VAVILOV, A.I.; KARDANOV, V.K.; KOTCHENKO, F.F.; PAVLOV, G.M.

High-speed recording device for electronic analogs. Priborostroenie no.8:25-26 Ag '64.   (MIRA 17:10)

VAVILOV, A.A. (Leningrad); YAKOVLEV, V.B. (Leningrad)

Approximation methods for constructing logarithmic frequency
characteristics of discrete systems with delay. Avtom. i
telem. 26 no.5:823-831 My '65.   (MIRA 18:12)

1. Submitted April 9, 1964.

L 24552-66   EWT(1)/EWA (h)

ACC NR. AP6006321   SOURCE CODE: UR/0413/66/000/002/0043/0043

.   : Vavilov, A. A.; Granstrem, M. P.; Solodovnikov, A. I.

O.u   ne

TI   An infralow frequency generator of sinusoidal oscillations of multiple
frequencies. Class 21, No. 177937

SOU .   Izobroteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1966, 43

TO. , GS: electronic circuit, oscillation , very low frequency, electric
generator

ABSTRACT: This Author Certificate presents an infralow frequency generator of
sinusoidal oscillations of multiple frequencies. The generator contains a driving
generator and a driven generator. The design eliminates the trigger of the
frequency divider in the synchronization circuit and also provides compensation
of the attenuation of the oscillatory system and simultaneous synchronization of
the driven generator by an outside signal. The input of the relay element con-
nected to the positive feed-back circuit of the driven generator is also connected
to the driving generator.

SUB CODE: 09/ SUBM DATE: 27Jun63

UDC: 621.373.42

Card 1/1

ACC NR: AM5011710   Monograph   UR

Vavilov, A. A.; Verkholat, M. Ye.; Rubashkin, I. B.

Electromechanical power servomechanisms of copying milling machines (Silovyye
elektromekhanicheskiye sledyashchiye sistemy kopiroval'no-frezernykh stankov)
Moscow, Izd-vo "Mashinostroyeniye", 1964. 406 p. illus., biblio. 4,200 copies
printed.

TOPIC TAGS: milling machine, automatic control, servomechanism system, servosystem,
industrial automation, automation

PURPOSE AND COVERAGE: This book presents construction principles and circuits of
electromechanical servodrives for copying milling machines and milling machines with
digital program control. Methods for static calculations of servomechanisms and
concrete examples of the calculations are given. Specific properties of joint per-
formance of two interconnected channels of electromechanical servomechanisms are
described. Methods of analysis and synthesis of servomechanisms with continuous
proportional control and of discrete servomechanisms with logarithmic frequency
characteristics are discussed in detail. Methods for the analysis of electromechani-
cal servomechanisms of copying milling machines on analog computers are investigated.
Paragraphs 3-5, 4-6, and 6-6 were written by A. A. Vavilov in cooperation with V.B.
Yakovlev. The book is intended for engineering and technical personnel concerned

Card 1/2   UDC: 62-523.8:621.916

ACC NR: AM5011710

with the design, research, adjustment, and operation of electromechanical servo-drives for copying milling machines, as for specialists engaged in the designing of servomechanisms for various applications, and for students attending courses of instruction in these fields.

TABLE OF CONTENTS [abridged]:

SUB CODE: 09,13/ SUBM DATE: 11Nov64/ SOV REF: 073/ OTH REF: 004

Card 2/2

L 58536-65   EEC-2/EWT(d)/FSS-2/EPF(n)-2/EWP(v)/EWP(k)/EWP(h)/EED-2/EWP(1)
Po-4/Pq-4/Pf-4/Pg-4/Pae-2/Pu-4/Pk-4/Pl-4   IJP(c)   WW/BC

ACCESSION NR: AP5013839   UR/0103/65/026/005/0823/0831
                                           62-504.1.001.24   68
                                                                              B

AUTHOR: Vavilov, A. A. (Leningrad); Yakovlev, V. B. (Leningrad)

TITLE: Approximate methods of constructing logarithmic frequency characteristics
of delay-type sampled-data systems

SOURCE: Avtomatika i telemekhanika, v. 26, no. 5, 1965, 823-831

TOPIC TAGS: automatic control, automatic control design, automatic control system,
automatic control theory, sampled data system

ABSTRACT: A method is proposed for constructing log frequency characteristics
which is based on two (h-f and 1-f) characteristics or on replacement of small
time constants by equivalent delays. The transfer function of a sampled-data
system is found by a modified z-transform method. Formulas for the complex
transfer factors are developed. Formulas for calculating the approximate log
frequency characteristics, with an allowance for the duty factor of the sampling
unit, are derived. The method basically developed for PAM systems is also
applicable to PDM systems whose duty factor $\gamma > 1$. Orig. art. has: 4 figures
and 41 formulas.

Card 1/2

L 58556-65

ACCESSION NR: AP5013839

ASSOCIATION: none

SUBMITTED: 09Apr64   ENCL: 00   SUB CODE: DP, IE

NO REF SOV: 005   OTHER: 002

Card 2/2

L 58799-65   FWT(d)/EWP(k)/EWP(v)/EWP(l)/EWP(h)   Po-4/Pq-4/Pf-4/Pg-4/Pk-4/Pl-4
TJP(c)   BC
ACCESSION NR: AP5017813   UR/0286/65/000/011/0042/0043
                                                  621.317.361   5 2
                                                                         B

AUTHOR: Vavilov, A. A.; Solodovnikov, A. I.

TITLE: A method for determining the frequency response of automatic control sys-
tems. Class 21, No. 171445

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 11, 1965, 42-43

TOPIC TAGS: automatic control system, frequency response characteristic,
integrator   q

ABSTRACT: This Author· Certificate introduces a method for determining the
frequency response of automatic control systems by measuring the Fourier coeffi-
cient of stationary response for such a system in the case of sinusoidal action on
the system. The Fourier coefficient is measured without using multiplication by
feeding the steady-state response of the system to an oscillatory unit with two in-
tegrators and a single inverter. The oscillatory circuit simulates a cónservative
linear harmonic oscillator with a natural frequency equal to that of the externally
acting force. The integrators in the oscillator model are then switched on for a

Card 1/2

L 58799-65

ACCESSION NR: AP5017813

time which is equal to the period of the externally acting sinusoidal force at the moment when the sine passes through zero with a positive derivative. The in-phase and quadrature components of the response of the system are fixed at the output of the integrators in the oscillator model after they are switched off. In a modification of this method the in-phase and quadrature components of the response harmonics for the system are measured by tuning the natural frequency of the oscillator model to the frequency of the proper harmonic. In another modification the accuracy of the measurements is improved by a special method for tuning the natural frequency of the model. The basic externally acting sinusoidal force is fed to the oscillator model and the tuning is adjusted according to the signal which appears at the integrator which fixes the quadrature component. [14]

ASSOCIATION: none

SUBMITTED: 11Feb63   ENCL: 00   SUB CODE: IE, EC

NO REF SOV: 000   OTHER: 000   ATD PRESS: 4054

Card 2/2

AM4016109   BOOK EXPLOITATION   S/

Vavilov, Aleksandr Aleksandrovich; Solodovnikov, Aleksey Ivanovich

Experimental determination of frequency characteristic in automatic
systems (Eksperimental'noye opredeleniye chastotny*kh kharakter-
istik avtomaticheskikh sistem) Moscow, Gosenergoizdat, 63.
0251 p. illus., biblio. 12,000 copies.

TOPIC TAGS: automation, computer engineering, linear automatic
system, nonlinear automatic system, frequency characteristics,
frequency characteristic experimental determination, sinusoidal
input, nonsinusoidal input, infralow frequency generator, automatic
system experimental investigation

PURPOSE AND COVERAGE: The book systematizes different methods of
experimental determination of frequency characteristics of linear
and nonlinear automatic systems and their elements. The theory of
operation and synthesis of apparatus for experimental investigation

Card 1/3

AM4016109

of automatic systems is considered. The book is intended for many specialists in automation, engaged in the investigation and adjustment of automatic systems, and also those dealing with the design of apparatus for the experimental investigation of such systems. The book can also be useful for graduate and senior students in higher technical institutions, specializing in the field of automation, computation, and measurement. The authors are grateful to A. V. Fateyev, V. I. Anisimov, and F. F. Kotchenko for valuable advice and help, and also V. V. Semenov for useful remarks during reviewing of the manuscript.

TABLE OF CONTENTS [abridged]:

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AM4016109

teristics of automatic systems and their elements for a sinusoid-
al input signal – – 89
Ch. 3. Methods of experimental determination of the frequency
characteristics of automatic systems and their elements for an
anharmonic input signal – – 155
Ch. 4. Infralow frequency sinusoidal oscillation generator – – 184
Ch. 5. Examples of experimental investigation of linear and non-
linear automatic systems and·their elements – – 222
Literature – – 247

SUB CODE: CP, CG   SUBMITTED: 20May63   NR REF SOV: 102

OTHER: 023   DATE ACQ: 19Dec63

Card   3/3

VAVILOV, Aleksandr Aleksandrovich, kand.tekhn.nauk, dotsent; KOTCHEN-
KO, Fedor Fedorevich, aspirant

Calculation of a certain class of near optimum tracking systems.
Izv. vys. ucheb. zav.; elektromekh. 6 no.8:961-972 '63.
(MIRA 16:9)

1. Leningradskiy elektrotekhnicheskiy institut imeni Ul'yanova-
Lenina.

VAVILOV, Aleksandr Aleksandrovich; SOLODOVNIKOV, Aleksey Ivanovich;
FATEYEV, A.V., red.; ZHITNIKOVA, O.S., tekhn. red.

[Experimental determination of the frequency characteristics
of automatic-control systems] Eksperimental'noe opredelenie
chastotnykh kharakteristik avtomaticheskikh sistem. Moskva,
Gosenergoizdat, 1963. 251 p.   (MIRA 16:11)
                        (Automatic control)

L 17803-63.   EWT(d)/EPF(n)-2/BDS   AFFTC/ASD/APGC/SSD   Pu-4/Pg-4/
Pk-4/P1-4/Po-4/Pq-4   WW/BC
ACCESSION NR: AP3006225   S/0144/63/000/008/0961/0972

AUTHOR: Vavilov, A. A.; Kotchenko, F. F.   85

TITLE: Designing some near-optimum servosystems \0

SOURCE: IVUZ. Elektromekhanika, no. 8, 1963, 961-972

TOPIC TAGS: servo, servosystem, optimum servosystem, near-optimum servosystem,
servosystem design, EPP-09 compensator

ABSTRACT: Theoretical considerations are offered for designing low-power servo-
systems that have a narrow linear zone, high accuracy of response, and high speed.
Optimum functioning of such a system involves minimum time of response to a jump
input variable and limited voltage on the amplifier. The system is designed to
function under optimum conditions with the maximum input signal, and under near-
optimum conditions with small input signals; the system does not include computer,
its high performance being ensured solely by proper selection of its parameters.
Optimum conditions of operation of the servosystem motor are theoretically deter-
mined for a jump input signal. Realization of near-optimum transient conditions is
considered using an automatic high-speed EPP-09 compensator as an example.

Card 1/2

L 17803-63
ACCESSION NR: AP3006225

Functional diagram and a transient oscillogram are presented. Orig. art. has:
8 figures and 26 formulas.

ASSOCIATION: none

SUBMITTED: 27Mar62   DATE ACQ: 23Sep63   ENCL: 00

SUB CODE: IE   NO REF SOV: 007   OTHER: 000

Card 2/2

VAVILOV, A.A., kand.tekhn.nauk, dotsent (Leningrad)

Modeling of a generator taking into account saturation, hysteresis, and change of the angular velocity. Elektrichestvo no.1:33-36 Ja '63.
(MIRA 16:2)
(Electric generators—Electromechanical analogies)
(Automatic control)

Rubber Abstracts VAVILOV, A. A

Volcanized
Natural Rubber

New methods of testing leather substitutes.
VAVILOV and V. V. Mertsov (Legkaya Prom.
1949, No. 3, 23).

1949

VAVILOV, A.F.

Friction welding of tools. Avtom. svar. 18 no.3:51-53   Mr '65.
(MIRA 18:6)

1. Nauchno-issledovat~l'skiy i proyektno-tekhnologicheskiy
institut avtomatizatsii i mekhanizatsii mashinostroyeniya
Yuzhno-Ural'skogo soveta narodnogo khozyaystva.

L 27383-65   EWT(m)/EWP(v)/T/EWP(t)/EWP(k)/EWP(b)   Pf-4   JD/HM

ACCESSION NR AM4043701   BOOK EXPLOITATION   S/

Vavilov, A. F.; Voinov, V. P.

Friction welding (Svarka treniyem), Moscow, Izd-vo "Mashinostroyeniye", 1964,
    153 p. illus., biblio. 6,000 copies printed.

TOPIC TAGS: friction welding

PURPOSE AND COVERAGE: This book cites the experience in the practical use of
friction heat for joining materials. The theoretical problems of friction
welding are examined with the basic phenomona occurring in sliding friction
taken into account. The results of research and experience in the use of friction
welding in our country and abroad are presented and the welding technology is
considered. Information is included on the most interesting friction welding
equipment. The prospects for the development of this new progressive welding
method are shown. The book is intended for engineers and technicians in plants,
research institutes, and design organizations and can be used by students in
higher technical education institutions studying welding.

TABLE OF CONTENTS [abridged]:

Card 1/2

L 27383-65
ACCESSION NR AM4043701

Introduction -- 3
Ch. I.   The essence and methods of friction welding -- 5
Ch. II.   Some premises of the modern science of friction -- 10
Ch. III.   Power and heating in friction welding -- 29
Ch. IIII.   Friction welding technology -- 51
Ch. V.   Friction welding equipment -- 102
Ch. VI.   Economic effectiveness and prospects of friction welding -- 139
Bibliography -- 151

SUBMITTED: 12Mar64   SUB CODE: MM

NO REF SOV: 063   OTHER: C10

                                             o

Card 2/2

VAVILOV, A.G., inzhener.

Air intake blower for electric power station boilers. Elek.sta.
28 no.9:39-40 S '57.   (MIRA 10:11)
                        (Boilers)

ACC NR: AP6029763   (N)   SOURCE CODE: UR/0414/66/000/002/0107/0109

AUTHOR: Vavilov, A. N.; Kegarko, S.N.; Basevich, V. Ya.

ORG: none

TITLE: The effect of active particles on flame stabilization at low pressures

SOURCE: Fizika goreniya i vzryva, no. 2, 1966, 107-109

TOPIC TAGS: combustion, air breathing engine, combustion stability, flame stabilization

ABSTRACT: Experiments were made to determine the effect of active flame species, such as radicals and atoms (OH, H, O), on the stability of turbulent combustion of natural gas-air mixtures with respect to pressure and flow velocity. At a constant air flow, the gas flow rate was gradually decreased until the flame separated from the flame holder. This procedure was repeated at various pressures ranging from 20 to 300 mm Hg and flow velocities of 5—35 m/sec. Plots of the gas flow rate vs pressure and velocity were obtained delineating the regions of stable combustion with and without active flame species. The latter were introduced in the form of combustion products. It was shown that active flame species widen the stability region of lean mixtures by 40—60% and of rich mixtures by 5—15%. It is concluded that acceleration of the combustion rate by introduction of active flame species substantially lowers the pressure limit for stable combustion. Orig. art. has: 3 figures. [PV]
SUB CODE: 21/ SUBM DATE: 16Dec65/ ORIG REF: 004/ OTH REF: 004/ ATD PRESS:
Card 1/1   5077   UDC: 536.468

VAVILOV, A. S.

PA 38/49T26

USSR/Electricity   Jan 49
       Hydroelectric Plants

"Starting Tests for Hydroelectric Stations,"
A. S. Vavilov, Engr, 4 pp

"Gidrotekh Stroi" No 1

"Chirchikstroi" Trust has established a commission
which supervises the work of pitting a hydro-
electric station into operation. Describes
organizetion of commission, and the tests it
makes (checking underwater equipment, intake
pipes, drying the generator, etc.).

                                       38/49T26

VAVILOV, A.S., inzhener.

    Building dams with loess soils by the hydraulic fill method.
Gidr.stroi. 23 no.4:1-4 '54.   (MLRA 7:7)
      (Dams)

SOV-98-58-10-5/16

AUTHORS: Vavilov, A.S., Candidate of Technical Sciences, Nikolayev,
I.K. and Pak, I.D., Engineers

TITLE: The Construction of a Derivation Canal in Shifting Ground
(Stroitel'stvo derivatsionnogo kanala v oplyvayushchikh
gruntakh)

ABSTRACT: The authors describe the construction process of a deriva-
tion canal, built as a part of the Nizhniy Bozsu   Hydroe-
lectric Power Plant near Tashkent. The topographic and hy-
drographic situation of this canal were very unfavorable.
The geological structure of the canal consisted of Quater-
nary deposits, represented by loess-like clayey soils, over-
laying the eroded surface of basic rock, marl and sandstone.
The depth of subsurface water varied in limits of 2 - 3
to 0.5 - 1.00 m. E-1004 excavator and ESh-1 walking exca-
vator were used in the excavation. The excavation work was
stopped after reaching 1 - 1.5 m below the subsurface water

Card 1/2   horizon, due to a shifting of the ground. The following re-

SOV-98058-10-8/16

The Construction of a Derivation Canal in Shifting Ground

commendations were made: 1) a minimum deep, parabolic-shaped
canal crossection was needed; 2) a stabilization of the ca-
nal slopes by means of loading the lower sections; 3) an ex-
tension of the embankment as much as possible to allow the
moving of equipment. There are 2 diagrams and 1 map.

1. Inland waterways---Construction   2. Soils---Stability

Card 2/2

VAVILOV, A.S.

Pneumatic drive for controlling a bunker gate in unloading crushed
stone. TSement 27 no. 2:27 Mr-Ap '61.   (MIRA 14:5)

1. TSementnyy zavod "Pobeda Oktyabrya."
             (Cement plants) (Pneumatic machinery)

VAVILOV, A.V.

Measures for the protection of workers and the decrease of
injuries in the paper industry of Sakhalin Province. Vop.
travm. i ortop. no.13:26-28 '63.   (MIRA 18:2)

.1. Glavnyy inzhener upravleniya bumazhnoy promyshlennosti
Sakhalinskogo soveta narodnogo khozyaystva.

L 3260-66

ACCESSION NR: AR5014342   UR/0271/65/000/005/A003/A003
                                 62 - 5 : 519. 25 (002)

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika.
Svodnyy tom, Abs. 5A19

AUTHOR: Vavilov, A. V.; Yakovlev, V. B.

TITLE: Log-frequency diagrams of discrete systems

CITED SOURCE: Izv. Leningr. elektrotekhn. in-ta, vyp. 53, 1964, 319-335

TOPIC TAGS: discrete system

TRANSLATION: Methods are considered of approximate plotting of log-frequency
diagrams (LFD) for purposes of calculating discrete systems; the diagrams are
constructed either from a sum of two LFD's (LF and HF) or by substituting an
equivalent delay for a short time constant. The above methods ensure good
agreement of these diagrams with the exact LFD's of discrete systems
constructed on the basis of the total sum of all terms of the expansion. Formulas
and characteristics are obtained which permit plotting PAM discrete-system

Card 1/2

L 3280-66
ACCESSION NR: AR5014342

LFD's with a duty factor of $\gamma < 1$ on the basis of an exact or approximate LFD with $\gamma = 1$. It is demonstrated that the construction of a PDM discrete-system LFD, when the principle of equivalent areas is observed, does not differ from the construction of a PAM-system LFD with a duty factor $\gamma < 1$. Application of the above methods is illustrated by examples. Bibl. 7, figs. 6.

SUB CODE: IE   ENCL: 00

Card 2/2

24.4200, 3.3600

65713
SOV/139-59-2-12/30

AUTHOR: Vavilov, B.T.

TITLE: On Weak Gravitational Fields

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1959, Nr 2, pp 73-77 (USSR)

ABSTRACT: The gravitational field of an oscillating particle is considered assuming that the law of motion of the particle is $z_0 = a \sin \omega t_0$. The non-zero components of the energy-momentum tensor $T_{\alpha\beta}$ are given by Eq (1) to (3) where m_0 is the mass of the oscillating particle and δ is the Dirac δ-function. Since the field is weak, the metric tensor $g_{\alpha\beta}$ may be represented by Eq (4) where

$$g_{44}^{(0)} = -g_{11}^{(0)} = -g_{22}^{(0)} = -g_{33}^{(0)} = 1, \quad g_{\alpha\beta}^{(0)} = 0 \text{ for } \alpha \neq \beta$$

and $h_{\alpha\beta}$ are small compared with unity. Einstein and Rosen (Ref 2) have shown that if Eq (4) holds then the linearization described by Eq (5) leads to the system of equations given by Eq (6), where

$$\psi_{\alpha\beta} = h_{\alpha\beta} - \frac{1}{2} g_{\alpha\beta}^{(0)} h, \quad h = g^{(0)\alpha\beta} h_{\alpha\beta}, \text{ and } \square \text{ is the}$$

Card 1/3

65713
SOV/139-59-2-12/30

On Weak Gravitational Fields

D'Alembert operator. The solution of Eq (6) is given by Eq (7) where the subscript "o" refers to points within matter and R is the distance between the point under consideration and the volume element in matter. In the integrand, t_o must be replaced by t - R/c and the integration is carried out over the volume of the gravitating matter. Using Eq (1), (2) and (7) one obtains Eq (8) where γ is Newton's constant and $\varkappa = 8\pi\gamma/c^2$. From Eq (8) and (9) the non-zero $h_{\alpha\beta}$ are given by Eq (10). The quantities $h_{\alpha\alpha}/2$ play the role of the classical gravitational potential. The component h_{34}, due to the particle vibrations, gives an additional curvature of space. The magnitude of this component is proportional to the amplitude and frequency. Moreover, h_{34} has a wave character. Thus, the gravitational field of an oscillating particle has two components, namely a Coulomb-type field and a wave field. Since for R = ct the ratio of h_{34} to h_{44} is equal to $a\omega/c$, it follows that for small frequencies and amplitudes, the curvature of space introduced by the gravitational wave is small

Card 2/3   compared with the Schwarzschild curvature for a given mass

On Weak Gravitational Fields

65713

SOV/139-59-2-12/30

For microparticles h_{34} and h_{44} may be of the same order of magnitude. In the above method, the gravitational field was determined starting with a given energy-momentum tensor. Another possibility is to start with Einstein's equations for free space-time obtained from formal considerations and to find a physical model for the source of the gravitation. In this case, the functions $\psi_{\alpha\beta}$ in Eq (7) are looked upon as given and the $T_{\alpha\beta}$ as unknown. Starting with the metric given by Eq (11), expressions are derived for the rate of change of the moments of inertia - Eq (15). Doctor of Physico-Technical Sciences, A.Z.Petrov is thanked for her criticisms of the present work. There are 5 references, 3 of which are Soviet and 2 English.

ASSOCIATION: Kazanskiy gosuniversitet imeni V.I.Ul'yanova (Lenina) (Kazan' State University imeni V.I.Ul'yanov (Lenin))

SUBMITTED: April 2, 1958

Card 3/3

VAVILOV, B.T.

Quantum field model for multiple production of particles. Vest.
Mosk. un. Ser. 3: Fiz., astron. 15 no. 6:46-53 N-D '60.
(MIRA 14:5)

1. Kafedra elektrodinamiki i kvantovoy mekhaniki Moskovskogo
gosudarstvennogo universiteta.
    (Quantum field theory)   (Particles (Nuclear physics))

84967

S/056/60/039/003/053/058/XX
B006/B070

24.4500

AUTHORS: Vavilov, B. T., Grigor'yev, V. I.

TITLE: Relation Between the Matrices of Various Transitions and
             Multiple Processes

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960,
             Vol. 39, No. 3(9), pp. 794 - 799

TEXT: The aim of the authors was to construct an infinite system of
"chain" equations interrelating the matrices of various transitions. A
transition from the initial state $|ink\rangle$ (i bosons, n fermions, and k anti-
fermions) to the final state $|jml\rangle$ is considered, the transition being
characterized by the matrix $V^{(ij,nm,kl)}[\sigma,\sigma_0]$. This matrix is related
to the general transition matrix $V[\sigma,\sigma_0]$ by the relation
$$\langle jml|\ V^{(ij,nm,kl)}[\sigma,\sigma_0]|ink\rangle = \langle jml|\ V[\sigma,\sigma_0]|ink\rangle \quad (1).$$ A method is de-
scribed in the introduction for obtaining the system of equations con-

Card 1/3

84967

Relation Between the Matrices of Various   S/056/60/039/003/053/058/XX
Transitions and Multiple Processes   B006/B070

necting the various transition matrices $V_j^{(\xi)}$, by means of which the following system is obtained.(2):

$$i\delta V^{(ij,nm,kl)}/\delta\sigma = \sum_{\substack{\alpha,\beta,\gamma \\ a,b,c \\ p,q,r}} \hat{H}\binom{\alpha\beta\gamma}{abc} V^{(i-a+ap,j-\alpha+ap;n-b+bq,m-\beta+bq;k-c+cr,l-\gamma+cr)}$$

The term $\hat{H}\binom{\alpha,\beta,\gamma}{abc}$ of the interaction Hamiltonian contains the production and absorption operators α,β,γ and a,b,c, respectively, of the bosons, fermions, and antifermions. Mass renormalization is carried out with the conditions $V^{(11,00,00)}[\sigma,\sigma_0] = 0$, and $V^{(00,11,00)}[\sigma,\sigma_0] = 0$. The results obtained are applied to the problem of N charged scalar (pseudoscalar) bosons in a fermion-fermion collision. The following assumptions are made for this purpose: Fermion-antifermion pairs are produced neither in the final state nor in the intermediate one; the nucleon collisions may be arbitrary; the energies are so high

Card 2/3

84967

Relation Between the Matrices of Various
Transitions and Multiple Processes

S/056/60/039/003/053/058/XX
B006/B070

that a large number of bosons are produced; all the bosons have about
the same energies. On these assumptions, the equation for the matrix
$v^{(ON,22)}$ is set up according to formula (2), and the solution obtained
is discussed. The authors thank Ye. L. Feynberg and D. S. Chernavskiy
for valuable comments. There are 6 non-Soviet references.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State
               University)

SUBMITTED: April 18, 1960

Card 3/3

VAVILOV, B. T.

Cand Phys-Math Sci, Diss -- "On the problem concerning quantum-field description of multiple processes". Moscow, 1961. 8 pp, 20 om (Sci Res Inst of Nuclear Phys, Moscow State U), 175 copies, Not for sale, 15 ref in bibl at end of text (KL, No 9, 1961, p 175, No 24248). /61-5230j7

BELOV, D.V. [translator]; VAVILOV, B.T. [translator]; IVANENKO, D., red.;
ILIN, S.I., red.; DOTSENKO, V.A., tekhn. red.

[Recent problems in gravitation] Noveishie problemy gravitatsii; sbornik
statei. Moskva, Izd-vo inostr. lit-ry, 1961. 488 p.   (MIRA 14:7)
(Gravitation)

VAVILCV, B.T.

Contact interaction of mesons in nonelastic nucleon-nucleon
collisions. Vest. Mosk. un. Ser. 3: Fiz., astron. 16 no.3:90-93
My-Je '61.   (MIRA 14:7)

1. Kafedra elektrodinamiki i kvantovoy teorii Moskovskogo
gosudarstvennogo universiteta.
              (Mesons) (Collisions (Nuclear physics))

VAVILOV, B.T.

Author's corrections to the article entitled "Links between the matrices of various transitions, and multiple processes." Zhur.eksp. i teor.fiz. 41 no.1:307-308 Jl '61. (MIRA 14:7)

1. Moskovskiy gosudarstvennyy universitet.
          (Mesons)   (Nuclear reactions)

S/020/61/137/001/008/021
B104/B209

AUTHOR: Vavilov, B. T.

TITLE: Angular distribution in multiple processes

PERIODICAL: Doklady Akademii nauk SSSR, v. 137, no. 1, 1961, 51-53

TEXT: The angular distribution of mesons produced in the collision of
two high-energy nucleons is analyzed by a method used to establish a
system of correlated equations for the matrices $V^{ij,nm,kl}$, which has
been worked out in a previous paper (Ref. 1: B. T. Vavilov, V. I.
Grigor'yev, ZhTEF, $\underline{39}$, 3(9), 794 (1960)). The matrices describe the
transition of a system consisting of i bosons, n fermions, and
k antifermions from the initial state ink> into the final state jml>.
The author proceeds from the scalar meson-nucleon interaction and
examines a model in which antifermions are not present in the final and
in virtual states. The mesons interact only through scattering from a
real nucleon. An analysis of this model answers the question as to whether
the deviation of the angular distribution from the isotropic one is a

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Angular distribution in multiple ...

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consequence of meson-meson interaction, or whether it also appears when this interaction is neglected. The operators $V^{On,22,00}$ and $V^{On,mm,00}$ are shown in Fig. 1 in the form of graphical equations. These systems (1) and (2) are an infinite number of equations, and the exact solution does not correspond to any finite perturbation-theoretical approximation. In the following, the author restricts himself to $n \gg 1$, corresponding to very high energies, and employs the C-numerical fermion distribution function: $S^c(p) = i(2\pi)^{-4}(ap - m)^{-1}$ (3). Here, p denotes the four-momentum, m the nucleon mass, and a is a four-vector satisfying the condition $a^2 = 1$. The solution of (1) and (2) has the following form:

$$V^{On,22,00}[\sigma, \sigma_0] = \int_{\sigma_0}^{\sigma} d^4\xi \sum_{\text{мип}} \bar{u}(p_1)\bar{u}(p_2) u(q_1) u(q_2) \prod_{a=1}^{n} \varphi^{(+)}(k_a) Q_n$$

$$\times \exp\left\{ i\xi\left(p_1 + p_2 - q_1 - q_2 + \sum_{a=1}^{n} k_a\right)\right\}. \qquad (4)$$

$$V^{On,11,00}[\sigma, \sigma_0] = \int_{\sigma_0}^{\sigma} d^4\xi \sum_{\text{мип}} \bar{u}(p) u(q) \prod_{a=1}^{n} \varphi^{(+)}(k_a) B_n \exp\left\{ i\xi\left(p - q + \sum_{a=1}^{n} k_a\right)\right\}. \quad (5)$$

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Assuming a forward-backward symmetry, the solution

$$Q_n = \frac{g^{n+2}}{2n!} f_n(g; E, \gamma) P(p_1, p_2) \times$$

$$\times \sum_{l=0}^{n} P\left(\frac{k_1 \ldots k_l}{k_{l+1} \ldots k_n}\right) \prod_{j=1}^{l}\left[a\left(p_1 + \sum_{\alpha=1}^{l} k_\alpha\right) - m\right]^{-1} \cdot \prod_{l=l+1}^{n}\left[a\left(p_2 + \sum_{\alpha=1}^{l} k_\alpha\right) - m\right]^{-1} . (8)$$

(8)

is found in the center-of-mass system for Q_n as a function of the

initial nucleon energy E, the inelasticity coefficient γ, and the

meson momenta $\vec{k}_1$. Here, $P\left(\dfrac{k_1 \ldots k_1}{k_{1+1} \ldots k_n}\right)$ is an operator of summation

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over all $n!/l!(n-l)!$ decompositions of the set $(k_1....k_n)$ with respect to $(k_1....k_l)$ and $(k_{l+1}...k_n)$, simultaneously rendering the expression symmetrical. The function $f_n(g; E, \gamma)$ satisfies the equation

$$\left\{ 1 - \frac{ig^2}{(2\pi)^4} \int d^4k \, P(p_1, p_2) \, [a(p_1 - k) - m]^{-1} (k^2 - \mu^2)^{-1} [a(p_2 + k) - m]^{-1} \right\} \times$$

$$\times f_n(g; E, \gamma) = f_{n-l}(g; E, \gamma) = (2\pi)^4 \frac{g}{i} n P(q_1, q_2) P(p_1, p_2) \times$$

$$\times [D^c(p_1 - q_1) - D^c(p_2 - q_2)]. \tag{9}$$

Since the momenta k_α do not appear in Eq. (9), the meson angular distribution is completely described by the sum of products entering into Eq. (8). From Eq. (8) it is easily seen that the angular distribution is not isotropic as spherical symmetry does not exist. Thus, it was found that, without accounting for π-π interaction, theory leads to anisotropic distribution. The distribution of very slow mesons

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Angular distribution in multiple ...

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only is approximately isotropic. The isotropism obtained by Lewis et al. (Ref. 3) is probably due to the assumption that there is no interference between the interactions, and that an emissive recoil effect upon the source does not exist. The author thanks V. I. Grigor'yev for valuable discussions. There are 1 figure and 4 references: 3 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: H. W. Lewis, I. R. Oppenheimer, S. A. Wouthuyson, Phys. Rev., 73, 127, 1948.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)
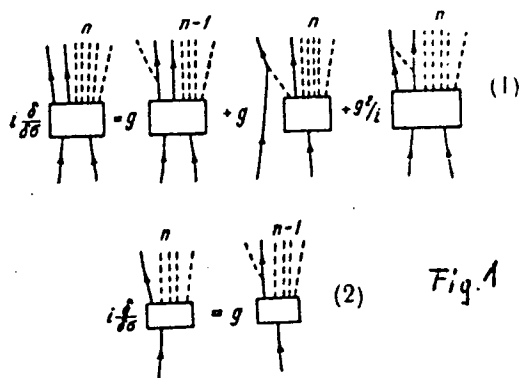
PRESENTED: October 12, 1960, by V. A. Leontovich, Academician

SUBMITTED: October 10, 1960

Card 5/6

Angular distribution in multiple ...

Fig. 1

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38880

S/188/62/000/003/005/012
B111/B112

AUTHORS: Vavilov, B. T., Verdiyev, I. A., Goncharova, N. G.,
             Grigor'yev, V. I., Meledin, G. V.

TITLE: Quantum field theoretical investigation of multiple processes

PERIODICAL: Moscow. Universitet. Vestnik. Seriya III. Fizika,
             astronomiya, no. 3, 1962, 46-59

VOL - 17

TEXT: Multiple production of π-mesons in π-N, Y-N, N-N, and π-π collisions
is studied and the corresponding graphic renormalization equations are
given. The mathematical structure of the theory is similar to that of
the Tamm-Dankov method. It differs only in that the infinite system of
equations does not break off, but a solution being reached through a
reduction of the propagation function and on other assumptions. Proceeding
from the Tomanaga-Schwinger equation

$$i \frac{\delta}{\delta\sigma} U_{[\sigma,\sigma_0]} = H(x) U_{[\sigma,\sigma_0]}$$

where

$$U_{[\sigma,\sigma_0]} = \sum_{ij,nm,kl} U^{(ij,nm,kl)}_{[\sigma,\sigma_0]}.$$

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B111/B112

Quantum field theoretical...

$U(ij,nm,kl)$ is the transition matrix for a graph with i, n, k incoming, and j, m, l outgoing boson, fermion and antifermion lines, respectively.

For $U_{[\sigma,\sigma_o]}^{(ij,nm)}$ it is established that

$$U_{(\tau,s,)}^{(ij,nm)} = \int d^4z \sum_{\text{\tiny MMN}} \prod_{s=1}^{m} \bar{u}(\vec{p_s}) \prod_{3=1}^{n} u(\vec{p_3}) \prod_{\tau=1}^{i} q^{(\cdot)}(\vec{p_1}) \prod_{4-1}^{i} q^{(-)}(\vec{p_4}) \times$$

$$\times Q^{(ij,nm)} \exp\left[iz\left(\sum_{s-1}^{m} p_s + \sum_{\tau-1}^{i} p_1 - \sum_{3-1}^{n} p_3 - \sum_{4-1}^{i} p_4 \right)\right]. \qquad (4),$$

where $Q^{(ij,nm)}$ is a coefficient function, for the individual collisions, as determined from the graphs. This method offers the advantage that summation does not necessitate all graphs being written explicitly as in the perturbation theory. Since a closed solution is impossible, the procedure is simplified by disregarding the production of nucleor.- antinucleon pairs in the intermediate and final states, disregarding spin effects, and assuming low energy in the mesons produced. In addition, scalar and pseudoscalar mesons with scalar interaction are

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Quantum field theoretical...

studied. Following the determination of $Q^{(ij,nm)}$ for the π-N, Γ-N .collisions the probability W_n

$$W_n = n!\,(2\pi)^4 \int \frac{d^3p}{2E_p} \prod_{l=1}^{n} \frac{d^3k_l}{2k_{0l}} \, |Q^{(n,ll)}|^2 \times$$

$$\times \delta\!\left(E_p + \sum_{l=1}^{n} k_{0l} - \epsilon_0\right) \delta^3\!\left(\vec{p} + \sum_{l=1}^{n} \vec{k}_l\right). \tag{8}$$

is obtained by insertion into (4) where p, k_i is a four-momentum of the final particles. The integral in (8) is the "generalized phase integral" which, for N-N and π-π collisions has similar shape. Its calculation is illustrated for π-N collisions. For N-N collisions, similar considerations as for π-N collisions, give

$$W_n \sim (gm)^{2n} \left(\frac{\pi}{2\mu^2}\right)^{n/2} \frac{n!\,(z-1)^{2n-1}}{[(n+1)!]^2\,(2n-1)!} \,,$$

Card 3/5

Quantum field theoretical...

where $z = \frac{\Sigma q}{m}$. For $\pi-\pi$ collisions the interaction is brought about by a nucleon-antinucleon pair (a term λ_φ^4 being added in the interaction Hamiltonian). If meson scattering only is considered, this influences the multiplicity only slightly. The angular distribution tends to higher isotropy in the presence of meson interaction. For the angular distribution of relativistic mesons in N-N collisions $\frac{dn(\theta)}{d\theta} \sim \frac{1}{\sin^3\theta}$, and for the energy distribution

$$\frac{dn(k)}{dk} \sim \frac{1}{\mu^2} + \frac{\mu^2}{4k\mu^3} \cdot \ln\left(\frac{\omega + k}{\omega - k}\right)^2, \quad \omega^2 = k^2 + \mu^2.$$

Summary of the results for multiplicity:

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Quantum field theoretical...

$$\bar{n}_{N-N} \simeq \frac{\pi^{1/3}}{3}\left(g\,\frac{m}{\mu}\right)^{2/3}(z^{1/3}-1)^{2/3}, \quad z = \frac{W\ell_i\ell}{2m}.$$

$$\bar{n}_{x-N} = \bar{n}_{\gamma-N} = \frac{\pi^{1/3}}{4^{1/3}}\,g^{2/3}\left(\frac{m}{\mu}\right)^{2/3}\left[\left(\frac{W\ell_i\ell}{2m}\right)^{1/3}-1\right]^{2/3},$$

$$\bar{n}_{\pi-x} \sim \begin{cases} \left(\dfrac{E^c}{2\mu}-1\right)^{2/3} & \text{(I)} \\[2ex] \left(\dfrac{E^c}{2\mu}-1\right)^{1/3,5} \div \left(\dfrac{E^c}{2\mu}-1\right)^{2/3}. & \text{(II)} \end{cases}$$

No qualitative agreement could be found between the formulas and the experiment. There are 5 figures and 1 table.

ASSOCIATION: Kafedra elektrodinamiki i kvantovoy teorii (Department of Electrodynamics and Quantum Theory)

SUBMITTED: July 16, 1961

Card 5/5

VAVILOV, Dimitriy Mikhaylovich, kapitan 1 ranga zapasa; OSADCHIY, Mikhail
Dmitriyevich, kapitan 1 ranga zapasa; BYKHOVSKIY, Izrail' Adol'fo-
vich, kapitan 2 ranga zapasa; KAZANKOV, A.A., kapitan 1 ranga,
red.; KONOVALOVA, Ya.K., tekhn.red.

[Practical seamanship] Morskaia praktika. Pt.2.[Ship handling]
Upravlenie manevrami korablia. Moskva, Voen.izd-vo M-va obor.SSSR.
1958. 287 p.   (MIRA 12:4)
                           (Navigation)

KOVANOV, Vladimir Vasil'yevich;prof.;BOMASH,Yuliy Maksimovich,dots.;
BOGUSLOVSKAYA,T.B.,kand.med.nauk; GEYMAN,D.V.,kand.med.nauk;
ZUBRILOVA,A.V.,kand.med.nauk; LEONOV,S.V.,kand.med.nauk;
NIKOLAYEV,F.D.,dots.[deceased]; VAVILOV,G.S.,kand.med.nauk,nauchn.red.

[Practical manual on topographical anatomy] Prakticheskoe
rukovodstvo po topograficheskoi anatomii; dlia studentov i
vrachei. Moskva, Izd-vo "Meditsina," 1964. 388 p.
(MIRA 17:3)

1. Prepodavateli kafedry operativnoy khirurgii i topografi-
cheskoy anatomii Pervogo Moskovskogo meditsinskogo instituta
imeni I.M.Sechenova (for Boguslavskaya, Geyman, Zubrilova,
Leonov). 2. Deystvitel'nyy chlen AMN SSSR (for Kovanov).

VAVILOV, G. S.

"Projection of the Human Pericardium."
Thesis for degree of Cand. Medical Sci.
Sub 26 Jun 50, Moscow Medical Inst.
Ministry of Health RSFSR

Summary 71, 4 Sep 52. Dissertations
Presented for Degrees in Science and
Engineering in Moscow in 1950. From
Vechernyaya Moskva, Jan-Dec 1950

MATALASOV, S.F., kand. tekhn. nauk; NOSKOV, Yu.A., inzh.; Prinimali uchastiye:
RAMODIN, V.N., inzh.; SUGAK, P.A., kand. tekhn. nauk; CHIKAREV, S.S.,
inzh.; KURITSYN, V.I.; YAKOV, N.A.; VAVILOV, G.S., starshiy mekhanik;
OVCHINNIKOV, Yu.P., starshiy mekhanik; DEVICHINSKIY, Yu.V., starshiy
laborant; GOL'DENTUL, A.B., inzh.; VOROB'YEVA, T.M., starshiy tekhnik

[Transportation of goods subject to freezing; problem in the theory
of freezing and the mechanization of loosening operations.] Perevozki
smerzaiushchiksia gruzov; voprosy teorii smerzaniia i mekhanizatsii
rykhleniia. Moskva, Transport, 1964, 132 p. (Moscow. Vsesoiuznyi
nauchno-issledovatel'skii institut zheleznodorozhnogo transporta.
Trudy, no.273).   (MIRA 17:9)

85616

6.8000 (320/, 1099, 1162)

S/050/60/000/011/004/005
B012/B063

AUTHORS: Soskin, I. M., Vavilov, I. A., Rossiyskiy, B. M.

TITLE: Experience Gathered With the Use of the Radionavigation
              System "Koordinator" for the Observation of Currents

PERIODICAL: Meteorologiya i gidrologiya, 1960, No. 11, pp. 35-36

TEXT: In 1959 a series of experiments were made in the Baltic Sea for
the purpose of determining the velocity and direction of marine currents
by the use of the radionavigation system "Koordinator". This system is
designed for the location of vessels. It is a follow-up system with
continuous counting. A sonde-type receiver and a recording counter are
mounted on the ship, while the control station and the reflecting station
are installed on the shore. These experiments were performed on the test
ship "Okeanograf". The drifting system (a cross and a float with a
ranging rod) was located in certain intervals with the help of the
above-mentioned radionavigation system. The trajectory of the drifting
system determined in this way was used to calculate the elements of the

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Experience Gathered With the Use of the
Radionavigation System "Koordinator" for the
Observation of Currents

S/050/60/000/011/004/005
B012/B063

current, and the current was simultaneously observed from an anchored
ship. The elements of the current were thus obtained by two methods the
results of which were found to be satisfactory. These observations are
described in detail. The system "Koordinator" is recommended for use in
deep-sea research. There is 1 figure.

Card 2/2

USSR / General and Specialized Zoology.   Insects   P
              Pest Insects and Ticks.

Abs Jour   : Ref Zhur - Biol., No 17, 1958, No 78308

Author   : Vavilov, I. F.
Inst   : Not given
Title   : Winter Measures in the Control of Pests and
              Diseases in Orchards.

Orig Pub   : Vinogradarstvo i sadovodstvo Kryma, 1957, No. 2,
              23-26

Abstract   : No abstract given.

Card 1/1

USSR/General and Special Zoology. Insects. Insect   P
and Mite Pests. Fruit and Berry Crop Pests.

Abs Jour : Ref Zhur-Biol., No 20, 1958, 92196

Author   : Vavilov, I. F.
Inst   : Crimean Agricultural Institute.
Title   : Distribution of Fruitgrowing Pests within
           the Crimea Oblast'.

Orig Pub : Tr. Krymsk. s.-kh. in-ta, 1957, 4, 169-182

Abstract : This study describes the results of zonal
           surveys conducted in May-June 1947-1954,
           in all Crimean rayons with respect to
           the varieties and ages of fruit plantings,
           the system of caring for the orchards, and
           particularly with respect to protective
           measures against pests and diseases, harmful

Card   : 1/3

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USSR/General and Special Zoology. Insects. Insect   P
    and Mite Pests. Fruit and Berry Crop Pests.

Abs Jour : Ref Zhur-Biol., No 20, 1958, 92196

          insect fauna of the orchards and the trees
          which surrounded them. On the basis of dif-
          ferences in the natural conditions of indi-
          vidual Crimean rayons and the state of fruit-
          growing in them, the author divides the Cri-
          mean peninsula into entomogeographical zones:
          steppes, foot hills, mountaineous, Kerchen,
          Tarkhankut, and southern coastal. The charac-
          teristics of the natural history for each
          zone are given, as well as the state of fruit-
          growing, the composition of harmful insect
          groups, their distribution and economic sig-
          nificance. The study of the geographical
          distribution of fruit pests furnishes a
          foundation for creating a system of insect

Card   : 2/3

VAVILOV, L.; IGNAT'YEV, V.; CHUMAKOV, A.; USHAKOV, A.

Useful undertaking. Zashch. rast. ot vred. i bol. 5 no. 8:60
Ag '60.   (MIRA 13:12)
                    (Plant quarantine)

VAVILOV, L.; USHAKOV, L.; DERKACH, A.; AKOL'ZIN, L.; YUTSOV, L., agronom;
YEVMENENKO, L.

Successes of chemicalization. Zashch. rast. ot vred. i bol. 10
no.1:4-8 '65.   (MIRA 18:3)

1. Nachal'nik Primorskoy stantsii zashchity rasteniy, Vladivostok
(for Vavilov). 2. Nachal'nik Brestskoy stantsii zashchity rasteniy
(for Ushakov). 3. Glavnyy agronom Brestskoy stantsii zashchity
rasteniy (for Derkach). 4. Nachal'nik Pskovskoy stantsii zashchity
rasteniy (for Akol'zin). 5. Mogilevskiy otryad po zashchite rasteniy
(for Yutsov). 6. Nachal'nik Gomel'skoy stantsii zashchity rasteniy
(for Yevmenenko).

VAVILOV, L.; KUZNETSOVA, Ye.

Forecasters' seminar. Zashch. rast. ot vred. i bol. 10 no.12:
52 '65.   (MIRA 19:1)

1. Nachal'nik Primorskoy stantsii zashchity rasteniy (for
Vavilov).

VAVILOV, L.N., starshiy agronom-inspektor

Quarantine station in Vladivostok Harbor. Zashch.rast.ot vred.
1 bol. 5 no.7:45 Jl '60.   (MIRA 16:1)
                    (Vladivostok—Plant quarantine)

ONISIMOVA, Z.G., starshiy nauchnyy sotrudnik; VAVILOV, L.N.

The meadow moth Cirphis unipuncta Naw., a scourge of grain
crops in the Far East. Zashch.rast.ot vred.i bol. 5 no.3:23-25
Mr '60.   (MIRA 16:1)

1. Dal'nevostochnyy filial Sibirskogo otdeleniya AN SSSR (for
Onisimova). 2. Starshiy inspektor Primorskoy krayevoy
inspektsii po karantinu rasteniy (for Vavilov).
        (Soviet Far East—Grain—Diseases and pests)
         (Soviet Far East—Moths—Extermination)

VAVILOV, M.

They went a long way.   Prof.-tekh. obr. 22 no.10:19 O '65.
(MIRA 18:10)

VAVILOV, M.N.

Biostratigraphy of the Olenek stage of the western Verkhoyansk Range.
Vest.LGU 20 no.12:17-27 '65.   (MIRA 18:8)

VAVILOV, Mikhail Aleksandrovich; BARANOV, A.Ya., red.; BODANOVA,
A.P., tekhn. red.

[Manual for the dump truck driver] Pamiatka shoferu avtomo-
bilia-samosvala. Izd.2., ispr. Moskva, Avtotransizdat,
1963. 58 p.   (MIRA 16:8)

(Dump trucks)

KOSTRYKIN, Mikhail Iosifovich; LUKASHIN, Tikhon Alekseyevich;
VAVILOV, Mikhail Andreyevich; MAKIYENKO, N.I., inzh.,
retsenzent; BOLOTIN, A.I., inzh., retsenzent; KITAYEV,
V.Ye., inzh., retsenzent; KADOBNOV, V.F., inzh.,
retsenzent; BORZOV, K.V., inzh., retsenzent; ORLOV, M.P.,
inzh., otv. red.; KRASNYANSKIY, Ye.A., inzh., red.;
SILINA, L.A., red.izd-va; SABITOV, A., tekhn. red.

[Metal work shop and electric equipment installation opera-
tions] Slesarnoe i elektromontazhnoe delo. Moskva, Gosgor-
tekhizdat, 1963. 182 p.   (MIRA 17:1)
     (Electric wiring)   (Metalwork)

VAVILOV, M.N.

Stratigraphy of the Lower Triassic in the western part of the
Verkhoyansk Range. Vest. LGU 19 no.24:140-143 '64   (MIRA 18:1)

AZARENKO, B.S., kand. tekhn. nauk; AFANAS'YEV, V.D., kand. tekhn. nauk;
BROVMAN, M.Ya., inzh.; VAVILOV, M.P., inzh.; VENDIK, A.B., inzh.;
GOLUBKOV, K.A.; GUBKIN, S.I., akademik [deceased]; GUREVICH, A.Ye.,
inzh.; DAVYDOV, V.I., kand. tekhn. nauk; DROZD, V.G., inzh.;
YERMOLAYEV, N.F., inzh.; ZHUKEVICH-STOSHA, Ye.A., inzh.; KIRILIN,
N.M., kand. tekhn. nauk; KOVYNEV, M.V., inzh.; KOGOS, A.M., inzh.;
KOROLEV, A.A., prof.; KUGAYENKO, M.Ye., inzh.; LASKIN, A.V., inzh.;
LEVITANSKIY, B.A., inzh.; LUGOVSKIY, V.M., inzh.; MEYEROVICH, I.M.,
kand. tekhn. nauk; OVCHAROV, M.S., inzh.; PASTERNAK, V.I., inzh.;
PERLIN, I.L., doktor tekhn. nauk; POBEDIN, I.S., kand. tekhn. nauk;
ROKOTYAN, Ye.S., doktor tekhn. nauk; SAF'YAN, M.M., kand. tekhn.
nauk; SMIRNOV, V.V., kand. tekhn. nauk; SMIRNOV, V.S.; SOKOLOVSKIY,
O.P., inzh.; SOLOV'YEV, O.P., inzh.; SIDORKEVICH, M.A., inzh.;
TRET'YAKOV, Ye.M., inzh.; TRISHEVSKIY, I.S., kand. tekhn. nauk;
KHENKIN, G.N., inzh.; TSELIKOV, A.I.; GOROBINCHENKO, V.M., red.
izd-va; GOLUBCHIK, R.M., red. izd-va; RYMOV, V.A., red. izd-va;
DOBUZHINSKAYA, L.V., tekhn. red.

[Rolling; a handbook] Prokatnoe proizvodstvo; spravochnik. Pod
red. E.S.Rokotiana. Moskva, Metallurgizdat. Vol.1. 1962. 743 p.
(MIRA 15:4)
1. Akademiya nauk BSSR (for Gubkin). 2. Chlen-korrespondent Akademii
nauk SSSR (for Smirnov, TSelikov).
  (Rolling (Metalwor))—Handbooks, manuals, etc.)

Smazka Metallurgicheskogo Oborudovaniya (Lubrication Of Metallurgical Equipment)
Moskva, Mashgiz, 1954.
175 P. Diagrs., Tables.
"Literatura":   P. (174)

SO: N/5
    741
    .V3

VAVILOV, M. P.

VAVILOV, M.P.; RYBAL'CHENKO, A.M., inzhener, retsenzent; BUR'YANOV, V.F., inzhener, redaktor.

[Lubrication of metallurgical plant equipment] Smazka metallurgicheskogo oborudovaniia. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. i sudostroit. lit-ry, 1954. 175 p.   (MLRA 7:7)
    (Lubrication and lubricants) (Metal industries)

VAVILOV, M. P.

:32

PHASE I BOOK EXPLOITATION   SCV/5925

Rokotyan, Ye. S., Doctor of Technical Sciences, ed.

Prokatnoye proizvodstvo; spravochnik (Rolling Industry; Handbook) v. 1. Moscow, Metallurgizdat, 1962. 743 p. Errata slip inserted. 9250 copies printed.

Authors of this volume: B. S. Avsrenko, Candidate of Technical Sciences; V. D. Afanas'yev, Candidate of Technical Sciences; M. Ya. Brovman, Engineer; M. P. Vavilov, Engineer; A. B. Vornik, Engineer; K. A. Golubkov, Engineer; S. I. Gubkin, Academician, Academy of Sciences BSSR; A. Ye. Gurovich, Engineer; V. I. Davydov, Candidate of Technical Sciences; V. G. Drozd, Engineer; N. F. Yermolayev, Engineer; Ye. A. Zhukovich-Stosha, Engineer; N. M. Kirilin, Candidate of Technical Sciences; M. V. Kovynov, Engineer; A. M. Kogos, Engineer; A. A. Korolev, Professor; M. Ye. Eugeyenko, Engineer; A. V. Laskin, Engineer; B. A. Lovitanskiy, Engineer; V. M. Lugovskoy, Engineer; I. M. Mayorovich, Candidate of Technical Sciences; M. S. Ovcharov, Engineer; V. I. Pasternak, Engineer; I. L. Perlin, Doctor of Technical Sciences; I. S. Pobedin, Candidate of Technical Sciences; Ye. S. Rokotyan, Doctor of Technical Sciences; M. M. Saf'yan, Candidate of Technical Sciences; V. V. Smirnov, Candidate of Technical Sciences; V. S. Smirnov, Corresponding Member, Academy of Sciences USSR; O. P. Sokolovskiy,

Card 1/10

Rolling Industry; Handbook   SOV/5585

Engineer; O. P. Solov'yev, Engineer; M. A. Sidorkevich, Engineer; Yo. M.
Tret'yakov, Engineer; I. S. Trishevskiy, Candidate of Technical Sciences; G. N.
Khonkin, Engineer; and A. I. Tselikov, Corresponding Member, Academy of Sciences
USSR. Introduction: A. 1. Tselikov, Corresponding Member, Academy of Sciences
USSR; Yo. S.(Rokotyan, Doctor of Technical Sciences; and L. S. Al'shevskiy, Can-
didate of Technical Sciences.

Eds. of Publishing House: V. M. Gorobinchenko, R. M. Golubchik, and V. A. Rynov;
Tech. Ed.: L. V. Dobuzhinskaya.

PURPOSE: This handbook is intended for technical personnel of metallurgical and
machine-building plants, scientific research institutes, and planning and de-
sign organizations. It may also be useful to students at schools of higher
education.

COVERAGE: The fundamentals of plastic deformation of metals are discussed along
with the theory of rolling and drawing. Methods of determining the power con-
sumption and the forces in rolling with plane surface or grooved rolls are

Card 2/10

Rolling Industry; Handbook   SOV/5985

Card 11/19

VAVILOV, N.

VEDENEYEV, N.; VAVILOV, N.

The radio-phonograph "Daugava". Radio no.1:49-51 Ja '55.
(Radio) (Phonograph)   (MLRA 8:3)

VAVILOV, N.

VEDENEYEV, N.; VAVILOV, N.

The radio-phonograph "Daugava". Radio no.1:49-51 Ja '55.
        (Radio) (Phonograph)   (MIRA 8:3)

Vavilov, N.

USSR/ Electronics - Radio-phonograph

Card 1/1   Pub. - 21/27

Authors   : Vedeneyev, N., and Vavilov, N.

Title   : "Daugava" radio-phonograph

Periodical : Radio 1, 49-51, Jan 1955

Abstract   : The specifications are presented for a combination radio re-
             ceiver and phonograph called the "Daugava", manufactured by
             the A. S. Popov factory in Riga. The sensitivity of the re-
             ceiver is not less than 20 db. The bands covered by the apparatus
             are 723-2000 m for long waves, 187.5-576.9 m for medium-length
             waves and 24.7-31.7 m for short waves. The phonograph part will
             use either the regular records or the long-playing ones. Full
             technical details are given for the construction of the apparatus.
             Illustration, schematic diagram.

Institution :   ....

Submitted   :   ....

VAVILOV, N.

    Achievements of innovators.   NTO 3 no.12:44 D '61. (MIRA 15:1)

Zamestitel' predsedatelya Leningradskogo oblastnogo pravleniya
nauchno-tekhnicheskogo obshchestva radiotekhniki i elektrosvyazi
imeni Popova.
                 (Technological innovations)

VAVILOV, N.

People's university of radio electronics. Radio no.6:32 Je '61.
                                                          (MIRA 14:10)

1. Zamestitel' predsedatelya Leningradskogo pravleniya
Nauchno-tekhnicheskogo obshchestva radiotekhniki i elektrosvyazi
im. A.S.Popova.
          (Electronics—Study and teaching)

Vavilov, Nikolay Fedorovich

Elektronnyye lampy (Electron Tubes) Moscow, Voyen. izd-vo M-va
    obor. SSSR, 1958. 92 p. (Series: Radiolokatsionnaya tekhnika)
    No. of copies printed not given.

Ed.: V. T. Vladimirov, Engineer, Colonel; Tech. Ed.: G. F. Sokolova.

PURPOSE: This book is intended for officers who use radio
    communications equipment and for the general reader.

COVERAGE: This book of the popular radar series presents electron-
    tube fundamentals, including construction, principle of operation,
    physical properties, characteristics, and parameters.

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Electron Tubes   SOV/1871

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Electron Tubes   SOV/1871

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  2. Table for the corresponding old and new names of
     electron tubes   92

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VAVILOV, Nikolay Fedorovich; VLADIMIROV, V.T., inzh.-polkovnik, red.;
     SOKOLOVA, G.F., tekh.red.

[Electron tubes] Elektronnye lampy. Moskva, Voen. izd-vo
M-va obor. SSSR, 1958. 92 p.   (MIRA 12:2)
                    (Electron tubes)

VAVILOV, N.F.

DUGIN, A.I.,   VAVILOV, N.F.

"Manual for Laboratory Work for the Course 'Electronic and Ionic
Devices' " (Rukovodstvo k laboratornym rabotam po kursu "Elektronnyye
i ionnyye probory"). Izd Voyenno-vozdushnoy akademii im Zhukovskogo
(Publishing House of the Military Air Academy imeni Zhukovskiy, 80 00.,
1947.

VAVILOV, Nikolay Dmitriyevich; SKORUBSKAYA, I.N., redaktor; KIRSANOVA, N.A., tekhnicheskiy redaktor

[Our experience in hardening steel] Nash opyt zakalki stali. [Moskva] Izd-vo VTsSPS Profizdat, 1956. 62 p.   (MIRA 9:12)

1. Brigadir termicheskoy brigady instrumental'nogo tsekha zavoda sel'khozmashin imeni Ukhtomskogo. (for Vavilov)
        (Steel--Hardening)

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Extracting gravel with a hydraulic classifier. Transp. stroi.
12 no.8:35 Ag '62.   (MIRA 15:9)
            (Gravel) (Separators (Machines))

VAVILOV, Nikolay Ivanovich (1887-1943); KALESNIK, S.V., red.; DAVITAYA,
F.F., red.; SINSKAYA, Ye.N., doktor biol. nauk, red.; STANKOV,
S.S., doktor biol. nauk [deceased]; IVANOV, I.R., doktor sel'-
k'oz. nauk, red.; PERVAKOV, I.L., red.; ZHURAVLEVA, G.P., mlad.
red.; MATVEYEVA, G.Ye., mlad. red.; ARDANOVA, N.P., tekhn. red.

[Five continents]Piat' kontinentov. Moskva, Geografgiz, 1962. 253 p.
(MIRA 16:2)
1. Chlen-korrespondent Akademii nauk SSSR (for Kalesnik). 2. Dey-
stvitel'nyy chlen Akademii nauk Gruzinskoy SSR (for Davitaya).
(Voyages and travels) (Phytogeography)

VAVILOV, Nikolay Ivanovich, akademik; YAKUBTSINEP, M.M., doktor
sel'khoz. nauk, otv. red. toma; LEPIN, T.K., doktor
sel'khoz.nauk, otv. red. toma; YAKOVLEVA, V.M., red.izd-
va; BOCHEVER, V.T., tekhn. red.

[World resources of cereal, pulse crop, and flax varieties
and their use in breeding] Mirovye resursy sortov khlebnykh
zlakov, zernovykh bobovykh, l'na i ikh ispol'zovanie v se-
lektsii. Moskva, Izd-vo "Nauka." Vol.2. [Wheat] Pshenitsa.
1964. 122 p.   (MIRA 17:4)

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To what extent can Mendel's laws be universally applied to segregation
in hybrids. Genetika no.1:13-19 '65.

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      Wild fruit resources of Kopetdag. Ibid.:450-451

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                           (Scaffolding)

VAVILOV, Nikolay Ivanovich, akademik; SUKACHEV, V.N., akademik, glav. red.; BARANOV, P.A., zam. glav. red.[deceased]; ZHUKOVSKIY, P.M., zam. glav. red.; BARULINA-VAVILOVA, Ye.I., red. [deceased]; BAKHTEYEV, F.Kh., otv. red. toma; SINSKAYA, Ye.N., otv. red. toma; IPAT'YEV, A.N., red.; RODIN, L.Ye., red.; YAKOVLEVA, V.M., red. izd-va; GALIGANOVA, L.M., tekhn. red.

[Selected works in five volumes] Izbrannye trudy v piati tomakh. Moskva, Izd-vo Akad. nauk SSSR. Vol.3. [Problems of the geography, phylogeny, and breeding of wheat and rue. Plant resources and problems of the classification of cultivated plants]Problemy geografii, filogenii i selektsii pshenitsy i rzhi. Rastitel'nye resursy i voprosy sistematiki kul'turnykh rastenii. 1962. 531 p.   (MIRA 15:7)

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2. Deystvitel'nyy chlen Vsesoyuznoy akademii sel'sko-khozyaystvennykh nauk imeni V.I.Lenina (for Zhukovskiy).
                      (Wheat)   (Rye)

VAVILOV, Nikolay Ivanovich, akademik; BAKHTEYEV, F.Kh., otv. red.
toma; LIPSHITS, S.Yu., otv. red. toma

[Selected works in five volumes] Izbrannye trudy v piati
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CHERNYSHEV, A.M.; GESS, B.A.; KANAVETS, P.L.; MELENT'YEV, P.N.;
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        KISELEV, G.P.; VOLNISTOVA, R.A.; MOREYEVA, G.P.

        Testing granules made by the method of chemical catalysis
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GLINKOV, M.A.; VAVILOV, N.S.

    Instruments for investigating the thermal operation of metallurgical
    furnaces. Zav.lab.21 no.10:1203-1207 '55.   (MLRA 9:1)

    1.Moskovskiy institut stali imeni Stalina.
       (Thermometers) (Metallurgical furnaces)

    Some water calorimeter type of heat flow meters are critically considered,
with special reference to their use in steel-making furnaces. Details are given
of instruments developed by the Moscow Steel Institute.