage of the alkali metals is essential Spectral characteristics are given by fig 1. Fig 2-4 show the change of the optical properties on occasion of a consecutive working of antimony by alkali metals As can be seen from the here given curves the treatment by sodium after potassium leads to a noticeable alteration not only of the spectral sensitivity but also of the optical properties. As the figures show, the value of the "external" work function after the cesium treatment changes by o 5 - 1,4 eV while the "internal" work function remains unchanged The variation of the magnitude of the potential barrier at the boundary photocathode- a vacuum can be obtained not only by a treatment by cesium but also by a sensitisation by oxygen. As a rule the latter method was dropped If such a sensitisation was necessary the dark currents considerably increased and one of the main advantages of this photocathode was lost. Further properties of the photocathodes under discussion are described Only preliminary data on the stability are present According to them the fatigue of these pho-

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Some Properties of Poly-Alkali Photocathodes. (Data From the VIIIth All-Union Conference on Cathode Electronics, Leningrad, October 17-24, 1957)

48-22-5 11/12

cathodes is relatively low (fig. 7). The production method still could be simplified considerably. In the production of specimen- and test-devices V. I. Safronova and L. I. Biserkina took part. In the discussion on the abstract V. S. Gusel'nikov Shcheglov and the first author participated. There are 7 figures and 3 references, 1 of which is Soviet.

1. Cathodes (Electron tubes)--Materials 2. Cathodes (Electron tubes) --Production 3. Cathodes (Electron tubes)--Properties 4. Alkali metals--Applications

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