BATRAKOV, V.S.

Special features of agricultural development in the Bokhara Khanate from the middle of the 18th century to the 1870's. Nauch. trudy TashGU no.193:154-184 '62. (MIRA 16:7)

(Bokhara—Agriculture)

BATRAKOV, V.V., IOFA, Z.A.

Measurement of the impedance of an iron electrode by means of alternating current. Elektrokhimiia 1 no.2:123-129 F '65.
(MIRA 18:6)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

FRUMKIN, A.N.; FEDOROVA, [illegible]; [illegible]

Zinovii Aleksandrovich Iofa; on his 70th birthday, 1895-.
Elektrokhimiia 1 no.5:620-621 My '65. (MIRA 18:6)

IOFA, Z.A.; BATRAKOV, V.V.; KHO NGOK BA

Effect of the adsorption of anions on the action of inhibitors of acid corrosion of iron and cobalt. Zashch.met. 1 no.1:55-62 Ja-F '65. (MIRA 18:5)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

BATRAKOV, V.V.; P'YANKOVA, A.P.; IOFA, Z.A.

Behavior of an iron electrode in alkaline solutions at low temperatures. Zhur. fiz. khim. 38 no.5:1340-1343 My '64. (MIRA 18:12)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.
Submitted July 3, 1963.

BATRAKOV, Yu.G.

Using the KB-1 telescopic alidade and staff with a movable scale and anvil. Geod. i kart. no.9:32-36 S '56. (MLRA 10:1)
(Surveying--Instruments)

BATRAKOV, Yu. G.: Master Tech Sci (diss) -- "Investigation of the precision of surveying relief and of computations of the volume of planning work in draft drawings". Moscow, 1958. 18 pp (Min Agric USSR, Moscow Inst of Land Management Engineers), 150 copies (KL, No 4, 1959, 125)

3(4)

AUTHOR: Batrakov, Yu. G., Assistant

SOV/154-59-3-13/19

TITLE: Exhibition of Geodetic Instruments of the Hungarian People's Republic (Vystavka geodezicheskikh instrumentov Vengerskoy Narodnoy Respubliki)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Geodeziya i aerofotos"-yemka, 1959, Nr 3, pp 139 - 142 (USSR)

ABSTRACT: A short description of the geodetic instruments produced in Hungary is given. These instruments were exhibited in Moscow in November and December 1957. 1) The theodolite D-1 is used for triangulations of lower orders and in geodetic engineering work. Wedge bolt and micrometer screw of the horizontal circle have a common axle. The same applies to the screws of the vertical circle. The magnifying power of the telescope is 25^x. 2) The theodolite-tachymeter Ye-1 is small and light. Here, too, the wedge bolts and micrometer screws of the horizontal and vertical circles are mounted in pairs on a common spindle. The reading accuracy is 30", the proper weight 3.4 kg. Apart from this instrument there exists another Ye-2 type which is mainly destined for underground surveying. This instrument is lighted

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and not mounted on a tripod but on a side support. Thus it needs not be demounted when ores are removed from the mine. 3) The universal theodolite-tachymeter 17 A is used for the plotting of tachymeter lines of higher accuracy, for micro-triangulations, etc. The magnifying power of the telescope is 28^{x}, the weight - including the case - is 5.7 kg. The telescope has a turning level with a 20" scale. 4) Leveling instrument with horizontal circle, type 35 Ye, for leveling of third and fourth orders. The root of the square mean error is 5 mm per km of the line in leveling from both ends. The horizontal circle makes it possible to determine both superelevation and location of points. The reading of the horizontal circle is done at the vernier with an accuracy of 6'. The instrument is equipped with a tilting screw. 5) The measuring table MF has 2 levels on the telescope and on the vertical circle. The turning level of the telescope permits a determination of the picket mark by means of a horizontal ray. In figure 6 the field of the telescope is shown. All instruments described above are shown in the figures. There are 6 figures.

Exhibition of Geodetic Instruments of the Hungarian People's Republic SOV/154-59-3-13/19

ASSOCIATION: Moskovskiy institut zemleustroystva (Moscow Institute of Land Survey)

SUBMITTED: December 15, 1958

Card 3/3

BATRAKOV, Yu.G.

Effect of surface curvature on the accuracy of the calculated volume of grading work. Trudy MIIZ no.10:15-18 '60.
(MIRA 16:12)

BATRAKOV, Yu.G., kand.tekhn.nauk

Accuracy of calculating the volume of grading work by the method of square prisms. Izv.vys.ucheb.zav.; geod.i aerof. no.1:51-57 '61. (MIRA 14:6)

1. Moskovskiy institut inzhenerov zemleustroystva.
(Earthwork--Tables, Calculation, etc.)

BATRAKOV, Yu.G., kand.tekhn.nauk

Precision of leveling in irrigated areas. Izv. vys. ucheb. zav.; geod. i aerof. no.3:35-43 '61. (MIRA 14:10)

1. Moskovskiy institut inzhenerov zemleustroystva.
(Leveling)

S/006/61/000/011/002/002
D054/D113

AUTHORS: Batrakov, Yu. G., Yeremeyev, V. D. and Savinov, L. B.

TITLE: Investigations and practical use of the NL-3 level

PERIODICAL: Geodeziya i kartografiya, no. 11, 1961, 29-32

TEXT: The article deals with investigations and the practical use of the НЛ-3 (NL-3) level. Investigations were conducted by the Department of Geodesy of the Moskovskiy institut inzhenerov zemleustroystva (Moscow Institute of Survey Engineers) and the Central Establishment of the Vsesoyuznaya kontora Sel'khozaeros"yemka (All-Union Office for the Aerial Surveying of Rural Areas). The device has an optical altimeter built in the telescope which consists of a reticule of altimetric hachures protected by etched glass. The image of these hachures can be seen in the left part of the visual field of the telescope on a silvered strip; the image of the staff, of the middle hachure of the graticule and the two anallactic hachures can be seen in the right part. The position of the altimetric hachure in the visual field of the telescope depends on the inclination angle of the directional ray. The functioning of the level depends on the point-to-point

Card 1/2

correspondence of the altimetric hachure with the middle horizontal hair of the graticule at the horizontal position of the directional axis of the telescope. The authors describe the functioning of the NL-3 device which was used in stereotopographic surveying in the Smolenskaya Oblast' and in the Moldavskaya SSR in 1960 and compare the results obtained with the results obtained by geometrical levelling. The NL-3 level can be used for altitudinal field observations, for stereotopographic surveying, and for compiling a vertical control network for an aerophotographic survey. The NL-3 level is also recommended for operations in regions with broken conformation, as well as for surveying roads, transmission lines, pipelines, etc. The disadvantage of the device is that the prism for observing the spirit level bulb is fixed at such a distance from the lens ring that it is impossible to observe the bulb when taking the readings from staffs. Scientist A. N. Kolmogorov is mentioned in the article. There are 2 tables.

BATRAKOV, Yu.G., kand.tekhn.nauk

New instruments for surveying in land-improving hydraulic engineering. Gidr. i mel. 13 no.5:51-59 My '61. (MIRA 14:5)

1. Moskovskiy institut inzhenerov zemleustroystva.
(Surveying--Instruments)

S/270/63/000/002/009/020
A001/A101

AUTHOR: Batrakov, Yu. G.

TITLE: Modern geodetic instruments

PERIODICAL: Referativnyy zhurnal, Geodeziya, no. 2, 1963, 21, abstract 2.52.153 ("Gidrotekhn. i melioratsiya", 1962, no. 10, 43 - 50)

TEXT: The author briefly describes and cites the principal technical characteristics of the following geodetic instruments manufactured by the people's Zeiss enterprise (Jena, GDR): level instruments: Ni 060, Ni 030, Ni004, Koni 007; theodolites: Theo 030 and Theo 010; reduction tacheometers: Dahlta 020 and Redta 002; range finders: teletop, Lotakeil 004, Dimesskeil 002; mapping desk Karti 250; base rod Bala; rods to range finders Lotakeil 004 and Dimesskeil 002.

V. S.

[Abstracter's note: Complete translation]

Card 1/1

SOBERAYSKIY, Konstantin Stanislavovich; SIROTA, Ivan Fedorovich; BATRAKOV, Yuriy Grigor'yevich; VZNUZDAYEV, Sergey Vasil'yevich; DVORYANKOV, Sergey Mikhaylovich; MASLOV, A.V., red.; VASIL'YEVA, V.I., red.izd-va; ROMANOVA, V.V., tekhn. red.

[Geodesic works for the construction of irrigation and drainage systems] Geodezicheskie raboty dlia stroitel'stva orositel'nykh i osushitel'nykh sistem. [By] K.S.Soberaiskii i dr. Moskva, Gosgeoltekhizdat, 1963. 203 p. (MIRA 16:12)

(Surveying) (Irrigation) (Drainage)

BATRAKOV, Yu.G.

NASM-4B geodimeter. Geod. i kart. no.12:25-34 D '64.
(MIRA 18:2)

MASLOV, Aleksey Vasil'yevich; LARCHENKO, Yefim Gerasimovich; GORDEYEV, Aleksandr Vasil'yevich; ALEKSANDROV, Nikolay Nikolayevich; Prinimal uchastiye BATRAKOV, Yu.G.; ZUBRITSKIY, I.V., prof., retsenzent [deceased]; VASIL'YEVA, V.I., red.izd-va; ROMANOVA, V.V., tekhn. red.

[Geodesy] Geodeziia. [By] A.V.Maslov i dr. Moskva, Izd-vo "Nedra." Pt.1. 1964. 490 p. (MIRA 17:4)

1. Zaveduyushchiy kafedroy geodezii Belorusskoy sel'skokhozyaystvennoy akademii (for Zubritskiy).

MIKHNEVICH, Grigoriy Vasil'yevich, dots.; RYAZANOV, Viktor Pavlovich, dots.; SIBIRYAKOVA, Aleksandra Dmitriyevna, dots. Prinimali uchastiye: BATRAKOV, Yu.G., dots.; VITMAN, A.I., dots.; YUNOSHEV, L.S., aspirant; KOROBOCHKIN, M.I., assistent; NEKHOROSHEV, M.Ye., retsenzent; BOGOLYUBOVA, N.S., retsenzent; NIKOLENKO, N.F., retsenzent; CHERNUKHIN, L.S., retsenzent; NESHCHADIMOV, L.S., retsenzent; LARCHENKO, Ye.G., prof., red.

[Surveying] Geodeziia. Moskva, Nedra. Pt.2., 1964. 338 p. (MIRA 17:12)

1. Zamestitel' nachal'nika Upravleniya sel'skokhozyaystvennykh aerofotos"yemok (for Nekhoroshev). 2. Kafedra vysshey geodezii Omskogo sel'skokhozyaystvennogo instituta (for Bogolyubova, Nikolenko, Chernukhin, Neshchadimov).

L 4917-66 EWT(1) OW

ACC NR: AP5023339 UR/0154/65/000/003/0055/0061
538.52

AUTHOR: Batrakov, Yu. G., (Docent, Candidate of technical sciences); Lyubarets, V.P., (Student); Kovalenko, A.N., (Student); Romeyko, D.F., (Engineer)

TITLE: Field investigation and trial use of the Koni 007 and Ni-VZ leveling instruments

SOURCE: IVUZ: Geodeziya i aerofotos"yemka, no. 3, 1965, 55-61

TOPIC TAGS: geodetic survey, geodetic instrument, model test, performance test

ABSTRACT: The Koni 007 leveling instrument, made by VEB Karl Zeiss in Jena, and the Ni-VZ, made by the Hungarian optical factory MOM, were field-tested near Moscow in 1963 and used during the 1963 Kazakh expedition of Giprovodkhoz to survey the possible route of the Irtysh-Ishim canal. An analysis of the comprehensive data presented in this article shows that the leveling accuracy for double (single) path is ±2 — 3 mm (2.5 — 4 mm) per 1 km for the Koni 007 instrument, and ±3 — 4 mm (4 — 6 mm) for the Ni-VZ instrument. Both instruments are resident to shocks encountered during travel on poor quality village roads. During high wind or heavy traffic nearby, the filaments of the Ni-VZ instrument acquired excessive vibrations leading to unreliable readings. No such effects appeared on the Koni 007 instrument. The use of these leveling instruments reduced by about 20 — 25% relative to the ordinary instruments the amount of time needed for the leveling operations. "Students Yu. Soldatov and K. Shetinina participated in the work with the leveling instruments." Orig. art. has: 7 formulas, 2 figures, and 2 tables.

Card 1/2

0901 1347

L 4917-66

ACC NR: AP5023339

ASSOCIATION: [Batrakov, Lyubarets, Kovalenko] Moscow Institute of Land Management Engineers (Moskovskiy institut inzhenerov zemleustroystva); [Romeyko] Giprovodkhoz 44,55

SUBMITTED: 29Sep64 ENC: 00 SUB CODE: ES, IE

NO REF SOV: 004 OTHER: 002

Card 2/2

L 47100-66 EWT(d)/EWT(l) GW/BC

ACC NR: AR6016484 SOURCE CODE: UR/0272/65/000/012/0016/0016

AUTHOR: Batrakov, Yu. G.

TITLE: Principle of operation and practice of measuring distances by geodetic radio range finders

SOURCE: Ref. zh. Metrologiya i izmeritel'naya tekhnika, Abs. 12.32.150

REF SOURCE: Tr. Mosk. in-ta inzh. zemleustroystva, vyp. 24, 1965, 3-18

TOPIC TAGS: geodetic instrument, range finder, tellurometer, line measurement

ABSTRACT: A study has been made of the operating principle of a tellurometer-type radio range finder and of the order of carrying out measurements and calculations with it. According to the results of eight measurements of a geodetic base line 1080-m long, the conclusion is drawn that with small lines there is no necessity of measuring in the 10—12 carrier frequencies when the station is

Card 1/2 UDC: 389.528.516

L 47100-66

ACC NR: AR6016484

placed on supports, but it is sufficient to carry out two rough and two precise measurements. For small lines the requirements can also be lowered with respect to the duration of heating the thermostat, the thoroughness of synchronizing the frequencies of both the master and the slave stations, and the determination of meteorological elements. [Translation of abstract] [NT]

SUB CODE: 08/

hs

Card 2/2

BATRAKOV, Yu. V.

Batrakov, Yu. V. --"Application of Periodic Solutions of Schwarzschild to the Problem of Vacua in the Ring of Asteroids." Cand Phys-Math Aci, Leningrad State U, Leningrad 1953. (Referativnyy Zhurnal--Astronomiya, Jan 54)

SO: SUM 168, 22 July 1954

BATRAKOV, Yu.V.

Schwarzschild-type periodical solutions in the limited problem of three bodies. Biul.Inst.teor.astron. 6 no.2: 112-120 '55. (MIRA 13:3)
(Problem of three bodies)

BATRAKOV, Yu.V.

Third-grade periodical solutions in the general problem of three bodies. Biul.Inst.teor.astron. 6 no.2:121-126 '55. (MIRA 13:3)

(Problem of three bodies)

BATRAKOV, Yu.V.

Periodic motions of a particle in the gravitation field of a rotating three-axial ellipsoid. Biul.Inst.teor.astron. 6 no.8:524-542 '57. (MIRA 13:3)
(Problem of two bodies)

BATRAKOV, Yu.V.

Distribution of mean motions of asteroids in the vicinity of commensurabilities. Biul.Inst.teor.astron. 6 no.9: 577-581 '58. (MIRA 13:3)
(Planets, Minor)

BATRAKOV, Yu.V.

29(0) PHASE I BOOK EXPLOITATION SOV/3065

Iskusstvennyye sputniki zemli, vyp. 3 (Artificial Earth Satellites, No. 3) Moscow, Izd-vo Akademii nauk SSSR, 1959. 125 p. 5,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR.

Resp. Ed.: L.V. Kurnosova; Ed. of Publishing House: L.V. Samsonenko; Tech. Ed.: Yu. Rylina.

PURPOSE: This collection of articles is the third in a series intended to disseminate data collected from artificial earth satellite investigations to scientists.

COVERAGE: The collection of articles deals with various problems arising in the operation of artificial satellites. The papers also cover the use of artificial satellites as scientific instruments for various types of geophysical investigations.

TABLE OF CONTENTS:

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Artificial Earth (Cont.) SOV/3065

AVAILABLE: Library of Congress

Card 3/3 AC/jb
12-30-59

PROSKURIN, V.F.; BATRAKOV, Yu.V.

First order perturbances in the motion of artificial satellites caused by flattening of the earth. Isk. sput. zem. no.3:32-38 '59. (MIRA 12:12)
(Artificial satellites) (Mechanics, Celestial)

BATRAKOV, Yu.V.; PROSKURIN, V.F.

Perturbances of artificial-satellite orbits caused by air resistance. Isk. sput. zem. no.3:39-46 '59. (MIRA 12:12)
(Artificial satellites)

Name : BATRAKOV, Yu. V.

Title : Candidate of Physico-Mathematical Sciences.

Remarks : Yu. V. BATRAKOV is the author of an article entitled "On the Way to Learning about Outer Space".

Source : M: Stantsii v Kosmose (Stations in Outer Space), a collection of articles, published by the USSR Academy of Sciences, Moskva, 1960, with foreword by Academicians A. N. Nesmeyanov and A. V. Topchiyev, p. 93.

99 10

PHASE I BOOK EXPLOITATION 307/4946

Mikhaylov, A. A., ed.

Stantsii v kosmose; sbornik statey [Space Stations; Collection of Articles] Moscow, Izd-vo AN SSSR, 1960. 444 p. 25,000 copies printed. (Series: Akademiya nauk SSSR. Nauchno-populyarnaya Seriya)

Resp. Ed.: A. A. Mikhaylov; Compiler: V. V. Fedorov; Ed. of Publishing House: Ye. M. Klyuz; Tech. Ed.: I. D. Novichkova.

PURPOSE: This book is intended both for the space specialist and the average reader interested in space problems.

COVERAGE: The book contains 73 short articles by various Soviet authors on problems connected with space travel and the launching of artificial earth satellites and space rockets. Some possibilities of future developments are also discussed. The articles were published in the period of 1957-1960. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

II. PRELIMINARY RESULTS OF SPACE INVESTIGATION

Zeygarnov, A. N. Historical Frontier [October 8, 1958] 72

Konchiyev, A. V. First Scientific Results of the Flight of Soviet Sputniks [March 26, 1958] 75

Soviet Artificial Earth Satellites [Pravda, October 9, 1957] 78

Mikhaylov, V. V., Candidate of Physical and Mathematical Sciences. Automatic Laboratory in Space [November 14, 1957] 90

Krasovskiy, V. I., Doctor of Physical and Mathematical Sciences. Investigation of the Upper Atmosphere With the Help of the Artificial Earth Satellite [October 10, 1957] 93

Soviet Artificial Earth Satellites [Pravda, April 27, 1958] 96

Blokhintsev, D. I., Candidate of Physical and Mathematical Sciences. On the Way to an Understanding of the Universe [December 4, 1957] 112

Ginzburg, V. L., Corresponding Member of the Academy of Sciences USSR and L.Z.Kurmoyeva, Candidate of Physical and Mathematical Sciences. The Sun, Cosmic Radiation, and Sputniks [November 14, 1957] 115

Sergeyev, F., Professor. Investigation of Outer Space [December 11, 1957] 118

Third Soviet Artificial Earth Satellite [Pravda, May 18, 1958] 124

Discoveries, Widening Knowledge About the Universe [Pravda, October 5, 1958] 153

Mikhaylov, A. A., Candidate of Physical and Mathematical Sciences. In Outer Space - Our Third Sputnik [July 1958] 174

Kukarkin, B. V., Doctor of Physical and Mathematical Sciences. Taiman Look Into Outer Space [March 22, 1956, December 11, 1957] 183

Arent'yev, V. V. Sputnik on a Photo Plate [March 1958] 188

Martynov, D. Ya., Doctor of Physical and Mathematical Sciences. Why Does the Amount of Reflected Light From the Sputniks Change? [September 12, 1958] 190

Polonkov, S. M. High Altitude Laboratories [May 16, 1958] 191

Mayevich, A. G., Doctor of Physical and Mathematical Sciences. Outer Space Laboratory [1958] 192

Fedorov, Ye. K., Corresponding Member of the Academy of Sciences USSR. Assault on Outer Space [1958] 194

Isakov, P., Candidate of Biological Sciences. Life on the Sputnik [November 14, 1957] 204

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BATRAKOV, Yu.V.

PHASE I BOOK EXPLOITATION SOV/5574

Akademiya nauk SSSR. Astronomicheskiy sovet.

Byulleten' stantsiy opticheskogo nablyudeniya iskusstvennykh sputnikov Zemli. no. 7 (17) (Bulletin of the Stations for Optical Observation of Artificial Earth Satellites. No. 7 (17) Moscow, 1960. 16 p. 500 copies printed.

Sponsoring Agency: Astronomicheskiy sovet Akademii nauk SSSR.

Resp. Ed.: G. A. Leykin; Ed.: D. Ye. Shchegolev; Secretary: O. A. Severnaya.

PURPOSE : This bulletin is intended for scientists and engineers concerned with optical tracking of artificial satellites.

COVERAGE: The bulletin contains four articles concerned with the orbital elements of the Soviet artificial satellites 1958 δ_1 and 1958 δ_2 (Sputnik III and its carrier rocket). No personalities are mentioned. There are 6 references: 4 Soviet and 2 English.

Card 1/3

Bulletin of the Stations (Cont.) SOV/5574

Card 2/3

Bulletin of the Stations(Cont.) SOV/5574

Slovokhotova, N. P. [Astronomic Council of the Academy of Sciences of the USSR] Comparison of Different Systems of Orbital Elements of the Third Soviet Artifical Satellite 1958 δ_2 14

AVAILABLE: Library of Congress

Card 3/3

AC/dwm/jw
10-30-61

BATRAKOV, Yu.V.

Preliminary orbital elements of the third Soviet artificial earth satellite (1958 δ_2). Biul. sta. opt. nabl. isk. sput. Zem. no. 7:3-6 '60. (MIRA 14:2)

1. Institut teoreticheskoy astronomii AN SSSR.
(Atrificial satellites—Tracking)

BATRAKOV, Yu.V.; SOCHILINA, A.S.

Motion of the rocket carrier of the third Soviet artificial earth satellite (1958δ_1) and the magnitude of the oblateness of the earth. Biul. sta. opt. nabl. isk. sput. Zem. no. 7:6-12 '60. (MIRA 14:2)

1. Institut teoreticheskoy astronomii AN SSSR.
(Artificial satellites--Tracking)

84571

S/035/60/000/009/002/016
A001/A001

3.2200

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1960, No. 9, p. 11, # 8676

AUTHOR: Batrakov, Yu.V.

TITLE: Some Results of Processing Visual Observations of the Earth's Artificial Satellites in the Institute of Theoretical Astronomy of AS USSR

PERIODICAL: Byul. In-ta teor. astron. AN SSSR, 1960, No. 7, pp. 503-510 (Engl. summary)

TEXT: This is a report on the processing methods of artificial satellites visual observations adopted by the Institute of Theoretical Astronomy of AS USSR. In some more detail the author dwells on changes in the mean motion of the carrier-rocket of the third sputnik due to air resistance. A series of irregular fluctuations are observed in the graph of mean motion variations, the causes of which are not quite clear. The hypothesis of a relation between the mean motion and the atmospheric temperature conditions and solar activity is not unfounded.

Card 1/2

84571

S/035/60/000/009/002/016
A001/A001

Some Results of Processing Visual Observations of the Earth's Artificial Satellites in the Institute of Theoretical Astronomy of AS USSR

Determinations of the Earth oblateness on the basis of some systems of elements yielded the value of its inverse magnitude $1/\xi = 297.5$, which is somewhat higher than the value usually adopted. It is hoped that precise photographic fluctuations will make it possible to determine the Earth gravitation parameters more accurately. The author presents graphs of variations of the mean motion and the quantity proportional to the first derivative of the mean motion of the carrier-rocket of the third Earth Soviet satellite for the entire period of its existence.

V.F. Proskurin

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

S/035/62/000/005/012/098
A055/A101

3,7700

AUTHOR: Batrakov, Yu. V.

TITLE: Preliminary elements of the circular orbit of the carrier-rocket vehicle of the fourth Soviet artificial satellite (1960 ε_1)

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 5, 1962, 10 - 11, abstract 5A86 ("Byul. st. optich. nablyudeniya iskusstv. sputnikov Zemli", 1960, no. 10, 11 - 12, English summary)

TEXT: Preliminary elements of the circular orbit of the carrier-rocket of the fourth Soviet artificial Earth-satellite are given for the period from May 24 to June 30, 1960. All the calculations were effected on the electronic computer "БЭСМ" (BESM).

G. Ch.

[Abstracter's note: Complete translation]

Card 1/1

13.2000

S/035/60/000/011/003/010
A001/A001

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1960, No. 11, p. 18, # 11029

AUTHORS: Proskurin, V.F., Batrakov, Yu.V.

TITLE: Perturbations in the Motion of Artificial Satellites due to Earth's Oblateness

PERIODICAL: Byul. In-ta teor. astron. AN SSSR, 1960, Vol. 7, No. 7, pp. 537-548 (Engl. summary)

TEXT: Expressions, in letters, are derived for first-order perturbations in the elements of artificial satellite orbits with a precision of up to first degree of Earth's oblateness and fifth degree of eccentricity, including. Coefficients of these expressions depend on inclination by means of finite trigonometric polynominals. Moreover more precise expressions are given for the secular perturbations of first order in the node longitude, perigee argument and mean anomaly. Secular nodal motion is determined with allowance for second-order

Card 1/2

S/035/60/000/011/003/010
A001/A001

Perturbations in the Motion of Artificial Satellites due to Earth's Oblateness

perturbations due to Earth's oblateness. A numerical example is cited which illustrates the comparative magnitudes of perturbations.

Author's summary

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

84573

S/035/60/000/009/004/016
A001/A001

3,2200

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1960, No. 9, p. 11, # 8680

AUTHORS: Kulikov, D.K., Batrakov, Yu.V.

TITLE: A Method for Improving the Orbits of Earth's Artificial Satellites on the Basis of Observations Whose Instants are Known Approximately

PERIODICAL: Byul. In-ta teor. astron. AN SSSR, 1960, Vol. 7, No. 7, pp. 554-569 (Engl. summary)

TEXT: The authors describe a method for improving the orbits of artificial satellites when the instants of their observations are known approximately. In the practice of improving the elements of planetary orbits such a problem did not arise due to their small motion across the sky, so that observational instants, even erroneous by as much as 1^s, could be considered as quite precise. Artificial satellites move across the sky by $1\text{-}2^o$ during 1^s, therefore any error in the observation instant will considerably affect the position of the satellite. Im-

Card 1/3

84573

S/035/60/000/009/004/016
A001/A001

A Method for Improving the Orbits of Earth's Artificial Satellites on the Basis of Observations Whose Instants are Known Approximately

proving the accuracy of time reading is a natural, but not the sole, method of improving the accuracy of elements of the satellite orbit obtained from the observations. A new method of compiling condition equations is presented in the article: instead of usual variations $\Delta\alpha$, $\Delta\delta$, are used the variations Δg, ΔG along the perpendicular to the apparent orbit of the satellite and along the tangent to the apparent orbit in the sky. Condition equations for Δg do not depend on errors in reading the instants of observation, but equations for G do depend on them. The analysis of condition equations has shown that observations near zenith permit reliable determinations of Δi and $\Delta\Omega$ from the equations for Δg. The equations for ΔG permit determinations of corrections to elements ω, M_0, n, e, but in this case errors in reading the instants affect the accuracy of the elements obtained. In case of sloping passages of the satellite, the equations for Δg will contain 4 unknowns: Δi, $\Delta\Omega$, Δn and Δe, whose determination will be almost independent of errors in observation instants. The method is described for using artificial satellites for geodetic purposes, which

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84573

S/035/60/000/009/004/016
A001/A001

A Method for Improving the Orbits of Earth's Artificial Satellites on the Basis of Observations Whose Instants are Known Approximately

permits the effect of errors in observation instants to be reduced to a minimum. The method described in the article is illustrated by an example of improving elements by using condition equations. There are 8 references.

V.F. Proskurin

Translator's note: This is the full translation of the original Russian abstract.

Card 3/3

S/035/60/000/009/005/016
A001/A001

3,2200

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1960, No. 9, pp. 11-12, # 8681

AUTHOR: Batrakov, Yu.V.

TITLE: Determination of Initial Orbits of Artificial Satellites from Observations Whose Instants are Known Approximately

PERIODICAL: Byul. In-ta teor. astron. AN SSSR, 1960, Vol. 7, No. 7, pp. 570-580 (Engl. summary)

TEXT: The problem is considered of determining the initial undisturbed orbit of an Earth's close satellite in a case when the instants of some observations are known very approximately. A usual assumption is made here that observations are made on the same turn and embrace a not very great portion of the orbit. It is shown that this problem can be solved only with a number of observations greater than three. Equations are derived for topocentric distances and for quantities n_1^0 which serve to determine time intervals between the observations.

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S/035/60/000/009/005/016
A001/A001

Determination of Initial Orbits of Artificial Satellites from Observations Whose Instants are Known Approximately

A numerical example is cited of determining the orbit from 4 observations with two accurate instants.

Author's summary

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

S/035/61/000/007/011/021
A001/A101

3.7200

AUTHOR: Batrakov, Yu.V.

TITLE: Processing observations of the third Soviet Earth's artificial satellite in the Institute of Theoretical Astronomy, AS USSR

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 7, 1961, 7, abstract 7A70 ("Byul. In-ta teor. astron. AN SSSR", 1960, v. 7, no. 10, 766 - 769)

TEXT: The processing of observations of the third Soviet Earth's artificial satellite was begun in the Institute of Theoretical Astronomy in February 1959. Almost all the observations from October 15, 1958, to March 1, 1960 (~ 28,000 observations) were processed. Of all the bulk of observations, about 10% showed deviations from the calculated positions by more than 20° and were assumed to be in error. The processing of observations was carried out on a БЭСМ (BESM) electronic computer; it consisted in the improvement of orbital elements by the known Eckert-Brower method, i.e. in calculating corrections to elements satisfying in the best way the entire totality of observations. The theory in letters of satellite motion in the gravitational field of the oblate Earth was put at the

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A001/A101

Processing observations ...

basis of improvement; it yields first-order perturbations relative to Earth's oblateness with an accuracy of up to 5th degree of eccentricity inclusive. This theory was developed by V.F. Proskurin and Yu.V. Batrakov (RZhAstr, 1960, no. 8, 7384; no. 11, 11029). Perturbations caused by air are taken into account empirically, i.e., coefficient of secular variations of mean anomaly is determined by processing observational data. The effect of periodic perturbations, caused by air resistance, is neglected in view of their smallness. Every time about 150-200 observations within 7 - 15 days were taken for improvement, and the residual discrepancies of observations after processing amounted, on an average, to $0^{\circ}.5$. Altogether 39 systems of elements were obtained which could serve as a basis for the further improvement of the orbit using more precise observations. The graph is presented which shows the variation of coefficient n' in the expression for mean anomaly $M = M_0 + nt + n't^2$. For comparison, on the same graph is plotted the curve of variation of the solar radio emission flux at a frequency of 208 Mc which corresponds to wavelength of 143 cm. The comparison of the solar radio emission curve with the curve of n' variation shows that there is apparently some correlation between these curves. Thus, an especially great rise of the mean flux of solar radio emission at the end of August and beginning of September, 1959, cor-

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Processing observations ...

responds to the sharp increase of n' occurred on September 5, 1959. Moments of disturbances of the Earth's magnetic field are also marked on the graph. Small relative rises of the n' curve correspond almost everywhere to strong magnetic disturbances. There are 5 references.

G. Chebotarev

[Abstracter's note: Complete translation]

Card 3/3

BATRAKOV, Yu. V.

S/511/61/008/002/001/004
B163/B186

AUTHOR: Batrakov, Yu. V.

TITLE: Method of improving the orbital elements of artificial satellites from topocentric distances and radial velocities

SOURCE: Akademiya nauk SSSR. Institut teoreticheskoy astronomii. Byulleten'. v. 8, no. 2(95), 1961, 93 - 98

TEXT: If a first approximation for the elliptical orbit of an artificial satellite is known, a second corrected approximation can be calculated from radiocommunication measurements of the radial velocities and topocentric distances, i.e. the distances between the satellite and an observer on the earth's surface. Instead of the directirelations between the measureable quantities (azimuth, altitude, topocentric distance ρ, radial velocity $\dot{\rho}$) and the orbital elements (inclination i of the orbital plane, longitude Ω of the ascending node of the orbit from the point of vernal equinox, eccentricity e, distance ω of the perigee from the node, mean anomaly M_0 in the beginning epoch, and mean motion n, which is connected with the major axis a by Kepler's third law), differential relations between these quantities are derived. An analysis of the coefficients in

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Method of improving the ...

these linear differential relations shows that the corrections δn, δe, and the combination $\delta M_0 + \delta\omega + \cos i\, \delta\Omega$ can be determined from the radial velocities measured in the moments of closest approaches of the satellite to the observer. The corrections δi, δΩ, δn, δe can be determined from the measured distances at the closest approaches. If terms of higher order in the differentials are neglected, one obtains for the moments of closest approaches to the observer

$\rho\dot{\delta\rho} = [\vec{r}, \dot{\vec{r}}]\, \vec{j}_\omega\, (\delta M_0 + \delta\omega + \cos i\, \delta\Omega + t\delta n + K\frac{\delta e}{e})$ and

$\delta\rho = \left[\vec{r}\,\frac{\vec{\rho}}{\rho}\right] (\vec{j}_i \delta i + \vec{j}_\Omega \delta\Omega) - (\vec{r}\,\frac{\vec{\dot{\rho}}}{\dot{\rho}})(-\frac{2}{3}\frac{\delta n}{n} + H\frac{\delta a}{a})$. In these equations, $\vec{j}_i$, $\vec{j}_\Omega$, and $\vec{j}_\omega$, respectively, denote unit vectors oriented along the node line, the polar axis, and perpendicular to the orbit in the direction from which the motion of the satellite is anticlockwise. The coefficients H and K are determined by

$H = \frac{r + p - 2a}{p}$, $K = \frac{(r+p)(x\dot{x} + y\dot{y} + z\dot{z})}{p\, n\, a^2}$, $p = a(1 - e^2)$. $\vec{r}(x,y,z)$ is the position vector of the satellite, and t denotes time.

Card 2/2

BATRAKOV, Yu.V., kand.fiz.-matem.nauk

Symposium on the dynamics of earth satellites. Vest. AN SSSR 32 no.9:114-115 S '62. (MIRA 15:9)
(Artificial satellites)

BATRAKOV, Yu. V.

"On the Use of Resonant Satellites for Determining the Constants of the Earth's Gravitational Field."

report submitted for 14th Intl Astronautical Federation Cong, Paris, 25 Sep-1 Oct 63.

BATRAKOV, Yu.V.

Vitalii Fedorovich Proskurin, 1919-1964; obituary. Biul. Inst. teor. astron. 9 no.9:585-586 '64. (MIRA 17:12)

FEDOROV, Ye.P.; KUCHEROV, N.I.; BATRAKOV, Yu.V., kand.fiz.-matem.nauk; KOSTYLEV, K.V., kand.fiz.-matem.nauk; MIKHEL'SON, N.N., kand. fiz.-matem.nauk; GINDILIS, L.M., kand.fiz.-matem.nauk

In the Astronomic Council; conferences and plenums. Vest. AN SSSR 34 no.9:112-120 S '64. (MIRA 17:10)

1. Chlen-korrespondent AN UkrSSR (for Fedorov).

L 12468-65

ACCESSION NR

AUTHOR: Batrakov, Yu. V. (Candidate of physicomathematical sciences)

TITLE: A theory of the motion of artificial earth satellites

SOURCE: AN SSSR, Vestnik, no. 9, 1964, 114-115

TOPIC TAGS: theoretical astronomy, artificial satellite, ..., satellite rotation, long periodic perturbation, gravitational constant, optimum orbit, space rocket

ABSTRACT: A conference on theoretical astronomy organized by the Astronomical Council and the University of Latvia took place in Riga on 19—23 May 1964, where problems of the motion of artificial earth satellites were discussed. Special attention was paid to ... tion, perturbed motion, and rotation of satellites. A method for determining long-period perturbations of satellites caused by the moon, planets, and the sun was discussed. A series of papers dealt with determining the terrestrial gravitational constant from satellite observations. The development of an optimum orbit for a

Card 1/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203930002-2"

L 12468-65
ACCESSION NR: AP4046590

Venus-bound space probe of variable mass and the adaption of the equations of motion of a space rocket for passing near the earth and moon were described.

ASSOCIATION: none

SUBMITTED: 00	ENCL: 00	SUB CODE: AA
NO REF SOV: 000	OTHER: 000	ATD PRESS: 3126

Card 2/2

L 38951-65 EEO-2/EWT( )/FBD/FSF(h)/FSS-2/EWT(1)/FS(v)-3/EEC(k)-2/EWG(v)/EWA(d)/EPF(n)-2/T-2/EWG(v)-2/EEP-2 Pn-4/Po-4/Pe-5/Pq-4/Pac-4/Ps-4/Pae-3/Pi-4/Pk-4/Pl-4 IT/G /WR

ACCESSION NR: AP5006013 UR/0033/65/042/001/0195/0202

AUTHOR: Batrakov, Yu. V.

TITLE: Determination of the relative position of observation stations using artificial earth satellites

SOURCE: Astronomicheskiy zhurnal, v. 42, no. 1, 1965, 195-202

TOPIC TAGS: artificial earth satellite, earth satellite observation, geodesy, theoretical astronomy, tracking station, satellite geodesy

ABSTRACT: The purpose of this paper was to call attention to some possible uses of simultaneous or almost simultaneous observations of satellites in the determination of the relative position of stations at a considerable distance from one another on the earth's surface. In addition, together with the possibilities of using simultaneous observations of α, δ, and ρ, the paper discusses the possibilities arising from the use of observations of $\dot{\alpha}$, $\dot{\delta}$, and $\dot{\rho}$, and also observations containing time errors. Also considered is the problem of the use of nonsimultaneous observations. In determining the relative position of stations, it is assumed that observations can give not only the angular coordinates α and δ, but also the topocentric dis-

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L 38951-65
ACCESSION NR: AP5006013

tances ρ and the first derivatives of these values $\dot{\alpha}$, $\dot{\delta}$ and $\dot{\rho}$. Technically, α and δ can be determined from measurements of satellite photographs and ρ and $\dot{\rho}$ by direct radiotechnical measurements; in addition, $\dot{\alpha}$ and $\dot{\delta}$ are determined by differentiation of the polynomials representing changes of α and δ with time. It is noted that, although $\dot{\alpha}$ and $\dot{\delta}$ are obtained from α and δ, in certain cases they can yield additional information which is lost if only α and δ are used. An example is the case when the arcs of an orbit overlapping in a small segment are observed from two stations. In this case, observations in the nonoverlapping segments are lost if only simultaneous observations of α and δ are used, but they give additional information if α and δ are used to form $\dot{\alpha}$ and $\dot{\delta}$. In the case of the use of nonsimultaneous observations (with precise recording of time), it is shown that it is possible to determine the interval of time in which it is possible to use nonsimultaneous observations. Finally, it is shown that an expression can be derived for determining the relative position of stations using observations with time errors. Orig. art. has: 14 formulas and 1 table. [08]

ASSOCIATION: Institut teoreticheskoy astronomii Akademii nauk SSSR (Institute of Theoretical Astronomy, Academy of Sciences, SSSR)

SUBMITTED: 30Jan64 ENCL: 00 SUB CODE: ES, SV
NO REF SOV: 008 OTHER: 005 ATD PRESS: 3227
Card 2/2

BATRAKOVA, G.

Masters of high output. Prom.koop. 13 no.9:5 S '59.
(MIRA 13:1)

1. Instruktor orgotdela oblpromsoveta, g.Leningrad.
(Leningrad--Manufactures)

KRAVCHENKO, I.V., doktor tekhn. nauk; BANIT, F.G., kand. tekhn. nauk; KHOKHLOV, V.K., inzh.; BATRAKOVA, G.S., inzh.

Specific features in the preparation of a raw material batch in a kiln with a cyclone heat exchanger. Cement 31 no.2:10-12 Mr-Ap '65. (MIRA 18:8)

1. Vsesoyuznyy gosudarstvennyy nauchno-issledovatel'skiy institut tsementnoy promyshlennosti.

PLUNGYANSKAYA, M.N., kand. tekhn. nauk; BATRAKOVA, G.S., insh.

Improving the water resistance of concrete by incorporating paraffin emulsions with its mixes. Trudy NIIZHB no.9:53-58 '59 (MIRA 13:3)

(Waterproofing) (Concrete)

SOV/68-59-6-5/25

AUTHORS: Medvedev, K.P. and Batrakova, I.A.

TITLE: The Content and Concentration of Rare and Trace Elements in Coal (Soderzhaniye i nakopleniye redkikh i rasseyannykh elementov v kamennykh uglyakh)

PERIODICAL: Koks i Khimiya, 1959, Nr 6, pp 13-17 (USSR)

ABSTRACT: A review of literature on the presence of rare and trace elements in coals is given.
There are 6 tables and 11 references, (of which 8 are Soviet, 2 English and 1 German).

ASSOCIATION: UKhIN

Card 1/1

DEKHTERMAN, B.A.; BATRAKOVA, I.A., inzh.

Processing high-acidity commercial fats. Masl. - zhir. prom. 27 no.12:41 D '61. (MIRA 14:12)

1. Vinnitskiy maslozhirovoy kombinat.
(Oil and fats)

BATRAKOVA, I.O.; KAPLAN, N.M.

Utilization of wastes in the Vinnitsa Oils and Fats combine.
Khar. prom. no.1:60-61 Ja-Mr '65. (MIRA 18:4)

BATRAKOVA, I.O.; KAPLAN, N.M.

Utilization of wastes in the Vinnitsa Oils and Fats combine.
Khar. prom. no.1:60-61 Ja-Mr '65. (MIRA 18:4)

Batrakova, T. A.

A rapid chromatographic test to indicate the end of fermentation. I. Z. Bydel'yanova and T. A. Batrakova. *Gidroliz. i Lesokhim. Prom.* 9, No. 3, 14–15(1956).—The termination of fermentation can be detd. by transferring a drop of fermentation soln. to chromatographic paper (I) in the form of a flat wick with handle tip dipping into the developing mixt. consisting of ethyl acetate-pyridine-water at ratios 5:1:5. After the developing, which takes less than 1 hr., I is spotted with a soln. of 0.92 *M* of lanilin (?) and 1.66 g. phthalic acid in 100 ml. of EtOH. I is dried at 100° in the case of alc. fermentation of hexoses and at 70–80° when tested for pentoses in yeast plants. T. J.

2

Chem

Vsesoyuznyy nauchno-issled. institut gidrol. i sulf-spir. prom.

BATRAKOVA, T. A.

AUTHORS: Yemel'yanova, I. Z., Batrakova, T. A. 75-1-24/26

TITLE: A New Method for the Quantitative Determination of Reducing Sugars in Wood-Hydrolyzates and Sulfite Liquors by Paper Chromatography (Novyy metod kolichestvennogo opredeleniya redutsiruyushchikh sakharov v drevesnykh gidrolizatakh i v sul'fitnykh shchelokakh pri pomoshchi khromatografii na bumage)

PERIODICAL: Zhurnal Analiticheskoy Khimii, 1958, Vol 13, Nr 1, pp 142-147 (USSR)

ABSTRACT: In the investigation of the composition of wood-hydrolyzates and sulfite liquors the sugar content is evaluated according to the total quantity of reducing substances. This method, however, always yields too high results, as the reducing substances occuring in wood-hydrolyzates and sulfite liquors represent a mixture of reducting sugars (glucose, mannose, fructose, galactose, xylose, arabinose, rhamnose, and others) and reducing substances which are not sugars (furfurol, uronic acids and others). The majority of the methods for the separation of sugars by unidimensional paper chromatography permits the

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A New Method for the Quantitative Determination of Reducing Sugars in Wood-Hydrolyzates and Sulfite Liquors by Paper Chromatography

seperation of a sugar mixture which only consists of 3-4 components and is therefore not suitable for the analysis of wood-hydrolyzates and sulfite liquors in which 7-10 sugars the R_f-values of which are close to each other have to be separated. The quantity of the sugars on the chromatogram can either be determined by measuring the area and the intensity of the coloring of the spots after the development (References 3, 4) or by various micromethods after the extraction of the sugar from the chromatogram (References 5-9). These methods often require unusual reagents and apparatus, are not sufficiently exact and take a long time. The authors worked out a method for the separation of the sugars in wood-hydrolyzates and sulfite liquors on an unidimensional paper chromatogram and a method for the quantitative determination of the individual sugars after extraction from the chromatogram. The separation of all sugars of the hydrolyzates from each other takes 2-3 days. It takes place in a descending passage chromatogram at room temperature. The upper layer of a mixture

A New Method for the Quantitative Determination of Reducing Sugars in Wood-Hydrolyzates and Sulfite Liquors by Paper Chromatography

of ethyl acetate, pyridine and water (5:1:5) serves as solvent. A solution of phthalic acid and freshly distilled aniline in ethyl alcohol serves as developer for the spots. After the development it is dried for 5 minutes at 105°C. After 24 hours a good separation of rhamnose and xylose is attained, after 50 hours the other sugars are also separated from each other. The determination of the kinds of sugars takes place on the basis of the color of the spots, their spreading and on the basis of the blank value. By development with aniline phthalate as developer the pentoses according to concentration yield colors of from pink to dark red. Hexoses yield brown-green colors, rhamnose yields a brown color. The R_f-value is concluded from the spreading of the spots.

When sufficient separation was made, the chromatogram is cut into pieces each of which contains sugar. From these pieces the corresponding sugar is washed out by distilled water and finally quantitatively determined potentiometric titration.

Card 3/4 On that occasion the method according to Nizovkin and

A New Method for the Quantitative Determination of Reducing Sugars in Wood-Hydrolyzates and Sulfite Liquors by Paper Chromatography

Yemel'yanova (References 10, 11) is employed. It is based on the back-titration of applied hot Fehling solution with a solution of the corresponding sugar of known content. The end of titration is potentiometrically determined. This method is a micromethod. It permits the determination of 10 to 2500 μ with an accuracy of ± 2 %. The duration of the determination is 10 minutes. The used apparatus are illustrated and exactly described. There are 8 figures, 2 tables, and 11 references, 2 of which are Slavic.

ASSOCIATION: All-Union Scientific Research Institute of the Hydrolysis and Sulphite Alcohol Industry, Leningrad (Vsesoyuznyy nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-spirtovoy promyshlennosti, Leningrad)

SUBMITTED: Nobember 23, 1955

AVAILABLE: Library of Congress

Card 4/4 1. Sugars-Determination 2. Sugars-Chromatographic analysis

MAREYCHEV, Vladimir Petrovich; CHERNE, Khaim Isaakovich; KORF, M.D., otv. red.; BATRAKOVA, T.A., red.; ROMANOVA, S.R., tekhn. red.

[Nomograms for the calculation of the characteristics of electric filters] Nomogrammy dlia rascheta kharakteristik elektricheskikh fil'trov. Moskva, Sviaz'izdat, 1963. 86 p. (MIRA 16:5)

(Electric filters) (Radio filters)

NAUMOV, Pavel Alekseyevich; KOGAN, Valentina Solomonovna; BATRAKOVA, T.A., red.; MARKOCH, K.G., tekhn. red.

[Principles of telegraphy] Osnovy telegrafii. Moskva, Sviaz'izdat, 1963. 183 p. (MIRA 17:2)

PETRUSHIN, Ivan Petrovich; MOROZOV, V.V., otv. red.; BATRAKOVA,T.A., red.

[Fundamental principles of the operation of the technical means of long-distance communication] Osnovnye printsipy ekspluatatsii tekhnicheskikh sredstv mezhdugorodnoi sviazi. Moskva, Sviaz', 1964. 39 p. (MIRA 18:4)

KLIMOV, Mikhail Aleksandrovich; RAZUMOV, Leonid Davydovich;
POPOVA, N.E., otv. red.; BATRAKOVA, T.A., red.

[Protection of high-frequency cables from the interfering action of electromagnetic fields] Zashchita tsepei vysokochastotnykh kabelei ot meshaiushchego vliianiia elektromagnitnykh polei. Moskva, Izd-vo "Sviaz'," 1964. 68 p. (MIRA 18:1)

IVANOVA, Ol'ga Nikolayevna; KOKHANOVA, Zoya Sergeyevna; SAGALOVICH, L.I., otv. red.; BATRAKOVA, T.A., red.

[PS-KE-100 crossbar-type electronic telephone substation] Koordinatno-elektronnaia telefonnaia podstantsiia PS-KE-100. Moskva, Izd-vo "Sviaz'," 1964. 111 p. (MIRA 17:4)

ARKHANGEL'SKIY, Georgiy Aleksandrovich; INYUSHIN, Yermogen Ivanovich; KASHIRINA, Valentina Mikhaylovna; LEVINOV, Konstantin Georgiyevich; BATRAKOVA, T.A., red.

[Location of leakages in communication cable sheathings] Opredelenie mest negermetichnosti obolochek kabelei sviazi. Moskva, Izd-vo "Sviaz'," 1965. 38 p. (MIRA 18:2)

AFANAS'YEVA, Lyudmila Vasil'yevna; KARPESHKO, Yuriy Yefimovich; BOGORODSKIY, G.N., otv. red.; BATRAKOVA, T.A., red.

[Electrophotographic recording of images] Elektrofotograficheskaia zapis' izobrazhenii. Moskva, Sviaz', 1965. 46 p. (MIRA 18:5)

SVERDLOV, M.P.; YETRUKHIN, N.N.; YAROSLAVSKIY, L.I.; ZUBOVSKIY, L.I.; GUROV, V.S.; TARAKANOVA, M.S., ctv. red.; BATRAKOVA, T.A., red.

[New TT-17P and OTT-2S voice frequency telegraphy apparatus using transistor devices] Novaia apparatura tonal'nogo telegrafirovaniia na poluprovodnikovykh priborakh TT-17P i OTT-2S; informatsionnyi sbornik. Moskva, Sviaz', 1965. 125 p. (MIRA 18:7)

NIKOL'SKIY, Konstantin Konstantinovich; FROLOV, Pavel Alekseyevich; BATRAKOVA, T.A., red.

[Use of polymeric materials in the equipment of communication systems] Primenenie polimernykh materialov v tekhnike dal'nei sviazi. Moskva, Sviaz', 1965. 107 p.
(MIRA 18:12)

KULESHOV, Vasiliy Nikolayevich; GAVRILYUK, V.V., kand. tekhn. nauk, otv. red.; BATRAKOVA, T.A., red.

[Long-distance cable communication lines] Mezhdugorodnye kabel'nye linii sviazi. Moskva, Sviaz', 1965. 262 p. (MIRA 18:7)

L 32923-66 EWT(m)/EWP(j)/T RM/WW

ACC NR: AP6017599 (A) SOURCE CODE: UR/0183/66/000/001/0009/0010

AUTHOR: Kamalov, S. K.; Pyrkov, L. M.; Batrakova, T. V.; Sheremeteva, T. V. 33 32

ORG: IVS AN SSSR

TITLE: Effect which amidocitraconic acid and its N-alkyl derivatives have on the structural and mechanical properties of nitron fiber B

SOURCE: Khimicheskiye volokna, no. 1, 1966, 9-10

TOPIC TAGS: aliphatic dicarboxylic acid, alkyl radical, synthetic fiber, polyacrylonitrile, plasticizer

ABSTRACT: The authors study the strength of fibers as a function of their previous history and various structural parameters, in particular the overall orientation evaluated by isotrometric heating. The fibers tested were pure polyacrylonitrile containing 4 mol.% N-ethylamide of citraconic acid. Temperature-stress curves are given for isothermal heating of fibers subjected of identical plastification stretching and of fibers with identical strength but different compositions and molecular weights. Curves are also given showing the modulus of elasticity of the fibers as a function of temperature. Overall fiber orientation (determined from the maximum on the isothermal heating curves) increases in polyacrylonitrile fibers of equal strength as the concen-

Card 1/2 UDC: 677.742.2

L 32923-66

ACC NR: AP6017599

tration of the secondary component in the copolymer is increased from 0 to 19%. It is possible that the large monomeric units of the copolymer act as an internal plasticizer which aids in orientation of amorphous sections of the fibrils. Orig. art. has: 3 figures, 2 tables.

SUB CODE: 11, 07/ SUBM DATE: 10Oct64/ ORIG REF: 003/ OTH REF: 000

Card 2/2

BATRAKOVA, T.V.; SHEREMET'YEVA, T.V.; KAMALOV, S.K.; PYRKOV, L.M.

Production of fiber-forming materials on the base of acrylonitrile copolymers with N-alkyl derivative amides of citraconic and maleic acid. Khim. volok. no.6:17-19 '65. (MIRA 18:12)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.
Submitted October 10, 1964.

L 37203-66 EWT(m)/EWP(j)/T IJP(c) WW/RM/TWD

ACC NR: AP6012416 (A) SOURCE CODE: UR/0183/65/000/006/0017/0019

AUTHOR: Batrakova, T. V.; Sheremet'yeva, T. V.; Kamalov, S. K.; Pyrkov, L. M.

ORG: IVS AN SSSR

TITLE: Preparation of fiber-forming materials based on acrylonitrile copolymers with N-alkyl amides of citraconic and maleic acids

SOURCE: Khimicheskiye volokna, no. 6, 1965, 17-19

TOPIC TAGS: synthetic fiber, acrylonitrile, copolymerization, chemical reaction, tensile strength

ABSTRACT: New copolymers of acrylonitrile with unsubstituted and with N-substituted monoamides of citraconic and maleic acids were synthesized and characterized. Copolymerizations were in aqueous media using oxidation-reduction initiators. The monoamides copolymerize with acrylonitrile in different molar ratios; their activity is greater than the activity of pure acrylonitrile since resultant copolymers were richer in monoamide than the composition of the initial mixture. Fibers formed from the copolymers were stronger than polyacrylonitrile fibers.

Card 1/2

UDC: 677.494.745.32

Card 2/2/MCP

BATRANIN, Yu. Ye.,

"Method of Analysis and Calculation of Stationary Processes in Frequency Doublers." (Dissertation for Degree of Candidate of Technical Sciences) Min Higher Education USSR, L'vov Polytechnical Inst, L'vov, 1955

SO: M-1036 28 Mar 56

3(0)

SOV/112-59-5-9438

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 5, p 140 (USSR)

AUTHOR: Batranin, Yu. Ye.

TITLE: Graphical Method for Determining the Ranges of Odd and Even Harmonics in the Output of a Nonlinear Converter

PERIODICAL: V sb.: Avtomat. kontrol' i izmerit. tekhn. Nr 1, Kiyev, AS UkrSSR, 1957, pp 62-69

ABSTRACT: A simple graphical method is suggested for determining ranges of odd and even harmonics in the output of a nonlinear transducer that has a specified unambiguous (nonhysteretic) characteristic. The periodic transducer input comprises both unidirectional and alternating components which contain only odd harmonics. It is proved in the article that the range of odd harmonics in the output is equal to the difference between the extreme ordinates of the working section of the transducer characteristics, while the range of the even harmonics is equal to the distance measured along the median ordinate between

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the curve and the point of intersection of that ordinate with the chord that connects the extreme points of the characteristic working segment. The proof holds true if the odd curve is monotonic throughout the entire working segment and if the even curve is monotonic throughout one-half of that segment. The odd (symmetrical with respect to the origin) and the even (symmetrical with respect to the Y-axis) curves can be obtained by developing the transducer characteristic. The conditions of the proof are sufficient but not necessary. Examples are cited where the characteristics wholly or partially do not satisfy the above conditions, yet the proof holds true for them. Five illustrations. Bibliography: 2 items.

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TITLE: An Analysis and Calculation Method for Multi-Phase Ferromagnetic Frequency Multipliers

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Energetika, 1958, Nr 10, pp 49-58 (USSR)

ABSTRACT: Ferromagnetic frequency multipliers and instruments of the frequency multiplier type find an ever increasing application in engineering. In this paper, the author explains the principles of an analysis and calculation method of an n-phase, ferromagnetic frequency multiplier, whose multiplication factor is equal to the number of phases in its primary winding. Multipliers of such type are the well-known frequency doubler and tripler circuits. The equations and formulae presented in this paper connect the output magnitudes of the frequency multipliers (current, voltage, power) with their constructional parameters for an

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arbitrary load impedance z. These formulae may be used as the basic of a general engineering calculation method of the aforementioned type of frequency multipliers. The suggested method is an analytical one, permitting the analysis of processes within the multiplier in a general form. The formulae are simple and suitable for practical application. The method produces a satisfactory accuracy of the calculations for the majority of important operating conditions of frequency multipliers. The accuracy of the method is increased by the transition from capacitive load to active or inductive loads. The method provides a simple determination of the load resistance producing a maximum of output power, or, in other words, it provides the possibility of matching the load with the multiplier. In this way a frequency multiplier may be calculated with minimum dimensions and weights at a given power. The frequency multiplier calculation method was tested experimentally on frequency doublers and

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triplers. The parameters of the test multipliers are listed in a table. They had toroidal cores made of E-41 steel. Figure 5 is a graph showing the experimental and theoretical external characteristic of a frequency doubler corresponding to the active load of the latter. Graph, figure 6, contains a group of experimental and theoretical curves for a frequency tripler. For their calculations the authors assume that hysteresis, eddy currents and leakage are absent in the core. They neglect the active resistance of the multiplier coils. They determine the load current, power, voltage and external characteristic of frequency multipliers. There are 1 circuit diagram, 5 graphs and 2 Soviet references.

ASSOCIATION: L'vovskiy politekhnicheskiy institut (L'vov Polytechnic Institute) Kafedra teoreticheskoy i obshchey elektrotekhniki (Chair of Theoretical and General Electrical Engineering)

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Engineering method for calculating the errors of an uncompensated electric current transformer. Izv. vys. ucheb. zav.; energ. 4 no.10:38-45 O '61. (MIRA 14:11)

1. L'vovskiy politekhnicheskiy institut. Predstavlena kafedroy teoreticheskoy i obshchey elektrotekhniki.
(Electric current transformers)

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TITLE: Automatic quality control of spot welding by infrared radiation

PERIODICAL: Svarochnoye proizvodstvo, no. 2, 1963, 25 - 27

TEXT: In 1960 - 1961, the authors have been studying at the L'vov Polytechnic Institute the correlation between infrared radiation and the welding process and the quality of the weld joints produced. The results obtained were used to develop an automatic device for quality control of spot welding during the welding process by the intensity of the infrared radiation flux which is irradiated from the annular electrode-adjacent zone of the part to be welded. When the given infrared radiation level, corresponding to a given diameter of a spot, has been attained, the welding current is switched-off. The machine consists of the measuring head and the measuring unit, which are described and illustrated. The device was tested on spot-welding machine WP 62 d/60 with up to 500 kg elec-

trode compression force. The welding current attained 18 kamp. Special experimental welding tests were performed; optimum conditions were not observed, i.e. the current and the electrode compression force were lowered or increased, and the methods of preparing the specimens varied. The main properties of the new machine were revealed by investigating the dependence of the weld joint strength and the dimensions of the cast nucleus upon the parameters of the welding conditions and the preparation of the specimens. It was found that the scattering of results in the breaking force per welded spot was only ±6% at varying compression force of the electrodes. Analogous results were obtained when the welding current was changed. The strength of the weld joint was 2,600 kg on the average for 2.5 mm thick plates and varied within ±8%. The tests show that high stability of welding one spot is assured, independent of the changes in welding conditions, parameters and preparation of specimens. There are 5 figures

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