"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

S/141/61/004/003/001/020
E133/E435

Radioastronomical methods ...

935, (1957); (2) using an absorbing screen (Ref.6: N.L.Kaylanovskiy, M.T.Turusbekov, S.E.Khaykin, Transact. of the Fifth Conference on the Problems of Cosmogony. Izd. AN SSSR, M., 1956, p.347); (3) using radiation from an absorbing material (Ref.8: R.Whitehurst, J.Copeland, F.Mitchell, Proc. IRE, 45, 1410 (1957); R.Whitehurst, F.Mitchell, Bull. Amer. Phys. Soc., 2, 282 (1957)); (4) using the radio emission from a wood (Ref.13: P.Mezger, Z. fur Astrophysik, 46, 234 (1958); Z. fur angewandte Physik, 11, 41, (1959); Telefunken Zeitung, 32, Heft 124, June 1959); (5) by several connected methods described in Ref.15 (V.S.Troitskiy, N.M.Tseytlin, Izv. VUS Radiofizika, 3, 667, (1960)) (e.g. measuring the dielectric constant of the soil).
Three methods of measuring the intensity of radio emission from the Sun and the Moon are also described.
1. Comparison of radio emission from the Sun and the Moon (e.g. Ref.27: M.R.Zelinskaya, V.S.Troitskiy, Transact. of the Fifth Conference on the Problems of Cosmogony. Izd.AN SSSR,M.,1956,p.99).
2. Comparison of solar and lunar emission with that of an artificial "Sun" and "Moon" (e.g. Ref.16: A.P.Molchanov, Izv. VUZ

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Radioastronomical methods ... S/141/61/004/003/001/020
E133/E435

Radiofizika, 3, 722 (1960)). These are calibrated sources, which are reflected into the apparatus by plane mirrors of the correct angular dimensions.

3. Measurement of the intensity from the Sun, the Moon and discrete sources with the aid of an absorbing disc of small dimensions (Ref.30: V.D.Krotikov, V.A.Porfir'yev, V.S.Troitskiy, Izv. VUZ. Radiofizika (in press)).

There are 30 references: 19 Soviet and 11 non-Soviet. The four most recent references to English language publications read as follows:

W.Medd, A.Covington, Proc. IRE, 46, 112 (1958);
R.Coates, Proc. IRE, 46, 122 (1958);
J.A.Roberts, G.J.Stanley, Publ. Astr. Soc. Pacific, 71, 485 (1959);
J.Aarons, W.Barron, J.Castelly, Proc. IRE, 46, 325 (1958).

ASSOCIATION: Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete (Scientific Research Institute for Radiophysics at Gor'kiy State University)

SUBMITTED: November 5, 1960

Card 4/4

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

36959

S/141/62/005/001/003/024
E140/E435

3,1720
3,1700

AUTHORS: Razin, V.A., Tseytlin, N.M.

TITLE: On the measurement of radio radiation of the atmosphere and the Earth's surface

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika. v.5, no.1, 1962, 21-30

TEXT: This paper was presented at the All-Union Scientific Session on the occasion of Wireless Day (Moscow, 1961). The authors consider the problems of measurement of the radio radiation of the atmosphere at 3 cm, using very large antenna systems. In this case it is found that the effectively radiating zones are well within the Fresnel zone of the antenna. Since the authors know of no prior study of the problems arising, they present a derivation of a general expression for the antenna temperature and certain consequences therefrom. The calculation is based on the reciprocity theorem. The author employs only the spectral characteristics of all quantities involved, and the derivation is so carried out. The general expression for antenna temperature T_a follows directly from Poynting's vector

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

$$T_a = -\frac{1}{P}\int_{V_T} T \text{ div } S dV \qquad (3)$$

where S is the value of the Poynting's vector within the body. Since this is very difficult to calculate, further considerations are only qualitative. Only reflector antennas are considered, apparently since it is this type which is used almost exclusively in the field of study covered by the paper. The region of integration is divided into three zones: the principal lobe, the forward halfspace outside of the principal lobe, the back halfspace. This is particularly convenient if it is assumed that the temperature within the principal lobe varies only with the distance, remaining constant over the section. This is well satisfied for atmosphere and Earth measurements. Likewise the zone of Fresnel diffraction is divided into two parts: a zone of geometrical optics, where more than two or three Fresnel zones fit into the antenna aperture, and a zone of rapidly oscillating field, where the aperture covers from one to three or so Fresnel zones.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

On the measurement of radio ... S/141/62/005/001/003/024
E140/E435

The analysis is carried out with a view to the problems of estimating atmospheric absorption from the radiation of the atmosphere and the antenna noise background due to radiation from the Earth as a function of antenna azimuthal orientation.

ASSOCIATION: Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete (Radiophysics Scientific Research Institute at Gor'kiy University)

SUBMITTED: May 27, 1961

Card 3/3

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TROITSKIY, V.S.; TSEYTLIN, N.M.

Use of an absolute radio astronomy method for calibrating small antenna systems at microwave frequencies. Izv. vys. ucheb. zav.; radiofiz. 5 no.4:623-628 '62. (MIRA 16:7)

1. Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete.
(Radio astronomy) (Microwave measurements)
(Antennas (Electronics))

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TSEYTLIN, N.M.

Problem concerning the absolute measurement of cosmic radiation. Izv. vys. ucheb. zav.; radiofiz. 5 no.4:810-812 '62. (MIRA 16:7)

1. Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete.
(Cosmic rays--Measurement)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

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L 14695-63 EWT(d)/EWT(1)/FBD/FCC(w)/BDS/T-2/EEC-2/EED-2/ES(v)/ES(t)-2
APFTC/AFMDC/APGC/ASD/ESD-3/SSD Pe-4/Pi-4 PT-2/GW
ACCESSION NR: AP3004850 S/0141/63/006/003/0629/0630 29 26

AUTHOR: Lastochkin, V. P.; Porfir'yev, V. A.; Stankevich, K. S.; Troitskiy, V. S.; Kholodilov, N. N.; Tseytlin, N. M.

TITLE: Precision measurements of radiation intensity from discrete sources in Cas-A, Cyg-A, and Tau-A in the decimeter band

SOURCE: IVUZ. Radiofizika, v. 6, no. 3, 1963, 629-630

TOPIC TAGS: Cas-A, Cyg-A, Tau-A, radiation source, radio source, cosmic source, radiation temperature, antenna temperature, black body

ABSTRACT: Test results and receiving equipment are described for radio reception recorded in the autumn of 1962 from discrete sources in Cas-A, Cyg-A, and Tau-A in the decimeter band. An 8-meter parabolic antenna was used which was designed to track a given source by maintaining an optical match with a visible star pattern in which the source location was known. Tracking error by this means was of the order of ±0.5'. Operating wavelengths were 25.2, 34.2, 4[illegible], and 54.3 cm, for which the pattern widths were 150, 200, 240, and 300', respectively. For each source a nearby cosmic region was chosen as a reference point, the same

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L 14695-63
ACCESSION NR: AP3004850

2

point being used for all wavelengths. The receiver used was a wideband modulated type with sensitivity of 0.3—0.4K at a 16-sec time constant. Compensation for temperature drift in the antenna and its cold standard was provided by a gas discharge tube fed via directional coupler to the antenna; a further correction was made for the difference in steady-state background noise levels existing between the measured source and its reference point. Absolute calibration of received signals was made against radiation from a black-body disk "moon" of the type used earlier by Krotikov et al. (Izv. vy*ssh. uch. zav. - Radiofizika, 4, 1004 (1961)) in similar measurements, which subtended an angle of 56.34' and was elevated 26° above the horizon to minimize diffraction effects. Radiation temperature of the disk fell between 3 and 12K depending on wavelength, while source radiations were in the 4—20K range. The results are tabulated, giving both absolute flux density and density relative to the particular reference calibration area. Flux density tended to increase with longer wavelengths and was generally greatest from the Cas-A source, with a measured maximum of about 50×10^{-24} w/m^2/cps at 53.4 cm. The rms errors are included; they had a maximum calculated to be ±10.5%. The coordinates of sources and reference areas are given. "The authors are deeply grateful to Ya. M. Parnas and T. V. Shikina under whose direction the coating for the black-body disk was prepared and

ASSOCIATION: Radiophysical Scientific Research Inst., Gor'kiy Un.

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APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

STANKEVICH, K.S.; BONDAR', L.N.

Fluctuations in atmospheric radio emission. Izv. vys. ucheb. zav.; radiofiz. 6 no.4:669-673 '63. (MIRA 16:12)

1. Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

KAPLAN, S.A.; ZAYTSEV, V.V.; KISLYAKOV, A.G.; KOBRIN, M.M.; TSEYTLIN, N.M.

Fourth All-Union Conference on Radio Astronomy. Izv. vys. ucheb. zav.; radiofiz. 6 no.4:861-869 '63. (MIRA 16:12)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

[illegible]

AUTH: [illegible]

ALTA: [illegible]
Tseytlin, [illegible]

[illegible] measuring [illegible] emission intensity of [illegible] and Jupiter at the [illegible] a series [illegible] cm wavelength

SOURCE: IVUZ. Radiofizika, v. [illegible], n. [illegible], 1964, [illegible]

TOPIC TAGS: cassiopeia A, radiation spectrum, artificial Moon method, modulation radiometer, cold standard, black standard

ABSTRACT: [illegible] measurements [illegible] sources of radio emission in [illegible] September 1963 at the [illegible] spectra [illegible] measured [illegible]

of Cass[illegible]
ry, Sv_{Cass} = 6.1 x 10[illegible]

Card 1/3

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ACCESSION NR: AP4044109

[illegible] according to the radiation of [illegible] with a sen- [illegible]

[illegible] signal between [illegible]

table.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

L 15738-65
ACCESSION NR: AP4044109

ASSOCIATION: Nauchno-issledovatel'skiy radiofizicheskiy institut, Gor'kovskiy universitet (Scientific Research Institute of Radiophysics, Gor'kiy University

SUBMITTED: 21Dec63 ENCL: 00

SUB CODE: AA, EC NO REF SOV: 004 OTHER: 007

Card 3/3

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

S/0141/64/007/005/0817/0821

AUTHOR: Dmitrenko, D. A.; [illegible]

TITLE: Absorption of 70.17 cm radio emission in the atmosphere

SOURCE: [illegible] Radiofizika, v. 7, no. 5, 1964, 817-821

Card 1/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

ACCESSION NR: AP4040842 S/0033/64/041/003/0446/0451

AUTHOR: Troitskiy, V. S.; Tsoytlin, N. M.; Porfir'yev, V. A.

TITLE: Results of measurements of the intensity of radio emission of the source Taurus-A in the decimeter wavelength range

SOURCE: Astronomicheskiy zhurnal, v. 41, no. 3, 1964, 446-451

TOPIC TAGS: astronomy, radio astronomy, Taurus-A, radio emission, artificial satellite

ABSTRACT: Measurements of the intensity of the radio emission from the discrete source Taurus-A were made in July-September 1962 at a number of wavelengths in the decimeter range: 25.1, 34.25, 35.9, 42.4 and 54.4 cm. The measurements were made with a parabolic antenna with an aperture diameter D = 8 meters. The antenna parameters are given in a table. The measurement method involved the comparison of the received radiation of the source and the standard (reference) radiation of an artificial moon, a metal disk 3.8 meters in diameter, covered by an absorbing material with a known temperature. The reference signal was the difference in the antenna temperatures caused by radiation of the disk and radiation of the region of the sky shielded by the disk. This difference is measured by the successive movement of the disk to and away from the main lobe of the diagram. The source was

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

ACCESSION NR: AP4040842

observed at altitudes ranging from 35 to 60°. The measured values of the intensity of the radio emission of Taurus-A are shown in Fig. 1 of the Enclosure. The new data are plotted as circles; data obtained by various other authors are shown for comparison. A straight line can be drawn through the experimental points, corresponding to a spectral index of the intensity of the radio emission of Taurus-A of $\alpha = -0.25$. For further increase in accuracy it is proposed that the measurements be repeated in the considered range and that a detailed investigation be made of the intensity of radio emission in the range 10 cm $\leqslant \lambda \leqslant$ 25 cm and at wavelengths $\lambda > 60$ cm. Orig. art. has: 6 formulas, 1 figure, and 3 tables.

ASSOCIATION: Radiofizicheskiy institut Gor'kovskogo gosudarstvennogo universiteta imeni N. N. Lobachevskogo (Radio Physics Institute, Gorky State University)

SUBMITTED: 18May63 ATD PRESS: 3082 ENCL: 01

SUB CODE: AA, EC NO REF SOV: 008 OTHER: 012

Card 2/3

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

ACCESSION NR: AP4040842

ENCLOSURE: 01

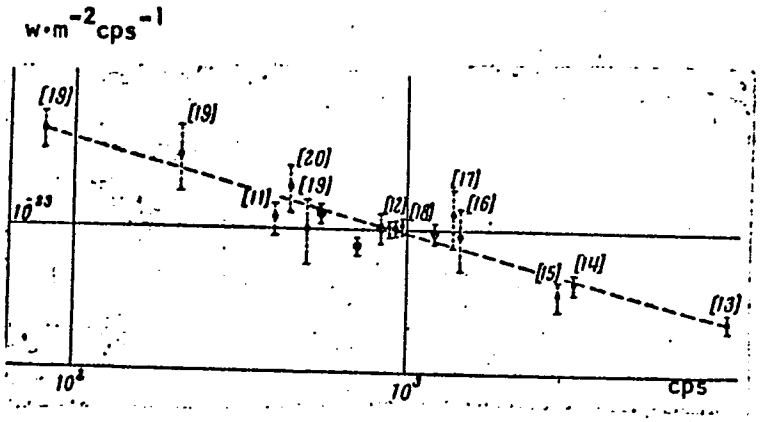

Fig. 1. Intensity of the radio emission of Taurus-A

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APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

ABSTRACT: The radio-emission temperature of the Moon has been mea-

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

L 17938-65
ACCESSION NR: AP4047159

fluctuation sensitivity [illegible] at a time [illegible] sec. [illegible] lunar radio emission, [illegible]

ASSOCIATION: Nauchno-issledovatel'skiy radiofizicheskiy in-t pri Gor'kovskom gos. universitete [illegible] Research Institute [illegible]

[illegible]

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

L 29195-66 EWT(1)/T WR

ACC NR: AP6008281 SOURCE CODE: UR/0109/66/011/003/0451/0455

AUTHOR: Stankevich, K. S.; Tseytlin, N. M.

ORG: none

39
38
B

TITLE: Effect of exciter defocusing on the accuracy of 25B antenna measurements

SOURCE: Radiotekhnika i elektronika, v. 11, no. 3, 1966, 451-455

TOPIC TAGS: antenna, antenna calibration

ABSTRACT: Variation of maximum antenna gain with distance is considered for various values of the phase error at the aperture which may be caused by an out-of-focus condition of the exciter. Small error in conventional antenna measurements at $R \geqslant 2D^2/\lambda$ is ensured only with cophasal irradiation of the aperture (the exciter situated in the mirror focus). In real antennas, an out-of-focus condition changes the gain ratio G_A/G_∞, which must be taken into account in accurate

Card 1/2 UDC: 621.396.67.012.12

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L 29195-66
ACC NR: AP6008281

(within a few per cent) antenna calibrations. The effect of exciter displacement along the axis of symmetry on the G_A/G_∞ ratio is considered in detail; formulas and curves for uniform and Gaussian distributions of amplitudes over the aperture permit calculating the above ratio. The above results assume a point source of radiation. For an extended source, US NBS formulas are used (Ming-Kuei Hu, J. Res., NBS, 1961, 65D, 2, 137). "The authors wish to thank V. S. Troitskiy for discussing results and lending the experimental data." Orig. art. has: 4 figures and 13 formulas.

SUB CODE: 09 / SUBM DATE: 25Nov64 / ORIG REF: 004 / OTH REF: 001

Card 2/2 BLG

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

L 1940-66 FBD/EWT(1) GW/WS-2

ACCESSION NR: AP5020672 UR/0033/65/042/004/0705/0708
523.164.42

44
34
B

AUTHOR: Lastochkin, V. P.; Lukin, E. B.; Stankevich, K. S.; Tseytlin, N. M.
55 55 55 55

TITLE: Using lunar occultations to study the Crab Nebula

SOURCE: Astronomicheskiy zhurnal, v. 42, no. 4, 1965, 705-708

TOPIC TAGS: radio astronomy, 12, 55 nebula, lunar phenomenon

ABSTRACT: During lunar occultation of a discrete source, the radio waves emitted by the source are diffracted by the surface of the moon, and an observer on the earth sees a distribution of intensities which corresponds to the Fresnel diffraction region. An occultation can be considered as a diffraction on the edge of an infinite half-screen. The width of the interference bands generated by superposition of the direct rays and those reflected from the spherical lunar surface, in a plane perpendicular to the incident rays and passing through the center of the moon, being

$$\delta = \frac{3}{2} a \left(\frac{\lambda}{4a}\right)^{1/3}$$

(where a is the radius of the moon), is smaller by a factor of 10^2–10^3 than

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L 1940-66

ACCESSION NR: AP5020672

the first Fresnel zone $\sqrt{\lambda R}$ (R is the distance to the moon), and consequently the average distribution of the field cannot be altered by possible interference effects. Experimental data on the distribution of intensity during occultations of a source with extremely small angular dimensions agree well with the diffraction pattern of an infinite half-screen. Ordinarily, the antenna is directed toward the discrete source during observation of an occultation, so that the moon is a moving screen. If temperature changes in the antenna due to passage of the moon through the radiation pattern during occultation of the source are disregarded, then the antenna temperature is proportional to:

$$T_A \sim \int\int_{-\infty}^{\infty} F(\theta, \varphi) T(\theta, \varphi) I(\theta - x, \varphi) d\theta\, d\varphi,$$

where the θ axis is along the direction of motion of the source, $F(\theta, \phi)$ is the antenna pattern, $T(\theta, \phi)$ is the distribution of brightness from the source, and $I(\theta - x, \phi)$ is the distribution of intensity from a point source for the case of diffraction on the edge of an infinite half-screen.

$$I(\theta - x) = \left\{C\left[(\theta - x)\sqrt{\frac{\pi R}{\lambda}}\right] + \frac{1}{2}\right\}^2 + \left\{S\left[(\theta - x)\sqrt{\frac{\pi R}{\lambda}}\right] + \frac{1}{2}\right\}^2$$

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ACCESSION NR: AP5020672

and

$$C(w)=\sqrt{\frac{2}{\pi}}\int_0^w \cos\eta^2 d\eta \quad \text{и} \quad S(w)=\sqrt{\frac{2}{\pi}}\int_0^w \sin\eta^2 d\eta$$

10

are Fresnel integrals. It is shown that diffraction effects should be taken into account in the reduction of occultation curves even when the source is extended. Three occultations of the Crab Nebula by the moon were observed at 535, 180, and 412, Mc. These occultations were used to obtain data on the angular dimensions of the nebula and on the shift of the effective emission center. The position of the emission center for the nebula is given in Table 1 of the Enclosure, where α and δ are given for points of the source located on the intersection of the source direction of motion with the edge of the lunar disk. "The authors are sincerely grateful to A. G. Kuntsevich and V. S. Lazarevskiy for making the astronomical calculations, and to O. N. Shipule and G. N. Nikulin for help in making the measurements." Orig. art. has: 4 figures, 6 formulas, 1 table. [14]

ASSOCIATION: Radiofizicheskiy institut Gor'kovskogo gos. universiteta (Radiophysics Institute, Gorky State University)

55

SUBMITTED: 22Dec64 ENCL: 01 SUB CODE: AA

NO REF SOV: 002 OTHER: 005 ATD PRESS: 4115

Card 3/4

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

L 1940-66

ACCESSION NR: AP5020672 ENCLOSURE: 01

Table 1.

Frequency, Mc	Transit time of the edge of the moon through the center of the source	α (1950)	Δα	δ (1950)	Angular diameter	Positional occultation angle
535	$18^h59^m.9$	$5^h31^m30^s.9$	$\pm0.2^s$	21°59'.4	5.5'	74°
535	$20^h07^m.3$	$5^h31^m20^s.3$	$\pm0.2^s$	21°59'.3	5.5'	278°
180	$14^h03^m.5$	$5^h31^m31^s.4$	$\pm0.4^s$	21°59'.4	5.5'	108°
180	$15^h07^m.0$	$5^h31^m29^s.6$	$\pm0.45^s$	21°59'.3	6'	236°
412	-	-	-	-	6'	127°

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

L 5122-66 FBD/EWT(1)/T/FCS(k) GW/WS-2/WR

ACCESSION NR: AP5020116 UR/0109/65/010/008/1363/1400

621.396.67.001.5:523.164

AUTHOR: Tseytlin, N. M.

TITLE: Radio-astronomical methods of investigation of antennas (A review)

SOURCE: Radiotekhnika i elektronika, v. 10, no. 8, 1965, 1363-1400

TOPIC TAGS: antenna, radio astronomy

ABSTRACT: Based on 1948-64 Soviet and 1950-62 Western publications, the review presents an analysis of modern radio-astronomical methods of investigation of antennas. Theoretical aspects are emphasized. These topics are considered: I. Fundamental theory of antennas: (1) Spatial distribution of the antenna field; zones; mirror-antenna radiation; (2) Antenna response to thermal r-f radiation from bodies arbitrarily situated with respect to the antenna; applicability of the concept of brightness temperature in characterization of the antenna response; (3) Antenna temperature (with and without losses); intrinsic noise of the antenna system; background radiation; allowance for atmospheric and Earth r-f radiation. II. Radio-astronomical methods of measurement of antenna

Card 1/2

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L 5122-66

ACCESSION NR: AP5020116

parameters: (1) Aligning the electrical axis of an antenna; (2) Directional pattern measurements; (3) Directive gain measurements; (4) Measurement of the antenna-system efficiency on the basis of its intrinsic noise (cm and decimeter waves); (5) Measurement of $(1-\beta_m)\eta$ on the basis of a distributed cosmic r-f radiation (longer decimeter and meter waves); (6) Measurement of $(1-\beta_m)\eta$ and dispersion factor by natural terrestrial sources; (7) Same, on the basis of r-f radiation of the Moon (cm and decimeter waves); (8) Measuring the antenna parameters on the basis of the radiation from an absolutely black disk (cm and decimeter waves). Orig. art. has: 8 figures and 120 formulas.

ASSOCIATION: none

SUBMITTED: 09Jul64 ENCL: 00 SUB CODE: EC, AA

NO REF SOV: 038 OTHER: 010

Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

BONDAR', L.N.; KROTIKOV, V.D.; STANKEVICH, K.S.; TSEYTLIN, N.M.

Measurement of the atmospheric absorption of radio waves in the S-band. Radiotekh. i elektron. 10 no.4:755-756 Ap '65. (MIRA 18:5)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

LASTOCHKIN, V.P.; LUKIN, E.B.; STANKEVICH, K.S.; TSEYTLIN, N.M.

Study of the Crab nebula using the method of lunar occultations. Astron. zhur. 42 no.4:705-709 Jl-Ag '65. (MIRA 18:8)

1. Radiofizicheskiy institut Gor'kovskogo gosudarstvennogo universiteta.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

DMITRENKO, D.A.; KROTIKOV, V.D.; TROITSKIY, V.S.; TSEYTLIN, N.M.

Atmospheric absorption of radio emission at a wavelength of 70.16 cm. Izv. vys. ucheb. zav.; radiofiz. 7 no.5:817-821 '64. (MIRA 18:2)

1. Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

ZAKHAROV, A.V.; KROTIKOV, V.D.; TROITSKIY, V.S.; TSEYTLIN, N.M.

Results of intensity measurements of the radio emission from discrete sources, the moon, and Jupiter at a wavelength of 70.16 cm. Izv. vys. ucheb. zav.; radiofiz. 7 no.3:553-555 '64. (MIRA 17:11)

1. Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

RYABCHENKO, N.I.; TSEYTLIN, P.I.; YASKEVICH, A.G.

Study of local radiation injuries in DNA by the method of the thermal division of the spirals. Biul.eksp.biol.i med. 54 no.11:51-54 N '62. (MIRA 15:12)

1. Iz Instituta eksperimental'noy biologii (dir. - prof. I.N. Mayskiy) AMN SSSR i Instituta meditsinskoy radiologii (dir. - deystvitel'nyy chlen AMN SSSR G.A.Zedgenidze) AMN SSSR, Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR N.N.Zhukovym-Verezhnikovym.

(RADIOCHEMISTRY) (NUCLEIC ACIDS)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

AZBELEV, V.M.; TONGUR, V.S.; TSEYTLIN, P.I.

"Biochemical bases of medical bacteriology." V.S.Gostev. Reviewed by V.N.Azbelev, V.S.Tongur, P.I.TSeitlin. Zhur.mikrobiol.epid.i immun. no.2:73-75 F '54. (MLRA 7:3)
(Bacteriology) (Biochemistry) (Gostev, V.S.)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TSEYTLIN, P.I.

USSR/General Problems of Pathology - Tumors. T-5

Abs Jour : Ref Zhur - Biol., No 3, 1958, 12670

Author : Tseytlin, P.I., Kapichnikov, M.M.

Inst : Not given

Title : The Effect of Immune Anticancerous Serum on the Restoration of Proteins in Tumors and Normal Organs.

Orig Pub : Byul. Eksperim. biol. i meditsiny, 1955, 40, No 11, 60-62

Abstract : By means of radioactive isotopes a study was made of the speed of restoring proteins in the Ehrlich's ascites tumor and in the liver and spleen of the tumor bearing mice after injecting serum from rabbits that had been immunized with this tumor. Fiffteen to 16 days after a subcutaneous injection of tumor cells, the control animals received normal serum and the experimental animals an immune serum followed by tyrosine-C^{14} (5000 imp per/gm).

Card 1/2 Kabineta fiziko-khimicheskikh metodov issledovaniya i laboratorii biologii antigenov Instituta eksperimental'noy biologii AMN SSSR, Moskva

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

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TSEYTLIN P1

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

SPITKOVSKIY, D.M., TSEYTLIN, P.I.

Viscosimetric determination of the molecular weight of desoxyribonucleoprotein and desyxyribonucleic acid as its constituent [with summary in English]. Biofizika 3 no.3:369-371 '58 (MIRA 11:6)

1. Institut eksperimental'noy biologii AMN SSSR.
(DESOXYRIBONUCLEIC ACID)
(MOLECULAR WEIGHTS)
(VISCOSIMETRY)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TONGUR, V.S.; TSEYTLIN, P.I.

First All-Union Congress on Nucleic Acids and Nucleoproteins. (MIRA 13:8)
Vysokom.soed. 2 no.5:817-822 My '60.
(Nucleic acids--Congresses)
(Nucleoproteins--Congresses)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

SPITKOVSKIY, D.M.; TSEYTLIN, P.I.; TONGUR, V.S.

On the configurations of DNA and certain associated phenomena.
Biofizika 5 no.1:3-15 '60. (MIRA 13:6)

1. Institut eksperimental'noy biologii AMN SSSR, Moskva.
(DESOXYRIBONUCLEIC ACID chem.)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TSEYTLIN, P.I.; UGAROVA, T.Yu.; KLIMOV, V.Yu.; SOKOLOVA, T.D.

Differences in the radiosensitivity of desoxyribonucleoproteins and DNA. Biokhimiia 25 no.1:129-134 Ja-F '60. (MIRA 13:6)

1. Institute of Experimental Biology, Academy of Medical Sciences of the U.S.S.R., Moscow.
(RADIATION EFFECTS)
(NUCLEOPROTEINS)
(DESOXYRIBONUCLEIC ACID)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

BOCHKOV, N.P.; TSEYTLIN, P.I.; KHOMAZYUK, V.G.

Reviews. Biofizika 10 no.3:554-556 '65. (MIRA 18:11)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

L 31194-66 EWP(j)/EWT(m) RM

ACC NR: AP6022568 SOURCE CODE: UR/0216/66/000/002/0197/0210

53

B

AUTHOR: Tseytlin, P. I.; Spitkovskiy, D. I.; Gorin, A. I.; Ivannik, B. P.; Kulikova, L. G.; Luchkina, L. A.; Martynov, E. V.; Ryabchenko, N. I.; Usakovskaya, T. S.

ORG: Institute of Experimental Biology, AMN SSSR, Moscow (Institut eksperimental'noy biologii AMN SSSR)

TITLE: Analysis of radiation injury to deoxyribonucleoproteins at the molecular and supramolecular levels

SOURCE: AN SSSR. Izvestiya. Seriya biologicheskaya, no. 2, 1966, 197-210

TOPIC TAGS: radiation injury, protein, DNA, x ray irradiation, hydrogen bonding, molecular structure

ABSTRACT: X-irradiation does not give rise to covalent crosslinks within the DNA macromolecule, i.e., it does not prevent the separation of DNA strands or interfere with its replication. The authors' studies on optic rotation of DNA and DNP and melting curves indicate that irradiation causes latent damage to the system of hydrogen bonds. The formation of single breaks in the polynucleotide skeleton may result in rotation around the remaining single bond at the site of the break. This may produce local change in the configuration of the DNA macromolecule, resulting in steric hindrance between the DNA and corresponding protein molecule.

Irradiation with doses below 10^3 rad causes breaks only in a small number of DNA molecules. This does not alter the physicochemical properties of the DNA or DNP as a whole, although it undoubtedly has some biological

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ACC NR: AP6022568

effect. Thus, there is no reason to believe that the effects of low irradiation doses, as manifested in structural rearrangements of chromosomes, are related to changes in the DNA macromolecules. The results of studies on the physicomechanical properties of supramolecular oriented DNP structures present in a medium with physiological ionic strength indicate that these formations are highly sensitive to radiation. Orig. art. has: 10 figures. [JPRS]

SUB CODE: 07, 06, 20 / SUBM DATE: 18Dec65 / ORIG REF: 013 / OTH REF: 013

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APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TONGUR, A.M.; PYABCHENKO, N.I.; PASYNSKIY, A.G.; TSEYTLIN, P.I.

Electron microscopic study of the flexibility of single-strand and double-strand (native and denaturated) forms of DNA. Radiobiologiia 5 no.3:330-333 '65. (MIRA 18:7)

1. Institut biokhimii imeni Bakha AN SSSR i Institut eksperimental'noy biologii AMN SSSR, Moskva.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

IVANNIK, B.P.; KOMM, S.G.; SPITKOVSKIY, D.M.; TSEYTLIN, P.I.

Effect of small ionizing radiation doses on some phases of the deoxyribonucleoproteid structuration. Radiobiologiia 5 no.4: 491-493 '65. (MIRA 18:9)

1. Institut eksperimental'noy biologii AMN SSSR; Otdel nauchnoy i eksperimental'noy meditsinskoy kinematografii AMN SSSR i Institut meditsinskoy radiologii AMN SSSR, Moskva.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

RYABCHENKO, N.I.; BRAGINSKAYA, F.I.; EL'FINER, I.Ye.; TSEYTLIN, P.I.

Analysis of degradation mechanisms of DNA macromolecules by ultrasonic waves. Biofizika 9 no.2:162-167 '64. (MIRA 17:12)

1. Institut eksperimental'noy biologii AMN SSSR, Moskva i Institut biologicheskoy fiziki AN SSSR, Moskva.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

RYABCHENKO, N.I.; SPITKOVSKIY, D.M.; TSEYTLIN, P.I.; Prinimala uchastiye YASKEVICH, A.G., studentka

Some physicochemical aspects of single-strand DNA. Biofizika 8 no.1:19-27 '63. (MIRA 17:8)

1. Institut eksperimental'noy biologii AMN SSSR, Moskva i Institut meditsinskoy radiologii AMN SSSR, Moskva.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

RYABCHENKO, N.I.; TSEYTLIN, P.I.

Study of radiation injuries of DNA by thermal separation of strands. Report No.2: Effect of ionizing and ultraviolet radiations on the separation of double spiral DNA. Radiobiologiia 3 no.3:331-335 '63. (MIRA 17:2)

1. Institut eksperimental'noy biologii i Institut meditsinskoy radiologii AMN SSSR, Moskva.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

RYABCHENKO, N.I.; TSEYTLIN,,P.I.

Study of radiation injury to DNA by the method of thermal splitting of threads. Report No.1: Analysis of local injuries to DNA caused by ionizing radiation. Radiobiologiia 3 no.2: 153-158 '63 (MIRA 17:1)

1. Institut eksperimental'noy biologii AMN SSSR i Institut meditsinskoy radiobiologii AMN SSSR, Moskva.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

ACCESSION NR: AP4015077 S/0205/64/004/001/0003/0009

AUTHOR: Tseytlin, P. I.; Yaskevich, G. P.; Ryabchenko, N. I.

TITLE: Effect of ionizing radiation on the hydrogen bond system of DNA macromolecules

SOURCE: Radiobiologiya, v. 4, no. 1, 1964, 3-9

TOPIC TAGS: ionizing x-irradiation effect, DNA macromolecular structure, DNA hydrogen bonds, DNA thermostability, radiation dose, DNA melting temperature, double strand DNA

ABSTRACT: This study of DNA macromolecular structure thermostability is based on the literature and on investigation of DNA solutions. DNA solutions (0.008%) were vibrated at 10 kc and x-irradiated in 0.2M NaCl with doses ranging from 12 to 59 kr. Hydrogen bond system damage in DNA solutions was determined spectrophotometrically by absorption value changes. Melting temperature curves served as thermostability indices. Findings show that radiation doses may markedly reduce DNA melting temperatures without affecting DNA absorption values at room temperature. With increased radiation doses,

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ACCESSION NR: AP4015077

the DNA melting temperature profile deteriorates. Melting temperature decrease is a linear function of the radiation dose. Irradiation breaks down DNA hydrogen bonds into several double strand DNA parts independent of one another. These DNA parts melt at lower temperatures because of reduced molecular weight (100,000 or less). Orig. art. has: 5 figures, 1 table.

ASSOCIATION: Institut eksperimental'noy biologii AMN SSSR, Moscow(Institute of Experimental Biology,AMN SSSR); Institut meditsinskoy radiologii AMN SSSR, Obninsk(Institute of Medical Radiology, AMN SSSR)

SUBMITTED: 17Jul63 DATE ACQ: 12Mar64 ENCL: 00

SUB CODE: LS NO REF SOV: 006 OTHER: 015

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

ACCESSION NR: AP4015083 S/0205/64/004/001/0047/0051

AUTHOR: Ugarova, T. Yu.; Diskina, B. S.; Tseytlin, P. I.

TITLE: Radiosensitivity of ribonuclease in an artificial DNA-ribonuclease complex

SOURCE: Radiobiologiya, v. 4, no. 1, 1964, 47-51

TOPIC TAGS: ribonuclease radiosensitivity, artificial DNA-ribonuclease complex, X-irradiation, ribonuclease inactivation, free ribonuclease, ribonuclease radiation damage

ABSTRACT: Preparations of ribonuclease mixed with DNA, combined in a DNA complex, and in a free state were X-irradiated (RUT-60 unit, 50 kv, 15 ma, 2000 r/min) with doses ranging from 2 to 30 kr. Ribonuclease radiation damage was determined by decrease in enzyme activity. Artificial DNA-ribonuclease complexes were used in this study because of the heterogeneity of natural DNP protein composition and lack of reliable radiation damage indices. Findings show that X-irradiation inactivates ribonuclease combined in a DNA complex considerably more than in a free state or mixed with DNA. Possible mechanisms which may be responsible for the increased radiosensitivity of ribonuclease

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ACCESSION NR: AP4015083

combined in a DNA complex are discussed on the basis of the literature. Several studies of DNA-ribonuclease complexes indicate that approximately 25% of the total number of protein molecules combined with DNA undergo extensive deformation which is accompanied by almost complete loss of protein biological activity. With the ratio between DNA and protein in the artificial complex practically the same as in natural DNP, it appears possible that nucleic acids are inactivated by X-irradiation in a similar manner and this may lead to biological after effects on the chromosome level. Orig. art. has: 2 tables and 1 figure.

ASSOCIATION: Nauchno-issledovatel'skiy institut virusnykh preparatov, Moscow (Scientific-research Institute of Virus Preparations); Institut eksperimental'noy biologii AMN SSSR, Moscow (Institute of Experimental Biology, AMN SSSR)

SUBMITTED: 17Jul63 DATE ACQ: 12Mar64 ENCL: 00

SUB CODE: LS NO REF SOV: 012 OTHER: 012

Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TSEYTLIN, P.I.; YASKEVICH, G.P.; RYABCHENKO, N.I.

Effect of ionizing radiation on the hydrogen bonding system of the DNA macromolecule. Radiobiologiia 4 no.1:3-9 '64. (MIRA 17:4)

1. Institut eksperimental'noy biologii AMN SSSR, Moskva i Institut meditsinskoy radiologii AMN SSSR, Obninsk.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

UGAROVA, T.Yu.; DISKINA, B.S.; TSEYTLIN, P.I.

Radiosensitivity of ribonuclease as a part of an artificially prepared complex DNA-ribonuclease. Radiobiologiia 4 no.1:47-51 '64. (MIRA 17:4)

1. Nauchno-issledovatel'skiy institut virusnykh preparatov, Moskva i Institut eksperimental'noy biologii AMN SSSR, Moskva.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

SPITKOVSKIY, D.M.; TSAY LYAN'-VAN' [TS'ai Lien-Wan]; TONGUR, V.S. ; TSEYTLIN, P.I.

Obtaining a single-spiral deoxyribonucleic acid. Nauch. inform. Otd. nauch. med. inform. AMN SSSR no.1:11-12'61 (MIRA 16:11)

1. Institut eksperimental'noy biologii (direktor- prof. I.N. Mayskiy) AMN SSSR, Moskva.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TSEYTLIN, P.I.; USAKOVSKAYA, T.S.; SPITKOVSKIY, D.M.; TONGUR, V.S.

Study of the radiosensitivity of DNA on the molecular level.
Trudy MOIP. Otd. biol. 7:42-46 '63. (MIRA 16:11)

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AFWL AR/K

58
56

AUTHORS: Ryabchenko, N. I., and Tseytlin, P. I.

TITLE: Study of radiation damage of DNA by thermal splitting of threads. 1. Analysis of local damage to DNA caused by ionization radiation 19

PERIODICAL: Radiobiologiya, v. 3, no. 2, 1963, 153-158

TEXT: The article deals with further development of application of thermal separation of threads method to the analysis of local damage of DNA molecules, which occur as a result of X-ray radiation. The DNA was obtained from calf thymus. To answer the question regarding formation of absence of interstitchings during irradiation of DNA and regarding distribution of breaks in DNA threads, natural DNA was irradiated in 0.01 Na^+ with different doses and after irradiation the separation of threads was conducted by heating the samples at 89° C for 15 min. with subsequent rapid cooling. The intrinsic viscosity ([η]) was then measured. The viscosity was measured with low-gradient Ostwald viscosimeter with subsequent extrapolation to 0 gradient and 0 concentration. It was found that degradation of each thread in the composition of natural DNA is described by the law of chance. The probabilities were determined for single breaks without and in the presence of protective substances. The article contains 3 figures, 1 table and an 18-item bibliography.

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Study of radiation.....

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ASSOCIATION: Institut experimental'noy biologii AMN SSSR (Institute of Experimental Biology of the Academy of Medical Sciences of the USSR) and Institut meditsinskoy radiobiologii AMN SSSR (Institute of Medical Radiobiology of the Academy of Medical Sciences of the USSR), Moscow

SUBMITTED: July 21, 1962

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APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

L 11234-63 EWT(1)/EWT(m)/BDS--AFFTC/ASD--RM/AR/K

ACCESSION NR: AP3001056 S/0205/63/003/003/0331/0335

58
56

AUTHOR: Ryabchenko, N. I.; Tseytlin, P. I.

TITLE: Investigation of radiation damage of DNA by thermal separation of strands. 2. Effect of ionizing and ultraviolet radiation on separation of two-strand DNA

SOURCE: Radiobiologiya, v. 3, no. 3, 1963, 331-335

TOPIC TAGS: DNA, ionizing radiation, ultraviolet radiation, macromolecule denaturation

ABSTRACT: In earlier studies the effects of x-rays and ultraviolet rays on the kinetics of breaks and cross-linking in irradiated DNA were investigated by thermal separation of DNA strands. /Abstracter's note: Russian term "tyazh" translated as "strand"./ But the effect of breaks and cross-linking on the kinetics of DNA strand separation was not studied. In this investigation, both irradiated and non-irradiated DNA preparations were heated at different temperatures, quickly cooled, and then the flexibility factor and temperature viscosity rise were determined for each. Figure 1 shows the effect of heating on irradiated and non-irradiated DNA solutions. X-ray irradiation of DNA does not affect the separation of its strands. The transition from rigid two-strand DNA to flexible one-strand DNA takes place abruptly the

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ACCESSION NR: AP3001056

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same as for non-irradiated DNA. Ultraviolet irradiation of DNA prevents its strands from separating. Data on kinetics of thermal separation of irradiated DNA indicate that DNA macromolecules are subjected to denaturation disturbances. Orig. art. has: 3 figs., 1 table, 2 formulas.

ASSOCIATION: Institut eksperimental'noy biologii i Institut meditsinskoy radiologii AMN SSR, Moscow (Institute of Experimental Biology and Institute of Medical Radiology, AMN, SSSR)

SUBMITTED: 21Jul62 DATE ACQD: 01Jul63 ENCL: 00

SUB CODE: 00 NO REF SOV: 006 OTHER: 014

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Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

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TSEYTLIN, P. I.; USAKOVSKAYA, T. S.

Effect of ionizing radiation on the complexes of deoxyribonucleic acid with methylamine; on the problem of radiosensitive and radioresistant forms of deoxyribonucleic acid. Radiobiologiia 2 no.3:356-361 '62. (MIRA 15:7)

1. Institut eksperimental'noy biologii AMN SSSR, Moskva.

(NUCLEIC ACIDS) (METHYLAMINE)
(X RAYS--PHYSIOLOGICAL EFFECT)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

GOLUBEVA, G. P.; SPITKOVSKIY, D. M.; TSEYTLIN, P. I.

Some common features in the mechanisms of action of ionizing radiation and heat on deoxyribonucleic acid. Radiobiologiia 2 no.3:362-364 '62. (MIRA 15:7)

1. Institut eksperimental'noy biologii AMN SSSR, Moskva.

(NUCLEIC ACIDS) (RADIATION—PHYSIOLOGICAL EFFECT)
(HEAT—PHYSIOLOGICAL EFFECT)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

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42058

27.1220

S/219/62/000/011/002/002
B144/B186

AUTHORS: Ryabchenko, N. I., Tseytlin, P. I., Yaskevich, A. G.

TITLE: Study of local radiation injuries in DNA by thermal separation of the double helix

PERIODICAL: Byulleten' eksperimental'noy biologii i meditsiny, no. 11, 1962, 51 - 54

TEXT: The effect of irradiations on the DNA macromolecule was studied on tha basis of the degradation kinetics and viscosity of its one-strand structures. A double-helix DNA ($N/P \simeq 1.64 - 1.68$; $E(P) \approx 6500 - 6700$; molecular weight $\approx 7 \cdot 10^6 - 8.5 \cdot 10^6$) was obtained from calf thymus and x-ray irradiated with 5000 r/min. UV irradiation lasted for 5 min, dose $4.7 \cdot 10^4$ erg/min·mm^2. One-strand DNA was obtained at 88°C by the method of P. Doty et al. (Proc. nat. Acad. Sci. (Wash.), 1960, v. 46, p.461). The number of strands was calculated from $\log \eta / \log R$ divided by $-\alpha$, where η is the viscosity, R the x-ray dose in r, and α the exponent in the Staudinger equation. Since the number of chains, n, was ~ 1 in irradiated and

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non-irradiated structures, it is assumed that x-ray irradiation does not cause thermostable crosslinking. UV irradiation inhibited the separation of the strands, owing to crosslinking. These results agree closely with the viscosity data obtained with different electrolytes and temperatures. When the Na^+ ion concentration is increased from 0.01 to 0.2 M, the one-strand DNA from irradiated as well as non-irradiated DNA coils up, and the viscosity decreases by 20 - 30 times. When the temperature in 0.2 M Na^+ is raised from 25 to 70°C, the viscosity increases by a factor of 3.0-3.7. The viscosity of the irradiated one-strand DNA is, however, 3-4 times lower than that of the non-irradiated; this is apparently due to solitary breaks in the chains. The effects of increased temperature and ion concentration in UV irradiated one-strand DNA were much less marked. There are 1 figure and 1 table.

ASSOCIATION: Institut eksperimental'noy biologii AMN, SSSR (Institute of Experimental Biology AMS USSR (I. N. Mayskiy, Professor, Director); Institute meditsinskoy radiologii AMN SSSR (Institute of Medical Radiology AMS USSR, Moscow (G. A. Zedgenidze, Member of the AMS USSR, Director)

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Study of local ...

S/219/62/000/011/002/002
B144/B186

PRESENTED: by N. N. Zhukov-Verezhnikov, Member of the AMS USSR

SUBMITTED: February 20, 1962

Card 3/3

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

UGAROVA, T.Yu.; TSEYTLIN, P.I.

Effect of desoxyribonucleic acid on the radiosensitivity of -chymotrypsin in an artificial desoxyribonucleic acid. -chymotrypsin complex. Biul. eksp. biol. i med. 50 no.7:55-58 Jl '60. (MIRA 14:5)

1. Iz Instituta eksperimental'noy biologii (dir. - prof. I.N.Mayskiy) AMN SSSR, Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR N.N. Zhukovym-Verezhnikovym.

(RADIATION--PHYSIOLOGICAL EFFECT)
(CHYMOTRYPSIN) (NUCLEIC ACID)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TSEYTLIN, P. I., SPITKOVSKI, D. M., USAKOVSKAYA, T. S., GOLUBEVA, G. P., RYABCHENKO, N. I., SOKOLOVA, T. D. (USSR).

Structural Lability of Deoxyribonucleic Acids and Deoxyribonucleoproteins as a function of their Molecular Morphology.

report presented at the 5th Int'l. Biochemistry Congress, Moscow, 10-16 Aug. 1961

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TSEYTLIN, P.I.; SPITKOVSKIY, D.M.; RYABCHENKO, N.P.

Relation between the molecular morphology of desoxyribonucleia acd macromolecules and t eir radiosensitivity; radiosensitive and radio-resistant forms of desoxyribonucleia acid. Biofizika 5 no. 4:393-397 '60. (MIRA 13:12)

1. Institut eksperimental'noy biologii AMN SSSR, Moskva.
(DESOXYRIBONUCLEIA ACID) (RADIATION—PHYSIOLOGICAL EFFECT)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TONGUR, V.S.; SPITKOVSKIY, D.M.; TSEYTLIN, P.I.; GORKINA, N.B.

Relation between the configurational stability of desoxyribonucleic acid and its molecular weight; radiosensitive and radioresistant forms of desolyribonucleic acid. Biofizika 6 no. 1:9-14 '61. (MIRA 14:2)

1. Institut eksperimental'noy biologii AMN SSSR, Moskva.
(DESOXYRIBONUCLEIC ACID) (RADIATION—PHYSIOLOGICAL EFFECT)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TSETYLIN, P. M.

"Caisson Disease."

Gigiyena Truda i Tekhnika Bezopasnosti (Labor Hygiene and Safety Technique), 1935, No 6.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

RUBASHKIN, A.S., inzh.; TSEYTLIN, R.A., inzh.; MAKAROV, A.S., inzh.; KOPEYKINA, L.V., red.

[Methods for adjusting the automatic control systems of once-through type boilers] Metodika naladki sistem avtomaticheskogo regulirovaniia priamotochnykh kotlov. Moskva, Izd-vo "Energiia," 1964. 110 p. (MIRA 17:6)

1. ORGRES, trust, Moscow.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TSEYTLIN, R. A.

"The Problem of the Normal Limits of the Peripheral Field of Vision." Cand Med Sci, Kazakh State Medical Inst, Alma-Ata, 1953. (RZhBiol, No 3, Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TSEYTLIN, Roza Davydovna; NEMIROVSKIY, S.A., otvetstvennyy redaktor; SVERDLOVA, I.S., redaktor; BERESLAVSKAYA, L.Sh., tekhnicheskiy redaktor

[Leading fitters and solderers] Peredovye montery-spaishchiki. Moskva, Gos. izd-vo lit-ry voprosam sviazi i radio, 1956. 18 p. (MIRA 9:12)
(Solder and soldering)
(Telephone)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

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480 mg H_2O ml $Al(NO_3)_3$ and Cr sulfate should not

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TSEYTLIN, R. I.

4

USSR

2020. Amperometric titrations with anthranilic acid. A. K. Zhdanov, R. I. Tseitlin and A. M. Yakubov (Zavod. Lab., 1955, 21 [1], 7-10).—Conditions for the amperometric determination of Cu, Zn, Ni and Co with 0·17 M Na anthranilate of pH 5·4 are studied. The optimum conditions are pH 4·5 to 5·5, 15 to 20 per cent. of ethanol, and 15 to 30 mg of the element sought in 50 ml of the solution for titration. For Cu a suitable supporting electrolyte is 0·1 or 1 M KNO_3 in the presence of 1 ml of 0·5 per cent. gelatin solution; the potential applied can be zero or −0·6 V. For Zn, Ni and Co the supporting electrolyte can be 0·5 to 2 M KNO_3, KSCN, KCl, Na_2SO_4 or Na acetate; the applied potential is −1·4 V for Zn, and −1·6 V for Ni and Co. Hydrogen is used to remove dissolved oxygen. The results for Cu, Ni, Zn and Co are satisfactory in the presence of large amounts of Mg, and salts of Mg can be used as supporting electrolytes. Aluminium (0·1 M) causes no interference and, with Ni and Co, Cr (0·04 M) causes no interference. When Pb is present the same solution can be used for an amperometric determination of Pb, using Na_2SO_4, and an amperometric determination of Cu, Zn, Ni or Co by the method described. G. S. SMITH

C11 (2)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TSEYTLIN, S., yurist

Rights of temporary workers. Okhr.truda i sots.strakh. 4 no.12:33 D '61. (MIRA 14:11)
(Temporary employment)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TSEYTLIN, S.

And so the dispute has been solved... Sov. profsoiuzy 19 no.18: 41-43 S '63. (MIRA 16:12)

1. Starshiy yuriskonsul't yuridicheskoy konsul'tatsii Moskovskogo gorodskogo soveta professional'nykh soyuzov.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TSEYTLIN, S., yurist

Rights of seasonal workers. Okhr.truda i sots.strakh. 5 no.4: 38-40 Ap '62. (MIRA 15:4)

(Part-time employment)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TSEYTLIN, S.; BOROVSKAYA, Ye.

Committees on labor disputes. Okhr. truda i sots. strakh. 6 no.11:42-43 N '63. (MIRA 16:11)

1. Starshiye yuriskonsul'ty Moskovskoy yuridicheskoy konsul'tatsii professional'nykh soyuzov.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TSEYTLIN, S., yurist

If there is an argument about remuneration. Izobr.i rats no.4:34 Ap '62. (MIRA 15:4)
(Technological innovations)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TSEYTLIN, S.

Labor disputes and factory and plant local committees. Sov. profsoiuzy 19 no.4:29 F '63. (MIRA 16:2)

1. Starshiy yuriskonsul't yuridicheskoy konsul'tatsii Moskovskogo gorodskogo soveta professional'nykh soyuzov. (Labor disputes) (Trade unions)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TSEYTLIN, S., yurist

Dispute is settled by the committee. Sov. profsoiuzy 18 no.18:45-46 S '62. (MIRA 15:9)

1. Moskovskaya yuridicheskaya konsul'tatsiya professional'nykh soyuzov. (Labor disputes)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TSEYTLIN, S.D., inzh.; RUDCHENKO, V.N.

Use of reinforced concrete spherical shells at the building sites of a metallurgical plant. Prom. strci. 42 no.1:11-12 '65. (MIRA 18:3)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TSEYTLIN, Sof'ya Davydovna

[Temporary and seasonal workers] Vremennye i sezonnye rabotniki. Moskva, Gos.izd-vo iurid. lit-ry, 1[illegible]. 36 p. (MIRA 16:5)

(Migrant labor) (Labor laws and legislation)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TSEYTLIN, S.D.

Planning the organization of building operations. Prom. stroi. 39 no.9:61-62 '61. (MIRA 14:10)

1. Nachal'nik tekhnicheskogo otdela tresta Kazmetallurgstroy.
(Construction industry)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

TSEYTLIN, S.D.

A multiplicity of design details hinders the construction of the plant. Prom.stroi. no.10:18-19 '62. (MIRA 15:12)

1. Trest Kazmetallurgstroy.
(Industrial plants—Design and construction)
(Building—Details)

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TSEYTLIN, S.

Around Christmas trees. Izobr.i rats. no.2:56-57 F '61.
(MIRA 14:2)

1. Starshiy yuriskonsul't yuridicheskoy konsul'tatsii Moskovskogo gorodskogo soveta professional'nykh soyuzov.
(Christmas trees)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

RATTS, Emmanuil Genrikhovich, kand. tekhn. nauk; TSEYTLIN, Semen Yudovich, kand. tekhn. nauk; MILOVIDOV, Konstantin Ivanovich, inzh.; YARMOLINSKIY, Vladimir Moiseyevich, inzh.; ANTONOVA, N.N., inzh., red.

[12 m reinforced concrete crane beams with rod reinforcement stressed by the electrothermal method; practices of the All-Union Research Institute for Reinforced Concrete and Plant No.18 for Reinforced Concrete Products of the Main Administration for Building Materials of the City of Moscow] Zhelezobetonnye podkranovye balki dlinoi 12 M so sterzhnevoi armaturoi, napriagaemoi elektrotermicheskim metodom; opyt raboty VNIIzhelezobetona zavoda zhelezobetonnykh izdelii no.18 Glavmospromstroimaterialov. Moskva, Stroiizdat, 1964. 31 p. (MIRA 18:5)

1. Zaveduyushchiy laboratoriyey sbornykh zhelezobetonnykh konstruktsiy Vsesoyuznogo nauchno-issledovatel'skogo instituta zavodskoy tekhnologii sbornykh zhelezobetonnykh konstruktsiy i izdeliy(for Ratts). 2. Zaveduyushchiy sektorom inzhenernoy konstruktsii Vsesoyuznogo nauchno-issledovatel'skogo instituta zavodskoy tekhnologii sbornykh zhelezobetonnykh konstruktsiy i izdeliy (for TSeytlin). 3. Glavnyy konstruktor sektora inzhenernykh konstruktsiy Vsesoyuznogo nauchno-issledovatel'skogo instituta zavodskoy tekhnologii sbornykh zhelezobetonnykh konstruktsiy i izdeliy(for Milovidov).

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TSEYTLIN, S. G.

Boron content of natural waters. N. V. Tageeva, S. G. TSEYTLIN, and A. I. Morozova (Compt. rend. Acad. Sci. U.R.S.S., 1934, 3, 360--366). Analytical data for samples from petroleum (I), salt lakes, and thermal springs are recorded. B is a normal constituent in each case, and may be technically valuable in (I). H.J.E.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TSEYTLIN, S. G.

Boron content of oil-field waters. S. G. Zeitlin (Compt. rend. Acad. Sci. U.R.S.S., 1936, 1, 123--126). Data are recorded for samples from the Baku, Dagestanskije Ogni, Novogroznenskoie, and Turkestan regions. The borax content of the dry residue was 0·5-- 0·6 %. H.J.E.

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TSEYTLIN, S. G.

CA

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PROCESSES AND PROPERTIES INDEX

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

Radioactive elements in several soils of U. S. S. R. V. I. Baranov and S. G. Tseitlin. *Doklady Akad. Nauk S. S. S. R.* 30, 328-31(1941).—The authors detd. the contents of Ra and Th in a no. of soil samples taken from various regions of U. S. S. R. lying approx. along the 40th meridian. The amts. of the elements and their ratio were approx. const., with Ra content of 10^{-11} g. and Th of 10^{-6}% of the soils used. The authors propose an investigation of the fertility of the soils as related to the radioactive contents. G. M. Kosolapoff

METALLURGICAL LITERATURE CLASSIFICATION

AUTHOR INDEX

1ST AND 2ND LETTER

2ND LETTER

MATERIALS INDEX

3RD AND 4TH ORDERS

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757020008-1

TSEYTLIN, S. G.

Content of radioactive elements in some soils of the U.S.S.R. V. I. Baranov and S. G. Zeitlin (*Compt. rend. Acad. Sci. U.R.S.S.*, 1941, **30**, 330—333).—Soils off lat. 40° N. were examined. The content of Ra and Th in all the soils investigated was of the same order, viz., 10^{-11}% Ra and 10^{-4}% Th. The ratio Th/Ra is approx. the same in all cases, the average being $6{\cdot}9 \times 10^{4}$, which is approx. the same as the Th/Ra ratio in rocks. The emanation power of the soils was also determined. They all emit an appreciable amount of Rn and Tn. The emanating power is, on the average, 41% Rn and 45% Tn.

A. J. M.

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