

Invariant parametrization of the...

S/056/62/042/001/023/048
B104/B102

final states of the particles. This is necessary when examining reactions with zero-mass particles. The conditions under which the scattering matrix is invariant with respect to space and time reflections are formulated. Using a unitary Lorentz transformation U , the scattering matrix is parametrized in an arbitrary (laboratory) system: $S_{lab} = U^+ S_{cms} U$. The invariant parametrization of the relativistic amplitude for scattering through given angles is performed for reactions with particles of arbitrary spins. The analysis is applicable to zero as well as nonzero rest mass particles. There are 15 references: 11 Soviet and 4 non-Soviet. The four references to English-language publications read as follows:
 A. Simon, Phys. Rev., 92, 1050, 1953; M. Yacob, G. C. Wick, Ann. of Phys. 7, 404, 1959; L. Wolfenstein, J. Ashkin, Phys. Rev., 82, 947, 1952;
 A. R. Edmonds, CERN, 55-26, Geneva, 1955.

ASSOCIATION: Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta (Institute of Nuclear Physics of the Moscow State University)

SUBMITTED: June 6, 1961

Card 2/2

ACCESSION NR: AP3009492

S/0188/63/000/005/0058/0066

AUTHOR: Lonskiy, E. S.; Shirokov, Yu. M.

TITLE: New types of connection of local operators with dispersion matrices

SOURCE: Moscow. Universitet. Vestnik. Seriya 3. Fizika, astronomiya, no. 5, 1963, 58-66

TOPIC TAGS: matrix algebra, mathematical operator, matrix function, operator equation, vector function, vector calculus, matrix element, matrix, local operator, dynamic moment

ABSTRACT: A method for obtaining S-matrices for the non-relativistic case by means of a two-body Heisenberg matrix element of the local operator is analyzed at length in the present paper. It is shown that the direct application of methods given in an earlier paper by one of the authors (Yu. M. Shirokov, ZhETF, 44, 203, 1963) allows one to obtain all the phases of dispersion except one, namely the S-phase. In the present paper, a significant amplification of this method is derived, allowing one to calculate even the S-phase with a high degree of accuracy. Until recently, the only expression for the relationship between the matrix elements of local operators and the dispersion matrix was the reduction formula of Lehmann, Zimmermann, and Symanzik (Nuovo Gimento, 1, 205, 1955; 6, 319, 1957). Consequent-

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ACCESSION NR: AP3009492

ly, it was assumed that matrix elements of local operators have immediate physical meaning only in a mass envelope. The present paper is an amplification and analysis of results obtained with particular application to the non-relativistic case. The method of dynamic moments was used to obtain a dispersion matrix with the local operator $A(\vec{x}, t)$ for non-relativistic particles dispersed in the outside field. Thus, the result of this analysis is the proof that the whole dispersion matrix can be reestablished according to a given Heisenberg matrix element of any scalar, local operator $A(\vec{x}, t)$ for the diffusion of one particle in the outside field. This can be accomplished with accuracy up to the constant (i.e., independent of the energy and transmitted impulse) phase factor. The proposed method is suitable for relativistic and non-relativistic cases. Orig. art. has: 45 formulas.

ASSOCIATION: NIIYaF

SUBMITTED: 01Apr63

DATE ACQ: 08Nov63

ENCL: 00

SUB CODE: MA

NO REF SOV: 002

OTHER: 004

Card 2/2

S/056/63/044/001/037/067
B112/B186

AUTHOR: Shirokov, Yu. M.

TITLE: Microcovariance and microcausality in the quantum theory

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44, no. 1, 1963, 203-224

TEXT: Basing on the principles of the quantum theory, the following conditions are derived for microcovariance and microcausality: If the universe is pseudo-Euclidean everywhere, an operator $T_{\mu\nu}(x)$ exists which obeys the law of conservation $\partial T_{\mu\nu}(x)/\partial x^\nu = 0$ and which is determined by the distribution of matter in the universe. Within the light cone, the condition $\delta T_{\mu\nu}(x)/\delta g^{\lambda\sigma}(y) = 0$ is fulfilled. With the aid of these conditions, the quantities describing the space-time relations in the relativistic quantum theory are connected with quantities called dynamic momenta, which are directly susceptible to experimental measurement.

Card 1/2

Microcovariance and microcausality ...

8/056/63/044/001/037/067
B112/B186

ASSOCIATION:

Institut yadernoy fiziki Moskovskogo gosudarstvennogo
universiteta (Institute of Nuclear Physics of the
Moscow State University)

SUBMITTED:

July 10, 1962

✓

Card 2/2

L 13631-63 EWT(d)/FCC(w)/BDS AFFTC IJP(C)

ACCESSION NR: AP3003129

3/0056/63/044/006/1982/1992

AUTHOR: Cheshkov, A. A.; Shirokov, Yu. M.

53
52

TITLE: Invariant parametrization of local operators 16

SOURCE: Zhurnal eksper. i teor. fiziki, v. 44, no. 6, 1963, 1982-1992

TOPIC TAGS: local operator parametrization, space-time structure, elementary-particle structure

ABSTRACT: A general method is developed, with the aid of which the matrix elements of local operators of arbitrary tensor or spinor dimensionality, specified between states with either one or several particles of arbitrary mass or spin, are expressed in terms of invariant form factors. The same technique as used by the authors previously for parametrization of the scattering matrix (ZhETF v. 42, 144, 1962) is employed here, but is modified to allow also for the space-like 4-momenta and to accommodate the possible tensor or spinor indices of the local operators. The matrix elements of a scalar local quantity between the states of one particle with arbitrary spin is first parametrized. The results are then generalized to include the case of a local quantity having a nontrivial tensor dimensionality. The procedure is finally extended to matrix elements of local operators for particle systems.

Card 1/2 / Association: Inst. of Nuclear Physics, Moscow St. Un.

ACCESSION NR: AP4019224

S/0056/64/046/002/0583/0592

AUTHOR: Shirokov, Yu. M.

TITLE: New reduction formulas

SOURCE: Zhurnal eksper. i teor. fiz., v. 46, no. 2, 1964, 583-592

TOPIC TAGS: quantum field theory, reduction formulas, S matrix theory, matrix element parametrization, local operator, observable quantity, local field, mass shell, Heisenberg matrix, scattering phase shift, inelastic interaction, inelastic interaction channel, one particle form factors, matrix element analyticity

ABSTRACT: This article continues developing a technique first introduced in another paper of the author (ZhETF v. 44, 203, 1963), which aims at a complete parametrization of matrix elements of local operators by experimentally observable quantities, i.e., by elements of the S matrix. It is shown that the method of the author, named

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ACCESSION NR: AP4019224

the method of dynamic moments, is capable of relating to the S matrix not only matrix elements of local fields and currents on the mass shell but also off the mass shell. The main result consists in demonstrating that a given Heisenberg matrix element of a local operator determines all the elastic scattering phase shifts except one, as well as kinematic characteristics and transition amplitudes for all inelastic channels. In addition one-particle form factors of the operator in question can be determined for all particles produced in the inelastic channels. The connection between this work and the reduction formulas of Lehmann, Symanzik and Zimmermann is brought out and some comments are made on the implications for the analytic structure of matrix elements of local operators.

ASSOCIATION: Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta (Nuclear Physics Institute, Moscow State University)

SUBMITTED: 23Jun63

DATE ACQ: 27Mar64

ENCL: 00

SUB CODE: PH

NO REF SOV: 004

OTHER: 003

Card 2/2

87056164/048/001 0.22 0.32

4 21 11 11 12

11 11 11 M

... .. field theory

... .. nearly critical

... .. matrix

... .. two-particle matrix
... .. taken between the two-particle states in the
... .. arbitrary basis. It is possible to

different sorts by means of the same

End 1/2

REFERENCE NR: AP5004396

... of the derivation ... also that analogous poles exist
... specialized to ...
... for all ...

ASSOCIATION: Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta
(Institute of Nuclear Physics of the Moscow State University)

SUBJECT: [Illegible]

1 43743-65 EWT(1)
4 110:12N NF AP5006524

S/0056/65/048/002/0719/0722

9
3
E

AUTHOR: Mineyev, V. S.; Shirokov, Yu. M.

TITLE: On the relation between fields and spin particles

21

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 2, 1965, 719-722

TOPIC TAGS: quantum field, scalar neutral quantum field, spin particle

ABSTRACT: A method previously described by Yu. M. Shirokov for obtaining the physical quantities characterizing a corpuscular description is extended to the case of particles having a spin, the physical quantities are derived from the matrix elements $\langle \alpha, A(x), \alpha' \rangle$ of a scalar neutral quantum field $A(x)$ which are described in an arbitrary basis α . Transition to a corpuscular description means that one determines: a) the spectra of masses χ and spins j for all stable particles, b) the set of quantities $\langle \alpha | 0 \rangle$, $\langle \alpha | \chi, j, k, m \rangle$, $\langle \alpha | \chi_1, j_1, k_1, m_1; \chi_2, j_2, k_2, m_2 \rangle, \dots$

which constitute the transition matrix from the initial basis to the in-basis in which the particle state is defined by its momentum k and spin projection on the

Card 1/2

APR 1965
APR 1965 24

... at minus infinity in time and of the scattering matrix. The
... physical nature or tensor dimension.

Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta
(Nuclear Physics, Moscow State University)

NO REF DIV. 006

OTHER: 001

card
Card 2/2

SHIBUKOV, Yu.M.

Particles and the S-matrix in quantum field theory. Zhur. eksp.
i teor. fiz. 48 no.1:222-231 Ja '65. (MIRA 18:4)

1. Institut yadernoy fiziki Moskovskogo gosudarstvennogo
universiteta.

PETUKHOV, B.V.; POLYAKOV, Yu.I.; SHIROKOV, Yu.M.

Relationship between form factors of the single-particle matrix element of the energy-impulse tensor and the charge and magnetic moment. Vest. Mosk. un. Ser. 3: Fiz., astron. 20 no.5:14-17 S-0 '65. (MIRA 18:11)

1. Nauchno-issledovatel'skiy institut yadernoy fiziki Moskovskogo universiteta. Submitted February 29, 1964.

MINEYEV, V.S.; SHIROKOV, Yu.M.

Relation between fields and spin particles. Zhur. eksp. i
teor. fiz. 48 no.2:719-722 F '65. (MIRA 18:11)

1. Institut yadernoy fiziki Moskovskogo gosudarstvennogo universi-
teta.

L 22029-66 EWT(m)/EWP(j)/T GS/RM
ACC NR: AT6005937 (A)

SOURCE CODE: UR/0000/63/000/000/0047/0049

AUTHORS: Mikhant'yev, B. I. ; Kretinin, S. A. ; Shirokov, Yu. P.

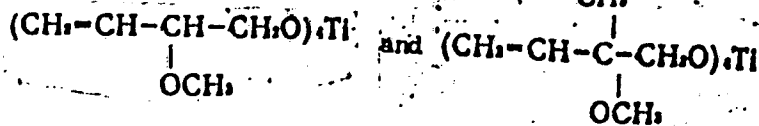
ORG: Laboratory for the Chemistry of High-Molecular-Weight Compounds, Voronezh State University (Laboratoriya khimii vysokomolekulyarnykh soyedineniy Voronezhskogo gosudarstvennogo universiteta)

TITLE: Synthesis and polymerization of certain titanorganic compounds containing unsaturated radicals

SOURCE: Voronezh. Universitet. Laboratoriya khimii vysokomolekulyarnykh soyedineniy. Trudy, no. 2, 1963. Monomery, khimiya i tekhnologiya SK (Monomers, chemistry, and technology of synthetic rubber), 47-49

TOPIC TAGS: organometallic compound, organotitanium compound, titanium compound, organic synthetic process, titanium, polymerization

ABSTRACT: The organotitanic compounds



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L 22029-66

ACC NR: AT6005937

0

were synthesized to extend the work of S. V. Nogina, R. Kh. Freydina, and A. N. Nesmeyanov (Izv. AN SSSR, OKhN, 3, 327, 1950). The compounds were synthesized by reacting $TiCl_4 \cdot 8NH_3$ in dry benzene with 2-methoxybuten-3-ol-1 and with 2-methoxy-2-methylbuten-3-ol-1 respectively. The intermediate products were synthesized after the method of A. A. Petrov (ZhOKh, 11, 991, 1941; ZhOKh, 16, 1625, 1946) and of A. N. Pudovnik and S. G. Denislamova (ZhOKh, 27, 2363, 1957). Reaction yields and the characteristic physical constants for the synthesized compounds are tabulated. The polymerization of the synthesized compounds was studied. Only thermopolymerization and polymerization induced by orthophosphoric acid yielded polymers. Metallic sodium, BF_3 , $FeCl_3$, and benzoyl peroxide did not induce polymerization. The polymers obtained were ruby-red in color, brittle, and showed a poor adhesion to glass. Orig. art. has: 2 formulas.

SUB CODE: 07/

SUBM DATE: none/

ORIG REF: 007

OTH REF: 001

Card. 2/2da

LOPCHENKOV, E.A., inzh.; TSYELIN, I.A., inzh.; SHIRKOV, Yu.P., inzh.;
SUDIN, N.V., inzh.

New series of d.c. micromotors. Elektrotekhnik 35 no.7:40-42 164.
(MIRA 17:11)

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549530003-1

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549530003-1"

APR 1972

... was saturated with ...
... was initially ...

SHIROKOVA, A. S.

Shirokova, A. S. - "Question of treatment of exophytic forms
of cancer of the cervix," Trudy Rost. rentgeno-radiol. i
onkol. in-ta, Issue 2, 1948, p. 77-82

SO: U-3566, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 14, 1949).

PANASYUK, V.I.; ASHRATOVA, Sh.K.; YAROSHEVICH, R.A.; SHIROKOVA, A.V.

Analyzing batches of opalescent, boron silicate, and some
other kinds of glass. Leg.prom. 18 no.12:19-23 D '58.
(MIRA 11:12)

(Glass manufacture--Chemistry)

S/207/62/000/005/008/012
B125/B102

AUTHORS: Khristoforov, B. D., Shirokova, E. A. (Moscow)

TITLE: Shock-wave parameter in underwater detonation of a cord charge

PERIODICAL: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 5, 1962, 147-149

TEXT: The shock-wave parameters for underwater detonation of a very long cylindrical charge were measured by the piezoelectric method using tourmaline primary elements (at distances $R = 5; 10; 13; 20; 25$ cm from the charge) and by schlieren photography (at $R < 5$ cm). This charge was ignited at one end in the range $1 \leq R/R_0 < 160$. R_0 is the radius of the charge. In the piezoelectric measurements the charge consisted of a detonating cord (PETN and hexogene, weights 10 and 15 g/m) and of a PETN and hexogene filling (density 1 g/cm³) in a paper wrap at $R < 5$ cm. In all cases the charge was more than twice as long as the distance from the point of measurement. Hence the effect of the ends of the charge on the shock wave could be neglected. The velocity of detonation was 7 km/sec.

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S/207/62/000/005/008/0:2
B125/B102

Shock-wave parameter in ...

Evaluation of the experimental data has been described by B. D. Khristoforov (PMTF, 1960, No. 2; 1961, No. 4). The results obtained in the evaluation of the schlieren photographs are given in Table 1. V is the component of the actual rate N of propagation of the front normal to the charge axis. $N = V[1 + (V/D)^2]^{-1/2}$. With the passage of time in the interval $0 \leq t \leq \theta$ the pressure decreases as $p(t) = P \exp(-t/\theta)$, and for $t > \theta$ according to a power law. The spatial pressure distribution is described by the empirical formulas

$$P = (9.75/(R^0)^{1.08}) \quad \text{at } 0.0005 \leq R^0 \leq 0.0007 \quad \text{and } P = 65.5/(R^0)^{0.71} \quad \text{at}$$

$0.007 \leq R^0 \leq 0.1$. The empirical formula $\theta^0 = 14.6 \cdot 10^{-6} (R^0)^{0.43}$ holds for the time constant θ of the shock wave;

$R^0 = (R/\sqrt{q})_m^{3/2} / \text{kcal}^{1/2}$. For $\varepsilon = E/q = \psi(R^0)$ the empirical formula $\varepsilon = 0.0157/(R^0)^{1.02}$ is valid. $E = \int_0^{5.50} (1/qa) p^2(t) dt$ is the energy flux

density of the shock wave through the unit area of the wave front. There are 3 figures and 1 table.

Card 2/3

KHRISTOFOROV, B.D. (Moskva); SHIROKOVA, E.A. (Moskva)

Parameters of a shock wave produced by underwater explosion
of a fuse charge. PMTF no. 5:147-149 S-0 '62. (MIRA 16:1)
(Shock waves) (Underwater explosions)

U.S.S.R. / Human and Animal Physiology. Blood. T

Abs Jour: Ref Zhur-Biol., No 5, 1958, 22074.

Author : Zakharova, F. V., Shirokova, E. I.
Inst : Not given.
Title : A Study of Chlorophyll Metabolism in Cattle
With the Aid of Radioactive Atoms.

Orig Pub: Zhivotvodstro, 1957, No 3, 37-44.

Abstract: Two 37-39 day old Kholmogorski calves were fed for a period of 6-10 days, crystalline chlorophyll (I) containing C^{14} (0.173-0.183 microcuries/kg.). Radioactive substances were studied in the blood, hemin, Hb and excreta. After the animals were killed, the radioactivity of the tissues was studied. It was demonstrated that the blood contained 59.43-79.05% of end prod-

Card 1/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549530003-

U.S.S.R. / Human and Animal Physiology. Blood. T

Abs Jour: Ref Zhur-Biol., No 5, 1958, 22074.

Abstract: ucts of I (up to porphyrins), which are utilized in the synthesis of Hb in the bone marrow and liver. A large concentration of C^{14} is also demonstrated in the substance of the brain. I appears to represent an indispensable plastic material for the formation of Hb.

Card 2/2

54

ACC NR: AP7000774

SOURCE CODE: UR/0065/66/000/012/0054/0056

AUTHOR: Churshukov, Ye. S.; Gureyev, A. A.; Rozhkov, I. V.; Shirokova, G. B.

ORG: none

TITLE: Test method for the corrosiveness of fuels and the effectiveness of anticorrosion additives

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 12, 1966, 54-56

TOPIC TAGS: fuel, liquid fuel, crude petroleum, crude oil, sulfur compound, sour crude, gasoline, jet fuel, diesel fuel, corrosion inhibitor, corrosion determination, anticorrosion additive

ABSTRACT: As sour crudes of the Volga River Basin and of the eastern regions of the USSR form approximately 70% of the total crude oil production in the USSR, and as gasolines jet and diesel fuels obtained for these crudes contain a high amount of corrosive sulfur, methods for rapid and reliable determination of the corrosiveness of liquid fuels are desirable. Presently available methods are either time-consuming or only qualitative. This situation prompted the authors to develop a comparatively rapid method (the determination requires 4 hr) which has good reproducibility. The method basically consists of heating a metal plate immersed in fuel in a special water-jacketed flask in which constant temperature, humidity and pressure are maintained during the determination (see Fig. 1). The metal plate is weighed on a semi-

Card 1/3

UDC: 665.521.5:620.193

ACC NR: AP7000774

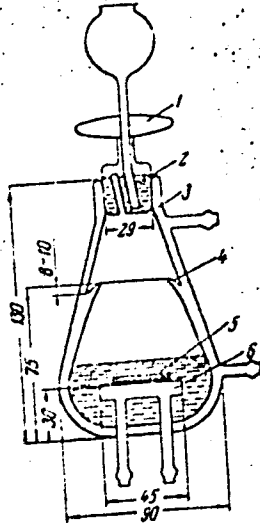


Fig. 1. Corrosion testing apparatus

- 1 - Water filled glass stopper;
- 2 - water lock; 3 - water-jacketed flask;
- 4 - water-filled groove;
- 5 - metal plate; 6 - water-cooled glass stand.

cro analytical balance before the experiment and after removal of corrosion products. The difference indicates the extent of the corrosion. Gasolines are tested at 70C, jet and diesel fuels at 90C. The cooling water for the glass stand on which the

Card 2/3

ACC NR: AP7000774

the testing plate is placed is 12—15 C. The accuracy of the method is within $\pm 0.5 \text{ g/m}^2$ for a total corrosion in the range 10—15 g/m^2 , and within $\pm 1.0 \text{ g/m}^2$ for higher corrosion values. Bronze, brass or steel can be used for testing the fuel corrosion. Experiments were run by the authors with individual sulfur compounds, thermal cracking gasoline, TS-1 jet fuel and Diesel Winter Fuel (GOST 305-62) on St. 3 steel plates. It was found that fuel corrosiveness depends both on the concentration and the nature of the corrosive sulfur compounds; aromatic sulfur compounds are more corrosive than aliphatic compounds. The authors recommended tightening of specifications with respect to mercaptan sulfur, and especially aromatic mercaptan sulfur in sulfur-containing fuels. The method described is suitable for evaluating the corrosiveness of liquid fuels and the effectiveness of anticorrosion additives. Orig. art. has; 1 figure and 6 tables.

SUB CODE: 21/ SUBM DATE: none/ ORIG REF: 003/ ATD PRESS: 5108

Card 3/3

TSAL'KOVICH, I.M., dots.; BARON, F.Ya., kand. tekhn. nauk;
SAPRYKIN, V.A., red.; SHIROKOVA, G.M., red.; BOROVNEV,
N.K., tekhn. red.

[Organization and work production during the initial stages
of building apartment houses] Organizatsiia i proizvodstvo
rabot podgotovitel'nogo perioda stroitel'stva zhilykh mas-
sivov. Pod red. V.A.Saprykina. Moskva, Gosstroizdat, 1963.
211 p. (MIRA 16:7)

1. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury
SSSR (for Saprykin).

(Apartment houses)

ARISHEV, Boris Sergeevich; YAKUSHEV, A.A., nauchn. red.; SHIROKOVA,
G.M., red.

[Large-panel construction from components made at plants for
reinforced concrete and silicate products (Series 1-467)]Krup-
nopanel'noe stroitel'stvo iz detalei, izgotovlennykh na zavo-
dakh zhelezobetonnykh i silikatnykh izdelii (Seria 1-467). Mo-
skva, Stroizdat, 1964. 141 p. (MIRA 17:3)

DIKOV, V.A., st. inzh.; KUVYRKIN, N.I., st. inzh.; LITOVCHENKO, Ya.A., st. inzh.; SULOTSKIY, B.P., st. tekhnik; ABDULINA, Kh.M., st. tekhnik; KOLKOTIN, N.M., st. inzh.; SHIROKOVA, G.M., red.; PEREVALYUK, M.V., red.izd-va; BOROVNEV, N.K., tekhn. red.;

[Instructions for the capital repair of machinery used in construction] Ukazaniia po kapital'nomu remontu mashin, zaniatykh v stroitel'stve (U5-62). Moskva, Gosstroizdat, 1963.

No.4. [Technical specifications for major repairs on excavators with a shovel capacity of 0.35 m³; excavators E-255, E-353, E-257, E-358, E-301, and E-352] Tekhnicheskie usloviia na kapital'nyi remont ekskavatorov s kovshom emkost'iu do 0,35 m³: ekskavatory E-255, E-353, E-257, E-258, E-301, E-352. 180 p.

No.5. [Technical specifications for major repairs on excavators with a shovel capacity of 0.5³: excavators E-505, E-505A] Tekhnicheskie usloviia na kapital'nyi remont ekskavatorov s kovshom emkost'iu 0,5 m³: ekskavatory E-505, E-505A. 146 p.

(MIRA 16:8)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu. (Excavating machinery--Maintenance and repair)

PUTYAKOV, Konstantin Petrovich, kand. tekhn. nauk; POLONSKIY,
Lev Davydovich, inzh.; PATRIN, Nikolay Ivanovich, inzh.;
VEDENEYEV, Vasilii Alekseyevich, inzh.; ZHEBROVSKIY,
Aleksandr Stepanovich, inzh.; SHIROKOVA, G.M., red.;
SIVITSKIY, K.P., nauchn. red.; SHEVCHENKO, T.N., tekhn. red.

[Industrial construction of sugar] Industrial'noe stroi-
tel'stvo sakharnykh zavodov. Moskva, Gosstroizdat, 1963.
163 p. (MIRA 17:2)

FUCHKALOV, Viktor Viktorovich. Irinsk. Ia univertsiye (FUCHKALOV, V.I.,
akht.; SHELENEVA, V.I., Irinsk., rauchn. red.; FUCHKALOV,
G.N., red.

[Assembly-line construction of apartment houses and build-
ings for cultural and social purposes; Stroitel'stvo zhi-
lykh domov i kul'turno-bytovykh zdaniy potsovnym shtetom].
Moskva, Stroizdat, 1964. 161 p. (Stroitel'stvo)

СМЕРДИН, Владимир Григорьевич; ШИРОКОВА, Г.М., ред.

[Use of radioisotopes in construction] Primenenie radio-
nativnykh izotopov v stroitel'stve. Moskva, Stroizdat,
1964. 159 p. (MIRA 17.9)

KALABUKHOV, N.I.; SHIROKOVA, G.P.; SHKEL'MAN, A.I.

Effect of vitamins C and E on the physiological characteristics and sensitivity of the gerbil *Meriones meridianus* to plague infection. *Zhur. mikrobiol., epid. i immun.* 40 no.4:102-107 Ap '63. (MIRA 17:5)

1. Iz eksperimental'noy bazy Instituta "Mikrob" i Astrakhanskoy protivechumnoy stantsii Ministerstva zdравookhraneniya SSSR.

ACC NR:

AP6008825

SOURCE CODE: UR/0294/66/004/001/0035/0039

AUTHOR: Rovinskiy, R. Ye. (Moscow); Gruzdev, V. A./Shirokova, I. P. (Moscow)

ORG: None

TITLE: The energy balance of a steady-state induced discharge

SOURCE: Teplofizika vysokikh temperatur, v. 4, no. 1, 1966, 35-39

TOPIC TAGS: gas discharge, argon, xenon

ABSTRACT: The authors describe an experimental investigation of a discharge in argon and xenon, induced in closed flasks. A study is made of the energy balance of a steady-state discharge in the pressure range from 1 to 750 mm Hg. The authors measured the magnitude of thermal and radiant losses of the discharge depending on gas pressure and the power of the discharge. It is found that the thermal and the radiant losses in the case of xenon are several times higher than those in the case of argon. At atmospheric pressure, the proportion of radiant losses in argon amounts to about 15% and drops substantially with decreasing pressure. The radiant losses in both xenon and argon as a function of pressure with a constant power in the discharge, are found to increase sharply at first, then, starting from about 200 to 300 mm Hg, to increase at a slower rate. It is asserted that the increase in the radiant power will, in some degree, continue even at pressures above atmospheric. Orig. art. has: 6 figures and 3 formulas.

UDC: 537.523.537—96.533.9.07

Cord 1/2

ACC NR:

AP6008825

SUB CODE: 20 / SUBM DATE: 26Jan66 / ORIG REF: 001

Card 2/2

BIDZHIYEV, R.A.; ZEMSKOVA, G.K.; NEVYAZHSKIY, I.I.; SHIROKOVA, I.Ya.

New discoveries of Tertiary flora in central Yakutia. Trudy VAGT
no.2:177-179 '56. (MLRA 10:5)
(Yakutia--Paleobotany, Stratigraphic)

SHIROKOVA, I.Ya.

Sulfide mineralization in the area of Sharabrina Mountain
(Ural Mountains). Izv.vys.ucheb.zav.; geol.i razv. 2
no.10:64-68 0 '59. (MIRA 13:6)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(Sharabrina Mountain--Sulfides)

SHIROKOVA, I.Ya.

Metamorphism of rocks in the Sugomak Mountain region (Central Urals)
and its connection to sulfide mineralization. *Biul.MDIP.Otd.geol.* 35
no.4:139-140 J1-Ag '60. (MIRA 14:4)
(Sugomak Mountain region--Metamorphism (Geology))

SHIROKOVA, I. Ya. Cand Geol-Min Sci -- " Metamorphism of rocks of the greenstone belt of the central Ural and the relation of sulfide mineralization to it. According to the example of Sugomakskiy Rayon." Mos, 1961 (Min of Higher and Secondary Specialized Education RSFSR. Krasnoyarsk Inst of Nonferrous Metals ~~in M. I. Kalinin~~). (KL, 4-61, 191)

-115-

SHIROKOVA, I.Ya.

Tectonics of the zelenokamenny synclinorium in the Sugomak Mountain region (Central Urals). Izv.vys.ucheb.zav.;geol.i razv. 3 no.2:23-28 F '60. (MIRA 15:5)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.
(Sugomak Mountain region-Geology, Structural)

SHIROKOVA, K.I., dotsent (Moscow)

"Stomach and duodenal ulcer." S.O.Badyl'kes. Reviewed by K.I.
Shirokova. Klin. med. 32 no.10:89-90 0 '54. (MLRA 8:1)
(DUODENUM--ULCERS) (STOMACH--ULCERS)
(BADYL'KES, S.O.)

SHIROKOVA, K.I. (Moskva)

Tenth anniversary of the death of V.N.Smotrov. Klin.med. 35 no.7:
145-147 JI '57. (MIRA 10:11)
(SMOTROV, VLADIMIR NIKOLAEVICH, 1900-1947)

SHIROKOVA, K.I.; SUDAKOVA, S.A. (Moskva)

Effect of riboflavin on the secretory function of the stomach.
Klin.med. 37 no.6:130-133 Je '59. (MIRA 12:8)

1. Iz propedevticheskoy terapevticheskoy kliniki (dir. -
deystvitel'nyy chlen AMN SSSR prof.V.Kh.Vasilenko) I Moskov-
skogo ordena Lenina meditsinskogo instituta imeni I.M.Seche-
nova.

(STOMACH, eff. of drugs on
vitamin B2, on secretion (Rus))
(VITAMIN B2, eff.
on stomach secretion (Rus))

SHIROKOVA, K.I.

Summaries of the scientific session dedicated to the problem of
cirrhosis of the liver. Sov.med. 28 no.7:152-154 JI '65.
(MIRA 18:8)

SHIROKOVA, K.I., dotsent; KOVALEVA, N.V., dotsnet (Moskva)

Comparative evaluation of the determination of free hydrochloric acid with and without intubation. Klin.med. 38 no.8:113-115 Ag '60. (MIRA 13:11)

1. Iz kafedry propedevtiki vnutremnikh bolezney (zav. - deystvitel'nyy chlen AMN SSSR prof. V.Kh. Vasilenko) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova. (GASTRIC JUICE)

NECHITAYLO, N.A.; SANIN, P.I.; TOLCHINSKIY, I.M.; Primali uchastiye:
LZYUBINA, M.A.; SHIROKOVA, L.A.

Melting heat of polymers. Plast.massy no.8:3-5 '61. (MIRA 14:7)
(Polymers) (Heat of fusion)

SARYCHEV, B.M.; DUTKIN, G.S., inzhener; SHIROKOVA, L.P.; FINGER, L.M.,
redaktor; MINASYAN, Ye.A., redaktor; PETROVSKAYA, Ye.S., redaktor.

[Overhead lines of municipal low-voltage networks] Vozdushnye
linii gorodskikh setei niskogo napriazhenia. Moskva, Izd-vo
Ministerstva kommunal'nogo khoziaistva, 1953. 163 p. (MLRA 7:2)
(Electric lines--Overhead)

SARYCHEV, Boris Mikhaylovich, inzh.. Prinsipali uchastnye: SHIROKOVA,
L.P., inzh.; SHEPELEVA, F.S., inzh.. SHNEYEROV, S.A.,
red.izd-va; VOLKOV, S.V., tekhn.red.

[Tables for use in connection with the hanging of wires and
wire cables for high voltage lines] Montazhnye tablitsy
provodov i trosov vysokovol'tnykh lini. Izd.2., perer.
Moskva, Izd-vo M-va kommun.khoz.RSFSR, 1959. 178 p. (MIRA 13:2)
(Electric lines--Overhead)

VAYNSHTEYN, Yu.I.; DZIGNEC, V.M.; DUNAYEVSKAYA, K.A.; SHIROKOVA, M.D.

Polarographic study of ortho-substituted azoxy compounds. Part 1.
Zhur.ob.khim. 32 no.9:2777-2782 S '62. (MIRA 15:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh reaktivov i osobo chistykh khimicheskikh veshchestv.
(Azoxy compounds) - (Polarography)

SHIROKOVA, M.N.; YAKUBCHIK, A.I.

Oxidation of polymeric Schiff bases from benzyl and p-phenylenediamine. Vysokom. sced. 7 no.9:1641-1644 S '65.
(MIRA 18:10)

1. Leningradskiy gosudarstvennyy universitet.

CHIBRIKOV, Georgiy Georgiyevich; YEFIMOV, O.S., red.; SHIROKOVA,
N.A., red.; LAZAREVA, L.V., tekhn. red.

[Contradictions between U.S.A. monopolies and under-
developed countries on the basis of the exportation of
capital] Protivorechiia mezhdru monopoliiami SShA i slabo-
razvitymi stranami na pochve vyvoza kapitala. Moskva,
Izd-vo Mosk. univ., 1963. 36 p. (MIRA 16:10)
(Underdeveloped areas—Investments, American)

SHIROKOVA, N. I.

USSR/Chemistry - Hydrocarbon oxidation

Card 1/1 : Pub. 147 - 4/21

Authors : Ioffe, I. I.; Levin, Ya. S.; Sokolova, E. V.; Kronich, I. G.; and Shirokova, N. I.

Title : Study of the kinetics and mechanism of vapor-phase incompleted oxidation of benzene with molecular oxygen

Periodical : Zhur. fiz. khim. 8, 1386-1394, Aug 1954

Abstract : The kinetics of benzene oxidation with molecular O₂ was investigated at high hydrocarbon concentrations and relatively low temperatures and pressures. It was found that the kinetics of oxidation reaction corresponds to the kinetics of a degenerated explosion. The relation between the rate of reaction, benzene:oxygen ratio and partial O₂-pressure, was established. The inhibiting effect of the quartz surface on the volumetric reaction of benzene oxidation, is discussed. Six references: 2-USSR and 4-English (1929-1950). Tables; graphs; drawings.

Institution : The K. E. Voroshilov Scientific Research Institute of Organ. Semi-Products and Dyes

Submitted : July 3, 1953

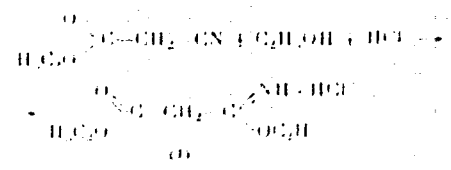
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

1. 7.

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3. 10.

4. 10.



5. 10.

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Handwritten reference numbers: "304/21-55-3-5/47".

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SHIROKOVA, N.I.; RUSSKOVA, Ye.F.; ALISHOYEVA, A.B.; GITINA, R.M.; LEVKOYEV, I.I.; KOZLOV, P.V.

Polycarbonates. Part 3: Synthesis of 2, 2-bis(4'-hydroxyphenyl) propane polycarbonates in a homogeneous medium and their properties. Vysokom.soed. 3 no.4:642-649 Ap '61. (MIRA 14:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy kino-foto institut.
(Carbonic acid)

SHIROKOVA, N. I.; LEVKOYEV, I. I.; SVESHNIKOV, N. N.

Synthesis of meso-alkyl- and aryl indocarbocyanines and their coloration. Zhur. VKHO 7 no.5:587-588 '62. (MIRA 15:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy kinofotoinstitut.

(Carbocyanine dyes)

LEVKOYEV, I.I.; SVESHNIKOV, N.N.; SHIROKOVA, N.I.

Some transformations of quaternary salts of 2- β -chloropropenyl derivatives of heterocyclic bases. Dokl. AN SSSR 153 no.2: 350-353 N '63. (MIRA 16:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy kinofotoinstitut.
Predstavleno akademikom M.I.Kabachnikom.

SVESHNIKOV, N.N.; LEVKOYEV, I.I.; SHIROKOVA, N.I.; DAMIR, N.A.

Action of phosgene on acetylmethylene derivatives of heterocyclic
bases and some reactions between the compounds formed. Dokl. AN
SSSR 148 no.5:1091-1094 F '63. (MIRA 16:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy kinofotoinstitut.
Predstavleno akademikom M.I. Kabachnikom.
(Phosgene) (Heterocyclic compounds)

SHIROKOV, Matvey Yevdokimovich. Prinsipali uchastiye: PROKOP'YEV, I.M.,
vrach; KATOLIK, G.M., vrach; KERBULEV, V.I., vrach; SHIROKOVA,
N.S., vrach. KHODOS, Kh.G., prof., red.; BOHDONSKIY, S., red.;
YURGANOVA, M., tekhn.red.

[Darasun Health Resort] Kurort Darasun. Izd.2., dop. 1 ispr.
Chita, Chitinskoe knizhnoe izd-vo, 1960. 142 p. (MIRA 13:11)

(DARASUN-KURORT--THERAPEUTICS, PHYSIOLOGICAL)

PIRELAGOVA, N.I.; SVFENIKOV, N.N.; LEVKOV, I.I.

Effect of quaternary salts of β -chlorovinyl derivatives of heterocyclic bases on some carbo- and dimethinemerocyanine dyes.
Dokl. AN SSSR 162 no.3:603-606 My '65. (MIRA 18:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy kinofotoinstitut. Submitted September 14, 1964.

KOZISHKURT, P.P.; SHIROKOVA, N.V.

Organizing control of child mortality in Kishinev. Zdravookhra-
nenie 5 no.3:3-6 My-Je '62. (MIRA 16:1)

1. Zaveduyushchiy Kishinevskim gorodskim otdelom zdravookhra-
neniya (for Kozishkurt). 2. Glavnyy pедиатр города Kishineva
(for Shirokova).

(KISHINEV—INFANTS—MORTALITY)

ZELENIN, N.I.; TATARKINA, G.V.; SHIROKOVA, N.Ye.; NEMIROVSKIY, A.N.;
FEOFILOV, Ye.Ye.; OL'SHEVSKAYA, K.Ya.

Production of automobile gasoline. Khim. i tekhn. gor. slan.
i prod. ikh perer. no.8:75-83 '60. (MIRA 15:2)
(Gasoline)

Hydrous calcium silicates N. A. Toropov, A. I. Borj-
senko, and P. V. Shirokova, Dokl. Akad. Nauk S.S.S.R.,
Dokl. Chem. Ser. 133, 89 (1960) (Engl. translation). See C.A.
48, 9247d (U. I. H. 2)

Hydrolyzation of calcium silicate
obtained in 100% yield by saturating 100 g of amorphous SiO₂ with 100 g of glycerol heating with stirring at 180-185 until clear cooling diluting with water and washing the ppt on tencantate filter and by drying at 100° for 4 hr. Chemical analysis and X ray fully support its purity. The reaction proceeds through the formation of Ca glycerate which reacts with the amorphous SiO₂. The product is hydrated on dilution and washing with water. When the silicate is heated for 2 hr at 900° it forms fine grained aggregates with refractive index $n_D = 1.734$ and $n_D = 1.718$ W. Masz

USSR .

✓ The system tricalcium silicate-tricalcium phosphate.
N. A. Toropov, A. I. Borisenko, and P. V. Shirokova.
Doklady Akad. Nauk S.S.S.R. 92, 1016-10 (1962).
1460° in the system $3\text{CaO}\cdot\text{SiO}_2 - 3\text{CaO}\cdot\text{P}_2\text{O}_5$, there are
formed solid soln. of silicophosphates in di-Ca silicate and
CaO. The degree of decompn. of tri-Ca phosphate (followed
by the CaO formed) was greatest with 20 moles % of this
Ivan Pascal
constituent.

Широкова, П. В.
USSR/Physical Chemistry - Thermodynamics, Thermochemistry, Equilibria, Physical-Chemical Analysis, Phase Transitions. B-8

Abs Jour : Referat Zhur - Khimiya, No 1, 1958, 403

Author : A.I. Borisenko, P.V. Shirokova.

Inst : -

Title : Study of Calcium Titanates.

Orig Pub : Zh. neorgan. khimii, 1956, 1, No 4, 615-618

Abstract : It was established by the method of complex thermal analysis (RZhKhim, 1953, 2166) that at 765° the 3-calcium diti-tanate $3\text{CaO} \cdot 2\text{TiO}_2$ (I) suffered a polymorphous transforma-tion accompanied by a small heat effect. It was establis-hed by the x-ray-ionization analysis that an insignificant change of the tetragonality of the crystalline lattice of I took place in the temperature range from 700 to 800°, and splitting of some diffraction lines was observed at high temperatures (900 to 1200°), which was caused by structural changes of the crystalline lattice of I.

Card 1/2

USSR/Physical Chemistry - Thermodynamics, Thermochemistry, Equilibria, Physical-Chemical Analysis, Phase Transitions. B-8

Abs Jour : Ref Zhur - Khimiya, No 1, 1958, 403

A new crystalline phase $3\text{CaO}\cdot\text{Ti}_2\text{O}_3$ is produced by melting
I several times in electric arc flame.

Card 2/2

SHIROKOVA, P.V.; LILEYEV, I.S.

Synthesis of sodium gallsilicates at sintering temperatures.
Zhur. neorg. khim. 10 no.6:1402-1408 Je '65. (MIRA 18:6)

1. Institut khimii silikatov imeni Grebenshchikova AN SSSR.

ARAFANOVICH, Ismak Gaurikhovich. D.N.S. Uchenyye Zapiski
EL'SGOL'TS, Izz. Prilozheniya POKROVA, S. A. et al.

[Functions of a complex variable. Operational calculus.
Stability theory] Funktsii kompleksnykh peremennnykh.
Operatsionnoye ischisleniye. Teoriya ustoychivosti. Moskva, Nauka, 1981. 181 p. (MIRA 18:12)

SKORNYAKOV, Lev Anatol'yevich; SHIROKOVA, S.A., red.; YERMAKOVA, Ye.A.,
tekhn. red.

[Dedekind structures with complements and regular rings] Dedekindovy
struktury s dopolneniyami i reguliarnye kol'tsa. Moskva, Gos. izd-vo
fiziko-matem. lit-ry, 1961. 194 p. (MIRA 14:11)
(Aggregates) (Rings (Algebra))

BOGOLYUBOV, N.N., red.; GNEDENKO, B.V., red.; POGREBYSSKIY, I.B., red.;
REMEZ, Ye.Ya., red.; SMIRNOV, V.I., red.; SOKOLOV, Yu.D., red.;
SHTOKALO, I.Z., red.; YUSHKEVICH, A.P., red.; SHIROKOVA, S.A., red.;
YERMAKOVA, Ye.A., tekhn. red.

[Pedagogical heritage and documents on the life and work of Mikhail Vasil'evich Ostrogradskii (1.1.1862 - 1.1.1962)] Mikhail Vasil'evich Ostrogradskii, 1 ianvaria 1862 - 1 ianvaria 1962; pedagogicheskoe nasledie, dokumenty o zhizni i deiatel'nosti. Pod red. I.B. Pogrebysskogo i A.P. Ushkevicha. Moskva, Gos. izd-vo fiziko-matem. lit-ry, 1961. 397 p. (MIRA 15:1)

1. Akademiya nauk SSSR. Institut matematiki.
(Ostrogradskii, Mikhail Vasil'evich, 1801-1861)

GNEDENKO, Boris Vladimirovich; SHIROKOVA, S.A., red.; YERMAKOVA,
Ye.A., tekhn. red.

[Course in the theory of relativity] Kurs teorii veroiat-
nostei. Izd.3., perer. Moskva, Gos. izd-vo fiziko-matem.
lit-ry, 1961. 406 p. (MIRA 15:2)
(Relativity (Physics))

VENTSEL', Yelena Sergeevna, SHIROKOVA, S.A., red.; BRUDNO, K.F.,
tekhn. red.

[Probability theory] Teoriia veroiatnostei. Izd.2., perer.
i dop. Moskva, Gos. izd-vo fiziko-matem. lit-ry, 1962. 564 p.
(MIRA 15:4)

(Probabilities)

PROSKURYAKOV, Igor' Vladimirovich; SHIROKOVA, S.A., red.; LIKHACHEVA,
L.V., tekhn. red.

[Collection of problems in linear algebra] Sbornik zadach po
lineinoi algebre. Izd.2. Moskva, Gos. izd-vo fiziko-matem.
lit-ry, 1962. 332 p. (MIRA 15:3)
(Algebras, Linear--Problems, exercises, etc.)

ALEKSANDROV, P.S., red.; MARKUSHEVICH, A.I., red.; KHINCHIN, A.Ya.,
red. [deceased]; BOLTYANSKIY, V.G., red.; YAGLOM, I.M., red.;
SHIROKOVA, S.A., red.

[Encyclopedia of elementary mathematics] Entsiklopediia ele-
mentarnoi matematiki. Moskva, Fizmatgiz. Book 4. [Geometry]
Geometriia. 1963. 567 p. (MIRA 17:4)

1. Akademiya pedagogicheskikh nauk RSFSR, Moscow.

KALININ, Robert Avgustovich; GUTER, R.S., retsenzent; GRUDNIKOV,
V.I., retsenzent; SHIROKOVA, S.A., red.

[Algebra and elementary functions] Algebra i elementarnye
funktsii. Moskva, Nauka, 1964. 477 p. (MIRA 18:4)

SHVEDOV, V.P., prof., red.; SHIROKOVA, S.I., prof., red.; KALYUZHNYAYA,
T.P., red.; POPOVA, S.M., tekhn. red.

[Radioactive pollution of the external environment]Radioaktivnye
zagriazneniia vneshnei sredy. Moskva, Gosatomizdat, 1962. 274 p.
(MIRA 15:12)

(Radioactivity)

S/046/63/009/001/017/026
B104/B186AUTHOR: Shirokova, T. A.

TITLE: The variation of pulse shapes under the action of random non-uniformities in a medium

JOURNAL: Akusticheskiy zhurnal, v. 9, no. 1, 1963, 101 - 106

TEXT: Variations of the pulse shape with the distance from the emitter are investigated assuming random non-uniformities only; factors of elasticity acting on a pulse are neglected. The pulse is represented as superposition of harmonic waves and the wave field is found by the method of continuous perturbations. In first approximation (L. A. Chernov, Rasprostraneniye voln v srede so sluchaynymi neodnorodnostyami - Propagation of waves in a medium with random non-uniformities, M., Izd-vo AN SSSR, 1958) the fluctuations of the levels and of the phases of the harmonic waves, depending on the wave number k and the distance x , can be determined. In second approximation (T. A. Shirokova, Akust. zh., 1959, 5, 4, 485 - 489) a normalizing

factor $\exp\{-B^2(k, x) - iB(k, x)S(k, x)\}$ is found characterizing the variations

Card 1/3

S/046/63/009/001/017/026
B104/B186

the variation of pulse shapes...

of the regular field with distance. Here $B^2(k, x)$ is the square of the level fluctuations, $B(k, x)S(k, x)$ is the level-phase correlation function. The intensity of the sound field in the pulse is obtained in the form

$$\overline{pp^*} = \int_{-\infty}^{+\infty} A_0(k) \cdot A_0(k_1) \exp \left\{ -\frac{8 \sqrt{\pi} \bar{\mu}^2 x^2}{a^2 D^2} - \frac{8 \sqrt{\pi} \bar{\mu}^2 x^2}{a^2 D_1^2} + \right. \quad (12)$$

$$\left. + \frac{32 \sqrt{\pi} \bar{\mu}^2 x^2}{a^2 D D_1 (D - D_1)} \operatorname{arctg} \frac{D - D_1}{2} + i \frac{16 \sqrt{\pi} \bar{\mu}^2 x^2}{a^2 D D_1 (D_1 - D)} \ln \left[1 + \frac{(D_1 - D)^2}{4} \right] + \right.$$

$$\left. + i(k - k_1)(x - ct) \right\} dk dk_1.$$

taking into account the first and second approximation for the sound pressure

$$p(k, x) = \exp \left[-\bar{B}^2(k, x) - i\bar{B}(k, x) \cdot S(k, x) + B(k, x) + \right. \quad (1)$$

$$\left. + iS(k, x) + ik(x - ct) \right].$$

Card 2/3

S/046/63/009/001/017/026
B104/B186

The variation of pulse shapes...

in a harmonic wave. Here $D = 4x/ka^2$, and $D_1 = 4x/k_1a^2$ (wave parameters).

The pulse shape is determined by integrating the double integral in (12). In an analysis of bell-shaped and rectangular pulses, assuming that the correlation factor of the fluctuations of the refractive index has Gaussian form, it is shown that the pulse width of bell-shaped pulses increases with x , and intensity decreases. One boundary of a rectangular pulse increases with x , the other decreases. The rate of increase decreases with x .

ASSOCIATION: Yaroslavskiy meditsinskiy institut (Yaroslavl' Medical Institute)

SUBMITTED: May 21, 1962

Card 3/3

SHIROKOVA, V.I.

Review of articles on the study of approximate computation in the sixth grade. Mat. v shkole no.5:22-26 S-0 '61.

(MIRA 14:10)

(Approximate computation--Study and teaching)

DONSKAYA, Ye.V., kand.tekhn.nauk; SHIROKOVA, V.N., kand.khimicheskikh nauk;
NEVCLIN, V.F.

Trilonometric determination of simultaneously present trivalent
iron and sulfate ion. Report No. 1. Trudy LTITSBP no.8:
127-128 '61. (MIRA 16:9)

(Iron--Analysis) (Sulfates)

DONSKAYA, Ye.V., kand. tekhn. nauk; SHIROKOVA, V.N., kand. khim. nauk;
VOLKOVA, M.G., laborant; Prinimali' uchastiye: KUL'TER, V.Ya.,
laborant; KOZHEVNIKOVA, V.N., laborant

Trilonometric method of determining the sulfate ion in paper.
Trudy LTITSBP no.10:80-84 '62. (MIRA 16:8)

(Paper—Analysis) (Sulfates)

FLIS, I.Y.; SHIROKOVA, V.N.; DONSKAYA, Ye.V.

Potentiometric titration in the presence of hydrogen peroxide
with the use of a platinum electrode. Report No.1. Trudy LITSEB
no.13:75-77 '64. (MIRA 18:2)

USSR/Human and Animal Physiology - (Normal and Pathological). T
Nervous System. Higher Nervous Activity. Behavior.

Abs Jour : Ref Zhur Biol., No 4, 1959, 17966

Author : Shirokova, Ye.A.

Inst : Academy of Pedagogical Sciences

Title : The Extinguishing of Conditioned Reflexes to Verbal and
Direct Stimuli in Children of School Age.

Orig Pub : Dokl. Acad. ped. nauk RSFSR, 1957, No 1, 125-128

Abstract : In 32 schoolgirls of 7-13 years of age, conditioned
reflexes to direct (color screen, animal pictures) and
verbal (names of colors and animals) stimuli, which subse-
quently were extinguished in parallel, were worked out on
the basis of a preliminary reflex formed by means of ins-
truction. The speed of extinguishing of the reactions in
all age groups turned out to be extremely individual.

Card 1/2

• APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549530003

USSR/Human and Animal Physiology (Normal and Pathological).
Nervous System . Higher Nervous Activity. Behavior.

Abs Jour : Ref ZhurBiol., No 4, 1959, 17966

In 4 cases complete extinguishing was not attained.
In an overwhelming majority of test subjects of 12-13
years of age and many children of 7-8 years of age, the
reflex to indirect stimulus extinguished earlier: con-
ditioned-reflex connections to verbal stimuli are more
stable than those to indirect ones in a majority of
children of school age. -- K.S. Ratner

Card 2/2

VARFOLOMEYEV, F.G.; GEL'FENBOYM, M.Sh.; KOTOVICH, Yu.V.;
OSTANOVSKIY, T.S.; SEMENETS, V.M.; SHIROKOVA, Ye.A.;
EYGINSON, Ye.N.; VVEDENSKIY, S.F., red.; SINEL'NIKOVA,
TS.B., red.; TSESARKIN, L.D., red.

[Study of goods serving cultural needs] Tovarovedenie
kul'ttovarov. [By] F.G.Varfolomeev i dr. Moskva, Izd-vo
Ekonomika, 1964. 471 p. (MIRA 17:5)

67050

3.9300

SOV/49-59-8-4/27

AUTHOR: Shirokova, Ye. I.

TITLE: Some Data on the Character of Velocity Variations in Top Layers of the Earth's Mantle

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1959, Nr 8, pp 1127-1137 (USSR)

ABSTRACT: The determination of the character of velocity variations at the depths to 200 km was based on the observed amplitudes of longitudinal waves P of the Hindukush earthquakes shown in Fig 1, a, b, B, 2. Also the direction of their focal radiation was considered. The minimum amplitude was obtained for the epicentric distances 500 to 700 km for foci about 200 km. This shows that lower velocities can be extended to that depth. An analysis of distances and the observed width of shadow zones shows that:

- 1) An increase of velocity from the bottom of the Earth's crust to the top boundary of the low velocity layer takes place at a higher rate (8.0 km/sec below crust to 8.71 km/sec at 100 km) than that calculated from corresponding hodographs (see Fig 5, where 1 - investigated, 2 - from hodographs).

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Some Data on the Character of Velocity Variations in Top Layers
of the Earth's Mantle

- 2) The boundary of the low velocity layer is clearly defined.
 - 3) The difference between the velocities at the top boundary can reach 10%.
 - 4) The difference between the velocities at the lower boundary is about the same or slightly lower than that at the top boundary.
- A dislocation of the corresponding waves P, calculated from Eqs 1 and 2, is illustrated in Figs 2-4. Fig 6 shows the hodographs obtained by Rozova, 1 (Ref 3), by the author, 2 and by Jeffries-Bullen, 3.
- There are 6 figures and 12 references, 5 of which are Soviet and 7 English.

ASSOCIATION: Akademiya nauk SSSR Institut fiziki Zemli
(Institute of Physics of the Earth, Ac.Sc. USSR)

SUBMITTED: October 3, 1958

Card 2/2

S/049/59/000/12/002/027
E131/E591

AUTHOR: Shirokova, Ye. I.

TITLE: Determination of Stresses in Foci of the Hindu Kush Earthquakes ✓

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya
1959, Nr 12, pp 1739-1744 (USSR)

ABSTRACT: The distribution of forces in the foci of the Hindu Kush earthquakes located in the region $\varphi = 36.5^\circ$ N $\lambda = 70.5^\circ$ E (Table 1) and 200 km deep was investigated. It was found that the compressive stresses were acting almost horizontally ($e \approx 10^\circ$) in the direction NNW-SSE ($\approx 350^\circ$), and the vertical ($e \approx 85^\circ$) tensile forces had the direction SSW-NNE. Detailed data of these are given in Table 2. Fig 1 illustrates the results of analysis, where 1, 2 and 3 - nodal lines of P, S and SH waves, respectively, 4 and 5 - axes of compressive and tensile stresses, 6 - dilatational wave, 7 - compression wave; Ritsema's data: a - nodal lines of P waves, b - compressive wave, B - dilatational wave, $\hat{\zeta}$ and $\hat{\theta}$ - axes of compression and tensile stresses, respectively. Directions of the axes of compressive and tensile

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Determination of Stresses in Foci of the Hindu Kush Earthquakes

stresses of five earthquakes are given in Fig.2
There are 2 figures, 2 tables and 6 references
5 of which are Soviet and 1 English.

ASSOCIATION: Akademiya nauk SSSR Institut fiziki Zemli
(Ac. Sc., USSR, Institute of Physics of the Earth)

SUBMITTED: March 3, 1959

Card 2/2

S 019 61 000 006 007 011
0259 0306

Author: Shirokova, Ye. I.

Title: Stress-fields of earthquake foci in (Soviet) Central Asia

Periodical: Akademiya nauk. Izvestiya. Seriya geofizicheskaya,
1961, no. 6, 876-881

NOTE: The method of direction of first motion is applied to twelve Central Asian earthquakes of magnitudes greater than 5 occurring between 1954-1958. Wolff's [Abstractor's note: Possibly Wolff's] projection is used to plot the data from the Soviet network of stations. The foci were in the crust. It is shown that the directions of compression for all earthquakes had nearly the same directions. The axes of compression for 9 out of the 12 varied within the limits 140° - 170° i.e. they had a NW-SE direction. The angles between these axes and the horizon were between 0° - 50° . The fundamental mountain system of Central Asia has a strike ENE - WSW. Thus the axes of compression are almost perpendicular ✓

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stressfields of...

to the strike direction and are mainly horizontal. The axes of tension have azimuths about 50° - 90° i.e. along the strike of insignificant angle to the horizontal. The axes of shear are predominantly vertical. One of the two possible planes of shear lies along the strike of the structure, but also along the strike of the large-scale geological faults. There are 5 tables, 3 figures and 6 Soviet-bloc references.

ASSOCIATION Akademiya nauk SSSR, Institut fiziki Zemli (Academy of Sciences USSR, Institute of Physics of the Earth)

SUBMITTED December 22, 1960

Card 2 2

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S/137/62/000/007/069/072
A160/A101

AUTHORS: Tikhomirov, M. N., Shirokova, Ye. I.

TITLE: New type of anode-treatment of aluminum and its alloys ("ematalirovaniye")

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 7, 1962, 100, abstract 7A679
("Tr. Proyechn., tekhnol. i n.-i. in-ta. Gor'kovsk. sovnarkhoz".
Gor'kiy, 1961, 57 - 63)

TEXT: Considered is the process of the formation of non-transparent oxide layers on aluminum and its AMr (Amg), Д-16 (D-16), Ал-13 (Al-13), Al-2 and other alloys. A technological process of building up protective and decorative non-transparent layers on aluminum and its alloys in titanium-potassium oxalic acid and chrome boric electrolytes was worked out. A transparent film which is easily colored by organic dyes develops in a chrome-boric electrolyte. No protective and decorative layer was obtained on the Al-2 alloy. The "ematalirovaniye" takes place most easily in an electrolyte with the following composition (in g/l): 40 titanium-potassium dioxalate, 8 H₃BO₃, 1, 2 oxalic acid, 1 citric acid; the

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temperature of the bath 55°C; pH 1.5 - 2.5; Da 2 - 3 a/dm², the tension 60 volts.

Ye. Layner

[Abstracter's note: Complete translation]

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SHIROKOVA, Ya.I.

Stresses acting in the focuses of earthquakes in the Caucasus and adjacent areas. Izv. AN SSSR. Ser. geofiz. no.10:1297-1306 0 '62.
(MIRA 1632)

1. Institut fiziki Zemli AN SSSR.
(Caucasus—Earthquakes)