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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, B.A.

A new type of celestial bodies. Astron.tsir. no.202:8-10 Je '59. (MIRA 13:4)

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

(Galaxies)

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FRANK-KAMENETSKIY, D.A., prof., otv.red.; VORONTSOV-VEL'YAMINOV, B.A., red.; SMORODINSKIY, Ya.A., prof., red.; ZEL'DOVICH, [illegible], starshiy nauchnyy sotrudnik, red.; SAGDEYEV, R.Z., mladshiy nauchnyy sotrudnik, red.; SAMSONENKO, L.V., red.izd-va; SHEVCHENKO, G.N., tekhn.red.

[Transactions of the sixth conference on cosmogony; extra-galactic astronomy and cosmology] Trudy shestogo soveshchaniia po voprosam kosmogonii, 5-7 iiunia 1957 g.; vnegalakticheskaia astronomiia i kosmologiia. Moskva, Izd-vo Akad.nauk SSSR, 1959. 273 p. (MIRA 12:12)

1. Soveshchaniye po voprosam kosmogonii, 6yh, 1957. 2. Chlen-korrespondent Akademii pedagogicheskikh nauk SSSR (for Vorontsov-Vel'yaminov).
(Cosmology--Congresses)

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VORONTSOV-VEL'YAMINOV, Boris Aleksandrovich

[Atlas and catalog of interacting galaxies] Atlas i katalog vzaimodeistvuiushchikh galaktik. Moskva, Gos.astronomicheskii in-t im. P.K.Shternberg pri Mosk.gos.univ. Vol.1., 1959. (MIRA 13:4)

(Galaxies)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

PEREL', Yu.G.; POPOV, P.I.; MARTYNOV, D.Ya.; KUNITSKIY, R.V.; VORONTSOV-VEL'YAMINOV, B.A.; BAZYKIN, V.V.; KULIKOV, K.A.; SHISTOVSKIY, K.N.; TSVETOV, R.I.; BRONSHTEN, V.A.; DAGAYEV, M.M.; MOGILKO, A.D.; SEMAKIN, N.K.; DMITRIYEV, L.S.; IZOTOV, A.A.

Mihail Evgen'evich Nabokov; obituray. Buil.VAGO no.28:60-62 '60. (MIRA 14:6)

(Nabokov, Mikhail Evgen'evich, 1887-1960

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VORONTSOV-VELYAMINOV, B.A.

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PHASE I BOOK EXPLOITATION SOV/4374

Astronomiya v SSSR za sorok let 1917 - 1957; sbornik statey (Forty Years of Astronomy in the USSR, 1917-1957; Collection of Articles) Moscow, Fizmatgiz, 1960. 723 p. 2,000 copies printed.

Ed.: L. V. Sanschenko; Tech. Ed.: N. A. Tumarkina; Editorial Board: A. A. Mikhaylov (Resp. Ed.), M. S. Zverev, P. G. Kulikovskiy, A. G. Masevich, E. R. Mustel'; V. V. Sobolev, and M. F. Subbotin.

PURPOSE: This book is intended for astronomers, astrophysicists, and others interested in the history of astronomy in the USSR.

COVERAGE: This major work on the history of astronomy in the USSR consists of two parts, review articles and bibliographies. Part I contains a collection of articles on various facets of astronomical research written by leading Soviet specialists in the field. Chief emphasis is placed on developments of the last ten years. The research activities and equipment of 23 Soviet observatories and institutes are described, and the leading scientific personalities of each mentioned. The geographic coordinates and elevations of 41 astronomical centers are listed. Individual articles discuss problems dealing with

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85108

3,1560 (1057,1129,1062)

S/033/60/037/004/014/015/XX
E032/E314

AUTHOR: Vorontsov-Vel'yaminov, B. A.

TITLE: Partial Gas Densities in the Comet 1942g Whipple

PERIODICAL: Astronomicheskiy zhurnal, 1960, Vol. 37, No. 4, pp. 709 - 715

TEXT: In a previous paper (Ref. 3), the present author discussed the photometric structure of the comet 1942g, using direct photographs obtained at the Abastuman Observatory. It was established that, within experimental error, the spatial photometric densities in the head of the comet are inversely proportional to the square of the distance from the nucleus and the brightness seen in projection is inversely proportional to this distance. The diameter of the coma in the best photographs could be extended up to 6 x 10^5 km but this does not, of course, indicate that the diameter of the comet was, in fact, infinite. Using Imperial 1200 plates, G. Tevzadze, working at the Abastuman Observatory, obtained four good photographs of the spectrum of the comet on February 3 and March 11, 30 and 31. He used an 8" camera with F = 100 cm and a 15 deg. prism. The dispersion on the spectrograms

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E032/E314

Partial Gas Densities in the Comet 1942g Whipple

was 170 Å/mm in Hγ. The present paper gives an account of the information obtained from the best spectrogram which was obtained on March 11 (exposure 2 hours, length of spectrum about 12 mm). The motion of the comet was slow and hence its images were undistorted. Weak traces of the cometary tail are seen in the photograph at an angle of about 30° to the direction of dispersion. The spectrum of the nucleus can be clearly seen. Bright emissions in 3883 CN, 4730 C_2 and 4050 C_3 are present in the spectrum of the head. The photographic brightness was measured at 500 points on the spectrum and the intensity of the centre of the image in the CN radiation (maximum intensity) was taken as the unit of the intensity. Fig. 1 shows the isophots in the spectrum of the comet. The numbers show the intensities in hundredths of the above unit. The absolute monochromatic emission in the above three bands was found by reference to stellar spectra. The number of molecules inside the 0.005 isophot which are responsible for

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E032/E314

Partial Gas Densities in the Comet 1942g Whipple

the above three bands was found to be 1.3×10^{33}, 7.1×10^{32} and 2.7×10^{31}, respectively (radius of coma 3.7×10^{5} km). The total mass of the coma was found to be 7.5×10^{10} g and is mainly due to CN and C_2 (4.4×10^{10} and 2.9×10^{10}, respectively). The densities are inversely proportional to the distance from the nucleus and are of the order of 10^{11} molecules near the nucleus and about 2 molecules of CN, 1 molecule of C_2 and 0.04 molecules of C_3 per cm^3 at a distance of 3.7×10^{5} km. The calculated number of molecules based on the apparent brightness of the comet and the Zanstra method is in agreement with accurate spectrophotometric determinations.

Acknowledgments are expressed to Professor Ye.K. Kharadze of the Abastumani Observatory for supplying the spectrograms.

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E032/E314

Partial Gas Densities in the Comet 1942g Whipple

There are 4 figures and 10 references: 4 English, 1 German and 6 Soviet.

ASSOCIATION: Gos. astronomicheskiy in-t im. P.K. Shternberga (State Astronomical Institute imeni P.K. Shternberg)

SUBMITTED: April 8, 1960

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, B.A.

Variations in the spectrum of the planetary nebula IC 4997 and their origin. Astron.zhur. 37 no.6:994-1000 N-D '60. (MIRA 13:12)

1. Gosudarstvennyy astronomicheskiy institut im. P.K. Shternberga.
(Nebulae--Spectra)

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VORONTSOV-VEL'YAMINOV, B.A.

Classifying line spectra of stars. Astron.zhur. 37 no.6:1122 N-D '60. (MIRA 13:12)

1. Gosudarstvennyy astronomicheskiy institut im. P.K.Shternberga.
(Stars--Spectra)

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VORONTSOV-VEL'YAMINOV, B.A.

Ring galaxies. Astron.zhur. 37 no.3:381-386 My-Je '60. (MIRA 13:6)

1. Moskovskiy gorodskoy pedagogicheskiy institut imeni V.P. Potemkina.

(Galaxies)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, B.A.; SAVEL'YEVA, M.V.

Spectrophotometry of a supernova in NGC 4496. Astron.tsir. no.216: 2-3 D '60. (MIRA 14:4)

1. Gosudarstvennyy astronomicheskiy institut im. P.K.Shternberga. (Stars, New)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

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ARKHIPOVA, V.P.; DOKUCHAYEVA, O.D.; VORONTSOV-VEL'YAMINOV, B.A.

Spectrophotometry of AG Pegasi. Astron.tsir. no.223:17-18 Jl '61. (MIRA 15:3)

1. Gosudarstvennyy astronomicheskiy institut im. Shternberga.
(Stars, Variable--Spectra)

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A001/A001

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1961, No. 2, p. 21, # 2A222

AUTHOR: Vorontsov-Vel'yaminov, B.A.

TITLE: Visible Residues of Three More Supernovae

PERIODICAL: "Astron. tsirkulyar", 1960, maya 5, No. 211, pp. 25 - 27

TEXT: The author describes three nebulae from the Abell list, identified by him with Supernovae. The nebulae were studied on the charts of the Palomar atlas. Nebula Medusa ($7^h23^m.5$, $+213^\circ27'$; 1900). A large filamentous formation in the shape of the crescent having the size 8' x 6'. Filaments complementing the nebula to a full ellipse are on the verge of visibility. The appearance and brightness of the nebula in red and blue rays are almost identical; consequently, nebulium green lines are bright in its spectrum in addition to H_α. This indicates considerable ionization and excitation. According to its coordinates the nebula is identified with radio source 2C = 653 from the catalogue of Shakeshaft, Rhyle et al. and Supernovae of years 829 and 1430 AD. Nebula Crescent ($1^h24^m.2$, $+57^\circ50'$; 1900) has exactly the same filamentous structure as Medusa but weaker. In blue

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Visible Residues of Three More Supernovae

rays Crescent is considerably less luminous than in red ones. The nebula is close to two Supernovae of 722 and 902 AD and probably is a residue of Supernova 902 AD. Nebula Semi-ellipse ($23^h54^m.1$, $+61°54'$; 1900) represents an arc of ellipse consisting of thin and weak filaments traced approximately by 210° and only 1 (?) wide. The major axis of the nebula amounts to 31'. The brightest arc part is slightly visible in blue rays, consequently, emission in lines N_1 and N_2 is considerable. Several Supernovae are located close to the nebula. The most probable is the identity of nebula Semi-ellipse with Supernova 3692. There are 6 references.

N. Perova

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

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

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Mikhail Evgen'evich Nabokov; obituary. Fiz. v shkole 20 no.3:110-111 My-Je '60. (MIRA 13:11)

(Nabokov, Mikhail Evgen'evich, 1887-1960)

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VORONTSOV-VEL'YAMINOV, B.A., doktor fiziko-matematicheskikh nauk

Congress of astronoms in California. Nauka i zhizn' 28 no.12:14-20 D '61. (MIRA 15:2)
(Astronomy--Congresses)

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VO[illegible]TSOV-[illegible], [illegible]; [illegible], [illegible]

Determining stellar [illegible] by means of the Palomar sky atlas. Astron. zhur. [illegible] no. 1:1[illegible]5-1[illegible]7 Ja-[illegible] '[illegible]1. ([illegible])

1. Gosudarstvennyy astronomicheskiy institut im. P.K. Shternberga.
(Stars--Magnitudes)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, B.A.

Description of 50 planetary nebulae. Astron. zhur. 38 no. 1:75-82 Ja-F '61. (MIRA 14:2)

1. Gosudarstvennyy astronomicheskiy institut im. P.K. Shternberga.
(Nebulae)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, B.A., prof. (Moskva)

Interaction between galaxies. Fiz. v shkole 21 no.1:11-14 Ja-F '61. (MIRA 14:9)

1. Chlen-korrespondent Akademii pedagogicheskikh nauk RSFSR.
(Galaxies)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

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Pavel Petrovich Parenago (1906-1960). Ist.-astron.issl. no.7:335-394 '61. (MIRA 14:9)
(Parenago, Pavel Petrovich, 1906-1960)

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New planetary and peculiar gas nebulae. Astron.zhur. 38 no.2:375-376 Mr-Ap '61. (MIRA 14:4)

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

(Nebulae)

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VORONTSOV-VEL'YAMINOV, B.A.

Changes in the spectrum of the planetary nebula NGC 6905. Astron. zhur. 38 no.2:247-249 Mr-Ap '61. (MIRA 14:4)

1. Gosudarstvennyy astronomicheskiky institut im. P. K. Shternberga.
(Nebulae—Spectra)

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VORONTSOV-VIL'YAMINOV, Boris Aleksandrovich; KRASNOGORSKAYA, Alisa Arkad'yevna; Prinimali uchastiye: TSITSIN, F.A.; PONOMAREVA, G.A.; MAKAROV, A.N.; KUKARKIN, B.V., prof., otv.red.; YERMAKOV, M.S., tekhn.red.

[Morphological catalog of galaxies. Part 1. Catalog of 7,200 galaxies with declinations from 90 to 45] Morfologicheskii katalog galaktik. Chast' 1. Katalog 7200 galaktik ot 90 do 45 sklonenii. Moskva, Izd-vo Mosk.univ., 1962. 205 p. (Moscow. Universitet. Gosudarstvennyi astronomicheskii institut. Trudy, vol.32). (MIRA 16:2)
(Galaxies—Catalogs)

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Extragalactic astronomy and cosmogony at conference in California in 1961. Astron.zhur. 39 no.1:174-181 Ja-F '62. (MIRA 15:2)

(Astronomy—Congresses)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

ASTAPOVICH,I.S.; BAKULIN,P.I.; BAKHAREV,A.M.; BRONSHTEN,V.A.; BUGOSLAVSKAYA, N.Ya.[deceased]; VASIL'YEV,O.B.; GRISHIN,N.I.; DAGAYEV,M.M.; DUBROVSKIY,K.K.[deceased]; ZAKHAROV,G.P.; ZOTKIN,I.T.; KRAMER,Ye.N.; KRINOV,Ye.L.; KULIKOVSKIY,P.G.; KUNITSKIY,R.V.; KUROCHKIN,N.Ye.; ORLOV,S.V.[deceased]; POPOV,P.I.; PUSHKOV, N.V.; RYBAKOV, A.I.; RYABOV,Yu.A.; SYTINSKAYA, N.N.; TSESEVICH, V.P.; SHCHIGOLEV,B.M.; VORONTSOV-VEL'YAMINOV,B.A.,red.; POLOMARCVA,G.A., red.; KRYUCHKOVA, V.N., tekhn. red.

[Astronomical calender; permanent part] Astronomicheskii kalendar'; postoiannaia chast'. Izd.5., polnost'iu perer. Otv. red. P.I.Bakulin. Red.kol.V.A.Bronshten i dr. Moskva, Gos.izd-vo fiziko-matem.lit-ry, 1962. 771 p. (MIRA 15:4)

(Astronomy--Yearbooks)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, B.A.

Some aspects of the Ambartsumian hypothesis on the origin of galaxies. Vop.kosm. 8:27-31 '62. (MIRA 15:7)
(Galaxies) (Cosmogony)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

AGEKYAN, T.A.; VORONTSOV-VEL'YAMINOV, B.A.; GORBATSKIY, V.G.; DEYCH, A.N.; KRAT, V.A.; MEL'NIKOV, O.A.; SOBOLEV, V.V.; MIKHAYLOV, A.A., otv. red.; KULIKOV, G.S., red.; AKSEL'ROD, I.Sh., tekhn. red.

[Course on astrophysics and stellar astronomy]Kurs astrofiziki i zvezdnoi astronomii. 2. izd. Moskva, Fizmatgiz. Vol.2. [By]T.A. Agekian i dr. 1962. 688 p. (MIRA 16:1)
(Astrophysics) (Stars) (Nebulae)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, Boris Aleksandrovich, prof.; KULIKOV, G.S., red.; BRUDNO, K.F., tekhn. red.

[Collection of problems and exercises in astronomy] Sbornik zadach i uprazhnenii po astronomii. Izd.5. Moskva, Fizmatgiz, 1963. 279 p. (MIRA 16:9)
(Astronomy--Problems, excercises, etc.)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, B. A.

Dark matter in galaxies. Astron. zhur. 40 no.1:85-93 J-F '63. (MIRA 16:1)

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

(Galaxies)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VELIAMINOV, B. [Vorontsov-Vel'yaminov, B.], prof.

What will astronauts find on the moon? Nauka i tekh mladezh 15 no.6:7-9 Je'63.

1. Moskovski durzhaven universitet.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, Boris Aleksandrovich, prof.; FAYNBOYM, I.B., red.; RAKITIN, I.T., tekhn. red.

[Galactic spaces] Prosttory galaktik. Moskva, Izd-vo "Znanie," 1963. 47 p. (Novoe v zhizni, nauke, tekhnike. IX Seriia: Fizika i khimiia, no.23) (MIRA 17:2)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

S/033/63/040/001/010/016
E032/E514

AUTHOR: Vorontsov-Vel'yaminov, B.A.

TITLE: Dark matter in galaxies

PERIODICAL: Astronomicheskiy zhurnal, v.40, no.1, 1963, 85-93

TEXT: This is a review paper concerned with the distribution of dark matter of all types and based on a study of a large number of direct photographs taken mainly from the Hubble Atlas of Galaxies compiled by A. Sandage (1961). The subject matter is considered under the following headings: 1) elliptical galaxies, 2) lenticular galaxies, 3) spiral galaxies, 4) particularly noteworthy cases, and 5) dust in the nuclei of spirals. Conclusions: It is shown that the dynamics of diffuse matter in galaxies is much more complicated than is usually assumed. It is estimated that the thickness of the layer of dust in many galaxies seen edgewise is often greater than in our galaxy and reaches up to 1000 ps. There is 1 table.

ASSOCIATION: Gos. astronomicheskiy in-t im. P. K. Shternberga (State Astronomical Institute imeni P.K.Shternberg)

SUBMITTED: January 29, 1962

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APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, Boris Aleksandrovich; KULIKOV, G.S., red.

[Essays on the universe] Ocherki o Vselennoi. Izd.5., dop. Moskva, Izd-vo "Nauka," 1964. 552 p. (MIRA 17:5)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, B.A.; KOSTYAKOVA, Ye.B.; DOKUCHAYEVA, O.D.; ARKHIPOVA, V.P.

Absolute intensities of emission lines of planetary nebulae. Part 1. Astron.zhur. 41 no.2:255-263 Mr-Ap '64. (MIRA 17:4)

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

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, B.A.

Similarity of NGC 5195 and 3077 with the exploding galaxy M82. Astron. tsir. no.266:1 0'63. (MIRA 17:5)

1. Gosudarstvennyy astronomicheskiy institut imeni Shternberga.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VELYAMINOV, B. A.

"Evidence of magnetic-like phenomena in the structure of galaxies and their cosmological meeting."

report presented at the Intl Conf on Cosmology, Padua, Italy, 14-16 Sep 64.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

ACCESSION NR: AT4038537 S/2623/62/000/118/0003/0035

AUTHOR: Vorontosov-Vel'yaminov, B. A.

TITLE: A new catalogue of planetary nebulae

SOURCE: Moscow. Univ. Gos. astron. inst. Soobshch., no. 118, 1962, 3-35

TOPIC TAGS: astronomy, astrophysics, nebula, planetary nebula

ABSTRACT: This catalogue of planetary nebulae contains not only the accepted planetary nebulae, but also possible objects of this class listed by Haro and Perek; the total listing is 591 nebulae. The first column in the catalogue gives the assigned number; the second column -- the NGC, IC number or other source, abbreviated as described in the Russian text. Possible planetary nebulae are denoted by an accent mark. Coordinates are for the epoch 1900.0. The table gives the type according to the author's former classification and dimensions in seconds of arc (if not marked with a minute sign). D in the table means that the disk was visible. The upper limit of 10" is given on the basis of spectroscopic observations made by Moscow observers; m_n is the integrated photographic magnitude; RE is the relative exposure (Curtis); H is the author's value of the average surface brightness in magnitudes per square minute of arc. Roman numerals are used to denote the surface brightness from the Palomar Sky Atlas on the scale: I -- very bright, III -- very faint,

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ACCESSION NR: AT 4038537

O -- invisible. Sp_n denotes the spectral classification of the nebula on the scale: I -- low excitation (N_1 and N_2 faint), III -- high excitation (λ 4686 HeII strong). The excitation was estimated from absolute spectrophotometric data (or relative data when in brackets). For other nebulae the observed lines are noted. Those in brackets refer to the author's observations; (-) means that no trace of a spectrum could be found; m_* and Sp_* are the photographic brightness of the nucleus and its spectrum; V is the radical velocity and ΔV the velocity expansion. Values of nuclear temperature and proper motions are given in the former catalogue in the author's book Gasnebel und Neue Sterne, Berlin, 1953. Orig. art. has: 1 table.

ASSOCIATION: Gosudarstvenny*y astronomicheskiy institut Moskovskogo Universiteta (State Astronomical Institute of Moscow University)

SUBMITTED: 00May61 DATE ACQ: 18Jun64 ENCL: 00

SUB CODE: AA NO REF SOV: 005 OTHER: 009

Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, B.A.

Nuclear regions of galaxies. Part 1: Photometric characteristics. Astron. zhur. 42 no.6:1168-1183 N-D '65. (MIRA 19:1)

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

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, B.A.

Globular clusters in galaxies. Astron. zhur. 43 no. 1:231-232 Ja-F '66 (MIRA 19:2)

1. Gosudarstvennyy astronomicheskiy institut imeni P.K. Shternberga. Submitted March 18, 1965.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, B.A., prof.

Verification of cosmological theories by observations. Zem.i vsel. 1 no.2:60-63 Mr-Ap '65. (MIRA 18:8)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, B.A.; KOSTYAKOVA, Ye.B.; DOKUCHAYEVA, O.D.; ARKHIPOVA, V.P.

Absolute intensities of emission lines of planetary nebulae. Part 2. Astron. zhur. 42 no.4:730-739 Jl-Ag '65. (MIRA 18:8)

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

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, B.A.; KOSTYAKOVA, Ye.B.; DOKUCHAYEVA, O.D.; ANKHIPOVA, V.P.

Revised absolute intensities of the emission lines of 25 planetary nebulae. Astron.zhur. 42 no.2:464-466 Mr-Ap '65. (MIRA 18:4)

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

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, B.A.

KULAGIN, S.G.; KOVBASYUK, L.D.; DAGAYEV, M.M.; ROZENBLYUM, N.D.; YEGORCHENKO, I.F.(Irkutsk); KAVERIN, A.A. (Irkutsk); KONSTANTINOVA, T.G. (Irkutsk); KUKLINA, V.A. (Irkutsk); KUKLIN, G.V. (Irkutsk); SAZONOVA, Z.G., (Irkutsk); CHERNYKH, L.I. (Irkutsk); CHERNYKH, N.S. (Irkutsk); DEMIDOBICH, Ye.G.; BRONSHTEN, V.A.; YAKHONTOVA, N.S. (Leningrad); PEROVA, N.B.; DOKUCHAYEVA, O.D.; KATASEV, L.A.; KLYAKOTKO, M.A.; PARENAGO, P.P.; SHCHERBINA-SAMOYLOVA, I.S.; MASEVICH, A.G.; RYABOV, Yu.A.; SHCHEGLOV, V.P.; PEREL', Yu.G.; MARTYNOV, D.Ya.; FEDYNSKIY, V.V.; VORONTSOV-VEL'YAMINOV, B.A.; ZIGEL', F.Yu.; BAKULIN, P.I., otv.red.; RAKHLIN, I.Ye., red.; AKHLAMOV, S.N., tekhn.red.

[Astronomical calendar] Astronomicheskii kalendar'. [A yearbook; variable section for 1959] Ezhegodnik. Peremennaia chast', 1959. Red.kollegiia P.I. Bakulin i dr. Moskva, Gos.izd-vo fiziko-matem.lit-ry, 1958. 370 p. (Vsesoiuznoe astronomo-geodezicheskoe obshchestvo, no.62) (MIRA 12:2)

1. Gosudarstvennoye astronomo-geodezicheskoye obshchestvo (for Kulagin, Kovbasyuk, Demidovich). 2. Moskovskoye otdeleniye Vsesoyuznogo astronomo-geodezicheskogo obshchestva (for Dagayev, Rozenblyum, Bronshten, Perova).

(Astronomy--Yearbooks)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

ACC NR: AP6027541 SOURCE CODE: UR/0384/66/000/003/0006/0008

AUTHOR: Vorontsov-Vel'yaminov, B. A. (Professor)

ORG: none

TITLE: Puzzling phenomena in the world of the galaxies

SOURCE: Zemlya i vselennaya, no. 3, 1966, 6-8

TOPIC TAGS: galaxy, galactic structure, gravitation effect

ABSTRACT: The author suggests that it may soon be possible to discover new properties and laws associated with galactic systems, indicating a change in the mass and gravitational fields of these systems with time. Several examples are cited to support this viewpoint. These concern the extremely high rate of gas flow from the centers of galaxies, the discovery of radiogalaxies with their peculiar properties, and certain other phenomena which show that the existing forms of stellar systems cannot be explained by known laws of mechanics. Drawing attention to recent developments in the field of magnetohydrodynamics, the author states that certain phenomena observed in other galaxies can apparently be explained as manifestations of magnetic forces. Orig. art. has: 2 photographs.

SUB CODE: 03/ SUBM DATE: none

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

ACC NR: AT6027582 SOURCE CODE: UR/0000/66/000/000/0010/0014

AUTHOR: Vorontsov-Vel'yaminov, B. A. (Doctor of Physico-mathematical sciences)

ORG: none

TITLE: New studies of galaxies

SOURCE: Zvezdy i vselennaya (Stars and the universe). Moscow, Izd-vo Znaniye, 1966, 10-14

TOPIC TAGS: galactic structure, gravitation, magnetohydrodynamics

ABSTRACT: It was assumed until recently that a single universal law of gravitation controlled the world of galaxies. Recent discoveries have disproved this assumption and have shown that we still know little about the factors governing the galaxies and their clusters. They suggest that we are about to discover new properties and new laws which involve systems having colossal masses and distances. Recently a new science was developed designated as magnetohydrodynamics. It deals with the movement of ionized gases. The presence of a magnetic field in our galaxy was proved recently by direct observations. However, galaxies consist of stars (often very old) and the magnetic field cannot control the stars and therefore cannot determine the form of galaxies. There are galaxies in which one branch curls right and the other left; two galaxies (spiral and elliptic) are known to be joined by a bridge extending for ...

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ACC NR: AT6027582

distances of hundreds of thousands of light years; there are three or more galaxies converging with each other; some galaxies have a very bizarre form (mice, fishing nets, owls). An atlas issued recently has several hundred pictures of these distorted galaxies. The shape of some of them could be explained by the movement of ionized gas. But these galaxies had no gas. However, all facts suggest that galaxies are not tidal formations. One of the galaxies is especially interesting. It resembles a Segner wheel: the main bodies of two galaxies converged and their tails bent like two jets of water in the Segner wheel. The photos of the small galaxy M82, which was proved to be a source of elevated radio emission, showed that flows of incandescent hydrogen [illegible] erupting up and down. The eruption generating the flows occurred in the core of [illegible] galaxy 1.5 million years ago and was much more powerful than ever observed in the past, even in supernova stars. The fact of this explosion may suggest that galaxies having two radiation centers were also formed by explosion. In conclusion, the author answers two questions: (1) the farthest known object is situated from us at a distance of eight billion light years; (2) the problem of the recession of interacting galaxies is still unsolved.

SUB CODE: 03/ SUBM DATE: 22Apr66

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

SEMAKIN, N.K.; VORONTSOV-VEL'YAMINOV, B.A., prof., red.; GUS'KOV, G.G., red.; NOVOSELOVA, V.V., tekhn.red.

[Teaching astronomy in schools; collected articles] Prepodavanie astronomii v shkole; sbornik statei. Pod red. B.A.Vorontsova-Vel'iaminova. Moskva, 1959. 269 p. (MIRA 13:2)

1. Akademiya pedagogicheskikh nauk RSFSR, Moscow. Institut metodov obucheniya. 2. Laboratoriya metodiki fiziki Instituta metodov obucheniya Akademii pedagogicheskikh nauk RSFSR i Shkola No.500 g. Moskvy (for Semakin). 3. Chlen-korrespondent Akademii pedagogicheskikh nauk RSFSR i Pedinstitut imeni V.P.Potemkina, g.Moskva (for Vorontsov-Vel'yaminov).

(Astronomy--Study and teaching)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, Boris Aleksandrovich; MARTYNOV, D.Ya., prof., retsenzent; SAMSONENKO, L.V., red.; BRUDNO, K.F., tekhn.red.

[Essays about the universe] Ocherki o vselennoi. Izd.4. Moskva, Gos.izd-vo fiziko-matem.lit-ry, 1959. 532 p. (MIRA 13:2)

(Cosmogony)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, B. A.

Evidences of magnetiklike phenomena in the structure of galaxies. Astron. zhur. 41 no. 5:814-822 S-O '64.

1. Gosudarstvennyy astronomicheskiy institut im. P.K.Shternberga.
(MIRA 17:10)

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spect to another at a given time, and it is almost impossible ... calculations in galaxies containing billions of stars. There are several theories ... to explain the nature of galaxies. One states that a galaxy resembles a ... Ogorodnikov are

gas and cosmic dust ... which he calls interacting, whose behavior ...

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

REYSH, Arvid Karlovich; VORONTSOV-VEL'YAMINOV, N.P., otv.red.; KOLOMIYTSEV, A.D., red.izd-va; KOROVENKOVA, Z.A., tekhn.red.

[Lubrication of strip mining machinery; handbook] Smazka mashin ugol'nykh kar'erov; spravochnik. Moskva, Ugletekhizdat, 1959. 213 p. (MIRA 12:11)
(Lubrication and lubricants)
(Coal mining machinery--Maintenance and repairs)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, Nikolay Pavlovich, dotsent; SHAGINOV, Dmitriy Luk'yanovich, dotsent; PETROV, Nikolay Mitrofanovich, dotsent. Prinimal uchastiye POPOV, N.N., dotsent. DOMBROVSKIY, N.G., prof., doktor tekhn.nauk, red.; BELOV, B.A., inzh., nauchnyy red.; REYSH, A.K., inzh., nauchnyy red.; UDOD, V.Ya., red.izd-va; NAUMOVA, G.D., tekhn.red.

[Building machinery; album of drawings] Stroitel'nye mashiny; al'bom chertezhei. Pod red. N.G.Dombrovskogo. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1960. 5 p. 294 p. of diagrs. (MIRA 13:12)

1. Kafedra "Stroitel'nyye mashiny" Moskovskogo ordena Trudovogo Krasnogo Znameni inzhenerno-stroitel'nogo instituta imeni V.V.Kuybysheva (for Vorontsov-Vel'yaminov, Shaginov, Petrov). 2. Voyenno-transportnaya akademiya (for Popov).
(Building machinery)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, Nikolay Pavlovich, kand.tekhn.nauk; PUL'MANOV, Nikolay Viktorovich, kand.tekhn.nauk; RYAKHIN, Viktor Aleksandrovich, kand.tekhn.nauk; PODOBED, E.G., red.; PERSON, M.N., tekhn.red.

[Assistant operator of diesel and electric construction excavators] Pomoshchnik mashinista dizel'nykh i elektricheskikh stroitel'nykh ekskavatorov. Izd.2., perer. i dop. Pod obshchei red. N.P.Vorontsova-Vel'iaminova. Moskva, Vses. uchebno-pedagog.izd-vo Proftekhizdat, 1960. 439 p. (MIRA 13:12)

(Excavating machinery)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

REYSH, Arvid Karlovich; VORONTSOV-VEL'YAMINOV, N.P., nauchnyy red.; MALINOVSKIY, Yu.F., red.; NESMYSLOVA, L.M., tekhn. red.

[Single-bucket construction excavators] Odnokovshovye stroitel'nye ekskavatory. Kalinin, Proftekhizdat, 1961. 100 plates. (MIRA 15:3)

(Excavating machinery)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, N., kand.tekhn.nauk

Rotary excavator. IUn.tekh. 4 no.8:8-10 Ag '60. (MIRA 13:9)

(Excavating machinery)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, Nikolay Pavlovich; PUL'MANOV. Nikolay Viktorovich; RYAKHIN, Viktor Aleksandrovich; REYSH, A.K., nauchn. red.; BEREZOVSKAYA, A.L., ved. red.

[Operator of agricultural excavators] Mashinist ekskavatorov dlia sel'skogo khoziaistva. Moskva, Vysshaia shkola, 1965. 399 p. (MIRA 18:7)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, P.N.; NOVIKOV, V.V.

Propagation of an electromagnetic pulse over a plane nonuniform track. Probl.dif.i raspr. voln. 2:158-165 '62. (MIRA 16:4)
(Electromagnetic waves)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, V.A.

PHASE I BOOK EXPLOITATION SOV/5609

Soveshchaniye po voprosam kosmogonii, 6th, 1957.

Trudy soveshchaniya...; vnegalakticheskaya astronomiya i kosmologiya (Transactions of the 6th Conference on Problems of Cosmogony; Extragalactic Astronomy and Cosmology) Moscow, Izd-vo AN SSSR, 1959. 273 p. Errata slip inserted. 1,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Astronomicheskiy Sovet.

Editorial Board: D.A. Frank-Kamenetskiy, Professor (Resp. Ed.); B.A. Vorontsov-Vel'yaminov, Corresponding Member, Academy of Pedagogical Sciences USSR; Ya. A. Smorodinskiy, Professor; A.L. Zel'manov, Senior Scientific Contributor; and R.Z. Sagdeyev (Scientific Secretary) Junior Scientific Contributor; Ed. of Publishing House: L.V. Semsonenko; Tech. Ed.: G.N. Shevchenko.

PURPOSE: The publication is intended for astronomers, geophysicists and theoretical physicists interested in general problems of cosmology.

COVERAGE: This is a collection of reports given at the 6th Conference on the Problems of Cosmogony, June 5-7, 1957. In the publication observational data in the field of extragalactic astronomy are summarized, the data are analyzed from a theoretical point of view, and the accuracy and reliability of the observations are evaluated. The relativistic cosmological theories are discussed in detail for the first time in Soviet literature and correlated with observational data, primarily with the red-shift measurements. The relationship of cosmology to the theory of the formation of chemical elements and general thermodynamic and philosophical problems of cosmology are also investigated. No personalities are mentioned. References accompany some of the articles.

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APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

FEDOSENKO, Radiy Yakovlevich; VORONTSOV, F.F., red.

[Transformers in local electric power distribution networks] Transformator v mestnoi raspredelitel'noi elektricheskoi seti. Moskva, Izd-vo M-va kommun.khoz.RSFSR, 1963. 83 p. (MIRA 17:3)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

L 02937-67 EWT(1)/EWT(m)/EWP(t)/ETI IJP(c) JD/AT/WW/JG

ACC NR: AP6021057 (A, N) SOURCE CODE: UR/0292/66/000/003/0021/0023

AUTHOR: Zakharov, M. V. (Doctor of technical sciences); Putsykin, G. G. (Candidate of technical sciences); Stepanova, M. V. (Candidate of technical sciences); Vorontsova, L. A. (Engineer)

ORG: none

TITLE: Alloys for electric-machine commutators

SOURCE: Elektrotekhnika, no. 3, 1966, 21-23

TOPIC TAGS: electric machine, electric ~~machine~~ equipment, commutator, copper alloy

ABSTRACT: The results are reported of an experimental investigation of high-conductivity low-alloy coppers: Cu-Ni-Be, Cu-Ni-Ti, Cu-Cr-Zr, Cu-Cr-Mg, Cu-Cr-Be, Cu-Cr-Ti, Cu-Co-Be, Cu-Cr-Al, Cu-Cr-Cd, Cu-Fe; for control purposes, copper M1, a copper-magnesium alloy, and Cu-Zr and Cu-Cr bronzes

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ACC NR: AP6021057

were also tested. The alloys were subjected to two treatments: (1) Water-quench hardening at 960—980C and tempering at 470—480C for 5 hrs; (2) The same hardening, then 50% workhardening, and then tempering at 470—480C for 4 hrs. Experimental curves and tabulated data show that: By their hardness, wear resistance, heat resistance, and electric conductivity, the following alloys can be recommended for the commutators of electrical machinery operating at 350—500C: a chrome-zirconium bronze containing 0.25—0.5% Cr and 0.15—0.35% Zr (or its cheaper substitute, chrome-magnesium bronze) and a nickel-beryllium bronze containing 0.8—1.1% Ni and 0.15—0.25% Be. The second thermal treatment is recommended for these bronzes. Orig. art. has: 1 figure and 2 tables.

SUB CODE: 10, 11, 09 / SUBM DATE: none / ORIG REF: 004 / OTH REF: 005

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV, Yevgeniy Andreyevich; CHEREPANOV, B.I., red.; ISUPOVA, N.A., tekhn.red.

[Yalta; reference guidebook] IAlta; putevoditel'-spravochnik. Simferopol', Krymizdat, 1960. 92 p. (MIRA 14:2)
(Yalta--Guidebooks)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

24(7) SOV/48-23-9-16/57

AUTHOR: Vorontsov, Ye. I.

TITLE: Dependence of Total Intensity of Spectral Lines on the Concentration of Atoms in a Pulsed Discharge

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 9, pp 1088-1091 (USSR)

ABSTRACT: In the first part of the present paper the methods and the selection of experimental conditions are discussed. In this investigation a method for a forced introduction of electrode material into the spark space by pulsed discharge is dealt with, in which case the discharge is localized on a certain part of the test sample. As shown in an earlier paper (Ref 1) by the author, the dimensions of the electrode holes in this case remain unchanged in order to eliminate the selectivity of the material entry into the spark space and the influence of "third" elements. The forced introduction of a certain quantity of material is necessary for an investigation of the interrelation between the total intensity of the spectral lines and the concentration of the atoms. Figure 1 shows the blackening along the line Si 2516 Å in the silumin spectrum for various kinds of spark discharge and in the alternating

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Dependence of Total Intensity of Spectral Lines on the Concentration of Atoms in a Pulsed Discharge

current arc. The diagram in figure 2 shows the influence exercised by the diameter of the localized perforation of the test sample upon the slope of the calibration curves for silicon in the case of soft discharge, and in figure 3 the calibration curves for zinc at various working conditions. It is found that in a hard discharge the calibration curve takes a rectilinear course. Also the influence exercised by the hole dimensions in the electrode surface upon the material leave . depending upon the sample composition is investigated. It was found that, in the case of a hard discharge, the radiation atoms are distributed nearly uniformly within the discharge zone. In the second part of the paper, the total intensity of the spectral lines depending upon atom concentration in a hard pulse discharge is investigated. Figure 4a shows the calibration curves for the determination of zinc in copper and bronze within the range of 0.39-62%, and the calibration curves for the determination of chromium in the binary alloy Cr-Ni in the range of concentration of 2-87%. Figure 4b shows the corresponding theoretical curves for the case of complete absorption. The practical value of the present

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SOV/48-23-9-16/57

Dependence of Total Intensity of Spectral Lines on the Concentration of Atoms in a Pulsed Discharge

paper is the theoretical possibility of obtaining calibration lines with an inclination of 45°, which is possible in the case of spark spectral lines up to comparatively high concentrations. This may be realized in the analysis of steel, silumin, and brass. There are 5 figures and 1 Soviet reference.

Card 3/3

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV, Ye.S., kand.tekhn.nauk, starshiy prepodavatel'; [illegible], O.A., [illegible], doktor tekhn.nauk

Mass transfer of iron, sulfur and phosphorus in [illegible]. Trudy Ural. politekh.inst. no.91:84-91 '60. (MIRA 14:3)
(Mass transfer) (Liquid metals)
(Radioisotopes--Industrial applications)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

L 04906-67 EWT(d)/EWP(1) IJP(c) GD

ACC NR: AT6022684 SOURCE CODE: UR/0000/66/000/000/0158/0164

48
B+1

AUTHOR: Varshavskiy, V. I.; Vorontsova, I. P.

ORG: none

TITLE: The use of stochastic automatons of variable structure to solve certain behavior problems

SOURCE: Moscow. Institut avtomatiki i telemekhaniki. Samoobuchayushchiyesya avtomaticheskiye sistemy (Self-instructing automatic systems). Moscow, Izd-vo Nauka, 1966, 158-164

TOPIC TAGS: game theory, stochastic process, finite automaton

ABSTRACT: The authors analyze some behavior problems for variable-structure stochastic automatons in game situations. The definitions and notation adopted in the paper are those of M. L. Tsetlin (e.g., Konechnyye avtomaty i modelirovaniye prosteyshikh form povedeniya. --UMN, 1963, vol. XVIII, vyp. 4 (112)). The zero-sum game of a variable-structure automaton with a single opponent using one pure strategy is considered in an effort to demonstrate the conditions for asymptotic behavior optimality of such an automatic device in a stationary random environment. The simplest stochastic automaton version is considered, i.e., the line-

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automaton without input. Expressions are derived for the mathematical win expectancy of such an automaton (C_k). Games by two such C_k automatons are considered for pure strategies, state diagrams are analyzed, and experimental data on C_k automaton assignment game behavior are presented. In the case of the nonstationary (random) environments (to which the problem of inter-automaton gaming can ultimately be resolved) it is not yet possible to formulate requirements as the method of changing the state transition probabilities. It is also shown that a C_k automaton which has functioned for any extended period of time in one stationary medium is very slow to retrain itself for operation in another environment. The elimination of this defect is seen as the key to the design of an automaton capable of optimal behavior in nonstationary environments. The authors wish, in conclusion, to express their sincere gratitude to M. L. Tsetlin, I. I. Pyatetskiy-Shapiro, V. Yu. Krylov, S. L. Ginzburg, and V. A. Volkonskiy for their willingness to take part in a discussion of the problems considered in this paper and for their many helpful suggestions. Orig. art. has: 2 figures, 3 tables, and 9 formulas.

SUB CODE: 09,12/ SUBM DATE: 02Mar66/ ORIG REF: 008

Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOVA, Ye.I., doktor med. nauk, red.

[Industrial hygiene and safety measures for electric welding operations; collection of transactions of the scientific conference on March 29-30, 1960] Gigiena truda i tekhnika bezopasnosti pri elektrosvarochnykh rabotakh; sbornik trudov nauchnoi konferentsii 29-30 marta 1960 g. Pod red. E.I.Vorontsovoi. Moskva, In-t gigieny truda i profzabolevanii AMN SSSR, 1962. 142 p. (MIRA 17:4)

1. Nauchno-tekhnicheskoye soveshchaniye po voprosam gigiyeny truda i tekhnike bezopasnosti pri elektrosvarochnykh rabotakh, Moskva, 1960.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOVA, Ye.I., doktor med. nauk; ALEKSEYEV, Ye.K., inzh.

Conference on labor hygiene and safety in electric welding operations. Svar. proizv. no.5:43-45 My '64. (MIRA 18:11)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOVA, Ye.I., doktor med. nauk; TESMENITSKIY, D.I., inzh.

Consultations on questions asked in our readers' letters. Svar. proizv. no.8:48 Ag '64. (MIRA 17:9)

1. Institut gigiyeny truda i professional'nykh zabolevaniy AMN SSSR (for Vorontsova). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut avtogennoy obrabotki metallov (for Tesmenitskiy).

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOVA, Ye.I.; SHIROKOV, Yu.G.

Some aspects and principal tasks of industrial hygiene in relation to the development of heavy chemical industry. Vest. AMN SSSR 19 no.7:3-8 '64. (MIRA 18:3)

1. Institut gigiyeny truda i professional'nykh zabolevaniy AMN SSSR, Moskva.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV, Ye. S. Cand Tech Sci -- (diss) "Diffusion in molten slags." Sverdlovsk, 1958. 14 pp (Min of Higher Education USSR. Ural Polytechnic Inst im S. M. Kirov), 100 copies (KL, 14-58, 113)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

L 47392-66 EWT(d)/FSS-2

ACC NR: AP6031030 SOURCE CODE: UR/0109/66/011/009/1657/1665

AUTHOR: Vorontsov, Yu. I.; Polyakov, I. V.

47 B

ORG: none

TITLE: Investigation of continuous signals in lines with nonlinear resistance

SOURCE: Radiotekhnika i elektronika, v. 11, no. 9, 1966, 1657-1665

TOPIC TAGS: signal propagation, continuous signal, nonlinear resistance line, signal propagation velocity, signal shape

ABSTRACT: The propagation of continuous signals in lines with nonlinear resistance is investigated. It is shown that the resistances existing in the series and parallel branches of the equivalent circuit of such a line affect continuous signal propagation in an essentially different manner. Simplified equivalent circuits used in earlier studies have failed to provide a complete picture of all the types of continuous signals possible in such a line. Conditions of the applicability of simplified equivalent circuits are established. Conditions for the existence of continuous signals and the dependence of their shape and propagation velocity on circuit parameters have been determined. It is demonstrated that with a specific

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ACC NR: AP6031030

relationship of parameters, depending on the displacement current, two types of stationary signals propagating at completely different velocities are possible in these lines. Orig. art. has: 6 figures, 22 formulas, and a bibliography of 6 titles [DW]. [Authors' abstract]

SUB CODE: 09/ SUBM DATE: 05May65/ ORIG REF: 005/ OTH REF: 001/

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APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VALNYEV, Kh.S.; VORONTSOV, Yu.N.; MOROZOV, M.G.

Spark ignition unit with a flash time less than a microsecond. Prib.i tekh.eksp. no.2:122-123 Mr-Ap '60. (MIRA 13:7)

1. Gosudarstvennyy issledovatel'skiy elektrokeramicheskiy institut.
(Electric discharge lighting)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

83636

S/029/60/000/009/003/008
B013/B060

3,1400

AUTHOR: Vorontsov-Vel'yaminov, B. A., Professor

TITLE: Has the General Law of Gravitation Universal Validity?

PERIODICAL: Tekhnika molodezhi, 1960, No. 9, pp. 10-13

TEXT: The author contributes the present article in response to reader's A. Viskovataya, of Chardzhou, Turkmenskaya SSR, desire to hear about new theories on the unlimited validity of Newton's law of gravitation. The author starts by pointing out that attraction depends on the size of a system. He confronts microcosmos with megacosmos, and gives their respective orders of magnitude. It was possible to establish the predominance of Newton's law of gravitation in the megacosmos. Up to date, this law has been unrestrictedly extended to all phenomena arising within galaxies and their interrelations. In fact, this law has been verified only with respect to double and, at most, multiple stars. Regarding the clustering of several dozens of stars, no proof has as yet been obtained as to whether there are other types of interactions comparable to the law of gravitation. Conceptions and theories applying to the solar system,

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Has the General Law of Gravitation Universal Validity?

and even to microcosmos, are often used to explain the formation, evolution, and interaction of stellar systems. Since, however, only the form of stellar systems, but not the processes occurring in them, are observed, it is not possible to prove the validity of the theories applied to them. The photographic stellar atlas published by the Observatory of Mount Palomar, USA, is systematically studied in the USSR. As many as 500 galaxies, designated as interacting, have already been identified. These comprise pairs and groups of galaxies, whose normal form is visibly distorted, but also such as are situated in a common bright nebula. The author gives some proofs for the fact that interactions of these pairs and groups of galaxies have no gravitational character, and that the form distortions have nothing to do with ordinary attractive effects. Arguments have also been put forward in favor of the proposition that galaxies possess a high toughness. This can be hardly explained by interstellar gravitation. Research made into the interactions of stellar systems led to the belief that also other, as yet unknown, forces exist in these systems apart from gravitation about which there is no doubt. Academician V. A. Ambartsumyan indicates a number of convincing arguments for his hypothesis that the centers of some galactic clusters split and fly asunder to form new

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Has the General Law of Gravitation Universal Validity?

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galaxies. The author assumes that individual members of interacting galactic clusters arise simultaneously, and mutually disturb their normal evolution. In flying asunder, they exert an inexplicable effect on each other. Physicist N. P. Lebedev is mentioned. There are 11 figures.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, B.A.

Interaction of galaxies and the nature of their arms, bars, and tails. Morphology of galaxies; part 5. Astron.zhur. 35 no.6:858-868 N-D '58. (MIRA 11:12)

1. Gosudarstvennyy astronomicheskiy institut imeni P.K. Shternberga.

(Galaxies)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, Boris Aleksandrovich; YERPYLEV, N.P., red.; KOLESNIKOVA, A.P., tekhn.red.

[Sketches of the history of astronomy in the U.S.S.R.] Ocherki istorii astronomii v SSSR. Moskva, Gos.izd-vo fiziko-matem. lit-ry, 1960. 227 p. (MIRA 14:3)
(Astronomy)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, B.A., prof.

Is the universal gravitation law really universal? Tekh.mol. 28 no.9:10-13 '60. (MIRA 13:10)
(Gravitation) (Galaxies)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, B.A.

Partial gas densities in Whipple's comet (1942g). Astron.zhur. 37 no.4:709-715 Jl-Ag '60. (MIRA 13:8)

1. Gosudarstvennyy astronomicheskiy institut im. P.K.Shternberga.
(Comets--1942)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

VORONTSOV-VEL'YAMINOV, B.A.

Problem of comparing the dimensions of galaxies. Astron.zhur. 37 no.4:778-780 Jl-Ag '60. (MIRA 13:8)

1. Gosudarstvennyy astronomicheskiy institut im. P.K.Shternberga.
(Galaxies)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001861010010-3

87248
S/033/60/037/006/007/022
E032/E514

3.1520 (1068, 1168, 1177)

AUTHOR: Vorontsov-Vel'yaminov, B. A.

TITLE: Variations in the Spectrum of the Planetary Nebula IC4997 and Their Origin

PERIODICAL: Astronomicheskiy zhurnal, 1960, Vol.37, No.6, pp.994-1000

TEXT: Aller and Liller (Ref.1) have noted variations in the relative intensities of the lines H_γ and λ4363 (OIII) in the spectrum of IC 4997 as reported by different workers. They have suggested that the reduction in the intensity of the line λ 4363 is due to a reduction in the electron density. The problem has been discussed theoretically by Gurzadyan (Ref.2). However, Gurzadyan erroneously assumed that in the first observations of 1916 the line λ4363 was twice as bright as H_γ. The present author gives a detailed discussion of the ratio of the intensities of the lines λ4363 and H_γ using existing observations as well as additional data based on measurements on a standardized spectrogram obtained by M. V. Savel'yeva on September 5, 1959. This spectrogram was obtained using an objective prism and the 50 cm Maksutov camera at the Crimean Station of the Shternberg State Astronomical

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Variations in the Spectrum of the Planetary Nebula IC 4997 and Their Origin

Institute (GAISh). Agfa ISS plates were used. The exposure was 2 1/2 hours and the dispersion 200 Å/mm at H_γ (further details will be published in a later paper). The spectrogram obtained on June 2, 1960 confirmed the 1959 results. Other data employed in the present discussion were as follows:

Date and Observer	λ 4363:H_γ
1916, September, Wright (Ref.3)	1.1
1938, August, Aller (Ref.4)	1.6
1940, June, Struve and Swings (Ref.5)	1.2
1949, Aller (Ref.1)	1.0
1956, Aller (Ref.1)	0.77
1950, September, Savel'yeva and Vorontsov-Vel'yaminov	0.61

The case of IC 4997 is said to be exceptionally favourable, since the intensities of the lines λ 4363 and H_γ are almost equal and it is quite clear from the spectrum which of them is stronger.

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S/033/60/037/006/007/022
E032/E514

Variations in the Spectrum of the Planetary Nebula IC 4997 and Their Origin

In 1916 the intensities of these two lines were practically equal, in 1938 to 1940 λ 4363 became appreciably stronger, while in 1956 to 1959 it was appreciably weaker than H_γ. There is thus little doubt that the ratio of the intensities of the two lines does, in fact, oscillate rather than systematically decrease. An attempt was made by the present author to evaluate the values of N_e and T_e simultaneously, using the Seaton method (Refs. 10 and 11). However, this attempt was unsuccessful owing to the lack and low accuracy of observational data and the approximations made in the theory. The IC 4997 nebula has exceptionally high values of N_e, namely, $10^5 - 10^6$ and the approximate equations apparently do not hold for this nebula. The surface brightness of the nebula in Hβ in absolute units and the photographic magnitude of the nucleus (about $13^m.7$) were obtained directly from the spectrum. The decrease in the intensity of λ4363 is said to be probably due to a drop in the temperature of the nucleus. In general, this temperature probably oscillates. Observations can also be

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explained qualitatively by assuming that an increase in the corpuscular emission of the nucleus takes place. The nucleus belongs to the Wolf-Rayet type and the enhanced corpuscular emission leads to an accelerated supply of oxygen to the envelope. The observed change in the electron temperature of IC 4997 could be due to an increase in the concentration of oxygen by anything between 0.02 and 0.06 with a change in the relative abundance from $1:5 \times 10^5$ to $3:5 \times 10^5$. If the mass of the envelope of the nebula is 0.01 $M_\odot$, then this process will require an increase in the injection of oxygen from the nucleus of about 2×10^{-8} $M_\odot$ per year. For normal Wolf-Rayet stars, the mass loss by ejection is estimated as 10^{-5} $M_\odot$ per year, i.e. a quantity which is greater by three or four orders of magnitude than the above figure. In usual stars the amount of oxygen is less than the amount of hydrogen by a factor of 1000. However, it is considered that Wolf-Rayet stars are very poor in hydrogen and hence if they lose about 10^{-5} $M_\odot$ per year, the fraction of oxygen should be greater than 1:1000. It follows

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that the observed decrease in the electron density could be explained by a much smaller increase in the corpuscular emission from the nucleus. Since, however, there is no progressive change in the spectrum of IC 4997 and only oscillations appear to be present, and since in the case of NGC 6905, for example, an increase in the temperature of the nucleus has been observed, it is more probable that an oscillation in the temperature of the nucleus of the IC 4997 nebula does in fact occur, and changes in the chemical composition of the envelope of this nebula are not significant in this connection. There are 23 references: 5 Soviet, 18 non-Soviet.

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