

BUKIN, V.N.; MIKHLIN, E.D.; BYKHOVSKIY, V.Ya.; PANTSKAYA, Ye.S.; LOGOTKIN, I.S.

Producing vitamin B₁₂ by processing waste products of the distilling industry with thermophilic methane bacteria. Vit. res. i ikh isp. no.5:90-111 '61. (MIRA 15:1)

1. Institut biokhimii im. A.N.Bakha AN SSSR i Tsentral'nyy nauchno-issledovatel'skiy institut spirtovoy promyshlennosti, Moskva.

(CYANOCOBALAMINE) (BACTERIA, METHANE_PRODUCING)
(DISTILLING INDUSTRIES...BY_PRODUCTS)

BUKIN, V.N.; PANTSKHAVA, T.S.; BYKHOVSKIY, V.Ya.; LOGOIKIN, I.S.;
KONDAKOVA, L.N.; YUZINA, O.M.

Using enriched media in the biosynthesis of vitamin B₁₂ by
methane-producing bacteria. Vit. res. i kn isp. no.6:52-55
'63. (MIFA 17:1)

1. Institut biokhimi imeni A.N. Bakha AN SSSR, Moskva,
TSentral'nyy institut ferment'noy i spirtovoy promyshlen
nosti i Groznenskiy atsetonovyy zavod.

GUS'KOVA, N.P.; LOGOTKIN, I.S.

Selecting the strain of the fodder yeast and additional nutrients
in its growing on acetone-butyl wash. Fern. i spirt. prom. 31
no.6:30-32 '65. (MIRA 18:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut fermentnoy
i spirtovoy promyshlennosti.

150-OTKIND, N.S.

6314. Early and late results of the treatment of thyrotoxicosis with methylthiouracil. N. S. Logotkina *Probi Endokr. Gormony*, 1955, 1, 22-28; *Referat. Zh. Biol.*, 1958, Abstr. No. 87448.—In severe thyrotoxicosis methylthiouracil (M) was prescribed at 0.25 g. 3 times daily for the first 10 days; 0.25 g. twice daily for the second 10 days; thereafter once per day. Patients with moderate symptoms had 1.0-2 g./day. In the majority of patients tachycardia was reduced at day 20-30, the general state was improved, and the wt. had increased. However, in some cases the general state had deteriorated, hypothyroidism was present, as well as effects of an allergic character. In all cases the use of M was accompanied to a greater or lesser extent by leucopenia and granulopenia. In 31% of patients a permanent improvement was noted; the rest relapsed. (Russian) J. E. S. BRADLEY

LOGGUDA, D. N.

"Leukocyte Distribution in the Bodies of Accidentally Killed Healthy People." Cand Med Sci, Chair of Pathological Anatomy, Inst of Experimental Medicine, Acad Med Sci USSR, Leningrad, 1954. (KL, No 7, Feb 55)

SO: Sum. No. 631, 26 Aug 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (14)

LOGOV. B S.

S

Burovoy agregat ZIV-75 (Drilling unit, ZIV-75) opisaniye i rudovedstvo po eksploatatsii. Sostavili B. S. Logov, S. P. Shtoda, G.A. Chechulin. Moskva, Gosgeolizdat, 1952. 112 p. diagrs., tables. At head of title: kussia, Ministerstvo Geologii.

N/5

74.311

.18

IGGCV, B. 5.

S.

Burovoy agregat ZIV-150 (Drilling unit, ZIV-150) opisaniye i rukovodstvo po eksploatacii.
S. P. Shtoda, G. A. Chechulin. Moskva, Gosgeolizdat, 1952. 118 p. diagrs., tables. At
head of title: Russia. Ministerstva Geologii.

N/5
741.311
.L81

LOGOV, I.L., inzh.

Pneumatic water pump. Mekh. i elek. sots. sel'khoz. 17 no.2:40-42
'59. (MIRA 12:6)

1. Tsentral'naya nauchno-issledovatel'skaya laboratoriya po vetrostilovym
ustanovkam i vetroelektrostantsiyam.
(Pumping machinery)

LOGOV, I.L. (Moskva)

Designing pneumatic pumps. Izv.AN SSSR. Otd.tekh.nauk.Mekh. i
mashinostr. no.4:162-164 JI-Ag '61. (MIRA 14:8)
(Air pump)

L 04641-67 EWT(m)/EWP(w)/EWP(t)/ETI IJP(c) JD/WB

ACC NR: AP6024412 (N) SOURCE CODE: UR/0020/66/169/001/0085/0088

AUTHOR: Shal'nev, K. K.; Stepanov, R. D.; Logov, I. L.ORG: Institute of Problems of Mechanics, Academy of Sciences SSSR (Institut problem mekhaniki Akademii nauk SSSR)TITLE: Cavitation-mechanical strength of metals

SOURCE: AN SSSR. Doklady, v. 169, no. 1, 1966, 85-88

TOPIC TAGS: lead, cavitation, ultimate strength, erosion, metals stress, creep mechanism, yield stress

ABSTRACT: To check on the effect of cavitation erosion on various parts of hydraulic machinery, the authors have set up experiments to investigate the influence of cavitation on the deformation curves of metals under conditions of uniaxial tension. The investigations were made in a hydrodynamic tube with 24 x 100 mm working chamber. The cavitation was excited by a round cylinder of 24 mm dia. The stream velocity in all experiments was maintained constant at 22 m/sec; the stage of the cavitation zone was also kept constant. The experimental conditions were such that the frequency of the pulsations of the pressure should lie in the 200 - 30,000 cps range. The material tested was 99.985% pure lead (SI/grade), being the most plastic material that retains an elongation deformation after removal of the load. The samples were prisms of length 18 - 20 mm, thickness 1.2 - 1.5 mm, and height 10 - 12 mm. The load was produced by a suspended weight. Tests were made under both continuous and intermittent conditions. The authors point out that in all the theories of cavitation sight is

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lost of the structure of the cavitation zone accompanying the erosion zone and its physical aspects. The cavitation zone was shown by one of the authors in another paper (Shal'nev, DAN v. 139, No. 1, 1961) to consist of caverns which occur periodically, pulsate, and are carried away by the stream. This unstable state of the cavitation zone gives rise to sound waves and pulsating pressures, producing conditions for the material which differ from the ordinary static tests. The tests resulted in creep curves for lead under vibration and cavitation at different stresses. The strain curves were plotted from creep curves for intervals of 30 and 120 sec. The results showed an appreciable increase in the creep of the lead in the cavitating liquid, compared with tests in air, and a decrease in the yield point of the lead. Various other changes in the mechanical properties of the lead under the influence of cavitation are briefly discussed. The authors thank N. A. Lysov and I. A. Kolesnikov for help with the laborious experiments. This report was presented by Academician P. Ya. Kochina 24 September 1965. Orig. art. has: 4 figures.

SUB CODE: 20, 11/ SUBM DATE: 10Sep65/ ORIG REF: 002/ OTH REF: 001

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Card 2/2

LOGOV, Igor' Leonidovich; GILINSKIY, I.A., kand. tekhn. nauk,
retsenzent; FAL'KO, O.S., inzh., red.; SMIRNOVA, G.V.,
tekhn. red.; VLADIMIROVA, L.A., tekhn. red.

[Pneumatic pumps]Pnevmaticheskie nasosy. Moskva, Mashgiz,
1962. 207 p. (MIRA 15:9)

(Pumping machinery)

LOGOV, L.M., prof., doktor tekhn. nauk; LOGOV, I.L., kand. tekhn. nauk

Kinematics of the NEP-5 crankless submerged pump. Izv. vys.
ucheb. zav.; mashinostr. no. 10:94-98 '65 (MIRA 19:1)

1. Volgogradskiy institut inzhenerov gorodskogo khozyaystva.
Submitted February 19, 1964.

LOGOV, L. M.

Logov, L. M. - "The use of wind power to move water on Apsheron Peninsula",
Izvestiya Akad. nauk Azerbaydzh. SSSR, 1948, No. 1, p. 24-32, (Reprint in
Azerbaijani).

SO: U-3042, 11 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 8, 1949).

LOGOV, L. M.

Yes'man, I. G. and Logov, L. M. "The tasks of experimental wind technology in Azerbaydzhan", (In index, second author is L. M. Logov), Doklady (Akad. nauk Azerbaydzh. SSR), 1948, No. 11, p. 463-66, (Resume in Azerbaijani).

SO: U-3042, 11 March 53, (Letopis'nykh Starey, No. 10, 1948).

LOGOV, L. M.

Logov, L. M. "The basic conditions for the utilization of winds in the agriculture of the Azerbaydzhan SSR," Izvestiya Akad. nauk Azerbaydzh. SSR, 1949, No. 1, p. 32-46, (Resume in Azerbaijani), 0 Bibliog: 15 items.

So: U-3736, 21 May 53, (Letopis IZhural 'nykh Statey, No. 17, 1949).

LOGOV, I. M. and YES'MAN, I. G.

Logov, L. M. and Yes'man, I. G. "The use of wind power for the radiofication of Azerbaijan", Doklady (Akad. nauk Azerbaydzh. SSR), 1949, No. 3, p. 99-102, (Resume in Azerbaijani).

SO: U-4630, 16 Sept. 53, (Letopis 'Zhurnal 'nykh Statey, No. 23, 1949).

LOGOV, L. M.

27139. LOGOV, L. M.-- Pogruzhnoy nasos s avtomaticheskim regulirovaniyem. Doklady (akad. Nauk azerbaydzh SSR), 1949, No. 7, c. 257-65.-- Re-yume na azerbaydzh yaz.

SO: Letopis' Zhurnal'nykh Statey, Vol. 36, 1949

LOGOV, L. M.

29026 Vetrinasosnaya ustanovka s ruchnym mnogostupenchatym regulirovaniem rozhima raboty. Doklady (Akad. nauk Azerbaydzh. SSR), 1949, No. 2, s. 30--31. -- Rezyume na azerbaydzh. yaz.

SO: Letopis' Zhurnal'nykh Statey, Vol. 39, Moskva, 1949

LEGOV, L. M.

32534. Beschreibungs des maschinellen Replicierens von Bildern mit Hilfe der gleichförmigen Bewegung. Povolija akad. nauk Azerbajdzh. SSR, 1946, No. 1, S. 12-17. Resyore na azerbajdzhi.

SO: Letopis' Zhurnal'nykh Statey, Vol. 44, Moskva, 1949

Wind Power

Wind Power

Utilization of wind power. Trudy Emerg. inst. AN Azer. SSR No. 10, 1951

1. LOGOV, L. M.
2. USSR 600
4. Pumping Machinery
7. Crankless pumps for irrigation installations, Gidr. i mel, 4, No. 12, 1952.

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

LOGOV, L. M.

Wind Power

Prospective utilization of the energy of wind (scientific-technical session at Baku). Vest. AN SSSR 22 no. 7, 1952.

Monthly List of Russian Accessions Library of Congress November 1952. UNCLASSIFIED.

LOGOV, L., kandidat tekhnicheskikh nauk.

Submersible crankless electric pump. *Zhil-kon.khoz.* vol.3 no.9:15-17 S '53.
(MLBA 6:9)
(Pumping machinery)

LOGOV, L.M., kandidat tekhnicheskikh nauk.

Crankshaftless vertical submerged pumps. Gidr. i mel. 5 no. 4:63-67 Ap '53.
(MLRA 6:5)
(Pumping machinery)

1. IGGY, L. M.
2. USSR (600)
4. Dredging Machinery
7. Increasing the productivity of suction dredges. *Sidr. stroi.* 22 No. 1, 1953.

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

LOGOV, Leonid Maksimovich, kand. tekhn. nauk; KULIKOV, N.K., doktor
tekhn. nauk, retsenzent; FAL'KO, O.S., inzh., red.; EL'KIND,
V.D., tekhn. red.

[Hydraulic reversible multi cilinder engine] Gidravlicheskii ob-
ratimyi mnogotsilindrovyyi dvigatel'. Moskva, Mashgiz, 1962. 66 p.
(MIRA 15:4)

(Hydraulic engines)

S/262/62/000/008/022/022
1007/1207

AUTHOR: Logov, L. M.

TITLE: New designs of engines and pumps without crankshafts, and their prospective use in industry

PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk. 42. Silovyye ustanovki, no. 8, 1962, 72, abstract 42.8.430. In collection. "Nekotorye vopr. konstruir., prochnosti i snizheniya vesa mashin". Moscow - Leningrad, Goslesbumizdat, 1960, 78-84

TEXT: A historical review of the development of engines without crankshaft is presented and 8 designs of a pump without crankshaft, developed by the author, are outlined. These types have the following characteristics: number of cylinders 3 to 9; pump delivery 3.3 to 120 l/sec; delivery pressure 4-300 kg/cm² at a rotational speed of 300 to 950 rpm. A mud pump is also described. There are 3 references and 1 figure. ✓

[Abstracter's note: Complete translation.]

Card 1/1

LOGOV, L.M., kand.tekhn.nauk, dotsent

The NBG-2 crankless mud pump. Izv.vys.ucheb.zav.; mashinostr.
no.8:127-138 '62. (MIRA 15:12)

1. Volgogradskiy institut inzhenerov gorodskogo khozyaystva.
(Mine pumps)

LOGOV, L.M., kand. tekhn.nauk; KALISHEVSKIY, V.L., kand. tekhn.
nauk, retsenzent; SHUL'GIN, V.A., red.izd-va; DEMKINA,
N.F., tekhn. red.

[Crankless multicylinder pumps] Beskrivoshipnye mnogo-
tsilindrovye nasosy. Moskva, Mashgiz, 1963. 221 p.
(MIRA 17:2)

LOGOV, L.M., prof., doktor tekhn. nauk; LOGOV, I.L., kand. tekhn. nauk

Kinematics of the NEP-5 crankless submerged pump. Izv. vys.
ucheb. zav.; mashinostr. no. 10:94-98 '65 (MIRA 19:1)

1. Volgogradskiy institut inzhenerov gorodskogo khozyaystva.
Submitted February 19, 1964.

LOGOV, L.M., kand. tekhn. nauk, dotsent

The NEP-5 crankless submerged five-cylinder pump. Izv. vys.
ucheb. zav.; mashinostr. no.10:157-167 '63.

(MIRA 17:3)

1. Volgogradskiy institut inzhenerov gorodskogo khozyaystva.

Logov, L.M.

3-12-14/27

AUTHOR: None Given

TITLE: The Chair Has a Decisive Part (Reshayushchaya rol' prinadlezhit kafedre). Review of articles and materials relating to students' scientific circles (Obzor statey i materialov o studencheskikh nauchnykh kruzhekakh)

PERIODICAL: Vestnik Vysshey Shkoly, 1957, # 12, pp 65 - 72 (USSR)

ABSTRACT: This article deals with various publications relating to the activity and organization of students' scientific circles. Dotsent A.S. Rudakov from the Chelyabinsk Polytechnic Institute describes in his article experiences made by his chair and states that scientific circles must be organically connected with tasks of educational processes. Dotsent A.Kh. Karapetyan from the Moscow Institute of Finance describes the activity of scientific circles where the problems set before the students are connected with the research work of the chair. I.P. Garanina, Candidate of Medical Sciences of the Kazan' Medical Institute, points out that students dealing with only one theme become often narrow-minded. I.P. Yemelin and V.I. Osipov give information on students' circles organized at the Ufa Institute of Aviation imeni Ordzhonikidze, which concentrate their activity on technical problems. Dotsent L.M. Logov of the Stalingrad Engineering

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The Chair Has a Decisive Part

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Institute of Urban Economy says that the scientific circles create favorable conditions for contacts between vuzes and industry. Sh. Dzhaferov, the president of the council of the students' scientific society at the Azerbaydzhan University describes the participation of students at conferences organized at the Tbilisi, Yerevan' and Voronezh universities.

AVAILABLE: Library of Congress

Card 2/2

MATVEYEVA, M.D., nauchnyy sotrudnik (Chita); OGNEV, I.M.; LOGOVA, M.G.;
BADULIN, A.V., kand.biolog.nauk; ROKTANEN, L.P.; KAL'BERGENOV, G.K.;
LYAKH, A.I.; PETROVA, L.A.

Effectiveness of entobacterin. Zashch.rast. ot vred. i bol. 9
no.11:26-27 '64. (MIRA 18:2)

1. Zaveduyushchaya Minskim entomo-fitopatologicheskim uchastkom (for Logova).
2. Kustanayskaya opyt'naya sel'skokhozyaystvennaya stantsiya (for Badulin).
3. Zaveduyushchiy kafedroy zashchity rasteniy TSelinogradskogo sel'skokhozyaystvennogo instituta (for Roktanen).
4. Toksikologicheskaya laboratoriya, pochtovoye otdeleniye Tolstopal'tsevo, Moskovskoy oblasti (for Kal'bergenov, Lyakh).
5. Zaveduyushchaya laboratoriyey biometoda, Lubny, Poltavskoy oblasti (for Petrova).

OGNEV, I.M., inspektor po sortoispytaniyu (Minsk. pochtovaya otdeleniye Kurascovshchina); LOGOVA, M.G.

Tetramethy'thiuram-disulfide against seed potato diseases. Zashch. rast. ot vred. 1 bol. 9 no.9:18-19 '64. (MIRA 17:11)

1. Zaveduyushchiy Minskim entomofitopatologicheskim sortouchastkom (for Logova).

LOGOVATOVSKIY, A.

Eliminate shortcomings in the establishment of work norms at the principal metallurgical sub-plants. Sots.trud 4 no.11:103-108
N '59. (MIRA 13:4)
(Steel industry--Production standards)
(Wages)

LOGOVATOVSKY, A.

Well-organized labor norms are an important factor in the
development of the steel industry. Sots.trud. 7 no.6:70-75
Je '62. (MIRA 16:2)

(Steel industry--Production standards)

LOGOVATOVSKIY, A.

Conference of the workers of the metallurgical industry.
Sots. trud 6 no.7:147-150 JI '61. (MIRA 16:7)

(Wages—Metal industries)

LOGOVATOVSKIY, A.A.

Potentialities of increased labor productivity in blast furnace
practice. Stal' 22 no.12:1128-1130 D '62. (MIRA 15:12)

1. Tsentral'noye byuro promyshlennykh normativov po trudu.
(Blast furnaces--Equipment and supplies)
(Iron and steel workers)

LOGOVATOVSKIY, A.A.

Addition to the universal principle of grooving. Izv. vys. ucheb.
zav.; chern. met. 5 no.9:135-142 '62. (MIRA 15:10)

1. Tsentral'noye byuro promyshlennykh normativov po trudu pri
Nauchno-issledovatel'skom institute truda Gosudarstvennogo Komiteta
Soveta Ministrov SSSR po voprosam truda i zarabotnoy platy.
(Rolls (Iron mills))

LOGOVATOVSKIY, A.A., inzh.

Urgent objectives in the mechanization and automation of the iron and steel industry. Mekh.i avtom. proizvod. 1/ no.2:18-21 P '63. (MIRA 16:2)
(Iron and steel plants—Technological innovations)(Automation)

LOGOVATOVSKIY, A.A.; GONCHAROV, P.G.

Potentialities for the growth of labor productivity in
open-hearth production. Stal' 24 no.1:78-81 Ja '64.
(MIRA 17:2)

LOGOVINENKO, N.A., otv. red.; KATS, M.Ya., red.; KCSSOVSKAYA, A.G., red.; SHUTOV, V.D., red.; SHLEPOV, V.K., red. izd-va; DOROKHINA, I.N., tekhn. red.

[Physical research methods of sedimentary rocks and minerals]
Fizicheskie metody issledovaniia osadochnykh porod; doklady.
Moskva, Izd-vo Akad. nauk SSSR, 1962. 270 p. (MIRA 16:1)

1. Vsesoyuznoye soveshchaniye po fizicheskim metodam issledovaniya osadochnykh porod i mineralov. 1st, Moscow, 1960. 2. Geologicheskiy institut Akademii nauk SSSR, Moskva (for Kossovskaya, Shutov, Kate).

(Rocks, Sedimentary--Analysis) (Mineralogy)

BOGACHEVSKIY, M.B.; ALEKSEYEVA, A.M., redaktor; LOGOVINSKAYA, A.M., redaktor; LEBEDEV, A., ~~tehnicheskij redaktor~~

[Finances of the U.S.A. and England in the period of the general crisis of capitalism] Finansy SShA i Anglii v period obshchego krizisa kapitalizma. Pod red. A.M.Alekseeva. Moskva, Gosfinizdat, 1954. 341 p. (MLRA 8:6)
(United States--Finances) (Great Britain--Finances)

LOGINOVSKAYA, L.K.

The TZLM and TKLM-10 current transformers. Biul.tekh.-ekon.inform.
Gos.nauch.-issl.inst.nauch.i tekh.inform 17 no.11:59-61 N 164.
(MIRA 18:3)

ROTSHEYN, L.; SHOLOMICH, I., redaktor; LOGOVINSKAYA, R., redaktor;
LEBKIN, A., tekhnicheskii redaktor.

[Principles for the organization of working capital in Soviet
industry] Osnovy organizatsii oborotnykh sredstv v promyshlen-
nosti SSSR. Moskva, Gosfinizdat, 1955. 93 p. (MIRA 9:5)
(Capital)

67

LOGOVINSKAYA, R., redaktor; TOLYPINA, O., redaktor; DZHATIYEV, S., tekhnicheskii redaktor

[Problems of Soviet finance] Voprosy sovetskikh finansov. Moskva, Gosfinizdat, 1956. 243 p. (MIRA 10:1)
(Finance)

LOGOVINSKAYA R.

LAPTEV, M., otvetstvennyy red.; Logovinskaya, R., red.; LEBEDEV, A.,
tekhn.red.

[Finance and socialist construction] Finansy i sotsialisticheskoe
stroitel'stvo. Moskva, Gosfinizdat, 1957. 357 p. (MIRA 11:4)
(Finance)

LOGOVINSKAYA, R.L.

ABRAMOV, V.A.; ALEKSEYEV, A.M.; AL'TER, L.B.; ARAKELYAN, A.A.; BAKIANOV, G.I.;
BASOVA, I.A.; BLYUMIN, I.G.; BOGOMOLOV, O.T.; BOR, M.Z.; BRJEGEL',
E.Ya.; VSYTSMAN, N.R.; VIKENT'YEV, A.I.; GAL'TSOV, A.D.; GERTSOVSKAYA,
B.R.; GLADKOV, I.A.; DVORKIN, I.N.; DRAGILEV, M.S.; YEFIMOV, A.N.;
ZHAMIN, V.A.; ZHUK, I.N.; ZANYATIN, V.N.; IGNAT'YEV, D.I.; IL'IN,
M.A.; IL'IN, S.S.; IOFFE, Ya.A.; KAYE, V.A.; KAMENITSER, S.Ye.;
KATS, A.I.; KLIMOV, A.G.; KOZLOV, G.A.; KOLGANOV, M.V.; KONTOROVICH,
V.G.; KRAYEV, M.A.; KRONROD, Ya.A.; LAKHMAN, I.L.; LIVANSKAYA, P.V.;
LOGOVINSKAYA, R.L.; LYUBOSHITS, L.I.; MALYSH, A.I.; MENZHINSKIY,
Ye.A.; MIKHAYLOVA, P.Ya.; MOISEYEV, M.I.; MOSKVIN, P.M.; NOTKIN,
A.I.; PARTIGUL, S.P.; PIRVUSHIN, S.P.; PETROV, A.I.; PETRUSHOV, A.M.;
PODGORNOVA, V.M.; RABINOVICH, M.A.; RYVKIN, S.S.; RYNDINA, M.N.;
SAKSAGANSKIY, T.D.; SAMSONOV, L.N.; SMEKHOV, B.M.; SOKOLIKHIN, S.I.;
SOLLERTINSKAYA, Ye.I.; SUDARIKOV, A.A.; TATAR, S.K.; TERENT'YEV,
P.V.; TYAGAY, Ye.Ya.; FEYGIN, Ya.G.; FIGURNOV, P.K.; FRUMKIN, A.B.;
TSYRLIN, L.M.; SHAMBERG, V.M.; SHAPIRO, A.I.; SHCHENKOV, S.A.;
RYDEL'MAN, B.I.; EKHIN, P.E.; MITROFANOVA, S., red.; TROYANOVSKAYA, N.,
tekh.red.

[Concise dictionary of economics] Kratkii ekonomicheskii slovar'.
Moskva, Gos.izd-vo polit.lit-ry, 1958. 391 p. (MIRA 11:7)
(Economics--Dictionaries)

LOGOVINSEAYA, R.

~~Financial and foreign exchange crisis in France.~~ Den. 1 kred. 16
no. 7:79-87 J1 '58. (MIRA 11:7)

(France--Finance)

ZVEREV, Arseniy Grigor'yevich; LOGOVINSKAYA, R., red.; LEBEDEV, A.,
tekhn.red.

[Economic development and finance in the 1959-1965 seven-year
plan] Khoziasistvennoe razvitie i finansy v semiletke, 1959-
1965 gg. Moskva, Gosfinizdat, 1959. 98 p. (MIRA 12:12)

1. Ministr finansov SSSR (for Zverev).
(Russia--Economic policy) (Finance)

LOGOVINSKIY, M. D.

12 1/1979

USSR/Engineering
Furnaces, Open Hearth
Furnaces, Blast

Aug 48

"Combining Trades and Functions in Blast Furnace
and Martin Furnace Shops," S. M. Levin, M. D.
Logovinskiy, Engineers, Ukrainian Inst of Metals,
4 1/2 pp

"Stal'" No 8

Cycle of operations of main technological processes
in blast and open-hearth furnace shops and steady
increase in mechanization facilitate merging of
duties. This reduces personnel required, and
raises qualifications for workers.

6/4979

LOGOVINSKIY, I. D.

PHASE I BOOK EXPLOITATION

SOV/5368

Agaletskiy, Filaret Nikolayevich, Izrail' Semenovich Barats, Vasiliy Illarionovich
Volobuyev, and Miron Davydovich Logovinskiy

Chernaya metallurgiya Sovetskoy Ukrainy (Ferrous Metallurgy of Soviet Ukraine)
[Dnepropetrovsk] Dnepropetrovskoye knizhnoye izd-vo, 1959. 53 p. 4,000
copies printed.

Sponsoring Agency: Dnepropetrovskiy Sovnarkhoz.

Gen. Ed.: N. I. Krasavtsev, Candidate of Technical Sciences; Ed.: N. Shinkarenko;
Tech. Ed.: G. Glushko.

PURPOSE: This booklet is intended for the general reader interested in
metallurgy.

COVERAGE: The booklet deals with the development of ferrous metallurgy in the
Ukraine from 1913 to the present. The following are discussed briefly:

Card 1/2

Ferrous Metallurgy of Soviet Ukraine

SOV/5368

technological progress, increased pig-iron production, and advancements in steelmaking, steel rolling, and pipe manufacture. No personalities are mentioned. There are no references.

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I. Development of Ferrous Metallurgy in the Soviet Ukraine (I.S. Barats, Author)	3
II. Technological Progress in Pig-Iron Production (F.N. Agaletskiy, Author)	5
III. Technological Progress in Steelmaking (M.D. Logovinskiy, Author)	15
IV. Technological Progress in [Metal] Rolling and Pipe Production (V.I. Volobuyev, Author)	25
AVAILABLE: Library of Congress	33

Card 2/2

VK/wrc/gmp
8-4-61

LOGOVSKAYA, G.K.

Study of producing horizons in the lower and middle divisions
in the Karadag field based on radioactive logging data. Azerb.
neft.khoz. 37 no.6:10-11 Je '59. (MIRA 13:4)
(Apshehon Peninsula--Oil well logging, Radiation)

LOGOVSKAYA, G.K.; AGAMALIYEV, G.M.

Determination of the porosity factor of reservoirs in the horizon of the producing formation in fields of the Kura Lowland based on geophysical data. *Izv.vys.ucheb.zav.; neft' i gaz* 5 no.2:11-14 '62. (MIRA 15:7)

1. Azerbaydzhanskiy institut nefti i shimi imeni M. Azizbekova i "Azneftegeofizika".

(Kura Lowland--Oil sands)

(Porosity)

KIREYEV, V.F.; LOGOVSKAYA, G.K.

Method for determining the actual thicknesses in the cross section
of the producing formation of the Kalmas field. Azerb. neft.
khoz. 42 no.1:9-11 Ja '63. (MIRA 16:10)

(Kura Lowland—Oil well logging, Electric)

С. В. ВАСИЛЬЕВ.

Operation of hydraulic equipment of rural hydro-electric power stations Moskva,
Gos. izd-vo sel'khoz. lit-ry, 1953. 255 p. (54-16944)

TK1081.L77

1. Water-power electric plants.

LOGOYRA, D.M., PILIPYAK, M.I., (Lvov)

Malignant neurinoma of the left sciatic nerve in multiple neurofibromatosis. Arkh.pat. 18 no.3:97-100 '56 (MIRA 11:10)

1. Iz kafedry patologicheskoy anatomii (zav. - prof. Ye.I. Pal'chevskiy) i kafedry obshchey khirurgii (zav. - prof. G.P. Kovtunovich) L'vovskogo meditsinskogo instituta.

(NEUROFIBROMATOSIS, compl.

neurilemmoma of left sciatic nerve (Rus))

(NEURILEMMOMA,

sciatic nerve, left, in multiple neurofibromatosis

(Rus))

(NERVES, SCIATIC, neoplasms

neurilemmoma in multiple neurofibromatosis (Rus))

LOGOYDA, D.M.

Determining the duration of life following trauma by recording the number of leucocytes in the capillary network of the internal organs. Sud.-med.ekspert. 2 no.4:5-13 O-D '59. (MIRA 13:5)

1. Laboratoriya infektsionnoy patologii (zav. - prof. M.V. Voyno-Yasenetskiy) Otdela patologicheskoy anatomii Instituta eksperimental'noy meditsiny AMN SSSR i kafedra patologicheskoy anatomii L'vovskogo meditsinskogo instituta.

(DEATH (BIOLOGY)) (LEUCOCYTES)

LOGOYDA, D.M. (L'vov)

Malignant tumors of the sympathetic nervous system (neuroblastoma).
Arkh.pat. no.10:77-81 '61. (MIRA 14:10)

1. Iz patologoanatomicheskogo otdeleniya (zav. P.P. Kalynyuk)
L'vovskoy oblastnoy bol'nitsy (glavnyy vrach I.I. Besedin).
(NERVOUS SYSTEM, SYMPATHETIC--CANCER)

LOGOYDA, D.M. (L'vov)

Zpendymo-choroid papilloma of the sacrococcygeal region. Izkh.
pat. 27 no.11:67-68 '65. (MIRA 18:12)

1. Kafedra patologicicheskoy anatomii (zav. - prof. Ye.I.Pal'-
chevskiy) L'vovskogo meditsinskogo instituta. Submitted February
18, 1965.

SIDORENKO, Yu.P.; LOGOYDA, V.M.

Operation of an automated wet pan at the Krasnoarmeiskii Dinas
plant. Ogneupory 26 no.10:472-474 '61. (U:IRA 14:11)

1. Krasnoarmeyskiy dinasovyy zavod imeni Dzerzhinskogo.
(Krasnoarmeysk--Firebrick)

LOGOYSKIY, A.I., inzhener.

Draining surface water from subgrades. Vest.TSNII MPS no.2:45-47
№ '57. (MLRA 10:4)

(Drainage)

LOGUA, Sh.S. .

Serious shortcomings of a textbook on the electrification of
railroads ("Electric power supply of electric railroads" by
K.G. Markvardt. Reviewed by Sh. S. Logua). Zhel. dor. transp.
41 no.10:92-94 0 '59. (MIRA 13:2)
(Railroads--Electrification)
(Markvardt, K.G.)

LOGUA, Sh.S., insh.

Rectifier-type electric locomotive for sections with direct
and alternating current. Zhel.dor.transp. 41 no.12:15-19
D '59. (MIRA 13:4)

(Electric locomotives)

LOGUA, Sh.S.

Electrification of the Krasnoyarsk Railroad using alternating
current. Transp.stroi. 10 no.7:9-14 J1 '60.
(MIRA 13:7)

1. Nachal'nik tresta Transelektromontash.
(Railroads--Electrification)

LOGUA, Sh.S.

Transportation electrification trust of the Order of Lenin.
Transp. stroi. 11 no.10:8-10 0 '61. (MIRA 14:10)

1. Nachal'nik tresta Transelektromontazh.
(Railroads--Electrification)

LOGUA, Sh.S., inzh., Geroy Sotsialisticheskogo Truda

What should be the characteristics of a rectifier type electric locomotive? Zhel. dor. transp. 45 no.3:8-12 Mr '63.

(MIRA 1686)

(Electric locomotives—Design and construction)

ABELISHVILI, L.G.; GABASHVILI, N.V.; KAKABADZE, D.R.; KARUMIDZE, I.G.;
KOTLAK, A.K.; KURDIANI, I.S.; LOGUA, Sh.S.; MACHAVARIANI, I.V.;
MESKHI, N.S.; MIKABERIDZE, A.S.; SEKHNIASHVILI, G.M.; TOIDZE, M.Z.;
TOPCHISHVILI, I.A.; KHEVSURIANI, M.A.

In memory of Stepan Petrovich Kirkesali, 1890-1937. Elektrichestvo
no.5:90-91 My '65. (MIRA 18:6)

LOGUCKI, Stanislaw

Notes on food allergy. Wiadomosci lek. 7 no.11:575-579 Nov 54.

1. Klinika Gastrologiczna, A.M.W.

(FOOD
allergy)

(ALLERGY
to food)

LOGUNIN, I. Z.

104-3-35/45

AUTHOR: Garkavtsev, S.Ya., Technician and Logunin, I.Z., Engineer.

TITLE: Experience of operating outdoor 110 kV distribution equipment with single-column isolators. (Opyt ekspluatatsii otkrytogo raspredelitel'nogo ustroystva 110 kV s'odnokol-onkovymi raz'yedinitelyami.)

PERIODICAL: "Elektricheskiye Stantsii" (Power Stations), 1957, Vol.28, No.3, p. 85 (U.S.S.R.)

ABSTRACT: An outdoor 110 kV sub-station has been in operation for three years at a power station; it has two busbar systems with one circuit breaker per circuit and single column isolators. It has been found in service that the surface of the fixed contacts of the isolators is too small. Corrective measures that were taken are briefly described; the isolators now operate normally and the outdoor sub-station is very convenient.

There is 1 figure.

AVAILABLE: Library of Congress

Card 1/1

GARKAVTSEV, S.Ya., tekhnik.; LOGUNIN, I.Z., inzh.

Experience in operating unit-type auxiliary switchgear. Elek. sta.
29 no.7:87-88 J1 '58. (MIRA 11:10)
(Electric switchgear)

LOGUNIN, I.Z., inzh. [deceased]

Melting of ice crusts on 35-110 kv. traction substation power
transmission lines. Elek sta. 35 no.10:82-84 0'64.

(MIRA 17:12)

Handwritten scribbles

Logunov, A. A.

USSR •

523.161
10. Distribution function of cosmic particles of the primary component. YA. P. TERLETSKII AND A. A. LOGUNOV. *Zh. eksp. teor. Fiz.*, 23, No. 6 (12) 692-5 (1952) In Russian.

A study of the equation of diffusion of cosmic particles in the interstellar medium. The equation is obtained with the assumptions that the coefficient of diffusion is linearly dependent on the energy of the particles, and that the increase in the magnetic field, caused by the turbulent motion of the interstellar gas, produces acceleration of the particles. The solution of the simplified equation of diffusion, with the sources located nearer than some critical radius, gives an exponential distribution of the particles with respect to the energies. The exponential index is equal to 2.5 and is the same for protons and for ions.

E. BARKIN

USSR

3

537.591.2

5764. On the energy spectrum of primary cosmic ray particles. A. A. LOKHOSY AND YA. P. TERLETSKI. *Izv. Akad. Nauk SSSR (Ser. Fiz.)* 17, No. 1, 119-35 (1953) In Russian.

The authors start from the assumption that primary particles are emitted from the stars, than accelerated by induced electric fields and finally further accelerated according to Fermi's mechanism in collision with moving magnetic fields in the Galaxy. They propose to improve the results of Fermi's theory by treating the equations for the "turbulent" motion of magnetic fields more accurately. The integration of the equations, based on the assumption that the diffusion coefficient of the particle \propto its energy, leads to an energy spectrum of primary particles of the form: $f(E) \approx \beta \cdot E^{-2.3} \exp(-\beta E/x)$, in good agreement with experimental results (the effect of the exponential factor is negligible up to energies of $\sim 10^{22}$ eV). [Transcription of Wataghin's summary (see Abstr. 5747 above).]

RML JAY

USSR/Astronomy - Particle acceleration

FD-611

Card 1/1 : Pub. 146-1/18

Author : Logunov, A. A., and Terletskiy, Ya. P.

Title : Acceleration of charged particles by a moving magnetized medium

Periodical : Zhur. eksp. i teor. fiz. 26, 129-138, February 1954

Abstract : Analyze the process of acceleration of charged particles by a moving magnetized interstellar medium. Establish that the increase in the average energy of a particle is proportional to this average energy only for moderate values of the energy. For such values, when the radius of curvature of the particle's trajectory in the magnetic field exceeds the dimensions of the homogeneous portions of the magnetic field, the average energy increase declines as the energy increases.

Institution : Moscow State University

Submitted : July 23, 1953

Logunov, A.A.
USSR/Nuclear Physics - Cosmic Radiation

Logunov, A.A.

FD-3350

Card 1/1 Pub. 146-22/28

Author : Logunov A. A. and Terletskiy Ya. P.

Title : Diffusion coefficient of particles in the magnetized interstellar medium. (Letter to the editor)

Periodical : Zhur. Eksp. i Teor. Fiz., 29, No 5, 701-702, 1955

Abstract : Ratio of diffusion coefficient to particle energy is analyzed. This ratio is assumed to be linear within a certain energy range. Six references including three foreign.

Institution : Moscow State Universtiy

Submitted : May 25, 1955

FD-3253

LOGUNOV, A. A.
USSR/Physics - Electrodynamics

Card 1/1 Pub. 146-22/44

Author : Logunov, A. A.

Title : Green function in scalar electrodynamics in the region of small momenta

Periodical : Zhur. eksp. i teor. fiz., 29, No 6(12), Dec 1955, 871-874

Abstract : In the usual theory of perturbations, besides fundamental divergences existing for large energies of virtual quanta, there arise divergences during the integration with respect to the virtual quanta with q^2 close to zero; this divergence is called the infrared "catastrophe" and is connected with the inapplicability of the usual theory of perturbations to these processes. In the present note the author investigates the behavior of the Green function of a particle where $k^2 \sim m^2$ on the example of scalar electrodynamics involving virtual electron-positron pairs and Green photon functions. He thanks Academician N. N. Bogolyubov for his guidance. Four references: e. g. A. A. Abrikosov, Dissertation, Institute of Physical Problems, Acad. Sci. USSR, 1955.

Institution : Moscow State University

Submitted : June 24, 1955

LOGUNOV, A. A.

USSR/Nuclear Physics - Cosmic Rays, C-7

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 34115

Author: Logunov, A. A., Terletskiy, Ya. P.

Institution: None

Title: On the Acceleration of Charged Particles Moving in a Magnetized Medium

Original Periodical: Vestn. Mosk. un-ta, 1956, No 3, 63-66

Abstract: The possibility of accelerating charged particles is analyzed when the charged particles move in a magnetized interstellar medium under the condition that the process of the increase in the magnetic field by the kinetic energy of the turbulent motion of the interstellar gas has already been computed and all that occurs at the present time are fluctuations in the changes of the magnetic field in the individual regions. The analysis of the acceleration mechanism pertains to the region of particle energies, where the radius of the curvature of the trajectory in the magnetic field is much smaller than the average length of the homogeneous regions of the magnetic field. It is shown that in this case acceleration of the particles will always occur. The equations derived agree with the equations obtained by Fermi (E. Fermi, Physical Review, 1949, 75, 1169).

- 1 -

1 of 1

Category : USSR/Nuclear Physics - Cosmic rays

C-7

Abs Jour : Ref Zhur - Fizika, No 1, 1957, No 616

Author : Logunov, A.A., Terletskiy, Ya.P.

Inst : Moscow State University, USSR

Title : Diffusion and Acceleration of Charged Particles in Magnetized Interstellar Space.

Orig Pub : Izv. AN. SSSR, ser. fiz., 1956, 20, No 1, 22-23

Abstract : The diffusion and the process of acceleration of charged particles moving in a magnetized medium is analyzed under various assumptions concerning the ratio of the radius of curvature R_k , of the particles in the magnetic fields, and the average dimension L of the homo-geneous portion of the magnetic field. If $R_k \ll L$ one obtains the usual equations as obtained by Fermi, but if $R_k \gg L$, the degree of acceleration of the particles depends on the charge of the particles and obeys the following law

$$\frac{\Delta E}{\Delta t} = \frac{Z^2 e^2 u^2 H^2}{E} \tau$$

where E and Ze and the energy and the charge of the particles respectively, u the velocity of the inhomogeneities, and τ the average time that the

Card : 1/2

Category : USSR/Nuclear Physics - Cosmic rays

C-7

Abs Jour : Ref Zhur - Fizika, No 1, 1957 No 616

particle stays in the homogeneous section of the magnetic field of intensity H . In this case, the coefficient of diffusion, $D \approx cE^2/1e^2H^2$, is proportional to the square of the particle energy.

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SECRET, A A

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... GROUP ...
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... of ... and ...
... is generalized to the case of arbitrary ...
... pairing.

Logunov, A. A.

USSR/Physics

Card 1/1 Pub. 22 - 13/54

Authors : Logunov, A. A.

Title : Vertex part in scalar electrodynamics in the region of large pulses

Periodical : Dok. AN SSSR 106/2, 223-225, Jan 11, 1956

Abstract : A derivation of a formula is presented with the help of which the vertex parts of large pulses $G(k, q/l)$ can be computed. These vertex parts are usually met in scalar electrodynamics. Four USSR references (1937-1955).

Institution : Moscow State University imeni M. V. Lomonosov

Presented by: Academician, N. N. Bogolyubov, June 2, 1955

LOGUNOV, A.A.

SUBJECT USSR / PHYSICS
 AUTHOR LOGUNOV, A.A.
 TITLE Spectral Representation and the Renormalization Group.
 PERIODICAL Dokl. Akad. Nauk, 109, fasc. 4, 740-742 (1956)
 Issued: 10 / 1956 reviewed: 10 / 1956

CARD 1 / 2

PA - 1436

In several works a spectral representation for GREEN'S function in the quantum theory of the field was given. In accordance with this representation the GREEN'S functions of fields which are in interaction can be represented as superposition of the GREEN'S function of free fields with different masses. These spectral functions are real and they characterize the field in detail. In quantum electrodynamics the spectral representation for GREEN'S function of the photon may be written down as follows:

$$d_c(k^2) = -1 + \int_0^\infty (dM^2/M^2) \left(\frac{k^2}{M^2 - k^2 - i\varepsilon} \right) f\left(\frac{M^2}{m^2}, e_0^2\right).$$
 Here the function f is real. There follows transition from the true function $d_c(k^2/m^2, e_0^2)$ to

$d(x, y, e^2)$. The spectral representation for the latter function can be written down as follows:
$$d(x, y, e^2) = A(y, e^2) - \int_0^\infty I(\gamma, y, e^2) \left(\frac{x}{\gamma - x - i\varepsilon} \right) d \ln \gamma$$

where $A(y, e^2) = 1 - \int_0^\infty (I(\gamma, y, e^2) / (\gamma + 1)) d \ln \gamma$.

The expressions for A and I obtained by the insertion of this expression for d into the functional equation are explicitly given, and the following LIE'S differential equation for the spectral function I is obtained: The GREEN'S function

Dokl.Akad.Nauk, 109, fasc.4,740-742 (1956) CARD 2 / 2

PA - 1436

for the photon is a real (or complex) function for the domains $k^2 < 0$ (and $k^2 > 0$ respectively). The following connection between the imaginary part of the function d and the spectral function I is found: $I(x,y,e^2) = - (1/\pi) \text{Im}(x,y,e^2)$.

Next, the group equations for the GREEN'S function in the domain $x > 0$ are written down separately for the real- and the imaginary part.

Basing upon the equations for the spectral functions it is possible to determine the spectral functions for low (infrared domain) and for high frequencies γ by means of the perturbation theory. The approximated computation of the GREEN'S functions from these or the other equations distorts its analytical structure. Spectral representation and the group equations mentioned facilitate the computation of GREEN'S function without destroying its analytical structure.

Now the asymptotic domain of large momenta is investigated. The formulae mentioned here are then applicable only within the domain

$(e^2/3\pi) \ln \gamma < 1$. In conclusion the domain $\gamma \sim y$ is discussed in short. In this case the spectral functions have no δ -like singularity.

INSTITUTION: Moscow State University "M.V.LOMONOSOV"

SUBJECT USSR / PHYSICS
 AUTHOR LOGUNOV, A.A., STEPANOV, B.M. CARD 1 / 2 PA - 1634
 TITLE The Dispersion Relation for the Reactions of the Photoproduction
 of Pions.
 PERIODICAL Dokl. Akad. Nauk, 110, fasc. 3, 368-370 (1956)
 Issued: 12 / 1956

These relations are here determined by the method developed by N.N. BOGDOLJUBOV (forming the subject of lectures delivered in January 1956 in several seminars of the Mathematical Institute of the Academy of Science in the USSR). The matrix element of the photoproduction can be written down with the aid of the formalism of the S-matrix as follows:

$$S(k, \alpha; q', \omega) = (2\pi)^3 \langle \Phi_{p's'}^* \varphi_Q^{(-)}(q') S a_V^{(+)}(k) \Phi_{ps} \rangle$$

Here $\varphi_Q^{(-)}(q)$ denotes the absorption operator of a meson of the type Q ($Q = 1, 2, 3$) and $a_V^{(+)}(k)$ (with $V = 0, 1, 2, 3$) - the creation operator of a photon, Φ - the amplitude of state of the scatterer. The compound indices α and ω refer to the initial- and final state and comprise all quantum numbers characterizing the system (with the exception of the momenta of the photon and of the meson). A more exact expression for this matrix S is given. According to M.L. GOLDBERGER et al, Phys. Rev. 99, 979 (1955), ibid. 100, 986 (1955) it is possible to introduce a new amplitude $M_{\xi, \omega}$ of considerably

Dokl.Akad.Nauk, 110, fasc.3, 368-370 (1956) CARD 2 / 2

PA - 1634

more simple structure, which is identical with the amplitude $T_{\xi, \omega}$ within the real domain of momenta. The expression for $M_{\xi, \omega}$ is explicitly written down and subdivided into a hermetic ($D_{\xi, \omega}$) as well as into an antihermetic ($A_{\xi, \omega}$) part.

Next, the theorem on analytic properties is employed. It is then easily possible to construct combinations of $A_{\xi, \omega}^{(+)}$ which have no line of intersection in the upper half-plane of E (the significance of E is not clearly defined). It is then possible to employ the generalized theorem by CAUCHY and to write down explicitly the dispersion relations for the processes of photoproduction. On this occasion it was assumed that in infinity the scattering amplitude has no pole of an order higher than the first. On the occasion of the practical application of the relations obtained here a phase analysis must be carried out. This problem will be investigated in the course of future works.

INSTITUTION: Mathematical Institute "V.A.STEKLOV" of the Academy of Science in the USSR

"APPROVED FOR RELEASE: 06/20/2000

CIA-RDP86-00513R000930420001-2

APPROVED FOR RELEASE: 06/20/2000

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LOGUNOV, A.A.; TAVKHELIDZE, A.N.

Dispersion correlations for meson-nucleon collisions in the
proximity of nucleons at rest. Soob. AN Gruz. SSR 18 no.1:
19-24 Ja '57. (MIRA 10:5)

1. Tbilisskiy gosudarstvennyy universitet im. Stalina.
Predstavleno chlenom-korrespondentom Akademii V.I. Mamasakhlisovym.
(Collisions (Nuclear physics)) (Mesons) (Nucleons)

LOGUNOV, A.A.

LOGUNOV, A.A.; TAVKHELIDZE, A.N.

Dispersion correlations and equations of phase displacements for
meson-nucleon collisions in the proximity of nucleons at rest.
Soob. AN Gruz. SSR 18 no.5:533-540 My '57. (MLRA 10:9)

1. Tbilisskiy gosudarstvennyy universitet im. Stalina. Predstavleno
chlenom-korrespondentom Akademii V.I. Mamasakhlisovym.
(Mesons) (Nucleons)

200-01101, 11.4
AUTHOR
TITLE56-6-16/56
LOGUNOV, A.A., TAVKHELIDZE, A.N.
Dispersion Relations for Photoproduction of Mesons on Nucleons
(Dispersionnyye scotnosheniya dlya reaktsiy fotorozhdeniya π -mезonov
na nuklonakh. Russian)
Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol 32, Nr 6, pp 1393 - 1403
(U.S.S.R.)

PERIODICAL

ABSTRACT

In the present paper these dispersion relations are derived by the BOGOLYUBOV'S method. The authors at first compute the amplitudes of photoproduction; the course of the computation is followed step by step. Next, an auxiliary amplitude of this reaction and its properties are dealt with. The study of the rôle played by the bound states on the occasion of the processes of photoproduction is essential because it is connected with the analysis of the unobservable energy domain in the dispersion relations. Because of the smallness of the coupling constant e (electric charge), the energy of the interaction with the electromagnetic field may be regarded as a perturbation. Therefore, also a development in series according to the eigen states of the energy momentum vector of the meson-nucleon system is possible. Next, information is given on the matrix structure of the amplitude of photoproduction. In conclusion, formulae for the dispersion relations are obtained on the basis of certain assumptions discussed in the present paper on the degree of increase of the amplitude of the photoproduction in infinity by the application of CAUCHY'S theorem. These dispersion relations are

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56-6-16/50

Dispersion Relations for Photoproduction of Mesons on Nucleons
then transformed by elimination of the domain of the negative energies.
(With 1 illustration)

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Not given

24.7.1956

Library of Congress

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Dokl. Akad. Nauk, 112, fasc. 1, 45-47 (1957) CARD 2 / 2

PA - 1914

if the recoil momentum is fixed in a suitable manner.

Next, the average values of the currents, which occur here, are investigated, and the average value of the meson current is computed by way of an example. The average value of the electromagnetic current is computed in a similar manner. For the average value of the meson current the following expression is obtained:

$\langle \bar{\Psi}_{p',s',J_Q}(0) \Psi_{p,s} \rangle = g \langle \bar{u}_s(p') \gamma^{\mu} \tau_Q u_s(p) \rangle$. Here g is the renormalized pseudoscalar coupling constant of the meson- and nucleon fields. For the electromagnetic current one obtains:

$\langle \bar{\Psi}_{p',s',I_m}(0) \Psi_{p,s} \rangle = \langle u_s(p') \{ e \frac{1+\tau_3}{2} \gamma^{\mu} + \frac{1}{2} \hat{M} [(k\gamma), \gamma^{\mu}] \} u_s(p) \rangle$. Here e denotes the renormalized charge of the electron, μ_p and μ_n - the anomalous magnetic moments of the proton and the neutron and it holds that: $\hat{M} = \mu_p \frac{1+\tau_3}{2} + \mu_n \frac{1-\tau_3}{2}$

With the help of the formulae just mentioned it is possible without any trouble to write down the dispersion equations for photoproduction, whereby the "coupled" states are taken into consideration and in which the non-observable energy domain is separated. The complete analysis of the dispersion relations in the approximation for a fixed source gives results which are equivalent to those obtained by G.F.CHEW and F.E.LOW, Phys.Rev. 101, 1579 (1956).

INSTITUTION: Moscow State University

Logunov, AA

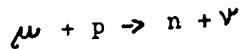
20-5-11/54

AUTHORS: Bogolyubov, N. N., Academician
Bilen'kiy, S. M., LOGUNOV, A. A.

TITLE: Dispersion Relations in Cases of Weak Interaction
(Dispersionnyye sootnosheniya v sluchayakh slabogo
vzaimodeystviya).

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 115, Nr 5,
pp. 891-893 (USSR)

ABSTRACT: At present dispersion relations meet with considerable
interest because in this way the fact of the existence
of an elementary length can be determined experimentally.
It is of interest to analyze what these relations tell
us in the case of a weak interaction. As an example the
authors investigate the reaction



in which, besides a weak interaction, there exists a
strong interaction between nucleon and the meson field.
In the theory of the dispersion relations the amplitude of
the process is split up into a hermitean and an antihermitean
part. In those systems of coordination in which the sum

CARD 1/3

20-5-11/54

Dispersion Relations in Cases of Weak Interaction

of the momenta of the nucleon before and after the reaction is equal to zero, the hermitean part D is equal to a certain integral of the antihermitean part A plus any polynomial $P_n(E)$ above the energy E of the impinging particle. The antihermitean part of the amplitude is expressed by the product of the meson current and the neutrino current. Because of the smallness of the constant of the weak interaction only those terms must be taken into account which contain the coupling constant in first approximation. This product is here at least small of second order and therefore the antihermitic part in the approximation investigated here is equal to zero. Accordingly, the dispersion relation takes on an especially simple form: $D(E) = P_n(E)$. Next, the matrix element of the process $\mu + p \rightarrow n + \nu$ is written down and transformed. The unknown functions of the amplitude of the process determined by strong interaction depend only upon the transmission of the momentum to the nucleons. By

CARD 2/3