B/2506/63/004/000/0151/0161

ACCESSION NR: AT4013672

AUTHOR: Serafimov, K. B

TITLE: Effect of the nocturnal E layer on night glow

SOURCE: B"lgarska akademiya na naukite, Geofizichen institut, Izv., v. 4, 1963, 151-161

TOPIC TAGS: absorption, D region, E layer, green line, ionization remnant, ionosphere, night glow, nocturnal E layer, O, photodissociation, red line, F layer

ABSTRACT: In the investigation of night glow, the author notes, corrections have to be made in measurement results, owing to absorption in the nocturnal E layer and ionization remnants in the D region. An analysis is made of the photodissociation processes in the lower nocturnal ionosphere and their absorption capacities. An explanation is given of certain night-glow phenomena (for example, the anomaly in the variations of green line intensity) through the association of ionospheric and optical processes. An explanation is given of the results of ionospheric investigations over Sofia at the time of the total solar eclipse (15 Feb 1961): ionospheric effects of the corpuscular shadow exist in the F layer and in the nocturnal E layer; shutting out the corpuscular streams provokes a heightening of electron concentration in the F layer, and a lowering in the E layer; these effects result from a

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negative correlation between the intensity of oxygen lines and maximal electron concentration in the F layer; consequently, with the heightening of ionization in the F layer owing to the corpuscular eclipse, the brightness of night glow declines and, at the same time, electron concentration in the nocturnal E layer will fall.

"I avail myself of the occasion to express my gratitude to Herr Ch.-U Wagner of the Geomagnetisches Institut der DAW (Geomagnetic Institute of the German Academy of Sciences) in Potsdam for permission to print as yet unpublished results of his researches. I extend my thanks also to the collectives of the Geofizichniya Institut pri BAN (Geophysical Institute, Bulgarian Academy of Sciences), the ionospheric Observatory of the Hydrometeorological Service of the German Democratic Republic in Kuhlungsborn, and to the Ionospheric Department of the Heinrich Hertz Institute in Berlin for their friendly discussion and valuable suggestions relating to this work."

Orig. art. has: 5 formulas, 5 figures, and 1 table.

ASSOCIATION: none

SUBMITTED: 050ct62 DATE ACQ: 04Mar64 ENCL: 00

SUB CODE: AS NO REF SOV: 011 OTHER: 028

Card 2/2

SERAFIMOV, K.; SAMARDJIEV, D. [Samardzhiev, D.]

Regularity in the development of ionospheric E2-layer.
Doklady BAN 16 no. 4: 365-368 '63.

1. Vorgelegt von Akademiemitglied L. Krastanov [Krustanov, L.].

SERAFIMOV, K.; GORINOV, N.

Regularity in the change of electronic density in the E layer over Sofia, 1961-1962. Doklady BAN 16 no.7:705-708 '63.

1. Vorgelegt von Akademiemitglied L.Krastanov [Krustanov,L.] Chlen Redaktsionnoy kollegii i otvetstvennyy redaktor, "Doklady Bolgarskoy Akademii nauk".

DEJANOV, I.; TOFOVIC, P.; SERAFIMOV, K.; LAZAROV, A.; MACALI, M.

Venous thrombosis and malignant neoplasms. Acta chir. Iugosl. 12 no.1:33-41 '65.

1. Zavod za transfuziju krvi SR Makedonije (v.d. direktora dr. N. Stojcenska), Hirurska klinika (direktor prof. dr. B. Dragojevic), Ginekolosko-akuserska klinika (direktor prof. dr. A. Cakmakov) i Interna klinika (direktor prof. dr. D. Arsov) Medicinskog fakulteta u Skopju.

SERAFIMOV, K.; TAUBENHEIM, J.

Quasiperiodic oscillations of electronic density in the F area of the ionosphere. Doklady BAN 16 no.7:709-712'63.

1. Vorgelegt van Akademiemitglied L.Krastanov [Krustanov,L.]; Chlen Redaktsionnoy kollegii i otvetstvennyy redaktor, "Doklady Bolgarskoy Akademii nauk".

SERAFIMOV, K.; GORINOV, N.

Quiescent changes in the total amount of electrons in the E ionospheric layer. Doklady BAN 16 no. 8: 809-812 '63.

1. Vorgelegt von Akademiemitglied L. Krastanov [Krustanov, L.]. Otvetstvennyy redaktor, "Doklady Bolgarskoy Akademii nauk".

NESTOROV, G.; SERAFIMOV, K.

Influence of altitude variat ons, number of collisons, and operating frequency on the equivalent concentration of electrons in the D-region. Doklady BAN 16 no. 8:817-820 '63.

1. Vorgelegt von Akademiemitglied L. Krastanov [Krustanov, L.]. Otvetstvennyy redaktor, "Doklady Bolgarskoy Akademii nauk".

SERAFIMOV, K.; NESTOROV, G.

Method for determining the electron density profile in the D region of the ionosphere. Geomag. i aer. 3 no.6:1059-1064 N-D '63. (MIRA 16:12)

1. Geofizicheskiy institut AN Bolgarskoy Narodnoy Respubliki.

S/0203/64/004/001/0109/0114

ACCESSION NR: AP4013144

AUTHOR: Serafimov, K. B.

TITLE: The intermediate E F zone of the ionosphere during the complete solar eclipse of 15 February 1961

SOURCE: Geomagnetizm i aeronomiya, v. 4, no. 1, 1964, 109-114

TOPIC TAGS: ionosphere, E zone, F zone, intermediate E F zone, solar eclipse, E2 layer, F0 layer, critical frequency, ionospheric reflection

ABSTRACT: Investigations (by radio methods) of this intermediate zone from the earth's surface are possible only when the critical frequencies in the zone (of the E2 and F0 layers) are greater than the critical frequencies of the E layer and of the shielding frequency of the E_s layer. The author has studied the theoretically expected changes in the state of the E2 layer during a solar eclipse, and he has then applied this to results of observations on the intermediate E-F zone (E2 and F0 layers) during the eclipse of 15 February 1961. From an analysis of control days and of data from a network of stations in eastern and central Europe,

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L 8915-65 EWT(1)/EWG(v)/FCC/EEC-4/EEC(t)/EWA(b) Po-4/Pe-5/Pq-4/Pae-2/Pi-4/Peb
ESD(c)/SSD/ESD(t)/RAEM(a) GW/WS

ACCESSION NR: AP4046284 S/0203/64/004/005/0873/0880

AUTHOR: Nestorov, G.; Segafimov, K.

TITLE: Electron density distribution in the ionospheric D region in winter

SOURCE: Geomagnetizm i aeronomiya, v. 4, no. 5, 1964, 873-880

TOPIC TAGS: ionosphere, ionospheric D region, ionospheric electron concentration, ionospheric absorption, ionospheric E layer

ABSTRACT: Full information on the D region of the ionosphere can be obtained only by continuous control of those ionospheric parameters which clearly reflect the vertical electron density concentration and its change with time. The authors have already proposed a method (Geomagn. i aeronomiya, 1963, 3, No. 6, 1059) for determining the $N_D(z)$ profile by measurement of nondeflected absorption along several frequency paths which are reflected from the E layer but without absorption in the D region. In this article, the authors investigate the applicability of this method to the study of the D region and determine $N_D(z)$ profiles under winter conditions. The method is illustrated using experimental data on absorption and the height of z_D in February 1961 as recorded in the middle latitudes. The equivalent frequencies used in determining the $N_D(z)$ profiles were 650, 860, 1100 and 1200 kc/s. Results of computations of the coefficients for $N_D(z)$ are presented

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ACCESSION NR: AP4046284

in a table. Among the important conclusions which can be drawn from such profiles is that the D region is an ionized formation situated in the lowest part of the ionosphere and has a smooth transition into the normal E layer. Even at the heights of the maximum N values the electron density gradient in the D region is much less than in the E layer. The constructed profiles show a weakly expressed maximum whose position correlates with the solar zenith angle. The examples presented in this paper confirm the applicability of the method to the winter D region as well and indicate the possibility of a systematic and continuous observation of the profile of the D region. The method makes it possible to study the structure, dynamics and ionization balance of this most poorly studied part of the ionosphere. Orig. art. has: 13 formulas, 7 figures and 1 table.

ASSOCIATION: Geofizicheskiy Institut, Akademiya nauk, Bolgarskaya Narodnaya Respublika (Geophysical Institute, Academy of Sciences, Bulgarian People's Republic)

SUBMITTED: 24Apr64 ENCL: 00 SUB CODE: ES

NO REF SOV: 008 OTHER: 016

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547930010-1"

L 18303-65 EWT(l)/EWG(v)/FCC/EEC-4/EEC(t)/EWA(h) Po-4/Pe-5/Pq-4/Pae-2/Peb/P1-4
ASD(m)-3/ASD(p)-3/ASD(a)-5/AS(mp)-2/ESD(c)/ESD(t) GW/WS
ACCESSION NR: AP5000530 S/0203/64/004/006/1123/1124

AUTHOR: Serafimov, K. B.

TITLE: The true height of maximum electron density in laminar formations in the interstitial space between the E and F layers

SOURCE: Geomagnetizm i aeronomiya, v. 4, no. 6, 1964, 1123-1124

TOPIC TAGS: laminar formation, critical frequency, cosine law, quasiperiodic oscillation, ionosphere, electron concentration

ABSTRACT: The existance of laminar formations between the E and F1 layers, denoted as E2 and F0 layers, is proposed. The critical frequency of the E2 layer obeys the exponential cosine law. Quasiperiodic oscillations occur sometimes in the ionosphere. At such times, the laminar formations descend and the critical frequencies f_oF0 and f_oE2 decrease from a definite level. These properties of the interstitial space were detected in the course of an investigation of the maximum electron concentration with height. Investigation results show that maximum electron concentrations take place at heights of 130 and 140 km. The maximum electron concentration in the E layer was at a

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ACCESSION NR: AP5000530

height of 120 km and remained unchanged during the period of investigation. Orig. art. has: 1 figure.

ASSOCIATION: Geofizicheskiy institut Bolgarskoy akademii nauk, Sofiya (Geophysical Institute, Bulgarian Academy of Sciences)

SUBMITTED: 29Jun64 ENCL: 00 SUB CODE: ES, NP

NO REF SOV: 003 OTHER: 004 ATD PRESS: 3156

Card 2/2

SERAFIMOV, K.B.

Seventh Conference of Geophysicists of the Socialist Countries in Moscow. Spisanie BAN 9 no.3:153-158 '64.

SERAFIMOV, Kiril B.

Ionosphere and its study by vertical drilling. Priroda Bulg 13 no. 2:66-69 Mr-Ap '64.

SERAFIMOV, K.

The E-F intersection of ionosphere during the total solar eclipse of February 15, 1961. Doklady BAN 17 no.1:29-32 '64

1. Vorgelegt von Akademiemitglied L. Krastanov [Krustanow,I.].

SERAFIMOV, K.

The ionization and neutralization balance in the E layer according to data of the solar eclipse of Februrary 15, 1961. Doklady BAN 17 no.6:553-556 '64.

1. Predstavleno akad. L. Krystanovym [Krastanov, L.].

SERAFIMOV, K.; NESTOROV, G.

Time variations of the equivalent elektron density in the ionospheric D region. Doklady BAN 17 no.2:125-127 '64.

1. Submitted by Academician L.Krastanov [Krustanov, L.], Responsible Editor and Member of the Board of Editors, "Doklady Bolgarskoy akademii nauk".

SERAFIMOV, K.; NESTOROV, G.

Theory of the method of determining electron density distribution in the ionospheric D region. Doklady BAN 17 no.3:239-242 '64.

1. Vorgelegt von Akademiemitglied L.Krastanov [Krustanov, L.].

SERAFIMOV, K.; NESTOROV, G.

Testing the method for determining electron density profile in the ionospheric D region. Doklady BAN 17 no.4:387-390 '64.

1. Vorgelegt von Akademiemitglied L. Krastanov [Krustanov, L.].

SHRAPTSOV, K.

Equations of the ionization-neutralization balance in the F layer. Doklady BAN 17 no.4:395-398 '64.

1. Predstavleno akad. L. Krystanovym [Krustanov, L.].

SERAFIMOV, K.

Methods of determining characteristic values of the ionization and neutralization balance in the E layer. Doklady BAN 17 no.5:451-453 '64

1. Predstavleno akad. L. Krystanovym [Krustanov, L.]

KHRAFTMOV,K.; NESTOROV,C.

Validity range and way of application for the method of determining height distribution of electron density in the ionospheric D region. Doklady BAN 17 no.5:455-458 '64

1. Vorgelegt von Akademimitglied L. Krastanov [Krustanov,L.]

L 20356-66 FCC/EWA(h)

ACC NR: AP6012041 SOURCE CODE: BU/0011/65/018/003/0211/0214

AUTHOR: Serafimov, K.

ORG: Institute of Geophysics, BAN

TITLE: Method for the determination of the dynamic contribution and of the components of the neutralization coefficient within the E-layer

SOURCE: Bulgarska akademiya na naukite. Doklady, v. 18, no. 3, 1965, 211-214

TOPIC TAGS: E layer, ionospheric physics, solar activity

ABSTRACT: The author proved in his earlier papers (see, e.g., Geofis. pura e appl. 57, 1964, no. 1; Izv. Geofiz. in-t BAN, V, 1964, no. 2, 69; Dokl. BAN, 17, 1955, no. 4, 395) the general form of the ionization-neutralization balance equation for the closest region of the E-layer

$$\frac{dN_m(t)}{dt} = q(t) - \alpha(t) N_m^2(t) - \operatorname{div}(N_m \vec{V}) \quad (1)$$

with

$$q(t) = q_{om} \cos \chi(t) \quad (3)$$

and

$$\alpha(t) = \alpha_d + (\alpha_e + \lambda \alpha_i)(1+\lambda) + \frac{1}{N}\frac{d\lambda}{dt} \quad (4)$$

(for notation explanation see the above-mentioned references). While the

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ACC NR: AP6012041

divergent term in (1) was neglected during earlier discussions, some peculiarity of the daily course of N_mE induced the author to reconsidor the role of the neglected term, and in this paper he shows how one can calculate with a sufficient accuracy the components of the dynamic contribution (V_{zo}, V_{z1}, V_{z2}) and the recombination coefficients (α_o, α_1, α_2) during the summer months and increased solar activity. This paper was presented by Academician L. Krastanov on 25 August 1964. Orig. art. has: 13 formulas. [JPRS]

SUB CODE: 04 / SUBM DATE: none / ORIG REF: 005 / OTH REF: 005
SOV REF: 001

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L 34513-66 EWT(1)/FCC

ACC NR: AP6024743 SOURCE CODE: BU/0011/65/018/010/0915/0918

42
B

AUTHOR: Serafimov, K.

ORG: Geophysical Institute, BAN

TITLE: Applicability of the quasi-stationary approximation during atmospheric investigations

SOURCE: Bulgarska akademiya na naukite. Doklady, v. 18, no. 10, 1965, 915-918

TOPIC TAGS: atmospheric ionization, atmospheric phenomenon, atmospheric stratification, ionosphere, ionospheric electron density

ABSTRACT: The structure of the ionization-neutralization balance, the dynamics and regularities of the stratified atmospheric layers, and the influence of the ionosphere on radio wave propagation are all usually studied in the quasi-stationary approximation. The use of various electron and ion density changes is thus avoided by substituting them by appropriate coefficients of macroprocesses causing and maintaining the existence of the ionosphere. Since the values of such coefficients found in scientific literature are very divergent, the author was able, in the present article, to carry out only an approximate estimate of the parts of the ionosphere and of the specific periods of time for which one can utilize the quasi-stationary approximation. These results, in turn, determine the regions for which one

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ACC NR: AP6024743

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can assume as valid numerous known ionospheric regularities and for which one can easily find the equivalent cosmic laws involving the maximum electron densities, critical frequencies, ionospheric absorptions and the like. This paper was presented by Academician L. Krystanov on 14 June 1965. [Orig. art. in Russian] [JPRS: 34,964]

SUB CODE: 04 / SUBM DATE: none / ORIG REF: 007 / SOV REF: 004
OTH REF: 003

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L 33295-66 EWT(1) GW

ACC NR: AP6011703 SOURCE CODE: UR/0203/66/006/002/0334/0340

38
B

AUTHOR: Serafimov, K. B. (BO)

ORG: Institut of Geophysics, Bulgarian Academy of Sciences (Institut geofiziki, Bolgarskaya Akademiya Nauk)

TITLE: Dependence of electron concentration in the F1 layer on the zenith angle of the sun

SOURCE: Geomagnetizm i aeronomiya, v. 6, no. 2, 1966, 334-340

12

TOPIC TAGS: F layer, solar activity, temperature gradient

ABSTRACT: In this study the author examines the exponent n of the cosine law of the simple α-layer in relation to the maximal electron concentration in the F1 layer. Expressions are given for obtaining n under unsteady conditions and in the presence of temperature gradients and temperature variations. An analysis of the values of n during the period 1957 — 1964 showed that solar activity had a very weak effect on this exponent. The results showed that the gradient of the reduced height for the ionized component of the atmosphere is less than that calculated by the author, whence follows that in the region close to the maximum of the F1 layer there are appreciable height changes of the mean mass of the ionized component since the calculations were carried out on the assumption of the constancy of the mass equal to the mass of atomic oxygen. The results obtained can be explained by the partial

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L 33295-66

ACC NR: AP6011703

compensation of the temperature gradients by the effect of temporal temperature variations in the presence of a variable mean mass of the ionized medium. Orig. art. has: 6 figures and 10 formulas.

SUB CODE: 04 / SUBM DATE: 21Jun65 / ORIG REF: 005 / OTH REF: 008

Card 2/2

ACC NR: AP6029744 SOURCE CODE: BU/0011/66/019/007/0599/0602

AUTHOR: Serafimov, K.

ORG: Geophysicsl Institute, Bulgarian Academy of Science

TITLE: The maximum frequency in space communications

SOURCE: Bulgarska akademiya na naukite. Doklady, v. 19, no. 7, 1966, 599-602

TOPIC TAGS: sonic communication, electromagnetic wave frequency, quantum mechanical instrument, laser, ionosphere, Doppler effect

ABSTRACT: The author considers the maximum and minimum frequencies of usable electromagnetic waves in space communications. These frequencies necessarily are limited by various types of absorption in the Earth's atmosphere. The author proceeds from the assumption that one of the points in space is situated either on the surface of the Earth or at an altitude of 4 to 5 km above it and the other one at a fairly great distance in space. The utilization of the transmission-reception point on the Earth's surface impedes the application of frequencies above 3000 Mc/sec because of the absorption lines of resonance in the spectrum of the atmospheric molecular components. However, if this point is raised to an altitude of 3—5 km above sea level, the upper frequency

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limit is expected to increase considerably. The limitation in this case results from the absorption of ultraviolet and other short-wave radiation in the ionosphere. Moreover, the ozonosphere absorbs considerable radiation at the wavelength $\lambda \leq 3000$ Å. It is therefore held that the limiting minimum length of the wave is $\lambda_{min} \approx 4000$ Å. This wavelength permits a wide-range utilization of quantum-mechanical devices (lasers and masers) with all the resulting advantages for space communications. Depending on the ratio of the frequency band used and the Doppler effect shift caused by the moving object, the optimum wavelength for laser communication should be in the range of 5000 Å. It has been established that there are phenomena in the ionosphere which cause a non-negligible absorption of short-wave radiation. Therefore, the optimum wavelength increases substantially with distant connections and the lower limit of utilized λ is subject to significant corrections. The limitations of the lower ionosphere indicated above are of no importance in case of space communication through an intermediate artificail satellite at an altitude of 1000 km. However, when establishing contact with other planets, particularly with Venus, absorption in negative ions must be considered. It is safe to assume that the integral content of negative ions in the Venusian ionosphere is greater than in the terrestrial, and thus its effect on space communications will be all the more pronounced. Orig. art. has: 9 formulas.

SUB CODE: / SUBM DATE: none/ OTH REF: 007/ SOV REF: 005

Card 2/2

ACC NR: AP7000702 SOURCE CODE: BU/0011/66/019/010/0893/0896

AUTHOR: Serafimov, K.; Krivsky, L.

ORG: Geophysical Institute, Bulgarian Academy of Sciences; Astronomical Observatory, Ondrejov

TITLE: Effect of superposition of two excessive solar radiations in the middle ionosphere

SOURCE: Bulgarska akademiya na naukite. Doklady, v. 19, no. 10, 1966, 893-896

TOPIC TAGS: ~~sun~~, ionosphere, solar chromosphere, chromospheric eruption, ~~chromospheric filament~~, ~~solar~~ ionizing radiation, solar UV radiation, ionosphere electron density ~~ionosphere~~, solar radiation ~~superposition~~

ABSTRACT: A study was made of six chromospheric eruptions accompanied by an eruption filament, which occurred on 29 December 1965 under relatively calm solar conditions. Ionograms of the Sofia Ionospheric Station were analyzed on the eruption day and three control days before and after the event in order to obtain morphologic information and a first approximate determination of the radiation-frequency range accompanying the phenomena. Examination of critical frequencies

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AP7000702

f_0E of the middle and high ionosphere confirmed that the electronic density increases due to the superposed action of the six solar eruptions. Study of f_0E values led to the assumption that filament appearance was accompanied by a distinct ionization increase in the E layer. Examination of critical frequencies in the F_1 and F_2 layers showed no particular changes. The authors believe that UV radiation in the $\lambda\lambda$ (200-800 Å) range either does not increase with a filament, of increases only slightly. It was concluded that the main ionizing radiation which accompanied superposition of two qaulitatively different solar phenomena on 29 December 1965 was concentrated in the X-ray range. The paper was presented by Academician L. Krastanov on 23 June 1966. Orig. art. has: 3 figures. [DR]

SUB CODE: 03, 04/ SUBM DATE: none/ORIG REF: 002/SOV REF: 003/
OTH REF: 002/

Card 2/2

ACC NR: AT7005561 SOURCE CODE: BU/2506/66/008/000/0045/0063

AUTHOR: Serafimov, K.

ORG: none

TITLE: Absorption of radio waves in simple and parabolic ionospheric layers

SOURCE: Bulgarska akademiya na naukite. Geofizichniya institut. Izvestiya, v. 8, 1966, 45-63

TOPIC TAGS: ionospheric absorption, ionospheric propagation, ionospheric radio wave, ~~mathematic analysis~~ radio wave absorption, ionospheric physics

ABSTRACT: Appleton's expressions for radio-wave absorption in simple ionospheric layers with arbitrary exponential dependence $\upsilon(z)$ are corrected. Undeflecting absorption of short waves in a plain layer is examined and a solution with incomplete gamma functions for an actual case is found. Corrections for the exponentially-varying (with height) recombination factor are also found. Nondeflecting absorption of the short waves in the simple α layer is examined for a constant and a variable neutralization factor. A general analysis of radio-wave absorption in a parabolic layer is made, and the case of short-wave absorption in a layer with parabolic distribution is considered in detail. Some general time-varying properties of nondeflecting absorption for all of the above cases are given. Orig. art. has: 3 figures and 74 formulas. [IV]

SUB CODE: 08,17/ SUBM DATE: 11Nov64/ ORIG REF: 016/ OTH REF: 015/ SOV REF: 008

Card 1/1 UDC: none

ACC NR: AT7005562 SOURCE CODE: BU/2506/66/008/000/0065/0081

AUTHOR: Serafimov, Kiril

ORG: none

TITLE: Regularities in development of the F1 layer

SOURCE: Bulgarska akademiya na naukite. Geofizichniya institut. Izvestiya, v. 8, 1966, 65-81

TOPIC TAGS: ionosphere, ionospheric propagation, ionospheric inhomogeneity, F LAYER,

ABSTRACT: Some theoretical views regarding the occurrence of bifurcation in the F region are considered. It is shown that movements in the ionosphere exert an influence on the form of the function f_0 F1(t) by introducing second harmonics in the daily variation and thereby deforming the cosine law that relates f_0F1 to the zenith angle x. If the mechanism generating the movements is purely thermal in nature, then the effects of the above can be neglected. Observations by a network of stations confirm the disappearance of the F1 layer in winter during periods of high solar activity, and the appearance of the layer during periods of low solar activity. The following properties are established: a) minimum duration of the existence of the layer is not during periods of maximum solar activity ($\bar{R} \sim 196$), but during $\bar{R} \sim 151.8$. In other words, bifurcation in the F region is delayed with respect to the sunspot maxima; b) for high solar activity the appearance and disappearance of the F1 layer corresponds to the sunrises and sunsets as seen from the

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ACC NR: AT7005562

earth's surface and not from an altitude 170 km above the surface; c) solar activity has a small effect on the duration of existence of the F1 layer during the summer. Afternoon values of f_0F1 are greater than the values before midday for equal values of cos x; the quantity η is introduced to characterize the above. It is shown that, until now, there has been no theoretical model that gives a good explanation of the causes for bifurcation in the F region. Orig. art. has: 6 figures, 21 formulas, and 1 table.

SUB CODE: 20/ SUBM DATE: 31May65/ ORIG REF: 009/ OTH REF: 013/ SOV REF: 010

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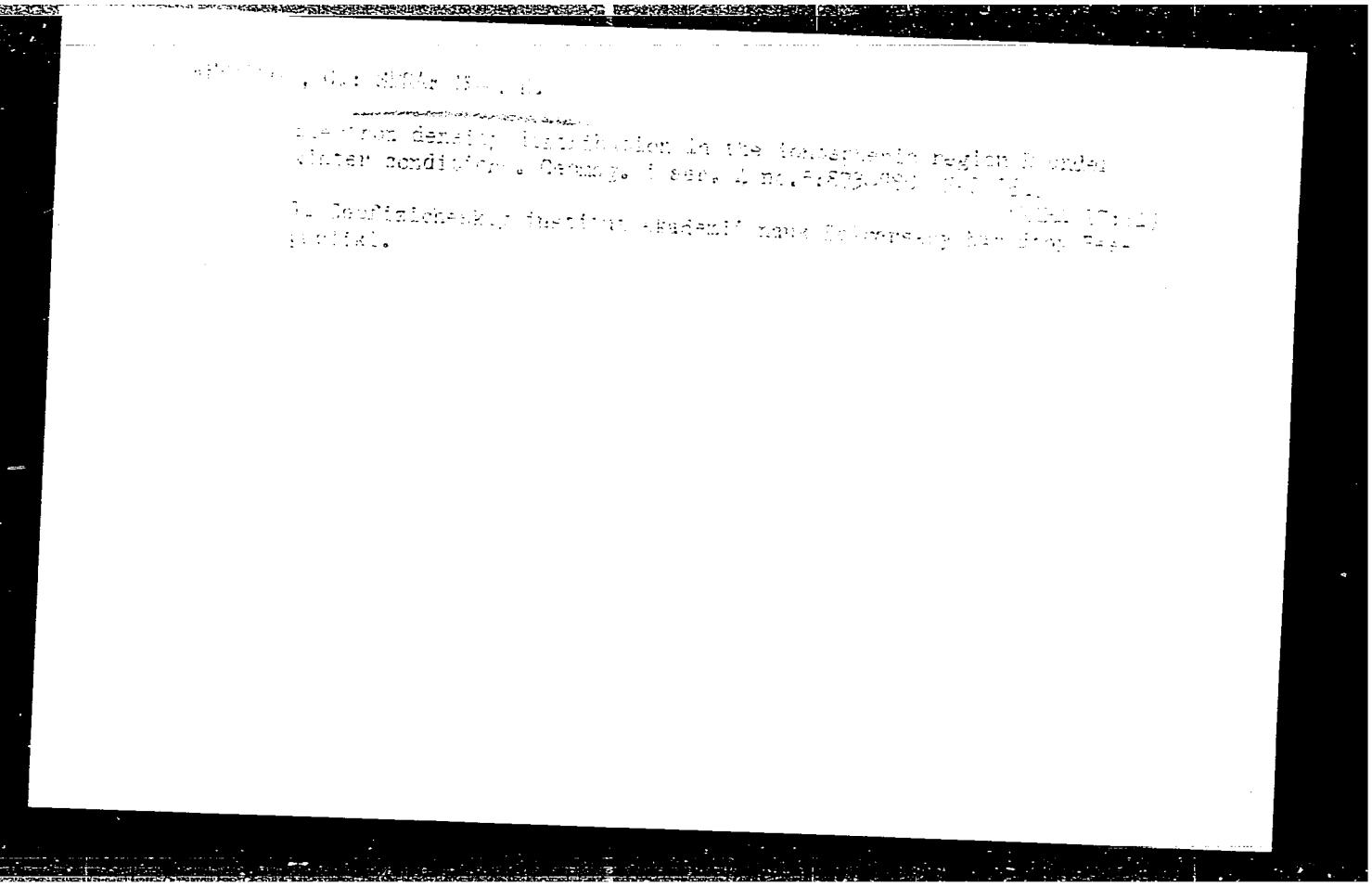


GEORGIJEV,Krcto; SERAFIMOV,Koco

Contribution to the treatment of cholecystopathies. Srpski arh. celok. lek 87 no.11:1032-1040 N '59.

1. Hirurska klinika Medicinskog Fakulteta u Skoplju, Direktor: prof. dr Bogosav Kragojevic.
(GALLBLADDER dis.)

DRAGOJEVIC, Bogosav; PANOVSKI, Bojan; SERAFIMOV, Koco

Traumatic hemorrhagic cyst of the spleen. Srpski arh. celok. lek. 88 no.6:719-722 Je '60.

1. Hirurska klinika Medicinskog fakulteta Univerziteta u Skopju. Direktor: prof. dr Bogosav Dragojevic.

(SPLEEN wds & inj) (CYSTS etiol)

SERAFIMOV, K.; ZERAJIC, D.

Mucocele of the appendix (apropos of one of our cases) Acta chir. iugosl. 8(9) no.2:142-147 '61.

1. Hirurska klinika Medicinskog fakulteta u Skopju (Upravnik prof. dr B. Dragojevic)

(APPENDIX diseases)

SERAFIMOVA, J.; NEDELKOVSKI, J.; SERAFIMOV, K.

On a case of Cruveilhier-Baumgarten disease. Acta chir. Iugosl. 8 no.3:246-252 '61.

1. Interna klinika (Upravnik prof. dr D.Arsov) i Hirurska klinika (Upravnik prof. dr B.Dragojevic) Medicinskog fakulteta u Skopju.
(LIVER CIRRHOSIS case reports)

SERAFIMOV, K.; ANASTASOV, M.; NEDELKOVSKI, J.; SERAFIMOVA, E.

Contribution to the treatment of secondary echinococcosis of the kidney. Acta chir. Iugosl. 8 no.4:371-377 '61.

1. Hirurska klinika (Upravnik prof. dr D. Arsov) Medicinskog fakulteta u Skopju.

(ECHINOCOCCOSIS surg) (KIDNEY DISEASES surg)

SERAFIMOV, K.; ZERAJIC, D.; PEEV, A.

A case of secondary echinococcosis of the spleen. Acta chir. Iugosl. 9 no.1:74-79 '61.

1. Hirurska klinika Medicinskog fakulteta u Skopju (Upravnik prof. dr B. Dragojevic).
(ECHINOCOCCOSIS case reports) (SPLEEN dis)

SERAFIMOV, Kocc; GEORGIJEV, Krsto; SERAFIMOVA, Elisaveta

Carcinoma of the biliary tract. God. Zborn. Med. Fak. Skopje no.10:79-83 '63.

1. Univerzitetska hirurska klinika - Skopje (Upravnik prof. d-r B. Dragojevic) i Univerzitetska interna klinika - Skopje (upravnik prof. d-r D. Arsov).

SERAFIMOV, K.; GEORGIEV, K.; GALIC, B.

Case of giant ulcer of the stomach. Acta chir. Iugosl. 10 no.1:75-78 '63.

1. Hirurska klinika Medicinskog fakulteta u Skopju (Upravnik prof. dr B. Dragojevic).
(STOMACH ULCER) (PEPTIC ULCER PERFORATION)
(GASTRECTOMY) (LIVER DISEASES) (PANCREAS)
(DISEASES)

S

DRAGOJEVIC, B.; ARSOV, D.; MILETIC, D.; GEORGIEV, K.; SERAFIMOV, K.; DAVCEV, P.; LEVI, S.

Cancer of the stomach. 10-year clinical experience. Acta chir. Iugosl. 10 no.2:125-133 '63.

1. Hirurska klinika (Upravnik prof. dr B. Dragojevic), Interna klinika (Upravnik prof. dr D. Arsov), Patoloski institut (Upravnik prof. dr D. Miletic), Rendgen institut (Upravnik doc. dr D. Tevcev) Medicinskog fakulteta u Skopju.
(STOMACH NEOPLASMS) (NEOPLASM STATISTICS)
(GASTRECTOMY)

S

GEORGIEV, K.; SERAFIMOV, K.

Pseudomyxoma peritonei. Acta chir. Iugosl. 10 no. 3:256-261 '63.

1. Hirurska klinika Medicinskog fakulteta u Skopju; Upravnik: prof. dr. B. Dragojevic.

SERAFIMOV, K[illegible], doc. dr.

Acute cholecystitis in our clinical experience. God. zborn. med. fak. Skopje 11:5-28 '64.

1. Clinique chirurgicale de l'universite de Skopye (Yugoslavie) (directeur: prof. B. Dragojevich).

GEORGIJEV, Krsto; SERAFIMOV, Kcco; DAVCEV, Penco; GRUJEV, Vojislav

Stomach cancer -- 10 years clinical experience. God.Zborn. Med.Fak.Skopje no.10:165-172 '63.

1. Univerzitetska Hirurska klinika (Upravnik prof. d-r B. Dragojevic) i Univerzitetska Interna klinika (Upravnik prof. d-r D. Arsov), Skopje.

SERAFIMOV,K., doc. dr.; KARAGJOZOV,P., prof. dr.; ANASTASOV, M., doc. dr.; SERAFIMOVA,E., dr.

Use of trasylol in acute pancreatitis. Med. glas. 18 no.1: 38-40 Ja-F '64

1. Hirurska klinika Medicinskog fakulteta u Skopju (Upravnik: prof. dr. B. Dragojevic) i Interna klinika Medicinskog fakulteta u Skopju (Upravnik: prof. dr. D. Arsov).

L 1169-66

ACCESSION NR: AP5025446 YU/0015/64/000/010/0313/0315

AUTHOR: Serafimov, K. (Doctor, Docent)

TITLE: Possibilities of achieving hemostasis at the place of accident with external bleeding

SOURCE: Medicinski glasnik, no. 10, 1964, 313-315

TOPIC TAGS: first aid, injury

ABSTRACT: Systematic discussion of the various types of bandages, digital compression, fixation of extremity in extreme flexion, Esmarch tourniquet, packing the wound, hemostasis by means of hemostatic forceps left in place until surgical care can be given in good facilities for this purpose.

ASSOCIATION: Hirurska klinika Medicinskog fakulteta, Skoplje (Surgical Clinic, Medical Faculty)

SUBMITTED: 00 ENCL: 00 SUB CODE: LS

NR REF SOV: 000 OTHER: 000 JPRS

Card 1/1

L 4349-66 FCC/EWA(h)

ACC NR: AP5028773 SOURCE CODE: BU/0011/65/018/002/0113/0116

AUTHOR: Sarafimov, K.

29
B

ORG: Geophysical Institute, Bulgarian Academy of Sciences (Geophysikalisches Institut der Bulgarischen Akademie der Wissenschaften)

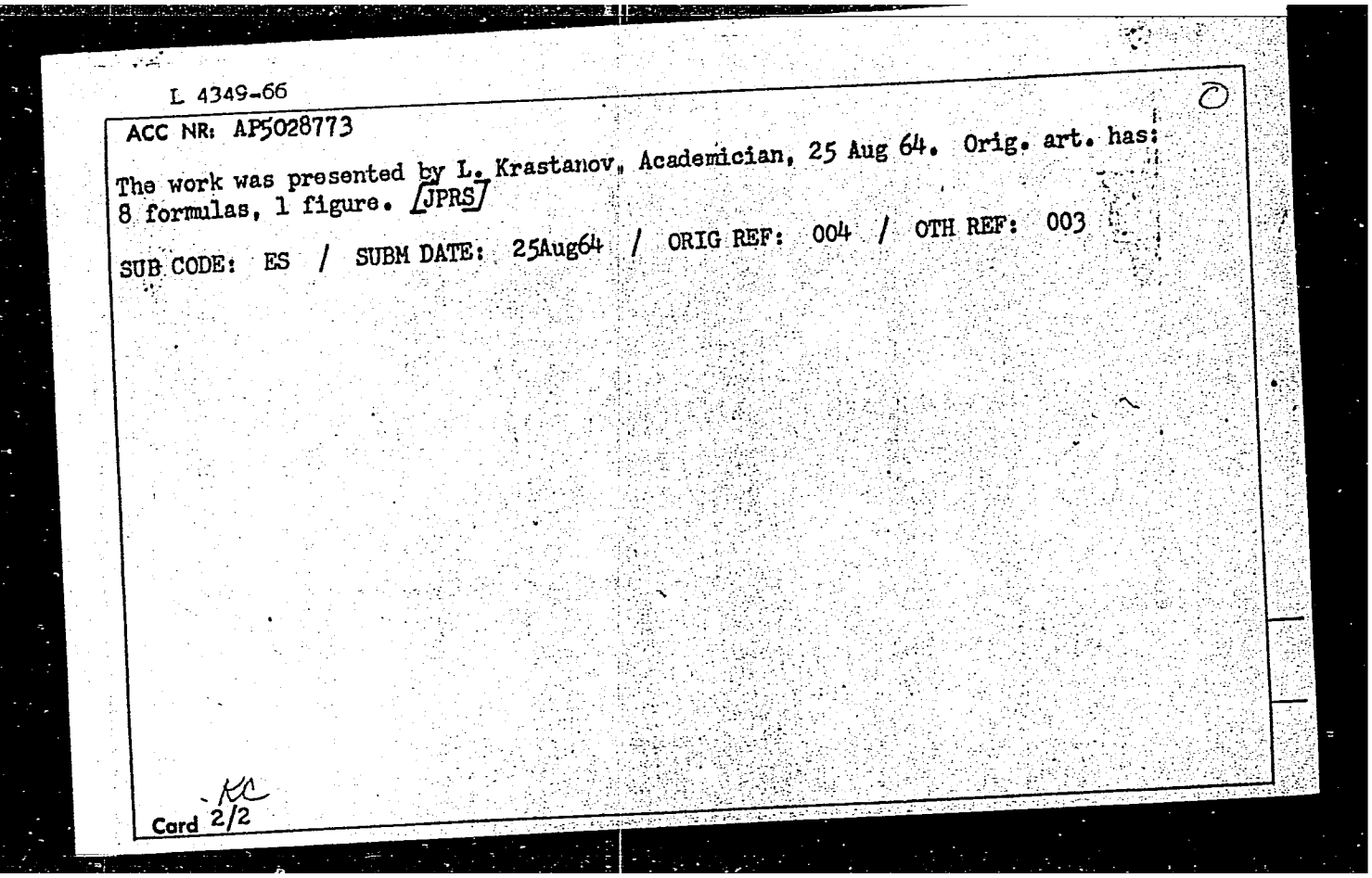
TITLE: Accuracy of ionospheric data and the applicability of the discrete point method to the study of the E-layer

SOURCE: Bulgarska akademiya na naukite, v. 18, no. 2, 1965, 113-116

TOPIC TAGS: E layer, ionospheric electron density, solar activity, ionospheric physics

ABSTRACT: [German article] To obtain the important characteristic quantities of the ionospheric E-layer, one must carry out several measurements at different time-points and then apply the method of discrete points. The author discusses the problem concerning the largest number of N-values which may be extracted from the course of a single day without making their mutual differences smaller than the permissible total error. He investigates the errors due to the instrumentation, to the estimates and interpretations of results, and to the physical inaccuracies relative to the medium under consideration. The results show that from the diurnal course of the electron density in the E-layer one can extract during the winter with low solar activity some 20-25 discrete points, while during the summer with high solar activity, the number of points may reach 40-45.

Card 1/2



L 4349-66

ACC NR: AP5028773

The work was presented by L. Krastanov, Academician, 25 Aug 64. Orig. art. has: 8 formulas, 1 figure. [JPRS]

SUB CODE: ES / SUBM DATE: 25Aug64 / ORIG REF: 004 / OTH REF: 003

Card 2/2

L 15609-66 EWT(d)/EEC(k)-2/FCC/EWA(h) RB/WS-2
ACC NR: AP6008202 SOURCE CODE: BU/0011/65/018/004/0311/0314

AUTHOR: Serafimov, K.

ORG: Geophysics Institute, Bulgarian Academy of Sciences

TITLE: Absorption effects of the E-F intermediate region on the propagation of radiowaves

SOURCE: Bulgarska akademiya na naukite. Doklady, v. 18, no. 4, 1965, 311-314

TOPIC TAGS: radio wave absorption, ionospheric electron density, radio wave propagation

ABSTRACT: General formulas for the determination of the nondeviative absorption within the E-F intermediate region have been derived. The actual calculation of the absorption requires the knowledge of the altitude electron density distribution, and the author carries out the calculations following a previously described method for the electron density profile determination (Pure a. Appl. Geophys., 62, 1965, no. 2). The article concludes with the discussion of a formula for the nondeviative absorption within the E2 and F0 layers. The paper was presented by

Card 1/2

L 15609-66

ACC NR: AP6008202

Academician L. Krastanov, 01 September 1964. Orig. art. has: 1 figure and 10 formulas. [JPRS]

SUB CODE: 04, 17 / SUBM DATE: none / ORIG REF: 003 / OTH REF: 002
SOV REF: 003

Card 2/2

L 18083-66 FCC/EWA(h)

ACC NR: AP6010174 SOURCE CODE: BU/0011/65/018/008/0735/0737

AUTHOR: Serafimov, K.

ORG: Institute of Geophysics, Bulgarian Academy of Sciences

TITLE: Determination of the vertical velocity of ionospheric electron transfer

SOURCE: Bulgarska akademiya na naukite. Doklady, v. 18, no. 8, 1965, 735-737

TOPIC TAGS: ionospheric physics, atmospheric movement, ionization, electron flow

ABSTRACT: Ionospheric movements exert a large if not decisive influence on the ionization-neutralization balance and on the reslting ionospheric structure N(z). The author discusses the various approaches to the determination of the vertical velocity of ionospheric electrons and finding them insufficiently precize, devises a new theoretical formulation of the problem and discusses various methods for the measurement of the quantities entering the newly-derived expressions. The final numerical determinations should be made by graphical integrations. This paper was presented by Academician L. Krastanov on 3 April 1965. Orig. art. has: 7 formulas. [JPRS]

SUB CODE: 04, 20 / SUBM DATE: 03Apr65 / ORIG REF: 003 / OTH REF: 007
SOV REF: 004

Card 1/1

L 35303-66 EWT(1)/FCC GW

ACC NR: AP6026868 SOURCE CODE: BU/0011/65/018/012/1107/1110

30
B

AUTHOR: Serafimov, K.

ORG: Geophysical Institute, BAN

TITLE: Daily course of the appearance of the E2 layer 12

SOURCE: BAN. Doklady, v. 18, no. 12, 1965, 1107-1110

TOPIC TAGS: radio wave, radio wave scattering, E layer

ABSTRACT: The author showed in earlier papers (Compt. rend. Acad. bulg. Sci., 16, 1963, 365) that the radiowave reflection from the E2 layer above Sofia, Bulgaria, exhibit a clearly pronounced daily course with a morning maximum. Using various experimental data the author discusses theoretically at length the possible reasons for the observed regularity. Some of the explanations are closely tied to the validity of the data by Jacchia and Slowey (Smithsonian Astrophys. Obs. Spec. Rep., 1962, p. 100). This paper was presented by Academician L. Krastanov on 17 July 1965. Orig. art. has: 10 formulas. [JPRS: 36,457]

SUB CODE: 04, 09 / SUBM DATE: 17Jul65 / ORIG REF: 010 / SOV REF: 002
OTH REF: 006

Card 1/1 fdh 0916 26 2.3

SERAFIMOV, K.V.

Ionosphere, electrified casing of the earth. Prir [illegible] znanie 18 no.1:1-5 Ja '65.

S/065/60/000/012/002/007
E030/E412

AUTHORS: Serafimov, L.A., Potapova, G.Ye. and L'vov, S.V.

TITLE: Direct Investigation of the Phase-Equilibrium of Non-Ideal Multicomponent Systems by Distillation

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1960, No.12, pp.10-14

TEXT: Ideas are put forward for separating multicomponent mixtures by distillation, whether they are ideal or non-ideal, or whether they form azeotropes or not. The separation of the system МЭК(MEK), 2-butyl alcohol, and water is carried and the phase equilibrium determined by continuous distillation. The conventional determination of the complete phase-equilibrium for multicomponent systems is shown to be unnecessary for predicting the separation to be effected by distillation. In the present method, only those regions are investigated which are relevant to the separation. The entire system can be regarded as a series of independent binary mixtures, where the liquid phase is always the liquid mixture, and for the vapour phase each of the vapours to be separated are considered in turn as the second phase of the binary system. This procedure is clearly valid for ideal

S/065/60/000/012/002/007
E030/E412

Direct Investigation of the Phase-Equilibrium of Non-Ideal Multicomponent Systems by Distillation

systems, and for non-ideal systems it is true to a degree of accuracy dependent on the particular mixture and component to be separated. In practice, even for non-ideal systems considerable accuracy in predicting separation is achieved by studying the phase-equilibrium by subjecting the various concentrations of the components to continuous distillation. The method has been shown to work for three and twenty seven real plate distillation columns for MEK, 2-butyl alcohol, and water. Analysis was by determination of the MEK content by hydroxylamine and determination of the other components by refractivity, the accuracy being 0.1 to 0.4% absolute. x,X Diagrams were obtained, confirming that there is an azeotrope at 59.4% MEK, 40% water and 0.4% butyl alcohol. Below this, in spite of stratification, there is no azeotrope and considerable separation is possible. The presence of water steepens the x,X curves for MEK in 2-butyl alcohol and confirms the desirability of water as an extracting agent. There are 2 figures,

Card 2/3

L'VOV, S.V.; SERAFIMOV, L.A.; MOZZHUKHIN, A.S.

Comparative efficiency of different systems for distilling the binary mixtures of partialloy mixing components. Khim.i tekh. topl.i masel 6 no.9:26-32 S '61. (MIRA 14:10)

1. Institut tonkoy khimicheskoy tekhnologii imeni M.V.Lomonosova. (Distillation) (Mixtures)

SERAFIMOV, L.A.; L'VOV, S.V.

Composition of multicomponent mixtures on a feed plate during rectification. Khim. i tekh. topl. i masel 6 no.11:32-34 N '61.
(MIRA 14:12)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M.V. Lomonosova.

(Distillation)

SERAFIMOV, L. A., Cand. Tech. Sci. (diss) "Directed Study of Phase Equilibrium Liquid - Steam and Computation of Rectification of Non-ideal Multiple-component Mixtures," Moscow, 1961, 12 pp. (Moscow Inst. Chem. Machinebuilding) 200 copies (KL Supp 12-61, 274).

SERAFIMOV, L.A.; KUSHNER, T.M.; L'VOV, S.V.

Liquid - vapor phase equilibrium in the system acetic acid-propionic acid at atmospheric pressure. Zhur.fiz.khim. 36 no.8:1830-1832 Ag '62. (MIRA 15:8)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii.
(Acetic acid) (Propionic acid) (Phase rule and equilibrium)

KRYUCHKOV, B.S.; SERAFIMOV, L.A.; L'VOV, S.V.

Recovery of organic acids by the liquid extraction method.
Khim.i tekh.topl.i masel 7 no.7:20-24 Jl '62. (MIRA 15:9)
(Acids, Organic) (Gasoline)

MOZZHUKHIN, A.S.; SERAFIMOV, L.A.; TIMOFEYEV, V.S.; TYURIKOV, I.D.

Apparatus and devices for laboratory rectification. Zav.lab. 29 no.4:503-505 '63. (MIRA 16:5)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M.V.Lomonosova.

(Distillation apparatus)

PAVLENKO, T.G.; ANDRIANOV, K.A.; L'VOV, S.V.; KHANANASHVILI, L.M.; SERAFIMOV, L.A.; KAMARITSKIY, B.A.

Hydrolysis of organochlorosilanes in continuous countercurrent spray columns. Izv. vys. ucheb. zav.; khim. i khim. tekh. 6 no.3:465-470 '63. (MIRA 16:8)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova kafedra tekhnologii osnovnogo organicheskogo sinteza elementoorganichekikh i neorganicheskikh polimerov.
(Silane) (Hydrolysis)

PAVLENKO, T.G.; FAL'KOVSKIY, V.B.; SERAFIMOV, L.A.; L'VOV, S.V.

Conduction of chemisorption processes in countercurrent spray columns operating continuously (in the system liquid - liquid). Izv.vys.ucheb.zav.;khim. i khim.tekh. 6 no.2:328-332 '63. (MIRA 16:9)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova, kafedra tekhnologii osnovnogo organicheskogo sinteza.
(Extraction apparatus)

SERAFIMOV, L.A.; MOZZHUKHIN, A.S.; L'VOV, S.V.

Design of distillation columns for separating binary mixtures of partially mixing components. Khim.i tekh.topl.i masel 8 no.8: 16-19 Ag '63. (MIRA 16:9)

1. Institut tonkoy khimicheskoy tekhnologii im. M.V.Lomonosova.
(Distillation apparatus)

KRYUCHKOV, B.S.; SERAFIMOV, L.A.; L'VOV, S.V.

Recovery of organic acids by liquid extraction. Khim. i tekh. topl. i masel 8 no.12:58-61 D '63. (MIRA 17:1)

1. ITKhT im. M.V. Lomonosova.

SERAFIMOV, L.A.; POTAPOVA, G.Ye.

Dependence of the refractive index on the composition of a mixture methyl ethyl ketone - butyl alcohol - water. Zhur. prikl. khim. 36 no.11:2550-2551 N '63. (MIRA 17:1)

L'VOV, S.V.; SERAFIMOV, L.A.; YEMAKOVA, A.

Method of investigating phase relations in the process of absorption of a multicomponent mixture. Khim. prom. no.5:364-367 My '64. (MIRA 17:9)

L 16922-65 EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4/Pa-4 RM

ACCESSION NR: AP5002733 S/0065/64/000/007/0018/0022

AUTHOR: Timofeyev, V. S.; Serafimov, L. A.; L'vov, S. V.

TITLE: Investigation of the process of isolating butyraldehydes from products of oxo-synthesis

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 7, 1964, 18-22

TOPIC TAGS: aldehyde, propylene, alcohol, chemical separation

ABSTRACT: The reaction mixture obtained in the production of butyraldehydes from propylene, using isobutyl alcohol as the solvent, after removal of the catalyst, volatiles, and condensation products, contains the basic components: isobutyraldehyde (13.9%), normal butyraldehyde (34.9%), isobutyl alcohol (44.7%), normal butyl alcohol (1.0%), and water (5.5%). Two schemes were developed for isolating butyraldehydes from the products of oxo-synthesis: 1) with preliminary dehydration and 2) with the addition of water during the isolation process. The scheme with the addition of water proved to be most suitable, and gave a high yield of the final products. The basic

Card 1/2

L 16922-65

ACCESSION NR: AP5002733

parameters of the fractional distillation columns of the technological schemes investigated were determined experimentally. Orig. art. has 2 figures, 3 tables.

ASSOCIATION: ITKhT im. M. V. Lomonosova

SUBMITTED: 00 ENCL: 00 SUB CODE: GC, OC

NO REF SOV: 012 OTHER: 003 JPRS

Card 2/2

KRYUCHKOV, B.S.; SERAFIMOV, L.A.; STRELETS, I.P.; GOLYNETS, Yu.F.; L'VOV, S.V.

Extraction of double-base acids by liquid extraction. Khim. i tekh. topl. i masel 9 no.4:6-9 Ap '64. (MIRA 17:8)

PROKHOROVA, V.V.; SERAFIMOV, L.A.; TAKHTAMYSHEVA, L.S.

Liquid - vapor phase equilibrium in the system acrylonitrile - acetonitrile at atmospheric pressure. Zhur. fiz. khim. 38 no.4:1005-1008 Ap '64. (MIRA 17:6)

1. Institut tonkoy khimicheskoy tekhnologii.

GRUZDEV, Ye.A.; ANOSOVA, I.G.; SERAFIMOV, L.A.; L'VOV, S.V.

Directed study of phase equilibrium curves for the technological flow sheet of the rectification of catalyzates of the Oxo synthesis. Khim. prom. 40 no.8:613-616 Ag '64. (MIRA 18:4)

PROKHOROVA, V.V.; [illegible], L.A.; [illegible]; [illegible], L.N.

Solubility in the systems acrylonitrile - propionitrile - water and acrylonitrile - acetonitrile - water. Zhur. fiz. khim. 38 no.6:1488-1492 Je '64. (MIRA 18:3)

1. Institut tonkoy khimicheskoy tekhnologii imeni Lomonosova, Moskva.

SERAFIMOV, L.A.; TIMOFEYEV, V.S.; STEPKOVA, N.P.; L'VOV, S.V.

Liquid - vapor phase equilibrium in the system isobutyric anhydride - n-butyraldehyde at atmospheric pressure. Zhur. fiz. khim. 38 no.7:1865-1867 Jl '64.

(MIRA 18:3)

SERAFIMOV, L.A.; TIKHONOVA, N.K.; L'VOV, S.V.

Liquid - vapor equilibrium in the acetone - vinyl acetate system at atmospheric pressure. Zhur.fiz.khim. 38 no.8:2065-2067 Ag '64. (MIRA 18:1)

SERAFIMOV, L.A.; PROKHOROVA, V.V.; NOVOSELOVA, R.I.

Liquid - vapor phase equilibrium in the system acrylonitrile - propionitrile at atmospheric pressure. Zhur. fiz. khim. 38 no.6: 1662-1665 Je '64. (MIRA 18:3)

1. Institut tonkoy khimicheskoy tekhnologii imeni Lomonosova.

SERAFIMOV, L.A.; TIMOFEYEV, V.S.; MOSKVICHIN, A.S.; POPOVA, L.M.; CHIRIKOVA, Z.F.; TYURIKOV, I.D.

Study and calculation of the rectification process of multicomponent mixtures by the separated vapors of the components. Khim. prom. 41 no.1:42-45 Ja '65. (MIRA 18:3)

YERMAKOVA, A.; KVASHA, V.B.; SERAFIMOV, L.A.; LVOV, S.V.

Investigating the dynamics of the absorption of alkyl chlorides and alkylchlorosilanes. Khim.prom. 41 no.4:18-22 Ap '65. (MIRA 18:8)

SERAFIMOV, L.A.; TIMOFEYEV, V.S.; L'VOV, S.V.

Liquid - vapor phase equilibrium in some binary mixtures present in the products of oxo synthesis from propylene at atmospheric pressure. Zhur. fiz. khim. 39 no.8:1890-1894 Ag '65. (MIRA 18:9)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova.

SERAFIMOV, L.A.; TYURIKOV, I.D.; RUMYANTSEV, P.G.; L'VOV, S.V.

Liquid - vapor phase equilibrium in the system methyl borate - methanol at atmospheric pressure. Zhur. fiz. khim. 38 no.5: 1326-1331 My '64. (MIRA 18:12)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova. Submitted June 29, 1963.

YUGOSIAVIA / Pharmacology and Toxicology. 5-Hydroxytryptamine. V-3

Abs Jour : Ref. Zhur - Biologiya, No 17, 1958, No. 80538

Author : Sorafimov, N.
Inst : Not given
Title : On the Problem of Serotonin

Orig Pub : Makod. med. pregl., 1957, 12, No 5-8, 8-12

Abstract : No abstract given

Card 1/1

8

DOLGOVA, Vera; SERAFIMOV, Nikola; SESTAKOV, Gligor

Thyroid I-131 fixation and perchlorate liberation in hypothermia in dogs treated with propylthiouracil. God.Zborn. Med.Fak.Skopje no.10:140-142 '63.

1. Institut za patofiziologija medicinski fakultet - Skopje (Direktor prof. d-r I.S. Tadzer).

SERAFIMOV, P.

Demonstrating the Cross method by the method of fixed points. p. 18.
(GLASNIK, Vol.1, No. 1. Mar./Apr. 1957

SO: Monthly List of East European Accessions (EEAL) LC Vol. 6, No. 12, Dec. 1957
Uncl.

SERAFIMOV, S

"Introducing subtropical cultured plants in Bulgaria", p 82, (ZOOPERATIVNO ZEMEDELIE, Vol 6 #3, Mar. 1951, Bulgaria)

SO: Monthly List of East European Accessions, Vol 2 #8 /Library of Congress, August 1953, Uncl.

SERAFIMOV,S.; ARSOV,A.; NIKOLOV,G.

Products obtained by sulfonation and condensation of the derivatives of talloleic acids. Khim i industriia 35 no.3: 84-87'63

SERAFIMOV, Serafim, inzh., st.prepodavatel

Color fastness of wool dyed with AS naphthol by using preventive agents. Tekstilna prom 13 no.5:20-26 '64.

1. Institute of Industrial Chemistry, Sofia.

SERAFIMOV, S.

"Standards in the Wool Textile Industry", P. 40, (RATSIONALIZATSIIA, Vol. 3, No. 10/11, Oct./Nov. 1953, Sofiya, Bulgaria)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

SERAFIMOV, S.

BULGARIA/Chemical Technology. Chemical Products and Their Applications. Dyeing and Chemical Treatment of Textile Fabrics. H

Abs Jour : Ref Zhur-Khimiya, No 6, 1959, 21898

Author : Serafimov, S.
Inst : -
Title : Use of Optically Active Substances During the Bleaching of Textile Materials.

Orig Pub : Leka promishlenost. Tekstilno izd., 1957, 6, No 10, 20-24

Abstract : A review of the construction of optical bleachers and conditions for their use during treatment of cellulose and animal and polyamide fibers is presented. -- O. Golosenko

Card : 1/1

H-162

KUNCHEV, Evgeni, inzh.; KOLEV, Stoian, inzh.; SERAFIMOV, Serafim, inzh.

Characteristics of natural silk fabrics treated with polyamides and by interfacial polycondensation. Tekstilna prom 13 no.6: 15-18 '64.

1. Institute of Industrial Chemistry, Sofia.

SERAFIMOV, S.; KOLEV, N.; ARSOV, A.; ZAKARIAN, A.; IAVASHEV, St.

Textile auxiliary means prepared on the basis of tall oil.
Khim i industriia 36 no. 2:51-54 '64.

SERAFIMOV, Serafim; KUNCHEV, Evgeni; KOSTOVA, Siika

Certain properties and qualities of Bulgarian RL sulfur blue dyestuff. Khim i industriia 36 no. 3:95-99 '64.

ENEV, Stoiko, dots. inzh.; SERAPIMOV, Serafim, inzh., st. prep.

Fifth International Congress of Dyers. Tekstilna prom 14 no.1: 46-48 '65.

KARANFILSKI, Borislav; DAVCEV, Penco; SERAFIMOV, Stevan

Radiochromium labeled erythrocyte tests in gastrointestinal hemorrhages. Srpski arh. celok. lek. 88 no.10:969-972 O '60.

1. Patofizioloski institut Medicinskog fakulteta Univerziteta u Skopju. Direktor: prof. dr Isak Tacer. Interna klinika Medicinskog fakulteta Univerziteta u Skopju. Direktor: prof. dr Dimitar Arsov.

(HEMORRHAGE GASTROINTESTINAL diag) (ERYTHROCYTES)
(CHROMIUM radioactive)

SERAFIMOV, St.

Etiology of typhoid pullorosis in chickens. Izv Vet inst zaraz parazit 7 61-67 '63.