MATUSEVICH, V., doktor veterin.nauk

Improved manure reservoir. Sil'. bud. 12 no.8:15-16 Ag '62.
(MIRA 15:9)

(Fertilizers and manures—Storage)

MATUSEVICH, V.P., doktor veterin.nauk; FEKLISTOV, M.N., kand.veterin.nauk;
ROZHDESTVENSKIY, V.A., kand.biolog.nauk

Characteristics of stachybotryotoxicosis in cattle. Veterineriia
39 no.9:23-25 S '62.   (MIRA 16:10)

MATUSKVICH, V.F., dokter veterir. nauk, prof.

Role of the p^H of rumen contents in the development of
stachybotryotoxicosis in cows. Veterinariia 38 no.4:49-50
Ap '61
(MIRA 18:1)

1. Kamenets- · Podol'skiy sel'skokhozyaystvennyy institut.

MATUSEVICH, V.F., doktor veterin. nauk, prof.

Role of the Piryatin (biothermal) pit in the maintenance of
veterinary and sanitary order on farms. Veterinariia 38 no.3:
74-75 Mr '61   (MIRA 18:1)

1. Kamenets-Podol'skiy sel'skokhozyaystvennyy institut.

LEBEDEV, P.T.; USOVICH, A.T.; CHEPUROV, K.P., prof.; KAL'CHENKO, M.M.,
aspirant; MATUSEVICH, V.F., doktor veterin. nauk; STEN'KO, A.S.,
mladshiy nauchnyy sotrudnik; LAKHMYTKINA, A.N., aspirant;
GRISHCHENKO, N.F.; ORLOV, A.I., veterinarnyy vrach (Arkhangel'-
skaya obl.); PROSTYAKOV, A.P., kand. biolog. nauk; KOVYNDIKOV,
M.S., kand. veterin. nauk; ARIFDZHANOV, K.A., kand. veterin. nauk

Veterinary experiments. Veterinariia 41 no.4:101-111 Ap '64.
(MIRA 17:8)
1. Sibirskiy nauchno-issledovatel'skiy veterinarnyy institut
(for Lebedev, Usovich). 2 Poltavskiy sel'skokhozyaystvennyy
institut (for Chepurov, Kal'chenko). 3. Ukrainskiy nauchno-
issledovatel'skiy institut zemledeliya (for Matusevich, Sten'ko,
Lakhmytkina). 4. Chernigovskaya oblastnaya veterinarnaya labora-
toriya (for Grishchenko). 5. Ukrainskiy nauchno-issledovatel'-
skiy institut eksperimental'noy veterinarii (for Prostyakov,
Portushnyy, Kovyndikov). 6. Uzbekskiy nauchno-issledovatel'skiy
veterinarnyy institut (for Arifdzhanov).

UDODOV, Pavel Afanas'yevich, prof.; MATUSEVICH, Vladimir Mikhaylovich; GRIGOR'YEV, Nikolay Vladimirovich

[Hydrogeochemical prospecting under conditions of partly covered geological structures in the Tom'-Yaya interfluve] Gidrogeokhimicheskie poiski v usloviiakh poluzakrytykh geologicheskikh struktur Tom'-IAiskogo mezhdurech'is. Tomsk, Izd-vo Tomskogo univ., 1965. 200 p.
(MIRA 18:7)

TELEPNEVA, A.Ye.; AVERBUKH, T.D.; BLINOVA, N.P.; MATUSEVICH, V.S.; SHCHELKUNOVA, N.V.; BASHKIROVA, Ye.M.

Processing of waste thiosulfate liquors produced in the removal of hydrogen sulfide from gases. Koks i khim. no.12:40-44 '60.
(MIRA 13:12)

1. Ural'skiy nauchno-issledovatel'skiy khimicheskiy institut (for Bashkirova).
(Sewage—Purification)   (Sodium thiosulfate)

VINITSKIY, L.Ye.; BABITSKIY, B.L.; Prinimal uchastiye: MATUSEVICH, V.V.

Some characteristics of sound reflexion by shock absorber
rubbers. Kauch. i rez. 22 no.6:78-39 Je '63.
(MIRA 16:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut shelezno-
dorozhnogo transporta.
(Rubber goods—Acoustic properties)

VINITSKIY, L.Ye.; BABITSKIY, B.L.; Prinimal uchastiye: MATUSEVICH, V.V.

Some characteristics of sound reflextion by shock absorber
rubbers. Kauch. i rez. 22 no.6:38-39 Je '63.
                                              (MIRA 16:7)
1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhelezno-
doroshnogo transporta.
          (Rubber goods—Acoustic properties)

MATUSEVICH, YA. Z.

25207. MATUSEVICH, YA.Z. Vitaminoterapiya Pri Promyshlennykh Otavleniyakh. Trudy
Leningr. San-Gigien. Med, In-ta T. I. 1949. S, 113-26.

SO: Letopis' No. 33 1949

MATUSEVICH, YA. Z.   AGAPITOVA, A. S.

25208. MATUSEVICH, YA. Z.   AGAPITOVA, A. S.   Rol' Adaptometrii V Diagnostike
Promyshle nykn Otravleniy. Trudy Leningr. San-Gigien, Med. In-ta.T. I 1949 S. 163-74

SO: Letopis' No. 33, 1949

MATUSEVICH, YA. Z.

27913. MATUSEVICH, YA. Z. — Vitaminoterapiya pri promyshlennykh otravleniyakh.
Trudy XIII vsesoyuz. S"yezda terapevtov. L., 1949, S. 477-84.
Ob alkaloidakh salsola richteri. (Soobshch.) S. - Sm. 27624. RODIONENKO, G. I.
"Yadovityy plyushch." — S". 27665.

SO: Letopis' Zhurnal'nykh Statey. Vol. 37, 1949.

MATUSEVICI, Z.. Z.

37591.   Ekspertiza stoykoy netrudosposotnosti pri yazvennoy bolezni v poslevoen.yy
          period. Sov. Vracheb. sbornik. Vyp. 17, 1949, S. 30-33 Bibliogr: 8 .. ..

SO: Letopis' Zhurnal'nykh Statey, Vol. 37, 1949

MATUSEVICH, Ya.Z., professor.

Vitamin therapy in occupational intoxications. Trudy LSGMI 14:
49-61 '53.   (MIRA 7:9)
        (Vitamin therapy) (Industrial toxicology)
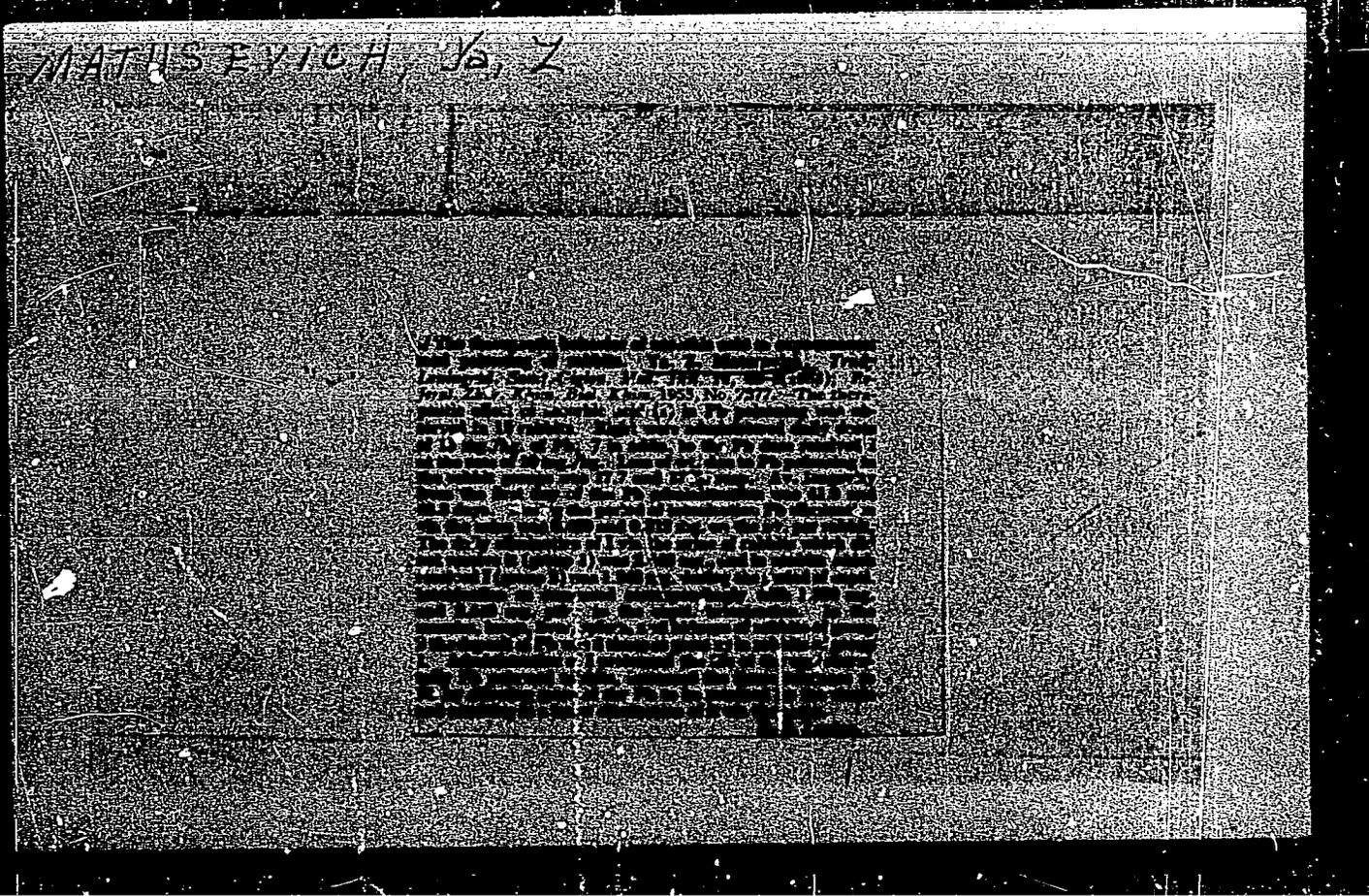
Matusevich, Ya. Z.

' USSR/Safety Engineering. Sanitary Engineering. Sanitation.   L.

Abs Jour: Ref Zhur-Khimiya, No 3, 1957, 10722

Author : Matusevich, Ya. Z., Agapitova, A. S., and Mikhaylova, T.G.
Inst   : Leningrad Medical Institute for Health and Sanitation
Title   : The Clinical Picture of Silicosis and Silicotuberculosis
          in Workers Employed in Porcelain Factories

Orig Pub: Tr. Leningr. san.-gigien. med. in-ta, 1955, Vol 21,
          20-26

Abstract: The medical examination of 360 workers in the porcelain
          industry between the ages of 30-50 and over with
          lengths of service varying from 5-10 years and over re-
          vealed cases of hypertrophic and atrophic rhinitis, rhino-
          pharyngitis, chronic catarrhal and purulent otitis, ton-
          sillitis, and pharyngolaryngitis as well as sclerotic
          processes which cause changes in the mucous membrane of
          the upper respiratory tract and bring about its progres-
          sive atrophy. A small thickening of the septum of the
          heart was also observed together with dystrophic changes

Card 1/2

USSR/Safety Engineering. Sanitary Engineering. Sanitation.   L

Abs Jour: Ref Zhur-Khimiya, No 3, 1957, 10722

Abstract: in the myocardium. Electrocardiographic investigations
           have shown that the age and past medical history of the
           patient are reflected in the electrocardiogram. X-ray
           and laboratory investigations shewed chronic cases of
           hyperacidic gastritis. In cases of neglected silicosis
           the patients were observed to suffer from sclerosis and
           and atrophic changes in the intestinal tract; changes
           in the overall immunobiological activity of the organism
           were also observed.

Card 2/2

SOV/89-5-4-10/24

AUTHORS: Kazanskiy, Yu. A., Belov, S. P., Matusevich, Ie. S.

TITLE: Angular- and Energy Distribution of γ-Rays Scattered by Iron
              and Lead (Uglovyye i energeticheskiye raspredeleniya
              γ-izlucheniya, rasseyannogo v zheleze i svintse)

PERIODICAL: Atomnaya energiya, 1958, Vol 5, Nr 4, pp 457-459 (USSR)

ABSTRACT: Measurements were carried out on the angular- and energy dis-
              tribution of Co^{60} and Au^{198} γ-radiation which had been scat-
              ed by lead with $\mu_o r$ = 2,2; 4,1; 5,3; 8,2 and iron with $\mu_o r$
              4, 6, 8,5, and 9,8 (μ_o denotes the absorption coefficient of
              γ-radiation and r - thickness of the filter). Measurement took
              place in semi-infinite geometry.
              For measurements the scintillation spectrometer (CsJ(Tl)-
              crystal: diameter 30 mm, height 27 mm) was used.
              Measurements were carried out at the following angles θ: 10,
              20, 30, 40, 50, and 60°.
              The angular distributions obtained are plotted in graphs. The
              results obtained by the present paper and the papers of ref-

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SOV/69-_-4-10/24

Angular- and Energy Distribution of γ-Rays Scattered by Iron and Lead

erences 1 - 3 permit the following conclusions to be drawn:
The angular distribution of the intensity of the scattered
γ-rays depends only little upon the thickness of the layer of
the scattered medium (up to a thickness of layer of 10 free
lengths of path). This determination holds for materials with
small as well as with medium or large Z (concrete, iron, lead)
within the γ-energy domain of from 0,4 to 1,5 MeV.
S. G. Tsypin and V. I. Kukhtevich advised the authors in
working out this paper, and S. I. Chubarov and V. I. Popov as-
sisted in carrying out experiments. There are 6 figures and
4 references, 1 of which is Soviet.

SUBMITTED: April 15, 1958

80291

S/170/60/003/04/23/027

B007/B102

?1.5200

AUTHORS: Kukhtevich, V. I., Matusevich, Ye. S., Shemetenko, B. P., Trykov, L. A.

TITLE: Dose Characteristics of Ionization Chambers and of Large Scintillation Crystals

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1960, Vol. 3, No. 4, pp. 125-126

TEXT: The present paper describes the measurement of the I/D ratios in the range
of from 0.08-2.0 Mev for ionization chambers the dimensions of which are
comparable with the path of secondary electrons (produced by γ-rays) in air, for
organic scintillation crystals (which absorb primary γ-radiation considerably),
and for a terphenyl crystal. I/D stands for the ratio between detector indication
and the dose produced in the place of the detector by γ-radiation of different
intensity. The method employed is briefly described, the results of measurement
are diagrammatically shown in Fig. 1. This diagram shows that the "large" air
chambers with air-equivalent walls are dosimetric with sufficient accuracy in the
energy range investigated. The I/D curves of small and large crystals agree well
with each other with respect to their shape. There are 1 figure and 2 references,

Card 1/2

ORLOV, V.V., kand. fiz.-mat. nauk, red.; TSYPIN, S.G., kand. fiz.-mat. nauk, red.; KAZANSKIY, Yu.A.[translator]; KUKHTEVICH, V.I. [translator]; MATUSEVICH, Ye.S. [translator]; NIKOLAYSHVILI, Sh.S. [translator]; SINITSYN, B.I. [translator]; YUS, S.V. [translator]; VISKOVA, M.V., red.; RYBKINA, V.P., tekhn. red.

[Protection of transportation units having nuclear engines; translated articles] Zashchita transportnykh ustanovok s iadernym dvigatelem; sbornik perevodov. Moskva, Izd-vo inostr. lit-ry, 1961. 619 p.

(MIRA 14:12)

(Radiation protection) (Nuclear reactors—Safety measures)

ACCESSION NR: AT4019059   S/0000/63/000/000/0251/0260

AUTHOR: Dulin, V. A.; Kazanskiy, Yu. A.; Matusevich, Ye. S.

TITLE: Experimental methods for the study of shielding (radiation detector)

SOURCE: Vo, rosy* fiziki zashchity* reaktorov; sbornik statey (Problems in physics of
reactor shielding; collection of articles). Moscow, Gosatomizdat, 1963, 251-260

TOPIC TAGS: nuclear reactor, reactor shielding, scintillation counter, radiation dosimetry,
relative biological effectiveness, Monte Carlo method, radiation shielding, radiation detector,
neutron spectrum, Gamma ray spectrum, neutron distribution, Gamma ray distribution,
radiometry

ABSTRACT: The authors call attention to the need for the study not only of the total
radiation dosage behind the shielding, in connection with the development of nuclear power,
but also of its more detailed characteristics (e.g., the spatial and energy distribution of the
neutrons and gamma-rays in the shielding, the angular and energy distribution of the neutrons
and gamma-rays on the surface of the shielding, etc.). At the present time, practically all
the modern means of radiation recording are used to investigate the spatial, energy and

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ACCESSION NR: AT4019059

angular distributions of penetrating radiation in the shielding. The various requirements levied on sensors of ionizing radiation are reviewed. The point is made that in the problem of the passage of radiation within shielding, exhaustive information is contained in the angular energy distribution at each point in space with different geometries, the anisotropy functions and the energy levels of the radiation sources. It is noted that for the development of computation methods, comparatively incomplete information such as the spatial distribution of the dosage of gamma-rays and neutrons in the shielding, the behavior of neutron streams having energy levels above a certain threshold, the angular distribution of streams of gamma-rays and neutrons on the surface of the shielding, etc. is of extremely great value in that it permits the application, when studying shielding, of very simple but nonetheless effective methods involving the use of dosage and fission chambers, threshold indicators and the like. The measurement of integral characteristics is considered with special attention to the problems of gamma-ray and neutron dosage determination The use of miniature ionization chambers is discussed and their characteristics are described. Dosimetric instruments, including scintillation counters, are analyzed in the light of their expectable performance in typical applications. A fundamental shortcoming of such devices

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ACCESSION NR: AT4019059

is shown to be their inability to measure gamma-ray doses when neutrons are present.
The method of pulse amplitude summing as a technique for enhancing the operational pro-
perties of the scintillation dosimeter is described. The fiber-equivalent polyethylene
proportional detector (for neutron dosage measurements) is described and its operational
principle analyzed. The concept of the "relative biological effectiveness" of neutrons as a
function of their energy is discussed, and the difficulties encountered in its precise measure-
ment are outlined. A section of the article is devoted to the measurement of neutron
streams, in which it is pointed out that the technology of measuring the spatial distributions
of such streams in the shielding does not differ essentially from the measurement of flow
conditions encountered in the solution of other problems. The differences that do exist,
in terms of sensitivity requirements and other instrumentation parameters, are noted.
The authors note that gamma-ray spectral distribution studies are currently being pursued
in two fundamental directions: (1) acquisition of data with respect to the spectra of the
sources of gamma-radiation (for example, the reactor, the volumetric sources of gamma-
rays, etc.); and (2) measurement of the angular and spectral distributions at the boundary
of the medium, which also describe the radiation sources and, on the other hand, are
absolutely indispensable for the computation of shadow shielding and the passage of

Card   3/4

ACCESSION NR: AT4019059

gamma-rays in heterogeneous media; that is, in those problem areas which do not as yet lend themselves to analytical computations. Various methods used in this connection are discussed; among them certain experimental techniques involving the determination of the form of the amplitude distribution of the pulses, the "random test method" (Monte Carlo method), and the use of spectrometers with NaI (Tl) crystals. The final section of the paper deals with the problem of neutron spectra measurements, and the techniques and instruments suitable for such investigations. "The authors express their deep gratitude to A. I. Abramov, V. I. Kukhtevich, V. P. Mashkovich, V. I. Popov, B. I. Sinitsy*n and S. G. Tsy*pin for their valuable contributions to this work".

ASSOCIATION: none

SUBMITTED: 14Aug63   DATE ACQ: 27Feb64   ENCL: 00

SUB CODE: NP   NO REF SOV: 019   OTHER: 015

Card 4/4

ACCESSION NR: AP4036533   S/0089/64/016/005/0453/0455

AUTHOR: Kukhtevich, V. I.; Matusevich, Ye. S.; Try*kov, L. A.

TITLE: Space distribution of a dose of scattered radiation from a source of uni-
directional gamma quanta in an infinite medium in the vicinity of the source

SOURCE: Atomnaya energiya, v. 16, no. 5, 1964, 453-455

TOPIC TAGS: gamma quanta scattering, scattering space distribution, air gamma ray
scattering, compton scattering, radiation space distribution, gamma ray

ABSTRACT: The scattering in air of gamma rays, whose energy was between 0.5 and
10 Mev, was measured. The effective collimation angles were 4.8 and 15.6°.   The
radioactive isotopes used were: A^{198} (0.412), Cs^{137} (0.661), Co^{60} (av. energy 1.25)
and Na^{24} (av. en. 1.86 Mev). The ratio D_{se}/D_{nse} was measured, where D_{se} is the
power scattered, D_{nse} - that not scattered. The results are compared with the
theoretical formula for single scattering. The deviations between the experimental
and calculated values increase with the increase of scattering angle. "The authors
are grateful to I. I. Bondarenko, S. G. Tsy*pin, and Ya. A. Kazanskiy for useful
advice." Orig. art. has: 5 figures.

Card 1/2

ACCESSION NR: AP4036533

ASSOCIATION: None

SUBMITTED: 19Jul63   DATE ACQ: 03Jun64   ENCL: 00

SUB CODE: AA, MP   NO REF SOV: 002   OTHER: 001

Card   2/2

MATUSEVICH, Ye.S.; TSYPIN, S.G.

Problems of radiation shielding for man in space. Atom.
enrg. 15 no.6:40-504 D '63.   (MIRA 17:1)

L 36073-66   EWT(m)/T/EWP(t)/ETI   IJP(c)   JD

ACC NR: AT6015890   SOURCE CODE: UR/3158/65/000/028/0001/0011

AUTHOR: Kon'shin, V. A.; Matusevich, Ye. S.; Regushevskiy, V. I.

ORG: Physicoenergetics Institute, State Committee for Use of Atomic Energy SSSR
(Fiziko-energeticheskiy Institut, Gosudarstvennyy komitet po ispol'zovaniyu atomnoy
energii SSSR)

TITLE: Angular distribution and the number of cascade nucleons emitted by nuclei in-
teracting with 660 Mev protons

SOURCE: Obninsk. Fiziko-energeticheskiy institut. Doklady, FEI-28, 1965. Uglovyye
raspredeleniya i chislo kaskadnykh nuklonov, ispuskayemykh yadrami pri vzaimodeystvii
s protonami s energiyey 660 Mev, 1-11

TOPIC TAGS: angular distribution, nucleon, proton, fission product, anisotropy

ABSTRACT: The present paper is concerned with the experimental test of the nucleon
cascade theory proposed by Heisenberg and Serber. Seven different elements placed in
a 660 Mev proton beam were used as targets. The interactions were investigated using
the measurements of the angular distribution and the number of cascade nucleons emit-
ted by different nuclei. A disc of 10 cm diameter and a thickness $0.1/L_a$ (where L_a
represents the inelastic cross section for 660 Mev protons) was used as a target. The
proton beam was calibrated using the Al^{27} (p, 3pn) Na^{24} reaction, which is accurate

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L 36073-66

ACC NR: AT6015390

within 1-2%. The cascade nucleons were detracted by means of fission products of Bi and Re. In the above measurements it is assumed that the spectrum of the cascade is independent of the angle θ for θ>90°. Data are presented on the fission products of Bi as a function of the angle θ and the angular distribution of the cascade nucleons (as calculated from the number of fission products) for different target material. It is concluded that anisotropy in the angular distribution of the cascade nucleons increases as the mass number A of the target decreases. The average number of nucleons, emitted in one inelastic interaction, is given in a table. The experimental data on the average number of the emitted cascade nucleons agree with the predicted number for nuclei lighter than Cu and differ by a factor of 1.5 for heavier nuclei. The ratio of emitted neutrons to the number of emitted protons is 0.54±0.07 for carbon. The theoretical value is 0.54 [9], 0.61 [10] and 0.52 [13]. The authors thank Yu. Kazanskiy and V. S. Stavinskiy for their constructive discussion. Orig. art. has: 2 figures, 2 tables.

SUB CODE: 20/   SUBM DATE: 20Nov65/   ORIG REF: 007

LS
Card 2/2

L 23.2-66   EWP(e)/EWT(m)/EPF(c)/EWP(i)/ETC/EPF(n)-2/EWO(m)/EWP(b)   WW/WH
ACCESSION NR: AT5022114   UR/3158/65/000/008/0001/0018
                                                                      61
                                                                      56
AUTHORS: Kon'shin, V. A.; Matusevich, Ye. S.; Regushevskiy, V. I.   B+1

TITLE: Emergence and angular distribution of secondary nuclear particles from
planar shields, effected by protons having an energy of 660 mev

SOURCE: Obninsk, Fiziko-energeticheskiy institut. /Doklady/, no. 8, 1965. Vykhod
i uglovoye raspredeleniye vtorichnykh nuklonov iz ploskikh zashchit pod deystviyem
protonov s energiyey 660 Mev, 1-18

TOPIC TAGS: angular distribution, ionization, fission, helium, uranium, thorium,
bismuth, lead, shielding, aluminum, cobalt, nickel, synchrocyclotron, proton/
OIYaI synchrocyclotron

ABSTRACT: Measurements were made of the angular distribution of secondary nuclear
particles emerging from planar layers of graphite (density 34 g/cm^2 - 0.35 of the
nuclear path $\lambda\alpha$ of the primary proton); aluminum (density 28 g/cm^2 - 0.26 $\lambda\alpha$)
and nickel (density 21 g/cm^2 - 0.15 $\lambda\alpha$, and 92 g/cm^2 - 0.66 $\lambda\alpha$) through which
a beam of protons with an energy of 660 mev passed. The information was necessary
for calculation of the required protection from the protons of high energy. The

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L 2342-66

ACCESSION NR: AT5022114

experiment was conducted in a synchrocyclotron OIYaI, and the beam of protons hitting the target was monitored by means of an ionisation chamber filled with helium. The geometry of the experiment is shown in Fig. 1 on the Enclosure. Fission reactions of U^{238}, Th^{232}, Bi^{209}, and Pb were employed to register the secondary nuclear particles, by registering the traces left by the fission fragments on the photo-glass. The threshold value was 20-25 mev. Values for $y_i(\alpha)$ (number of nuclear particles flying in the direction (α) for Al, C, Ni, and Pb are shown graphically for three energy intervals. The first corresponds to the measurements with U^{238}, the second—with Th^{232}, and the third—with Bi^{209} and Pb. The greater the energy threshold, the greater is the decrease of $y_i(\alpha)$. With an increased angle. Apparently when $\alpha > 30°$, $y_i(\alpha)$ can be represented for almost all targets by the following expression: $y_i(\alpha) = A_i \exp[-a_i \alpha]$, where constants A_i and a_i are functions of the atomic number Z of the target as well as of the latter's thickness d. The results of the work described agree with those obtained by V. A. Ion'shin, E. S. Matusevich, and S. S. Prokhorov (Sbornik statey, Voprosy fiziki zashchity, Atomizdat (v pechati)) who calculated the number of neutrons registered by graphite, copper, and aluminum targets, density 26 g/cm^2, in the interval of 30-660 mev and original energy of protons 660 mev. The authors

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L 2342-66

ACCESSION NR: AT5022114   5

express their gratitude to S. G. Tavrin for support of this work, to V. P.
Dzhelepov for enabling them to work on the synchrocyclotron, and to G. D. Stoletov
for advice on the use of the accelerator. Orig. art. has: 2 tables, 7 figures,
and 5 equations.

ASSOCIATION: Gosudarstvennyy komitet po ispol'zovaniyu atomnoy energii SSSR
(State Committee on Uses of Atomic Energy, SSSR); Fiziko-energeticheskiy institut,
Obninsk (Physical Energy Institute, Obninsk)

SUBMITTED: 00   ENCL: 01   SUB CODE: NP

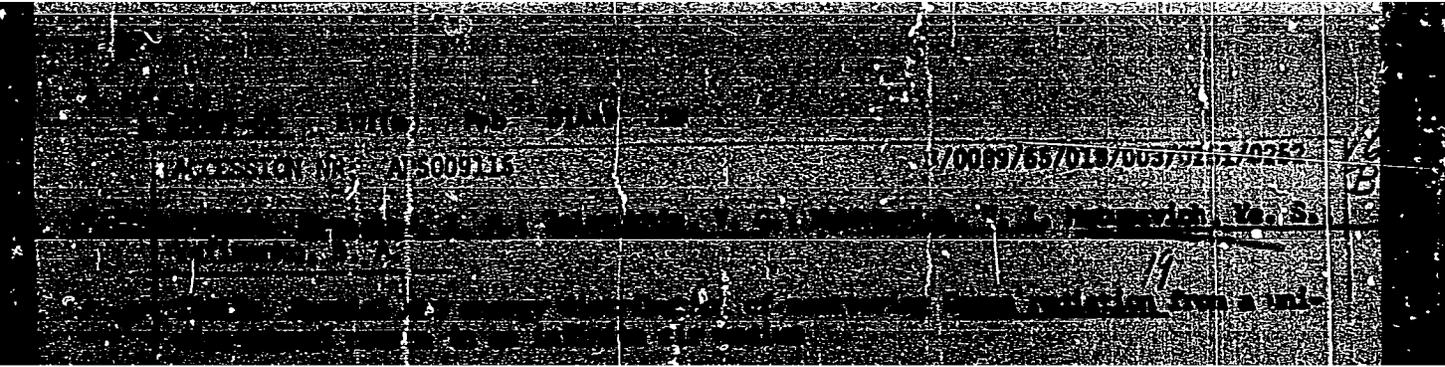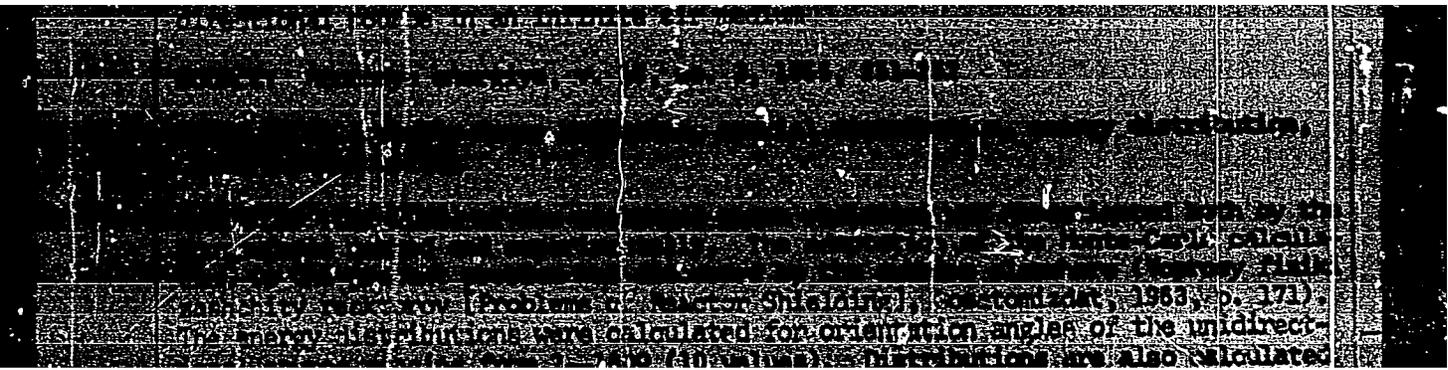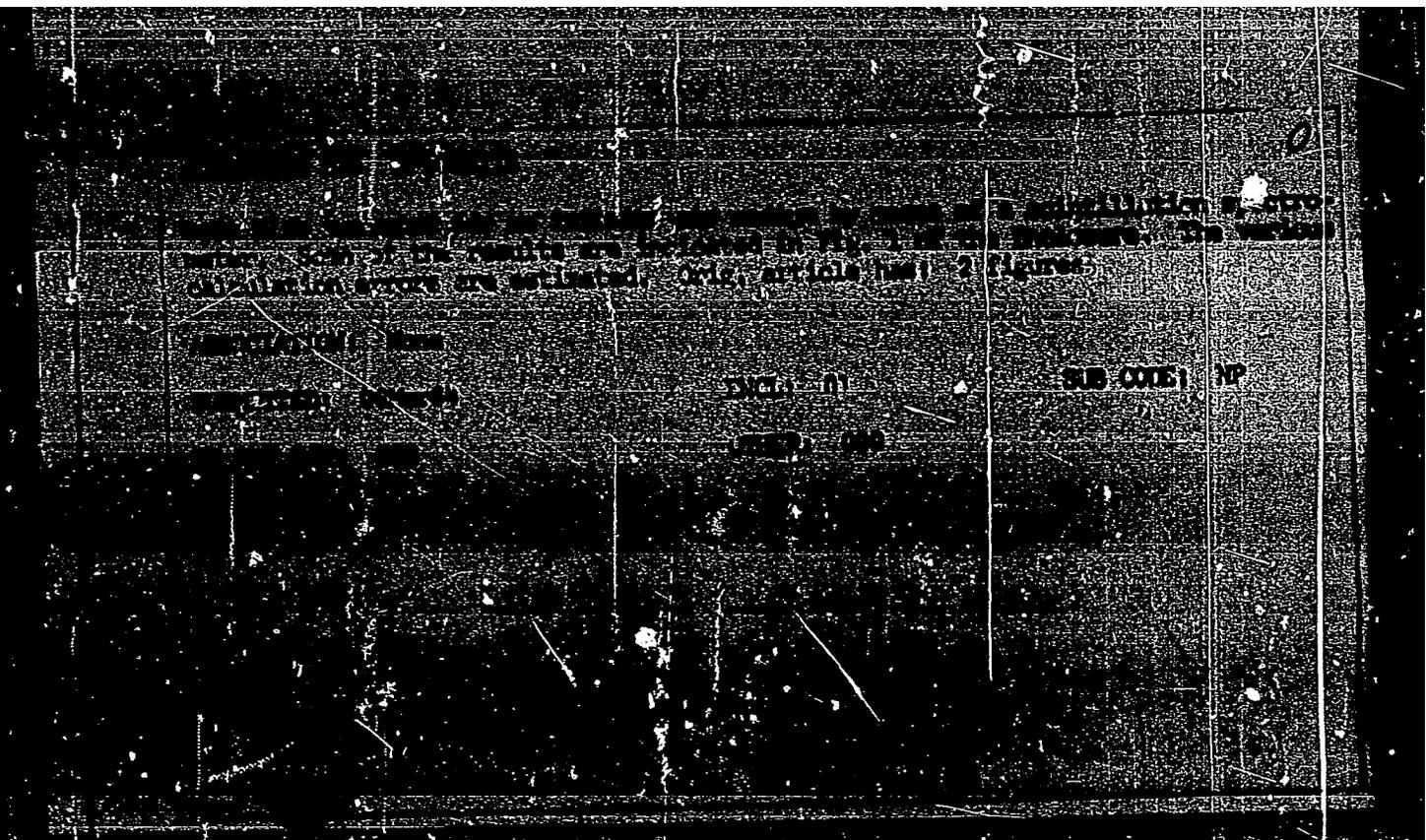NO REF SOV: 008   OTHER: 011

Card 3/4
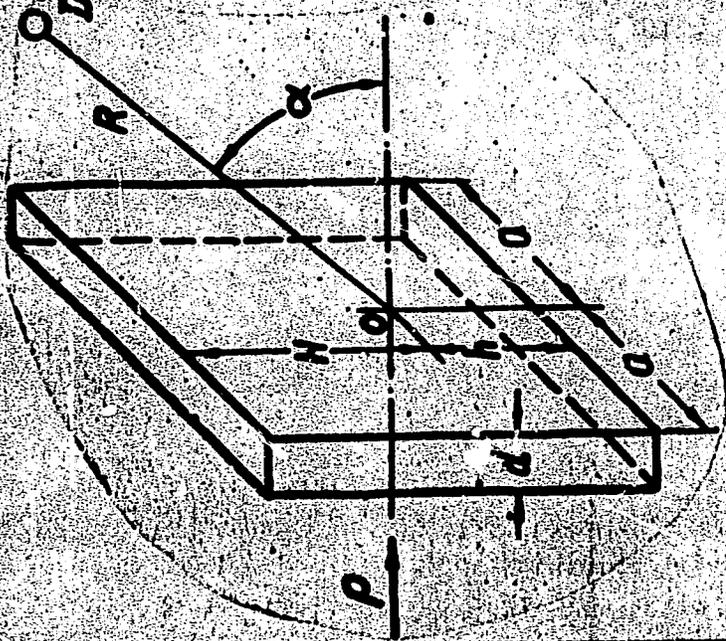
Fig. 1. Geometry of the experiment. P- beam of protons; d- detector; d,a,b,H- dimensions of the targets; O- center of rotation, located on the axis of the beam

KON'SHIN, V.A.; MATUSEVICH, Ye.S.; REGUSHEVSKIY, V.I.

Cross sections of the fission of Ta^{181}, Re, Pt, Au^{197}, Pb, Bi^{209}, Th^{232}, U^{235}, and U^{238} by 150-660 Mev. protons. IAd. fiz. 2 no.4: 682-686 O '65.
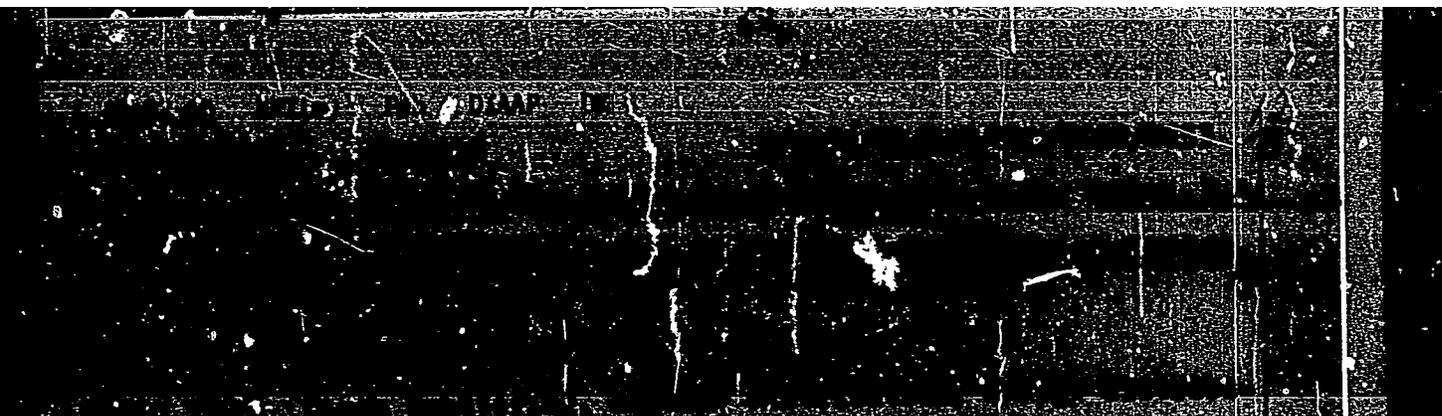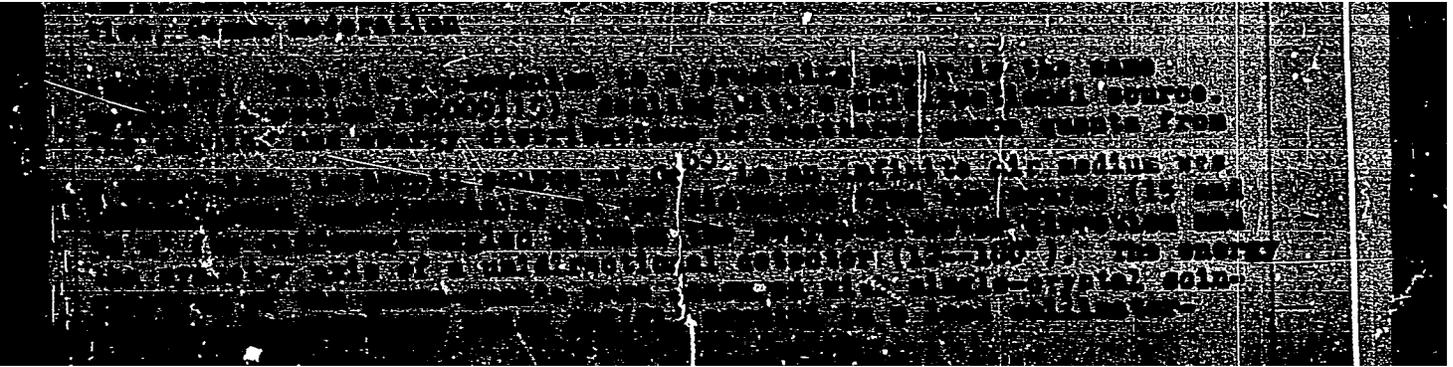
(MIRA 18:11)

high energy neutron problems of reactor shielding, Vol. from July 1963, p. 171).
the energy distributions were calculated for orientation angles of the unidirect-
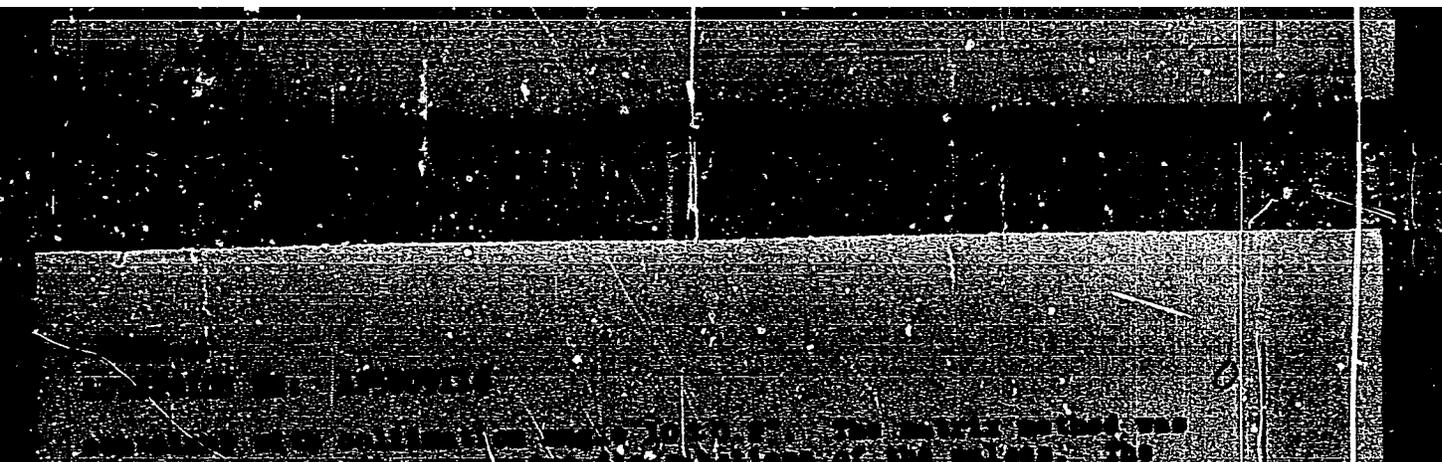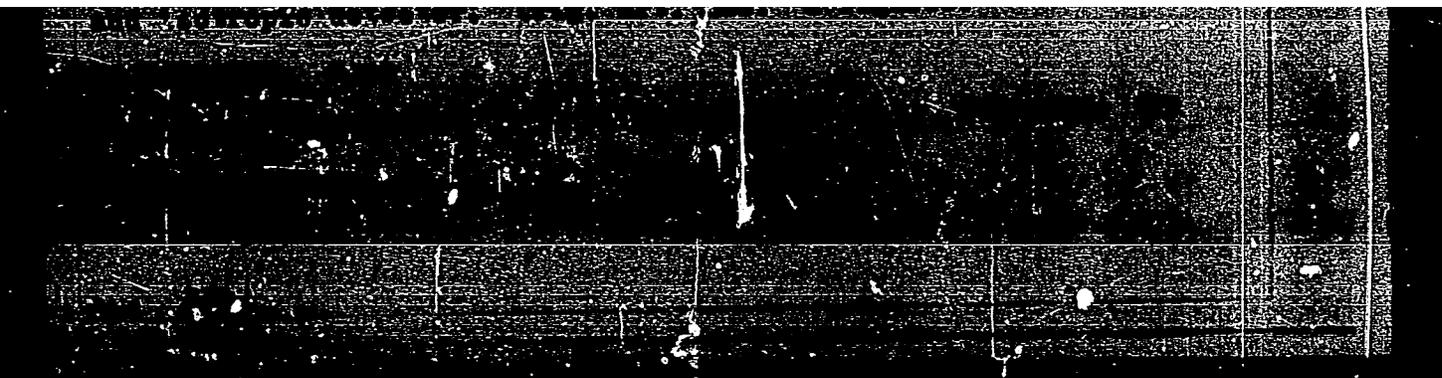
L 2280-66   EWP(e)/EWT(m)/EPF(c)/EWP(i)/EPF(n)-2/EWP(b)/AWA(h)   WW/DM/WE
ACCESSION NR: AP5016924
UR/0089/65/018/006/0573/0578
539.172.12:539.125.5

AUTHOR: Kon'shin, V. A.; Matusevich, Ye. S.; Prokhorov, I. B.

TITLE: Fluxes of secondary neutrons produced by 600 MeV protons in shields

SOURCE: Atomnaya energiya, v. 18, no. 6, 1965, 573-578

TOPIC TAGS: reactor shielding, neutron distribution, neutron flux, neutron inter-
action, neutron shielding, proton bombardment, proton interaction

ABSTRACT: The spatial and energy distributions of secondary neutrons in graphite
and nickel blocks have been measured with the aid of a set of threshold and resonance
indicators. The measurements were carried out with the OIYaI synchrocyclotron.
The diameter of the beam striking the blocks was 3 cm. The absolute values of the
neutron flux in an infinite plate were obtained for a plane unidirectional source
of protons. The energy distribution of the secondary neutrons in the interval
2.5 x 10⁻⁸—4.5 x 10⁻⁷ MeV was broken up into seven intervals for the graphite and
six for nickel, in each a new one, the bulk of the activity of each indicator was
due to neutrons belonging to one group. The dose behind a flat shield of nickel
or graphite was also determined as a function of the thickness of the shield. The
neutron flux distribution exhibited a maximum close to the center of the shielding

Card 1/2

L 22M-65

ACQUISITION No: Arpolégos

block. The radiation dose was practically independent of the thickness of the
shield in the case of graphite, and decreased with thickness in the case of nickel.
The results are discussed briefly. The authors thank S. G. Tsypin and O. N.
...for continuous interest and support. The P. Gundis and V. Stelchov for
help with ... accelerator, I. ... for measuring the absolute
activities of the aluminum foils, and V. F. Khalupov for the opportunity to work
with the ... accelerator. Orig. Art. Has 6 figures.

ASSOCIATES: none

SUBMITTED: 03Jan65   INCL: 00   SUB CODE: NP

NR REF SOV: 009   OTHER: 007

Card 2/2 DP

L 05064-67   EWT(m)/EWP(t)/ETI   LJP(c)   JD/JG/JR/GD
ACC NR: AT6027938
                                SOURCE CODE: UR/0000/66/000/000/0202/0205

AUTHOR: Degtyarev, S. F.; Kukhtevich, V. I.; Matusevich, Ye. S.; Popov, V. I.

ORG: None

TITLE: Spectra of air-scattered neutrons from a Po-α-Be source surrounded by iron shielding of various thickness

SOURCE: Voprosy fiziki zashchity reaktorov (Problems in physics of reactor shielding), sbornik statey, no. 2. Moscow, Atomizdat, 1966, 202-205

TOPIC TAGS: radiation shielding, neutron energy distribution, neutron spectrum, neutron scattering

ABSTRACT: The authors measure the energy distributions of neutrons scattered in the unbounded atmosphere. The distance between source and detector was set at 10 m. A composite Po-Be source with an intensity of approximately $5 \cdot 10^8$ neutr/sec was used with surrounding iron shielding with wall thicknesses of 5, 10 and 15 cm. A spherical io-nization chamber filled with a mixture of 5 atm of argon and 3 atm of hydrogen was used for neutron detection. The measurements were made in the 0.8-3.0 Mev range. The re-sults show unbalanced neutron spectra in iron at low energies (average spectral energy from the Po-Be source is 4.5 Mev). The initial neutron spectrum is softened by scat-tering in air at the energies studied. The number of scattered neutrons decreases

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L 05064-67

ACC NR: AT6027938

smoothly with respect to the number of unscattered neutrons with an increase in the initial energy from 0.28 at $E_n=0.8$ Mev to 0.15 at $E_n=3$ Mev. The data in this paper may be used for modeling various descending continuous spectra and for estimating and calculating the background due to neutrons scattered in air. Orig. art. has: 3 figures.

SUB CODE: 18/ SUBM DATE: 12Jan66/ ORIG REF: 003/ OTH REF: 001

Card 2/2

L 05045-67   EWP(e)/EWT(m)/EWP(t)/ETI   IJP(c)   JD/WW/HW/JR/GD/WH

ACC NR: AT6027942   SOURCE CODE: UR/0000/66/000/000/0226/0235

AUTHOR: Kol'shin, V. A.; Matusevich, Ye. S.; Prokhorov, S. S.

ORG: None

TITLE: Energy and spatial distribution of a stream of secondary neutrons produced by protons with an energy of 660 Mev in blocks of graphite and nickel

SOURCE: Voprosy fiziki zashchity reaktorov (Problems in physics of reactor shielding); sbornik statey, no. 2. Moscow, Atomizdat, 1966, 226-235

TOPIC TAGS: proton, neutron, neutron energy distribution, radiative capture

ABSTRACT: The authors study the spatial and energy distribution of neutrons in thick (i. e. comparable with the ionization path of the primary 660 Mev protons) blocks of graphite and nickel. The neutrons in the blocks were produced by interaction of a monodirectional point beam of protons with the block material. The experiments were done on the synchrocyclotron at the OIYaI. The following indicators were used for measuring the spatial and energy distribution of the number of neutrons produced by reactions between the protons and the nuclei of the target: $In^{115}(n, \gamma)In^{116}$; $U^{238}(n, \gamma)U^{239}$; $Cu^{63}(n, \gamma)Cu^{64}$; $Al^{27}(n, a)Na^{24}$; $P^{31}(n, p)Si^{31}$; $Mg^{24}(n, p)Na^{24}$; $C^{12}(^n_p, ^{2n}_{pn})C^{11}$. The efficiency of β-radiation was determined for each indicator as a basis for finding the absolute number of captures. The number of captures per gram weight of the indicators (In, U, Cu, Al, Mg, P) was

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L 05045-67

ACC NR: AT6027942

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measured and normalized to a single incident proton. The measurements were made with respect to radius r with center on the axis of symmetry of the proton beam. Curves are given showing the number of captures N as a function of r for indium, phosphorous, magnesium and aluminum indicators in nickel. The number of captures A from a plane monodirectional source of protons is determined by integrating the function $N(r)$ with respect to target area, i. e.

$$A = 2\pi \int N(r)rdr.$$

Figures are given showing A as a function of distance from the forward face of the nickel block for In, P, Al, Mg, U and Ci. Figures are also given for a graphite block showing $N(r) \cdot r$ as a function of thickness Z for indium and phosphorous indicators. Curves are given showing the number of captures from a plane monodirectional source as a function of the distance Z from the forward wall of a graphite block 120 cm thick for all indicators except carbon. Tables are given showing the neutron fluxes in various energy regions for both graphite and nickel. The neutron intensities are graphed as a function of thickness for both materials and it is shown that neutrons with energies below 4.65 kev are predominantly responsible for the neutron flux in graphite. A graphite block 120 cm thick shows a ratio of neutrons below this energy to those above of about 3.5 along the axis of symmetry. This ratio is 0.3 for a nickel block which is apparently due to the large absorption cross section in nickel at low neutron energies. Graphite and nickel show a difference in neutron fluxes below 4.65 kev by a factor of 30 while they differ by a factor of only 3 for neutron energies above 4.65 kev. The

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ACC NR: AT6027942   2

spatial distribution of the neutrons has a maximum at half the thickness of the block
with symmetric distribution in graphite. The asymmetric distribution in nickel is due
to the effect of neutron production by the primary beam. The energy spectrum is softer
in graphite than in nickel. Graphite shows a considerable neutron leakage for the en-
ergy group below 10^{-6} Mev. In conclusion the au ors thank Doctor of physical and
mathematical sciences S. G. Tsypin and Professor I. I. Bondarenko (deceased) for in-
terest in the work and discussion of the results. Orig. art. has: 8 figures, 2 tables.

SUB CODE: 20/ SUBM DATE: 12Jan66/ ORIG REF: 006/ OTH REF: 003

Card 3/3 pa)

L 05383-67   EWP(e)/EWT(m)/EWP(t)/ETI   IJP(e)   JD/WW/HW/JR/GD/WH

ACC NR: AT6027944   SOURCE CODE: UR/0000/66/000/000/0239/0244

AUTHOR: Kon'shin, V. A.; Matusevich, Ye. S.; Prokhorov, S. S.

ORG: None

TITLE: Dose of secondary neutrons produced by protons with an energy of 660 Mev behind flat shielding of nickel, copper, aluminum and graphite

SOURCE: Voprosy fiziki zashchity reaktorov (Problems in physics of reactor shielding); sbornik statey, no. 2. Moscow, Atomizdat, 1966, 239-244

TOPIC TAGS: radiation shielding, neutron energy distribution, nucleon interaction

ABSTRACT: The authors measure the flux and energy distribution of secondary neutrons escaping from plane layers of graphite, aluminum, nickel and copper with a thickness of 26 g/cm^2 (approximately 10% of the ionization path of the primary protons). The experiments were done on the synchrocyclotron at the OIYaI. The beam of protons incident on the target was monitored by the reaction $Al^{27}(p,3pn)Na^{24}$ with a cross section of (11±0.5) mbarn at a proton energy of 660 Mev. The following indicators were used for measuring the number and energy distribution of the neutrons produced by reaction of the protons with target nuclei: $P^{31}(n,p)Si^{31}$; $Al^{27}(n,\alpha)Na^{24}$; $Mg^{24}(n,p)Na^{24}$ with absolute registration of β-particles from decay of Si^{31} and Na^{24}. Tables are given showing

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L 05303-67

ACC NR: AT6027944

neutron fluxes in various energy groups for interaction of 660 Mev protons with target nuclei behind a graphite target and in front of and behind copper, nickel and aluminum targets, and for the doses produced by neutrons behind targets made from these four materials with an incident stream of protons. In conclusion the authors thank Doctor of physical and mathematical sciences S. G. Tsypin and Professor I. I. Bondarenko (deceased) for consultation and interest in the work. Orig. art. has: 2 figures, 2 tables.

SUB CODE: 18/ SUBM DATE: 12Jan66/ ORIG REF: 005/ OTH REF: 008

Card 2/2

L 22415-66   EWP(e)/EWT(m)/EWP(n)-2   WW/WH

ACC NR: AP6007947   SOURCE CODE: UR/0089/66/020/002/0132/0137

AUTHORS: Kon'shin, V. A.; Matusevich, Ye. S.; Regushevskiy, V. I.

ORG: none

TITLE: Emergence of secondary nucleons from flat shields and angular distribution under the influence of 660-Mev protons

SOURCE: Atomnaya energiya, v. 20, no. 2, 1966, 132-137

TOPIC TAGS: nuclear reactor shield, angular distribution, graphite, aluminum, nickel, proton bombardment

ABSTRACT: The authors have measured the angular distributions of the secondary nucleons emerging from flat layers of graphite of thickness 34 g/cm^2 (0.35λ_a -where λ_a is the nuclear range of the primary proton), aluminum (thickness 28 g/cm^2 -- 0.26λ_a), and nickel (thicknesses 21 and 92 g/cm^2 -- 0.15 and 0.66λ_a), induced by the passage of a normally-incident beam of 660-Mev protons through the shield. The

Card   1/2   UDC: 539.172.12:539.17.015

L 22419-66
ACC NR: AP6007947

experiment was made with the OIYaY synchrocyclotron. The proton beam incident on the target was monitored with a helium-filled ionization chamber. The secondary nucleons were registered by using the fission reactions of U^{238}, Th^{232}, Bi^{209}, and Pb. The secondary-nucleon yield was determined for three energy ranges, 0.9 -- 660 Mev, 1.6 -- 660 Mev, and 60 -- 660 Mev. The results show that the angular distribution for all targets decreases with increasing angle; the higher the energy threshold, the faster the decrease. At angles above 30° the decrease is nearly exponential. Specific differences between the different materials are discussed and the results are compared with experimental data by others. The authors thank S. G. Tsypin for support, V. P. Dzhelepov, for the opportunity to work with the OIYaI synchrocyclotron, and G. D. Stoletov for advice on the accelerator operating procedure. Orig. art. has: 5 figures, 4 formulas, and 2 tables.

SUB CODE: 18   SUBM DATE: 29May65/   ORIG REF: 008/   OTH REF: 011

Card   2/2

MATUSEVICHUS, Y.

USSR/Nuclear Physics - Cosmic Rays, C-7

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 34133

Author: Barsauskas, K., Puodziulynas, A., Matusevicius, J.

Institution: None

Title: Dependence of Angle of Distribution of Showers of Secondary Cosmic Rays on
        the Atomic Number of the Element

Original Periodical: Kauno politechn. inst. darbai, 1955, 3, 109-118; Lithuanian;
                      Russian resumé

Abstract: Two Geiger-Muller counters placed in a horizontal plane and connected for
coincidence were used to investigate the angular distribution of secondary showers
of particles formed when cosmic-ray particles penetrate through filters of substances
having different values of Z (C, Al, Fe, Cu, Pb). For light elements the experimen-
tally obtained values of the characteristic angle α can be represented empirically
by the relationship $\alpha = A \exp(-bZ)$, where $A = 18.68$, $b = 0.015$.

MATUSEWICZ, Alfred

D.C. measuring amplifiers.   Ladznosc Gdansk no.10:91-94   '64.

1. Department of Radio Receiving Engineering of the Danzig
Technical University.   Submitted December 17, 1963.

L 41205-65

ACC NR: AP6018206   SOURCE CODE: PO/0034/65/000/011/0481/0483

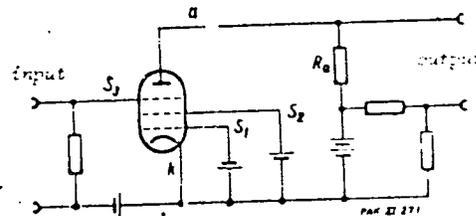AUTHOR: Matusewicz, Alfred (Doctor, Engineer)

ORG: Department of Surveying and Electronic Elements, Gdansk Polytechnical Institute (Katedra Miernictwa i Elementow Elektronicznych Politekhniki Gdanskiej)

TITLE: A d-c amplifier with high zero stability

SOURCE: Pomiary, automatyka, kontrola, no. 11, 1965, 481-483

TOPIC TAGS: circuit design, dc amplifier, negative feedback, pentode electron tube

ABSTRACT. The author describes the d-c amplifier circuit shown in the figure. The measured signal is applied to the third grid S_3 of the pentode which is negatively charged with respect to the cathode and controlled by the flow of cathode current between the second grid S_2 and the plate a. The first grid S_1 is also negative with respect to the cathode. The output voltage is taken from resistor R_a in the plate circuit. The resistance shown in this circuit or a symmetric circuit with a second tube operating in identical conditions

UDC: 621.275.024

Card 1/2

L 41205-66
ACC NR: AP6018206   ( )

may be used for compensating the d-c voltage component. When a constant current is
flowing through grid S_2 and plate a, the parameters of the amplifier are determined by
the design of electrodes S_2, S_3 and a and are not directly dependent on cathode emis-
sion. Since the geometric dimensions of the electrodes are independent of changes in
time, the parameters of the amplifier show a greater stability than in conventional
circuits. Two methods are discussed for introducing negative feedback to compensate
for fluctuation of cathode emission current in the plate circuit. In one method a
cathode resistor is used, while in the other the screen grid is negatively biased.
Circuits using both types of compensation are analyzed. Voltage amplification of
2-5 v/v may be obtained by using the following pentodes: EF80, EF85, EF86, EF99,
EF97, EF98, 12AC6 and 121X5. Operating conditions are recommended for the EF89 pen-
tode and schematic circuits are given showing resistor values producing these condi-
tions in circuits with both types of compensation. Orig. art. has: 5 figures, 21
formulas.

SUB CODE: 09/ SUBM DATE: none

Card 2/2   hs

MATUSEWICZ, J.

Case of Recklinghausen's disease with extensive invasion of the central
nervous system cured with x-rays. Polski tygod. lek 5:13, 27 Mar. 50.
p. 502-3

1. Formerly Doctor at the Ophthalmological Institute in Warsaw.

CLML 19, 5, Nov., 1950

AMS/A & B

R50
R2

551.5(US)

1-39
[Poland] Państwowy Instytut Hydrologiczno-Meteorologiczny. Wiadomości Służby, (Bulletin de Service Hydrologique et Météorologique) Editor Dr. Ing. J. Maturewicz, Obserwatorium 6, Warsaw, Poland. 120 p. per volume, 21x30 cm. First ___ ____ 1967. Each issue of this twice-yearly publication contains articles about the meteorological or hydrological services in Poland, and original contributions on climatology and hydrology accompanied by data and charts. The publication is more along the lines of an engineering journal than most publications of meteorological services. Considerable river, runoff and rainfall data are included, although material on temperature and cloudiness, sunshine, etc. is not wanting. MM-BM.

5X2+1

MATUSEWICZ, J.

Meteorological Abst.
Vol. 4 No. 7
July 1953
Aqueous Vapor and Hydrometeors

4.7-166   551.579(02)(47)
Matusewicz, J., Przegląd literatury hydrologicznej radzieckiej. [Review of Soviet liter-
ature on hydrology.] Przegląd Meteorologiczny i Hydrologiczny, v. 1950/1951:231-236, 1951.
DWB—The works of Arystovskii, Bykov, Velikanov and Zhelezniakov are reviewed.
Subject Headings: 1. Hydrologic literature. 2. U.S.S.R.—W. Innovations.

MATUSEWICZ, .

"Prevention of Droughts in the Light of Soviet Science." P. 116,
(PRZ GLAD METEOROLOGICZNY I HYDROLOGICZNY, Vol. 5, No. 3/4, 1952.
Warszawa, Poland.)

SO: Monthly Li .t of East European Accessions, (E AL), LC, Vol. 3,
No. 12, Dec. 1954, Uncl.

MATUSEWICZ, J.

"Remarks on he article 'Nomenclature of Characteristic Water Levels and Flows' by Dr. J. Lambor." p. 69 (Gospodarku Wodna, Vol. 14, No. 2, Feb. 1954, Warszawa)

SO: Monthly List of East European Accessions, Vol. 3, No. 6, Library of Congress, June, 1954, Uncl.

MATUSZI S, .

How we began; ten years of the Institut. of Hydrology r . eta.r..og .   . ..
GAZETA ..TRWA . A. Warszawa, Vol. , no. , .ar. 1955.

SE: Monthly List of East Euro ean Accessions, (.....), L , Vol. 4, n . 1, .et.. . 5,
Uncl.

MATUSEWICZ, J; MIKULSKI, Z.

Some remarks on the participation of the periodical Gospodarka Wodna in the

elaboration of the basis for planning water management and hydraulic engineering

constructions.   p. 448.
GOSPODARKA WODNA, Vol. 15, No. 11 Nov. 1955
(Naczelna Organizacja Techniczna) Warszawa

SOURCE: EAST EUROPEAN ACCESS ONS IIST Vol. 5, No. 1   Jan. 1956

WAKSMUNDZKI, Andrzej; OSCIK, Jaroslaw; MATUSEWICZ, Janusz; NASUTO, Romuald;
ROBYLO, Jan

Structure of silica gels, specifically adsorbing pyridine,
quinoline and acridine. Pt. 1. Przem chem 40 no.7:387-390
Jl '61.

1. Katedra Chemii Fizycznej, Uniwersytet im. M. Curie-
Sklodowskiej, Lublin.

MATUSEWICZ, MIROSLAW

MATUSEWICZ, Miroslav; WOJAKOWSKI, Ignacy; ZIOLKOWSKA, Maria

Scoliosis in children in urban & rural areas. Chir. narz. ruchu 22
no.2:121-123 1957.

1. Z Oddzialu Ortopedyczno-Urazowego Miejskiego Szpitala im.
Wl. Bieganskiego w Czestochowie Ordynator: dr Z. Teleszynski. Czestochowa,
ul. Mickiewicza 12, Szpital im. Wl. Bieganskiego.
        (SCOLIOSIS, in inf. & child
                incidence in child. in urban & rural areas, comparison
                (Pol))
        (RURAL CONDITIONS,
                incidence of scoliosis in child., comparison with child.
                from urban areas (Pol))

PUTYRSKAIA, G.V. (Budapest XIV. Hungaria korut 114); CHERNOVA, A.N. (Budapest XIV. Hungaria korut 114); MATUSH, L. (Budapest XIV. Hungaria korut 114)

Direct quantitative determination of free radicals formed at the radiolysis of water with the use of stable free radicals; a preliminary communication. In Russian. Acta chimica Hung. 21 no.3:289-291 '59.

(KEAI 9:5)

1. Central Research Institute for Chemistry, Hungarian Academy of Sciences, Budapest.

(Radicals (Chemistry)) (Radiochemistry) (Water)

KISHSH, Ishtvan; OPAUSKI, Ishtvan; MATUSH, Layosh

Research on the separation of boron isotopes. Rocz chemii 34 no.2:
385-389 '60.   (EEAI 10:1)

1. TSentral'nyy nauchno-issledovatel'skiy institut fiziki Vengerskoy
Akademii naui, Budapest.
      (Boron)   (Isotope separation)

21,3000
11,2221

S/089/6**0**/0·0/00·/0·0.0.0
BO06/BO63

AUTHORS: Kishsh, I., Opauski, I., Matush, L.

TITLE: Data on the Separation of Boron Isotopes in the Form of
                Volatile Compounds

PERIODICAL: Atomnaya energiya, 1960, Vol. 10, No. 1, pp. 73-75

TEXT: Besides many other possibilities of separating stable boron
isotopes there is a method that takes advantage of the fact that volatile
compounds containing heavy isotopes are more volatile than similar
compounds containing light isotopes. There is no universal theory available
for this phenomenon. Such a theory still requires a great amount of
experimental material. This "Letter to the Editor" presents a comparison
of the practical effectiveness of various oxygen-containing organic BF_3
compounds which are used for isotope enrichment, and deals also with the
difference in character and degree of volatility of boron isotope com-
pounds. The following systems have been studied: anisole - BF_3, ethyl

ether - BF_3, acetic acid - BF_3, ethyl acetate - BF_3, and trialkyl borates.

Card 1/4

Data on the Separation of Boron Isotopes   S/089/60/010/001/013/020
in the Form of Volatile Compounds   B006/B063

The experiments were partly made at $20^{\circ}C$ by the counterflow method
(liquid complex - BF_3-gas) and partly by a method described in Ref. 4.

The isotopic composition of the fraction obtained was determined by the
method of neutron absorption. Experimental equipment and technique are
described in Ref. 6. Results are given in Table 1. Enrichment was
determined from the formula:

$$A = (B^{11}/B^{10})_{in\ the\ column\ head} / (B^{11}/B^{10})_{in\ the\ column\ vat}.$$

Table 1:

Compound	$t^{\circ}C$	A
$C_6H_5OCH_3 \cdot BF_3$	20	2.0
$(C_2H_5)O \cdot BF_3$	60	2.4
$2H_2O \cdot BF_3$	80	1.9
$CH_3OH \cdot BF_3$	92	1.7
$CH_3COOH \cdot BF_4$	96	1.9

Table 2:

Compound	Pressure, mm Hg	$t^{\circ}C$	A
$B(OCH_3)_3$	740	56	1.0725
$B(OC_2H_5)_3$	740	56	1.0420
$B(OC_4H_9)_3$	20	128	1.0170

Card 2

Data on the Separation of Boron Isotopes
in the Form of Volatile Compounds

S/089/6**1**/010/001/013/02C
B006/B063

Studies of isotopic effects in liquid-vapor equilibrium with methyl, ethyl,
and n-butyl borates yielded many interesting results (for method see
Ref. 3). The isotope separation factor was determined with the help of
a rectifying column 12 mm in diameter; the headpiece layer was 1 m high.
A silver-wire coil was used as headpiece. The isotopic composition of
boron in the various fractions was determined by means of a mass spectro-
meter. Table 2 contains the results obtained for three esters. The
isotope separation factor decreases with decreasing size of the molecules.
Table 3 gives the separation factors for some other complex compounds.
There are 3 tables and 18 references: 5 Soviet, 3 Dutch, 5 US, 1 Hungarian,
1 South-African, and 2 British.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut fiziki,
Laboratoriya yadernoy khimii, Budapesht (Central Scientific
Research Institute of Physics, Laboratory for Nuclear
Chemistry, Budapest)

SUBMITTED: June 21, 1960

Card 3/4

ACC NR: AP6022017   SOURCE CODE: UR/0120/66/000/003/0158/0160

AUTHOR: Matush, L.; Opauski, I.; Kish, I.

ORG: Central Institut. of Physics Studies, Budapest (Tsentral'nyy institut fizicheskikh issledov--')

TITLE: Improvement f the MI-1305 mass spectrometer for the isotopic analysis of natural carbon and oxygen

SOURCE: Pribory i tekhnika eksperimenta, no. 3, 1966, 158-160

TOPIC TAGS: mass spectrometer, mass spectroscopy

ABSTRACT: High-accuracy measurements of the C^{13}/C^{12} and O^{18}/O^{16} ratios are required both in studies of the origin of CO_2 and in determination of the paleotemperature. For this purpose the following improvements and modifications have been made on the MI-1305 mass-spectrometer: (1) a new gas release system was developed; (2) the ion receiver was redesigned so as to make spacings between slots, through which two ion beams to be compared are transmitted; (3) a sensitive recording unit was added for the compensating comparison of ion currents; and (4) a precise control of both the accelerating ion current and the magnet feed current was introduced. Several hundred measurements were conducted with the modified mass-spectrometer system to determine the C^{13}/C^{12} ratio. The comparative measurement accuracy was 0.02—0.03%. Orig. art. has: 2 figures.
SUB CODE: 07 18/SUBM DATE: 12Jun65/ CRIG REF: 001/ OTH REF: 004 UDC: 621.384.8
Card   1/1

MATUSHENKO, V., inzhener.

Apparatus for preheating water and oil. Avt.transp.33 no.10:33
O '55.   (MIRA 9:1)
        (Automobiles--Apparatus and supplies)

KURAKOLJV, E.P., gorny inzh.; MATUSHENKO, V.M., gorny. inzh.

New conveying machinery systems in the mines of the German
Federal Republic. Ugol' Ukr. 6 no.11:42 N '62.   (MIRA 15:12)
            (Germany, West—Conveying machinery)

KURAKOLOV, E.P., gornyy inzh.; MATUSHENKO, V.M., gornyy inzh.

Equipment for open-pit mines in the U.S.A. Ugc...' Ukr. ` no.o:
50 Je '63.   (MIRA 16:8)

Name: MATUSHEVICH, A. A.

Dissertation: The center of Kiev in organizing the architectural planning of the city

Degree: Cand Arch Sci

Affiliation: Acad of Architecture Ukrainian SSR,   t of Construction of Cities

Defense Date, Place: 1956, Kiev

Source: Knizhnaya Letopis', No 1, 1957

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- E N D -

L 47091-66   EWT(m)/EWP(t)/ETI   IJP(c)   JH/JD/WW/HW/JG

ACC NR: AP6030767   (A)   SOURCE CODE: UR/0363/66/002/009/1581/1585

AUTHOR: Markiv, V. Ya.; Matushevskaya, N. F.; Rozum, S. N.; Kuz'ma, Yu. B.   5 3 B

ORG: Lvov State University im. I. Franko. (L'vovskiy gosudarstvennyy universitet)

TITLE: Study of aluminum-rich alloys of the Zr-Ni-Al system

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 9, 1966, 1581-1585

TOPIC TAGS: aluminum alloy, aluminum compound, nickel containing alloy, zirconium containing alloy, aluminum nickel zirconium alloy, alloy phase composition

ABSTRACT: Ninety-nine aluminum-rich alloys of the Zr-Ni-Al system containing up to 33 at% Zr and up to 75 at% Ni have been melted from high-purity components and their phase composition and crystal structure investigated. On the basis of obtained results, an isothermal (800C) section of the ternary diagram was plotted. Five ternary compounds were identified in the alloys: $ZrNi_2Al$ (a = 6.123 Å) and $ZrNi_{0.5-0.2}Al_{1.5-1.8}$ (a = 7.355—7.444 Å) with respective structures of $MnCu_2Al$ and $MgCu_2$ type; $Zr_6Ni_{1.2}Al_2$ (a = 12.08 Å) with a cubic structure; ZrNiAl (a = 6.93 Å; c = 3.47 Å; c/a = 0.50) with a hexagonal lattice; and $ZrNiAl_4$, whose structure has not been determined. Orig. art. has: 3 figures and 3 tables.   [TD]

SUB CODE: 11, 20/   SUBM DATE: 06Dec65/   ORIG REF: 007/   OTH REF: 014/

Card 1/1   hw   UDC: 546.3—19—831—74—621

ACC NR: AP6036445   SOURCE CODE: UR/0370/66/000/006/0127/0133

AUTHORS: Markiv, V. Ya. (L'vov); Matushevskaya, N. F. (L'vov); Kuz'ma, Yu. B.
(L'vov)

ORG: none

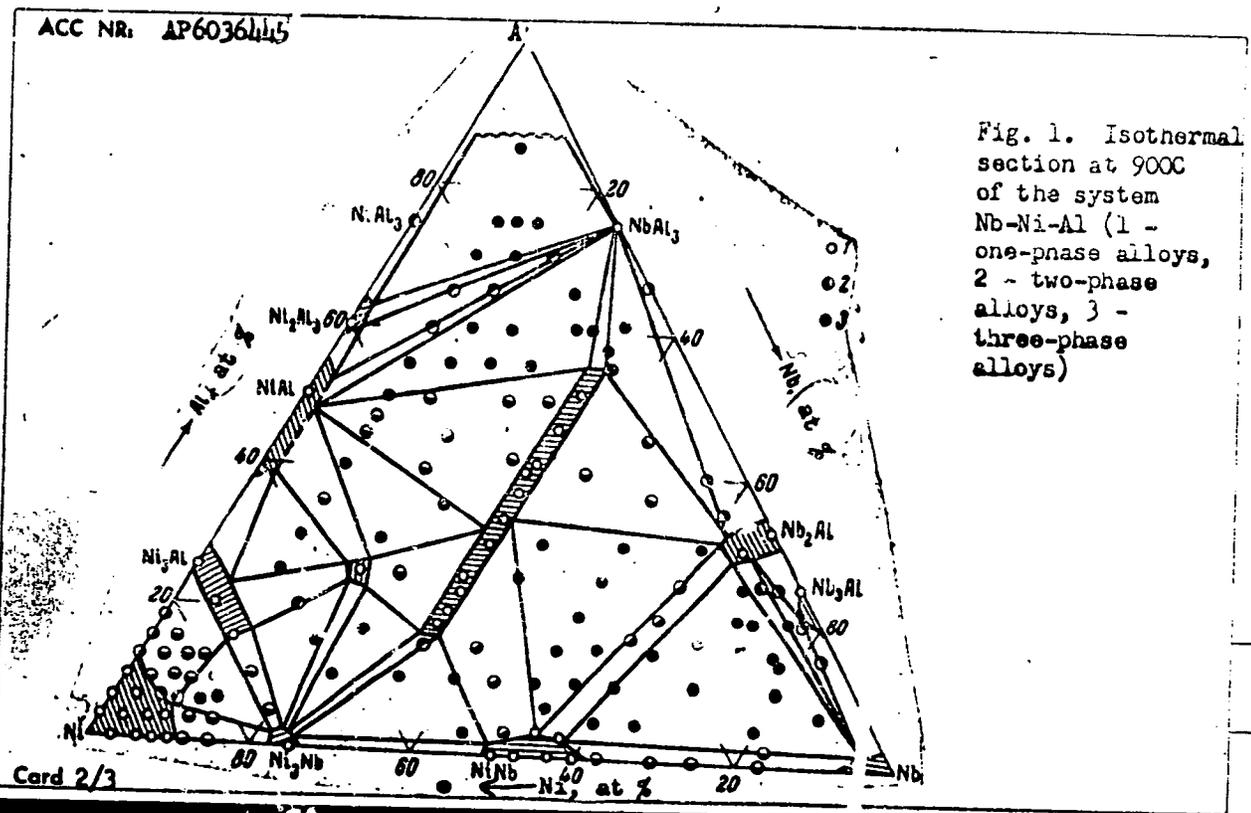TITLE: X-ray structural analysis of the system Nb-Ni-Al

SOURCE: AN SSSR. Izvestiya. Metally, no. 6, 1966, 127-133

TOPIC TAGS: alloy phase diagram, metal phase system, x-ray analysis, niobium, nickel,
aluminum

ABSTRACT: The phase diagrams of the binary system Nb-Ni at 900C and of the ternary
system Nb-Ni-Al at 800 and 900C respectively were investigated. The study supplements
the results of Ye. N. Pylayeva, Ye.1. Gladyshevskiy, and P. I. Kripyakevich
(Kristallicheskaya struktura soyed' neniy Ni_3Nb i Ni_3Ta. Zh. neorg. khimii, 1958,
3, No. 7). The phase composition was determined by x-ray analysis. In addition, the
crystal structure of the compounds $NbNi_2Al$ and $Nb(Ni, Al)_2$ were determined. The
experimental results are presented in graphs and tables (see Fig. 1). It was found
that at 900C Ni dissolves up to 11 at.% of Nb, and it was confirmed that the system
Nb-Ni is homogeneous in the region of 50--60 at.° Nb, as stated by W. Jeitschko,
H. Holleeck, H. Nowotny, F. Benesovsky (Phasen mit aufgefuellten Ti_2Ni-Typ M. Chemie,

Card 1/3   UDC: 669.293'24'71

Fig. 1. Isothermal section at 900C of the system Nb-Ni-Al (1 – one-phase alloys, 2 – two-phase alloys, 3 – three-phase alloys)

ACC NR: AP6036145

1964, 95, N 3). The compound $NbNi_2Al$ has a $NiCu_2Al$ structure (a - 5.946 $\overset{o}{A}$), and the compound $Nb(Ni,Al)_2$ has a $MgZn_2$ structure (a - 4.870 - 5.116 $\pm$ 0.003 $\overset{o}{A}$, C - 7.902 - 8.278 $\pm$ 0.005 $\overset{o}{A}$). Orig. art. has: 3 tables and 5 graphs.

SUB CODE: 11/   SUBM DATE: 03Mar65/   ORIG REF: 009/   OTH REF: 005

Card 3/3

MATUSHEVSKIY, Grigoriy Afanas'yevich; ARTAMONOV, D.S., red.;
PETROPOL'SKAYA, N.Ye., red.; DURASOVA, V.M., tekhn.red.

[Operation of machinery in road construction] Eksplua-
tatsiia mashin v dcrozhnom stroitel'stve. Kuibyshev,
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MATUSHSHKIY, G.V.

3(9)

AUTHOR: Matushevskiy, G.V.   SOV/50-60-1-12/20

TITLE: Estimation of the Integral Probability of Wave Elements
            Measured in a Coastal Zone by Means of the Wavegage Perspecto-
            meter

PERIODICAL: Meteorologiya i gidrologiya, 1960, Nr 1, pp 50-52 (USSR)

ABSTRACT: Before the new method of wave course observation was intro-
            duced in 1954, the wave course elements had an unknown integral
            probability. The latter can now be determined on the strength
            of deductions from the statistical theory of the wave course.
            In the present investigation, the integral probability of the
            following characteristics of a statistical observation series
            are determined: (1) Average height of five among the larger
            waves (h), (2) average length of five among the larger waves
            (L), and (3) average period from a treble determination of a
            period of 10 waves (τ). The operation was extended to several
            points. In the present paper, data are supplied for two of
            them: Cape Kodosh (Rayon of Tuapse) and Alushka. Table 1
            shows the mean values of the wave elements obtained from
            observations carried out over three years. The magnitude of
Card 1/2   the integral probability was determined on the strength of the

Estimation of the Integral Probability of Wave   SOV/50-60-1-12/20
Elements Measured in a Coastal Zone by Means of the
Wavegage Perspectometer

        following considerations. The wave period is established
by averaging the result.. of 3 measurements of the transit time
of 11 wave crests through an immovable point. Casual suc-
cessive waves are covered by each observation. By considering
this circumstance and the large amounts, the period obtained
for each wind velocity of the sea motion can be regarded as
a mean value. Therefore the period has a 50% integral proba-
bility. The determination of the latter in wave heights and
wave lengths is based on the results of the latest sea motion
investigations made by the Gosudarstvennyy okeanograficheskiy
institut (State Oceanographic Institute) (Refs 1,2). Further-
more, the integral probability of the mean h-values was
determined for each wind velocity with sea motion. The cal-
culation procedure is shown here. The final calculation
results for both points Cape Kodosh and Alushka are given in
table 3. There are 3 tables and 2 Soviet references.

Card 2/2

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Meteor.i gidrol. no.8:34-37 Ag '60.   (MIRA 13:8)
     (Azov, Sea of--Precipitation (Meteorology))

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Using materials of standard wave measuring observations to
establish specialized wave regime characteristics of the
costal zone. Trudy GOIN no.54:67-79 '60.   (MIRA 14:4)
                        (Waves)

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Angular distribution of energy in the spectrum of sea waves.
Meteor. i gidrol no.4:17-22 Ap '61.   (MIRA 14:3)
                        (Waves)

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    Study of fields of wind waves near obstacles. Okeanologiia 3
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Investigates disintegration of RaE. Shows the beta-spectrum of RaE is quite complex.
Determines upper limits of partial beta-spectra. Studies gamma-ray conversion, which
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Gamma-control of moisture in clay slurry. TSement 31 no. 6:
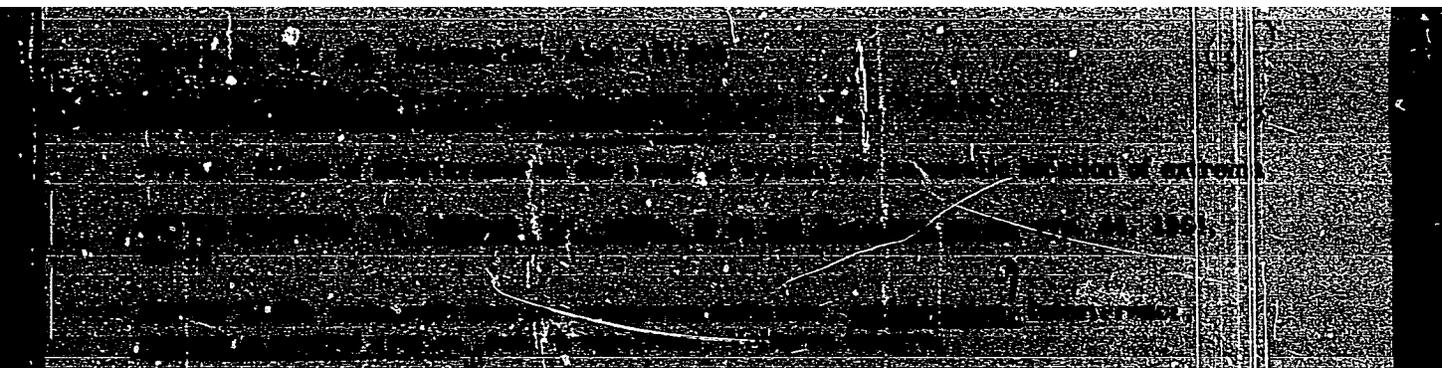17-19 N-D '65.   .MIRA 18:12)

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