TSVETKOV, E., inzh.; DUBROVIN, M., inzh.; SUCHKOV, L., inzh.

Effectiveness of delivering adequate coal supplies for a year's consumption. Rech. transp. 23 no.1:7-8 Ja '64. (MIRA 18:11)

DUBROVIN m.m.

SANIN, A.A.; BLOKH, Ya.L.; DUBROVIN, M.M.

Prolonging the life of self-quenching counters using radio engi-
neering methods. Prib. i tekh. eksp. no.1:58-59 Ja-F '57.
    (Geiger-Muller counters)   (Nuclear counters)   (MIRA 10:6)

DUBROVIN m.m.

S/058/61/000/010/020/100
A001/A101

AUTHORS: Babayan, Kh.P., Grigorov, N.L., Dubrovin, M.M., Mishchenko, L.G.,
           Murzin, V.S., Sarycheva, L.I., Sobinyakov, V.A., Rappoport, I.D.

TITLE: Investigation of interaction of 10^{11} - 10^{12} ev energetic particles
           with nuclei of iron and graphite

PERIODICAL: Referativnyy zhurnal. Fizika, no. 10, 1961, 96-97, abstract 10B506
              ("Tr. Mezhdunar. konferentsii po kosmich. lucham, 1959, v. 1", Mos-
              cow, AN SSSR, 1960, 176 - 182)

TEXT: The authors present the results of an investigation, carried out by
means of an ionization calorimeter, of interactions of 10^{11}-10^{12} ev particles
with nuclei of iron and graphite on the Aragats mountain (3,200 m above sea level).
It is shown that: 1) Coefficient of inelasticity of interaction of particles
with energy $E_0 \geqslant 2 \times 10^{11}$ ev with iron-nuclei $\bar{\alpha}_{Fe} = 1.0 \pm 0.09$; 2) In the inter-
action with the iron nucleus of a 2×10^{11} ev nucleon, one energetically outstand-
ing particle is produced with average energy of $\sim E_0$, probability of this occur-
rence being close to unity; most probable this particle is a π-meson; 3) The
mean coefficient of inelasticity of interactions of particles with $E_0 \geqslant 10^{11}$ ev

Card 1/2

Investigation of interaction ...

S/058/61/000/010/020/100
A001/A101

with carbon nuclei $\bar{\alpha}_C \leqslant 0.5 \bar{\alpha}_{Pe}$; 4) the experimental data obtained for $\bar{\alpha}_{Pe}$ and $\alpha_C/\alpha_{Pe} \leqslant 0.5$ rule out the possibility of consecutive collisions with individual nucleons of the nucleus (or small groups of nucleons) at interactions of particles with energies $\geqslant 10^{11}$ ev with heavy nuclei; 5) in the energy range of nucleons $10^{10} - 10^{11}$ ev the interaction with heavy nuclei changes its nature.

L. Dorman

[Abstracter's note: Complete translation]

Card 2/2

DUBROVIN, M. M.

STUDY OF INTERACTION PROCESSES OF $10^{11}-10^{12}$ ev
PARTICLES WITH IRON AND GRAPHITE NUCLEI

Kh. P. Babayan, N. L. Grigorov, M. M. Dubrovin
V. S. Murzin, V. A. Sobinyakov, and I. D. Rapoport

L. The use of the "ionization calorimeter" which comprises a large number
of ionization chambers made it possible to investigate the interaction of part-
icles of known energy.
   2. Studies carried out in 1957 at 3860 m above sea level and in 1958-59
at 3200 m above sea level have produced results that are in good agreement. From
these results, the following conclusions may be drawn:
   a) when interacting with Fe nuclei, $10^{11}-10^{12}$ev particles lose, as a rule, nearly
all their energy in the production of mesons:
   b) there is a large probability that as a result of collision with a nucleus there
are produced a small number of particles, the total energy of which amounts to $\sim 50\%$
of the energy of the primary particle (in the majority of cases these particles are
not nucleons):
   c) big fluctuations are observed in energy transfer to π-mesons.

Report presented at the International Cosmic Ray Conference, Moscow, 6-11 July 1959.

87469

3. 1800 (1041, 10621 1168)
9.9700

S/169/6C/000/012/007/010
A005/A001

Translation from: Referativnyy zhurnal, Geofizika, 1960, No. 12, p. 219, # 16270

AUTHORS: Blokh, Ya. L., Vernov, S. N., Dorman, L. I., Dubrovin, M. M.

TITLE: Preliminary Results of an Investigation of the Underground Variations
of Cosmic Rays

PERIODICAL: V sb.: Variatsii kosmich. luchey pod zemley, na urovne morya i v
stratosfere. No. 1, Moscow, AN SSSR, 1959, pp. 37-47

TEXT: The variations of the cosmic ray intensity are investigated on the
basis of data obtained from a counter telescope of triple coincidences, which was
located under the earth's surface at the depth of 40 m of water equivalent. By
the simple-correlation method the value of the barometric coefficient $\beta = (0.021 \pm
0.008)$ %/mb was obtained. The diurnal variation of the underground intensity
amounts to about 0.05%. By averaging the data it is shown that the average effect
at the depth of 40 m of water equivalent amounts to 0.3% during 11 events of
decreases of the Forbush type. The investigation of the disturbed diurnal varia-
tions in the cosmic ray intensity was also carried out.   N. K.
Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

37286

S/169/62/000/004/071/103
D218/D302

3.2410 (2205, 2705, 2805)

AUTHORS: Blokh, Ya.L., Dorman, L.I., and Dubrovin, M.M.

TITLE: Meteorological effects of cosmic rays under the earth's surface

PERIODICAL: Referativnyy zhurnal. Geofizika, no. 4, 1962, 13, abstract 4G70 (V. sb. Kosmicheskiye luchi, no. 3, M., AN SSSR, 1961, 166-169)

TEXT: A study is reported of meteorological effects in the μ-meson component of cosmic rays, based on underground recordings in Moscow (40 m) and Yakutsk (60 m) in 1957 - 1958. The triple-correlation method was used to determine the partial and total correlation and regression coefficients α and β between the observed cosmic-ray intensity variations, the barometric pressure and the temperature of the atmosphere, (β is the barometric coefficient and α is the temperature coefficient representing atmospheric temperature variations up to heights of 12 - 20 km). Although the values of α and β obtained for separate months exhibit a large spread, their average values are quite reliable and are in good agreement with the theoretical

Card 1/2

DuBRoViN   N.

ASTRETSOV, V.; KOROVIN, V.; DUBROVIN, N.

Readers comments on S.I. Shcherbakov's book "Milling wheat and rye." Reviewed by N.Lykov, V.Astretsov, V.Korovin, N.Dubrovin. Muk.-elev.prom. 20 no.8:30-31 Ag '54.   (MLRA 7:9)
    (Wheat milling) (Rye milling) (Shcherbakov, S.I.)

DUBROVIN, N., kantr-admiral

It was in the fleet of the Far North. Tyl. i snab. Sov. Voor. Sil
21 no.6:53-57 Je '61.   (MIRA 14:8)
               (Murmansk--World War, 1939-1945)

DUBROVIN, Nikolai Fedorovich

DUBROVIN, Nikolai Fedorovich. Nikolai Mikhailovich Przheval'skii ... Biograficheskii ocherk. S 4 portretami N.M.,3 avtografami, 2 fototipiiami i otchetnoiu kartoiu chetyrekh ego puteshestvii. S.-Peterburg, 1890. 2 p. i., ix, ii, 602 p. viiip.

DLC: DS785.P9D

SO: LC, Soviet Geography, Part I, 1951, uncl.

DUBROVIN, N.O.

Characteristics of the process of artificial drying of alfalfa.
Sel'khozmashina no.4:19-21 Ap '57.   (MLRA 10:4)
             (Alfalfa--Drying)

DUBROVIN, N.G., Cand Agr Sci -- (diss) "Artificial
drying of grass." Khar'kov, 1958, 20 pp (Min of
Agr USSR. Khar'kov Order of Labor Red Banner Agr
Inst im V.V. Dokuchayev) 150 copies (KL, 29-58, 134)

- 86 -

DUBROVIN, N.G., kand.sel'skokhosyaystvennykh nauk

Preliminary preparations for the artificial drying of alfalfa in
layers. Mekh. i elek. sots. sel'khoz. 19 no.2:19-22 '61.

(MIRA 14:3)

1. Nauchno-issledovatel'skiy institut zhivotnovodstva Lesostepi
i Poles'ya USSR.

(Alfalfa—Drying)

DUBROVIN, N.G.

Characteristics of the artificial drying of green fodder in the
bagasse dryers of sugar factories. Sakh. prom. 37 no.8:49-52
Ag '63.   (MIRA 16:8)

1. Khar'kovskiy zooveterinarnyy institut.
            (Feeds—Drying)

DUBROVIN, N.

Vazhneishie rezervy povysheniia rentabel(nosti gruzovykh perevozok. /Most important resources for increasing the profits from freight transportation_/. (Zhel-dor. transport, 1946, no. 11-12, p. 19-28.)

"Discusses post-war freight rate problems (p. 26-28). Table (p. 27) shows rates for 5 commodity groups, by length of haul."

DLC: HE7.25

DENISOV,V.N.; DUBROVIN,M.M., redaktor; GALAKTIONOVA,Ye.N., tekhnicheskiy
redaktor

[Rotor snow removers; manual for operators] Rotornye snegoochistiteli;
posobie dlia voditelia. Moskva, Izd-vo dorozhno-tekhn. lit-ry, 1952.
98 p.   (MLRA 9:1)
                                (Snowplows)

1. DUBROVIN, N.

2. USSR (600)

4. Railroads

7. About the railroad statutes. Za ekon. mat. No. 3, 1953.

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

DUBROVIN, N.

New regulations on improvements and inventions. Avt.transp. 32 no.6:
37 Je '54.   (MLRA 7:9)
        (Transportation, Automotive) (Efficiency, Industrial)

DUBROVIN, Nikolay Nikolayevich; FILATOV, N.P., redaktor; KOGAN, F.L.
tekhnicheskiy redaktor.

[Manual on improvement and invention in motor transportation]
Posobie po ratsionalizatsii i izobretatel'stvu na avtotrans-
porte. Moskva, Nauchno-tekhn. izd-vo avtotransp. lit-ry, 1955.
107 p.   (MLRA 8:8)
          (Transportation, Automotive)

NOGID, L.M., doktor tekhn.nauk; DUBROVIN, O.V., insh.

Frictional resistance of icebreakers. Frictional resistance
of icebreakers. Sudostroenie 28 no.6:10-14 Je '62.
(MIRA 15:6)

(Frictional resistance (Hydrodynamics))

(Ice-breaking vessels)

VOYTKUNSKIY, Ya.I.; DUBROVIN, O.V.

Determining the towing efficiency of single-screw coasters.
Trudy LKI no.38:27-42 '62.   (MIRA 16:7)

1. Kafedra gidromekhaniki Leningradskogo korablestroitel'nogo
instituta (for Voytkunskiy). 2. Kafedra teorii korablya
Leningradskogo korablestroitel'nogo instituta (for Dubrovin).
          (Coastwise navigation)   (Towing)

DUBROVIN, P, slesar'-mekhanik (Kirovskaya obl.)

Semiautomatic machine for making chessmen. Prom.koop. 12 no.11:13
N '58.   (MIRA 11:11)

1. Artel' invalidov "Sila."
                    (Chessmen)

DUBROVIN, P.A., starshiy prepodavatel'

Drainage of mines in the Karaganda Basin. Izv. vys. ucheb.
zav.; ger. zhur. no.12:105-107 '61.   (MIRA 16:7)

1. Karagandinskiy politekhnicheskiy institut. Rekomendovana
kafedroy gornoy mekhaniki.
              (Karaganda Basin—Mine drainage)

DUBROVIN, P.A., inzh.

Selecting efficient means of draining Karaganda Basin min-s with a
depth of more than 300m. Izv.vys.uchob.zav.;gor.zhur. 7 no.6:93-96
'64.
(MIRA 17:12)

1. Karagandinskiy politekhnicheskiy institut. Rekomendovana kafedroy
gornoy mekhaniki.

DUBROVIN, P.A., inzh.; RYBAKOV, I.P., inzh.

Centralization of water drainage in Karaganda Basin coal mines.
Izv. vys. ucheb. zav.; gor. zhur. 7 no.11:118-121 '64.

(MIRA 18:3)

1. Karagandinskiy politekhnicheskiy institut. Rekomendovana
kafedroy gornoy mekhaniki.

DUBROVIN, P.A., inzh,

Centralization of mine drainage. Izv.vys.ucheb.zav.; gor.zhur.
7 no.12:100-103 '64.
(MIRA 18:2)

1. Karagandinskiy politekhnicheskiy institut. Rekomendovana
kafedroy gornoy mekhaniki.

DUBROVIN, P.I. [Deceased]

Agglomeration of cities: genesis, economics, morphology. Top.
geog. no.45:27-36 '59.   (MIRA 12:5)
              (Cities and towns--Growth)

KAMARDIKH, N.P.; SHUVAYEV, A.S.; PAIKIN, V.I.; NEMKOVA, A.S.; TARABAN'KO,
P.I.; KHOLMSKIY, R.V.; CHIPP, L.V.; DOBASHIN, G.S.; FLEROVA, L.I.;
MAKSIMOV, N.N.; RAFIYENKO, I.I.; PAL'MOV, I.Y.; UVAROV, I.M.;
DUBROVIN, P.Ye.; LIKLACHEVA, O.A.; UVAROVA, I.I.

Conference of the Teaching Staff and Students of the Moscow
Geological Prospecting Institute. Izv. vys. ucheb. zav.; geol.
i razv. 6 no.12:143-148 D '63   (MIRA 18:2)

KAMARDINKIN, N.P.; SHUVAYEV, A.S.; PALKIN, V.I.; NEMKOVA, A.S.; TARABAN'KO,
    P.I.; KHOLMSKIY, R.V.; GNIPP, L.V.; DOBASHIN, G.S.; FLEROVA, L.I.;
    MAKSIMOV, N.M.; RAFIYENKO, I.I.; PAL'MOV, I.I.; UVAROV, I.M.;
    DUBROVIN, P.Ye.; LIKHACHEVA, O.A.; UVAROVA, I.I.

Conference of the Teaching Staff and Students of the Moscow
Geological Prospecting Institute. Izv. vys.ucheb.zav.; geol. i
razv. 6 no.12:143-148 D '63.   (MIRA 18:2)

DUBROVIN, R.; YALIN, M.

Gift from English miners. Sov. shakh. 11 no.10:35 O '62.

(MIRA 15:9)

(Visitors, British) (Phonorecords)

STEPANOV,A.,:dispetcher; DUBROVIN, I.

Workers of the Kizner Grain Procurement Station have assumed the name of the Group of the Communist Labor. Muk.-elev. prom. 26 no.2:5-6 F '60.   (MIRA 13:6)

1. Elevatorno-skladskiy otdel Udmurtskogo upravleniya khleboproduktov (for Stepanov). 2. Nachal'nik otdela ucheta Udmurtskogo upravleniya khleboproduktov (for Dubrovin).
                    (Kizner—Grain elevators)

DUBROVIN, V. (Rostov-na-Donu)

In contact with scientists. Mest.prom.i khud.promys. 2 no.10:
27-28 O '61.   (MIRA 14:11)
                    (Research, Industrial)

KOTEL'NIKOV, V., akad.; SHAKHOVSKA, A.; RZHIGA, O.; SHAROVAN, V.

Radio beams investigate the planets. Priorda Bulg 13 no.6:
78-79 N-D '64.

Dubrovin, V. F.

81995
S/120/60/000/03/032/055
E041/E521

9.6000

AUTHORS: Mirovitskiy, D. I. and Dubrovin, V. F.

TITLE: Free-Space Measurement of Small Samples of Dielectric
         Materials at Decimetre Wavelengths

PERIODICAL: Pribory i tekhnika eksperimenta, 1960, No 3,
         pp 109-114

ABSTRACT: At wavelengths of 10 cm and above waveguide methods and
         conventional free space methods for measuring reflection
         and transmission coefficients become awkward. By using
         end-fire radiators instead of lenses and reflectors a
         significant reduction in size can be effected and samples
         may be measured whose dimensions are comparable with the
         wavelength employed. Fig 1 shows a number of rod aerials,
         covering the range 3 - 50 cm. Their use has led to the
         following conclusions: 1) with a sufficiently slow
         surface wave almost all the electromagnetic energy is
         concentrated near the surface within a sheath whose
         diameter is comparable with the wavelength; 2) the
         'effective aperture' of the aerial depends only on the
Card 1/4 extent to which the surface wave is slowed down and

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S/120/60/000/03/032/055
E041/E521

Free-Space Measurement of Small Samples of Dielectric Materials at Decimetre Wavelengths

adjustment of the beam shape is controlled either by altering the material of the rod or fixing a modifying section to it; 3) the phase front at the end of the rod is practically plane and this enables samples to be brought close to it and to reduce sensitivity to external disturbances; 4) a dielectric aerial can be matched to free space such that a wave falling on it does so without reflection; 5) an end-fire aerial enables the use of a new device for indicating a reflected signal – the surface-wave directional coupler (Ref 4). This last device has low insertion loss ($\leq$ 5 db) and high directivity ($\geq$ 40 db) over a $\pm$ 15% band. Refractometers have been constructed for measuring transmission and reflection over the range 10-30 cm and loss over 20-50 cm. In the 10-30 cm range the aerials have been conical, 50 mm diameter at the feeder and 600 mm long, made of polystyrene loaded with $BaTiO_2$ ($\varepsilon = 14$). The surface was coated with graphite (200 ohm.cm) in order to stabilize the asymmetric

Card 2/4

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S/120/60/000/03/032/055
E041/E521

Free-Space Measurement of Small Samples of Dielectric Materials
at Decimetre Wavelengths

TE_{11} node, fix the polarization and help decouple the
sample from the oscillator. In the 10-50 cm range the
shape was similar, 75 mm diameter at the feeder, 750 mm
long and the material loaded to give $\varepsilon = 18$. The coating
was aluminium-loaded polystyrene ($\varepsilon = 30$). The support
for the sample was of expanded polystyrene (s.g. 0.04).
The apparatus was calibrated by using the reflection from
a standard reflector. A small aerial made of $CaTiO_2$
ceramic ($\varepsilon = 150$) was used as a probe for exploring the
field. Fig 3 shows how the reflected signal varies with
distance ($\lambda = 30$ cm) and various reflectors. Fig 4 shows
the effect of separating the transmitting and receiving
aerials to various distances for two samples of different
thickness and of placing the samples variously. Figs 5 and
6 give the field distribution across and along the
measuring area. Figs 7 and 8 compare theoretical and
experimental results at 30 cm and 20 cm wavelength
Card 3/4 respectively. It is concluded that for samples as small

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S/120/60/000/03/032/055
E041/E521

Free-Space Measurement of Small Samples of Dielectric Materials
at Decimetre Wavelengths

as the wavelength the measurement accuracy was about 10%.
There are 8 figures and 7 Soviet references.

SUBMITTED: April 27, 1959

Card 4/4

S/120/62/000/003/039/048
E039/E335

AUTHORS: Mirovitskiy, D.I. and Dubrovin, V.F.

TITLE: Stand for measurements on microwave dielectric
            materials in free space

PERIODICAL: Pribory i tekhnika eksperimenta, no. 3, 1962,
            162 - 173

TEXT: Automatic apparatus is described which is intended
for measuring the coefficients of reflection and transmission
for plane and curved sheets of dielectric materials. One trans-
mitter and two receiver antennae are mounted on mobile carriages
on a large metal framework. The receivers are arranged for sim-
ultaneous measurement of the reflected and transmitted waves
from the sample. The antennae and sample are all mounted on high
columns in order to avoid distortion of the high-frequency field
by the metallic parts of the apparatus. The limit of rotation
of the sample is 0 to 360°, accurate to 0.25°. The limit of
vertical and transverse motion of the sample is $\pm$ 400 mm, accurate
to 0.1 cm. Longitudinal movement of the sample can be up to
1 400 mm. All movements are independent or can be carried out

Card 1/2

Stand for measurements ....

S/120/62/000/003/039/048
E039/E335

simultaneously. Antennae construction is described in detail together with methods of making measurements and the calibration of the apparatus. There are five wavelength ranges and a nomogram system is described which is used for making a choice of calibration and working standards. There are 14 figures.
SUBMITTED: October 10, 1961

Card 2/2

DUBROVIN, V.G., inzh.

Transformer substations on reinforced concrete centrifuged
supports. Mont.i spets.rab.v stroi. 22 no.10:22-23 O '60.
                                                        (MIRA 13:9)
1. Neftepromyslovoye upravleniye Priazovneft'.
    (Electric substations) (Pipe, Concrete)

DUBROVIN, V.I., polkovnik meditsinskoy sluzhby

A year of work by the unified medical services in fulfilling problems arising from the decree of the Central Committee of the Communist Party of the Soviet Union and Soviet of Ministers of the U.S.S.R. Voen.-med.zhur. no.3:10-12 Mr '61.   (MIRA 14:7)
(MEDICINE, MILITARY)

GLANTS, R.M., starshiy nauchnyy sotrudnik; DUBROVIN, V.L., mladshiy
nauchnyy sotrudnik

Influence of isohemotransfusion on the posterior lobe of the hypophysis.
Vrach. delo no.10:63-65 O '60.   (MIRA 13:11)

1. Eksperimental'nyy otdel (rukovoditel' - starshiy nauchnyy
sotrudnik R.M.Glants) Ukrainskogo nauchno-issledovatel'skogo instituta
perelivaniya krovi i neotloshnoy khirurgii.
     (BLOOD--TRANSFUSION)
     (PITUITARY BODY)

GLANTS, R.M., kand.med.nauk; DUBROVIN, V.L., mladshiy nauchnyy sotrudnik
(Khar'kov)

Influence of isohemotransfusion on the function of the internal secretory area of the pancreas. Probl.endok.i gorm. 7 no.4: 96-101 '61.

(MIRA 14:8)

1. Iz fisiologicheskoy laboratorii (rukovoditel' - kand.med.nauk R.M. Glants) Ukrainskogo nauchno-issledovatel'skogo instituta pereliveniya krovi i neotlozhnoy khirurgii (dir. - kand.med. nauk Yu.M. Orlenko).
              (PANCREAS)   (BLOOD—TRANSFUSION)

DUBROVIN, V.L.; GLANTS, R.M. (Khar'kov)

Effect of transfusion of heterogenic blood on the function of
the endocrine portion of the pancreas. Pat. fiziol. i eksp.
terap. 6 no.1:86-87 Ja-F '62.   (MIRA 15:3)

1. Iz fiziologicheskoy laboratorii (rukovoditel' - doktor
meditsinskikh nauk R.M. Glants) Ukrainskogo instituta perelivaniya
krovi i neotlozhnoy khirurgii (dir. - kand.med.nauk L.A.
Ripyakh).
            (PANCREAS—SECRETION)   (BLOOD—TRANSFUSION)

ANIKEYEV, Y. (Moskva); DUBROVIN, V. (Moskva).

A simple video amplifier. Radio no.11:33 N '56. (MLRA 9:12)
(Television--Apparatus and supplies)

DU B RdVIN, V. (M)

AUTHOR: Dubrovin, V.

107-57-7-30/56

TITLE: Direction-Finding Attachment (Pelengatsionnaya pristavka)

PERIODICAL: Radio, 1957, Nr 7, pp 21-23 (USSR)

ABSTRACT: A description of the equsignal-zone method and a direction-finding unit for precise determination of the moment of flight of sputnik over a given point. The principle of equisignal zone of two antennas with shifted radiation patterns is explained. Both antennas are connected to the receiver through the direction-finding unit whose principal element is an electronic switch. Operating at a rate of a few hundreds cps, the switch connects in succession (alternatively) the antennas with the receiver. The head phones on the output of the receiver will deliver the switch (audio) frequency with all positions of the sputnik transmitter, except for one -- when the transmitter is in the equisignal zone.

A 2-tube symmetrical multivibrator is used as a switch. It controls two identical h-f amplifiers having a common output. The electronic-coupling multivibrator generates nearly square signals which are used to control the screen-grids of the amplifier tubes. With the circuit diagram data, the switching frequency is 270 cps. The last tube of the direction finder is a cathode follower.

Half-wave dipole antennas and U-shaped baluns are recommended. Antenna height 18.75 m, distance between the dipoles 3.75 m.

There are 9 figures and two Soviet references (in text).

AVAILABLE: Library of Congress

Card 1/1

Dubrovin, V. M.

AUTHOR: Dubrovin, V.   107-8-28/62

TITLE: Observing the Signals of Artificial Earth Satellites; Operating
            Direction Finding Equipment (Nabludeniye za signalami isskust-
            vennykh sputnikov zemli; Rabota s pelengatsionnoy pristavkoy)

PERIODICAL: Radio, 1957, #8, pp 19-20 (USSR)

ABSTRACT: The method of determining the time of passage of a satellite
            through a meridian plane in the equisignal zone has been check-
            ed by imitating the signals of the satellite with a receiver
            installed on an aircraft.

            A VHF receiver, an oscillograph (ЭО-7), and a tape recorder
            (МАГ-8) were placed in a tent. The antennas were placed
            20-25 m from the tent. The d/f attachment was installed on a
            tripod near the antennas.

            Before starting operation, the receiver and d/f attachment were
            warmed up for an hour and the tuning and balancing of the
            equipment channels were checked by transmitting an unmodulated
            signal from a generator "СГ-1" through the attenuator of the
Card 1/3   apparatus and the decoupling resistances (47 ohms) to the

TITLE:

107-8-28/62

Observing the Signals of Artificial Earth Satellites;Operating
Direction Finding Equipment (Nabludeniye za signalami isskust-
vennykh sputnikov zemli; Rabota s pelengatsionnoy pristavkoy)

input circuits of the attachment.

A local heterodyne was switched on and the receiver was tuned
by means of the quartz calibrator "kK-6" to 40 megacycles.
The calibrator was switched off and the "CГ-1" generator was
tuned to the same frequency. The equisignal moment was deter-
mined easily by the oscillograph.

The total error in determining the moment of passage of the
satellite across the meridian consists of errors due to impro-
per adjustment and position of the receiver and its antennas,
uneven soil and errors in determining the equisignal moment.
The latter errors, amounting to $5-10^{\circ}$, can be diminished by
means of a magnetic tape recorder with indications of record-
ing time.

The accuracy of determining the moment of passage through the
equisignal zone can be doubled by using a multi-stage antenna,
consisting of one loop vibrator and two directors.

Card 2/3   For matching the antenna with the asymmetrical cable (75 ohms),

DuBRoviN, U.M.

AUTHORS: Kotel'nikov, V. A., Dubrovin, V. M., Morozov, V. A., Rzhiga,
O. N., Shakhovskoy, A. M.

TITLE: Application of the Doppler Effect for the Determination of
the Orbital Parameters of the Artificial Earth Satellites
(Ispol'zovaniye effekta Dopplera dlya opredeleniya paramet-
rov orbity iskusstvennykh sputnikov zemli)

ABSTRACT: The frequency shift produced by the Doppler effect as a
result of the motion of an earth satellite is appreciable
enough to be employed in the evaluation of the time when the
satellite is at a minimum distance from the point of observa-
tion (the receiver), and the corresponding air-to-ground dis-
tance and velocity. In the first approximation it can be
assumed that the path of the satellite is linear (see Fig.1),
so that its distance from the receiver can be expressed by:

$$r = \sqrt{r_0^2 + v_0^2 \Delta t^2} \qquad (1)$$

Card 1/6 where $\Delta t = t - t_0$, where t_0 is the instant when the

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satellite is at the point B and r_0 is the corresponding air-to-ground distance. The frequency shift due to the Doppler effect is expressed by:

$$\Delta F = -\frac{1}{\lambda}\frac{dr}{dt} = -\frac{v_0}{\lambda}\frac{\Delta t}{\sqrt{\Delta t^2 + \left(\frac{r_0}{v_0}\right)^2}} \qquad (2)$$

Eq.(2) was used to plot a number of curves for a satellite transmitter operating at $f_0 = 40$ Mc/s for various values of r_0 and v_0 , where v_0 is the average velocity of the satellite. The curves are shown in Figs.2 and 3 where ΔF is in c/s and Δt in sec. The instant of the maximum approach (or minimum distance) of the satellite can be determined from the curves of Figs.2 and 3, bearing in mind that

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they are symmetrical with respect to f_0 (as shown in Fig.4);
t_0 is simply evaluated by constructing a secant which inter-
sects the curve at a point 0 in such a way that its seg-
ments between 0 and two other intersecting points are equal
(see Fig.4). The instant of maximum approach can also be
determined analytically by approximating the frequency-time
curve by means of straight lines (as shown in Fig.5), but
this procedure is less accurate. Eq.(2) can also be written
as Eq.(11). If this equation is plotted in
Δt^2 and $\Delta t^2/\Delta r^2$ coordinates a straight line is obtained
(see Fig.6) which intersects the coordinates at a and b;
it is thus possible to determine the average velocity v_0
and the minimum distance r_0 . These quantities are
expressed by Eqs.(14) and (15) respectively. If the motion
of the satellite is rectilinear but is subject to an accel-
eration a_0 , the distance between the transmitter and the
receiver is given by Eq.(16), and the frequency shift is
expressed by Eq.(17). If the acceleration a_0 is

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comparatively small (as was the case with the two Soviet
satellites) the frequency shift is expressed approximately
by Eq.(18). The presence of acceleration destroys the
symmetry of the frequency-time curve (see Fig.7) so that
the time of maximum approach, when determined from such a
curve, is subject to an error. The magnitude of the error
δt for various distances is plotted in Fig.8. The para-
meters of a satellite can be determined more accurately if
its trajectory is assumed to be curvilinear (see Fig.9);
here the true trajectory is represented by curve 1, the
approximate curvilinear trajectory by curve 2 and the tangent
to the orbit by straight line 3; the centre of the approxi-
mate trajectory is situated at point C and its radius
vector is equal to R_o . The distance between the satellite

and the receiver can then be expressed by Eq.(19). If the
motion of the satellite is uniform, the angle Θ is expressed

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Application of the Doppler Effect for the Determination of the
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by Eq.(21) so that the frequency shift is given by Eq.(22).
If Θ is comparatively small the frequency shift is given
approximately by Eq.(23). Experimentally, the task of
determining the orbital parameters of the satellites by the
Doppler effect was carried out by the Institute of Radio
Engineering and Electronics of the Soviet Academy of Sciences
at a frequency of 40 Mc/s. The actual time-frequency curve
taken on October 10, 1957, is shown in Fig.10. The graphi-
cal method was used for determining t_0 , r_0 and v_0
and the results are shown in the table on p 880 and in
Fig.11. It was found that the errors in determining t_0
were 0.2 to 1 sec, while v_0 and r_0 could be determined

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Application of the Doppler Effect for the Determination of the
Orbital Parameters of the Artificial Earth Satellites
with an error of 3 to 5%. There are 12 figures.

ASSOCIATION: Institut radiotekhniki i elektroniki AN SSSR (Institute
of Radio Engineering and Electronics of the Soviet Academy
of Sciences)

SUBMITTED: April 11, 1958.

1. Satellite vehicles trajectories--Mathematical analysis   2. Doppler
navigation systems--Applications

Card 6/6

KOTEL'NIKOV, V.A.; APRAKSIN, L.V.; VOYTOV, V.O.; GOLUBTSOV, M.G.;
DUBROVIN, V.M.; ZAYTSEV, N.M.; KORENBERG, Ye.B.; MINASHIN, V.P.;
MOROZOV, V.A.; NIKITSKIY, N.I.; PETROV, G.M.; RZHIGA, O.N.;
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Radar system used in the Venus probe of 1961. Radiotekh.
i elektron. 7 no.11:1851-1859 N '62.   (MIRA 15:11)

1. Institut radiotekhniki i elektroniki AN SSSR.
                        (Radar)
                  (Venus probes)

KOTEL'NIKOV, V.A.; DUBROVIN, V.M.; MOROZOV, V.A.; PETROV, G.M.;
    RZHIGA, O.N.; TRUNOVA, Z.G.; SHAKHOVSKOY, A.M.

Results of Venus radar probes conducted in 1961. Radiotekh.
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1. Institut radiotekhniki i elektroniki AN SSSR.
                    (Venus probes)
                       (Radar)

KOTEL'NIKOV, V. A., akademik; GUS'KOV, G. Ya.; DUBROVIN, V. M.;
DUBINSKIY, B. A.; KISLIK, M. D.; KORENBERG, Ye. B.; MINASHIN,
V. P.; MOROZOV, V. A.; NIKITSKIY, N. I.; PETROV, G. M.;
PODOPRIGORA, G. A.; RZHIGA, O. N.; FRANTSESSON, A. V.;
SHAKHOVSKOY, A. M.

Radar tracking of the planet Mercury. Dokl. AN SSSR 147 no.6:
1320-1323 D '62.   (MIRA 16:1)

1. Institut radiotekhniki i elektroniki AN SSSR.
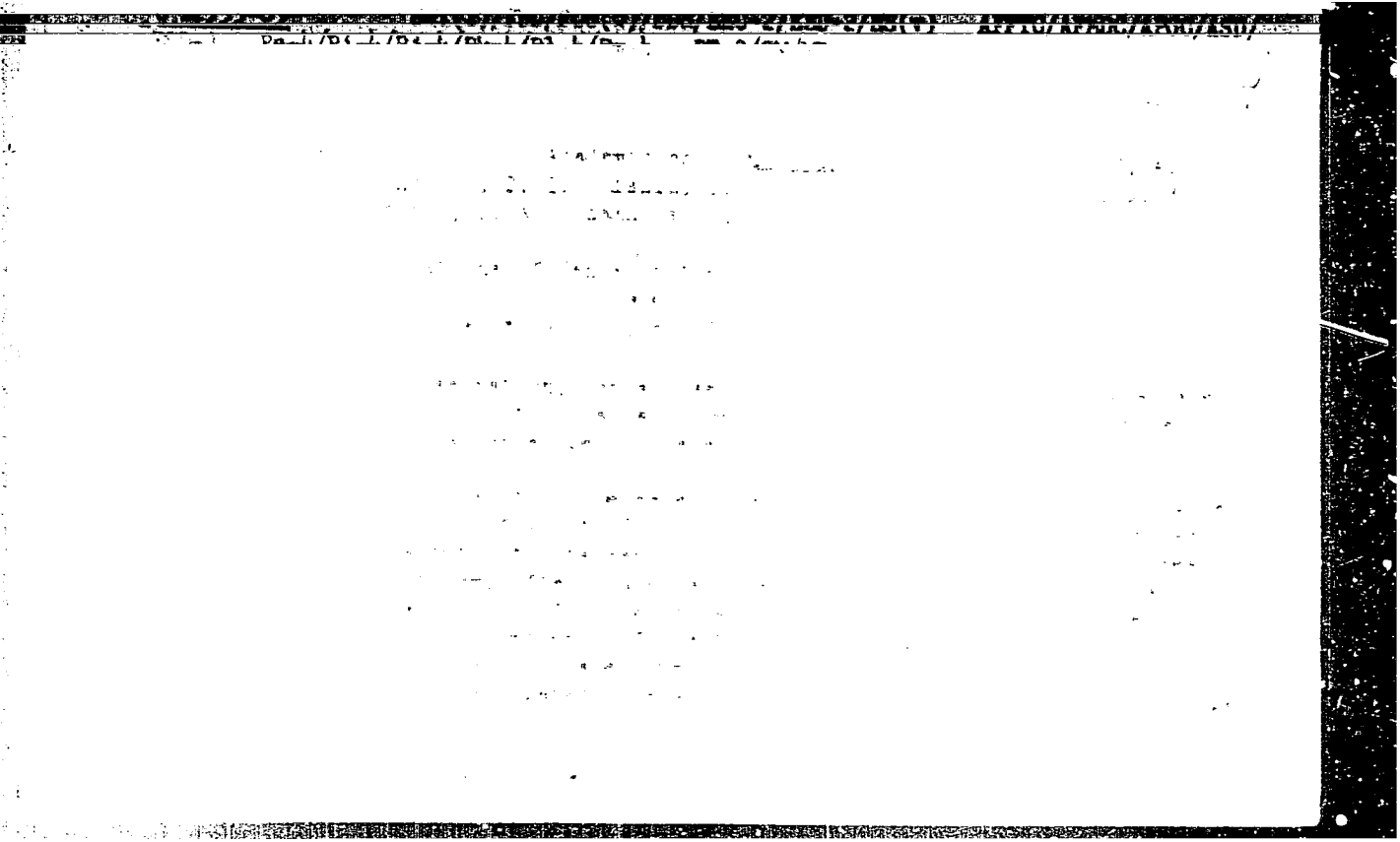
        (Mercury(Planet))   (Radar in astronomy)

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ESD(ga)/ESD(t)/RAEM(t) S/0026/64   DO3/GOC2/0012
NR: AP6045505   Pb-4   GM/WK

Malin'kov, V. A.; Dubrovin, V. M.; Kuznetsov, B.; Petrov, G. M.;
B; Shakhovskoy, A. M.

Advances in interplanetary radar

coda, no. 9, 1964, 2-12

radar, interplanetary radar, planet travel, radar, lunar
planetary orbit, radiowave reflection

The paper reviews past and present achievements, beginning, by
distance and the surface structure of the sun and the planets as
in the SSSR, USA, and England. The experiment of the radar
of Moon, mainly in the USA, was applied to the Venus and then
Mars, and Jupiter. The results obtained of these planets
abovementioned countries are briefly summarized radar distances
units are tabulated. The method of measuring using linear
modulation is briefly described; this method by the authors in
investigation of Venus. The astronomical discussed and its
by astronomical methods and by radar check method gives
accuracy. It is noted that the apparent relationship

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...sive obtained for the astronomica... ...ar frequency co-
...at... that any effect of the interplanet... ... ...the measurements
...mits of experimental error... ...mination of
...on of Venus by prolonged rada... ...ater, 1962) is
...distances to this planet obta... ...presented;
...the distance then observed wa... ...pation of
...anets by measuring the reflec... ...face
...ssed and the results obtained... λ 40 cm)
...λ 60 and 12.6 cm) are discuss... ...of the
...frequency, and the angle of... ...the re-
...wave is discussed. Comparison... ...own that
...the surfaces of Venus and of the Moon... ...s of about
...The radar study of Mars in... ...1963 is
...The mean reflection coefficient... ...the authors
...as in the case of the Moon), wh... ...ained in the
...t is half the above value. ... ...hange in the
...ficient of the planet's surface... ...haracter of
...of the reflected wave indicates the... ...large flat
...measurements of the period of rota... ...made in the SSSR
...62, are then discussed; the good agreement... ...ods of rotation
...days) computed from the data obta... ...frequencies

HR: AP4045505   /

and (2.6 cm) indicates that at these frequencies the reflections are ob-
r tly from the planet's surface and not from the atmosphere as it was
to be the case for the longer wavelength λ 40 m. In the SSSR the
ement's were made by the Institut radiotekhn i elektroniki AH SSSR
of Radio Engineering and Electronics of the USSR Academy of Sciences).
has: 11 figures, 2 tables and 1 formula.

ASSOCIATION: none

        20   ENCL: 00   SUB CODE: AA

        005   OTHER: 000

AUTHOR: Kotel'nikov, V. A. (Academician); Apraksin, L. V.; Dubrovin, V. M.;
Kislik, M. D.; Kuznetsov, B. I.; Petrov, G. M.; Rzhiga, O. N.; Frantsesson,
A. V.; Shakhovskoy, A. M.

TITLE: Radar ranging of the Planet Jupiter

SOURCE: AN SSSR. Doklady*, v. 155, no. 5, 1964; 1037-1038

TOPIC TAGS: Jupiter radar ranging, Jupiter reflection coefficient, radio astronomy,
Jupiter, Doppler effect

ABSTRACT: The radar ranging of Jupiter was undertaken in order to investigate
the propagation of radiowaves over long distances, and for the determination of
reflecting properties of Jupiter's surface. The power received by the planet's
surface was 13 w.   The time for double passage of the signal was 1 hr, 6 sec,
and the frequency was about 700 mc. Two consecutive signals differed by 62.5
cycles. The duration of the signals and the pauses was about 4 sec. The Doppler
effect caused by the relative motion and rotation of Earth was compensated by an
arrangement which linearly changed the heterodyne of the sender.   The noise was

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... ody, v. 183, no. ., 1965, ...

... reflection, Venus radar observ...   ... measure-
... radio astronomy

... servations of Venus at .. cm were 30
... stitute of Radio Engineering and ...   ... demy of
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radiotekhniki i radioelektr
Engineering and Electronics. Analog

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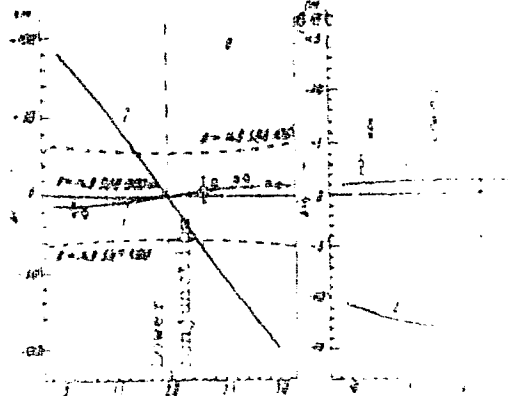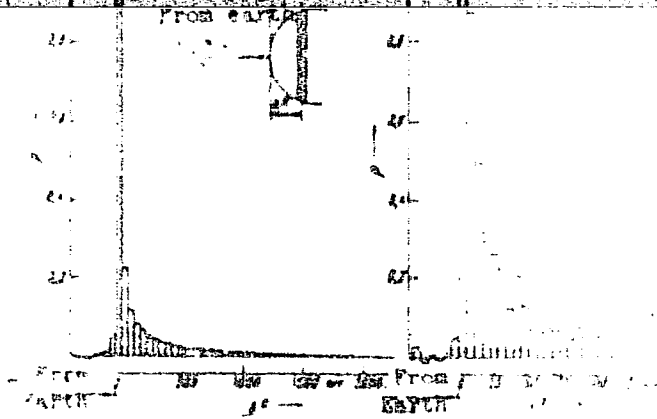
...rgy range distribution of signals ref... ...tained
...quency modulation (s) with a devia... ...
...ilters and r = 0.0016 for wide fi... ...
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PARAMONOVA, V.I.; PLATUNOVA, N.B.; DUBROVIN, V.S.

Complex formation of uranyl ion with salicyclic acid. Part 1: Complex
formation in solution studied by spectrophotometry. Radiokhimiia 6
no.5:505-513 '64.
                                                    (MIRA 18:1)

BILRTSKIY, M.L.[Bilets'kyi, M.L.], iush.; DUBROVIN, V.S., iush.

How to organize repair shops on collective farms. Mekh. sil'.
hosp. 9 no. 6:7-9 Je '58.   (MIRA 11:7)
            (Repair and supply stations)

DUBROVIN V.S., insh.-mekhanik

Get collective farm machinery and equipment well prepared for 1959.
Mekh.sil'.hosp. 9 no.11:20:21 N '58.   (MIRA 11:12)
(Agricultural machinery)

DUBROVIN, V.S., insh.

Improve the work of collective-farm repair shops, Mekh. sil'. hosp.
11 no.11:J—4 E '60.
(MIRA 13:11)
(Agricultural machinery—Maintenance and repair)

DUBROVIN, V.S., inzh.-mekhanik

Washing machines for repair shops. Mekh. sil'.hosp. 12 no.8:
26 Ag '61.   (MIRA 14:7)
        (Agricultural machinery—Maintenance and repair)
                (Washing machines)

DUBROVIN, V.S., insh.-mekhanik

Planning expenses for the maintenance and repairing of tractors
and machinery. Mekh. sil'. hosp 12 no.11:15-17 N '61.
(MIRA 14:11)
(Agricultural machinery—Maintenance and repair)
(Tractors—Maintenance and repair)

DUBROVIN, V.S., inzh.-mekhanik

Allotment of funds for maintenance and repair of automobiles. Mekh.
all'e hosp. 13 no.8:13-15 Ag '62.   (MIRA 15:7)
(Automobiles—Maintenance and repair)

DUBROVIN, V.S., insh.

Planning the volume of work and costs in over-all maintenance
and repair of a machinery and tractor pool. Mekh. sil'. hosp.
14 no.5:18-19 My '63.   (MIRA 16:10)

DUBROVIN, V.Ye.

Category : USSR/Radiophysics - Statistical Phenomena in Radiophysics   I-3

Abs Jour : Ref Zhur - Fizika, No 2, 1957, No 4429

Author   : Malakhov, A.N., Dubrovin, V.Ye.
Title   : Certain Investigation of the Flicker Effect.

Orig Pub : Zh. tekhn. fiziki, 1956, 26, No 7, 1451-1455

Abstract : A study was made of tube-current fluctuations in the 0.5 -- 120 cycle
           range, where the noise caused by the flicker effect exceeds the shot
           or the thermal noise. A special noise analyzer, based on a triple
           frequency conversion circuit, was used for the measurements. The max-
           imum sensitivity of the analyzer, the block diagram of which is shown
           in the drawing, is 10^{-16} v^2/cycle. The flicker intensity vs. anode
           voltage curves displayed minima and maxima, alternating approximately
           every 14 volts, caused, in the opinion of the authors, to the ionization
           of residual gases -- CO_2, CO, N, H_2O -- which have ionization potentials
           from 13.2 to 14.5 volts. The relative magnitude of the fluctuations
           $\Delta J^2/J^2$ ranges from 10^{-6} to 10^{-14}. The cathode temperature does not
           affect the form of the spectrum. Bibliography, 5 titles.

Card   : 1/3

Category : USSR/Radiophysics - Statistical Phenomena in Radiophysics   I-3

Abs Jour : Ref Zhur - Fizika, No 2, 1957, No 4429
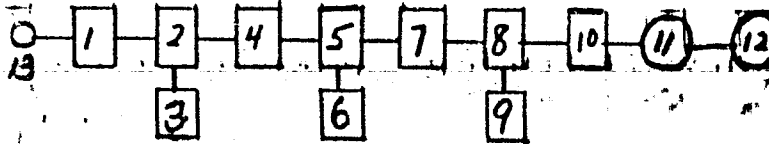
1) A_I -- First amplifier

2) M_I -- First mixer

3) H_I -- First heterodyne (800 cycles)

4) A_{II} -- Second amplifier

5) M_{II} -- Second mixer

6) H_{II} -- Second heterodyne (800-930 cycles)

7) DCF -- DC filter with approximate bandwidth of 0.2 cycles

Card   : 2/3

Category : USSR/Radiophysics - Statistical Phenomena in Radiophysics   I-3

Abs Jour : Ref Zhur - Fizika, No 2, 1957, No 4429

8) M_{III} -- Third mixer

9) H_{III} -- Third heterodyne (500 cycles)

10) A_{III} -- Third amplifier

11) T   -- Thermocouple

12) Galv.-- Galvanometer

13) Input

Card   : 3/3

DUBROVIN, Ye., dotsent; KEREULOV, Ye., dotsent; TURCHIKHIN, B., dotsent

Precast reinforced concrete city pavements. Zhil.-kom.khoz.
10 no.9:27-29 '60.   (MIRA 13:9)

1. Kafedra dorog Vsesoyuznogo zaochnogo inzhenerno-stroitel'nogo
instituta.
(Pavements, Concrete)

VINITSKIY, L., dotsent; DUBROVIN, Ye., dotsent; TURCHIKHIN, B., dotsent

Elastic securing of rails to reinforced-concrete ties. Zhil.-kom.
khoz. 10 no.10:30-31 '60.   (MIRA 13:10)

1. Vsesoyusnyy saochnyy inzhenerno-stroitel'nyy institut.
          (Street railways--Rails)

DUBROVIN, Ye.; KARMAL'SKIY, O.; FILATOV, G.; LOKOTKOV, A.; LEBEDINSKIY, A.;
BARANOV, I.; MITSEVICH, P.; BABENKO, Ye.; GOLITSYN, A. (Ozery, Moskovskoy
obl.); SHCHEPOTIN, I. (Ozery, Moskovskoy obl.); KHALANGOT, A. (Snezhnoye,
donetskoy obl.); KUZ'MICHEV, N. (Snezhnoye, Donetskoy obl.); SIRITSA, A.,
inzh. po ratsionalizatsii

This is the way we live. Izobr. i rats. no.10:4-5, 23 '63.
(MIRA 17:2)

1. Chlen soveta obshchestvennogo konstruktorskogo byuro zavoda im. V.I.
Lenina (for Karmal'skiy). 2. Predsedatel' Amurskogo oblastnogo soveta
Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov (for Filatov).
3. Predsedatel' Chelyabinskogo promyshlennogo oblastnogo soveta Vsesoyuz-
nogo obshchestva izobretateley i ratsionalizatorov (for Lokotkov). 4.
Starshiy svarshchik Odesskogo zavoda imeni Dzerzhinskogo (for Lebedinskiy).
5. Predsedatel' zavodskogo soveta Vsesoyuznogo obshchestva izobretateley
i ratsionalizatorov (for Baranov). 6. Predsedatel' soveta Vsesoyuznogo
obshchestva izobretateley i ratsionalizatorov Irkutskogo zavoda tyazheloge
mashinostroyeniya imeni Kuybysheva (for Mitsevich).

DUBROVIN, Ye. N., Cand of Tech Sci -- (diss) "The question of utilizing

block-pulley construction for streetcar tracks." Moscow, 1957, 15 pp

(Academy of Municipal Economy im K. D. Pamfilov), 100 copies

(KL, 30-57, 110)

KIKULOV, Yefim Afanas'yevich; PETROV, Vyacheslav Konstantinovich [deceased];
SOSYANTS, Vasiliy Georgiyevich; YUDIN, Vasiliy Aleksandrovich;
Prinimali uchastiye: DUBROVIN, Ye.N.; SLAVUTSKIY, A.K.; BARKOVA,
Ye.A.; BLATNOV, M.D.; KUDRYAVTSEV, O.K.; SAMOYLOV, D.S.; FRIDLYAND,
A.G.. BRONSHTEYN, L.A., red.; RACHEVSKAYA, M.I., red.izd-va;
LELYUKHIN, A.A., tekhn.red.

[Urban transportation and street construction] Gorodskoi transport
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RSFSR, 1959. 473 p.   (MIRA 12:8)

1. Sotrudniki Akademii kommunal'nogo khozyaystva im. K.D.Pamfilova
(for Barkova, Blatnov, Kudryavtsev, Samoylov, Fridlyand).
          (Transportation)   (Streets)

DUBROVIN, N. kand. tekhn. nauk

Using large sections in constructing streetcar tracks. Zhil.-kom.
khoz. 9 no.4:15-16 '59.   (MIRA 12:7)
     (Concrete slabs) (Moscow--Street railways--Construction)

DUBROVIN, Ye.N., dots., kand. tekhn. nauk; LUSHCHIKINA, N., red.;
STRAKHOVA, T., tekhn. red.

[Designing the longitudinal section of city streets and roads]
Proektirovanie prodol'nogo profilia gorodskikh ulits i dorog;
lektsiia dlia studentov spetsial'nosti "Gorodskoe stroitel'-
stvo i khoziaistvo." Moskva, Vses. zaochnyi inzhenerno-stroit.
in-t, 1962. 17 p.   (MIRA 15:12)
          (Streets)   (Roads—Design)

MERKULOV, Yefim Afanas'yevich, dots., kand. tekhn. nauk; DUBROVIN,
        Yevgeniy Nikolayevich, dots., kand. tekhn. nauk; TURCHIKHIN,
        Emmanuil Yakovlevich, dots., kand. tekhn. nauk; YUDIN, Vasiliy
        Aleksandrovich, dots., kand. tekhn. nauk; Prinimali uchastiye:
        SLAVUTSKIY, A.K., dots., kand. tekhn. nauk; ZAYTSEV, L.K., inzh.;
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[Examples of the design of roads and public transportation systems
in cities]Primery proektirovaniia dorog i setei passazhirskogo
transporta v gorodakh. [By] E.A.Merkulov i dr. Moskva, Gos. izd-
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dotsent

Use precast reinforced concrete in road construction.
Gor. khoz. Mosk. 36 no.9:17-20 S '62   (MIRA 15:10)

1. Vsesoyuznyy zaochnyy inzhenerno-stroitel'nyy institut.
(Prestressed concrete construction) (Moscow—Road construction)

DUBROVIN, Ievgeniy Nikolayevich; TURCHIKHIN, Emmanuil Yakovlevich;
SHAFRAN, Vladimir Leont'yevich; SAVOYLOV, D.S., red.;
ISEYEVA, R.Kh., red.izd-va; KHENOKH, F.M., tekhn. red.

[City vehicular and pedestrian crossings at various levels]
Gorodskie transportnye i peshekhodrye peresecheniia v raz-
nykh urovniakh. Moskva, Izd-vo MKKh RSFSR, 1963. 131 p.
                                        (MIRA 17:2)

DUBROVIN, Yevgeniy Nikolayevich; ZAYTSEV, Leonid Konstantinovich;
    TURCHIKHIN, Emmanuil Yakovlevich; SOSYANTS, V.G., red.;
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maintenance of city roads] Ekonomika i organizatsiia stroi-
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                        (Roads)

DUBROVIN, Yevgeniy Nikolayevich; TURCHIKHIN, Emmanuil Yakovlevich;
YUDIN, Vasiliy Aleksandrovich; LANTSBERG, Yu.S., red.;
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red.

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skikh dorog. Moskva, Vysshaia shkola, 1963. 305 p.
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(Road construction) (Streets)

DUBROVIN, Yevgeniy Nikolayevich; TURCHIKHIN, Emmanuil Yakovlevich; ZAMAKHAYEV, M.S., red.

[Pavements of prestressed reinforced concrete] Dorozhnye pokrytiia iz predvaritel'no napriazhennogo zhelezobetona. Moskva, Transport, 1964. 97 p.   (MIRA 17:6)

DUBROVIN, Ye.Ye. GELLER, Z.I.; LEVENBUK, I.Kh.

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