L 55122-65
ACCESSION NR: AP5017516

point of reverse martensite transformation). When cooled to room temperature, large martensite needles with plane faceting were observed on the samples. Orig. art. has 7 figures.

ASSOCIATION: Institut metallofiziki AN UkrSSR (Institute of Metal Physics AN UkrSSR)

SUBMITTED: 30Sep63 ENCL: 00 SUB CODE: MM, SS

NO REF SOV: 003 OTHER: 000 JPRS

Card 2/2

LOBODYUK, V.A.; KHADROS, L.G.

Reorientation of crystals of the γ' -phase during martensite transformation. Fiz. met. i metalloved. 18 no.4:573-579 O '64. (MIRA 18:4)

1. Institut metallofiziki AN UkrSSR.

HLINIAK, Andrzej; DABROWSKI, Jerzy; HLINIAK, Irena; LOBODZI N, Wlodzimierz; WOJCIECHOWSKI, Zbigniew; PETRYKA, Alicja

Depth and exposition of the rectum and bladder in x-ray therapy of cancer of the cervix uteri. Nowotwory 14 no.4:417-421 (=D '64

1. Z Zakladu Roentgenoterapii Instytutu Onkologii w Gliwicach (Kierownik: dr.med. A. Hliniak; Dyrektor: dr. med. J.Swiecki).

LOBODZIEC, Wlodzimierz

Characteristics of the energy of the KID type ionization chambers used in diagnostic and therapeutic roentgen apparatus. Pol. przegl. radiol. 27 no.4:347-352 '63.

1. Z Instytutu Onkologii - Oddzial w Gliwicach Dyrektor: dr med. J. Swiecki.
(RADIOTHERAPY, DOSAGE) (RADIOMETRY)
(EQUIPMENT AND SUPPLIES)

LUBAS, B.; ŁODYGOWSKI, W.; RATKA, P.; TYSZKA, L.

Cobalt telegammatherapy with the use of GUT-400 with a view toward radiologic protection. Pol. przegl. radiol. 28 no.6: 565-574 N-D '64.

1. Z Instytutu Onkologii; Oddział w Gliwicach (Dyrektor: dr. med. J. Świecki).

HLINIAK, Andrzej; DARLEWSKI, Jerzy; HLINIAK, Irena; LOBODZIEW, Wodzimierz; WOJCIESZEK, Zbigniew; PETRYKA, Alicja.

Comparison of the size of x-ray irradiation fields to the route of metastases of cervical cancer. Nowotwory 14 no.3:217-220 Ag-S '64.

1. Z Zakładu Rentgenoterapii Instytutu Onkologii w Gliwicach (Kierownik: dr. med. A. Hliniak; Dyrektor: dr. med. J.Skalski).

LOBODZIEC, Wlodzimierz

Distribution of doses at points screened by the bone in x-ray therapy generated in a roentgen tube of 200 kV peak tension. Nowotwory 15 no.1:93-96 Ja-Mr'65.

1. Z Instytutu Onkologii z Gliwicach (Dyrektor: dr. med. J. Swiecki).

ZWIERZ, J.; DURIAKOWA, I.; LOBODZINSKA, M.

Survey of edemic leptospirosis region in Lower Silezia and other regions of Poland. Polski tygod. lek. 7 no. 35:1041-1045 1 Sept 1952. (CLML 23:5)

1. Of the State Institute of Hygiene in Wroclaw.

ZWIERZ, J.; DURLAKOWA, I.; LOBODZINSKA, M.; SOBOLEWSKA, M.

Comparative studies on serological methods used most frequently in diagnosis of leptospirosis. Med. dosw. mikrob. 5 no.2:231-236 1953. (CIML 25:1)

1. Of Wroclaw Branch of the State Institute of Hygiene; Leptospirosis center.

ZWIERZ, Jozef; DURAKOWA, Irena; LOBODZINSKA, Maria; ZWIERZCHOWSKI, Jan

Studies on leptospiral antibodies in animals. Arch. immun. ter. dosw. 3:585-598 1955.

1. Filia Panstwowego Zakladu Higieny, Osrodek Leptospirowy we Wroclawiu (Kierownik: Doc. dr. Jozef Zwierz) Panstwowy Instytut Weterynaryjny, Pracownia do Badan nad Leptospiroza we Wroclawiu (Kierownik: Doc. dr. Jozef Zwierz).

(LEPTOSPIROSIS, immunology,
antibodies in animals (Pol))

MAKOWER, Henryk; SKURSKA, Zofia; LOBODZINSKA, Maria; KIDANKIEWICZ, Tadeusz

Variability of Asian influenza virus cultured in chick embryo allantois. Postepy hig. med. dosw. 12 no.3:291-292 1958.

1. Instytut Immunologii i Terapii Doswiadczalnej PAN im. Ludwika Hirszfelda Dzial Wirusologii Wroclaw, ul. Chalubinskiego 4.
(INFLUENZA VIRUSES, culture,
Asian strains in chick embryo allantois, variability (Pol))

LOBODZINSKA, M.

SURNAME, Given Names

6

Country: Poland

Academic Degrees:

Affiliation:

Source: Warsaw, Postepy Higieny i Medycyny Doswiadczalnej, Vol XV, No 1 1961, pp 440-441.

Data: "Early and Late Influenza Virus Strains in Tissue Cultures of t Chick Embryo." English abstract of article originally publishe Arch. Immunol. i Terapii Dosw. 1960, 8, 101.

Authors:
SKURSKA, Zofia, PhD, Deputy Chief, Department of Virology (Zak Wirologii), Ludwik Hirszfeld Institute of Immunology and Expe mental Therapy (Instytut Immunologii i Terapii Doswiadczalnej Ludwika Hirszfelda), Polish Academy of Sciences (PAN--Polska mia Nauk), Wroclaw; Director: Prof. Stefan SLOPEK, Dr.
MAKOWER, Henryk, MD., M Sc., Chief, Department of Virology, Lu Hirszfeld Institute of Immunology and Experimental Therapy, P Academy of Sciences, Wroclaw; Director: Prof. Stefan SLOPEK,
SYPULCIA, A.
LOBODZINSKA, M.
KIDANKIEWICZ, T.

GPO 9

SURNAME, Given Names

3

Country: Poland

Academic Degrees: [not given]
Affiliation: [Presumed] Ludwik Hirszfeld Institute of Immunology and Experimental Therapy (Instytut Immunologii i Terapii Doswiadczalnej im. Ludwika Hirszfelda), Polish Academy of Sciences (PAN--Polska Akademia Nauk), Wroclaw; Director: Prof. Stefan SLOPEK, Dr.
~~Source:~~
Source: Warsaw, Postepy Higieny i Medycyny Doswiadczalnej, Vol XV, No 4, 1961, pp 439-440.
~~Data:~~
Data: "Segregation of Influenza A_1, A_2, and B Viruses into Strains with Varying Sensitivity to Horse Serum Inhibitor."
English abstract of article originally published in Arch. Immunol. i Terapii Dosw. 1960, 8, 687.

Authors:
LOBODZINSKA, M.
KLUBINSKA, B.

GPO 901643

LOBODZINSKA, Maria; KLUBINSKA, Barbara

Segregation of influenza A, A_2 and B virus strains into strains with varying sensitivity to horse serum inhibitor. Arch.immun.ter. dosw. 8 no.4:687-694 '60.

1. Department of Virology, Institute of Immunology and Experimental Therapy of the Polish Academy of Sciences, Wroclaw.

(INFLUENZA VIRUSES) (IMMUNE SERUMS)

SKURSKA, Zofia; LOBODZINSKA, Marianna; KIDANKIEWICZ, Tadeusz; BALTOWSKA, Zofia; MAKOWER, Henryk.

Area irrigated with sewage. Its hygienic and sanitary evaluation. VII. Virological studies on sewage and rodents from fields irrigated with sewage water. Acta microbiol. pol. 10 no.4:457-468 '61.

1. Z Zakladu Wirusologii Instytutu Immunologii i Terapii Doswiadczalnej Polskiej Akademii Nauk we Wroclawiu.
(SEWAGE virol) (RODENTS virol) (VIRUSES)

LOBODZINSKA, Marianna

Leukergy in experimental infection of rabbits with vaccinia virus. Arch. immun. ther. exp. 11 no.1/2:63-83 '63.

1. Department of Virology, Institute of Immunology and Experimental Therapy, Polish Academy of Sciences, Wroclaw.
(VACCINIA) (LEUKOCYTES)

SYPULOWA, Alicja; LOBODZINSKA, Maria; SKURSKA, Zofia

Induced fluorescence in the study of cells in tissue cultures infected with viruses. I. Differential staining of nucleic acids in HeLa cells infected with vaccinia viruses. Arch. immun. ther. exp. 12 no.2:156-163 '64

1. Department of Virology, Institute of Immunology and Experimental Therapy, Polish Academy of Sciences, Wroclaw.

LOBODZINSKA, Maria; KIDANKIEWICZ, Tadeusz; SKURSKA, Zofia.

Selective hemagglutination of myxoviruses. Arch. immun. ther. exp. 12 no.2:164-172 '64

1. Department of Virology, Institute of Immunolog and Experimental Therapy, Polish Academy of Sciences, Wroclaw.

LOBODZINSKA, Maria; SYFULOWA, Alicja; SKURSKA, Zofia

Induced fluorescence in the study of tissue culture cells infected with viruses. II. Nucleic acids in the kidney cells of chick embryos infected with influenza viruses. Arch. immun. ther. exp. 12 no.4:503-511 '64

1. Department of Virology, Institute of Immunology and Experimental Therapy, Polish Academy of Sciences, Wroclaw.

SKUM[illegible], Zofia; LOBODZINSKA, Maria; BIERNACKA, Irmina

Studies on the viruses of asiatic influenza. III. Effect of physicochemical factors. Arch. immun. ther. exp. 13 no.2: 178-188 '65

1. Department of Virology, Institute of Immunology and Experimental Therapy, Polish Academy of Sciences, Wroclaw, and Department of Microbiology, Pharmaceutical Faculty, School of Medicine, Wroclaw.

LOBODZINSKA, Z.

(2)

Titration of phosphoric acid and calcium hydroxide. J. Kamecki and Z. Lobodzińska. *Bull. intern. acad. polon. sci., Classe sci. math. nat., Ser. A* 1951, 347–04(Pub. 1952) (in English).—H_3PO_4 was treated with $Ca(OH)_2$ soln., potentiometrically and conductometrically. Two series of titrations were made with approx. 0.04 and 0.006*N* $Ca(OH)_2$ soln. Two inflection points occurred on the potentiometric curves corresponding to the formation of the monobasic and tribasic salts. Reverse titrations gave similar results. All titrations were carried out with an Sb electrode at room temp. and at 50°. Two series of titrations, 0.0045 and 0.0088*N* H_3PO_4 were titrated, conductometrically, with 0.04 and 0.0327*N* $Ca(OH)_2$. While conductometric curves were different in shape, titration results indicated the formation of the mono-, di-, and tri-basic salts.

Glenn Dooley

LOBODZINSKA, Z.

(1) 6

Titration of phosphoric acid and barium hydroxide. J. Kamecki, Z. Lobodzinska, and J. Selzinur. *Bull. intern. acad. polon. sci., Classe sci. math. nat.*, Ser. A 1951, 365-77 (Pub. 1952)(in English).—The Poggendorff compensation method with a standard calomel electrode and Sb electrode were used for potentiometric titrations. Two series of titrations, one with 0.05*N* and the other with 0.015*N* H_3PO_4, were made with $Ba(OH)_2$ soln. Two inflection points occurred on the potentiometric curve corresponding to the formation of the monobasic and tribasic salts. In a more dil. soln. a characteristic max. appeared when the second equiv. of base was added. For conductometric measurements, 0.0045 and 0.015-0.020*N* H_3PO_4 solns. were titrated with $Ba(OH)_2$ soln. Three reflection points appeared though not sharp. Glenn Bradley

22859

S/044/60/000/012/003/014
C 111/ C 333

16.3500

AUTHOR: Lobodzinskaya, I. G.

TITLE: Potentials of the fundamental boundary value problem for the equation $\Delta^3 u = 0$

PERIODICAL: Referativnyy zhurnal, Matematika, no. 12, 1960, 78, abstract 13856. (Tr. Odessk. un-ta. Sb. molodykh nehenykh un-ta, 1958, 148, Nr 3, 115-128)

TEXT: The author considers the problem: Determine a function $u(x,y)$ which satisfies the equation $\Delta^3 u=0$ in a certain domain and the conditions: $u = f_1$, $(\partial u/\partial n) = f_2$, $\Delta u = f_3$ on the boundary L. For investigating this problem the author introduces the potentials:

$$w_1(P) = \frac{1}{\pi}\int_L \mu(Q)\cos^3\Theta(P, Q)\, R(P, Q)\, dl_Q,$$

$$w_2(P) = \frac{1}{\pi}\int_L \lambda(Q)\cos^4\Theta(P, Q)\, dl_Q,$$

Card 1/2

Potentials of the fundamental ... S/044/60/000/012/003/014
C 111/ C 333

$$w_3(P) = \int_L \bar{p}(Q) \frac{\cos^5 \Theta(P,Q)}{R(P,Q)} \, dl_Q$$

where $\Theta(P, Q)$ is the angle between $R(P, Q)$ and the interior normal. At first the behavior of these potentials and of the functions $(\partial w_1/\partial n_1)\Delta w_1$ is investigated for the passage through a marginal point, and analogies to the jump formulas are obtained. Then the solution is sought in the form $u = w_1 + w_2 + w_3$, where for the unknowns μ, λ, p a system of three integro-differential equations is obtained. It is remarked that in the case of the unit circle the corresponding homogeneous system possesses the eigen value $\frac{1}{\pi}$ with the multiplicity 1 and the general solution is a constant vector. An investigation of the inhomogeneous system in the general case is not given.

[Abstracter's note: Complete translation.]

Card 2/2

16.3450

37604

S/044/62/000/004/043/099
C111/C333

AUTHOR: Lobodzinskaya, I. G.

TITLE: The potentials of the basic boundary value problem for the equation $\Delta^m u = 0$

PERIODICAL: Referativnyy zhurnal, Matematika, no. 4, 1962, 51, abstract 4B236. ("Nauchn. yezhegodnik. Odessk. un-t. Fiz.-matem. fak. i N.-i. in-t fiz.", no. 2, Odessa, 1961, 107-110)

TEXT: The following boundary value problem is considered: Determine a function $u(P)$ which satisfies the equation

$$\Delta^m u = 0 \qquad (1)$$

in the bounded domain $\overline{D}$ and the boundary conditions

$$u\big|_{\gamma} = f(P_0), \quad u\big|_{\beta} = f_1(P_0),$$

$$\frac{\partial u}{\partial \nu}\Big|_{\alpha} = f_2(P_0), \quad \frac{\partial u}{\partial \nu}\Big|_{\beta} = f_2(P_0),$$

$$\Delta u\big|_{\gamma} = f_3(P_0), \quad \Delta u\big|_{\beta} = f_3(P_0)$$

Card 1/2

S/044/62/000/004/043/099
C111/C333

The potentials of the basic ... $\Delta^k u|_\gamma = f_m(P_o)$, if $m = 2k+1$, or $\frac{\partial^k u}{\partial \nu^k}\Big|_\gamma = f_m(P_o)$, if $m=2k$ on the boundary γ. The solution is sought as sum of the potentials

$$u(P) = \sum_{i=1}^{m} u_i(P)$$

where

$$u_i(P) = \frac{1}{\pi} \int_\gamma \mu_i(Q) \cos^{2m-i}\theta R^{i-2} dl_o .$$

The case of the biharmonic equation has been investigated by O.I. Panich.

[Abstracter's note: Complete translation.]

Card 2/2

39884
S/044/62/000/007/029/100
C111/C222

16.3800

AUTHOR: Lobodzinskaya, I.G.

TITLE: The solution of the basic boundary value problem for the polyharmonic equation of VI-th order

PERIODICAL: Referativnyy zhurnal, Matematika, no. 7, 1962, 55, abstract 7B269. ("Nauchn. yezhegodnik. Odessk. un-t. Fiz.-matem. fak. i N.-i. in-t fiz." No. 2. Odessa, 1961, 110-115)

TEXT: The equation

$$\Delta^3 u + 3a_1 \Delta^2 u + 3a_2 \Delta u + a_3 u = 0$$

with the conditions $u|_L = f_1$, $\frac{\partial u}{\partial n}\Big|_L = f_2$, $\Delta u|_L = f_3$ is solved in the domain D with the sufficiently smooth boundary L. The constants a_1, a_2, a_3 are so that the roots of the equation $k^3 + 3a_1 k^2 + 3a_2 k + a_3 = 0$ are

S/044/62/000/007/029/100
C111/C222

The solution of the basic ...

equations of second kind. It is stated that the corresponding homogeneous system possesses only trivial solutions. Thus the unique solvability of the formulated boundary value problem is proved.

Abstracter's note : Complete translation.

Card 2/2

GRIGULEVICH, V.I.; LOBODZINSKIY, V.A.

Some optimum relationships in the limitation of amplitude modulated oscillations. Elektrosviaz' 18 no.4:19-26 Ap '64.
(MIRA 17:6)

ACCESSION NR: AP4029221 S/0106/64/000/004/0019/0026

AUTHOR: Grigulevich, V. I.; Lobodzinskiy, V. A.

TITLE: Some optimum relations in the limitation of AM oscillations

SOURCE: Elektrosvyaz', no. 4, 1964, 19-26

TOPIC TAGS: frequency multiplication, AM, AM limitation, AM suppression, radio pulse frequency multiplication

ABSTRACT: A method of evaluating the efficiency of AM suppression by limiters is suggested. The suppression is mainly intended for obtaining monochromatic oscillations from the spectrum of a radio-pulse frequency multiplier (V. I. Grigulevich, Elektrosvyaz', 1956, no. 6). The system consists of a quartz oscillator, a frequency multiplier, a preselector, a limiter, and a filter; the preselector converts the pulsed oscillations of the frequency multiplier into AM continuous oscillations. The nature and position of the extremum points in the

Card 1/2

ACCESSION NR: AP4029221

output wave differ from those at the limiter input: the modulation frequency is doubled which was experimentally corroborated. The modulation factor at the output is found to be equal to: $m' \approx \frac{1}{12}\eta_0^2 m^2$; the efficiency of the amplitude limiter is $\varkappa_{ep} = \frac{1}{12}\eta_0^2 m$ where $\eta = \frac{U_0}{U_m} = \cos\theta$. The case of limiting under frequency-multiplication conditions is also considered. Orig. art. has: 4 figures and 37 formulas.

ASSOCIATION: none

SUBMITTED: 09Jun63 DATE ACQ: 28Apr64 ENCL: 00

SUB CODE: EC NO REF SOV: 003 OTHER: 000

Card 2/2

GRIGULEVICH, V.I.; LOBODZINSKIY, V.A.

Spurious phase modulation in the limiting of AM oscillations.
Elektrosviaz' 18 no.8:73-76 Ag '64. (MIRA 17:8)

L 29306-66 EWT(1)
ACC NR: AP6012340 SOURCE CODE: UR/0108/66/021/004/0033/0039

AUTHOR: Shumlyanskiy, I. I. (Active member); Lobodzinskiy, V. A. (Active member) 31 B

ORG: Scientific-Technical Society of Radio Engineering and Electric Communication im. A. S. Popov (Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi)

TITLE: Use of amplitude limiters in a frequency-selective system

SOURCE: Radiotekhnika, v. 21, no. 4, 1966, 33-39

TOPIC TAGS: filter circuit, receiver selectivity, tuned amplifier, amplitude modulation

ABSTRACT: The purpose of the investigation was to determine the optimal conditions under which an amplitude limiter used in conjunction with simple tuned filters increases the selectivity of a system intended for the separation of frequencies of a discrete spectrum. The optimal operating conditions of limiters with fixed and self bias are established, and the value of the grid leak resistance is established in a case of self bias. Operation with class A and class C operation are discussed and it is shown by analysis that a tuned amplifier operating in class C operation with self bias approaches the optimal conditions of amplitude limitations. These conclusions are borne out by experimental tests on a limiter operating a 6Zh9P tube

Card 1/2 UDC: 621.395.664

L 29306-66 0

ACC NR: AP6012340

at frequencies 235 and 0.2 kcs at a depth of modulation 0.15. Orig. art. has: 10 figures and 9 formulas.

SUB CODE: 09/ SUBM DATE: 018ep65/ ORIG REF: 005

Card 2/2 BK

SKOROKHODOV, Aleksey Gavrilovich; BEREZOVSKIY, Semen Mikhaylovich; LOBOK, Abram Yakovlevich; TSYRUL'NIKOV, A.I., redaktor; AVRUTSKAYA, R.F., redaktor; BEKKER, O.G., tekhnicheskiy redaktor.

[Secondary ferrous metals] Vtorichnye chernye metally; spravochnik. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1954. 336 p. [Microfilm] (MLRA 8:1)
(Scrap metal)

ARMAND, D.L.; Prinimal uchastiye: L'VOVICH, M.I.; RAUNER, Yu.L.; LOBOLEV, L.N.

Landform geophysics. Izv.AN SSSR. Ser. geog. no. 2:12-23 Mr-Ap '64. (MIRA 17:5)

1. Institut geografii AN SSSR.

LOBENEK, F.

Hardenability of steels. p. 40. STROJIRENSTVI. (Ministerstvo strojirenstvi) Praha. Vol. 5, no. 1, Jan. 1955.

SOURCE: East European Accessions List, Vol. 5, no. 9, September 1956

LOBOS, Tadeusz, mgr inz.

Two-phase network operation and correct action of the protective relays. Energetyka Pol 17 no.1:15-18 '63.

1. Katedra Zabezpieczen i Automatyki w Energetyce, Politechnika, Wroclaw.

IL'IN, R.S., kand.tekhn.nauk, dotsent, LOBOSOV, A...., [illegible]

Automatic recording split-beam microphotometer. [Trudy] MVTU no.110: 17-26 '62. (MIRA 16:6)

(Microphotometer)

LOPATKA, V.

LOPATKA, V. Karel Juva's Hospodareni vodouv zemedelstvi (Water Economy in Agriculture); a book review. P. 117.

Vol. 8, no. 2/3, 1956
GEOGRAFICKY CASOPIS
GEOGRAPHY & GEOLOGY
Czechoslovakia

So: East European Accession, Vol. 6, No. 5, May 1957

HLOTKA, V.

HLOTKA, V. Karel Juva's Hospodarení vodou v zemedelství (Water Economy in Agriculture); a book review. P. 115.

Vol. 7, no. 2/3, 1958
GEOGRAFICKY CASOPIS
GEOGRAPHY & GEOLOGY
Czechoslovakia

So: East European Accession, Vol. 6, No. 5, May 1957

LOBOTKA, V.

The Suez Canal during the last fifty years. p. 226

GEOGRAFICKY CASOPIS. (Slovenska akademie vied. Zemepisny ustav) Bratislava, Czechoslovakia, Vol. 11, no. 3, 1959

Monthly List of East European Accessions (EEAI), LC, Vol. 8, no. 11, Nov. 1959
Uncl.

LOBOTSKAYA, Eleonora Stefanovna; KORNEYEV, S.G., red.; KHAYKINA, A.Ye., nauchn. red.; POPOV, V.I., tekhn. red.

[Treasures of the "Black sphere."] Sokrovishcha "Chernogo shara." Tambov, Tambovskoe knizhnoe izd-vo, 1962. 11 p. (MIRA 16:10)
(Bibliotechka novatora, no.7)
(Patents)

LOBOTSKAYA, L.I

B

USSR/General Biology. Genetics

Abs Jour : Ref Biol., No 13, 1958, 57193

Author : Turbin N. V., Lobotskaya L. I., Kunitskiy Ye. A.
Inst : Belorussian University
Title : Main Results of the 1955-1956 Experiments for the Study of Varieties, Lines, and Hybrids of Maize as the Initial Form for the Selection of Hybrid Maize Under Conditions of Belorussian SSR

Orig Pub : Pub. Uch. zap. Belorussk. un-t, 1957, vyp. 37, 255-327

Abstract : On the basis of preliminary studies the following initial forms are recommended as the best for the selection of corn in Belorussia: early ripening and medium early--Kichkasskaya, Melkaya khulinskaya, Severyanka, Belaya Pireneyskaya, Voronezhskaya 76; medium ripening--

Card 1/2

33

PALILOV, A.I.; LOBOTSKAYA, L.I.

Regular features in reaction of flowering plants to rhythmical pollination of different frequency. Sbor. bot. rab. Bel. otd. VBO no.2:81-88 '60. (MIRA 15:1)

(Fertilization of plants)

PALILOV, A.I. [Palilau, A.I.]; ABBOTSKAYA, L.I. [Abbotskaia, L.I.]; ANOKHINA, V.S.

Differences of the effect of "basic" and "supplementary" pollen on the heredity; principles of the "supplementary pollination" concept. Vestsi AN BSSR. Ser. bilial. nav. no.2:46-59 '64. (MIRA 17:11)

LOBOTSKIY, N.I.

Acute paraproctitis. Zdrav. Belor. 6 no.9:35-36 S '60. (MIRA 13:9)

1. Iz kafedry obshchey khirurgii (ispoln.obyazan. zaveduyushchego - dotsent A.A. Greyman) Minskogo meditsinskogo instituta i kafedry obshchey khirurgii (zaveduyushchiy - dotsent A.Ya.Mitroshenko) Vitebskogo medinstituta (direktor - dotsent I.I. Bogdanovich).
(ANUS--DISEASES)

LOBOTSKIY, N.I. (Vitebsk, pr.Frunze, d.5, kv.17)

Pararectal fistulas. Vest.khir. no.1:76-79'63. (MIRA 16:7)

1. Iz kafedry obshchey khirurgii (zav.-dotsent N.I.Bobrik [deceased] Minskogo meditsinskogo instituta i kafedry obshchey khirurgii (zav.-dotsent A.Ya.Mitroshenko) Vitebskogo meditsinskogo instituta (dir.-dotsent I.I.Bogdanovich)
(RECTUM—DISEASES) (FISTULA)

LOBOTSKIY, N.I., assistent; LEPLYA, Ye.S., dotsent

Sensitivity of microflora to antibiotics in appendicitis. Zdrav. Bel. 9 no.7:32 Jl '63 (MIRA 17:4)

1. Iz kafedry obshchey khirurgii (zav. - dotsent A. Ya. Mitroshenko) i kafedry mikrobiologii (zav. - dotsent Ye.S. Leplya) Vitebskogo meditsinskogo instituta (rektor- prof. G.A. Medvedeva).

AUL', inzh.; LOBOV, master; BORISOV, starshiy monter; SAFRONOV, V.I.

Concerning Tereshchenko's article "A fatal accident while climbing a pole." Energetik 9 no.12:25-26 D '61. (MIRA 15:1)
(Electric lines--Poles) (Electricity, Injuries from)
(Electric lines--Safety measures)

LOBOV, A.

Repairing fuel pumps of mobile diesel-electric power stations. Muk. -elev.prom. 22 no.11:29 N '56. (MLRA 10:1)

1. Stavropol'skaya krayevaya kontora Zagotzerno.
(Fuel pumps)

AUTHORS: Lobov, A.A. and Yartsev, V.I., Engineers SOV/118-58-2-14/19

TITLE: Experience in the Operation of Electric Gantry Cranes (Opyt ekspluatatsii elektrokozlovykh kranov)

PERIODICAL: Mekhanizatsiya trudoyëmkikh i tyazhëlykh rabot, 1958, Nr 2, pp 38-41 (USSR)

ABSTRACT: The introduction of various types of electric gantry cranes on the L'vov Railway sharply increased the labor efficiency and cut down the costs of loading and unloading operations. The authors give a detailed description of the organization of loading and unloading operations, and of the working brigades. They also list numerous defects of the telphers TV-501 constructed at the Tula plant.
There are 3 photos.

1. Hoists--Operation 2. Electricity--Applications

Card 1/1

KOGAN, Liber Ayzikovich; kand.tekhn.nauk; GOKHBOM, Yevgeniy Naumovich; VEKSLER, Vladimir Markovich; KHOTIN, Boris Mikhaylovich; Prinimali uchastiye: PETROVA, T.I., ANAN'YEVA, S.A.; TAL', K.K.; BUTSKIY, A.M.; LOBOV, A.A. BOBROVA, Ye.N., tekhn.red.

[Containers] Konteinery. Pod obshchei red. L.A.Kogana. Moskva, Vses.izdatel'sko-poligr.ob"edinenie M-va putei soobshcheniia, 1960. 318 p. (MIRA 14:3)
(Railroads--Freight) (Containers)

SEMISALOV, L.P.; LOBOV, A.A.; AMSTISLAVSKIY, D.M.; VEKSEL'MAN, Z.N.; CHEBOTAREV, A.V.

Effect of the shape of coke pieces on some indices of size. Koks i khim. no.9:33-37 '63. (MIRA 16:9)

1. Ukrainskiy uglekhimicheskiy institut (for Semisalov, Lobov).
2. Zhdanovskiy koksokhimicheskiy zavod (for Amstislavskiy).
3. Koksokhimstantsiya (for Veksel'man, Chebotarev).

(Coke--Testing)

SURENYAN, G. S., Eng.; and [illegible], A. I., Eng.

Cranes, Derricks, Etc.

Walking crane. Mekh. trud. rab. 6 no. 6, 1952.

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

ABRAMOVICH, I.I., inzh.; AUERBAKH, V.M., inzh.; LOBOV, A.G., inzh.

"Building tower cranes" by I.IA.Kogan. Reviewed by I.I.Abramovich, V.M.Auerbakh, A.G.Lobov. Stroi.i dor.mashinostr. 4 no.5:38 My '59. (MIRA 12:7)
(Cranes, derricks, etc.)

LOBOV, A.G., inzh.

Modernization of tower cranes. Mekh.atroi. 7 no.3:14-17 Mr '60. (MIRA 13:6)
(Cranes, derricks, etc.)

L 14444-66
ACC NR: AP6002971 SOURCE CODE: UR/0286/65/000/024/0145/0145

INVENTOR: Lobov, A. G.; Ol'shanskiy, A. V.; Shulepov, L. V.

ORG: none

TITLE: A tractor with a bulldozer attachment. Class 63, No. 177286 [announced by the Red Banner Military Engineering Academy im. V. V. Kuybyshev (Voyenno-inzhenernaya krasnoznamennaya akademiya)]

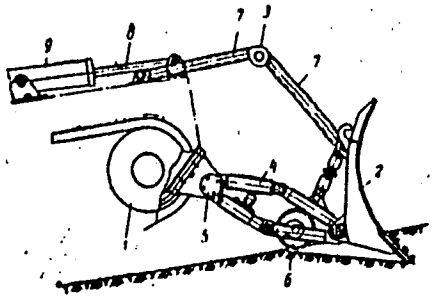
SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 24, 1965, 145

TOPIC TAGS: tractor, construction machinery

ABSTRACT: This Author's Certificate introduces: 1. A tractor with a bulldozer attachment including a scraper blade, a blade-raising mechanism, upper push rods, lower push rods which are four-link hinged mechanisms with flexible connections and a support roller mounted on one of the bottom links. The device is designed for uniform load distribution on the caterpillar tread of the tractor and for reduced frame vibration during motion. The rear end of the tractor body is made in the form of the bulldozer scraper attachment mounted so that it can be moved into the working

Card 1/3 UDC: 621.868.238.6 : 621.878.23

L 14444-66
ACC NR: AP6002971



1 - tractor; 2 - scraper; 3 - hoist mechanism; 4 - four-link hinged mechanism; 5 - adjustable torsion device; 6 - support roller; 7 - upper push rods; 8 - cylinder rod; 9 - power cylinder.

Card 2/3

L 14444-66

ACC NR: AP6002971

position by the hoist mechanism with interhinged upper push rods. One of these rods is also hinged to the scraper device and the others are hinged to the tractor. The rods of power cylinders mounted on the tractor are fastened by hinges to these push rods. 2. A modification of this tractor in which each of the hinged four-link mechanisms of the bulldozer attachment is made with a flexible connection in the form of an adjustable torsion device mounted in the hinge which fastens the four-link mechanism to the tractor.

SUB CODE: 13/ SUBM DATE: 26Nov64

Card 2/2

L 26161-66 EWP(h)/EWT(d)/EWP(1)
ACC NR: AP6006350 (A) SOURCE CODE: UR/0413/66/000/002/0084/0084

AUTHORS: Reznik, A. P.; Lobov, A. G.; Auerbakh, V. M.; Trofimov, A. P.; Yashin, K. A.; Vasil'chenko, N. M.

20
B

ORG: none

TITLE: A means of mounting upper sections of crane masts with the boom. Class 35, No. 178071

14

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1966, 84

TOPIC TAGS: crane, construction equipment

ABSTRACT: This Author Certificate describes the mounting of upper sections of crane masts with the boom. The upper sections are set by means of crane mechanisms which are on the lower section of the mast which is on a rotating platform. The leading end of the boom and the base of the supporting part of the mast are joined by a cable which, in turn, is fastened to the edge of the platform. Thus the elevation of the upper sections of the mast is secured by the boom through their turning relative to the place where the truss joins the platform (see Fig. 1).

UDC: 621.873.25.002.72

Card 1/2

L 26161-66
ACC NR: AP6006350

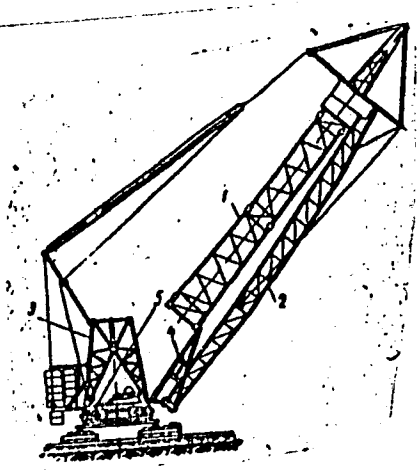


Fig. 1. 1 - upper sections of the mast; 2 - boom; 3 - lower section of the mast; 4 - truss; 5 - rotating crane platform.

Orig. art. has: 1 figure.
SUB CODE: 13/ SUBM DATE: 18Oct63
Card 2/2 cc

LOBOV, B.; SHALASHOV, V.; YEROFEYEV, N.

Three years have passed. Okhr. truda i sots. strakh. 5 no.8:14-15 Ag '62. (MIRA 15:7)

1. Zamestitel' nachal'nika kuznechnogo tsekha moskovskogo zavoda imeni Likhacheva. (for Lobov). 2. Predsedatel' komissii okhrany truda 1-go moskovskogo chasovogo zavoda (for Shalashov). 3. Predsedatel' komissii okhrany truda fabrichnogo komiteta 1-y moskovskoy sittsenabivnoy fabriki (for Yerofeyev).
(Moscow--Industrial hygiene)

KALLISTRATOV, F.V.; LOBOV, F.P.

Manure-soil compost, a valuable fertilizer. Zemledelie 23 no.1: 48-53 Ja '61. (MIRA 13:12)

1. Eksperimental'naya nauchno-issledovatel'skaya baza "Gorki Leninskiye" Instituta genetiki Akademii nauk SSSR.
(Compost)

LOBOV, F.P., kand.sel'skokhozyaystvennykh nauk

Manure-soil composts. Biol. v shkole no.2:78-81 Mr-Ap '62. (MIRA 15:2)

1. Eksperimental'naya nauchno-issledovatel'skaya baza "Gorki Leninskiye" Instituta genetiki Akademii nauk SSSR.
(Compost)

S/056/60/039/003/021/045
B006/B063

AUTHOR: Lobov, G. A.

TITLE: Polarization of Internal Conversion Electrons and Positrons Emitted After Beta Decay of the Nucleus

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 3(9), pp. 684-688

TEXT: As a result of the non-conservation of parity in beta decay, the decaying nucleus is polarized in the direction of emission of the beta electron. If the nucleus was initially unpolarized, and if the direction of emission of the neutrino is not recorded, the pair particles ought to be somehow polarized if the beta decay is followed by conversion with electron - positron pair production. The author now describes a theoretical study of the correlation of the direction of emission (polarizations) of the internal conversion electrons and positrons to the direction of emission of the electrons from the preceding beta decay. He considers the processes $I_1 \rightarrow I_2$ (β-decay) and $I_2, m_2 \rightarrow I_3, m_3$ (internal conversion with pair production), where I_1 is the angular momentum of the parent

Polarization of Internal Conversion Electrons and Positrons Emitted After Beta Decay of the Nucleus

S/056/60/039/003/021/045
B006/B063

nucleus, I_2 - momentum of the nucleus originating from the beta decay, m_2 - projection of this momentum, and I_3, m_3 - dto. for the final nucleus. The author employs a density matrix given by V. B. Berestetskiy and A. P. Rudik (Ref. 1). Calculations are made in Born approximation (without considering the nuclear Coulomb field) for allowed beta transitions, the assumptions made for the beta-interaction Hamiltonian being most general. The resulting expressions hold for any 2^J pole electric and magnetic types of nuclear conversion transition. Next, the author considers the case of VA-types of beta coupling (with time parity being conserved) and the case of beta transitions involving a change by unity of the nuclear spin $\Delta I = \pm 1$ ($\Delta T = \pm 1$). The resulting formula (11) is used for a numerical computation of the polarization of the internal conversion electrons following the beta decay of Na^{24}: $4^+(\beta^-)4^+(E2)2^+(E2)0^+$. The author thanks I. S. Shapiro for having suggested this work and for his interest in it. B. V. Geshkenbeyn is mentioned. There are 5 Soviet references.

SUBMITTED: April 26, 1960

Card 2/2

S/056/62/043/005/035/058
B102/B104

AUTHORS: Lobov, G. A., Shapiro, I. S.

TITLE: Radiative capture of a μ^--meson by a proton

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 5(11), 1962, 1821 - 1825

TEXT: The contributions from induced pseudoscalar interaction to the radiative muon capture $\mu^- + p \rightarrow n + \nu + \gamma$ are investigated. In contradistinction to previous papers (Phys. Rev. 111, 354, 1958; 115, 694, 1959; Rev. Mod. Phys. 31, 797, 1959; 31, 802, 1959), all graphs (Figs. 1, 2) are taken into account. It can be shown that the contribution from the graphs of Fig. 2 is comparable with that from Fig. 1. The probability of radiative muon capture depends strongly on sign and magnitude of the pseudoscalar coupling constant g_p. Photonspectra due to the above graphs and photon circular polarization are calculated (Figs. 3, 4). The amount of circular polarization (β) is strongly affected by the presence of induced pseudoscalar interaction; change in sign of g_p changes β by a factor of 5. Taking account of the graphs δ and δ of Fig. 2 raises the probability of radiative

S/056/62/043/005/035/058
B102/B104

Radiative capture of...

μ^--capture by almost 100%; change in sign of g_P reduces this probability from $W=10.2\cdot10^{-2}$ sec^{-1} for $g_P = +8g_A$ to $W=4.2\cdot10^{-2}$ sec^{-1} for $g_P = -8g_A$. The radiative μ^- capture due to induced pseudoscalar interaction and the processes $n+\gamma\rightarrow\pi^-+p$ and $\pi^+\rightarrow\mu^+ + \nu + \gamma$ are interrelated since the matrix element of the radiative capture in pole approximation can be expressed in terms of the form factors of the latter processes. There are 5 figures.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki Akademii nauk SSSR (Institute of Theoretical and Experimental Physics of the Academy of Sciences USSR)

SUBMITTED: June 1, 1962

Fig. 3. Spectra of the photons emitted in μ^- capture. Δ for graphs of Fig. 1 only, $\Box$ - for all graphs with $g_P=+8g_A$, B - for all graphs with $g_P=-8g_A$.

Fig. 4. $\beta(x)$ for + (A) and - (B) sign of g_P; x is the photon energy in terms of its maximum energy.

Card 2/3

S/056/62/043/005/035/058
B102/B104

Radiative capture of...

Fig. 1

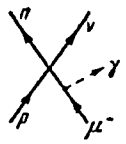


Fig. 2

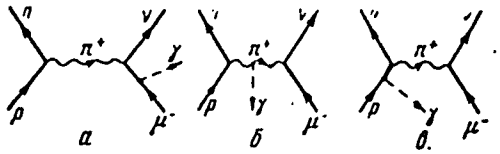


Fig. 3

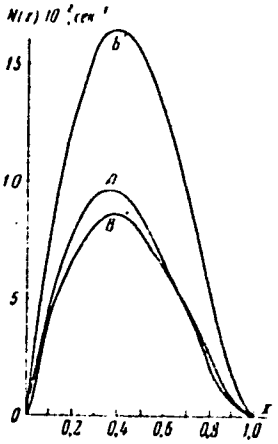
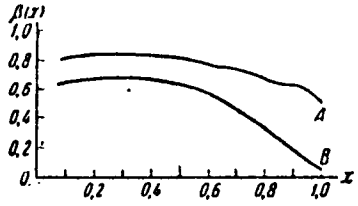


Fig. 4



Card 3/3

LOBOV, G.A.

Radiative capture of μ^--mesons in hydrogen. Zhur. eksp. i teor. fiz. 45 no.3:713-722 S '63. (MIRA 16:10)

1. Institut teoreticheskoy i eksperimental'noy fiziki.
(Mesons--Capture)

L 00500-66 EWT(m)
ACCESSION NR: AT5022123 UR/3138/64/000/302/0001/0028

AUTHORS: Kolkunov, V. A.; Lobov, G. A. 44,55

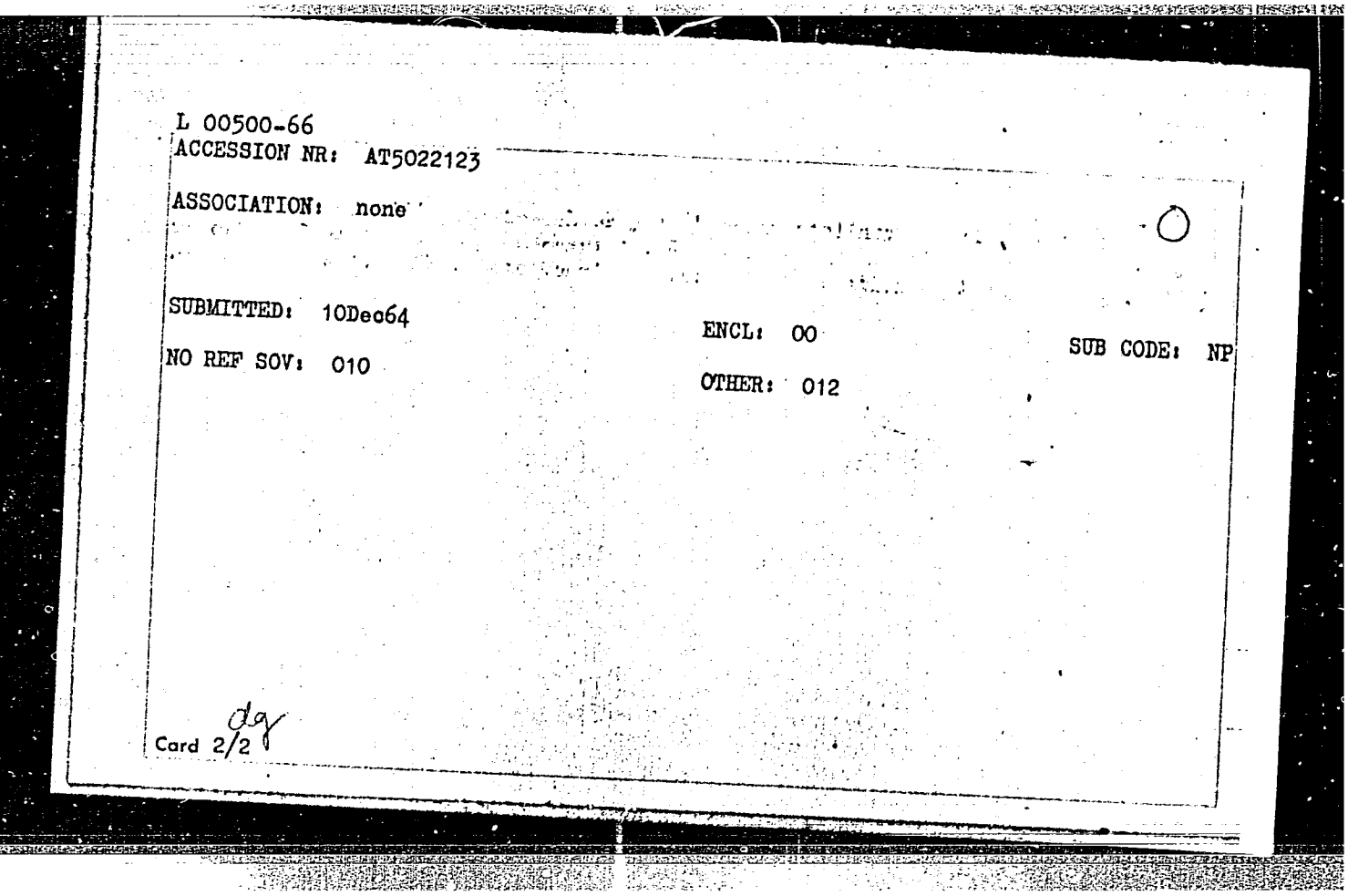
TITLE: Regge poles in a potential of the Coulomb-well type

SOURCE: USSR. Gosudarstvennyy komitet po ispol'zovaniyu atomnoy energii. Institut teoreticheskoy i eksperimental'noy fiziki. Doklady, no. 302, 1964. Polyusa Redzhe v potentsiale tipa Kulonovskoy yamy, 1-28

TOPIC TAGS: potential well, Schroedinger equation, quantum theory

ABSTRACT: The behavior of Regge poles as a function of energy for a potential of the Coulomb-well type is studied in nonrelativistic theory on the basis of an exact solution of the Schrödinger equation. The work was done to extend the obtained results to the relativistic quantum field theory, to explain the structure of the 1-plane. The equation of the Regge poles is derived, and the general structure of the trajectories, the interrelationship of the motion of the poles, and the motion of the poles at high, medium, and low energies are considered. It is shown that the trajectories of the poles in a Coulomb-well potential at low and medium energies are of a Regge nature, and that the asymptotics of the pole trajectories at high energies coincides with the Coulomb case. Orig. art. has: 39 formulas and 7 figures.

Card 1/2



L 00500-66
ACCESSION NR: AT5022123

ASSOCIATION: none

SUBMITTED: 10Dec64 ENCL: 00 SUB CODE: NP

NO REF SOV: 010 OTHER: 012

Card 2/2 dg

L 4067-66 EWT(m)/T/EWA(m)-2

ACCESSION NR: AT5022317 UR/3138/64/000/315/0001/0107

AUTHOR: Lobov, G. A. (Candidate of physico-mathematical sciences)

TITLE: Radiative capture of μ^--mesons by nuclei

SOURCE: USSR. Gosudarstvennyy komitet po ispol'zovaniyu atomnoy energii. Institut teoreticheskoy i eksperimental'noy fiziki. Doklady, no. 315, 1964. Radiatsionnyy zakhvat mu minus-mezonov yadrami, 1-107

TOPIC TAGS: mu meson, radiative capture, proton, nucleon, photon, neutron, circular polarization, particle interaction

ABSTRACT: In order to obtain information on constants of weak interaction between muons and nucleons, the author has studied the radiative capture of μ^- mesons by protons ($\mu^- + p \to n + \nu + \gamma$) and nuclei with $Z \leq 35$. The total probability of radiative μ^--capture and the spectrum and degree of circular polarization of photons are calculated in this dissertation. These quantities are strongly dependent on the constant of the effective pseudoscalar interaction C_p, which can be measured experimentally by means of the effect of radiation μ^-- capture. The table of contents follows:

Card 1/3

L 4067-66

ACCESSION NR: AT5022317

I. Introduction

1. Theoretical and experimental data on the interaction of μ^-- mesons and nucleons
2. Contents and chief results obtained in the dissertation

Chapter I. Radiative capture of a μ^--meson by a proton

1. Matrix elements of the process $\mu^- + p \to n + \nu + \gamma$
2. Matrix elements of the effective pseudoscalar interaction
3. Matrix elements of the process $\mu^- + p \to n + \nu + \gamma$
   Introduction of photon circular polarization vectors
4. Spectrum and degree of circular polarization of photons in the process $\mu^- + p \to n + \nu + \gamma$

Chapter II. Radiative capture of μ^--mesons in hydrogen

1. Density matrix of the spin states $(p\mu)$ of a mesoatom
2. Spectrum and degree of photon circular polarization in the course of radiative capture of a μ^--meson from a given state of the hyperfine structure of the hydrogen atom
3. Radiative capture of a μ^--meson from the state of the mesomolecule $(pp\mu)$

Chapter III. Radiative capture of μ^--mesons by medium-heavy nuclei

1. Matrix element of the process $\mu^- + (A, Z) \to (A, Z-1) + \nu + \gamma$
   Green function

Card 2/3

L 4067-66

ACCESSION NR: AT5022317

6

2. Spectrum and degree of photon circular polarization in the process $\mu^- + (A, Z) \to (A, Z-1) + \nu + \gamma$
3. Spectrum and degree of photon circular polarization in the radiative capture of μ^--mesons by $_6C^{12}$ nuclei
4. Experimental data on the radiative capture of μ^--mesons by nuclei

Acknowledgements

Appendix I. Calculation of the integrals $A(K, Z)$ and $B(K, Z)$

Literature

"I express my deep appreciation to my scientific mentor, Doctor of Physico-mathematical Sciences I. S. Shapiro, who proposed this topic and formulated most of the problems of this dissertation, for his assistance and for numerous fruitful discussions, which did much to elucidate the physical picture of the phenomena considered. I also express my gratitude to Doctor of Physico-mathematical Sciences A. M. Baldin for many valuable comments and suggestions." Orig. art. has: 10 figures, 2 tables, 187 formulas.

ASSOCIATION: none

SUBMITTED: 29Dec64 ENCL: 00 SUB CODE: NP

NO REF SOV: 042 OTHER: 073

Card 3/3

L 1142-66 EWT(m)/T/EWA(m)-2

ACCESSION NR: AP5019588 UR/0386/65/001/006/0007/0011

AUTHOR: Lobov, G. A. 44,55 27

TITLE: Nonconservation of time parity in strong interactions 44,55

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v.1, no. 6, 1965, 7-11

TOPIC TAGS: strong nuclear interaction, particle interaction, gamma quantum, gamma transition, parity principle

ABSTRACT: Pulse correlation is calculated for successive γ-quanta in the general case where both γ-transitions are mixed. A formula is derived for the angular correlation of the γ-quanta in which phase shifts due to nonconservation of time parity are taken to be of the order of 10^{-3}, assuming that time parity may not be conserved in the amplitudes of all processes where strongly interacting particles participate. "The author is grateful to P. A. Krupchitskiy, who initiated this work, and to I. S. Shapiro for discussion and for a number of valuable comments." Orig. art. has: 4 formulas. 44,55

ASSOCIATION: none

SUBMITTED: 04May65 ENCL: 00 SUB CODE: NP

NO REF SOV: 003 OTHER: 002

Card 1/1

L 5415-66 EWT(1)

ACCESSION NR: AP5019246 UR/0056/65/049/001/0306/0314

44,55

AUTHOR: Kolkunov, V. A.; Lobov, G. A. 44,55

TITLE: Regge poles in a potential of the Coulomb well type 21,44,55

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 1, 1965, 306-314

TOPIC TAGS: moving pole method, Schrodinger equation, Coulomb interaction, particle interaction, potential well

ABSTRACT: The energy dependence of the motion of the Regge poles is investigated on the basis of an exact solution of the Schrodinger equation for a potential of the Coulomb-well type, which is identical with a Coulomb potential at short distances, cuts off like a square-well potential at large distances, and has many features in common with the Yukawa potential. The equation of the Regge pole trajectory is derived and its general structure is discussed. The locations of the Regge poles at higher energies are obtained, and the relative motion of the poles is investigated. The motion of the poles at medium and low energies are also studied, and it is shown that the pole trajectories can have a Regge character at small and medium energies in a Coulomb-well potential. Differences in the results obtained with the different potentials are briefly discussed. Orig. art. has:

Card 1/2

32
29
13

L 5415-66
ACCESSION NR: AP5019246

3

6 figures and 26 formulas.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki GKIAE (Institute of Theoretical and Experimental Physics, GKIAE)

SUBMITTED: 24Feb65 ENCL: 00 SUB CODE: GP

NR REF SOV: 004 OTHER: 004

44,55

B√K.

Card 2/2

LOBOV, G.A.

CP-parity failure in the decay of polarized neutrons. IAd. fiz. 2 no.4:716-719 O '65. (MIRA 18:11)

1. Institut teoreticheskoy i eksperimental'noy fiziki Gosudarstvennogo komiteta po ispol'zovaniyu atomnoy energii SSSR.

LOBOV, [illegible]

Nonconservation of the [illegible] in strong interactions. Pis'. v red. [illegible] '65. (MIRA 18:10)

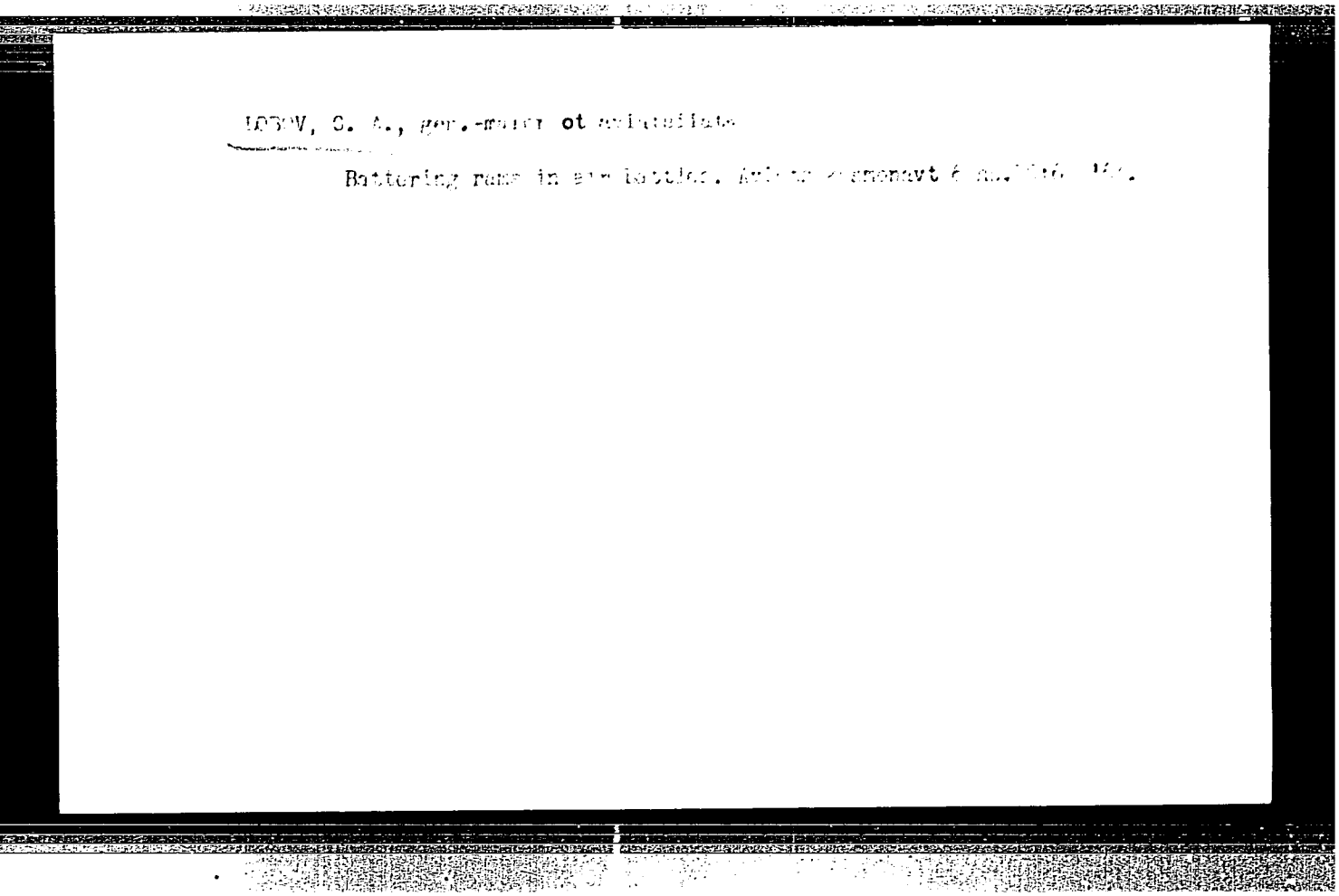
Zhur. eksper. i teoret. fiz. [illegible]

LOBOV, G. A. and SHAPIRO, I. S.

"Radiative capture of μ^- - Mesons in hydrogen"

report presented at the Intl. Conference on High Energy Physics, Geneva, 4-11 July 1962

Institute of Theoretical and Experimental Physics, Moscow, USSR



LOBOV, Georgiy Ageyevich, general-leytenant aviatsii, Geroy Sovetskogo Soyuza

In ranks forever. Av. i kosm. 47 no.3:79-82 Mr '65.
(MIRA 18:3)

LOBOV, G.D.; MIKHAYLOVSKIY, L.K.

Gas-filled detector for centimeter and millimeter waves. Nauch. dokl.vys.shkoly; radiotekh. i elektron.no.1:232-234 '58. (MIRA 12:1)

1. Kafedra teoreticheskikh osnov radiotekhniki Moskovskogo energeticheskogo instituta.

(Microwaves)

11 июня

(с 18 до 22 часов)

Г. И. Рапопорт

Возбуждение колебаний электронными пучками с периодически [illegible] траекториями

С. Г. Афанасов

Об управлении частотой триодного генератора

А. Н. Чижов

Низкочастотные шумы [illegible] электронных ламп

М. С. Арлов

Метод получения [illegible] амплитудно-частотных характеристик [illegible] форм в [illegible] электронных лампах

12 июня

(с 10 до 16 часов)

Е. В. Богданов,
В. Я. Киселев,
З. С. Чернов

Взаимодействие электронного потока с плазмой

Г. Д. Лобов

[illegible] детектор СВЧ колебаний

А. И. Быстров,
Я. Н. Залогин,
С. С. Шахназаров

Волноводные умножители частоты на [illegible] электронных пучков

А. М. Харченко,
В. В. [illegible],
М. Н. [illegible],
Д. В. Зернов

Электронные [illegible] лампы и [illegible] схемы их применения

6. СЕКЦИЯ РАДИОИЗМЕРЕНИЯ

Руководитель Г. Д. Бурдун

9 июня

(с 10 до 16 часов)

А. Г. [illegible]

О [illegible] повышения стабильности кварцевых генераторов для эталонов частоты

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

88162

S/109/60/005/011/011/014
E140/E485

9,4200

AUTHOR: [redacted]

TITLE: Microwave Mixers Employing Gas-Discharge Detector

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol.5, No.11, pp.1848-1856

TEXT: The article considers the use of the gas-discharge detector as a microwave frequency converter. A theoretical study is given based on the theory of the "average" electron, taking into account only elastic electron collisions with molecules. The change in electron temperature with microwave power is calculated and is shown to lead to a change in discharge current through the tube. Calculations are given for H_2, He, Ne, Ar and curves of frequency characteristics and conversion transconductance are presented with a tabulation of the sensitivities attainable for He and Ne. The local oscillator power required is of the order of 2 to 10 W. Certain of the theoretical conclusions have been verified experimentally. Acknowledgments are expressed to L.K.Mikhaylovskiy and S.F.Golyan for their assistance. There are 6 figures, 3 tables and 7 Soviet references.

Card 1/2

88162
S/109/60/005/011/011/014
E140/E485

Microwave Mixers Employing Gas-Discharge Detector

ASSOCIATION: Moskovskiy energeticheskiy institut
Kafedra teoreticheskikh osnov radiotekhniki
(Moscow Power Engineering Institute
Department of Theoretical Fundamentals of Radio-
engineering)

SUBMITTED: February 18, 1960

Card 2/2

21435

S/1[illegible] 1/014/023
E140/E163

9.4200 (also 1105)

AUTHOR: Lobov, G.D.

TITLE: Gas-discharge microwave detector

PERIODICAL: Radiotekhnika i elektronika, Vol.6, No.1, 1961, pp. 117-124

TEXT: The article concerns the theoretical analysis of one possible theory of operation of the gas-discharge detector. It is based on the fact that in application of a microwave field to the gas-discharge the electron energy changes. The change in electron energy may lead to variations of certain of the gas-discharge parameters, which in the last analysis is expressed in the magnitude of the constant component of discharge current through the tube. It can be assumed that variation of electron energy is expressed to a higher degree where the total electron energy is minimum. This discharge region is the Faraday dark space. The author derives the equation of electron energy balance in the gas-discharge, the temperature increase and transient duration of temperature increase in the gas-discharge with applied microwave field, the transfer factor of the gas-discharge detector,

Card 1/ 3

S/109/61/006/001/014/023
E140/E163

Gas-discharge microwave detector

and presents experimental measured results. On the basis of the analysis and experimental results the author concludes that the gas-discharge detector is quadratic at small values of applied power; the transfer factor of the gas-discharge detector is proportional to the energy density of the detected signal and inversely proportional to the square of the signal frequency. Using standard waveguide in which to amount the gas-discharge detectors, the detector transfer factor will not depend on signal frequency, since with increase of frequency the corresponding energy density increases. The transfer factor increases with increase of discharge current only up to an optimal current, defined by the relationship between electron concentration and signal frequency. With increase of signal frequency this magnitude increases. The gas-discharge detector time constant depends on the type and pressure of gas. With increase of gas pressure the time constant decreases. Acknowledgement is made to E.V. Dmitriyeva for her assistance.
There are 7 figures, 3 tables and 14 references: 8 Soviet and 6 English.
Card 2/3

21435

S/109/61/006/001/014/023

Gas-discharge microwave detector. E140/E163

ASSOCIATION: Moskovskiy energeticheskiy institut
Kafedra teoreticheskikh osnov radiotekhniki
(Moscow Power Engineering Institute
Department of Basic Theory of Radio Engineering)

SUBMITTED: April 9, 1960

Card 3/3

9.3150
9.4120

20582
S/109/61/006/002/014/023
E140/E435

AUTHORS: Lobov, G.D. and Yeremeyev, V.I.

TITLE: Certain Effects Accompanying Detection in Gas Discharge

PERIODICAL: Radiotekhnika i elektronika, 1961, Vol.6, No.2, pp.286-291

TEXT: An experimental verification is given of the hypothesis that microwave detection in gas discharge devices is accompanied by variation of both the discharge current and the magnitude of glow of the gas. Curves of various discharge parameters along the length of a special tube indicate that the maximum pulse detection coincides with the maximum of excitation, with these maxima occurring at the negative glow. The regions of maximum recombination intensity and of excitation do not coincide, giving maxima of the corresponding parameters in different locations in the gas discharge. The experimental results show agreement between the phenomena of detection and of variation of glow intensity. A qualitative explanation of the results can be based on the assumption that the microwave power varies the electron energy. Three physical phenomena in the tube are considered to be related to the detection process. These are the variation of the

Card 1/2

S/109/61/006/002/014/023
E140/E435

recombination factor, of the number of excited atoms and the number of collisions leading to excitation. These phenomena influence the discharge current and hence the detection process. There are 8 figures and 4 references: 2 Soviet and 2 non-Soviet.

ASSOCIATION: Moskovskiy energeticheskiy institut
Kafedra teoreticheskikh osnov radiotekhniki
(Moscow Power Engineering Institute, Department of Basic Theory of Radioengineering)

SUBMITTED: May 6, 1960

Card 2/2

30760
S/141/61/004/003/017/020
E192/E382

6.4100
9.4120

AUTHOR: Lobov, G.D.

TITLE: Operation of a gas-discharge mixer at UHF at high intermediate frequencies

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy Radiofizika v. 4 no. 3, 1961 pp. 560 - 564

TEXT: The use of gas-discharge detectors as UHF mixers permits an increase in the sensitivity of certain devices (Ref. 1 - the author - Radiotekhnika i elektronika. 5 1848. 1960), however the operation of such a detector at narrow bandwidths is very complicated and it is therefore necessary to investigate the behaviour of the mixer at intermediate frequencies which are higher than the limit frequency. The spectral noise density of a gas-discharge tube can be expressed as (Ref. 2 - Ye.A. Zdornova - this journal 2 262. 1959):

$$I = I_0 / f^k \qquad (1)$$

Card 1/6

Operation of ....

where k is a constant coefficient for a given discharge gap, and I_o is the spectral-noise density at a frequency of 1 c.p.s.

The noise voltage in a bandwidth $2\Delta f$ at the frequency f_o is expressed by:

$$\sigma_u = \sqrt{2\Delta f}\, I_o / f_o^k \qquad (2)$$

provided $\Delta f \ll f_o$. If the sensitivity of the gas-discharge detector is defined as the minimum signal power at which the voltage ΔU_{mp} of the intermediate frequency is equal to the noise voltage σ_u, the minimum UHF power is determined by:

$$\sigma_u = \Delta U_{mp} .$$

The intermediate frequency voltage of the gas-discharge detector depends on the signal power P_s and the intermediate frequency f_{mp} and is expressed by:

Card 2/6

$$\Delta U_{np} = A\sqrt{P_c}\,\frac{1}{1+(f_{np}/f_{cc})^2} \qquad (3)$$

where f_{cc} is the limit frequency of the mixer and A is a constant coefficient. By combining Eqs. (2) and (3) the minimum signal power is expressed by:

$$P_{c\,min} = \frac{2I^{[illegible]}\,(1+(f_{np}/f_{cc})^2)^2}{A^2\,[illegible]}\;[illegible] \qquad (4)$$

When the intermediate frequency is increased the bandwidth of the detector is also increased and [illegible] voltage at a fixed intermediate frequency is given by

30755
S/141/61/004/003/017/020
E192/E382

Operation of ...

$$\Delta U_{mp} = \frac{B}{\sqrt{1 - (f_{mp}/f_{...})^2}}$$

where B is the voltage at f_{mp} < ... It is now possible to introduce the concept of an equivalent bandwidth such that ΔU_{mp} decreases $\sqrt{2}$ times at this bandwidth the bandwidth is defined by:

$$\Delta f_{3dB} = f_{mp}\sqrt{2 - (f_{...}/f_{mp})^2} \quad \text{at} \quad f_{mp} \qquad (7).$$

The theoretical formulae were verified experimentally by using special sealed-off discharge tubes [illegible] with parallel cylindrical electrodes made of molybdenum wire. The tubes were filled with Ne and He at various pressures (ranging from 18 - 44 mm Hg). The measurement of the sensitivity and conversion losses was performed at [illegible] fixed frequencies.

Card 4/6

Operation of ....

1; 10; 30 and 60 Mc/s. The spectral density of the noise as a function of frequency is illustrated in Fig. 1. From the curves of the figure, it is seen that the noise level is almost independent of the type of gas and pressure and that the noise spectrum decreases with frequency in the manner indicated by Eq. (1); the exponent k varies from 1 to 2 (the curves corresponding to the characteristics of the type f^{-1} and f^{-2} are indicated by the dotted lines in Fig. 1). The experimental curves illustrating the sensitivity as a function of frequency and the conversion losses (as a function of frequency) were also taken. It was found that as the intermediate frequency was increased, the bandwidth of the gas-discharge detector was also increased. This was verified by means of a pulse test, in which the rise time of the pulses at the output of the second detector was recorded. The author expresses his gratitude to A.N. Shamanskiy for help in this work. There are 3 figures, 2 tables and 2 Soviet-bloc references.

4

Card 5/6

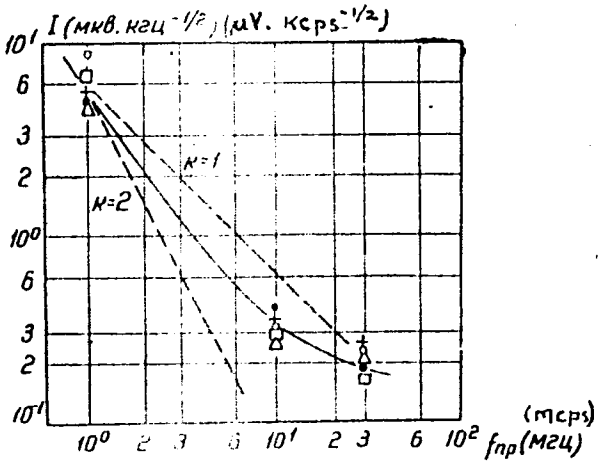
S/141/61/004/003/017/020
E193/E382

Operation of ....

ASSOCIATION: Moskovskiy energoticheskiy institut
(Moscow Power-engineering Institute)

SUBMITTED: September 5, 1960

Fig. 1:



4

Card 6/6

S/109/62/007/004/008/018
D230/D302

9,4230

AUTHORS: Lobov, G.D., and Zakharov, V.V.

TITLE: Change of directional electron current in a gaseous discharge under the action of a microwave field

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 4, 1962, 652 - 662

TEXT: It is shown theoretically that the microwave oscillatory power increases the electron directional velocity causing an increase in the discharge current through the tube. The theoretical results were verified experimentally and the variations in the directional part of the distribution function are reproduced on oscillograms. The experiments were conducted on tubes filled with neon at pressures between 5 and 8 mA. The analysis of an appropriate function Φ shows that the variation in the discharge current under the action of the microwave field is fundamentally due to the change in electron velocity and not in their concentration. Denoting f_1 - distribution function and n_e - electron concentration, function $\Phi \equiv f_1$

Card 1/3

Change of directional electron ...

n_e; This shows that during the bombardment in the discharge gap a change will take place in the form of Φ as a result of the variations in f_1 and n_e. The presence of the microwave field causes magnification of the total electron energy, as a result of which the response of f_1 widens with its maximum decreasing and moving in the direction of the higher frequencies; this variation applies also to the response of Φ for an unchanged electron concentration. On the basis of previously published information the full electron energy remains constant and the action of the e.m. field results in a change of electron concentration thus, increasing the microwave power only leads to an increase in the maximum response of Φ without changing its form. On the basis of the evidence obtained the difference function $\Delta \Phi = \Phi_d - \Phi_{d=0}$ should alternate in sign when the electron energy is changed and it should vary monotonically with the change in electron density when the energy is constant. The experimental data show that as a result of the action of the microwave power there is a change in the response of Φ corresponding to the electron energy variation and to the variation of directional