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PROXY LINK

Category : HUNGARY/Nuclear Physics - Instruments and Installations. Methods C-2
of Measurement and Investigation

Abs Jour : Ref Zhur - Fizika, No 2, 1957 No 2980

Author : Meray, Lure

Title : 800 KV Cascade Generator in the Division of Atomic Physics of the
Central Scientific Institute of Physics

Orig Pub : Magyar fiz. folyoirat, 1955, 3, No 5-6, 489-496

Abstract : No abstract

Card : 1/1

MEROZHINSKI M.F.

Participation of some electrolytes in the overall metabolic reaction of the organism against tumors. M. F. Merozhinski and E. S. Cherkasova. *Vestnik Akad. Nauk. Biol. Ser.* S.S.S.R. 1954, No. 2, 96-105. —The contents of Na, K, Ca, Mg, Cl, and F-contents in blood and in normal and traumatic tissues of men and exptl. animals are discussed. The following traumatic tissues are considered: burns, shocks, septicæ, bone fractures, dislocations, and pathol. operations. The shifts of Na and Cl are particularly pronounced in the injured tissues. The reaction of the organism is described during the development, presence, and curing of the tumors, expressed in the ionic shifts, changes in the body water balance, and the metabolic changes of proteins and org. acids.

E. Wierzbicki

LEVIN, M.I., inzh.-tekhnolog; MERPERT, A.O.

"Feltwork technology" by [dotsent] M.P.Pil'shchikov. Reviewed by
M.I.Levin, A.O.Merpert. Tekst.prom. 22 no.1:90-91 Ja '62.
(MIRA 15:2)

1. Rosglavlegsbytsyr'ye (for Levin). 2. Zamestitel' predsedatelya
pryadil'noy seksii Soveta novatorov Moskovskogo gorodskogo
sovnarkhoza (for Merpert).

(Feltwork)
(Pil'shchikov, M.P.)

MERPERT, L.O., inzh.; TRUBITSYN, I.M., inzh.

Possibilities for lowering costs of making reinforced concrete
construction elements. Transp.stroi. 10 no.6:32-35 Je '60.

(MIRA 13:7)

(Reinforced concrete)

(Construction industry--Costs)

MERPERT, M.G.

33981 MERPERT, M.G. Po Povodu
Oorganizatsii Proyeektnykh Yachyeyek
V Tryestakh (Otkltk Na Stat; Yu A
S Gal Pyerina "Organizovat
Vypolnyeniye Proyeektnykh I
Montazhnykh Rabot Na Myestakh"
V Zhurn "Sakhar Prom- St" 1949
No. 11) Sakhar, Prom-St; 1949 No. 11
S. 30

SO: Le topis' Zhurnal'nykh Statey, Vol. 42, Moskva, 1949

MERPERT, M.O.

Planning establishments of the sugar industry in the U.S.S.R.

Sakh. prom. 31 no.11:35-42 N '57.

(MIRA 11:1)

1. Giprosakhar.

(Sugar industry)

MERPERT, M.G.

Errors in designs. Sakh. prom. 32 no.5:41-44 My '58. (MIRA 11:6)

1. Gosudarstvennyy institut po proysktirovaniyunovogo stroitel'stva
i rekonstruktsii predpriyatiy sakharnoy promyshlennosti.
(Sugar industry)

MERPERT, M.P.

USSR/Engineering - Industrial tools

Card 1/1 Pub. 104 - 5/23

Authors : Merpert, M. P.

Title : Accuracy of preparation and productivity of thread cutters

Periodical : Stan. i instr. 2, 16-20, Feb 1954

Abstract : Various ways are suggested for increasing the accuracy and output of thread cutters. Tables are given for the proper selection of grinding wheel dimensions and the angle of grinding. The use of multiple thread discs for the grinding of thread cutters is recommended. The technological processes for proper preparation of thread cutters are described. Two references: 1 USSR and 1 German (1937 and 1952). Tables; graphs, diagrams.

Institution :

Submitted :

MERPERT, M.P. laureat Stalinskoy premii, kandidat tekhnicheskikh nauk;
VYDRIN, P.G., inzhener, redaktor; BITIYEV, I.V., inzhener, retsenzent;
MATVEYEVA, Ye.N., tekhnicheskii redaktor.

[Thread-grinding machines] Rez'boshlifoval'nye stanki. Moskva,
Gos.nauchno-tekhn.izd-vo mashinostroitel'noy lit-ry, 1955. 153 p.
(Grinding and polishing) (Screw cutting machines) (MLRA 9:1)

100 100 100 100 100

Subject : USSR/Engineering AID P - 4202
Card 1/1 Pub. 103 - 3/20
Author : Merpert, M. P.
Title : Elimination of Slacks in Precision-Type Feeders
Periodical : Stan. 1 instr., 1, 13-16, Ja 1956
Abstract : The author describes in detail various means for slack-adjustment in headstocks, worm-gears and carriages of different makes of machine-tools, mostly of non-Russian origin (the NRK Reyshauer, the Moore, the Excello, the Lindner). The delicate mechanisms and the procedure for elimination of slacks are illustrated with 9 drawings.
Institution : None
Submitted : No date

76

AUTHOR: Merpert, M.P., and Bitiyev, I.V.

TITLE: Grinding Exact Straight-Line Helical Surfaces with Large Pitch Angles (Shlifovaniye tochnykh lineychatykh vintovykh poverkhnostey s bol'shim uglom pod'yema)

PERIODICAL: Stanki I Instrument, 1957, No. 1, pp 3-7 (U.S.S.R.).

ABSTRACT: The difficulties involved in forming steep helical surfaces are illustrated with reference to methods of cutting with single-edge form tools, grinding with a profiled disc grinding wheel on a thread grinding machine, grinding with the conical surface of a cup wheel, set at an appropriate compound angle (producing a smaller straightness error of the helical surface generating line than the disc wheel), and grinding with a suitably formed end wheel. The best approximation to the straight generating line is obtained by the end wheel but at the cost of low output. A numerical table shows that errors in the disc wheel method exceed the standards for all but single start worms. The errors are plotted in a family of curves

Card 1/3

Grinding Exact Straight-Line Helical Surfaces with Large Pitch Angles (Shlifovaniye tochnykh lineychatykh vintovykh poverkhnostey s bol'shim uglom pod'yema)

for different wheel diameters, thread profile angles and pitch angle variations between the crest and root of the thread. The disc wheel method remains the most economical. A trueing fixture is illustrated and described by which the profile of the disc wheel is corrected in such a manner as to produce a straight generating line of the work-piece. The fixture is mounted between centers in place of the worm, the profile of which is traversed by the trueing diamond. The design of the fixture is shown in two cases of a straight line worm profile either in the axial or in normal cross-sections.

There are 6 references, three of which are Slavic. The text contains 9 diagrams and 1 table.

Card 2/3

MERPERT, M.P., st. nauchnyy sotr.; RIVKIN, A.I.; ZUZANOV, G.I.,
red.; KRYNOCHKINA, K.V., tekhn. red.

[Survey of technological developments in the manufacture
of machine tools abroad; grinding machines] Obzor tekhnicheskogo
razvitiia zarubezhnogo stankostroeniia; shkofoval'nye stanki. Moskva, 1959. 116 p. (MIRA 16:4)

1. Moscow. Eksperimental'nyy nauchno-issledovatel'skiy institut
metallorezhushchikh stankov. 2. Konstruktor Eksperimental'nogo
nauchno-issledovatel'skogo instituta metallo-rezhushchikh stankov
(for Zuzanov).

(Grinding machines--Technological innovations)

MERPERT, M.P., REYBAKH, Yu. S.

Grinding high-precision rings in mass production. Stan.1
instr. 31 no.4:22-25 Ap '60. (MIRA 13:6)
(Grinding and polishing)

MEPPERT, M.P.

Some problems in the automatic control of grinding machines (from
materials of foreign literature). Stan.i instr. 31 no.10:14-17 0
'60. (MIRA 13:10)

(Grinding machines)

(Automatic control)

MERPERT, M.P., kand.tekhn. nauk; ROZENBAUM, B.S., red.; LUK'YANOV,
A.K., red.; VIKTOROVA, Z.N., tekhn. red.

[Development of structural elements of grinding machines
abroad] Razvitie elementov konstruktsii shlifoval'nykh stan-
kov za rubezhom; obzor. Moskva, 1961. 67 p. (MIRA 16:4)

1. Moscow. Tsentral'nyy institut nauchno-tekhnicheskoy infor-
matsii mashinostroyeniya.
(Grinding machines--Technological innovations)
(Automation)

MERPERT, Moisey Petrovich, kand. tekhn. nauk; VYDRIN, P.G., inzh.,
retsenzent; KUNIN, P.A., inzh., red.; EL'KIND, V.D., tekhn.
red.

[Precision thread-grinding machines; design, manufacture, operation] Pretsizionnye rez'boshlifoval'nye stanki; konstruktsiia, izgotovlenie, ekspluatatsiia. Izd.2., perer. i dop. Moskva, Mashgiz, 1962. 302 p. (MIRA 15:9)
(Grinding machines)

AYZENSHTADT, L.A.; PEN'KOV, P.M.; GLADKOV, B.A.; LIKHT, L.O.;
KRIMMER, T.Ye.; KASHEPAV, M.Ya., kand. tekhn. nauk;
MERPERT, M.P., kand. tekhn. nauk; KOPERBAKH, B.L.;
CHERNIKOV, S.S., kand. tekhn.nauk; BELOV, V.S.; ZHURIN,
B.F.; MONAKHOV, G.A., kand.tekhn.nauk; MOROZOV, I.I.;
MUSHTAYEV, A.F.; OGNEV, N.N.; PALEY, M.B., kand. tekhn.
nauk; FURMAN, D.B.; LIVSHITS, A.L., kand.tekhn.nauk; MECHETNER,
B.Kh.; SOSENKO, A.B.; AVDULOV, A.N.; LEVIN, A.A., kand.tekhn.
nauk; YAKOBSON, M.O., doktor tekhn.nauk; MAYOROVA, E.A.,
kand.tekhn.nauk; MOROZOVA, Ye.M.; ZUSMAN, V.G., kand.tekhn.
nauk; NAYDIS, V.A., kand.tekhn.nauk; VLADZIYEVSKIY, A.P., prof.,
doktor tekhn. nauk, red.; BELOGUR-YASNOVSKAYA, R.I., red.;
CHIGAREVA, E.I., red.; ASVAL'DOV, M.Ya., red.; KOGAN, F.L.,
tekhn. red.

[Machine-tool industry in capitalist countries] Stanko-
stroenie v kapitalisticheskikh stranakh. Pod red. i s pre-
disl. A.P.Vladzhevskogo. Moskva, 1962. 822 p. (MIRA 15:7)

1. Moscow. Tsentral'nyy institut nauchno-tekhnicheskoy in-
formatsii mashinostroyeniya. 2. Eksperimental'nyy nauchno-
issledovatel'skiy institut metallorazhreshchikh stankov
(for Vladzhevskiy, Belogur-Yasnovskaya, Chigareva, Asval'dov,
Kogan).

(Machine-tool industry)

1. SMIRNOV, A. P., Prof., MERPERT, N. Ya.
2. USSR (600)
4. Kuybyshev Hydroelectric Power Station - Antiquities
7. Archaeological expedition to the construction site of the Kuybyshev hydroelectric power station in 1952. Vest. AN SSSR 23, No. 1, 1953.

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

SMIRNOV, A.P., professor; MERPERT, N.Ya., kandidat istoricheskikh nauk.

Archaeological investigations of the Kuybyshev expedition in 1953.
Vest.AN SSSR 24 no.4:59-68 Ap '54. (MLRA 7:5)

(Volga Valley--Archaeology)
(Archaeology--Volga Valley)

30V/30-58-6-37/45

AUTHORS: Gantskaya, O. A., Merpert, N. Ya., Candidates of Historical Sciences

TITLE: Research Work Carried out by Soviet Archeologists and Ethnographers (Issledovaniya sovetskikh arkhologov i etnografov)

PERIODICAL: Vestnik Akademii nauk SSSR, 1958. Nr 6, pp. 125-128 (USSR)

ABSTRACT: From April 7 to 12 a conference of the Department of Historical Sciences (otdeleniye istoricheskikh nauk), the Institute of the History of Material Culture (Institut istorii materialnoy kultury), as well as the Institute of Ethnography imeni N. N. Miklukho-Maklay of the AS USSR (Institut etnografii imeni N. N. Miklukho-Maklaya AN SSSR) was held in Moscow. It dealt with the results obtained by archeological and ethnographical research work in 1957. More than 700 persons took part, all of whom represented scientific research institutes, colleges and museums of more than 150 towns of the USSR. The conference was opened by Ye. M. Zhukov. Lectures were held by:

1) S. V. Kiselev on research work carried out with respect

Card 1/4

SOV/30-53-6-37/45

Research Work Carried out by Soviet Archeologists and Ethnographers

- Zabaykal'ye towns.
- 2) S. A. Semenov on the investigations of primitive forms of engineering.
 - 3) B. A. Rybakov on the problem of the relations between archeologic sources and chronicles.
 - 4) S. P. Tolstov on the results obtained by the Khorezmsk expedition
 - 5) N. N. Voronin on the results of many years of work performed by archeologists on the history of old Russian architecture.
 - 6) I. I. Potekhin on his work in the former British colony of the Gold Coast.
 - 7) S. V. Ivanov on the investigation of the Sibir' peoples.
 - 8) M. K. Karger on a prehistoric settlement at Volyn'.
 - 9) B. B. Piotrovskiy on the investigation of the first state established on USSR territory.
 - 10) Ye. I. Krupnov on the expedition to Severo-Kavkaz in 1957.
 - 11) G. B. Fedorov on the old Slavs in Moldaviya.
 - 12) D. B. Shelov on new data in the history of Tanais.

152 reports on archeological problems were discussed by 8 sections. The conference of the Scientific Council of the

Card 2/4

30130-58-6-37/45

Research Work Carried out by Soviet Archeologists and Ethnographers

Institute of Ethnography imeni N. N. Miklukho-Maklay was held from April 9 - 12. The following reports were, among others, delivered:

- 1) N. A. Butinov on the 75th anniversary of N. N. Miklukho-Maklay's death.
- 2) L. P. Potapov and A. D. Grach on the archeological and ethnographical Tuvin expedition.
- 3) N. A. Kislyakov on the work carried out by the expedition to Central Asia.
- 4) B. O. Volgikh on the small nations in the northern part of the RSFSR.
- 5) M. M. Gerasimov on the excavations carried out at Mal'ta and Ust'-Belaya (Irkutsk area).
- 6) M. G. Levin on research work in the Chukotsk area.
- 7) G. F. Debets on the research of the anthropological type of the eskimo population of Ipiutak and Tigarã.
- 8) G. S. Chitay on some results obtained by the expedition organized by the Department of Ethnography of the Institute of History of the AS, Gruzinskaya SSR.

Card 3/4

SOV/30-58-6-37/45

Research Work Carried out by Soviet Archeologists and Ethnographers

- 9) S. A. Tarakanova and L. N. Terent'yeva on the Pribaltiy-skaya (Baltic) expedition in 1957.
- 10) K. Vilkun (Finnish scientist from Helsinki) on ethnological problems.

75 reports on ethnography were read during meetings of the sections. It was regarded necessary to extend the archeological, ethnographical and linguistic research.

ASSOCIATION: Otdeleniye istoricheskikh nauk, Institut istorii material'noy kultury i Institut etnografii imeni N. N. Miklukho-Maklaya (Department of Historical Sciences, Institute of the History of Material Culture, and Institute of Ethnography imeni N. N. Miklukho-Maklay)

- 1. Archeology--USSR
- 2. Anthropology--USSR
- 3. Scientific personnel--Performance

Card 4/4

MERPERT, N Ya

SOV/30-59-4-17/51

30(6)

AUTHOR:

Fedorov, G. B., Candidate of Historical Sciences

TITLE:

News in Brief (Kratkiye soobshcheniya). The Third Soviet-Rumanian Seminar on Archeology and Ethnography (Tretiy sovetsko-rumynskiy seminar po arkheologii i etnografii)

PERIODICAL:

Vestnik Akademii nauk SSSR, 1959, Nr 4, p 104 (USSR)

ABSTRACT:

The Seminar took place in Bucharest between December 26th, 1958 and January 5th, 1959 and dealt with problems of the ancient and medieval history of Rumania and the South-west of the USSR. Since 1957 joint Soviet-Rumanian research work is carried out and seminars are held in the Moldavskaya SSR and the People's Republic of Rumania. The work was carried out in a number of plenary meetings and three committees. The reports delivered by the Rumanian archeologists G. Stefan, and M. Constantin were regarded as interesting. The members of the Soviet delegation held the following reports: G. B. Fedorov spoke about the history of material civilization of the population of the South-west of the USSR in the first millenium of the new calendar. N. Ya. Merpert reported on the research of the history of the oldest Bulgarian tribes by Soviet archeologists. G. D. Smirnov gave new data concerning the history of the

Card 1/2

SOV/30-59-4-17/51

News in Brief. The Third Soviet-Rumanian Seminar on Archeology and Ethnography

medieval Moldavian town. P. P. Byrni dealt with archeological material characteristic of the life of the medieval Moldavian village. M. Ya. Salmanovich reported on ethnographical research in the region of the Moldavskaya SSR. V. D. Blavatskiy delivered a report on the conditions of the property of the inhabitants of the Bosphorus from the sixth until the second century of the new calendar. Ye. I. Levi dealt in his report with the research of the Ol'viyskaya agora, and M. A. Tikhanova with the population of the woodland-steppe zone of Central and East Europe in the first half of the first millenium of the new calendar. The scientists attending the seminar outlined a definite plan of collaboration in 1959. There is 1 Soviet reference.

Card 2/2

SMIRNOV, Kirill Alekseyevich; MERPERT, N.Ya., otv.red.; BOBRINSKIY, A.A.,
red.izd-va; MARKOVICH, S.G., tekhn.red.

[Velikiye Bolgary; guidebook for the ancient site of the city]
Velikie Bolgary; putevoditel' po gorodishchuu. Moskva, Izd-vo
Akad.nauk SSSR, 1960. 34 p. (MIRA 13:7)
(Bolgar--Description)

MERPERT, N., kand. istorich. nauk

Excavations on the shores of the Nile River. Nauka i zhizn' 30
no.1:60-64 Ja '63. (MIRA 16:4)

(Nile Valley—Excavations(Archaeology))

MERPORT, I. ^A, arkhitektor

Multistoried apartment house designed for the conditions of the
continental climate of Uzbekistan. Zhil. stroi. no.10:10-13 '60.
(Uzbekistan--Apartment houses) (MIRA 13:9)

MERPORT, I. A.

Principles of the standardization of multistory dwellings
under the climatic conditions of Uzbekistan. Sbor. nauch.
trud. NII po stroi. ASiA no.2:3-15 '61.

(MIRA 16:1)

(Uzbekistan—Apartment houses—Standards)

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2. The second part of the document (Was also...)
3. The third part of the document (Was also...)
4. The fourth part of the document (Was also...)

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16.8000 (1329,1031,1132)

S/044/62/000/001/041/061
C111/C222

AUTHOR: Merriem. Ch. V

TITLE: Calculations which are connected with a class of optimal control systems

PERIODICAL: Referativnyy zhurnal, Matematika, no. 1, 1962, 64, abstract B'IO (Mezhdunar. Federatsiya po avtomat. uprav. i y Mezhdunar. Kongress po avtomat. uprav.)

TEXT: Considered is a dynamic system which is described by a differential equation of first order

$$\dot{z} = b(z + t) + c(m + t)$$

where z is the parameter of state, M is the control parameter and $q = a(z)$ is the output quantity of the system. By optimal control is understood such a control where the error criterion

$$e = \int_0^{t^*} \{ \phi [q(\sigma) - q(\sigma)]^2 + \psi [M(\sigma) - m(\sigma)]^2 \} d\sigma$$

is minimal; here Q and M are the required signals of the output and Card 1/2

S/044/62/000/00 /044/06
C111/C222

Calculations which are connected

the control. If z can be measured, then the optimal control signal can be determined by solving three differential equations of first order which are given without derivation. These equations are normed in a special way which leads to their simplification. This is illustrated by examining the linear case for which block circuit diagrams of the optimal control are constructed. In the case of a linear system the error increases monotonically with the increase of the averaging interval. For the normed error, however, $\sigma^2(\tau) \rightarrow \sigma^2(\infty)$ for $\tau \rightarrow \infty$ is for

H

----- Analogous but more complicated dependences are obtained for random signals in a linear system and in the non-linear system. Abstracted's note: Complete translation

Card 2/2

GURSKIY, P.A., doktor tekhn.nauk; MBRRO, Ya.M., inzh.

Organization of checking and measuring operations in railroad
transportation. Zhel.dor.transp. 41 no.6:78 Ja '59.
(MIRA 12:9)

(Railroads--Maintenance and repair)

GURSKIY, P.A., MERRO, Ye.M., KHUTORYANSKIY, N.M.

Recommendation for the deciphering of an SI2 speedometer ribbon.
Elek. i tepl. tiaga 4 no.5:32-34 My '60. (MIRA 13:7)
(Locomotives) (Speedometers)

LYUTSAU, Aleksey Grigor'yevich; MER, N.I.; MERRO, Ye.M.; RYBIN, N.G.;
ROZENVASSER, M.A.; SOLOV'YEV, S.N.; FILIMONOV, V.P.;
SHAROYKO, V.V.; MEREZHKO, V.G., retsenzent; USENKO, L.A.,
tekhn. red.

[On the road of great initiative] Po puti velikogo pochina.
Moskva, Transzheldorizdat, 1961. 75 p. (MIRA 15:2)

1. Zamestitel' nachal'nika Glavnogo upravleniya lokomotivnogo
khozyaystva Ministerstva putey soobshcheniya (for Merezko).
(Railroads--Employees--Labor productivity)

ARENDT, A.A., prof.; MERSESYANTS, S.I., kand.med.nauk

Pathology of cerebrospinal fluid circulation following the re-
moval of neurinomas of the eighth nerve. Probl.sovr.neirokhir.
4:5-13 '62. (MIRA 16:2)
(ACOUSTIC NERVE—TUMORS) (CEREBROSPINAL FLUID)

MERSHALOV, A.F.; YAKOVLEV, V.I.

Efficient practices and types of bits in test drilling without coring.
Razved. i okh. nedr 26 no.9:26-31 S '60. (MIRA 15:7)

1. Leningradskiy gornyy institut (for Mershalov).
2. Komi-Nenetskoye geologicheskoye upravleniye (for Yakovlev).
(Boring--Equipment and supplies)

SHAMSHEV, F.A.; MERSHALOV, A.F.

Certain technical and economic data concerning core and
non-core prospecting drilling. Razved. i obh. deln. 30 no. 3:
33-35 Nr 164 (1954 12:1)

1. Leningradskiy gornyy institut.

MERSHALOVA, A. F.

USSR/General and Special Zoology. Insects. Injurious
Insects. and Ticks. Pests of Cereal Crops

Abs Jour : Ref Zhur - Biol., No 11, 1958, No 49585

Author : Mershalova A.F.
Inst : Panza Agricultural Institute
Title : The Pests and Diseases of Corn in Penzenskaya
Oblast.

Orig Pub : Sb. tr. Penzensk. s.-kh. in-ta, 1956, vyp. 1,
67=73

Abstract : No abstract

Card : 1/1

29

ABSTRACT : ... are ... (damage to shoots, chlorosis and reddening of leaves), fungus
... of the ... by fungi ... the genera ...
... and ... , ... , ...

CARD: 1/1

MERSHALOV, A.F.

Effectiveness of coreless drilling. Izv. vys. ucheb. zav.;
geol. i razv. 6 no.2:118-126 F '63. (MIRA 16:6)

1. Leningradskiy gornyy institut im. G.V. Plekhanova.
(Boring)

~~MERSHAVKA, V.~~; POPKOV, I., mashinist kombayna; FIRSOV, K. mashinist kombayna

We will achieve our aims. Mast.ugl. 9 no.12:6 D '60. (MIRA 13:12)

1. Nachal'nik pervogo uchastka shakhty No.37 kombinata Karagandaugol'
(for Mershavka).
(Karaganda Basin--Coal mines and mining--Labor productivity)

ACC NR: AT6036652

SOURCE CODE: UR/0000/66/000/000/0278/0279

AUTHOR: Mershchikov, A. G.; Aleshin, I. A.; Chanysheva, R. B.

ORG: none

TITLE: Shifts in the structure of the systolic portion of phono- and ballistocardiograms with changes in respiration resistance [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24-27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 278-279

TOPIC TAGS: ballistocardiography, phonocardiography, human physiology

ABSTRACT: The effect of increased respiration resistance on the systolic portions of phono- and ballistocardiograms (containing information on cardiac pumping function, which is closely related to respiration) was studied in healthy human subjects who were unaccustomed to the studied conditions. Phonocardiogram, electrocardiogram, and ballistocardiogram indices were recorded before and during exposure to increased respiratory resistance.

Increased respiratory resistance produced a phonocardiogram with changed duration of segments and intervals and some changes in the number of oscillations and the frequency characteristic of the first heart sound.

Card 1/2

ACC NR: AT6036652

The largest wave shifted its position, and the amplitude ratio of acoustic waves entering into the main segment of the first heart sound changed. Taken together, these changes point to differences in the tension phase and in initial phase of systolic ejection, and possible nonuniform phase variation in the right and left ventricles.

In the ballistocardiograms, increased respiration resistance produced changes in the duration of intervals, amplitudes, amplitude ratios, and ballistic coefficients. The H-K time was shortened by shortening of the tension phase and/or ventricular ejection phase. In most cases, JK increased. This increase is made possible by decrease in the inspiratory and (mainly) expiratory IJ amplitudes. The range of respiratory variations (RVI) in the activity state of the heart increases.

Phonocardiograph and ballistocardiograph data show that changes in cardiac pumping function during respiratory resistance include not only changes in the force and rhythm of cardiac contractions, but changes in the structure of the cardiac cycle itself as well.

[W. A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 2/2

KULIKOV, V.O., inzh.; KHL'KO, M.M., inzh.; PRILEPSKIY, V.M., inzh.;
ZUBKOV, A.P., inzh.; prinimali uchstiye; MERSHCHIY, M.P.,
inzh.; CHETVERIKOV, V.Ya., inzh.; DUBROV, V.S., inzh.; VOLKOV,
T.F., tekhnik; YERSEOV, V.I.; ~~tekhnik~~; SAFOHOVA, M.F., tekhnik

Using scale in steelmaking by the scrap and ore process.
Stal' 20 no.8:708-710 Ag '60. (MIRA 13:7)
(Open-hearth process)

MAL'KOV, V.G., inzh.; PRILEPSKIY, V.I., inzh.; DUBROV, V.S., inzh. V rabote
prinimali uschastiye: KHIL'KO, M.M., inzh.; MERSHCHIIY, N.P., inzh.;
CHETVERIKOV, V.Ya., inzh.; KUROV, I.N., inzh.; RATHER, B.R., inzh.;
BUBYCHEV, G.D., inzh.; ALFEROV, K.S., inzh.; PAVLENKO, N.M., inzh.;
FINKEL'SHTEYN, M.M., inzh.; PLUZHKO, N.F., inzh.; SAMSONOV, T.F.,
inzh.; BABENKO, N.N., inzh.; LAD'YANOV, N.I., inzh.; TUPIL'KO, V.S.,
inzh.

Decoxidizing and alloying 25G2C steel with ferromanganese and ferro-
silicon in 200-ton ladles. Stal' 20 no.9:803-806 S '60.(MIRA 13:9)
(Steel, Structural--Metallurgy)

VECHER, N.A., inzh.; GERMAIDZE, G. Ye., inzh.; PANFILOV, M.I., dotsent;
KHIL'KO, M.M., inzh.; MEBESHCHIY, N.P., inzh.; ALFEROV, K.S., inzh.;
ANTONOV, S.P.; DIKSHTEYN, Ye.I.; YAGHYUK, M.I.; BELIKOV, K.N.;
GONCHAREYSKIY, Ya.A.; TRIFONOV, A.G.; SEDACH, G.A.

"Open-hearth plants with large-capacity furnaces" by D.A. Smoliarenko,
N.I. Efanova. Reviewed by N.A. Veher and others. Stal' 21 no.2:125-126
F '61. (MIRA 14:3)

1. Sverdlovskiy sovet narodnogo khozyaystva (for Veher, Germaidze, Pan-
filov).

(Open-hearth furnace—Design and construction)
(Smoliarenko, D.A.) (Efanova, N.I.)

ZHUKOV, A.I., inzh.; KHIL'KO, M.M., inzh.; MERSHCHIY, N.P.; SHKLYAR, M.S.;
SLEZ, L.G.

Practice of firing open-hearth furnaces with natural gas by the method
of self-carburation. Stal' 21 no. 4:307-311 Ap '61. (MIRA 14:4)
(Open-hearth furnaces--Combustion) (Gas, Natural)

S/133/63/000/002/003/014
A054/A126

AUTHORS: Mershchiy, N.P., Elimelakh, R.Z.

TITLE: At the Makeyevskiy metallurgicheskoy zavod im. S.M. Kirova (Makeyevka Metallurgical Plant im. S.M. Kirov)

PERIODICAL: Stal', no. 2, 1963, 130

TEXT: Tests were carried out with the chemical and mechanical capping of rimming steel. Chemical capping took place by addition of 75-% ferrosilicon and 45-% ferrosilicon, in quantities of 450 - 500 and 1,000 - 1,100 g/ton, respectively, on the metal surface in the ingot mold, immediately after the mold was filled with metal, bottom-poured at a linear rate of 0.2 m/min. This process improved the structure of the ingot top, decreased chemical inhomogeneity lengthwise and in cross section. Head crop could be reduced by 1 - 1.2% as compared to conventional rimming steel ingots, while the thickness of the blister-free zone is the same for both types. The maximum sulfur segregation in the axial zone decreased by a factor of 2 - 2.5. The ingot weight and the metal level in the ingot mold could be raised. When 75-% ferrosilicon was applied, a silicon-

Card 1/2

At the Makeyevskiy metallurgicheskiy zavod

S/133/63/000/002/003/014
A054/A126

concentration was observed in the upper part of the ingot, while with 45-% ferro-silicon this occurred only incidentally. If rimming was not sufficiently intense in the mold containing much slag, and if the ferrosilicon added was not mixed thoroughly, capping was ineffective and the head crop had to be increased. The mechanical capping of rimming steel ingots, poured in flask-shaped molds, improved the structure of the ingot top, so that head cropping was reduced by 2% and chemical inhomogeneity decreased. The bottle-shaped molds presented difficulties due to the quick wear of the rim of the upper opening when the inner surface was cleaned (in top pouring).

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S/133/63/000/002/004/014
A054/A126

AUTHORS: Alferov, K.S., Mershechiy, N.P., - Engineers

TITLE: At the Makeyevskiy metallurgicheskiy zavod im. S.M. Kirova (Makeyevka Metallurgical Plant im. S.M. Kirov)

PERIODICAL: Stal', no. 2, 1963, 131

TEXT: To increase the output of the blooming mill, the ingot weight was increased from 6.8 - 7.0 tons to 7.4 - 7.8 tons by raising the height. The dimensions of the blind-bottom molds for killed steel were $\frac{750 \times 670}{650 \times 670} \times 2,130$ mm and those of removable-bottom molds for rimming steel $\frac{717 \times 647}{770 \times 700} \times 2,650$ mm (internally). Killed steel was bottom-poured in 4-mold stools at a linear rate of 0.3 - 0.5 m/min, rimming steel in 8-mold stools (at 0.15 - 0.25 m/min). As to macrostructure and mechanical characteristics the 7.4-ton killed steel ingots are not inferior to the 6.8-ton ones. Decreasing the relative volume of the ingot-head by 0.8 - 1.0% made it also possible to reduce the head crop from 13.0 to 12.5% for common grade killed steel and from 14.5 to 13.5% for high-quality

Card 1/2

At the Makeyevskiy metallurgicheskiy zavod

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A054/A126

steel. When bottom pouring was applied, the conicity of killed steel blooms could be reduced to 2.3%, without the macrostructure being affected. The blooming mill output was increased by an average of 4%.

Card 2/2

LITVINENKO, D.L.; SHCHASTNYI, P.M.; YAKUSHIN, V.I.; VASIL'YEV, A.N.;
PODYMOGIN, I.Ye.; YUDIN, N.S.; YEVS'TAF'YEV, Ye.I.; RUBINSKIY, P.S.;
ELIMELAKH, R.Z.; MERSHCHIY, N.P.

Greater use in industry of semikilled steel. Metallurg 8 no.3:10-19
Mr '63. (MIRA 16:3)

(Steel—Metallurgy)

KOCHC, V.S., doktor tekhn. nauk, prof.; RUDOV, P.S., inzh.; MERSHCHIY,
N.P., inzh.; VINOGRADOV, N.M., inzh.; BLASHCHUK, N.M., inzh.

Continuous temperature control of an open-hearth bath
during oxygen blowing. Stal' 24 no.8:698-700 Ag '64.

(MIRA 17:9)

1. Kiyevskiy politekhnicheskii institut i Makeyevskiy
metallurgicheskii zavod.

TOVPENETS, Ye.S., kand. tekhn. nauk; IVASHCHENKO, V.M., inzh.; STYCHINSKIY, L.P., inzh.; ZHUKOV, A.I., inzh.; MERSHCHIY, N.P., inzh.; KORENEV, K.I., inzh.; SHUMEYKO, R.I., inzh.; IVANOV, F.I., inzh.

Mechanical properties of reinforcement rods after heat treatment from the rolling process temperature. Stal' 25 no.2:157-160
F '65. (MIRA 18:3)

1. Donetskij politekhnicheskij institut; Makeyevskiy metallurgicheskij zavod; Nauchno-issledovatel'skiy institut "Donpromstroy" i Novo-Kramatorskiy zavod tyazhelogo mashinostroyeniya.

PRILEPSKIY, V.I.; MERSHCHIY, N.P.; ALFEROV, K.S.

Some characteristics of the technology of making steel with natural
gas heating of open-hearth furnaces. Stal' 25 no.7:606-610 JI '65.
(MIRA 18:7)

PHILEPSKIY, V.I.; MERSHCHIY, N.P.; ALFEROV, K.S.

Production of semikilled steel for periodic reinforcements
of large diameter. Stal' 25 no.2:217-220 Mr '65.

(MIPA 1848)

ALFEROV, K.S.; MERSHCHIK, N.P.

Selecting the optimum composition of powders and the
technology of repairing bottoms of open-hearth furnaces.
Stal' 25 no.10:910 0 '65. (MIRA 18:11)

ALFEROV, K.S.; MACHKOVSKIY, V.A.; MERSHCHIY, N.P.

New developments in research. Stal' 25 no.10:961 O '65.
(MIRA 18:11)

MERSHEN, A. P.

"Soils and Forest-Growing Conditions in Southern Yergeni and the Syrt Steppe of the Trans-Volga Region." Cand Agr Sci, Moscow Acad of Agriculture, Moscow, 1954. (RZhGeol, Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SC: Sum. No. 521, 2 Jun 55

MERSTAD, A.P.

Some characteristics of the dark chestnut-brown soils of
the syrt steppe in the Kuibyshev Hlnteryolga region. A. P.
Mertsin. *Izvest. Tsimryuzer. Sel'khoz. Akad.* 1955, No. 11

(Whole No. 8), 157-84.—M. presents chem. data on the
profiles of 3 varieties of chestnut-brown soils, deep, medium,
and shallow, with respect to org. matter penetration, pH of
neutral salt ext., CO₂ (combined), SO₄²⁻, exchange Ca, Mg,
and Na, and water-sol. constituents: Cl, SO₄²⁻, Ca, Mg,
f. S. Joffe

MERSHIN, A. P.

✓
physicochemical and agricultural properties of the virgin chernozem and chestnut-brown soils of the Akmolinsk province of Kazakhstan. A. P. Mershin. *Izvest. Tsel'skoye. Sel'skhoz. Akad.* 1956, No. 1, 117-34. — Data are presented on the compn., CO₂, pH, N, exchange capacity, and exchangeable Ca, Mg, and Na of a no. of soil profiles of the chernozem and chestnut-brown soil types. In the virgin soil the available K was 76 mg./100 g. of soil, P 4 mg., and hydrolyzable N 11.1 mg. After 5-yr. cultivation the figure for K was 53.1 mg./100 g. of soil; the P and N content increased slightly. I. S. Jaffe.

KULAKOV, Ye. V.; MERSHIN, A. P.; PANOV, I. P.; PODDUBNYY, N. N.; ZENIN, A. A.; KOPTEVA,
Z. F.

Fertility of virgin and waste lands. Zemledelie 4 no. 10:28-36 0 '56.
(Soil fertility) (MLRA 9:11)

1750544001

USSR/Soil Science. General Problems

J-1

Abs Jour : Ref Zhur - Biol., 11, 26, 1956, No 91550

Author : ~~Marshin, V. P.~~
Inst : Moscow Agricultural Academy i. N. K. M. Thiryayev
Title : Agricultural Research of Soils in the "Eighteenth Anniversary of Kazakhstan" Collective Farm. (Kazakhstan)

Orig Pub : Dokl. Mosk. s.-kh. univ. im. K. M. Thiryayeva, 1956, 1, No 26, 131-134

Abstract : No abstract

Card : 1/1

1

MERSHIN, A. P.

USSR/Soil Science. Physical and Chemical Properties of Soils. I-3

Abs Jour: Referat Zh-Biol., No 6, 25 March, 1957, 22444

Author : Mershin, A.P.

Inst :

Title : Physico-Chemical Characteristics of Virgin Southern Chernozems and Dark Chestnut Soils of Akmolin Region.

Orig Pub: Dokl. Mosk. s.-kh. akad. im. K.A. Timiryazeva, 1956, No 22, 423-428

Abstract: The analytical data for chemical and physical soil properties are reviewed. The lack of mobile phosphorus in the soil is noted (4-6 mg per 100 g of soil), which makes it necessary to add granulated superphosphate or phosphobacterine. The analytical data are in 5 tables.

Card : 1/1

-1-

USSR / Soil Science. Physical and Chemical Properties of Soil. J

Abs Jour : Ref Zhur - Biologiya, No 11, 1958, No. 48620

Author : Mershin, A. P.

Inst : Moscow Agricultural Academy K. A. Timiryazev

Title : Agricultural Characteristics of the Soils on Novorybinskiy Sovkhoz in Akmolinskaya Oblast'

Orig Pub : Dokl. Mosk. s.-kh. akad. im. K. A. Timiryazeva, 1956, vyp 25, 237-242

Abstract : Physical and certain chemical properties of southern (of little and average humus content) chernozem soil of heavy mechanical composition under sowings of spring wheat are briefly reviewed.

Card 1/1

MERSHIN, A. P.

BUSHINSKIY, V.P., akademik; GROMYKO, I.D., kand. nauk; KOTOVRASOV, I.P.,
kand. nauk; KULAKOV, Ye.V., kand. nauk; ~~MERSHIN, A.P.,~~ kand. nauk;
PANOV, N.P., kand. nauk.

Proper utilization of waste and virgin lands in Kazakhstan. Dokl.
TSKhA no.28:5-14 '57. (MIRA 11:4)
(Kazakhstan--Reclamation of land)

MIRSHIN, N.P.

GROMYKO, I.D., kand. nauk; KOTOVRASOV, I.P., kand. nauk; KULAKOV, Ye.V.,
kand. nauk; MIRSHIN, A.P., kand. nauk; PANOV, N.P., kand. nauk.

Crop rotations and the cultivation of virgin lands in northern
provinces of Kazakhstan. Dokl. TSKhA no.28:43-51 '57. (MIRA 11:4)
(Kazakhstan--Agriculture)

GROMYKO, I.D., kand.sel'skokhozyaystvennykh nauk; KULAKOV, Ye.V., kand.
sel'skokhozyaystvennykh nauk; ~~MERSHIN, A.P.~~, kand.sel'skokho-
zyaystvennykh nauk; PANOVA, N.P., kand.sel'skokhozyaystvennykh
nauk

Soil fertility and crop cultivation practices on virgin lands of
northern Kazakhstan. Izv. TSKhA no.4:55-76 '58. (MIRA 11:10)
(Kazakhstan--Soils)

SARYKALINA, A.D., kand.sel'skokhozyaystvennykh nauk; MERSHIN, A.P., kand.-
sel'skokhozyaystvennykh nauk, dotsent

Physical and chemical changes in soils of the Moskva River flood-
lands as a result of irrigation and cultivation. Izv. TSKhA
no.4:86-96 '61. (MIRA 14:9)

(Moskva Valley--Soils)

GROMYKO, I.D.; KULAKOV, Ye.V.; MERSHIN, A.P.; PANOV, N.P.

Soil fertility in the Virgin Territory. Pochvovedenie no.9:
48-58 S '61. (MIRA 14:10)

1. Moskovskaya sel'skokhozyaystvennaya akademiya imeni K.A.Timi-
ryazeva.

(Virgin Territory—Soil fertility)

GROMYKO, I.D., kand.sel'skokhoz. nauk; KULAKOV, Ye.V., kand.sel'skokhoz. nauk; MERSHIH, A.P., kand.sel'skokhoz. nauk; PANGOV, N.P., kand. sel'skokhoz. nauk

Genetic characteristics of Solonetz-type and carbonate-rich Solonetz soils in the Virgin Territory [with summary in English].
Izv. TSKHA no.3:122-131 '63. (MIRA 16:9)
(Virgin Territory--Solonetz soils)

GROMYKO, I.D., kand. sel'skokhoz. nauk; KULAKOV, Ye.V., kand. sel'skokhoz. nauk; MERSHIN, A.P., kand. sel'skokhoz. nauk; PANOV, N.P., kand. sel'skokhoz. nauk

Agrochemical characteristics of the soils in the Virgin Territory and the use of fertilizers. Izv. TSKHA no. 1142. 63 '64. (MIRA 17:1)

1. Kafedra pochvovedeniya Moskovskoy ordena Lenina sel'skokhozyaystvennoy akademii imeni Timiryazeva i Pochvenno-agronomicheskoy muzey.

MERSHIN, A.F., dots.; GRECHIN, I.P., dots., red.

[Methods manual on the use of aerial photographic materials in soil mapping] Metodicheskoe rukovodstvo po ispol'zovaniu materialov aerofotos'emki pri pochvennom kartirovanii. Pod red. I.P.Grechina. Moskva, Mosk. sel'khoz. akad. im. K.A.Timiriazeva, 1964. 62 p.
(MIRA 18:12)

WERBACH, M.

Metal U-tube for measuring differential pressure with magnetic marks. p. 273.
(MAGYAR ENERGIATUDOMANYS. Vol. 8, no. 7, July 1955. Budapest.)

SO: Monthly List of East European Accession. (MAGYAR ENERGIATUDOMANYS. Vol. 8, no. 7, July 1955. Budapest.)

MERSICH, M.

MERSICH, M. - Proposal for a new solution of the problem of a water
gauge adjusted to a lower position.
p. 314, Vol. 9, no. 8, Aug. 1956.
Magyar Energiagazdasag - Budapest, Hungary

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4--April 1957

MERSIN, Yu.

85-58-2-32/36

AUTHOR: Mersin, Yu.

TITLE: Indoctrination of U. S. Air Force Personnel (Ideologicheskaya obrabotka lichnogo sostava VVS SSHA)

PERIODICAL: Kryl'ya rodiny, 1958, Nr 2, pp 30-31 (USSR)

ABSTRACT: The author asserts that personnel of the U. S. Air Force, and especially of the Strategic Air Command, are subjected to constant indoctrination designed to induce hatred of the USSR and other socialist countries, and a desire to wage aggressive war against them. He contends that this indoctrination is carried on through the press and by a widespread and well-organized system of information officers and chaplains who teach American racial superiority, and advocate the conquest of the world by the United States.

AVAILABLE: Library of Congress

Card 1/1

NO. 10, 1954.

1954.

Vol. 10, no. 5, 1954.

Merrill, N. Proceedings of the 10th Annual Meeting of the American Society for the Study of the History of Psychology, 1954.

Monthly Index of East European Periodicals (AI 10, Vol. 8, No. 1).
Jan. 1954.

MERSLAVIC, R.

New method for testing the freshness of fish. p. 197. MORSKO RIBARSTVO,
(Udruzenje morskog ribarstva Jugoslavije) Rijeka. Vol. 7. No. 8, Aug. 1955.

SOURCE: East European Accessions List. (EEAL) Library of Congress,
Vol. 5, No. 8, Aug. 1956.

MERSLAVIC, R.

Six years of Morsko ribarstvo: a review. p. 203. MORSKO RIBARSTVO.
(Udruzenje morskog ribarstva Jugoslavije) Rijeka. Vol. 7, No. 8, Aug. 1955.

SOURCE: East European Accessions List, (EEAL) Library of Congress,
Vol. 5, No. 8, Aug. 1956.

MERSLYAKOVA, A.B.

Investigating the VV Cassiopeae. Per.zvezdy 11 no.3:228-229
F '57. (MIRA 12:1)

1. Gosudarstvennyy astronomicheskiy institut im. P.K.Shternberga,
Moskva.

(Stars, Variable)

MERSON, B.G.

EXCERPTA MEDICA Sec 7 Vol.12/6 Pediatrics June 58

1697. LABILITY OF SERUM PROTEINS IN RHEUMATISM OF CHILDREN (Russian text) - Merson B. G. - SOVET. ZDRAVOOKHR. KIRGIZII 1956, 5 (22-25)
Having investigated the trend of lability of serum proteins in 137 children, the author believes that qualitative changes in the colloid properties of the serum proteins depend on the type and the phase of the disease. They are most pronounced in exudative forms and less so in productive forms. (S)

MERSON, B.G., dotsent

Variability of serum proteins in epidemic hepatitis in children
[with summary in English]. *Pediatria* 36 no.4:34-39 Ap'58 (MIRA 11:5)

1. Iz kafedry detskikh bolezney (zav. - prof. B.F. Shagan) Kirgizskogo meditsinskogo instituta.
(BLOOD PROTEINS)
(HEPATITIS, INFECTIOUS)

BANNIK, B.P.; GALPER, A.M.; GRISHIN, V.G.; KOTENKO, L.P.; KUZIN, L.A.;
KUZNETSOV, Ye.P.; MERSON, G.I.; PODGORETSKIY, M.I.; SIL'VESTROV,
L.V.

Elastic scattering of 2.8 and 6.8 BeV/c negative pions on carbon.
Dubna, Izdatel'skii otdel Ob"edinennogo in-ta iadernykh issledova-
nii, 1961. 20 p.

(No subject heading)

MEYERSON, M. I.

Antiulcerin in complex therapy of pyorrhea alveolaris. Stomatologia
no.5:12-13 S-0 '54. (MLRA 7:11)

1. Iz Gorkovskoy oblastnoy stomatologicheskoy polikliniki (glavnyy
vrach L.I.Dynnik)

(PERIODONTOCLASIA, therapy,

Gnaphalium uliginosum extract antiulcerin)

(PLANTS,

Gnaphalium uliginosum extract antiulcerin in periodonto-
clasia)

(VASOMOTOR DRUGS, therapeutic use,

Gnaphalium uliginosum extract antiulcerin in periodonto-
clasia)

MERSON, M.I.

Treatment of parodontosis with preserved blood and its preparations.
Stomatologiya 38 no.4:23-24 J1-Ag '59. (MIRA 12:12)

1. Iz Gor'kovskoy oblastnoy stomatologicheskoy polikliniki (glavnyy
vrach L.I. Dynnik).

(GUMS--DISEASES) (BLOOD--THERAPEUTIC USE)

MERSON, Yakov Iosifovich, inzh.; SHAMILEV, Mikhail Richardovich, inzh.;
RAZIN, Konstantin Alekseyevich, inzh.; SHTEYNBOK, G.Yu., inzh.,
ved. red.; SOROKINA, T.M., tekhn. red.

[Photopyrometry for the determination of surface temperature fields]
Fotopirometricheskoe opredelenie polei temperatur poverkhnostei. Mo-
skva, Filial Vses. in-ta nauchn. i tekhn. informatsii, 1958. 21 p.
(Peredovoi nauchno-tekhn. i proizvodstvennyi opyt. Tema 34.
No.P-58-91/11) (MIRA 16:3)
(Pyrometry) (Photometry) (Surfaces (Technology))

44832

S/560/62/000/014/003/011
A001/A101

3,1800

AUTHORS: Aver'yanov, I. P., Kasatkin, A. M., Liventsov, A. V., Markov, M. N.,
Merson, Ya. I., Shamilev, M. R., Shervinskiy, V. Ye.

TITLE: The measurement of Earth's thermal radiation into space during the
total eclipse of February 15, 1961, from an altitude geophysical
automatic station

SOURCE: Akademiya nauk SSSR. Iskusstvennyye sputniki Zemli. no. 14, 1962,
49 - 56

TEXT: To improve calculational methods of determining radiation of the
atmosphere at high altitudes, the study of optical properties of its upper
layers, using the measurements of its thermal radiation, is necessary. These
studies have been conducted in the USSR since 1958 by means of altitude geophys-
ical rockets. The article describes one of these experiments performed during
the total solar eclipse of February 15, 1961, in the middle part of the European
part of the USSR. The general scheme of the experiment is shown in Figure 1 and
the block-diagram of the device mounted on an altitude geophysical automatic.

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S/560/62/000/014/003/011
A001/A101

The measurement of Earth's thermal...

station (rocket) is shown in Figure 2. The rocket was lifted to an altitude of about 100 km. During the operation at high altitudes the device performed about 5 cycles of scanning, three of which were satisfactory and were used for processing. The recorder of radiation functions on the differential system of registration; the speed of scanning motion is 6° per one sec.; the threshold of bolometer sensitivity amounts to 10^{-9} w/cps at a frequency of 80 cps; the spectral sensitivity of the bolometers is uniform within the range from 1 to 40μ . The mean magnitude of the thermal flux, averaged for the total scanning angle, was determined to amount to 1.8×10^{-2} w.cm⁻². The experiment conducted, as well as the previous measurements of the Earth's thermal radiation, is the first attempt of this kind. There are 5 figures. X

SUBMITTED: March 10, 1962

Card 2/4

10565

S/020/62/146/002/006/013
B142/B186

3.5110

AUTHORS: Liventsov, A. V., Markov, M. N., Merson, Ya. I., Shamilov,
M. R.

TITLE: Experimental determination of outward terrestrial radiation

PERIODICAL: Akademiya nauk SSSR: Doklady, v. 146, no. 2, 1962, 344-346

TEXT: So far only mean values of terrestrial radiation could be calculated for the troposphere and stratosphere, and sometimes the data were unreliable. In view of this, the emissive terrestrial radiation was measured by means of high-altitude sounding rockets at altitudes from 100 to 500 km. A special infrared radiation-measuring device was used. It comprised an optical mirror system for focusing the thermal radiation emitted upward (spectrum range from 2.5 to 40 μ) onto a low-inertia bolometer, signal amplifiers, automatic recorders of the magnetic and galvanometric type, and radio-telemetering systems for monitoring the recorded data to Earth. The modulation principle was employed with a frequency of 80 c/sec. Operational difficulties through the spectrum band being close to the modulator band were overcome by differential modulation

Card 1/3

S/020/62/146/0C2/0C6/013
B142/B186

Experimental determination of ...

of heat flux radiation both from the Earth and from cosmic space used as control gauge. During 1958 - 1961 four tests were carried out over specific territorial sections of the central regions in the European part of the USSR at altitudes of 100 km (during the total solar eclipse on February 15, 1961), 200 km (two tests), and 470 km. Data from single territorial sections were obtained by scanning of the lower hemisphere in the optical system. Scanning angle was 180° , scanning intervals were 30 sec. Integral radiation within this wave range was recorded. Solar short-wave radiation was filtered out by frosting the mirrors or by dusting them with PbS. The spatial resolving power of the device was 0.5° . Before testing, the device was calibrated to radiator gauges and the sensitivity was automatically controlled by a special built-in gauge radiator over intervals of 30 sec. Q and T_{eff} were calculated according to Lambert's law as numerical values. They were compiled in a table together with comparative data from other authors. Differences in radiation flux due to meteorological factors were observed. Results:

Card 2/3

S/020/62/146/002/006/C13
B142/B186

Experimental determination of ...

	Test 1	Test 2	Test 3	Test 4
Q w/cm ²	1.2·10 ⁻²	0.9·10 ⁻²	1.4·10 ⁻²	1.8·10 ⁻²
T _{eff} , K ^o	216	200	224	238
Conditions	no clouds	medium over-cast	medium over-cast	continuous overcast solar eclipse

Conclusion : it was possible to measure infrared terrestrial radiation over a broad spectrum range (40 μ) in practice. At the same time a new method, has been developed which can be applied both to studies in geophysics and to terrestrial atmosphere research. The mechanical part of the radiation-measuring device was designed by V. Ye. Shervinskiy. There is 1 table.

PRESENTED: April 9, 1962, by A. A. Blagonravov, Academician
SUBMITTED: March 13, 1962
Card 3/3

MARKOV, M.N.; MERSON, Ya.I.; SHAMILEV, M.R.

Use of geophysical aerostats in studying the stratospheric and
tropospheric heat radiation fields in the infrared spectral region.
Kosm. issl. 1 no.2:235-248 S-O '63. (MIRA 17:4)

L 52504-65 EWT(1)/EWG(v)/FCC Pe-5/Pae-2 CS/GH

ACCESSION NR: AT5011154

UR/0000/64/000/000/0044/0050

AUTHOR: Markov, M.N.; Merson, Ya. I. Shamilev, M.R.

TITLE: Investigation of the angular distribution of the infrared radiation of the earth and its atmosphere from geophysical balloons 24
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SOURCE: Mezhdomstvennoye soveshchaniye po aktinometrii i optike atmosfery 5ta, Moscow, 1963. Aktinometriya i optika atmosfery (Actinometry, and atmospheric optics); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1964, 44-50

TOPIC TAGS: geophysical balloon, terrestrial infrared radiation, atmospheric infrared radiation, stratosphere, troposphere

ABSTRACT: This paper presents the results of measurements of the angular distribution of terrestrial radiation from geophysical balloons. The primary objective of the study was to determine the total radiation in the lower stratosphere and troposphere. Measurements were made mostly at heights of 25-30 km. Emphasis was on determining the form of angular distribution as a whole, the degree of isotropic distribution and the possibility of detecting meteorological inhomogeneities on the basis of thermal radiation in a broad infrared region of the spectrum (0.8-40 μ). Several series of ascents were made in 1960-1961. The block diagram of the recorder is shown in Fig. 1 of the

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Enclosure. The instrument consists of an optical head, small amplifier, a mechanism for rotating the scanning head and a mechanism for orienting the instrument. Measurements were made in the central zone of the European SSSR. Each ascent yielded the following experimental data: 1. The angular distribution of the intensity of infrared radiation of the earth and atmosphere in the direction of space. 2. A flight barogram. 3. Data from the astrophotographic unit. 4. Photographs of the underlying surface and space in the visible region of the spectrum. Fig. 2 of the Enclosure shows the angular distribution of radiation for several scanning cycles on four flights at different heights (season the same for all flights). Orig. art. has: 5 figures.

ASSOCIATION: Fizichesky institut imeni P. N. Lebedeva AN SSSR (Physics Institute, AN SSSR)

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L 52504-65

ACCESSION NR: AT5011154

ENCLOSURE: 01

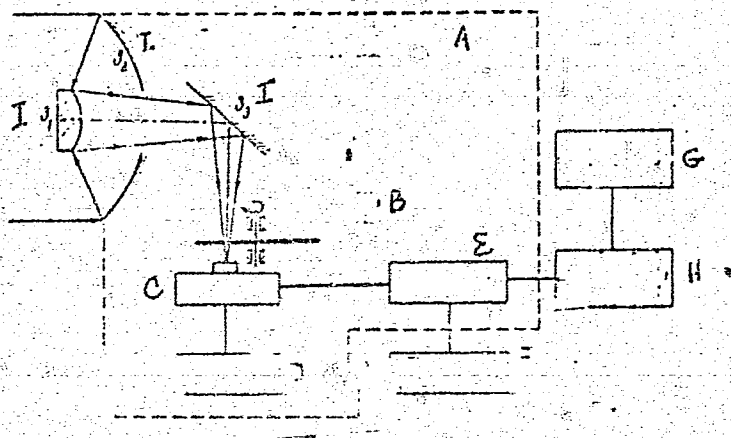


Fig. 1. Block diagram of the recorder. A. Optical head unit; B. Obturator; C. Bolometer; D. Power source (batteries); E. Amplifier; F. Power source (batteries); G. Power source (storage batteries, balloon electrical system); H. Loop oscillograph; I. Mirrors.

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ENCLOSURE: 02

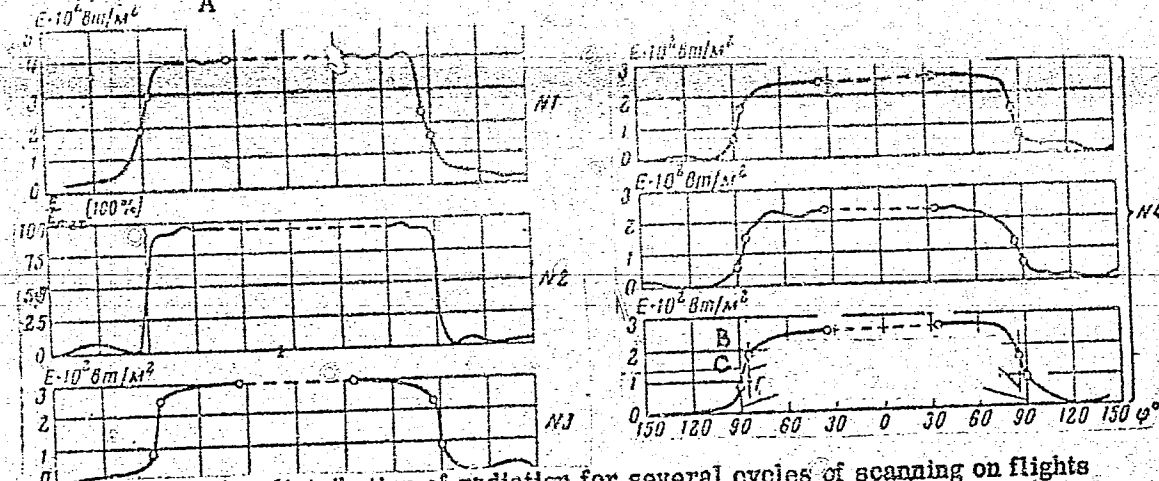


Fig. 2. Angular distribution of radiation for several cycles of scanning on flights Nos. 1-4 obtained from different heights. A) w/m²; B) tangent to earth's surface; C) horizontal direction.

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L. 45735-65 EWG(v)/EWT(1)/EEC(t)/FSS-26 Pe-5/Po-4/Pae-2 GW/GS
ACCESSION NR: AT501155 UR/0000/64/000/000/0051/0054

AUTHOR: Liventsov, A. V.; Markov, M. N.; Merson, Ya. I.; Shamilev, M. R.

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12-131

TITLE: Experimental determination of the outgoing radiation from the earth, and investigation of the thermal radiation from the earth into outer space during the time of the total solar eclipse, using high altitude geophysical rockets

SOURCE: Mezhvedomstvennoye soveshchaniye po aktinometrii i optike atmosfery. 5th, Moscow, 1963. Aktinometriya i optika atmosfery (Actinometry and atmospheric optics); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1964, 51-54

TOPIC TERMS: earth radiation, thermal radiation, geophysical rocket, high altitude rocket, solar eclipse, infrared radiation

ABSTRACT: The results reported were obtained since 1958 with geophysical rockets shot to altitudes of 100 - 450 km. The authors stress the results of one of the experiments carried out during the total solar eclipse of 15 February 1961 in the central belt of the European part of the Soviet Union. The radiation receiver was a bismuth bolometer. The null drift caused by instability of bolometer bridge and the

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dc amplifier were eliminated by using a modulation scheme. The specifications of the equipment are briefly described. The first essential result obtained during the experiments was a direct measurement of the average values of the radiation outgoing from the earth, measured from outer space. The results indicate that the radiation flux from the earth varies smoothly with angle, and does not decrease abruptly toward the earth's rim. This indicates that the high layers of the upper atmosphere have a strong influence on the angular distribution. The considerable change in the energy flux during the total phase of the eclipse also offers evidence of the appreciable contribution from the upper layers, since the thermal conditions in the lower layers and in the ground could not change noticeably during the total eclipse. The results cannot be directly compared with those by others, in view of the different experimental conditions. The data obtained make it possible to estimate the screening effect of the moon on the daytime thermal radiation of the earth's atmosphere and lead to the conclusion that although the theoretical values of the outgoing flux are in sufficiently good agreement with the experiment, the theoretical angular distribution needs considerable modification. "I. P. Aver'yanov, A. M. Kasatkin, and V. Ye. Shervinskiy participated in the experiment during the eclipse and in the development of the corresponding apparatus." Orig. art. has: 3 figures and 1 table. [02]

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