SHATALOVA, A.A.

Study of the function of the thyroid gland using the radioactive
method (I^{131}) in epilepsy. Vop.psikh.i nevr. no.7:455-459 '61.

(MIRA 15:8)

1. Iz Psikhonevrologicheskogo instituta imeni V.M.Bekhtereva (dir.
chlen-korrespondent Akademii pedagogicheskikh nauk RSFSR prof.
V.N. Myasishchev).

(IODINE--ISOTOPES) (THYROID GLAND)   (EPILEPSY)

SHATALOVA, A.A.; MEYEROV, G.I.

Possibility of using C^{14} benzoic acid in determining the synthetic
antitoxic function of the human liver. Med.rad. no.1:48-52 '62.
(MIRA 15:1)
1. Iz laboratorii biokhimii (zav. - prof. A.A. Shatalova) Nauchno-
issledovatel'skogo psikhonevrologicheskogo instituta imeni V.M.
Vekhtereva (Leningrad).
(LIVER)   (BENZOIC ACID)

SHATALOVA, A.A.; MEYEROV, G.I.

Radiometric method for determining the activity of urease.
Biokhimiia 28 no. 3:384-387 My-Je '63.

1. Nauchno-issledovatel'skiy psikhonevrologicheskiy institut
imeni V.M. Bekhtereva, Leningrad.

SHATALOVA, A.A.; MEYEROV, G.I.

Possibility of testing radiochemical purity of preparations by the radioenzymic method. Med. rad. 8 no.12:62-64 D '63.
(MIRA 17:8)

1. Iz laboratorii biokhimii (zav. - prof. A.A. Shatalova) Nauchno-issledovatel'skogo psikhonevrologicheskogo instituta imen. V.M. Bekhtereva, Leningrad.

L 41494-65   EWT(m)/EWP(t)/EWP(b)   IJP(c)   JD

ACCESSION NR: AP5004431   S/0075/65/020/001/0062/0066
                                                          /3
                                                          /2
AUTHORS: Levin, I. S.; Shatalova, A. A.; Azarenko, T. G.   B

TITLE: Use of alkyl phosphoric acids in analytical chemistry. Communication 2.
Separation of indium from antimony and bismuth

SOURCE: Zhurnal analiticheskoy khimii, v. 20, no. 1, 1965, 62-66

TOPIC TAGS: indium, antimony, bismuth, sulfuric acid, nitric acid, perchloric acid,
phosphoric acid, extracting agent, oxalic acid

ABSTRACT: A method for simultaneous separation of indium from antimony (Sb III) and
bismuth (Bi III) by extraction with alkyl phosphoric acid (APA) is described. First,
the extraction of Sb and Bi from sulfuric, nitric, and percholric acid solutions is
studied. It is shown that at 12-13 N H_2SO_4 concentration, the percent extraction of
Sb is at a maximum with mono-di- and pyro-ethylhexylphosphoric acid. It is then
shown that oxalic acid is the best medium for separating indium from Sb and a part
of Bi. The separation of indium from antimony and partial bismuth separation is
based on the re-extraction of Sb and Bi when indium (after flushing) is in the
organic phase. This can be accomplished with practically any amount of Sb, e.g.,
Sb: In = 4000:1. Similarily, indium can be separated from bismuth by the
Card 1/2

L 41494-65
ACCESSION NR: AP5004431

re-extraction of bismuth with potassium iodide. Orig. art. has: 5 figures, 3
tables, and 1 formula.

ASSOCIATION: Khimiko-metallurgicheskiy institut SO AN SSSR, Novosibirsk (Chemical-
Metallurgical Institute, SO AN SSSR)

SUBMITTED: 07Dec63   ENCL: 00   SUB CODE: GC

NO REF SOV: 017   OTHER: 008

Card 2/2

L'VIN, I.S.; SHATALOVA, A.A.

Extraction of antimony (III) by alkyl phosphoric acids and the
possibility of its separation from the accompanying elements.
Dokl. AN SSSR 161 no.5:1158-1160 Ap '65.   (MIRA 18:5)

1. Khimiko-metallurgicheskiy institut Sibirskogo otdeleniya AN
SSSR. Submitted October 24, 1964.

L 42941-65   EWT(1)/EWA(j)/EWA(b)-2   JK

ACCESSION NR: AP5008017   S/0016/65/000/003/0097/0101

AUTHOR: Shashayev, M. A.; Shapiro, I. L.; Shatalova, A. L.

TITLE: Length of periods during which plague and pseudotuberculosis bacteriophages are detected in a Rhombomys opimus organism

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 3, 1965, 97-101

TOPIC TAGS: Rhombomys, bacteriophage, phage, plague, spleen, blood, pseudotuberculosis

ABSTRACT: The present study investigated the number of phage particles found in the spleen and blood of a Rhombomys after administering only plague or pseudotuberculosis phages and after administering each of the phages together with its corresponding bacteria. Possible ways of transmitting phages were also studied. Four groups of 55 animals each were administered the following: the first group received a Pokrovskiy plague phage in a dose of $5 \cdot 10^8$ particles; the second group received the same phage and dose, and also at the same time $1 \cdot 10^6$ cells of plague bacteria (strain No. 319); the

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L 42941-65

ACCESSION NR: AP5008017

third group received a Kotlyarovskaya pseudotuberculosis phage in a
dose of $5 \cdot 10^7$ particles; and the fourth group received the same phage
and dose, and at the same time $1 \cdot 10^6$ cells of pseudotuberculosis
bacteria (strain No. 26S). Each phage was introduced into the right
groin area of the Rhombomys and the corresponding bacterial strain
was introduced into the left groin area. Two or three animals from
each group were killed daily for a period of 20 days to determine the
number of plague and pseudotuberculosis phages in the spleen. Phages
were found in the spleens of all animals in the four groups during the
entire observation period (20 days). With simultaneous administration
of a homologous bacteria strain to groups two and four, plague and
pseudotuberculosis phages did not multiply. In another experiment,
plague phages were found to circulate in the blood of a Rhombomys for
a 72 hr period and pseudotuberculosis phages for a 24-48 hr period,
with phage titers highest during the first 24 hrs. A plague phage
was experimentally transmitted from a Meriones Rhombomys to a
Rhombomus opimus by Xenopsylla gerbilli minax fleas, but this rarely
occurs in nature. Lysogenic bacteria appear to be the main source of
plague and pseudotuberculosis phages for rodents. Study data showing
that phages do not multiply in the presence of homologous bacterial

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L 42941-65

ACCESSION NR: AP5008017

strains explains why various attempts to use phages as therapeutic agents in infectious diseases have failed. Orig. art. has: 2 tables and 1 figure.

ASSOCIATION: Sredne-Aziatskiy nauchno-issledovatel'skiy protivochumnyy institut i Taldy-Kurganskaya protivochumnaya stantsiya (Central Asia Scientific-Research Antiplague Institute and Taldy-Kurgansk Antiplague Station)

SUBMITTED: 14Jun63   ENCL: 00   SUB CODE: LS

NR REF SOV: .002   OTHER: 000

Card 3/3

POLKOVNIKOVA, A.G.; KRUZHALOV, B.D.; SHATALOVA, A.N.; TSEYTINA, L.L.

Catalytic oxidation of propylene to acrolein in the presence
of inert diluents. Kin.i kat. 3 no.2:252-256 Mr-Ap '62.
(MIRA 15:11)
1. Nauchno-issledovatel'skiy institut sinteticheskikh spirtov i
organicheskikh produktov.
(Propene) (Acrolein) (Catalysis)

POLKOVNIKOVA, A.G.; SHATALOVA, A.N.; TSEYTINA, L.L.

Preparation of acrolein by catalytic oxidation of propylene.
Neftekhimiia 3 no.2:246-253 Mr-Ap '63.   (MIRA 16:5)

1. Nauchno-issledovatel'skiy institut sinteticheskikh spirtov i
organicheskikh produktov.
                        (Acrolein) (Propene) (Oxidation)

SHATALOVA, G. S.

Use of fibrin films in neurosurgery. Vopr. neirokhir. 14 no.
5:23-29 Sept-Oct 1950.   (CIML 20:1)

1. Of the Institute of Neurosurgery imeni Academician N. N.
Burdenko (Director -- Prof. B. G. Yegorov), Academy of Medical
Sciences USSR.

SHATALCVA, G. S.

"Replacement of Defects in the Dura Mater by Fibrinous Pellicles." Sub 10 May 51, Acad Med Sci USSR.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

SHATALOVA, G.S., kandidat meditsinskikh nauk; YEGOROV, B.G., chlen-korrespon-
dent Akademii meditsinskikh nauk SSSR, professor, direktor.

3-year results of the application of fibrin film in cerebrocranial surgery.
Khirurgiia no.4:32-36 Ap '53.   (MLRA 6:6)

1. Institut neyrokhirurgii Akademii meditsinskikh nauk SSSR. 2. Akademiya
meditsinskikh nauk SSSR (for Yegorov).   (Head--Surgery) (Fibrin)

Abstract M-670, 27 Jul 55

84833

18 6200   only 2308, 1497.

S/020/60/134/005/021/023
B016/B054

AUTHORS   Likhtman, V. I., Gorbunov, N. S., Shatalova, I. G., and
Rebinder, P. A., Academician

TITLE: On the Solidification by Vibration in Powder Metallurgy

PERIODICAL   Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 5,
pp. 1150-1152

TEXT: The application of powder-metallurgical methods is much impeded by
the high pressures required for pressing, particularly if the powders are
highly disperse. Also the small amounts of surface-active lubricants
acting favorably to a certain degree and counteracting the relaxation of
elastic stresses (Ref. 1) are unable to encounter the cracking of pressed
pieces at high ram pressure. In their investigation, the authors proceeded
from the results of application of vibration to the production of
building materials (Ref. 2). They present the results of application of
vibration to the pressing of various powders used in powder metallurgy.
The vibration source used was a mechanical vibrator of the type И-116
(I-116) with a frequency of 14.000 vibrations per minute, and a vibrational

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84633

On the Solidification by Vibration in
Powder Metallurgy

S/020/60/134/005/021/023
BO·6/B054

amplitude of 0.03 mm, which was found to be most favorable. Fig. 1 shows
a diagram of the vibrator mentioned (vibropress). Fig. 2 shows the time
dependence of the density of pressed pieces of powder mixtures as they
are used in hard metal production. Hence, it appears that 10 seconds are
sufficient to attain maximum density. For various metal powders, and for
their mixtures with nonmetallic powders, optimum duration of vibropressing
lies between 4 and 10 sec. The dispersity of the powder, and particularly
its fractional composition, are of high importance. Coarse powders can be
better pressed than fine ones. Particularly good results were obtained in
vibropressing with a polydisperse powder containing both coarse and fine
particles within a wide range of sizes. The authors also studied the
pressure dependence of the density of pressed pieces in vibropressing.
The results were compared with those of ordinary static and hydrostatic
pressing. Figs. 3 and 4 give such data for mixtures of titanium- and
tungsten carbide with cobalt, which are used for the production of hard
metals of the types BK6 (VK6), BK20 (VK20), T15K6 (T15K6), and T30K4
(T30K4). For the first two types (with 6 and 20% by weight of Co,
respectively) rest tungsten carbide, the ram pressure could be reduced
to about 1700 when the application of vibration. Conditions were similar

Card 2/3

84833

On the Solidification by Vibration in   S/020/60/134/005/021/023
Powder Metallurgy   BC16/BC54

for other mixtures. By the methods described, it was possible to eliminate,
to a great extent, the difficulties and defects of pressed pieces mentioned
at the beginning. The authors thank N. V. Mikhaylov, Doctor of Technical
Sciences, for assisting in the work. There are 4 figures and 2 Soviet
references

ASSOCIATION   Institut fizicheskoy khimii Akademii nauk SSSR (Institute
              of Physical Chemistry of the Academy of Sciences, USSR)

SUBMITTED: June 8, 1960

Card 3/3

LIKHTMAN, V.I.; GORBUNOV, N.S.; SHATALOVA, I.G.; REBINDER, P.A., akademik

Vibrational densification in powder metallurgy. Dokl. AN SSSR 134
no.5:1150-1152 O '60. (MIRA 13:10)

1. Institut fizicheskoy khimii Akademii nauk SSSR.
(Powder metallurgy)

39643
S/137/62/000/007/021/072
A052/A101

| 1600

AUTHORS: Gorbunov, N. S., Shatalova, I. G., Likhtman, V. I., Mikhaylov, N. V.,
             Rebinder, P. A.

TITLE: On the vibration method of compression in powder metallurgy

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 7, 1962, 47, abstract 7G325
             ("Poroshk. metallurgiya", no. 6, 1961, 10 - 16; English summary)

TEXT: The effect of working pressure on the change of density at a static
and vibration (vibrator with a vibration frequency of 14,000 per minute) pressing
of powders of Ti, Mo, SiC, B_4C, TiC and WC hard-alloy mixtures was studied. Vibra-
tion pressing is especially advantageous for unmoldable powders of refractory
compounds. When a vibrator is used the working pressure reduces approximately by
two orders of magnitude, which is connected with a better packing of powders. The
effect of the time factor and of the height of briquets on the change of density
was also studied.

                                            R. Andriyevskiy

[Abstracter's note: Complete translation]

Card 1/1

42023
S/659/62/008/000/015/028
I048/I248

AUTHORS: Gorbunov, N.S., Shatalova, I.G., Likhtman, V.I., and
Rebinder, P.A.

TITLE: Investigation of the vibration compacting of powdered
metals and their compounds

SOURCE: Akademiya nauk SSSR. Institut metalurgii, Issledovaniya
po zharoprochnym splavam. v.8. 1962. 103-110

TEXT: The vibratory compacting of various metal, carbide, nitride,
boride, and metal-carbide powders was studied on the I-116 vibrator,
at a frequency of 14000 vibrations/min. The vibratory compacting
of materials having elastic moduli above 25000 kg./sq.mm. (e.g., Mo,
TiC, WC, TiB_2, Co+WC) yielded products with a density equal to ·or
higher than that obtained under static loads of 1200 kg./sq.cm.;
the pressure applied during the vibratory compacting was 20 kg./sq.
cm. In some cases densities higher than the density produced by any
other method were obtained through the use of the vibration method,

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S/659/62/008/000/015/028
I048/I248

Investigation of the vibration...

e.g., 9 g./cc in the case of WC+3% Co. However, vibratory compact-
ing was inferior to the conventional static pressure method when
applied to materials with elastic moduli below 25000 kg./sq.mm.
(e.g., Co, Cr). The density of vibration-compacted products in-
creased with time under load and generally reached a constant value
after about 25 secs. In all cases the density increased with in-
creasing pressure. The final density was affected by the nature
and amount of liquid wetting agent used, e.g., a 6% aq. solution of
glycerine gave better results than water alone, the optimum amount
of the glycerine solution being 6.5% by wt. of the powder. The den-
sity increased with increasing kinetic moment of the vibrations
(within the range 0.065-0.35 kg.cm.). There are 5 figures and 3
tables.

Card 2/2

ACCESSION NR: AT4013968   S/2659/63/010/000/0295/0300

AUTHOR: Gorbunov, N. S.; Shatalova, I. G.; Likhtman, V. I.

TITLE: The influence of several factors on the density of packing of powder particles under the influence of vibration

SOURCE: AN SSSR. Institut metallurgii. Issledovaniya po zharoprochny*m splavam, no. 10, 1963, 295-300

TOPIC TAGS: powder metallurgy, powder metal density, packing density, vibrations, magnetic material, chemical stability

ABSTRACT: One of the most important technological operations in powder metallurgy is the pressing of powder into parts. It is very difficult, however, to obtain high density pressed parts from hard and brittle powder materials. The present investigation on the density of packing of powder particles under vibration was based on the theories of Academician P. A. Rebinder. The investigation showed that parts with a density up to 90% may be obtained when powders are vibrated. The following conditions must be observed: Two or three fractions of powder of optimal size should be used. The powder particles should be able to be compacted and should be of relatively simple shape. There should be no significant roughness on the particle boundaries. The duration of vibration should be limited by the time required for final placing of the particles, especially for

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ACCESSION NR: AT4013968

particles of brittle, non-plastic materials. Table 1 of the Enclosure shows the change
in powder density with the course of time of vibration. Orig. art. has: 1 figure and 4
tables.

ASSOCIATION: Institut metallurgii AN SSSR (Institute of Metallurgy AN SSSR)

SUBMITTED: 00   DATE ACQ: 27Feb64   ENCL: 01

SUB CODE: MM NO REF SOV: 002   OTHER: 000

Card   2/3

ACCESSION NR: AT4013968   TABLE 1   ENCLOSURE: 01

The change in packing density of powders with the course of time of vibration

Material of the powder	Parameters of vibration			Density (at equal length of vibration in sec.), g/cm³								
	frequency, vibr./min	amplitude, microns	specific pressure kg/cm²	3	6	9	12	15	18	21	24	30
Chromium	14 000	20	18.2	4.14	4.29	--	4.36	--	4.40	--	4.46	4.46
	10 000	65	18.2	4.43	4.56	--	4.67	--	4.72	--	4.72	--
Molybdenum boride	14 000	14	18.2	2.44	2.62	2.67	--	2.71	--	2.76	--	2.78
	10 000	75	17.6	3.12	3.30	--	3.38	--	3.52	--	3.52	--
Carborundum	14 000	15	21.2	2.02	2.06	2.09	2.12	2.12	--	--	--	--
	10 000	90	24.3	2.22	2.27	--	2.27	--	--	--	--	--

Card   3/3

SHATALOVA, Irina Georgiyevna, kand. tekhn. nauk; GORBUNOV,
Nikolay Stepanovich, prof., doktor khim. nauk; LIKHTMAN,
Vladimir Iosifovich, prof, doktor fiz.-matem. nauk;
REBINDER, P.A., akademik, otv. red.; CHERNYAK, A.L., red.

[Physicochemical principles of the vibrational compression
of powdered materials] Fiziko-khimicheskie osnovy vibratsion-
nogo uplotneniia poroshkovykh materialov. Moskva, Nauka,
1965. 162 p.   (MIRA 18:3)

1. Rukovoditel' Instituta fizicheskoy khimii AN SSSR (for
Rebinder).

ACC NR: AM5015045 .. .. . .BOOK EXPLOITATION .. . . . UR/ .. ..

Shatalova, Irina Georgiyevna (Candidate of Technical Sciences); Gorbunov, Nikolay
Stepanovich (Professor; Doctor of Chemical Sciences); Likhtman, Vladimir Iosifo-
vich (Professor; Doctor of Physical-Mathematical Sciences)

Physical-chemical principles of vibration compacting of powdered materials (Fiziko-
khimicheskiye osnovy vibratsionnogo uplotneniya poroshkovykh materialov) Moscow,
Izd-vo "Nauka", 1965. 162 p. illus., biblio. Errata printed inside back cover.
2500 copies printed. (At head of title: Akademiya nauk SSSR. Institut fiziches-
koy khimii) Editor: A. L. Chernyak; Technical editors: O. G. Ul'yanova, O. M.
Gus'kova; Managing editor: Academician P. A. Rebinder

TOPIC TAGS: ceramic processing, ceramic technology, cermet, powdered material, powder
metal compaction, powder metal molding, powdered glass, vibration compacting, vibra-
tion packing

PURPOSE AND COVERAGE: This monograph was intended for a wide circle of engineers and
personnel in the plant laboratories in all branches of metallurgy, the construction
and silicate industries, and production of fine ceramics and refractories, and also
instructors, aspirants and students in higher educational institutions connected with
the indicated fields of technology, as well as scientific personnel in the correspon-
ding research institutes. The authors describe the new, extremely valuable method,

Card 1/3

$UDC: 66.08/.09:66.099.5:621:929.7$

ACC NR: AM5015045

developed by them, for pressing powder materials by applying vibration packing. The technological and economic advantages of this method are tremendous, especially for powders of very hard, strong materials, such as carbides, borides, metals, ceramics, ferrites, etc.. The authors present a detailed and systematic description of investigations on the process of packing various powdered materials, depending on numerous physical-chemical factors: frequency and amplitude of vibration, granulometric composition of the powder, additions of surface-active lubricants, etc. This new demarcation in knowledge has been developed principally in the Institute of Physical Chemistry of the Academy of Sciences of the USSR, in the Section of Dispersed Systems (Otdel dispersnykh sistem), under the over-all direction of Academician P. A. Rebinder.

TABLE OF CONTENTS (ABRIDGED):

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ACC.NR: AM5015045

Literature - - 156

SUB CODE: 11,13   /SUBM DATE: 23Jan65   /ORIG REF: 115   /OTH REF: 061

Card 3/3

L 61030-65   EWP(e)/EWT(m)/EPF(n)-2/EWP(t)/EWP(k)/EWP(z)/EWP(b)   Pf-4/Pu-4   IJP(c)

ACCESSION NR: AR5017418   JD/JG   UR/0137/65/000/006/G028/G028

SOURCE: Ref. zh. Metallurgiya, Abs. 6G194

AUTHOR: Shatalova, K. G.; Gorbunov, N. S.; Likhtman, V. I.

TITLE: Investigation of density distribution over the height of briquets during vibration compacting of powders

CITED SOURCE: Tr. 7 Vses. nauchno-tekhn. konferentsii po poroshk. metallurgii. Yerevan, 1964, 101-105

TOPIC TAGS: powder metal compaction, vibration, tungsten, cobalt, specific density

TRANSLATION: An investigation was made of density distribution over the height of briquets, after vibration compacting at a frequency of 260 cycles; the powder was a mixture of tungsten powders containing 20% cobalt, wetted with a solution of glycerin in alcohol (0.3 glycerin). The diameter of the briquets was 20 mm, and the height from 7.75 to 106.80 mm. The compacting pressure in all cases was 25 kg/mm^2. The vibrations were intensively damped in the layer of the briquets

Card 1/2

L 61030-65

ACCESSION NR: AR5017418   O

at a distance of 10-20 mm from the source of the vibrations. Application of the
principle of a floating die decreases the nonuniformity of the density. Forced
vibration of the die made it possible to reduce the nonuniformity of the density
distribution in high briquets. Vibration compacting permitted production of bri-
quets with a higher ratio of height to diameter and with a better density distribu-
tion than by static pressing. M. Bal'shin

SUB CODE: MM   ENCL: 00

Card2/2

SHATALOVA, L.I.; SHEKHTER, A.B.

      Pheochromocytoma of the adrenal gland with fatal outcome in
pregnancy. Akush.i gin. 37 no.1:105-106 '61.   (MIRA 14:6)

      1. Iz rodil'nogo otdeleniya (zav. L.I. Shatalova) i patologoana-
tomicheskogo otdeleniya (zav. A.B. Shekhter) Shchekinskoy gorod-
skov bol'nitsy No.1 (glavnyy vrach N.I. Nesterov).
        (PREGNANCY, COMPLICATIONS OF) (ADRENAL GLANDS—TUMORS)

4278. SHATALOVA N.A. * The treatment of parapleuritis (Russian text) VESTN. KHIR. 1953, 73/3 (40-42)

Report of 4 cases of suppurative parapleuritis simulating an 'empyema necessitatis'. In 3 cases complete cure was obtained by puncture with evacuation of the pus and repeated injection of a 10% emulsion of iodoform. In the 4th case a thoracotomy was performed with removal of the pus and of the abscess wall followed by the introduction into the pleural cavity of Wishnewsky's pommade, the formula of which is not specified however. In this case some improvement was obtained, but the patient was discharged with a sinus. In the other 3 cure was obtained after 22, 39 and about 60 days respectively   Parenti - Ferrara (IX, 6, 15)

SHATALOVA, N.A.

Late pulmonary hemorrhages following wounds from penetrating
foreign bodies. Vest.khir. 73 no.6:32-36 N-D '53. (MLRA 6:12)

1. Is 2-y fakul'tetskoy khirurgicheskoy kliniki (nachal'nik -
professor P.A.Kupriyanov) Voyenno-meditsinskoy akademii im.
S.M.Kirova.

(Lungs--Wounds and injuries)

STARICHKOV, M.S., kand. med. nauk.; SHATALOVA, N.A., kand. med. nauk.

Partial duplication of the esophagus and stomach. Vest. rent. i rad.
33 no.6:86-88 N-O '58.   (MIRA 12:1)

1. Iz kafedry gospital'noy khirurgii (nachal'nik kafedry - prof.
I. S. Kolesnikov) Voyenno-meditsinskoy ordena Lenina akademii imeni
S. M. Kirova.
        (ESOPHAGUS, abnorm.
            partial esophagogastric duplication (Rus))
        (STOMACH, abnorm.
            same)

YERMOLAYEV, V.R., kand.med.nauk; SHATALOVA, N.A., kand.med.nauk

Chronic atelectasis of the middle lobe and lingula of the lung
of varied etiology [with summary in English]. Vest.khir. 82
no.1:86-93 Ja '59.   (MIRA 12:2)

1. Iz gospital'noy khirurgicheskoy kliniki (nach. - prof. I.S. Koles-
nikov) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.
Adres avtora: Leningrad, K-9, Botkinskaya ul., d.23, gospital'naya
khirurgicheskaya klinika.
        (ATELECTASIS, etiol. & pathogen.
            chronic, of middle lobe & lingula (Rus))

SHATALOVA, O. K.

Electric conductivity of different bismuth alloys. Z. I. Kir'yashkina and O. K. Shatalova. Uchenye Zapiski Saratov. Univ. 36, 29-33(1954); Referat. Zhur., Khim. 1956, Abstr. No. 3277.—For a single crystal of 99.98% pure Bi, the specific resistance (ρ) increases linearly with the temp. up to 120°; at higher temps. the relation is no longer linear. The value of ρ depends on the angle α between the direction of current and the main axis of the crystal; at 20°, for $\alpha = 65°$, $\rho = 113.5 \times 10^{-4}$ ohm cm.; for $\alpha = 10°$, $\rho = 132.8 \times 10^{-4}$ ohm cm.; for $\alpha = 4°$, $\rho = 139.7 \times 10^{-6}$ ohm cm. The curves $\rho = f(T)$ for different α are parallel. Addn. of 0.81-3.1 at. % Pb increases ρ 2-3 times. The curve $\rho = f(T)$ for Bi-Pb consists of 4 sections: (1) from -21 to +90°, when ρ decreases, (2) from 90 to 160°, when ρ is const. or changes very slightly, (3) from 160 to 250°, when ρ increases, and (4) above 250°, when ρ sharply decreases. Addn. of 0.55 at. % Sn increases ρ 2-4 times; the shape of the curve $\rho = f(T)$ is the same as for Bi-Pb.   Alexis N. Pestoff

BELETSKIY, ... prof., Doktor fiz.-matem. nauk; RAYKHENSHTEYN, I.TS.;
..., assistent

...sing molybdenum disulfide for reducing the wear of cutting
tools. Mashinostroitel' no.7:40-42 Jl '65.
                                                (MIRA 18:7)

1. Zaveduyushchiy kafedroy fiziki Leningradskogo inzhenerno-ekono-
micheskogo instituta imeni Pal'miro Tol'yatti (for Beletskiy).
2. Zamestitel' nachal'nika instrumental'nogo otdela Nauchno-
issledovatel'skogo instituta tekhnologii mashinostroyeniya Lenin-
gradskogo soveta narodnogo khozyaystva (for Raykhenshteyn).
3. Kafedra fiziki Leningradskogo inzhenerno-ekonomicheskogo
instituta imeni Pal'miro Tol'yatti (for Shatalova).

OYFEBACH, M.I.; ELINSON, F.L.; SHATALOVA, O.S.; MAZINA, Ye.G.; YAMPOL'SKAYA, V.D.

Incidence of healing in primary tuberculosis in adolescents and adults. Prob. tuberk., Moskva no.2:31-36 Mr-Ap '50.   (CLML 19:3)

1. Of the Institute of Tuberculosis of the Academy of Medical Sciences USSR (Director -- Z.A.Lebedeva; Scientific Director -- Prof. A.Ye.Rabukhin)

S/137/62/000/001/177/237
A006/A101

AUTHOR: Shatalova, V. I.

TITLE: The effect of the temperature factor on corrosion behavior of iron nickel, aluminum, tin and zinc in hydrochloric and sulfuric acids

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 1, 1962, 80, abstract 1I566 ("Izv. Voronezhsk. gos. ped. in-ta", 1960, v. 29, 45 - 53)

TEXT: The author studied the effect of temperature on the corrosion rate of Fe, Ni, Al, Sn, Zn in 1 n. solutions of HCl and H_2SO_4. At elevated temperatures the corrosion rate of all the metals investigated increased continuously. Least corrosion was observed in Sn, maximum one in Zn. The rate of dissolving of the metals investigated is higher in HCl than in H_2SO_4; this difference is particularly sharp at high temperature (with the exception of Ni, whose corrosion rate in HCl is lower than in H_2SO_4, approximately to 5 - 10°C, and Fe, to 20 - 25°C). On the basis of general concepts, considering the temperature factor as a basic criterium for the difference of diffusion and chemical processes, it can be stated that in the case of Fe (in both acids), Al (in both acids) Ni in HCl, and Zn (in both acids at low temperatures) diffusion processes are of insignificant import-

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The effect of the temperature factor...

S/137/62/000/001/177/237
A006/A101

ance whilst the chemical processes exert a controlling effect. In the case of Ni in H_2SO_4 and, in particular, for Sn, in both acids, however, the diffusion processes exert a considerable effect on the corrosion rate. For all the metals investigated (with the exception of Al in HCl and Zn in both acids at $> 40°C$), the logarithm of the corrosion rate is a linear function of $1/T$. There are 12 references.

Author's summary

[Abstracter's note: Complete translation]

Card 2/2

S/137/61/000/011/105/123
A060/A101

AUTHORS   Khitrov, V.A., Shatalova, V.I.

TITLE: On the effect of temperature upon the corrosion resistance and the
               electrode potentials of metals in acid environments. 2. Zinc

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 11, 1961, 51, abstract
               11I340 ("Izv. Voronezhsk. gos. ped. in-ta", 1960, 29, 55 – 63)

TEXT.   An investigation was carried out of the corrosion and electrochemi-
cal behavior of electrolytic and chemically pure Zn, and also the effect of tem-
perature upon the corrosion resistance and the electrode potentials of that Zn
in 1 N solutions of H_2SO_4 and HCl. The purity of the metal has a great influ-
ence on its corrosion and electrochemical behavior. The corrosion rate of elec-
trolytic Zn is 7-11 times higher than that of chemically pure Zn. At all tempera-
tures Zn of both kinds corrodes at a higher rate in HCl than in H_2SO_4 solution.
The electrode potentials of electrolytic Zn in solutions of both acids and at all
temperatures improve with time and do not take stationary values. The potentials
of chemically pure Zn quickly take the stationary values and vary little with
time and temperature. The electrolytic Zn in solutions of both acids is not

Card 1/2

On the effect of temperature

S/137/61/000/011/105/123
A060/A101

polarized even at high D and at low temperatures. Chemically pure Zn is polarized particularly noticeably at low temperatures (0 and 20°C). The cathode polarization at all temperatures exceeds the anode polarization in both acids. The corrosion of both chemically pure and electrolytic Zn is controlled by the rate of the cathode reaction of H^+-ion discharge. However, as the temperature increases and as the contamination of the metal surface increases, the access of the acid to the Zn becomes more difficult and the hydrogen overpotential is reduced, leading to an intensification of the role of the factors determining the value of the limiting diffusion current. There are 10 references.

V. Tarisawa

[Abstracter's note: Complete translation]

Card 2/2

S/137/62/000/001/178/237
A006/A101

AUTHORS: Shatalova, V. I., Khitrov, V. A.

TITLE: On the kinetics of self-diffusion processes of iron, nickel, aluminum, and zinc in hydrochloric and sulfuric acids at various temperatures

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 1, 1962, 80, abstract 11567 ("Izv. Voronezhsk. gos. ped. in-ta", 1960, v. 29, 65 - 77)

TEXT: The authors studied kinetics of self-diffusion of Fe, Ni, Al and Zn in 1 n. HCl and H_2SO_4 solutions. At low temperatures (20, 40°C), the self-diffusion process of the metals investigated was retarded in time (with the exception of Zn in both acids and Fe in 1 n. HCl at 40°C after holding the specimen in the solution for 3 hours). The diffusion of Al in 1 n. H_2SO_4 at 60°C is also retarded in time. At higher temperatures (60, 80°C) the self-diffusion process is accelerated (with the exception of Al in 1 n. H_2SO_4 at 60°C). Corrosion-time and corrosion rate - time curves, plotted for the diffusion of Fe in 1 n. H_2SO_4 at 60°C, Fe in 1 n. HCl at 40°C, and Al in 1 n. H_2SO_4 at 80°C, are complex curves showing a retarded process at the beginning, and a subsequent acceleration. Causes are mentioned which promote retardation or acceleration in time of the

Card 1/2

On the kinetics of ...

S/137/62/000/001/178/237
A006/A101

self-diffusion processes of metals in H_2SO_4 and HCl solutions. There are 11 references.

Author's summary

[Abstracter's note: Complete translation]

Card 2/2

S/020/60/133/04/28/031
B004/B056

AUTHORS: Khitrov, V. A., Shatalova, V. I., Smol'yaninov, I. S.,
Sadovskaya, Yu. I.

TITLE: The Problem of the Influence of Temperature on the Rate of
Corrosion of Metals in Acid Media

PERIODICAL   Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 4,
pp. 886 - 888

TEXT. The authors investigated the influence exerted by temperature on
the rate of corrosion of Armco iron, nickel, zinc, and cadmium in
1 N H_2SO_4 and N HCl, and found a linear course for the function
log K   f(1/T. according to the Arrhenius equation (Fig. 1). For the
corrosion of aluminum in 1 N HCl this function is, however, no longer
linear: corrosion increases with rising temperature more quickly than
would correspond to the Arrhenius equation (Fig. 2) This is explained by
the destruction of the oxide layer of Al. In the case of commercial
aluminum of the type Al 2   it was observed in 35 N H_2SO_4 that the

Card 1/-

The Problem of the Influence of Temperature
on the Rate of Corrosion of Metals in Acid
Media

S/020/60/133/04/28/031
B004/B056

corrosion rate obeys the Arrhenius equation up to 50 - 60°C, attains
a maximum value at 70°C, after which it decreases (Fig. 3). This is
explained by increasing passivation of the Al. A similar behavior is
shown by copper in 1 N HCl and 1 N H_2SO_4 (Fig. 3). Slight deviations from
linearity are found in zinc and lead in both acids (Fig. 4). This is
assumed to be caused by the fact that the rate of the diffusion processes
increases more slowly with rising temperature than the rate of chemical
processes. The authors mention a paper by N. D. Tomashov and T. V.
Matveyeva (Ref. 7). There are 4 figures and 8 references : 7 Soviet and
1 British.

ASSOCIATION: Voronezhskiy gosudarstvennyy pedagogicheskiy institut
(Voronezh State Pedagogical Institute)

PRESENTED: March 10, 1960 by V. I. Spitsyn, Academician

SUBMITTED: March 9, 1960

Card 2/2

SHISHALOVA, V.I.; MITROV, V.A.

Temperature effect on the corrosion resistance and electrode
potentials of metals in acid media. Part 1: Iron.
Izv.vys.ucheb.zav.;khim.i khim.tekh. 4 no.3:404-408 '61.
                                              (MIRA 14:10)

1. Voronezhskiy pedagogicheskiy institut, kafedra khimii.
              (Iron--Corrosion)
              (Electromotive force)

KHITROV, V.A.; SHATALOVA, V.I.

Kinetics of electrode processes on a chemically pure and commer-
cial tin in sulfuric and hydrochloric acid solutions at various
temperatures. Zhur.prikl.khim. 34 no.9:2106-2110 S '61.(MIRA 14:9)

1. Voronezhskiy Pedagogicheskiy institut.
                        (Electrodes, Tin)

KHITROV, V.A.; SMOL'YANINOV, I.S.; SHATALOVA, V.I.; SADOVSKAYA, Yu.I.

Effect of temperature on the corrosion resistance of some metals
in sulfuric and hydrochloric acid solutions of various concen-
trations. Zhur.fiz.khim. 36 no.5:1058-1060 My '62.
(MIRA 15:8)

1. Voronezhskiy gosudarstvennyy pedagogicheskiy institut.
(Metals--Corrosion)

KHITROV, V.A.; SHATALOVA, V.I.

Effect of temperature on the corrosion resistance of tin in acid
media. TSvet. met. 35 no.11:95-96 N '62.   (MIRA 15:11)
                              (Tin--Corrosion)
                    (Metals, Effect of temperature on)

KHITROV, V.A.; SHATALOVA, V.I.

Effect of temperature on the corrosion resistance of aluminum
in acids. Zhur. prikl. khim. 34 no.5:1163-1164 My '61.
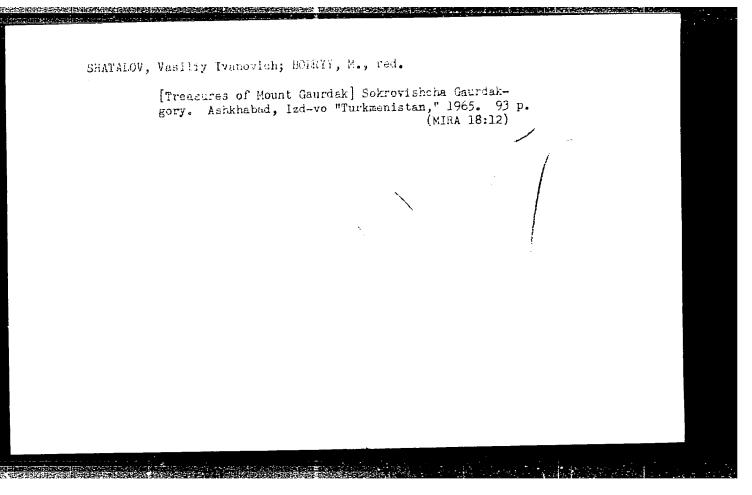(MIRA 16:8)

(Aluminum—Corrosion)

SHATALOVA, V.I.; KHITROV, V.A.

Effect of temperature on the corrosion resistance and
electrode potentials of metals in acid media. Part 8:
Nickel. Izv.Vor.gos.ped.inst. 47:46-56 '64.

(MIRA 18:11)

KHITROV, V.A.; ZADOROZHNYY, V.P.; SMOL'YANINOV, I.S.; SHATALOVA, V.I.;
    DUGIN, N.A.

Activation energy and temperature dependence of the rate of
the corrosion of metals dissolving in nonoxidizing acids.
Izv.Vor.gos.ped.inst. 47:78-90 '64.

                                    (MIRA 18:11)

SHATALOV, Vasiliy Ivanovich; BOIKYY, M., red.

[Treasures of Mount Gaurdak] Sokrovishcha Gaurdak-
gory. Ashkhabad, Izd-vo "Turkmenistan," 1965. 93 p.
(MIRA 18:12)

SHATALOVa-ZALESSKAYA,E.O.

/MD

✓ The effect of β-indoleacetic acid on the enzymic activity and respiration of seed sprouts. E. O. Shatalova-Zalesskaya. *Trudy Nauch.-Issledovatel. Inst. Biol., Khar'kov. Univ.* 17, 113–20(1953); *Referat. Zhur., Biol.* 1955, No. 8311.—Sterile seeds of barley and wheat were soaked for 24 hrs. in solns. of β-indoleacetic acid (I) and of β-indolylbutyric acid (II) (1 mg./100 ml. and 1 mg./3000 ml.). This re- ①

sulted in an increase of the amylase activity, as judged by the lessening in the intensity of the starch-I_2 reaction. The catalase activity of the sprouts of seeds soaked in a soln. of I decreased and increased in those soaked in a soln. of II. Peroxidase activity of sprouts of seeds soaked in high concns. of I at first was lowered, but rose again in a few days. The peroxidase activity rose in the leaves and roots of the sprouts from seeds so treated. The respiration rate of sprouts from seeds soaked for 3 days in I (1 mg./3000 ml. and 1 mg./5000 ml.) rose considerably. Similar results were obtained with sprouts of broad bean and sunflower seeds.
                                            R. S. Levine

SHATALOVA-ZALESSKAYA, Ye.O.

Changes in the activity of oxidative enzymes in the seed progeny
of the first generation of solanaceous plants obtained from grafts.
Uch.zap.KHGU 46:39-46 ' 53.   (MIRA 11:11)

1. Otdel fiziologii rasteniy nauchno-issledovatel'skogo instituta
Khar'kovskogo gosudarstvennogo universiteta.
   (Nightshade)   (Grafting)   (Oxidation, Physiological)

Category: USSR/General Division. History. Classics. Personalities.   A-2

Abs Jour: Referat Zh. Biol., No 9, 10 May 1957, 34881

Author : Shatalova-Zalesskaya, E. O.
Inst   : not given
Title   : Towards the History of the Department of Plant Physiology at
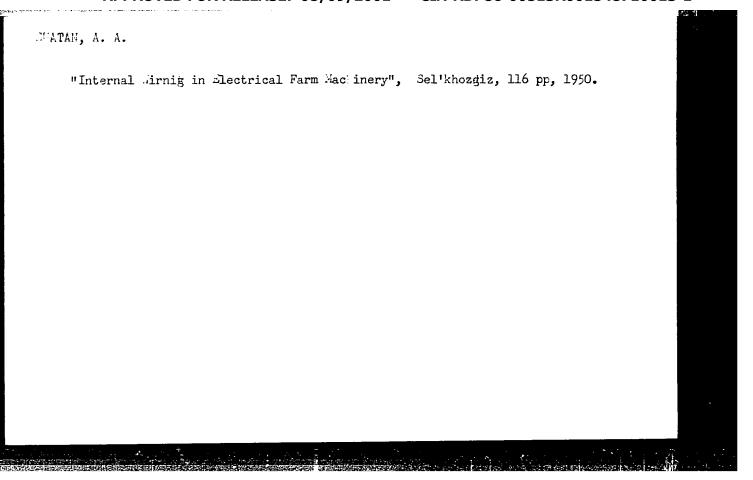   Kharkov University

Orig Pub: Uch. Zap. Kharkovskogo un-ta, 1955, 59, 227-234

Abstract: Plant physiology as a special course was introduced at Kharkov Uni-
          versity in 1863. The first lecturer was A.S. Pitra. In 1869 a
          separate department of plant physiology was established headed by
          V. I. Palladin, whose classic works were devoted to the study of
          breathing in plants (Breathing in Plants as a Sum of Fermentative
          Processes) (1907). From 1897 to 1902 V.A. Rotert headed the de-
          partment, having studied the problems of growth and movement in
          plants, the question of anatomy in plants, fundamentally, the struc-
          ture of the cell membrane. In 1903 V.K. Zalesskiy was named to the
          post and he occupied it until 1936. He studied the transformation
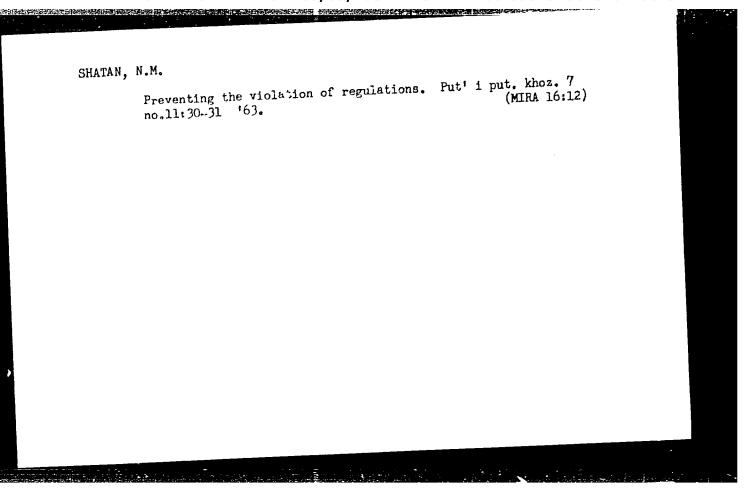
Card   : 1/2   -10-

ATAN, A. A.

"Internal Wirnig in Electrical Farm Machinery", Sel'khozgiz, 116 pp, 1950.

SARKISYAN, A.M.; SHATAN, A.A.; KAUFMAN, B.M.; PECHENKIN, I.V., tekhn.red.
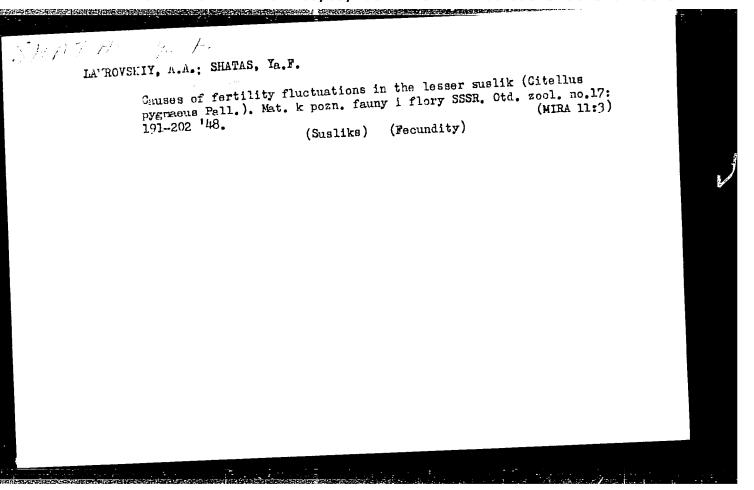
[Handbook for an agricultural electrician] Spravochnik sel'skogo
elektrika. Moskva, 1960. 377 p.   (MIRA 13:2)
          (Electricity in agriculture)

SHATAN, N.M.

Preventing the violation of regulations. Put' i put. khoz. 7
no.11:30-31 '63.
(MIRA 16:12)

BOGOMOLOV, Anatoliy Ivanovich, prof.; MIKHAYLOV, Konstantin Aleksandrovich, prof. Prinimal uchastiye SHATAN, V.S.; kand. tekhn. nauk; UGINCHUS, A.A., prof., doktor tekhn. nauk, retsenzent; KISELEV, P.G., dots., kand. tekhn. nauk, retsenzent; AL'TSHUL', A.D., retsenzent; OREZKOV, S.S., inzh., nauchn. red.

[Hydraulics] Gidravlika. Moskva, Izd-vo lit-ry po stroit.
1965, 632 p.   (MIRA 18:7)

LAVROVSKIY, A.A.; SHATAS, Ya.F.

Causes of fertility fluctuations in the lesser suslik (Citellus pygmaeus Pall.). Mat. k pozn. fauny i flory SSSR. Otd. zool. no.17: 191-202 '48.   (MIRA 11:3)

(Susliks)   (Fecundity)

1. SHATAS, YA. F.

2. USSR (600)

4. Stalingrad Province-Ticks

7. Ecological and faunal sketch of the ixodic ticks of Stalingrad Province and the northern districts of Astrakhan Province in relation to the new construction projects.
Zool. zhur. 31 No. 6, 1952

9. Monthly Lists of Russian Accessions, Library of Congress, March 1953, Unclassified.

SHATAS, Ya. F.

FD-555

USSR/Medicine - Tularemia

Card 1/1   Pub. 148 - 18/23

Author   : Shatas, Ya.F. and Bystrova, N. A.

Title   : The role of ixodidae ticks in the maintenance of natural tularemia foci

Periodical : Zhur. mikrobiol. epid. i immun. 6, 55-61, Jun 54

Abstract   : Of the 13 species of ixodidae ticks inhabiting the territory [not
specified] under investigation, four species - Dermacentor marginatus,
Rhipicephalus rossicus, Ixodes laguri, and Halmophysolis punctate, are
important in the transmission of tularemia and the maintenance of
tularemia foci. The ecological, biocenotic, and epidemiological factors
pertaining to the ixodidae ticks and their hosts. primarily rodents, are
discussed in detail. Two charts illustrate the occurrence of tularemia-
causing microorganisms in ixodidae ticks and other carriers. No refer-
ences are cited.

Institution : The Stalingrad Station of the Ministry of Health USSR (Chief - Candidate
of Medical Sciences N. I. Makarov)

Submitted   : April 6, 1953

SHATAS, Ya.F., (Satas, J.N.).

    Larvae and nymphs of some species of the genus Rhipicephalus Koch
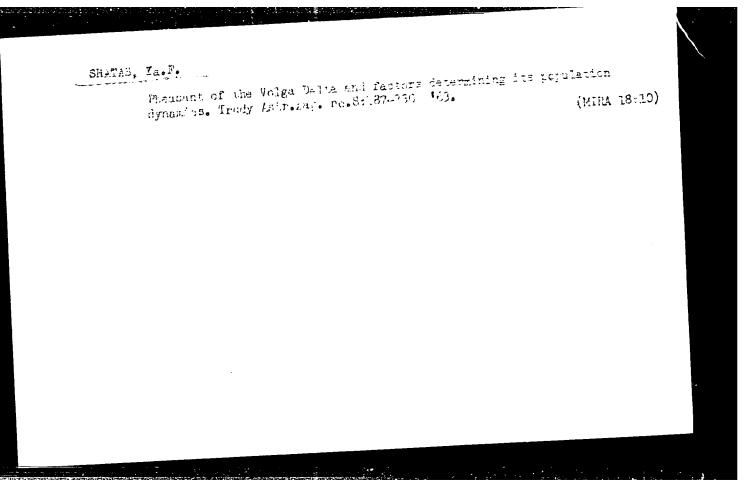(Acarina, Ixodidae). Ent.oboz.35 no.4:944-955 '56.   (MLRA 10:2)

    1. Sanitarno-epidemiologicheskaya stantsiya, Makhach-Kala.
          (Ticks)

LAVROVSKIY, A.A.; SHATAS, Ya.F.

Marmota baibacina in Daghestan [with English summary in insert].
Zool.zhur.35 no.8:1254-1259 Ag '56.   (MIRA 9:10)

1.Dagestanskaya protivochumnaya stantsiya.
                  (Daghestan--Marmots)

SHATAS, Ia.F.

Pheasant of the Volga Delta and factors determining its population
dynamics. Trudy Astr.zap. no.8:187-230 '63.   (MIRA 18:10)

S/0044/64/000/004/V011/V011

ACCESSION NR: AR4039855

SOURCE: Ref. zh. Matematika, Abs. 4V47

AUTHOR: Shatashvili, A. D.

TITLE: On the absolute continuity of measures corresponding to Gaussian processes under linear transformations.

CITED SOURCE: Tr. Vy*chisl. tsentra AN GruzSSR, v. 3, 1962(1963), 241-268

TOPIC TAGS: continuity of measure, absolute, Gaussian process, linear transformation, absolute continuity

TRANSLATION: The question under study is that of the absolute continuity of the measure ν corresponding to the process $y(t) = x(t) + a(t) + \int_0^1 k(t,s)x(s)ds$ with respect to the measure μ corresponding to the process $x(t)$, where $x(t)$ is a Gaussian process on $[0,1]$, with correlation function $R(t,s)$ and zero mean. Let the conditions

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ACCESSION NR: AR4039855

$$D = 1 + \sum_{m=1}^{\infty} \frac{1}{m!} \int_0^1 \cdots \int_0^1 \begin{vmatrix} k(s_1, s_1) \ldots k(s_1, s_m) \\ \vdots \qquad \qquad \vdots \\ k(s_m, s_1) \ldots k(s_m, s_m) \end{vmatrix} ds_1 \ldots ds_m \neq 0,$$

$$K(t, s) = \int_0^1 R(t, u) d_u f(u, s).$$

be satisfied, where $f(u,s)$ is of bounded variation with respect to u for each s, and that variation is square-integrable with respect to s, $a(t) = \int_0^1 R(t, s) dg(s)$.

Then the measure ν is absolutely continuous with respect to the measure μ, and

$$\frac{d\nu}{d\mu}[x] = \exp\left\{ -\frac{1}{2} \int_0^1 a(u) dg(u) - \int_0^1 x(u) dg(u) - \right.$$

$$- \int_0^1\int_0^1 k(u, s) x(s) dg(u) ds - \int_0^1\int_0^1 x(t) x(s) d_t f(t, s) ds -$$

$$\left. - \frac{1}{2} \int_0^1\int_0^1\int_0^1\int_0^1 R(u,v) x(t) x(s) d_u f(u, t) d_v f(v, s) dt ds \right\}.$$

Card   2/3

ACCESSION NR: AR4039855

A. Skorokhod

DATE ACQ: 15May64   SUB CODE: MA   ENCL: 00

Card   3/3

SHATASHVILI, A.D.

Nonlinear transformations of continual integrals by Gaussian measures. Dop. AN URSR no.6:717-719 '63   (MIRA 17:7)

1. Kiyevskiy gosudarstvennyy universitet. Predstavleno akademikom AN UkrSSR Yu.A. Mitropol'skim [Mytropol's'kyi, IU.O.]

BAKLAN, V.V.; CHATAMIVILI, A.V.

Conditions of absolute continuity of probability measures corresponding
to Gaussian random variables in a Hilbert space. Dop. AN URSR no.1:23-
(MIRA 18:2)
26 '65.

1. Leningradskiy gosudarstvennyy universitet. Predstavleno akademikom
AN URSR Yu.A. Mitropol'skim [Mytropol's'kyi, IU.O.].

BAKLAN, V.V.; SHATALOVICH, A.D.

Transformation of Jacobian equation and nonlinear mappings in Hilbert space. Dop. AN URSR no. 145.   (MIRA 13:9)

(Yinearly ...)

SHATASHVILI, A.D.

A class of absolutely continuous nonlinear transformations of
Gaussian measures. Trudy Vych. tsentr. AN Gruz. SSR 5:69-105 '65.
(MIRA 18:9;

SHATASHVILI, G.

In our arctic regions. Mest.prom.i khud.promys. 4 no.2:11-12
F '63.   (MIRA 16:2)

1. Direktor Murmanskogo kombinata bytovogo obsluzhivaniya.

SHATASHVILI, L.Kh.

Temperature effect in the intensity variations of cosmic rays in
Tiflis. Trudy Inst. geofiz. AN Gruz. SSR 18:311-319 '60.
(MIRA 13:10)
(Tiflis--Atmospheric temperature)   (Cosmic rays)

31804   S/203/61/001/005/007/028
A006/A101

3,2410 (1559, 2205, 2705)

AUTHORS: Dorman, L.I., Shatashvili, L.Kh.

TITLE: Lunar-diurnal variation of the neutron component of cosmic radiation and the problem of its origin

PERIODICAL: Geomagnetizm i aeronomiya, v. 1, no. 5, 1961, 663 - 670

TEXT: The authors investigated the lunar diurnal variation in intensity of the neutron component of cosmic radiation, using observation materials from high-mountain stations during the IGY. The authors established the existence of lunar diurnal variations of cosmic radiation and their latitudinal dependence. It is proved that these variations depend mainly on the mutual position of the Sun, the Moon and the Earth, attaining a maximum during the full-moon and a minimum during the new-moon period. At the same time substantial changes in the phase take place. The origin of lunar diurnal variations can be explained as follows: The gravitation forces of the Moon and the Sun affect the plasma of the terrestrial magnetosphere. As a result, terrestrial magnetic force lines frozen in the plasma at high altitudes are shifted. The effect of the deformed geomagnetic field on the cosmic radiation entails the appearance of lunar-diurnal variations. It can

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31204
S/203/61/001/005/007/028
A006/A101

Lunar-diurnal variation ...

be expected that this effect will be the higher, the more the corresponding layers
are remote from the Earth. The results obtained prove the reality of the tide-
forming movements of the plasma and the magnetic field in the outer layers of the
terrestrial atmosphere, bordering the interplanetary medium. These phenomena
should be studied by observations with artificial satellites and rockets. There
are 5 figures and 10 references: 7 Soviet-bloc and 3 non-Soviet-bloc.

ASSOCIATION: Magnitnaya Laboratoriya AN SSSR (Magnetic Laboratory, AS USSR) In-
stitut Geofiziki AN GruzSSR (Institute of Geophysics, AS Georgian
SSR)

SUBMITTED: August 22, 1961

Card 2/2

S/169/62/000/005/073/093
D228/D307

3.24/0

AUTHORS: Dorman, L. I. and Shatashvili, L. Kh.

TITLE: Investigation of the 27-day cosmic ray variations from
the data of the world network of IGY stations for the
period July-December 1957

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 5, 1962, 11, ab-
stract 5G85 (V sb. Kosmich. luchi, no. 4, M., AN SSSR,
1961, 179-201)

TEXT: The properties of the 27-day variation in the cosmic ray
intensity are investigated, as are the changes in the solar and the
geomagnetic activity in the period of the solar activity maximum
(July-December 1957). It is shown that the tendency to a 27-day re-
currence during the period under consideration is better displayed
in cosmic rays than in the solar and the geomagnetic activity. Mag-
netic storms, which are accompanied by Forbush-effects in the cos-
mic rays, are observed near the minimum of the 27-day wave. In all
phenomena the 27-day repetition is best displayed if days with

Card 1/2

S/169/62/000/005/073/093
D228/D307

Investigation of the ...

extreme values of the intensity of the neutron cosmic-ray component
are chosen as the zero days (when using the epochal imposition me-
thod). The epigenetic spectrum of the 27-day variation is determined
from the latitudinal change in the effect's amplitude by means of
the coupling factor method. The epigenetic spectrum falls as the
particle energy increases and agrees with the results of measure-
ments of the total component in the stratosphere and of the hard
component underground. It is concluded that in this period the
27-day variation in the intensity was related to the stable region
of active longitudes on the sun. /¯Abstracter's note: Complete
translation._7

Card 2/2

S/169/62/000/006/075/093
D228/D304

3.2410 (2205, 2805)

AUTHORS: Chichetiya, A. M. and Shatashvili, L. Kh.

TITLE: Tendency for the 27-day recurrence of the hard compo-
nent's intensity in the solar activity minimum accord-
ing to observations at Tbilisi

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 6, 1962, 13, ab-
stract 6G65 (V sb. Kosmich. luchi, no. 4, M., AN SSSR,
1961, 202-203)

TEXT: The 27-day recurrence of the intensity of the hard cosmic-
ray component at Tbilisi in 1954 is examined by the method of epo-
chal superimposition. The analysis is made separately for the year's
first and second halves. Deviations of the diurnal averages from
the monthly were used to eliminate the yearly temperature variation
of the intensity. Zero days were chosen from the extreme values of
the geomagnetic activity's K-indices. No effect of the 27-day recur-
rence of the intensity was detected. In the selection of zero days

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Tendency for the ...

39093
S/169/62/000/006/075/093
D228/D304

From the extreme cosmic-ray intensity values a 27-day recurrence of cosmic rays became apparent only for the second half of 1954. /Ab-stractor's note: Complete translation._7

Card 2/2

DORMAN, L.I.; SHATASHVILI, L.Kh.

The 27-day variations in cosmic ray anisotropy according to
data on the neutron component during the period of maximum
solar activity. Geomag. i aer. 2 no.2:238-241 Mr-Ap '62.
(MIRA 15:6)

(Cosmic rays)   (Sun--Rotation)

ACCESSION NR: AT3012807   S/2961/63/000/005/0082/0102

AUTHORS: Dorman, L. I.; Shatashvili, L. Kh.

TITLE: Cosmic ray variations connected with the rotation of the sun

SOURCE: AN SSSR. Mezhduvedomst. geofizich. komitet. 7 razdel pro-
gram, MGG: Kosmicheskiye luchi., Sb. statey, no. 5, 1963, 82-102

TOPIC TAGS: cosmic rays, cosmic ray variation, rotation of sun,
cosmic ray diurnal variation, 27 day variation, geomagnetic field
variation, solar activity variation, Forbush effect, solar wind,
magnetic heterogeneity, magnetized plasma radiation

ABSTRACT: A study is made, using neutron-monitor data gathered by
the world network during the IGY, of (a) the variations observed
from July 1957 through December 1960 in the mean-diurnal values of
the intensity of cosmic rays, which are connected exclusively with
the rotation of the sun, (b) the tendency towards repetition in the

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ACCESSION NR: AT3012807

geomagnetic activity and the question of the presence of two active
longitudes on the sun, (c) the tendency, towards repetition in the H
component of the geomagnetic field and the fraction of the 27-day
variation due to direct variations of the geomagnetic field, (d) the
27-day variations of cosmic rays as connected with the solar activ-
ity, (e) the phase shift of various parameters connected with the
rotation of the sun, (g) the effect of the sun's rotation on the di-
urnal variation of cosmic rays and on the variations of the cosmic-
ray intensities, and (h) a general discussion of the 27-day variation.
It is found that not all the phenomena under consideration display a
simultaneous tendency to recur every 27 days, the strongest tendency
being manifest by the cosmic ray intensity variations. Several pe-
culiarities of the 27-day variations of the cosmic rays are observed.
Questions connected with the determination of the spectrum, stabil-
ity, influence of the Forbush effect, 27-day variations of the aniso-
tropy, and other cosmic-ray variations connected with the sun's ro-
tation are also discussed. A detailed analysis shows that the ob-

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served peculiarities of the cosmic-ray variations due to the sun's
rotations can be attributed to the presence of an asymmetrical solar
wind of magnetic heterogeneities, and that the cause of the 27-day
variations lies in the rotating asymmetry of the electromagnetic
conditions in an interplanetary space of large volume, which includes
the earth's orbit. This asymmetry, which is connected in turn with
the anisotropic radiation of magnetized plasma in the presence of
active longitudes on the sun, produces an integral effect in the
cosmic rays, which decreases appreciably with increasing hardness
of the particles. "In conclusion, we consider it our pleasant duty
to thank Ya. L. Blokh, N. S. Kaminer, E. I. Mogilevskiy, and G. M.
Nikol'skiy for participation in the discussion of the results. Orig.
art. has: 11 figures and 1 table.

ASSOCIATION: None

SUBMITTED: 00   DATE ACQ: 22Oct63   ENCL: 00

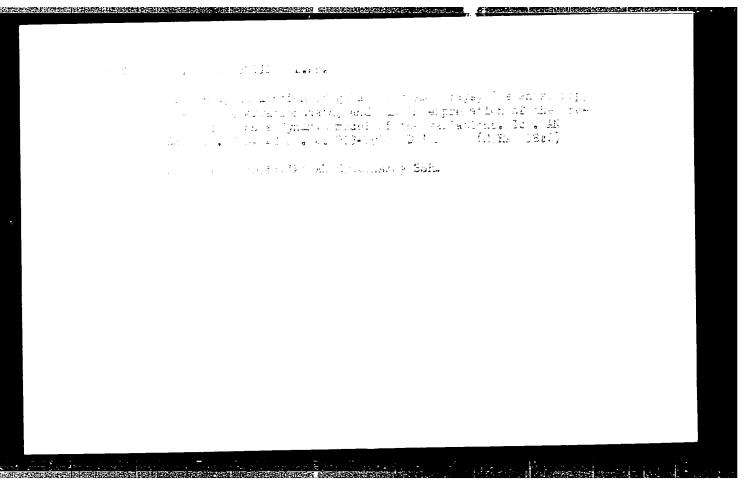SUB CODE: PH, AS   NO REF SOV: 022   OTHER: 022

Card 3/3

DORMAN, L.I.; SHATASHVILI, L.Kh.

Lunar diurnal variation and the 27-day modulation of cosmic
ray anisotropy. Geomag. i aer. 3 no.5:979-981 S-O '63.
(MIRA 16:11)

1. Institut geofiziki AN Gruzinskoy SSR.

DORMAN, L.I.; KORIDZE, V.G.; SHATASHVILI, L.Kh.

Increases in cosmic ray intensity not associated with visible
formations on the sun. Geomag. i aer. 5 no.1:159-161 Ja F '65.
(MIRA 18:4)

1. Institut geofiziki AN Gruzinskoy SSR.

ALANIYA, M.V.; DORMAN, L.I.; SHATASHVILI, L.Kh.

Character of the distribution of cosmic ray intensity fluctuations
for successive instants. Geomag. i aer. 5 no.1:161-162   Ja-F '65.

(MIRA 18:4)

1. Institut geofiziki AN GruzSSR.

L 11809-66   EWT(1)/EWT(m)/FCC/T/EWA(h)   IJP(c)   GW

ACC NR: AT6003529   SOURCE CODE: UR/3184/65/000/007/0161/0164

AUTHOR: Dorman, L. I. (Doctor of physico-mathematical sciences); Shatashvili, L. Kh.

ORG: none

TITLE: Cosmic-ray 27-day variations and general characteristics of electromagnetic conditions in interplanetary space

SOURCE: AN SSSR. Mezhduvedomstvennyy geofizicheskiy komitet. Kosmicheskiye luchi, no. 7, 1965, 161-164

TOPIC TAGS: cosmic ray, neutron component, solar rotation, neutron spectrum, solar activity, Forbush effect, geomagnetic activity, lunar diurnal variation, solar plasma, magnetic storm, field,

ABSTRACT: The neutron and the hard components of cosmic rays observed at mountain and sea-level stations have been processed in order to determine the influence of solar rotation on the intensity of cosmic rays. Observation data used were world-wide in scope. The 27-day variations of cosmic rays, which were found earlier, made it possible to compute the spectrum of the neutron component from data of mountain and sea-level stations. The study of spectral variations during a 27-day period of maximum solar activity showed that the spectrum was nearly the same as that of the Forbush effect during magnetic storms. Cosmic-ray variations with a 27-day period appear in the form of discrete waves. A map was composed representing

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ACC NR: AT6003529

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correlations between the earth's geomagnetic activity, Wolf numbers, and the neutron component. A distinct correlation between these parameters was difficult to find. It can be assumed that the 27-day period of cosmic-ray variations relates to short-lived variations. The 27-day period is similar to the lunar diurnal variations, which depend upon the lunar phases with a maximum during the full-moon phase. Further analysis made it possible to conclude that the active element in 27-day cosmic-ray variations is the magnetized solar plasma which is ejected into space. [EG]

SUB CODE: 03/ SUBM DATE: none/ ORIG REF: 011/ OTH REF: 006/ ATD PRESS: 4179

Card 2/2

DORMAN, L.I.; KOIAVA, V.K.; KOREDZE, V.G.; SHATASHVILI, L.Kh.

The 27-day variation of the geomagnetic field disturbance on
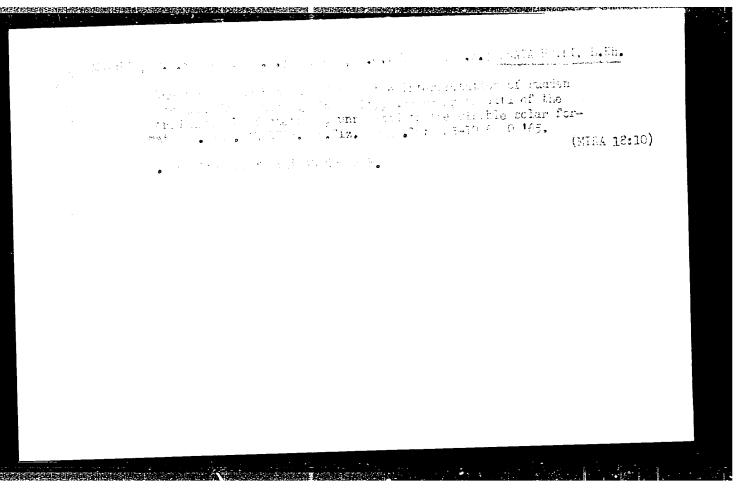zero-days of cosmic-ray intensity. Geomag. i aer. 5 no.3:566-
568 My-Je '65.   (MIRA 18:5)

1. Institut geofiziki AN Gruzinskoy SSR.

ALAVIDZE, M.A.; PICHKO, I.I.; SHATASHVILI, L.H.

....-day variations in cosmic ray and study on data of observations
of the neutron component at mountain stations of the world network.
Izv. AN SSSR.Ser.fiz. 29 no.10:1914-1915 O '65.

(MIRA 18:10)

1. Institut geofiziki AN GruzSSR.

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(MIRA 12:10)

ACC NR: AP7007046   SOURCE CODE: UR/0203/66/006/004/0782/0785

AUTHOR: Alaniya, M. V.; Dorman, L. I.; Shatashvili, L. Kh.
ORG: Institute of Terrestrial Magnetism, Ionosphere and Radio
Wave Propagation, AN SSSR (Institut zemnogo magnetizma, ionosfery i
rasprostraneniya radiovoln AN SSSR); Institute of Geophysics, AN GruzSSR
(Institut geofiziki AN GruzSSR)
TITLE: Mathematical expectation of the distribution of the harmonic
coefficients when determining them using 12 ordinates and comparison
with experimental results
SOURCE: Geomagnetizm i aeronomiya, v. 6, no. 4, 1966, 782-785
TOPIC TAGS: diurnal variation, cosmic ray
SUB CODE: 04

ABSTRACT: The method of harmonic analysis is used frequently in
investigation of stellar-diurnal, solar-diurnal, semidiurnal and other
cosmic ray variations of a periodic character. The frequency distributions
of the amplitudes and phases of the first and second harmonics of solar-
diurnal variations show that the amplitude and phase of the harmonics
have a definite distribution caused by two factors of a different
physical nature: 1) actual changes of electromagnetic conditions in
interplanetary space and in the earth's magnetosphere, determining
periodic variations of cosmic rays; 2) fluctuations of the values of
cosmic ray intensity caused primarily by errors of a statistical and
instrumental character. The purpose of this paper is to determine the
relative importance of the first and second factors. The quantitative
solution of this problem is important for study of diurnal variations

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ACC NR: AP7007046

over short intervals of one or two days, especially in analysis of
changes of the diurnal variations from day to day and in periods of
Forbush decreases. In this paper emphasis is on the second factor --
its influence on the frequency distribution of amplitude and phase of
the first harmonic in a harmonic analysis using 12 ordinates. It is
shown that comparison of the theoretical and experimental results makes
it possible to then determine the contribution of the first factor.
The results obtained in this paper can be generalized easily for the
case of determining harmonics using any number of ordinates. Orig. art.
has: 2 figures and 7 formulas.   /JPRS: 38,677/

Card 2/2

ACC NR: AP7002198   SOURCE CODE: UR/0203/66/006/006/1098/1100

AUTHOR: Alaniya, M. V.; Dorman, L. I.; Shatashvili, L. Kh.

ORG: Institute of Terrestrial Magnetism, Ionosphere, and Propagation of Radio Waves,
AN SSSR (Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN
SSSR); Institute of Geophysics AN GruzSSR (Institut geofiziki AN GruzSSR)

TITLE: Quasi-spiral changes of 27-day variation of cosmic rays with the solar
activity

SOURCE: Geomagnetizm i aeronomiya, v. 6, no. 6, 1966, 1098-1100

TOPIC TAGS: cosmic ray, magnetic field, interplanetary space, harmonic analysis,
neutron component, solar activity, $COSMIC$ RAY $INTENSITY$

ABSTRACT: It is pointed out that the eleven year variations of cosmic rays are
usually determined from the mean monthly intensities of cosmic rays. However, the
fine structure and the longitudinal distribution of cosmic rays cannot be determined
from these data. Using the 27 day variation of cosmic ray intensities, the asymmetry
of the magnetic inhomogeneities on the solar surface and their duration in the inter-
planetary space can be detected. The amplitude of the phase of the 27 day period of
variations in the intensity of cosmic rays was determined by harmonic analysis from
the mean values of the intensity of the neutron component. The obtained results are
presented graphically. The graphs show that the amplitude of 27-day variation
diminishes nonmonotonically with the solar activity, completing a full cycle (12 to

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ACC NR: AP7002198

18 solar rotations) at the minimum of solar activity. Thus, the 27 day variations of cosmic rays exhibit a spiral-shaped run. The spiral twists during the minimum of solar activity and untwists at its maximum. Variations of cosmic rays are caused by asymmetric fluxes of magnetic inhomogeneities. The asymmetry decreases with a decrease in solar activity. Orig. art. has: 2 figures.   [EG]

SUB CODE: 04/ SUBM DATE: 08Dec65/ ORIG REF: 004/

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