BANNOV, A.T.; OKUNTSOV, I.V., kand.veter.nauk

Early spring farrowing in small movable huts is a measure for ridding swine of plague. Veterinariia 37 no.1:27-29 Ja '60. (MIRA 16:6)

1. Nachal'nik veterinarnogo otdela Krasnoyarskogo krayevogo sel'skokhozyaystvennogo upravleniya (for Bannov). 2. Sibirskiy nauchno-issledovatel'skiy veterinarnyy institut (for Okuntsov).
(Swine plague) (Swine houses and equipment)

OKUNTSOV, L.P.

Puncture of the heart for obtaining blood from fowl, Lab. delo 7 no.1:53-56 Ja '61. (MIRA 14:1)

1. Berezovskaya mezhrayonnaya vetbaklaboratoriya (Stalingradskaya oblast').

(BLOOD—COLLECTION AND PRESERVATION)

OKUNTSOV, L. P. (Berezovsk Interraion Veterinary Bacteriological Laboratory of Volgogradsk Oblast')

"About age changes of carotin content in the blood serum of hens and ducks"

Veterinariya, vol. 39, no. 4, April 1962 p. 66

OKUNTSOV, L.P.

Age-related changes of the carotene content in the blood serum of hens and ducks. Veterinariia 39 no.4:66-68 Ap '62. (MIRA 17:10)

1. Berezovskaya mezhrayonnaya veterinarno-bakteriologicheskaya laboratoriya Volgogradskoy oblasti.

SHISHKOV, V.P., dotsent; BABAK, I.M., aspirant; SOLOV'YEV, F.A., dotsent; DANILEVSKIY, V.M., dotsent; VISHNYAKOV, S.I., dotsent; TITOV, G.I., OKUNTSOV, L.P.; AFANAS'YEV, V.P.; ZHAROV, A.V., assistent; SLUGIN, V.S., KRYLOV, O.N., aspirant

Noninfectious diseases. Veterinariia 41 no.4:64-80 Ap '64.
(MIRA 17:8)

1. Moskovskaya veterinarnaya akademiya (for Shishkov, Zharov).
2. Belotserkovskiy sel'skokhozyaystvennyy institut (for Babak).
3. Velikolukskiy sel'skokhozyaystvennyy institut (for Solov'yev).
4. Kurskiy sel'skokhozyaystvennyy institut (for Vishnyakov).
5. Zaveduyushchiy otdelom nezaraznykh zabolevaniy Buryatskoy nauchno-proizvodstvennoy veterinarnoy laboratorii (for Titov).
6. Zaveduyushchiy Berezovskoy veterinarnoy laboratoriyey, Volgogradskaya obl. (for Okuntsov). 7. Nauchno-issledovatel'skiy institut sel'skogo khozyaystva Kraynego Severa (for Afanas'yev).
8. Pushkinskiy zverosovkhoz Moskovskoy oblasti (for Slugin).
9 Leningradskiy veterinarnyy institut (for Krylov).

OKUNTSOV, L.P.

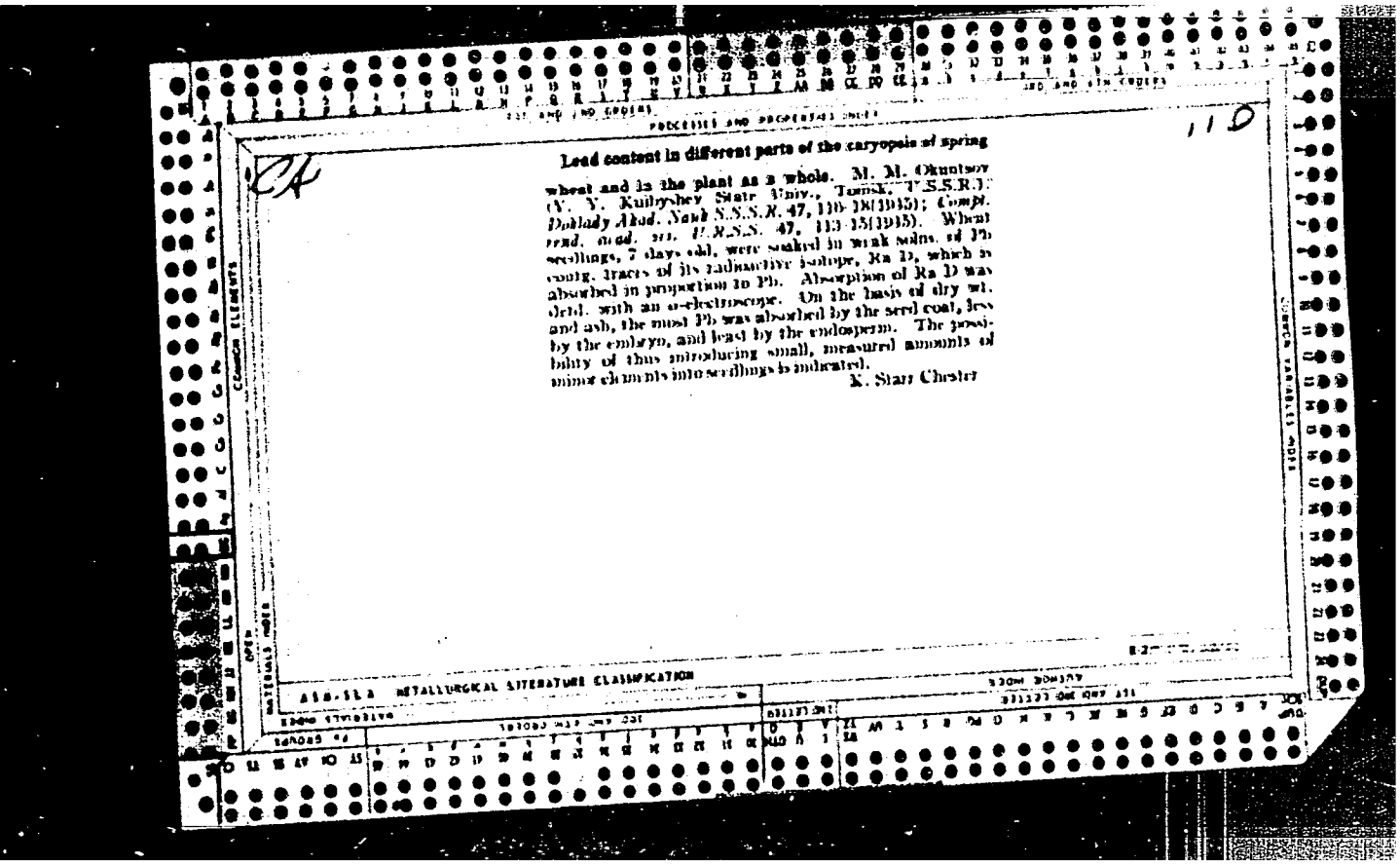
Effect of egg carotenoids on the development of chicks.
Veterinariia 41 no.6:84-86 Je '64. (MIRA 18:6)

1. Berezovskaya veterinarnaya laboratoriya Volgogradskoy oblasti.

OKUNTSOV, L.P.

Early diagnosis of hypovitaminosis A and its symptoms in ducklings. Veterinariia 42 no.8:77-79 Ag '65.
(MIRA 18:11)

1. Volgogradskiy sel'skokhozyaystvennyy institut.

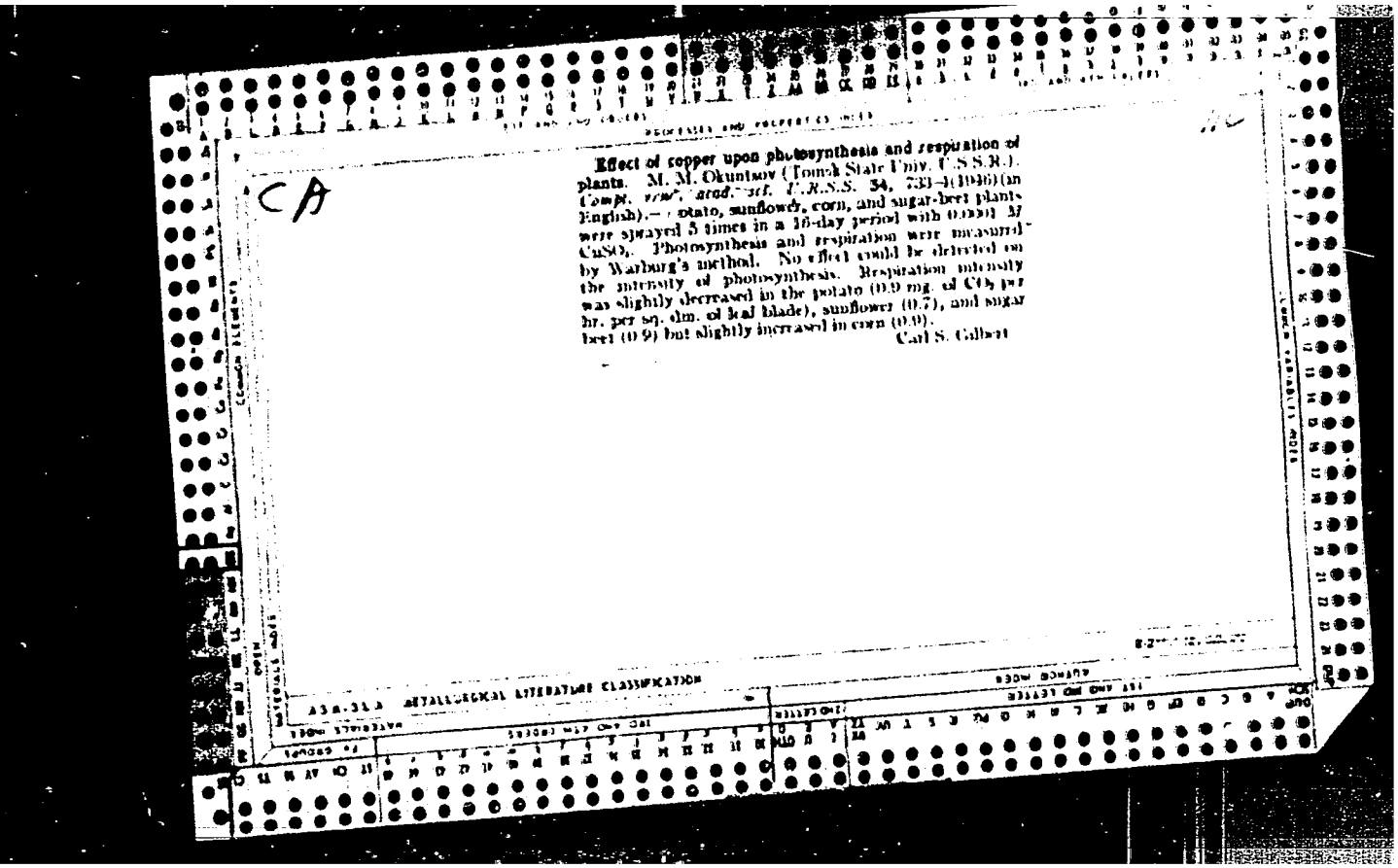


Lead content in different parts of the caryopsis of spring wheat and in the plant as a whole. M. M. Okuntsov (V. V. Kuibyshev State Univ., Tomsk, U.S.S.R.). *Doklady Akad. Nauk S.S.S.R.* 47, 110-18(1945); *Compt. rend. acad. sci. U.R.S.S.* 47, 113-15(1945). Wheat seedlings, 7 days old, were soaked in weak solns. of Pb containg. traces of its radioactive isotope, Ra D, which is absorbed in proportion to Pb. Absorption of Ra D was detd. with an α-electroscope. On the basis of dry wt. and ash, the most Pb was absorbed by the seed coat, less by the embryo, and least by the endosperm. The possibility of thus introducing small, measured amounts of minor elements into seedlings is indicated.
K. Starr Chester

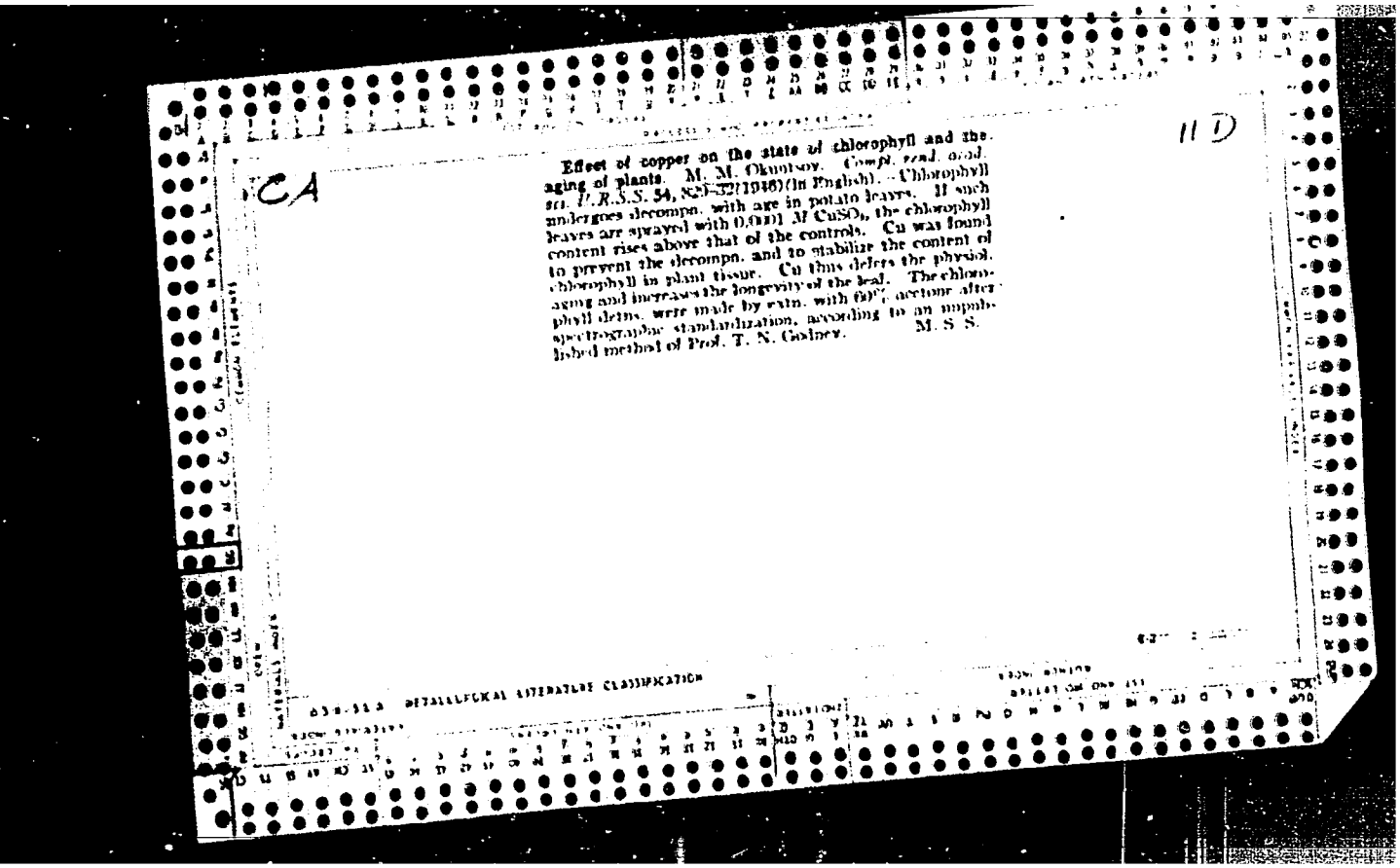
0A

11-1

Effect of copper on chlorophyll content of plants. M. M. Okuntsov (Tomsk State Univ., U.S.S.R.). *Compt. rend. acad. sci. U.R.S.S.* **54**, 841-3(1946)(in English); cf. *C.A.* **41**, 3023i.—Plants grown on turf were sprayed 3 times in a 10-day period with 0.001 *M* $CuSO_4$ soln. The green leaves were extd. with 85% acetone and the chlorophyll (I) detd. with a spectrophotometer. The increases in I as compared to controls were: sugar beets 11.4%, sunflowers 17.3%, black currants 20.3%, linden 21.5%, and corn 30.8%. The culms of wheat grown on turf to which $CuSO_4$ in varying amts. had been added showed increases of I up to 67.9% (10 g. $CuSO_4$ per kg. of dry turf). Carl S. Gilbert



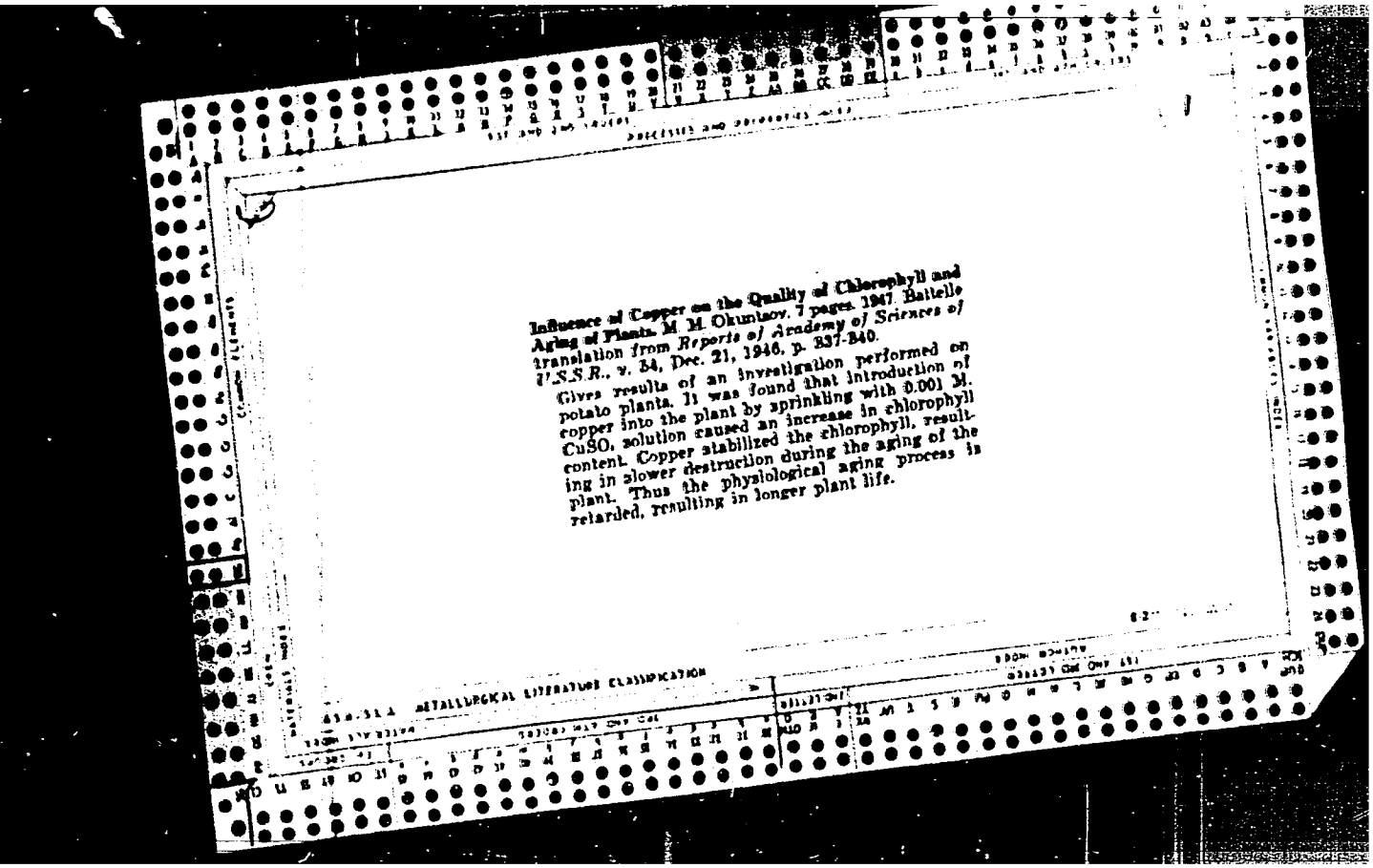
Effect of copper upon photosynthesis and respiration of plants. M. M. Okuntsov (Tomsk State Univ., U.S.S.R.). *Compt. rend. acad. sci. U.R.S.S.* 54, 733–4 (1936) (in English).— potato, sunflower, corn, and sugar-beet plants were sprayed 5 times in a 16-day period with 0.0001 *M* $CuSO_4$. Photosynthesis and respiration were measured by Warburg's method. No effect could be detected on the intensity of photosynthesis. Respiration intensity was slightly decreased in the potato (0.9 mg. of CO_2 per hr. per sq. dm. of leaf blade), sunflower (0.7), and sugar beet (0.9) but slightly increased in corn (0.9).
Carl S. Gilbert



CA

11 D

Effect of copper on the state of chlorophyll and the aging of plants. M. M. Okuntsov. *Compt. rend. acad. sci. U.R.S.S.* 54, 823–32 (1946) (In English). – Chlorophyll undergoes decompn. with age in potato leaves. If such leaves are sprayed with 0.0001 *M* $CuSO_4$, the chlorophyll content rises above that of the controls. Cu was found to prevent the decompn. and to stabilize the content of chlorophyll in plant tissue. Cu thus defers the physiol. aging and increases the longevity of the leaf. The chlorophyll detns. were made by extn. with 60% acetone after spectrographic standardization, according to an unpublished method of Prof. T. N. Godnev. M. S. S.



Influence of Copper on the Quality of Chlorophyll and Aging of Plants. M. M. Okuntsov. 7 pages. 1947. Battelle translation from *Reports of Academy of Sciences of U.S.S.R.*, v. 54, Dec. 21, 1946, p. 837-840.

Gives results of an investigation performed on potato plants. It was found that introduction of copper into the plant by sprinkling with 0.001 M. $CuSO_4$ solution caused an increase in chlorophyll content. Copper stabilized the chlorophyll, resulting in slower destruction during the aging of the plant. Thus the physiological aging process is retarded, resulting in longer plant life.

PA 53T56

OKUNTSOV, M. M.

USSR/Medicine - Chlorophyl
Medicine - Metals

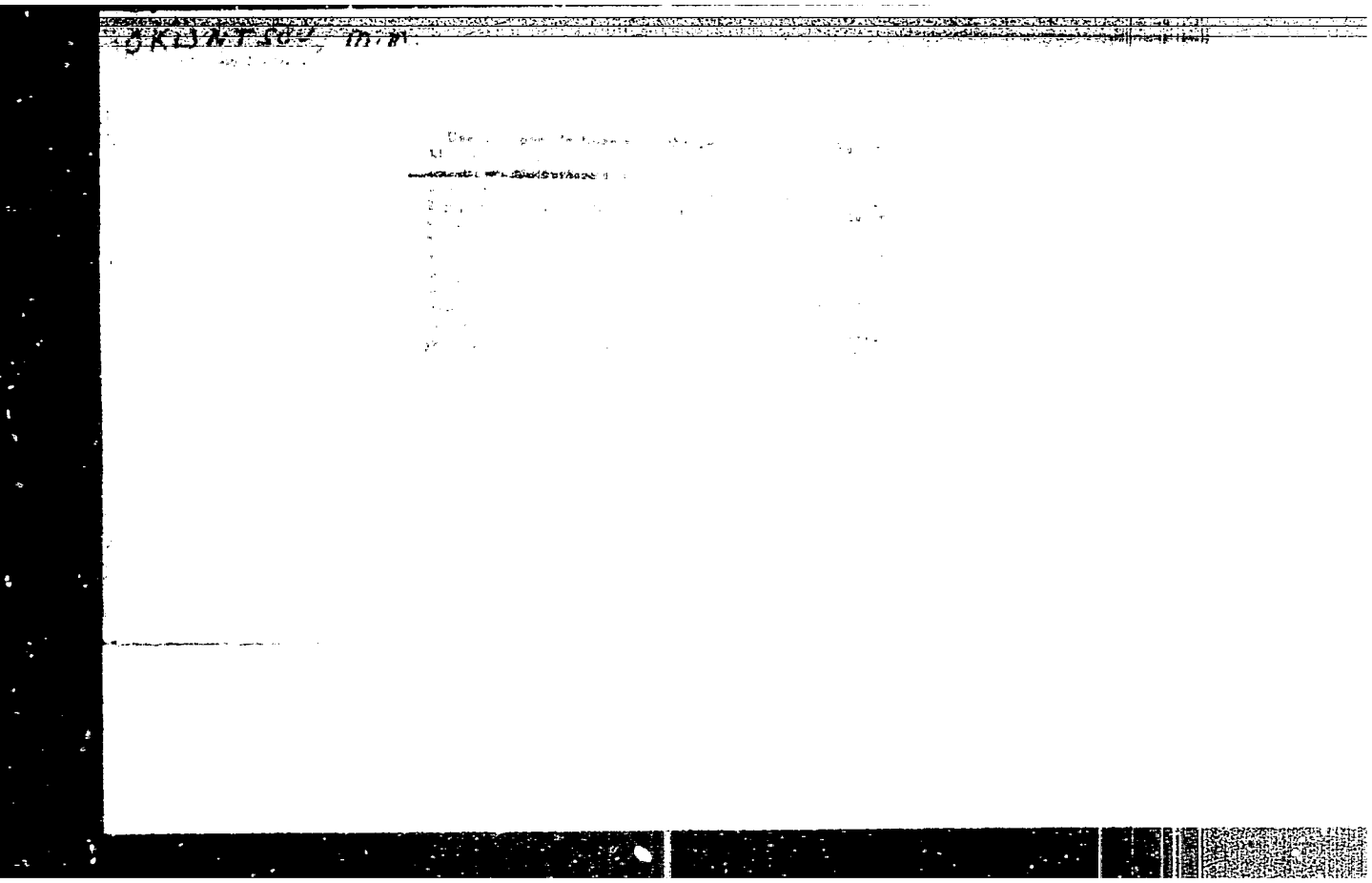
Aug 1947

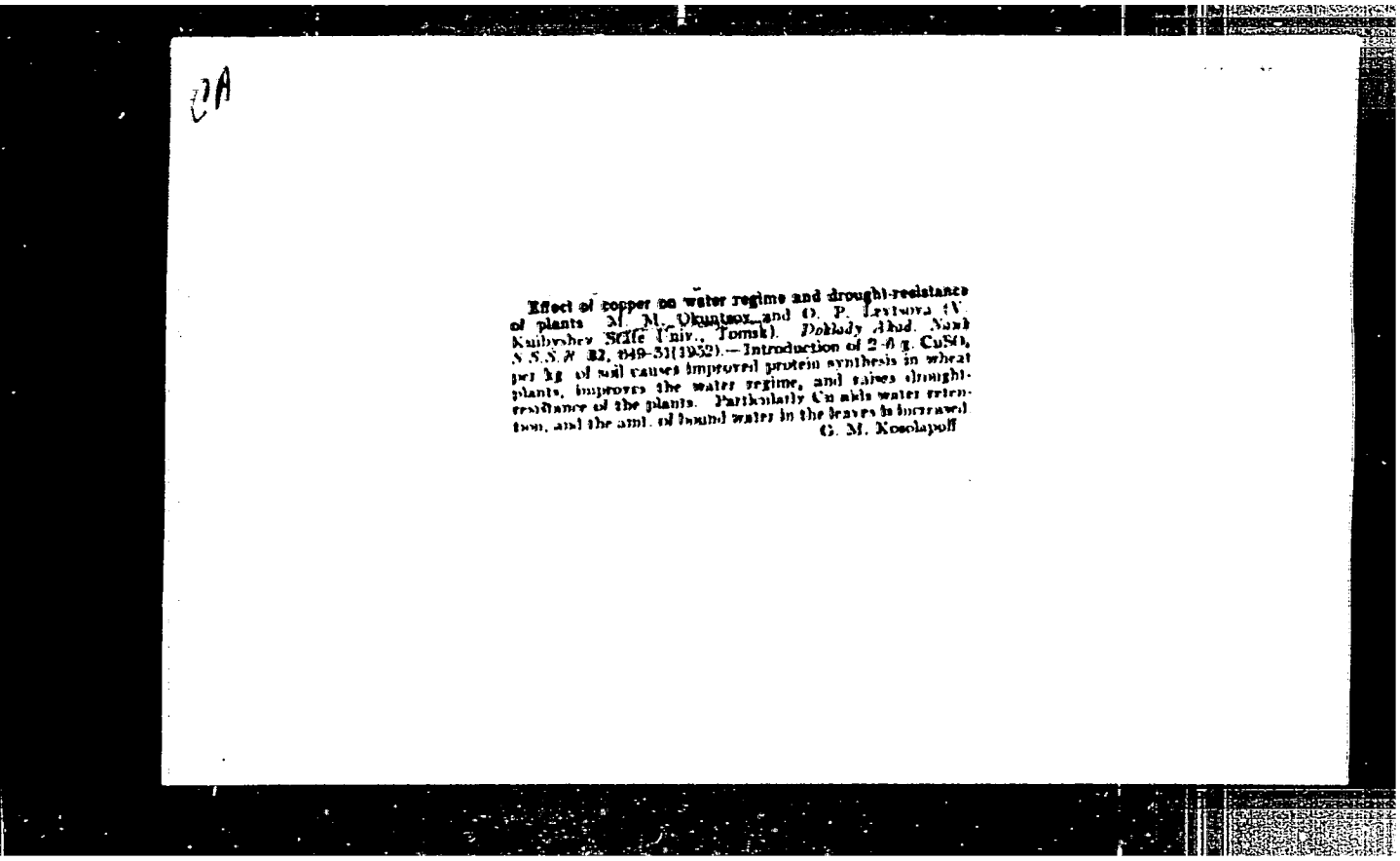
"Effect of Copper on the Production of Chlorophyl," M. M. Okuntsov, Lab of Photosynthesis, Acad Sci USSR; Tomsk State U imeni V. V. Kuybyshev, 2 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVII, No 4

Studies show that copper does not have any accelerating effect on formation of chlorophyl, but does have a stabilizing effect, its presence retarding the process of disintegration of chlorophyl. Submitted by Academician A. A. Rikhter, 24 Feb 1947.

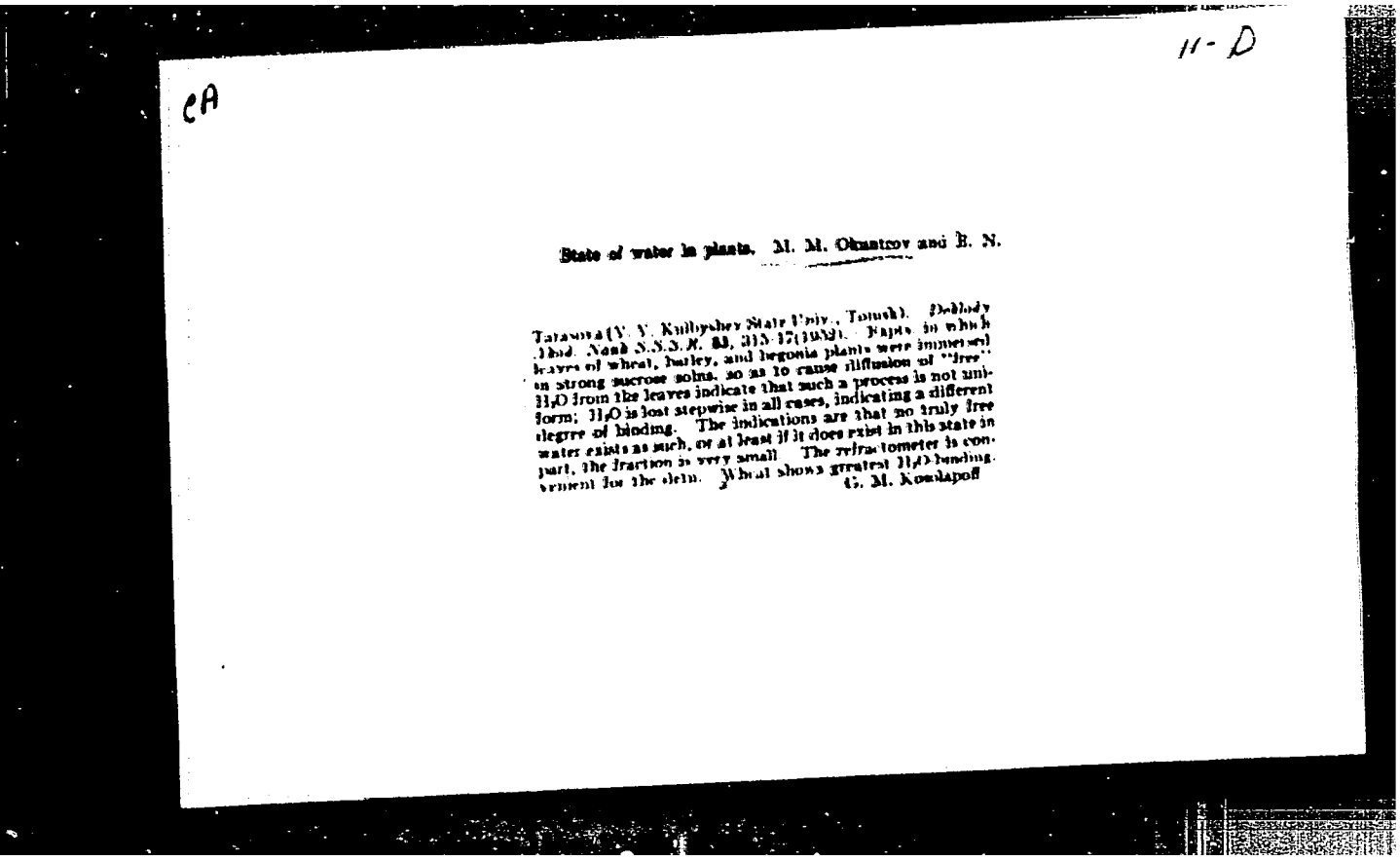
53T56





CA

Effect of copper on water regime and drought-resistance of plants. N. M. Ukuntsov and O. P. Levitova (V. Kuibyshev State Univ., Tomsk). *Doklady Akad. Nauk S.S.S.R.* 82, 949–51(1952).—Introduction of 2–6 g. $CuSO_4$ per kg. of soil causes improved protein synthesis in wheat plants, improves the water regime, and raises drought-resistance of the plants. Particularly Cu aids water retention, and the amt. of bound water in the leaves is increased.
G. M. Kosolapoff



11-D

cA

State of water in plants. M. M. Okuntsov and E. N.

Tatarova (V. V. Kuibyshev State Univ., Tomsk). Doklady Akad. Nauk S.S.S.R. 83, 315-17 (1952). Papers in which leaves of wheat, barley, and begonia plants were immersed in strong sucrose solns. so as to cause diffusion of "free" H_2O from the leaves indicate that such a process is not uniform; H_2O is lost stepwise in all cases, indicating a different degree of binding. The indications are that no truly free water exists as such, or at least if it does exist in this state in part, the fraction is very small. The refractometer is convenient for the detn. Wheat shows greatest H_2O-binding.
G. M. Kondapoff

Okuntsov, P. P.

The effect of copper on the synthetic processes of plants and some ideas on the mechanism of enzymic synthesis. M. M. Chuntzov and O. A. Roo'zhina. *Mikroelementy v Sel'sk. Khoz. i Med. Riga: Akad. Nauk Latv. S.S.R., Sbornik* 1956, 41-60; *Referat. Zhur., Khim., Biol. Khim.*, 1957, No. 3916. The expts were performed with vernalized wheat and with hemp. A study was made of the effect of Cu and of H_2S on the activity of peroxidase (I), protease (II), amylase (III), and of lipase (IV) and on the protein content (V), the amino acids (VI), the sugars, the pentosans and the fats in plants. The addn. of Cu to wheat plants 2 weeks old increased the I by 40%, and reduced the activity of II by 50%, the content of V increased by 44% and of VI was reduced by 50%. H_2S reduced the activity of I to a considerable extent and lowered the activity of II by 50%, the content of V was reduced by 50%, but the content of VI increased by 30%. In the case of the addn. of Cu, while the activity of I as shown above increased, the activity of III was considerably lowered, and the sugar content increased by 40-60%. The addn. of H_2S enhanced the activity of III and lowered the content of V. The synthesis of pentosans in the wheat plant increased under the effects of Cu. Cu reduced the activity of IV by almost 40%, and the fat content was to 4%. H_2S enhanced the activity of IV, but the fat content remained unaffected. The authors think that Cu increases the intensity of the oxidative processes of the plants and thereby favorably affected the plants' synthetic processes of many substances; H_2S impeded the plants' oxidative processes and enhanced the activity of the hydrolyzing enzymes. B. P. Lepin

OKUNTSOV, M.M.; ZYRYANOVA, G.D.

Effect of herbicides on metabolism in plants. Izv. Tomsk. otd. VBO 4:87-90 '59. (MIRA 14:6)

1. Kafedra fiziologii i biokhimii rasteniy Tomskogo gosudarstvennogo universiteta imeni V. V. Kuybysheva.
(Plants—Metabolism)
(Plants, Effect of chemicals on)

IOGANZEN, B.G., KUNTSOV, M.M.; PEGEL', V.A.

Interrelationships of chemistry and physics with biology. Nauch. dokl. vys. shkoly; biol. nauki no.3:210-212 '60.
(MIRA 13:8)

(Biological research)

OKUNTSOV, M. M.; GOL'D, V. M.; GLUSHKOVA, R. I.

Participation of xanthophylls (violaxanthin and lutein) in the process of photosynthesis. Nauch. dokl. vys. shkoly; biol. nauki no.3:129-132 '62. (MIRA 15:7)

1. Rekomendovana kafedroy fiziologii i biokhimii rasteniy i laboratoriyey fotosinteza Tomskogo gosudarstvennogo universiteta im. V. V. Kuybysheva.

(PHOTOSYNTHESIS) (XANTHOPHYLL)

L 39311-65 EWG(j)/EWC(r)/EWT(l)/FS(v)-3/EWG(v)/EWG(a)-2/EWG(c) Pe-5
ACCESSION NR: AR5006791 S/0299/65/000/0[illegible]

SOURCE: Ref. zh. Biologiya. Svodnyy tom, Abs. 1G4

AUTHOR: Okuntsov, M. M.; Ron'zhina, O. A.; Simonova, Ye. I.

TITLE: Effect of light spectral composition on chlorophyll biosynthesis in plants

CITED SOURCE: Raboty Problemn. labor. fotosinteza pri Kafedr[illegible] fiziol. i biokhimii rast. Tomskiy un-t, vyp. 1, 1964, 69-[illegible]

TOPIC TAGS: plant, barley, light brightness, light spectral composition, chlorophyll, biosynthesis

TRANSLATION: Four and six day old sprouts of etiolated and g[illegible] barley were investigated in the first leaf phase. Green li[illegible] especially yellow-orange light (with an intensity of 9.10^3 en[illegible] ergs/cm^2/sec) were found most favorable for formation of chlor[illegible] a and b in etiolated sprouts. Chlorophyll levels for green l[illegible] close to those for white light. At equal intensities, yellow l[illegible] produced an effect similar to that for yellow-orange light an[illegible]

Card 1/2

L 39311-65
ACCESSION NR: AR5006791

light. Chlorophyll formation was significantly poorer in the ... of red light than in green, yellow-orange, and yellow light. ... determining the effect of different light spectral composition ... chlorophyll levels in green barley leaves kept in the dark for ... hrs, it was established that in all experiments with white light ... level of chlorophyll a increases by 20-43% and the level of chlorophyll b increases by 23-54%. Pigments did not increase in infrared and red light. For green light, the level of chlorophyll a increased by 24% and of chlorophyll b by 17%. Yellow-orange light had practically no effect on the chlorophyll levels. It is concluded that the medium wave length range of the spectrum is most favorable for the chlorophyll formation process in etiolated and green barley sprouts. Ye. Yurin.

SUB CODE: LS ENCL: 00

Card 2/2 JO

L 61666-65
ACCESSION NR: AR5017512 UR/0299/65/000/013/G005/G005
581.132

SOURCE: Ref. zh. Biologiya. Svodnyy tom, Abs 13G39

AUTHOR: Okuntsov, M. M., Ron'zhina, O. A., Simonova, Ye. I.

TITLE: Effect of the spectral composition of light on carotinoid biosynthesis in plants

CITED SOURCE: Raboty Problemn. labor fotosinteza pri Kafedre fiziol. biokhimii rast. Tomskiy un-t, vyp 1, 1964, 91-113

TOPIC TAGS: plant chemistry, biosynthesis, light biologic effect

TRANSLATION: The yellow pigments were determined by chromatography according to D. I. Sapozhnikov's method with slight modifications. Light intensity was 20-25. 10^3 and 1. 10^3 erg/cm^2 sec. The greatest amount of carotenoid synthesis in green and etiolated barley shoots was found under green light. This also applies to xanthophylls, but their accumulation also increased under blue light of low intensity. The etiolated shoots irradiated with low-intensity

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L 64666-65
ACCESSION NR: AR5017512

light also developed a kind of xanthophyll which was not identified by the a... Green shoots showed a lesser reaction to the qualitative composition of ... than etiolated shoots. In the latter, reduced forms of xanthophylls preva... oxydized forms. Upon irradiation with various segments of the visible sp... and infrared light, a change of the ratio between the different xanthophy... was observed. L. Polishchuk

SUB CODE: LS ENCL: 00

Card 2/2

L 01829-66

ACCESSION NR: AR5017513 UR/0299/65/000/013/G006/G006

SOURCE: Ref. zh. Biologiya. Svodnyy tom, Abs. 13G41

AUTHOR: Okuntsov, M. M.; Osharov, A. B.; Nazarenko, I. V.

TITLE: Effect of light of different spectral composition on the relationship of protein fractions and the quantity of free amino acids in bean leaves

CITED SOURCE: Raboty Problemn. labor. forosinteza pri Kafedre fiziol. i biokhimii rast. Tomskiy un-t, vyp. 1, 1964, 114-122

TOPIC TAGS: radiation plant effect, plant chemistry, chromatographic analysis, protein, amino acid, glutamic acid, tyrosine, valine, leucine, lycine

TRANSLATION: A quantitative determination of free amino acids was carried out with ascending chromatograms by the method of G. N. Zaitseva and N. P. Tyuleneva. Intensity of irradiation was 3000 ergs/cm^2-sec. The smallest content of salt soluble protein was observed in green light, and of alkali soluble protein in orange red light. In the dark, substantial changes take place in the composition

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L 01829-66
ACCESSION NR: AR5017513

of the amino acids: there is a considerable rise in the content of asparagine, glutamic acid, tyrosine, valine, leucine, and of an unknown amino acid X_2. On illumination with white light lysine appears, and there is a decrease in the content of glutamic acid and alpha-alanine. On illumination with blue violet light, orange red light, and infrared light, the content of free amino acids is close to that observed in plants placed in the dark. However, the lysine content in blue violet and white light is considerably greater than in orange red and infrared light. The content of alpha-alanine in blue violet light is the same as in the dark, in orange red light it is less by 3 times, and in infrared light it is the same as with illumination by white light. 30 literature titles. L. Polishchuk

SUB CODE: LS ENCL: 00

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L 38553-65 EWG(j)/EWG(r)/EWT(l)/FS(v)-3/EWG(v)/EWG(a)-2/EWG(c) Pe-5 BE
ACCESSION NR: AR5006792 S/0299/65/000/001/0002/0002

SOURCE: Ref. zh. Biologiya. Svodnyy tom, Abs. 109

AUTHOR: Okuntsov, M. M.; Kudinova, L. I.

TITLE: On the method of determining chlorophyll a and b on a photoelectric colorimeter

CITED SOURCE: Raboty Problemn. labor. fotosintesa pri Kafedre fiziol. i biokhimii rast. Tomskiy un-t, vyp. 1, 1964, 123-126

TOPIC TAGS: oat leaf, chlorophyll, photoelectric colorimeter, colorimetric analysis

TRANSLATION: A chlorophyll extract was prepared from oat leaves. Separation into chlorophylls a and b was done according to D. I. Sapozhnikova's method. Chlorophylls a and b were determined in an acetone solution by means of an SF-4 and FEK-M. In determining chlorophylls a and b on a photoelectric colorimeter and plotting a calibrated curve according to a standard Getri /Translator's Note is transliterated from Russian/ solution (corresponding to a

Card 1/2

L 38553-65
ACCESSION NR: AR5006792

85 mg/l chlorophyll concentration), the values for chlorophyll a were 3 times higher and for chlorophyll b were 2.7 times higher compared to data obtained on an SF-4. On the basis of these data, the author recommends that, in determining chlorophylls a and b in pure solutions on a photoelectric colorimeter, a standard Petri solution be taken as corresponding to 28.3 mg/l chlorophyll a and 31.5 mg/l chlorophyll b and not 85 mg/l as assumed in visual colorimetry. Ye. Yurina.

SUB CODE: LS ENCL: 00

Card 2/2

OKUNTSOV, M.M.; [illegible]

Localization of the physiological movement of bean leaf. Nauch.dokl.vys. shkoly; biol.nauki no.3:131-133 '58. (MIRA 18:8)

1. Rekomendovana kafedroy fiziologii i biokhimii rasteniy i problemnoy laboratoriyey [illegible] Permskogo gosudarstvennogo universiteta [illegible] V.V.Pustovalova.

OKUNKOVA, Ye.A.; ROMANKOV, L.N., dots., otv. red.; VOLOSHIN, G.D., red.

[Projection drawing; a manual] Proektsionnoe cherchenie; uchebnoe posobie. Novosibirsk, Zapadno-Sibirskoe knizhnoe izd-vo, 1965. 113 p. (MIRA 18:11)

USSR/Diseases of Farm Animals. Diseases Caused by Viruses and Rickettsiae. R

Abs Jour: Ref Zhur-Biol., No 9, 1958, 40635.

Author : Bobrov, P. F., Okunyeva, V. Y., Dudorova, Ye. P.
Inst : State Scientific Control Institute of Veterinary Preparations.
Title : Use as Antigen of Banked Blood Crystal-Violet of Pest Afflicted Pigs.

Orig Pub: Tr. Gos. nauchno-kontrol'n. in-t po vetpreparatam, 1956, 6, 97-100.

Abstract: It was demonstrated that the swine pest virus, when processed through crystal-violet and inactivated in a thermostat at a 37-38° temperature for 20 days, for 14 days, and then not subjected to inactivation,

Card : 1/2

OKUNJ, L.B

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1517
AUTHOR IOFFE, B.L., OKUNJ, L.B.
TITLE On the Burning-Up of Fuel in Nuclear Reactors.
PERIODICAL Atomnaja Energija, 1, fasc. 4, 80-91 (1956)
Issued: 19.10.1956

The present work describes a method for the computation of this burning-up in consideration of the capture and the multiplication of neutrons in the course of the process of slowing down. In the course of computations the burning-up of U^{235} as well as the accumulation and the burning-up of Np^{239}, Pu^{239}, Pu^{240}, Pu^{241} and of the fission fragments (poisons) is taken into account. Here the change with respect to time of the reactivity of the reactor (dynamic of burning-up) in the case of the high burning-up of the fuel for systems of natural uranium with heavy water as a moderator is investigated. The work is arranged as follows: Multiplication during slowing down, the dynamic equations, changes of reactivity, computation of the burning-up of the fuel in reactors with natural uranium and heavy water as a moderator.

Summary: The numerical computation of the systems of natural uranium and heavy water as a moderator show that with a decrease of the reactivity of the reactor the accumulation of Pu^{240} as a result of the great resonance absorption by the level at 1,07 eV plays an important part. The duration of the operation increases considerably (compared with the case that the entire reactor is cleared out at one and the same time) if the reactor operates stead-

OKUNJH, L.B

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1540
AUTHOR OKUNJ,L.B.
TITLE On the Decay Probability of Σ -Particles.
PERIODICAL Žurn.eksp.i teor.fis,31,faso.2, 333-335 (1956)
Issued: 5.10.1956

In the case of this decay an energy of ~ 115 MeV is liberated, which corresponds to the scattering of pions with ~ 140 MeV (in the laboratory system) by nucleons. At such energies the scattering of pions by nucleons is already very considerable. At first the total and the orbital angular momenta J and L of the pion-nucleon system created on the occasion of the decay of the Σ -particle is given in dependence on the spin S and the parity P of the hyperon. L and J are univocally determined by S and P.
Here the two possible decay processes of the Σ -hyperon are studied: $\Sigma^+ \to p + \pi^0$ and $\Sigma^+ \to n + \pi^+$. When "switching off" the weak interaction there are only diagonal elements which modify Σ^+ into Σ^+ and by which the system pion-nucleon with given T is modified into a state with equal T. However, by "switching on" weak interaction also nondiagonal elements occur which modify the Σ -particles into states of the pion-nucleon system with T = 3/2 and T = 1/2. These nondiagonal elements are: $iq_3 e^{i\alpha_3}$ and $iq_1 e^{i\alpha_1}$ with real q_3 and q_1. The amplitudes of the transition of the Σ^+ hyperon into the states $\pi^+ n$ and $\pi^0 p$ are given, as also the phase differences for the various spin- and parity states of the Σ -hyperons. Furthermore, the limits of the range of values of $X = \omega_0/\omega_+$ (ω_0 and ω_+ - de-

OKUNJ, L. B.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1948
AUTHOR OKUNJ, L.B.
TITLE Congress on the Physics of Particles of High Energies.
PERIODICAL Usp.fiz.nauk, 61, fasc.1, 103-128 (1957)
Issued: 3 / 1957

In the first department "The Elementary Particles and their Interaction" among other lectures were delivered on the following problems: Production of pions by nucleons, the spectra of secondary protons and deuterons on the occasion of (p-p) collisions at an energy of 660 MeV, the energy spectra of positive pions in connection with the reaction $p + p \rightarrow p + n + \pi^+$ at 556 and 657 MeV, the production of charged mesons on Li^6- and Li^7 nuclei by 240 MeV protons, the theory of the multiple production of particles, energy spectra of γ -quanta on the occasion of the decay of neutral pions, the production of neutral pions by protons on hydrogen and composed nuclei, the production of neutral pions by 580 MeV neutrons, the antiproton (E.SEGRÈ), experimental data concerning the scattering of fast nucleons by nucleons, the elastic scattering of 580 MeV neutrons by protons and neutrons, the present stage of the meson theory and comparison with the experiment, the scattering of positive pions by protons at 310 MeV and also at 176, 200, 240, 270 and 307 MeV, the interaction between negative 300 MeV protons and helium nuclei, the search for acts of generation of positive pions on carbon by negative 308 MeV pions, the range of pions in nuclear matter, the polarization of 660 MeV protons, the photoproduction of

Usp.fis.nauk,61,fasc.1, 103-128 (1957) CARD 2 / 2 PA - 1948

mesons on protons and deuterons, effects in quantum-electrodynamics at high energies, etc.

In the second department more than 60 lectures were held by Soviet and foreign scientists on the construction and the theory of various types of accelerators for elementary particles. The following subjects were dealt with: accelerators, linear accelerators, devices with strong focussing, the methods employed in connection with experiments with high-energy particles. Individual lectures dealt, among others, with the following problems: the 6 m - synchrocyclotron of the Institute for Nuclear Problems of the Academy of Science in the USSR, some particular features and the principal data of the high-frequency system of this synchrocyclotron, further problems connected with the synchrocyclotron, the deflection of a bundle in a cyclotron, a 1,5 m cyclotron, the physical bases of the equipment of the 10 BeV synchrophasotron, radiofrequency systems for accelerators, the accelerating elements of a synchrophasotron, further technical problems connected with the synchrophasotron, etc.

The third department dealt with theoretical works concerning the physics of particles with high energies.

The above congress took place from the 14. to the 22.May at Moscow. The above review deals mainly with lectures delivered by Soviet scientists.

INSTITUTION:

[redacted], M. S., and [redacted], J. H.

"The nature of Cuprammonium solutions," Paper presented at the [redacted] on the Chemistry and Physics of High Polymers, [redacted], Research Inst.

B-3,084,305

OKUSHKO, A. A.

"Agrometeorological Characteristics of Conditions for the Winterizing of Winter Crops in the Irrigation Territory of the Kuybyshev Hydro Development". Trudy Tsentr. in-ta Prognozov, No 29, pp 77-92, 1953.

The author establishes (a) the frequency of winters with mean decile temperature lower than minus 20° (which is taken as the criterion for unsatisfactory thermal conditions for winter crops) and (b) the temperature of the soil at the depth of branching of winter crops. For example, in the Bezenchuk region the frequency of such deciles amounts to 60% (predominantly in January). The author compiles tables of minimum temperature of soil in the period 1942-1950 at six stations and the number of 5-day periods with temperatures less than minus 15° . The author also establishes a third item: (c) the mean depth of the snow cover and degree of coveredness of fields by snow for mean depths of snow of 5, 10, 20 and 30 cm. For example, for depth of 10 cm, 10% of the area remains completely without snow, and about 30% of the area is covered with snow with depth up to 6 cm and 20% is covered with snow 11 to 20 cm deep. The author concludes that only for mean depth of snow cover of 30 cm can one ensure favorable outcome of winterizing. He also considers the problem of the combination of low temperatures with little snow. (RZhGeol, No 11, 1955)

SO: Sum No 884, 9 Apr 1956

OKUSHKO, A.A.

Agricultural meteorological characteristics of wintering conditions of winter crops in the irrigated region of the Kuybyshev hydroelectric development. Trudy TSIP no.29:77-92 '55.
(MLRA 8:6)

(Kuybyshev Hydroelectric Power Station region--Crops and climate)

Country : USSR
Category: Cultivated Plants. Grains.

M

Abs Jour: RZhBiol., No 22, 1958, No 100215

Author : Okushko, A.A.
Inst : Central Forecasting Inst.
Title : Ice Crust and Wintering of Winter Crops on the European Territory of USSR.

Orig Pub: Tr. Tsentr. in-ta prognozov, 1956, vyp. 53, 142-169.

Abstract: Data from the experiments with artificial ice crust and observations at 110 hydro-meteorological stations on natural ice crust during 1943-1952. The ice crust - be it an interlayer in the snow or a crust on the surface of the

Card : 1/2

Card : 2/2

OKUSHKO, A.A.

In the section of agricultural meteorology of the Lenin All-Union Academy of Agricultural Sciences. Meteor. i gidrol. no.8,72-73 Ag '57. (MLRA 10:8)

(Meteorology, Agricultural)

OKUSHKO, A.A.

Ice crust and wintering of winter crops on the European territory of the U.S.S.R. Trudy TSIP no.53:142-169 '57. (MIRA 10:8)
(Crops and climate)

OKUSHKO, A.A.

Methods for snow surveys in fields meeting the requirements of the agrometeorological service. Trudy TSIP no.98:74-86 '60.
(MIRA 13:11)
(Snow surveys) (Meteorology, Agricultural)

OKUSHKO, A.A.

Comparative evaluation of different methods used in determining the viability of winter crops and perennial grasses in winter in U.S.S.R. Trudy TSIP no.98:87-98 '60. (MIRA 13:11)
(Plants—Frost resistance) (Field crops)

GOL'TSBERG, I.A., doktor geogr. nauk; VERIGO, S.A., kand. sel'khoz. nauk; SHEL'SHCHIKOV, V.V., kand. sel'khoz. nauk; BORISOGLEBSKIY, G.I., kand. geogr. nauk; OKUSHKO, A.A., kand. geogr. nauk; RUDNEV, V.M., kand. geogr. nauk; DAVITAYA, F.F., akademik, otv. red.; ZHDANOVA, L.P., red.; ALEKSEYEV, A.G., tekhn. red.

[Evaluation of the agroclimatic conditions of farm lands] Otsenka agroklimaticheskikh uslovii sel'skokhoziaistvennykh polei. Leningrad, Gidrometeor.izd-vo, 1961. 75 p. (MIRA 15:2)

1. Akademiya nauk Gruzinskoy SSR (for Davitaya).
(Crops and climate)

OKUSHKO, A.A.; BORISOGLEBSKIY, G.I.

Theoretical basis for the technique of snow surveys in fields with snow-retaining barriers. Trudy TSIP no.107:23-29 '61. (MIRA 14:5)
(Snow surveys)

OKUSHKO, N. (Simferepol'); ASTAF'YEV, V., inzh. (Minsk)

Machine measures and cuts fabrics. Mest.prom.i khud.promys. 1 no.2/3:45-46 N-D '60. (MIRA 14:4)
(Clothing industry—Equipment and supplies)

OKUSHKO, V.B.; [illegible], M.I.

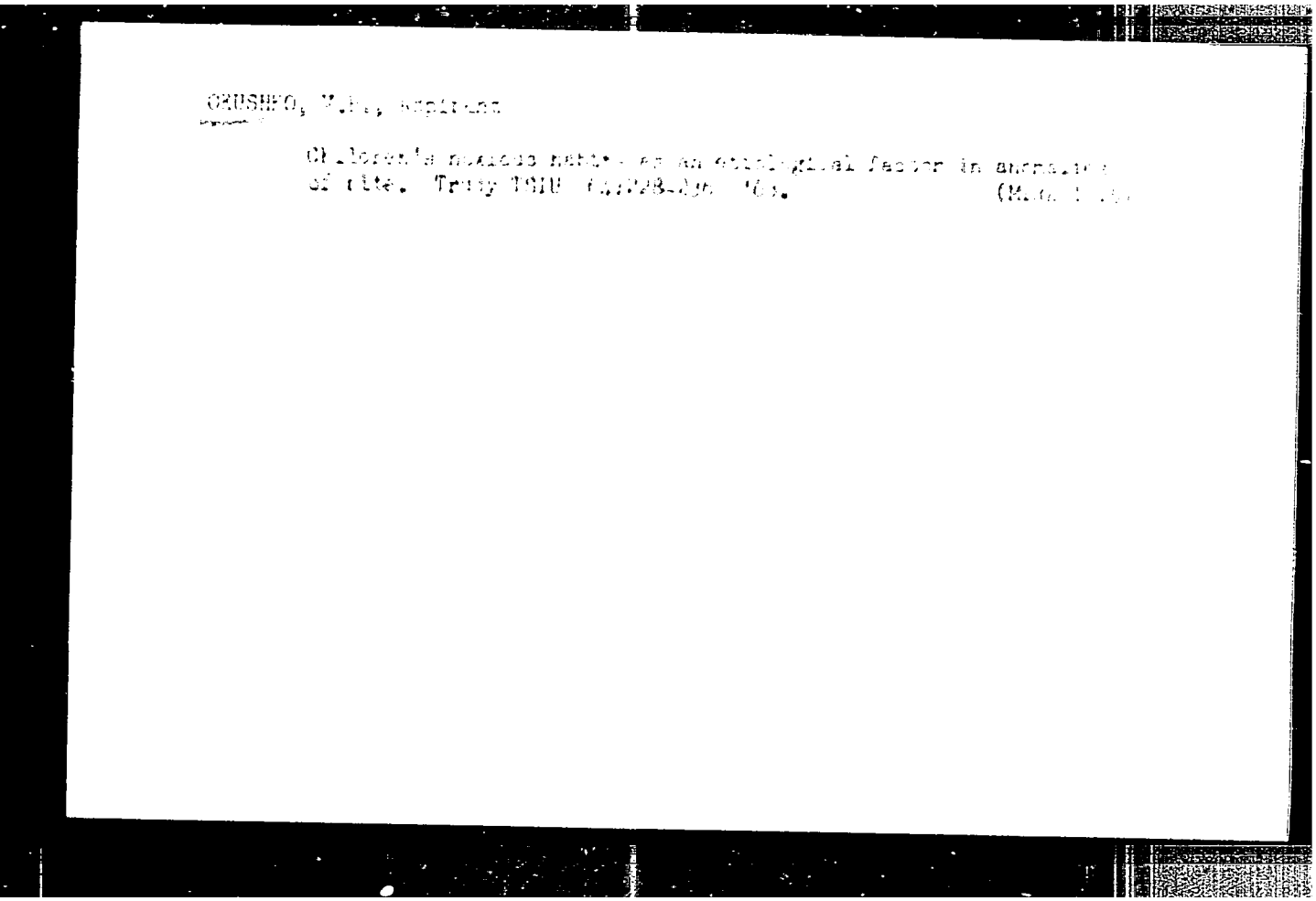
Upper [illegible] sediments [illegible] southeastern Kara Kum. Izv. AN Turk. SSR. Ser. fiz.-tekh., khim. i geol. nauk no.2: [illegible]-123 '64. (MIRA 17:8)

1. Yugo-Vostochnaya [illegible] ekspeditsiya Upravleniya geologii i okhrany nedr pri Sovete Ministrov Turkmenskoy SSR.

RAYEVSKIY, V.I.; OKUNEV, V.P.

Murgab Bay of the Kaspiyskoye More. Izv. AN Turk. SSR. Ser. fiz.-tekh., khim. i geol. nauk no.3:74-80 '64 (MIRA 18:1)

1. Upravleniye geologii i okhrany nedr pri Sovete Ministrov Turkmenskoy SSR.



OKUSHKO, V.R.

Experimental correlation of hyperpyridoxinosis with atrophy of the alveolar process and disorder of mineral metabolism. Stomatologiia 42 no.3:19-23 My-Je'63 (MIRA 17:1)

1. Iz kafedry khirurgicheskoy stomatologii (zav. - chlen-korrespondent AMN SSSR prof. A.I.Yevdokimov) i kafedry patologicheskoy fiziologii (zav. - chlen-korrespondent AMN SSSR prof. N.A. Fedorov) Moskovskogo meditsinskogo stomatologicheskogo instituta.

FAYNBERG, G.S., inzh.; SMELYANETS, S.G., inzh.; OKUSOK, A.A., inzh.

Planning power supply for mines and pits under construction. Shakht.stroi. 8 no.1:5-9 Ja '64. (MIRA 17:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut organizatsii i mekhanizatsii shakhtnogo stroitel'stva.

1892

ON THE POLARIZATION OF ELECTRONS DURING THE DECAY OF POLARIZED μ-MESONS. L. B. Okun'. Doklady Akad. Nauk S.S.S.R. 104, 840-2(1955) Oct. 21. (In Russian)

Calculations were made to determine the constant C_1 occurring in the equation describing μ-meson dec[illegible], by measuring the spin correlations of μ-meson decay and the electron escaping during the decay. (R. V. J.)

OKUJAVA, V. (Tbilisi, USSR)

"The influence of the polarization of the cortical surface upon the dendritic potentials"

Report submitted to the 7th Intl. Congress of Neurology, Rome, Italy, 10-15 Sep 61

Okyn' 55

110-3-1/22

AUTHORS: Petrov, G.N., Doctor of Technical Sciences, Professor, Okyn', S.S., Candidate of Technical Sciences and Krayz, B.L., Engineer.

TITLE: Smooth Contactless Voltage Regulation of Transformers Under Load (Plavnoye beskontaktnoye regulirovaniye napryazheniya transformatora pod nagruzkoy)

PERIODICAL: Vestnik Elektropromyshlennosti, 1958, Vol.29, No.3, pp.1-8 (USSR)

ABSTRACT: Until now, smooth voltage regulation by means of transformers has not been satisfactorily achieved and published, theoretical work is incomplete. The authors, therefore, developed a more accurate theory for one such type of transformer, a schematic circuit diagram of which is given in Fig.1. The transformer has two cores, magnetically independent; both may receive auxiliary d.c. magnetisation from windings with different numbers of turns. The two parts of the d.c. magnetising winding are so connected that the total a.c. e.m.f. acting on the windings is zero. The primary and secondary windings on the two cores are in series and have different transformation ratios. Hence, if the primary voltage is maintained constant and the auxiliary magnetisation is varied, the output voltage is altered. The article examines the analytical relationships

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that govern this process of voltage regulation. The main equations of the regulated transformer are first derived. A vector diagram is then constructed in Fig. 2 and discussed. When the secondary power-factor is other than unity, the vector diagram is constructed by first finding the relative orientation of the vectors of primary voltage and current. This may be done graphically and gives the vector diagram seen in Fig.3. The degree of regulation at no-load and the transformation ratios of the two transformers are related in Fig.4, and the relationship between the secondary voltage and auxiliary magnetisation is given for two cases in Fig.5. These equations and vector diagrams permit of an analysis of the working process of the transformer which is sufficiently accurate for practical purposes and explain the influence of the main parameters of the transformer on the limits of regulation.

Tests were made on a model regulated transformer to verify the main theoretical relationships established in the article. The two cores were represented by two identical core-type transformers having transformation ratios 1.6 and 3.2. The transformer voltage was regulated by d.c. magnetisation of the core;

the power required was less than 1% of the power transformed. The tests under no-load conditions, the results of which are given in Fig.6, demonstrated the good regulation of the transformer. Regulation of the secondary voltage by d.c. auxiliary magnetisation can cause a great increase in the auxiliary magnetising current. To change the secondary voltage by 47%, the no-load current was increased by a factor of 4. Non-magnetic gaps in the magnetic circuits of the transformers are sometimes advisable to prevent the increase in magnetising current from saturating the cores. The external characteristic, the relationship between the secondary voltage and current at unity power-factor is plotted in Fig.7. Tests were made with and without auxiliary magnetisation. The load tests confirmed that if the transformer parameters are suitably chosen its external characteristic is reasonably flat and the limits of secondary voltage regulation are much the same both with and without load with unity power-factor on the secondary.

The test data were used to construct vector diagrams both with and without auxiliary magnetisation, as in Fig.8. These diagrams qualitatively confirm the special features of secondary voltage regulation and the correctness of the vector diagram

Smooth Contactless Voltage Regulation (Cont.)

given in Fig.2. Some numerical deviation of the experimental vector diagram from the theoretical are due to magnetic losses in the cores and the presence of resistance and inductance in the primary and secondary windings, etc. A special feature of this method of voltage control is the possibility of generating higher harmonics in the voltage curves of both cores with sinusoidal primary voltage. However, if the degree of saturation of the cores is correctly chosen, this effect is small. By way of example, Fig. 9 gives secondary voltage oscillograms with auxiliary magnetisation. It is concluded that conditions will be most favourable to the use of these transformers when the degree of voltage regulation is not greater than 1.5:1. Although the article considers only the simplest regulated transformer, other arrangements, such as autotransformer connections, are possible. An advantage of this method of voltage regulation is its relatively high speed and also the possibility of easily making voltage control automatic. An appendix gives design procedure. There are 9 figures and 1 American, 1 German and 1 Russian reference.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Power Institute)
SUBMITTED: October 14, 1957
AVAILABLE: Library of Congress
Card 4/4
1. Transformers 2. Voltage-Stablization 3. Mathematical analysis

KHALTURIN, K.D., arkhitektor; CHAYKO, I.M., arkhitektor; GOLUBEV, S.L., inzhener; DOBROKHOTOV, I.G., inzhener; KRUPITSA, K.K., inzhener; POGORZHEL'SKIY, L.A., inzhener; POSTNIKOV, A.A., inzhener; SHARYY, Yu.V., kandidat tekhnicheskikh nauk; OL', A.A., professor, doktor arkhitektury; URAV'YEV, B.V., kandidat arkhitektury; VASIL'YEV, B.D., doktor tekhnicheskikh nauk professor, redaktor; SHUR, N.Ya., redaktor izdatel'stva; ROZOV, L.K., tekhnicheskiy redaktor

[Large-block construction in Leningrad] Krupnoblochnoe stroitel'stvo v Leningrade. Leningrad, Gos.izd-vo lit-ry po stroit. i arkhit., 1957. 93 p. (MLRA 10:7)

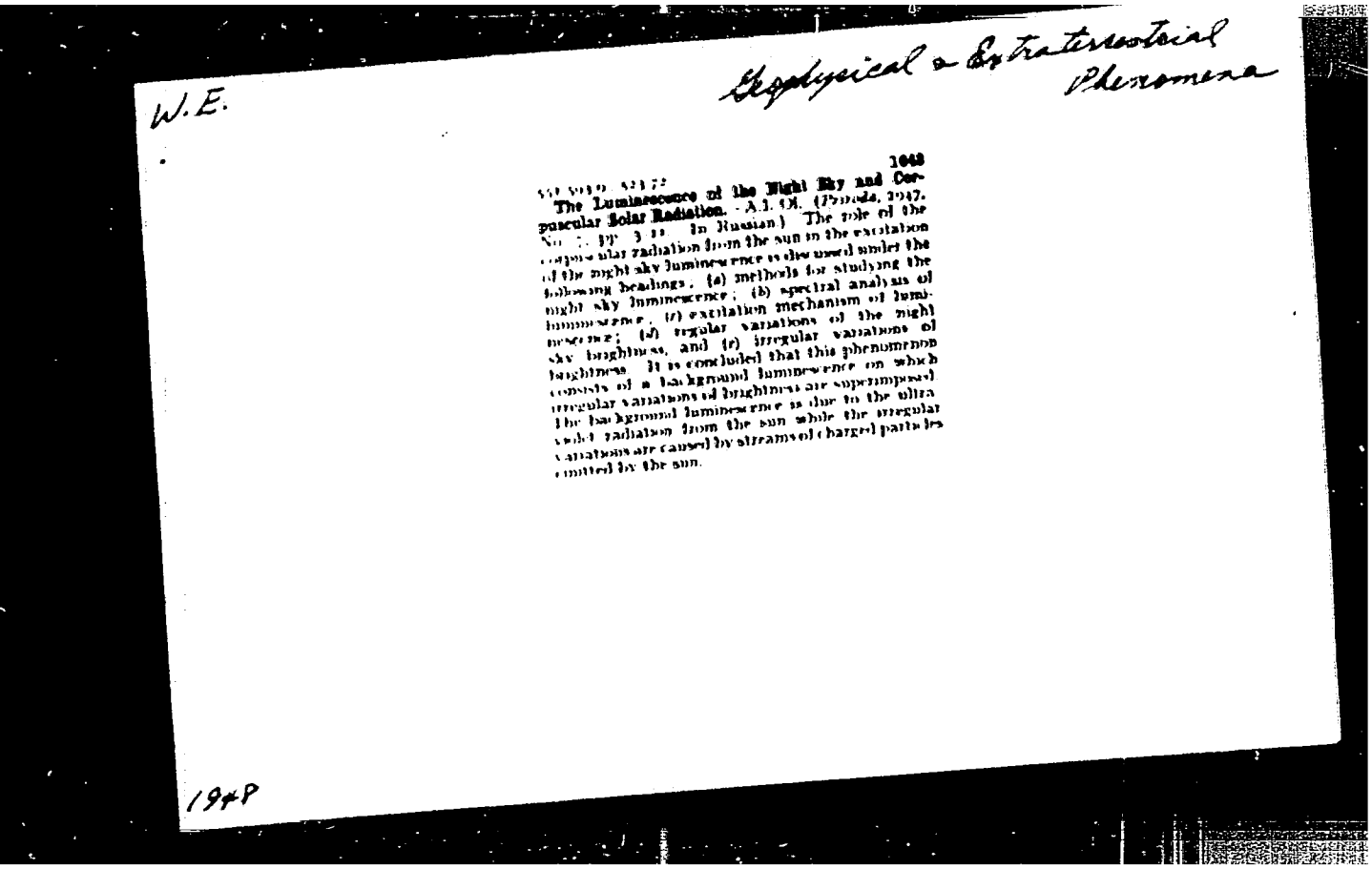
1. Akademiya stroitel'stva i arkhitektury SSSR. Leningradskiy filial.
(Leningrad--Precast concrete construction)
(Leningrad--Apartment houses)

LL', A. I.

State Astronomical Observatory (-1943-)

"Solar Activity & Geomagnetic Perturbations,"

Iz. Ak. Nauk SSSR, Ser. Georgraf. i Geofiz., No. 6, 1943



W.E.

Geophysical & Extraterrestrial Phenomena

1948

The Luminescence of the Night Sky and Corpuscular Solar Radiation. - A.I. Ol. (Trudy, 1947. No. : pp 3 ... In Russian) The role of the corpuscular radiation from the sun in the excitation of the night sky luminescence is discussed under the following headings: (a) methods for studying the night sky luminescence; (b) spectral analysis of luminescence; (c) excitation mechanism of luminescence; (d) regular variations of the night sky brightness, and (e) irregular variations of brightness. It is concluded that this phenomenon consists of a background luminescence on which irregular variations of brightness are superimposed. The background luminescence is due to the ultraviolet radiation from the sun while the irregular variations are caused by streams of charged particles emitted by the sun.

1948

1. YEYGENSON, M.S., GNEVYSHEV, M.N., OL', A.I., RUBASHEV, B.M.

2. USSR (600)

4. Physics and Mathematics

7. Solar Activity and its Terrestrial Manifestations, M.S. Yeygenson, M.N. Gnevyshev, A.I. Ol', B. M. Rubashev. (Moscow-Leningrad, State Technical Press, 1948). Reviewed by N.P. Barabashev, Sov. Kniga, No. 2, 1949.

9. [redacted] Report U-3081, 16 Jan. 1953, Unclassified.

OL', A. I.

"Radio Emissions from the Sun," Priroda, No. 1, 1948.

PA5/49T50

OL', A. I.

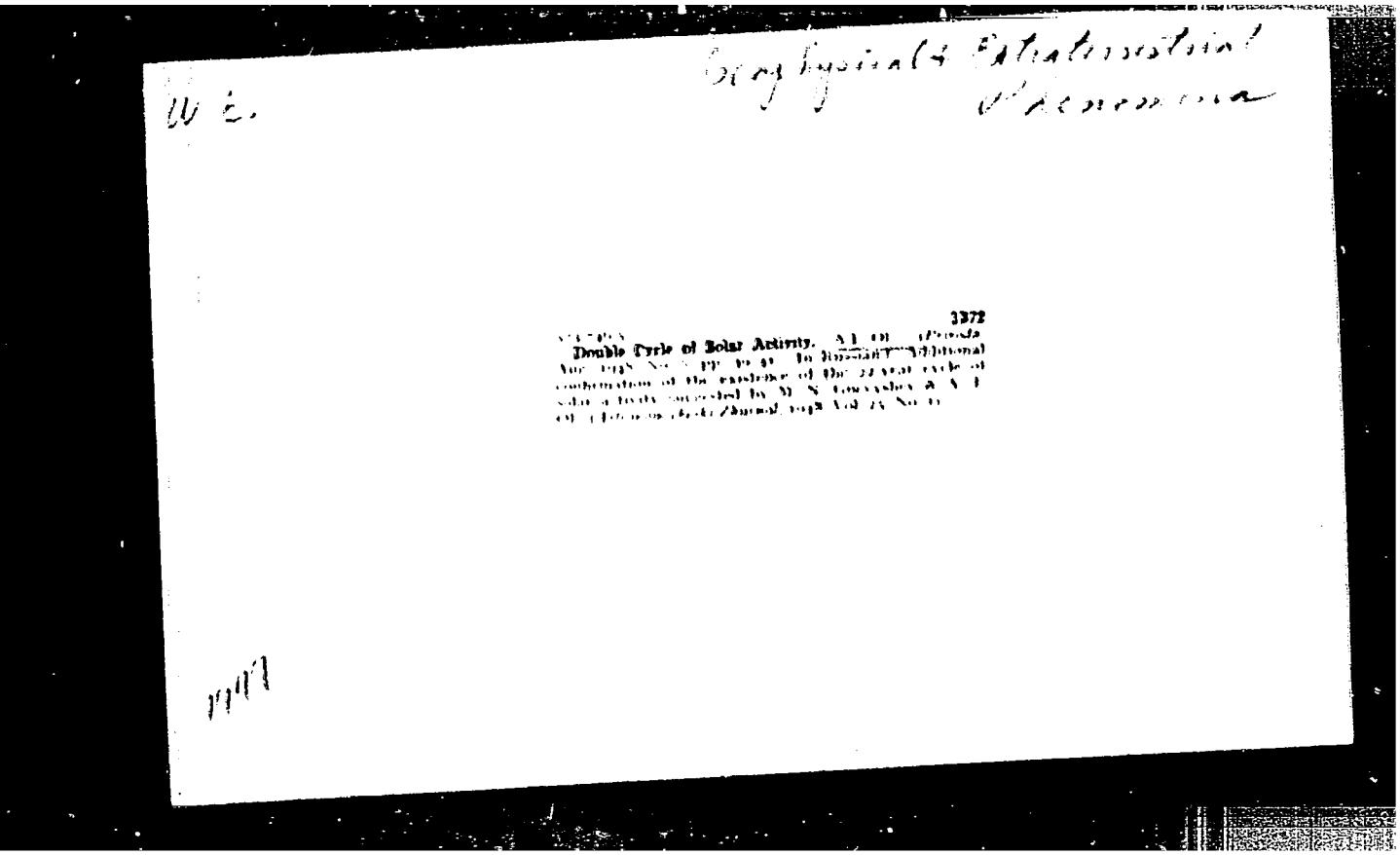
USSR/Geophysics Jul 48
Solar Radiation
Magnetism, Terrestrial

"Geomagnetic Disturbances and Solar Activity," A. I. Ol', 8 pp

"Priroda" No 7

New data showing relationship between subject phenomena. Discusses the solid angle of corpuscular solar radiation, two types of magnetic storms, tests conducted to identify the so-called M-region, and studies on ionized calcium lines during magnetic storms.

5/49T50



3372

Double Cycle of Solar Activity.

OL' A. I.

PA 9/49T58

USSR/Geophysics
Ionosphere Sep 48
Magnetic Fields - Earth

"Relation of the Ionization of the F_2 Layer to the Earth's Magnetic Field," A. I. Ol', 2 pp

"Priroda" No 9

Describes annual ionization cycle of F_2 layer. Discusses phenomenon known as "longitudinal effect". Compares ionization of F_2 layer at various points on earth's surface exposed to sun's rays.

[redacted]

9/49T58

OL', A. I.

USSR/Physics
Sunspots
Solar Phenomena

Jan/Feb 1948

"The 22-year Cycle of Solar Activity," M. N. Gnevyshev, A. I. Ol', Pikova Observatory, Acad Sci, USSR, 3 pp

"Astr Zhur" Vol XXV, No 1

Discusses the change in polarity of sunspots, and the law of formation of the 22-year cycle from the 11-year cycle.

PA 41T103

CL', A. I.

"Geomagnetic Disturbances and Solar Activity (New Studies of their Correlation)"
Priroda Vol 37, No. 7, 1948, 3-10

Translation 563404

OL', A. I.

"Relation Between the Ionization of the F_2 Layer and the Earth's Magnetic Field"
Priroda Vol. 37, No. 9, 1948, 50-52

Translation 563483

PA 35/49T101

USSR/Physics
Astronomy
Solar Phenomena

Dec 48

"The Problem Concerning the 22-Year Cycle of Solar Activity," A. I. Ol', Pulkovo Obs, Acad Sci USSR, 2 pp

"Dok Ak Nauk SSSR" Vol LXIII, No 6

Uses new factor or characteristic to check the connection between the even 11-year cycle and the odd 11-year cycle. This new characteristic T_1, the time of increase of the cycle, is the interval of time between the beginning of the cycle and the time of its maximum. Submitted by Acad S. I. Vavilov, 1 Nov 48.

35/49T101

OL', A. I.

Ol', A. I.

Ol', A. I. - "On the long-term prognosis of solar activity", Byulleten' Komissii po issledovaniyu Solntsa (Akad. nauk SSSR), No. 1, 1949, p. 17-22, - Bibliog: p. 22.

SO: U-4631, 16 Sept. 53, (Letopis 'nykh Statey, No. 24, 1949).

OL'A I.

Ol'a I. - "On the contours of the H and K lines of the solar spectrum during magnetic storms", Byulleten' Komissii po issledovaniyu Solntsa (Akad. nauk SSSR), No. 1, 1949, p. 23-24

SO: U-4631, 16 Sept. 53, (Letopis 'nykh Statey, No. 24, 1949).

OL', A. I.

35164. O Dolgorochnom Prognoze Solnechnoy Aktivnosti Na Konets Tekushchego I Na Sletsuyushchi Y Ii-Letniy Tsikl. Byulleten' Komissii Po Issledvaniyu Solntsa (Akad. Nauk SSSR), No. 2, 1949, s. 13-16

SO: Letopis' Zhurnal'nykh Statey, Vol. 48, Moskva, 1949

OL', A. I.

"Review of Pierre Augur's Book 'What are Cosmic Rays,'" No. 7, 1949.

OL', A. I.

PA 67/49T6

USSR/Astronomy - Solar Phenomena Aug 49
Sunspots

"Review of V. V. Sharanov's, The Sun and Observations of the Sun," A. I. Ol', 1 3/4 pp

"Priroda" No 8

Prof Sharanov's classification of sunspots is already widely known. This book is descriptive and instructive. Chapters V, VI and VII, describing the method of determining the coordinates and area of sunspots and instructions on the statistical study required for such determination, are particularly valuable. It defects do not detract greatly from its value.

67/49T6

OL', A. I.

"The Brightness of the Solar Corona," Priroda, No. 11, 1949.

OL', A. I.

"The Secular Behavior of the Magnetic Field and Terrestrial Seismism," Prirodа, No. 12, 1949.

OL', A. I.

OL', A.I. (Pulkov Observatory)

The twenty-two year cycle of solar activity.

Doklady Akademii Nauk, S.S.S.R.

63, 6, 1949, 629-30

From: B.M.L. Guide to R.-Scientific Per. Lit. No. 5, May 1949, p. 171

OL', A. I.

"Microseisms and Solar Activity," Priroda, No. 2, 1950.

OL', A.I.

USSR/Geophysics - Seismology Mar 50

"The Structure of the Earth and the Physical Properties of Matter in the Terrestrial Depths," A. I. Ol',

"Priroda" No 3, pp 3-9

Studies the speeds of seismic waves (P and S), pressures, and densities within the earth as functions of distance from the center. Four regions within the earth are distinguished which cause discontinuities in the above graphs. Considers the relation between the thickness of the Earth's const (H) and the vertical component of

219T64

the residual geomagnetic field (delta-Z). Also considers the elec cond (sigma) and temp (T) in the earth as functions of depth.

219T64

OL', A. I.

"The Largest Stone Meteorite, Priroda, Vol. 39, No. 4, 1950.

A. I. Ol'

USSR/Geophysics - Northern Lights Sep 50
Night Sky

"New Investigations on the Northern Lights,"
A. I. Ol'

"Priroda" No 9, pp 3-14

Discusses basic types, geographical distribution, diurnal behavior, relation to magnetic excitation, comparison with solar activity, height, spectrum, and theory. Claims that Soviet scientists will soon amalgamate the present 2 theories into one.

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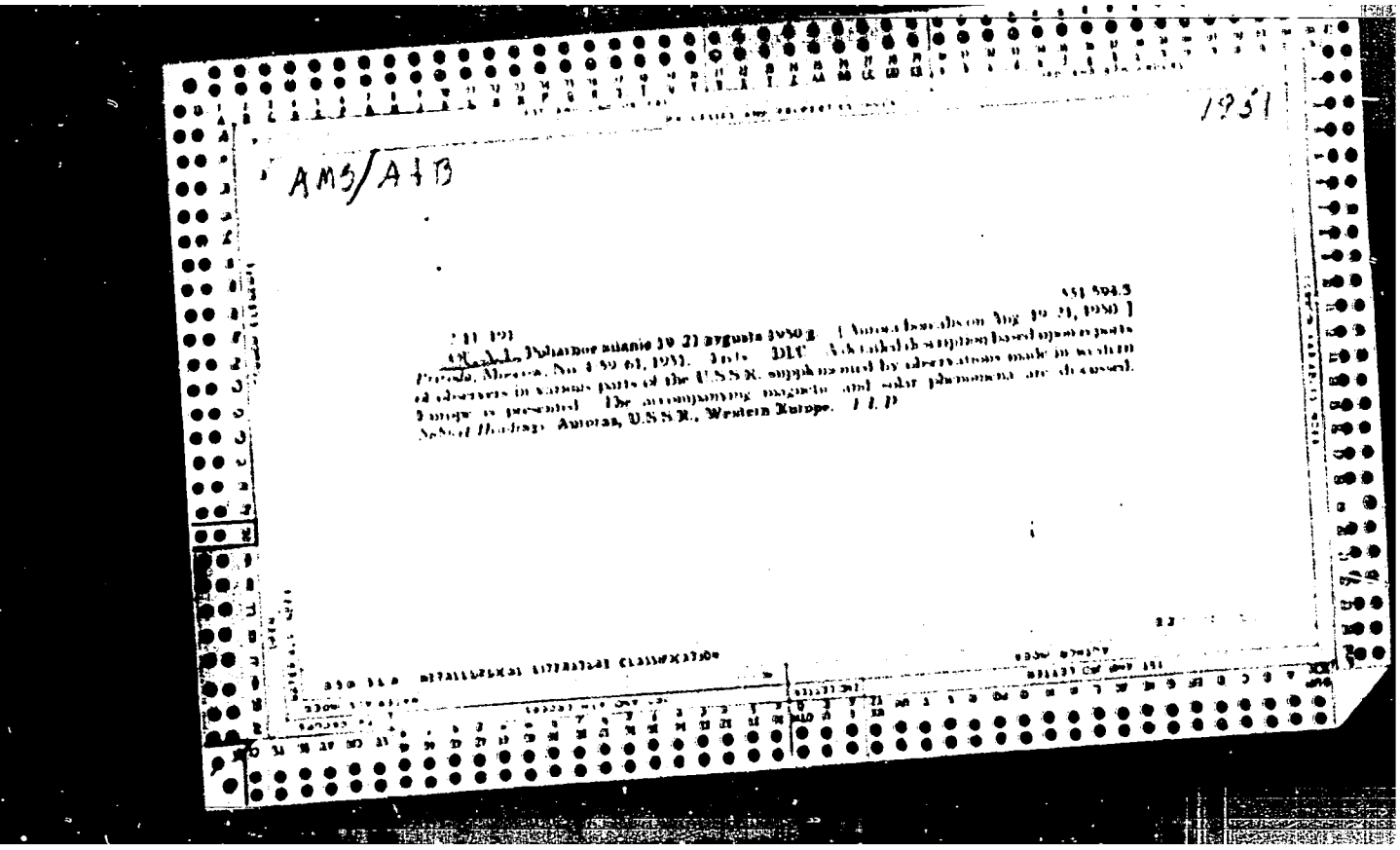
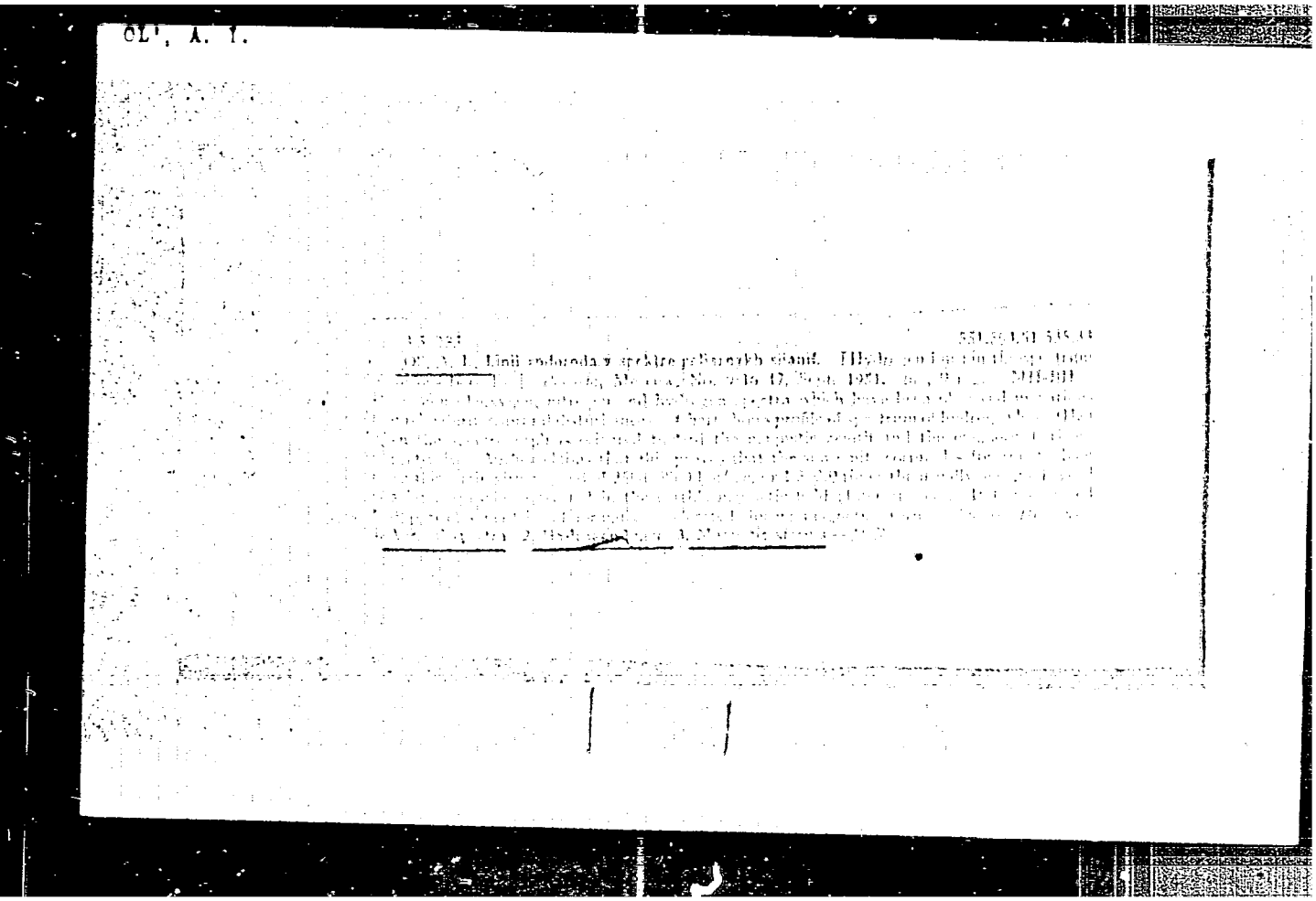
212T75





CL', A. I.

Polyarnoye siyaniye 19-21 avgusta 1950 g. (Aurora Borealis on August 19-21, 1950). Priroda, 1951, .v. 40, no. 4, p. 59-61, diagr., 4 refs.

Q4.P8 v. 40

7C-82 551.521.64:523 [illegible]

OL', A. I., Izmeneniia i[illegible] nsivnosti kosmicheskikh luchei, sviazannye s deistel'nost'iu solntsa (Variations in the intens[illegible] [illegible] rays as a result of solar act[illegible]) [illegible] Priroda, Moscow, 40 [illegible] 48-52, 1951. [illegible] DLC [illegible] [illegible] and [illegible] [illegible] magnetic [illegible] [illegible] cosmic ray intensity [illegible] research [illegible] Geomagnetic effects on cosmic rays. 4. Solar activity. 5. U.S.S.R.

USSR/Geophysics - Ultraviolet Solar Radiation May 52

"New Data on the Ultraviolet Radiation of the Sun," A. I. Ol', Jr Sci Assoc, Library of Acad Sci USSR, Leningrad

"Priroda" Vol 41, No 5, pp 103-106

States that the solar radiation in the far ultraviolet region of the spectrum possesses great value for the clarification of a number of problems in the physics of the upper layers of the

230T62

OL', A. I., JR SCI ASSOC

atm, especially the theory of I. S. Shklovskiy concerning the E layer ("Iz Krymskoy Astrofiz Obser" Vol 4, 1949). Cites mainly works appearing in Phys Rev.

230T62

ZVEREV,M.S., redaktor; OL',A.I., redaktor; KIRNARSKAYA,A.A., tekhnicheskiy redaktor

[Proceedings of the 11th Astrometrical Conference of the U.S.S.R., Pulkovo, May 24-26, 1954.] Trudy 11-i astronomicheskoi konferentsii SSSR; 24-26 maia 1954 g. Leningrad, Izd.Glav.astronomicheskoi observatorii v Pulkove, 1955. 269 p. (MLRA 9:2)

1. Vsesoyuznaya astrometricheskaya konferentsiya. 11th, Pulkovo, 1954. 2. Chlen-korrespondent AN SSSR (for Zverev).
(Pulkovo--Astrometry--Congresses)

Ol', A.I.

"The Connection Between Solar Activity and Geomagnetic Disturbances."

The Physics of Solar Corpuscular Streams and their Influence on the Upper Atmosphere of the Earth, Moscow, Izdatel'stvo Akademii Nauk SSSR, 1957.

82437
S/169/60/000/004/001/002
A005/A001

3.9000

Translation from: Referativnyy zhurnal, Geofizika, 1960, No. 4, P. 152, # 4054

AUTHOR: Ol', A.I.

TITLE: Variations in Cosmic-Ray Intensity During Magnetic Storms Having Sudden and Gradual Commencements

PERIODICAL: Solnechnyye dannyye, 1959, No. 2, pp. 68-71

TEXT: The author shows that drops in the intensity of the meson component of cosmic rays on the average by 0.7% are caused by magnetic disturbances having sudden (Sc) commencement. The rate of drop increases with the intensity of magnetic disturbance. Magnetic disturbances with gradual (G) commencement do not show connection with variations in the meson intensity. A noticeable increase in neutron component intensity was detected during the magnetic storms of G type by observations of cosmic rays on the Heys island, the stations at mean latitudes on Zugspitze (FRG) and Berkeley (USA), whereas intensity drops took place as usually during the Sc storms. The same results were obtained on the Heys island and the Berkeley station for the meson component, but the amplitudes of drop and rise were much lower (of the order of a few tenths of a percent). Increases in cosmic radiation intensity connected with G-type storms originate 1-2 days before the

Card 1/2

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A005/A001

Variations in Cosmic-Ray Intensity During Magnetic Storms Having Sudden and Gradual Commencements

day of storm, whereas decreases in intensity set in 1-2 days after So-type storms. The author utters the opinion that an increase in cosmic ray intensity is possible in consequence of the emission of high-energy particles by the Sun during relatively weak chromospheric flares.

A.P. Kovalevskiy

Card 2/2

87235

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

3,1550(1057,1062,1129)

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1960, No. 11, p. 64, # 11368

AUTHOR: Ol', A.I.

TITLE: On a Possible Periodicity of Solar Activity

PERIODICAL: Solnechnyye dannyye, 1959, No. 6, pp. 85-88

TEXT: On the basis of the analysis of Wolf numbers from 1700 to 1957, the author supports S. Newcomb's hypothesis that the development of solar activity follows a strong periodicity. He calculated correlation coefficients between the Δ t-values (differences between the instants of commencement of any phase of the cycle) and $\sum$ W, as well as $\sum$ W on the descending branch. Making use of some correlations, the author determines the epoch of minimum of cycle No. 20 to be 1965.2 and the epoch of maximum - 1970.0.

T.L.M.

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

Card 1/1

87470
S/169/60/000/012/009/012
A005/A001

3,1810
9,9840

Translation from: Referativnyy zhurnal, Geofizika, 1960, No. 12, p. 240, # 16417

AUTHOR: Ol', A. I.

TITLE: On the 11-yearly Cycle of Variations in the Number of Aurora Polaris

PERIODICAL: V sb.: Probl. Arktiki i Antarktiki. No. 2, Leningrad, "Morsk. transport", 1960, pp. 77-81

TEXT: The observations of aurora polaris in 1761-1874 (in the main in Scandinavia) were studied, which are listed in the catalogs of Fritz, Rubenson, and Tromkholt. When plotting the average 11-yearly cycle curve of aurora recurrence, it was detected that the 11-yearly cycles may be divided into two groups: the normal (the maximum of aurora recurrence agrees with the maximum of the Wolf numbers) and anomalous (a second maximum of aurora recurrence is observed, which falls in the fifth year after the maximum of the Wolf numbers). The anomalous 11-yearly cycles showed an interconnection with the peaks of the 90-yearly cycles of the solar activity. The study of the cyclic variations of the cloudiness and the number of aurora polaris according to the data from the Blue Hill Observatory (USA) from 1840-1888 showed that the cyclic variation of the cloudiness in normal

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87470

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A005/A001

On the 11-yearly Cycles of Variations in the Number of Aurora Polaris

cycles is generally absent, but in the anomalous cycles appears even the tendency to increased cloudiness near the minimum of the 11-yearly cycles. Therefore, the observed anomalous behavior of the aurora recurrence in some 11-yearly cycles cannot be connected with the corresponding variations of cloudiness. The assumption is expressed that auroras observed at the end of anomalous cycles pertain to red auroras of the B type. It is known that their recurrence has a maximum near the minimum of the 11-yearly cycles of the solar activity, and that the energy of the solar corpuscles causing these auroras is relatively high. - There are 15 references.

A. I. Ol'

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

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3.2410

S/169/61/000/012/078/089
D228/D305

AUTHOR: Zhukovskaya, N. A., and Ol', A. I.

TITLE: Change in the amplitude of the diurnal variation of the cosmic-ray intensity in relation to the magnetic activity

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 12, 1961, 10, abstract 12G57 (V sb. Variatsii kosmich. luchey i solnechn. korpuskulyarn. potoki. no. 2. M., AN SSSR, 1960, 101-104)

TEXT: The dependence of the amplitude of the diurnal variation of cosmic rays on the magnitude of K--the index of geomagnetic activity during the solar activity maximum (1957)--is established. The data were divided into 5 groups depending on the magnitude of the diurnal sum of the K-indices-- ΣKp. It is shown that the amplitude of the diurnal variation increases

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Change in the amplitude...

with the growth of ΣKp to 19 - 23, and that it then sharply decreases at values of $\Sigma Kp = 24 \div 33$. A further increase in in the amplitude is observed at $\Sigma Kp = 34$. An analogous relationship is also detected for the period of the solar activity minimum (1954). Subsequent analysis disclosed that the mean-daily intensity values for days with $\Sigma Kp = 24 \div 33$ show no anomalous behavior. The possible causes of the detected effect are discussed. [Abstracter's note: Complete translation.]

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33072
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D228/D305

3.2410 (2205, 2705, 2805)

AUTHOR: Ol', A. I.

TITLE: Change in the intensity of cosmic rays at the time of magnetic storms with sudden and gradual outbreaks

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 12, 1961, 10, abstract 12G60 (V sb. Variatsii kosmich. luchey i solnechn. korpuskulyarn. potoki. no. 2. M., AN SSSR, 1960, 131-136)

TEXT: The difference in the variations of the intensity of the rigid component of cosmic rays at the time of geomagnetic storms with sudden and gradual outbreaks is studied from data recorded at several points in 1937-1946. A positive correlation has been found between the amplitude of the intensity reduction and its duration. The magnetic activity increases markedly on

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Change in the intensity...

with gradual outbreaks. [Abstracter's note: Complete translation.]

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S/169/61/000/012/082/089
D228/D305

AUTHORS: Ol', A. I., and Tyasto, M. I.

TITLE: The relation of the intensity of cosmic rays to the magnetic activity and radio-emission of the sun

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 12, 1961, 11, abstract 12G62 (V sb. Variatsii kosmich. luchey i solnechn. korpuskulyarn. potoki. no. 2. M., AN SSSR, 1960, 142-145)

TEXT: It has been shown that an abrupt growth in the geomagnetic activity is observed on days with a high level of solar radio-emission coinciding with the reduction in the cosmic-ray intensity. The radio-emission maxima related to the growth of the cosmic-ray intensity are accompanied by reduction of the geomagnetic activity. [Abstracter's note: Complete translation.]

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29885
S/169/61/000/009/048/058
D228/D304

3,9110 (1124, 1482)

AUTHOR: Ol', A. I.

TITLE: Synoptic maps of magnetic disturbances in the Arctic

PERIODICAL: Referativnyy zhurnal. Geofizika, no. 9, 1961, 25, abstract 9G207 (Geomagnitn. vozmushcheniya, no. 4, M., AN SSSR, 1960, 22-29)

TEXT: Synoptic maps of magnetic disturbances for 1957 - 1958 (maps of r_H^Y --the hourly values of the amplitude of the geomagnetic field's horizontal component) were constructed from the data of Soviet high-latitude observatories and drifting stations. Two-hourly maps for 1957 and examples of successive hourly maps for individual disturbances are given. Considerable variations were discovered in the distribution of disturbances according to world time. This distribution is characterized by the presence of individual disturbance foci. The disturbance distribution more often changes haphazardly from hour to hour, but sometimes the disturbance

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