ARKHANGEL'SKAYA, V.M.

Enlarged seminar of the Section of Seismology and Seismic Service at the Institute of Geophysics of the [illegible] Sciences of the U.S.S.R. devoted to the study of [illegible]. Izv. AN SSSR. Ser. geofiz. no. 2:[illegible] F '51. [illegible]
(Seismic waves)

ARKHANGEL'SKAYA, V.M.

Investigation of short-period seismic Rayleigh surface waves. Izv. AN SSSR. Ser. geofiz. no.8:1097-1113 Ag '61. (MIRA 14:7)

1. AN SSSR, Institut fiziki Zemli.
(Seismic waves)

ARKHANGEL'SKAYA, V.M.; FEDOROV, S.A.

Some results of studies on the attenuation of Rayleigh surface waves. Izv. AN SSSR. Ser. geofiz. no.8:1122-1131 Ag '61. (MIRA 14:7)

1. Akademiya nauk SSSR, Institut fiziki Zemli.
(Seismic waves)

ARKHANGEL'SKAYA, V.M.

Session of the Council of Seismology of the Academy of Sciences of the U.S.S.R. devoted to research in the field of engineering seismology. Izv. AN SSSR. Ser. geofiz. no.3:394-396 Mr '62. (MIRA 15:2)

(Earthquakes and building--Congresses)

ARKHANGEL'SKAYA, V.M.

Enlarged conference dedicated to the study of surface waves. Izv. AN SSSR. Ser. geofiz. no.9:1219-1220 S '62. (MIRA 15:8)
(Seismic waves)

ARKHANGEL'SKAYA, V.M.

Session devoted to the use of seismic data in the study of the internal structure of the earth held by the Committee on Seismology and the Scientific Committee of the Institute of Earth Physics in connection with the centenary of the birth of the father of seismology, Academician B.B. Golitsyn. Izv. AN SSSR. Ser.geofiz. no.10:1399-1403 O '62. (MIRA 16:2)
(Earth--Internal structure)

ARKHANGEL'SKAYA, V.M.

Development of engineering seismology. Vest. AN SSSR 32 no.2:114-115 F '62. (MIRA 15:2)
(Seismology)

ARKHANGEL'SKAYA, V.M.

Studying surface seismic waves. Vest.AN SSSR 32 no.7:115 Jl '62.
(MIRA 15:7)

(Seismology)

ARKHANGEL'SKAYA, V.M.

Session of the Council on Seismology of the Academy of Sciences of the U.S.S.R. held in Dushanbe. Izv. AN SSSR. Ser.geofiz. no.2:336-339 F '63. (MIRA 16:3)

(Seismology)

L 19020-63 BDS/EWT(1) AFFTC/ESD-3 TF

ACCESSION NR: AP3007668 S/0049/63/000/009/1394/1398

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AUTHOR: Arkhangel'skaya, V. M.

TITLE: Meeting of the Council on Seismology AN SSSR in the city of Frunze [7-13 May 1963]

SOURCE: AN SSSR. Izvestiya. Seriya geofizicheskaya, no. 9, 1963, 1394-1398

TOPIC TAGS: seismic zoning, Seismological Council meeting, Central Asian seismicity, Central Asian seismic map, seismic activity repetition, seismic tectonic zone, seismic research, seismic conference

ABSTRACT: The 22nd Meeting of the Sovet po seysmologii (Council on Seismology AN SSSR), conducted jointly with the Institut fiziki, matematiki i mekhaniki (Institute of Physics, Mathematics, and Mechanics) of the Academy of Sciences of the KirgizSSR, was held on 7-13 May 1963, in Frunze. The meeting dealt with problems related to the regional seismicity and seismic zoning of Central Asia, with special emphasis on the Kirgiz, Kazakh, Tadzhik,

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Turkmen, and Uzbek Republics. The meeting was attended by 108 participants representing 31 organizations from Moscow and the Union Republics. The 34 papers presented summarized the results of seismic-tectonic research and the preparation of seismic maps of many Central Asian areas. A committee was established to accelerate, improve, and coordinate the seismic investigations of several Central Asian research organizations. V. N. Gayskiy, Council Member and Director of the Institut seysmostoykogo stroitel'stva i seysmologii (Institute of Earthquakeproof Construction and Seismology) of the Academy of Sciences, TadzhikSSR, was named committee chairman.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 14Oct63 ENCL: 00

SUB CODE: AS NO REF SOV: 000 OTHER: 000

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ARKHANGEL'SKAYA, V.M.

Session of the Council on Seismology of the Academy of Sciences of the U.S.S.R. in Moscow. Izv. AN SSSR, Ser. geofiz. no.7:1067-1070 Jl '64. (MIRA 17:7)

ACCESSION NR: AP5010411

AUTHOR: Arkhangel'skaya, V. M.

TITLE: Session of the Council on Seismology in Moscow

SOURCE: AN SSSR. Izvestiya. Seriya geofizicheskaya, no. 12, 1964, 1841-1848

TOPIC TAGS: seismology, seismologic instrument, seismologic station, seismograph, geophysic conference, geophysics

Abstract: The Twenty-Fifth Session of the Council on Seismology of the Academy of Sciences, SSSR was convened in Moscow, 5-11 May 1964. In addition to the Council members, 280 representatives of 62 different organizations were in attendance. Fifty-one papers and communications were presented. The work of the conference was divided into two parts, the first [illegible] operation, and work of the Unified Seismic Series [illegible] studies of the earth's crust and the upper mantle. The [illegible] address by Professor Ye. F. Savarenskiy. The following papers are especially noteworthy.

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1. N. V. Kondorskaya and I. I. Popov (Institute of Physics of the Earth - IFZ). Discussion of the organization of the system of observations used by the YeSS. The topics discussed included the current status of the seismic station network, the nature of the work of the subsidiary seismic stations controlled by and reporting to the main zonal stations at Pulkovo, Lvov, Simferopol, Tbilisi, Baku, Ashkhabad, Tashkent, Talgar, Frunze, Dushanbe, Irkutsk, and Yuzhno-Sakhalinsk, the national and international significance of the YeSS, and the [illegible] imposed on network stations by modern [illegible] subsidiary stations [illegible] SSSR [illegible].

2. D. P. Kirnos (IFZ). Development of new apparatus for stationary seismic observations. The speaker described the redesigning of general-purpose seismometers and the development of new systems of long-period seismographs at the IFZ's Division of Seismic and Recording Instruments. The principal goal was to make the characteristics of the vertical and horizontal components identical (instrument magnification [illegible], 1—20 sec interval). A new procedure for determining and regulating the constants of

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these instruments was also described. Newly developed apparatus includes [illegible] long-period [illegible] consists of a [illegible] galvanometer built at the [illegible] Republic [illegible] [illegible] for seismic wave[illegible] photo[illegible] and [illegible] galvanometers.

3. Ye. S. Borisevich (IFZ). Seismic recorders. A number of new instruments and the organizations developing them were discussed. The instruments that [illegible] OSB-VI-M oscillograph [illegible] (the last lot was manufactured in 1964) [2] [illegible] seismic-engineering oscillograph of the ISO type for [illegible] recording of strong earthquakes (mass production to be started in 1965), and experimental models of epicentral seismic stations (ESS) with microphotographic recorders (already developed and [illegible] for testing). Considerable attention has been paid to the production of direct readout recorders.

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At present, seismic instruments are being produced at the Special Construction Bureau (SKB) of the IFZ, at the experimental plant of the Siberian Division of the Academy of Sciences, and in the Moscow Radiomechanics Technicum. Existing demands can be completely satisfied.

The publication of "Information Bulletins" briefly listing the technical data for the new seismic instruments, their costs, and the procedures for ordering them was announced.

4. Ye. A. Koridalin (IFZ). Report on the organization of new seismic stations outside the SSSR which use Soviet-type apparatus. The need for standardizing seismic instruments, recognized by a subcommittee of the YeSS studying the seismicity of the Carpathians and Balkans in 1962, led them to adopt recommendations for standardizing the parameters of seismographs used in studying regional seismicity. Recommendations relating to the parameters of other types of seismometers are being discussed and finalized. Many countries are acquiring and installing instruments purchased from "outside"; in particular, those types used in the Soviet Union — the SK,

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SKh, and VEGIK — are being acquired and used in Communist China, Mongolia, Hungary, Bulgaria, Rumania, and Czechoslovakia. Standard seismic apparatus of the Soviet and American types are exchanged.

Greatly improved instrumentation research is being carried out in a number of countries at geophysical observatories having especially favorable sites (special mine tunnels, a minimum of noise, etc.) These facilities have been built in the SSSR, Czechoslovakia, the German Democratic Republic, and Hungary and are under construction in Poland and Bulgaria. The IFZ is loaning, for the necessary period of time, highly sensitive seismic apparatus to geophysical observatories in Czechoslovakia, the GDR, Hungary, Poland, and Bulgaria for standardization purposes.

5. Z. I. Aronovich. Improved resolution possibilities of the network of supporting seismic stations of the YeSS and the standardization of the frequency characteristics of seismic apparatus. Analysis of the threshold magnitudes M_p of PV waves (longitudinal wave readings from the vertical components) shows that the general-purpose instruments used at various

stations are inadequate, and the possibility of using narrow-band, highly-sensitive apparatus is discussed. Standard instruments selected as most suitable for use at each station in the supporting network are enumerated.

6. V. B. Preobrazhenskiy (IFZ). Apparatus with magnetic memory for recording distant earthquakes. The apparatus consists of a magnetoelectric SK-type seismometer, SZZ magnetic memory equipment, and a PP-6 pen recorder.[3] Registration is selective, and a visible record of distant earthquakes can be obtained from the memory in about 20 sec.

7. V. V. Stepanov and I. B. Sidorov, A highly sensitive seismograph with hot-pen recording. This instrument is designed to record weak and distant earthquakes in an interval of periods from 0.1—1.5 sec. Registration is visual with no subsequent processing required. The outfit consists of an SK-ZM seismometer, a specially built 3-channel UPN-Z amplifier, and an N-002 pen recorder.[4]

8. A. A. Lukk and I. L. Nersesov (IFZ). The structure of the upper mantle to a depth of 1400 km along the Pamir-Baikal profile. [illegible] of longitudinal and transverse waves propagated [illegible] in the Pamir and Hindu-Kush ranges were presented. Travel time curves were constructed for distances ranging from 0 to 3700 km. A high degree of differentiation (series of discontinuities) exists in the upper mantle, as evidenced by jumps in the transverse wave travel-time curves at distances from 800 to 1800 km, and in the nature of the so-called "20°-discontinuity." Two interfaces ("waveguides") were discovered, one at depths between 110 and 150 km, and another between 240 and 390 km, the latter appearing only for transverse waves. The author compared his results with those obtained by other investigators and pointed out principal differences.

9. A. I. Mozzhenko, I. V. Pomerantseva, I. A. Sokolova, and G. V. Yegorkina. The work of a station of the "Zemlya" type in connection with studies of the earth's crust and mantle. A description was given of the "Zarya" seismological station, built at the All-Union Scientific Research Institute of Geophysics (1957-1960) for the direct registration on magnetic tape of seismic oscillations in a frequency range of 0.5—20 cps. The sta-

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tion magnification is not less than 300,000. Round-the-clock records are made at the rate of 3 mm/sec.

10. I. V. Pomerantseva, Ye. D. Tagay, I. A. Sokolova, A. N. Mozzhenko, and G. V. Yegorkina. Results of deep seismic soundings made during the period 1956-1960, and seismological observations using the "Zarya" station in 1962-1963, in the crystallines of the crust and upper mantle in the southeastern part of the Russian platform. The block structure of the basement and the Moho boundary were established by analyzing refracted, diffracted, and subcritical reflected waves. Analysis of the wave pictures observed during deep seismic sounding led to the conclusion that the crust is a nonhomogeneous medium with first-order discontinuities. Five to six layers are identified in individual blocks. The crust is separated from the mantle by a zone in which there are 2—3 Moho-type surfaces separated by intervals of 5—7 km. The depth of the first surface is 35—45 km (V_p = 8.0—8.1 km/sec). The upper part of the mantle is here. The best identified discontinuity traces are at depths of 50—60, 90—110, and 200 km.

11. N. A. Karapetyan. Determination of the structure of the earth's crust according to seismic data. Twelve teleseismic determinations of the thick-

ness of the earth's crust, made at various points in the Lesser Caucasus and adjacent areas, showed that the earth's crust is approximately 50—54 km thick in this area. The thicknesses of the granitic and basaltic layers are 37 and 15 km, respectively.

12. V. Z. Ryaboy (Specialized Geophysics [Unit] of the State Geological Committee SSSR). Structure of the crust and upper mantle in the central regions of Turkmenia, as determined from deep seismic soundings made in 1962-1963 (Kopetdag-Aral Sea profile). Results of studies of these data are as follows: the crystallines of the earth's crust and the upper mantle have a layered structure (to a depth of the order of 110—120 km) and the Moho occurs at depths ranging from 36—38 km. Five layers were identified in the consolidated crust, the seismic-wave propagation velocity varying from 5.7 to 7.1—7.3 km/sec. There is also some possibility that an interface (waveguide) exists (velocity of 6.8—6.9 km/sec) in the lower part of the crust. In the upper mantle (depths ranging from 36—38 to 110--120 km), five layers were identified in which the seismic wave propagation velocity increases with depth from 8.0—8.2 to 9.0—9.5 km/sec.

13. N. N. Khaleviya and V. C. Druzhinina (Institute of Geophysics, Ural Branch of the Academy of Sciences SSSR). Deep seismic soundings were carried out along a Central Ural profile extending from the Russian platform on the west to the West Siberian lowland on the east. A number of complex sub-horizontal discontinuities were identified. The presence of the Ural Mountains' "roots" was confirmed. In the Central Ural zone the crust is 44—47 km thick and in adjacent regions of the Russian platform and the West Siberian lowland, 37—40 km. PS waves from distant earthquakes indicated the presence of three main discontinuities at depths of 14, 25, and 46 km. A number of discontinuities were also identified in the upper mantle.

14. O. G. Shamina (IFZ). A solid three-dimensional model of the mantle "waveguide." A method of three-dimensional modelling of gradients in a frequency range of about one megacycle was described. The models were made of epoxy resin and dust-size quartz sand. A waveguide model of the upper mantle was described. The kinematics and dynamics of the propagation of ultrasonic waves were investigated in the models at various depths of origin. Epicentral distances ranged up to 2000 km, depths to 600 km,

and the periods of the waves were about 6—7 sec. Comparisons of these results with those obtained earlier on two-dimensional models made it possible to formulate "waveguide" criteria.

15. N. B. Kondorskaya, S. S. Mebel', and L. Yu. Vartanova. The authors analyzed methods of using electronic computers in the SSSR Seismic Service, specifically methods for determining epicentral coordinates. More than 5000 earthquakes were studied and analyzed in the period 1960—1963. Improved accuracy in epicentral coordinate determinations with a computer (30—50%) makes it possible to sharply reduce the number of stations.

16. I. V. Litvinenko (Mining Institute, Leningrad). The most recent and complete data on the structure of the Baltic Shield obtained by the Western Geophysical Trust, the Leningrad Mining Institute, and the All-Union Scientific Research Institute of Geology during the past few years have demonstrated that the crust is very thin there and the seismic discontinuity is very irregular. The basaltic layer, as well as the granitic layer appears to be cut by abyssal faults. The crust in the vicinity of the shield is noteworthy in that the basaltic layer is much thicker than normal, the Moho being at a

depth of 40 km here, and that there is another clearly-defined discontinuity under the Moho.

17. V. B. Sollogub, I. I. Pavlenkova, and A. V. Chekunov (Institute of Geophysics, Academy of Sciences UkrSSR). The structure and depth of discontinuities in the Ukrainian SSR as determined from deep seismic sounding data. The Black Sea-Voronezh massif seismic profile was analyzed in this paper.

18. N. K. Bulin and Ye. A. Pronyayeva (All-Union Scientific Research Institute of Geology). A study of the upper mantle in Turkmenia, using PS earthquake waves. Data obtained from 56 portable seismic stations set up on the Geyok-Tepe-Tashauz profile (about 500 km) showed that the thickness of the crust of the Moho averaged 40 km. Five well-defined discontinuities exist in the mantle at depths of 60, 80—90, 140—155, 190—220, and 250 to 300 km.

19. N. K. Bulin and Ye. Ya. Rabinovich (All-Union Scientific Research Institute of Geology). The authors presented the results of studies of the

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structure of the earth's crust in the Tadzhik depression, as determined from PS and SP waves of nearby and distant earthquakes. The 250-km Shaartue-Kulyab profile was described. Depths of the refracting discontinuities are given (surface of the crystallines, the Conrad and Moho discontinuities, and the upper part of the mantle).

[1]Description, with photographs and schematic, in Akademiya nauk SSSR. Institut fiziki Zemli, Trudy, no. 35 (202), 1964, 43-48.

[2]Description, with photographs and schematic, in Akademiya nauk SSSR. Institut fiziki Zemli. Trudy, no. 35 (202), 1964, 43-48.

[3]Description, with photographs and schematics, in Akademiya nauk SSSR. Institut fiziki Zemli. Trudy, no. 35 (202), 1964, 54-60.

[4]Description, with photographs and schematics, in Akademiya nauk SSSR. Institut fiziki Zemli. Trudy, no. 35 (202), 1964, 30-35.

ASSOCIATION: none

SUBMITTED: 00	ENCL: 00	SUB CODE: ES
NO REF SOV: 000	OTHER: 000	FSBv.1, no. 5

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L 16305-65 EWT(l)/EWA(h) Peb ESD(t)/SSD/AFWL/AFETR GW
ACCESSION NR: AP4045786 S/0049/64/000/009/1334/1359

AUTHOR: Arkhangel'skaya, V. M.

TITLE: Investigation of short-period, seismic, surface Rayleigh waves

SOURCE: AN SSSR. Izvestiya. Seriya geofizicheskaya, no. 9, 1964, 1334-1359

TOPIC TAGS: seismology, seismological station, seismic wave propagation, Rayleigh wave

ABSTRACT: The article presents the results of the investigation of short-period, seismic, surface, Rayleigh waves on the basis of observations made at Sverdlovsk and Central Asiatic stations. An analysis was made of about 200 records of earthquakes with depths of focus ranging from 0 to 130 km, which had occurred in Kamchatka, Japan, China, Central Asia, the Persian Gulf, and the Mediterranean Sea. The coordinates of epicenters, depth of foci, time of occurrence, and degree of intensity are given in tabular form. Analysis

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of these observational data confirmed the existence of five groups of waves, previously detected, having predominant velocities of 4.0, 3.67, 3.57, 3.41, and 3.29 km/sec. Two additional groups of waves with apparent velocities of 3.25 and 3.14 km/sec were detected. Furthermore, the existence of a high-velocity branch of the hodograph of the first group of M_2 waves having a velocity of 4.25 km/sec was established. Study of the dispersional properties of waves for the earthquakes of nine established groups made it possible to estimate the mean thickness of the earth's crust along the following paths: 1) from Sverdlovsk to Kamchatka, the Kurile Islands, Japan— 35 ± 5 km; 2) from Sverdlovsk to China through the Himalaya, Tibet, and Tien Shan mountain systems — 50 ± 5 km; 3) from Sverdlovsk to the Persian Gulf, through the Zagross Mountains, the Iranian highland, and the Turan lowland — 30—35 km; 4) from Central Asian stations to the Far East — 40—45 km. Orig. art. has: 9 figures and 2 tables.

ASSOCIATION: Akademiya nauk SSSR, Institut fiziki Zemli (Academy of Sciences SSSR, Institute of the Physics of Earth).

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L 16305-65
ACCESSION NR: AP4045786

SUBMITTED: 12Jun63 ENCL: 00 SUB CODE: ES

NO REF SOV: 006 OTHER: 003

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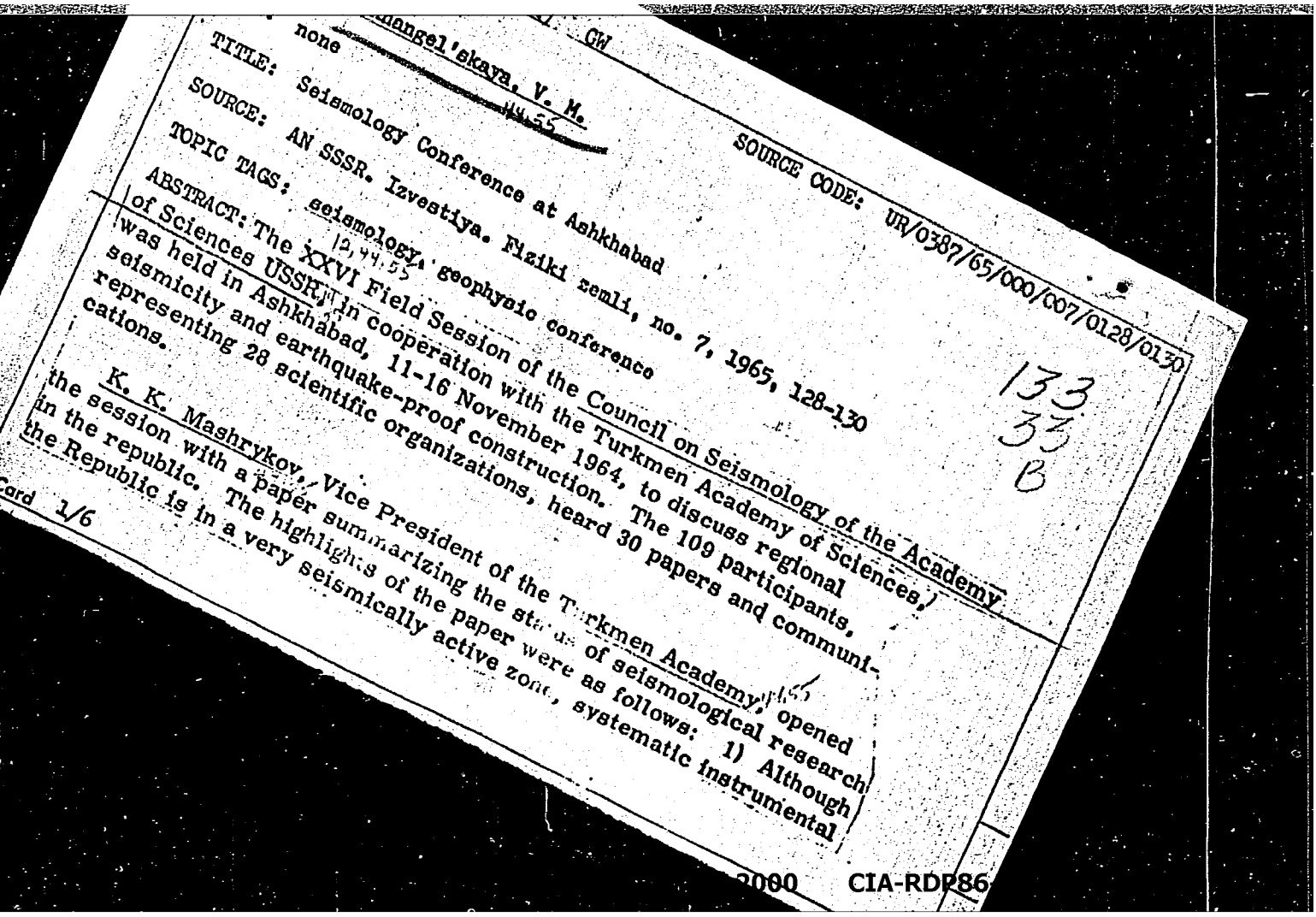
ARKHANGEL'SKAYA, V.M., kand.fiz.-matemat.nauk

Seismological research of the Institute of Geophysics; session in Moscow. Vest.AN SSSR 35 no.8:91-92 Ag '65.
(MIRA 18:8)



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SOURCE CODE: UR/0387/65/000/007/0128/0130

none

Mangel'skaya, V. M.

TITLE: Seismology Conference at Ashkhabad

SOURCE: AN SSSR. Izvestiya. Fiziki zemli, no. 7, 1965, 128-130

TOPIC TAGS: seismology, geophysic conference

ABSTRACT: The XXVI Field Session of the Council on Seismology of the Academy of Sciences USSR, in cooperation with the Turkmen Academy of Sciences, was held in Ashkhabad, 11-16 November 1964, to discuss regional seismicity and earthquake-proof construction. The 109 participants, representing 28 scientific organizations, heard 30 papers and communications.

K. K. Mashrykov, Vice President of the Turkmen Academy, opened the session with a paper summarizing the status of seismological research in the republic. The highlights of the paper were as follows: 1) Although the Republic is in a very seismically active zone, systematic instrumental

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ACC NR: AP501[illegible]385

observations were not begun until 1947. 2) All seismological research now being carried out in the Republic is concentrated in the Division of Geophysics and Seismology under the Presidium of the Turkmen Academy of Sciences. By decree of the Presidium of the Academy of Sciences USSR, this Division is being changed to the Institute of the Physics of the Earth and Atmosphere of the Turkmen Academy. 3) Turkmenian seismologists have carried out major studies to update the seismic regionalization map of the Republic, have completed combined instrumental and engineering-geology microregional seismic studies of Ashkhabad and the industrial regions around Krasnovodsk, Nebit-Dag, and Cheleken, and long-term tiltmeter observations are being continued. 4) A number of discontinuities have been identified in sedimentary formations in the crust and upper mantle with the "Zemlya" seismic station. 5) A system for automatic registration of local earthquakes, incorporating radio-time recording, is nearing completion and is expected to make these studies much less costly in time and money. 6) Factors seen as retarding future seismic research were described as including the limited size of the seismic network in the Republic (now consisting of only 3 permanent and 2 temporary stations) and lack of emphasis by the Division on Theoretical Problems. 7) Plans to overcome these deficiencies and improve research in the Republic call for the installation of 3 new seismic stations

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in Western Turkmenia, the installation of tiltmeter stations in Ashkhabad, Bakhardok, and Kara-Kal, extension of the mobile station network, and, in the period 1966-1970, erection of 6 permanent seismic stations (5 tiltmeter stations and 1 tunnel installation) for geophysical studies. 8) "Zemlya" stations are to be set up along seismic profiles to crisscross the Republic. 9) Considerable attention is to be given to training scientific personnel.

The second paper, presented by Ye. F. Savarenskiy representing the USSR Council on Seismology, defined the most pressing problems facing modern seismology and the Unified System of Seismic Observations as including protection against destructive earthquakes, determination of the causes and conditions for earthquake occurrence, processes which give forewarning of earthquakes, and study of the earth's structure (crust and mantle) using seismic-wave propagation data.

Other papers on regional seismicity included the following:

R. D. Nepesov and G. L. Golinskiy (Division of Geophysics and Seismology (OGIS), Turkmen Academy of Sciences) reported on Turkmenian earthquakes for the period 1960-1964.

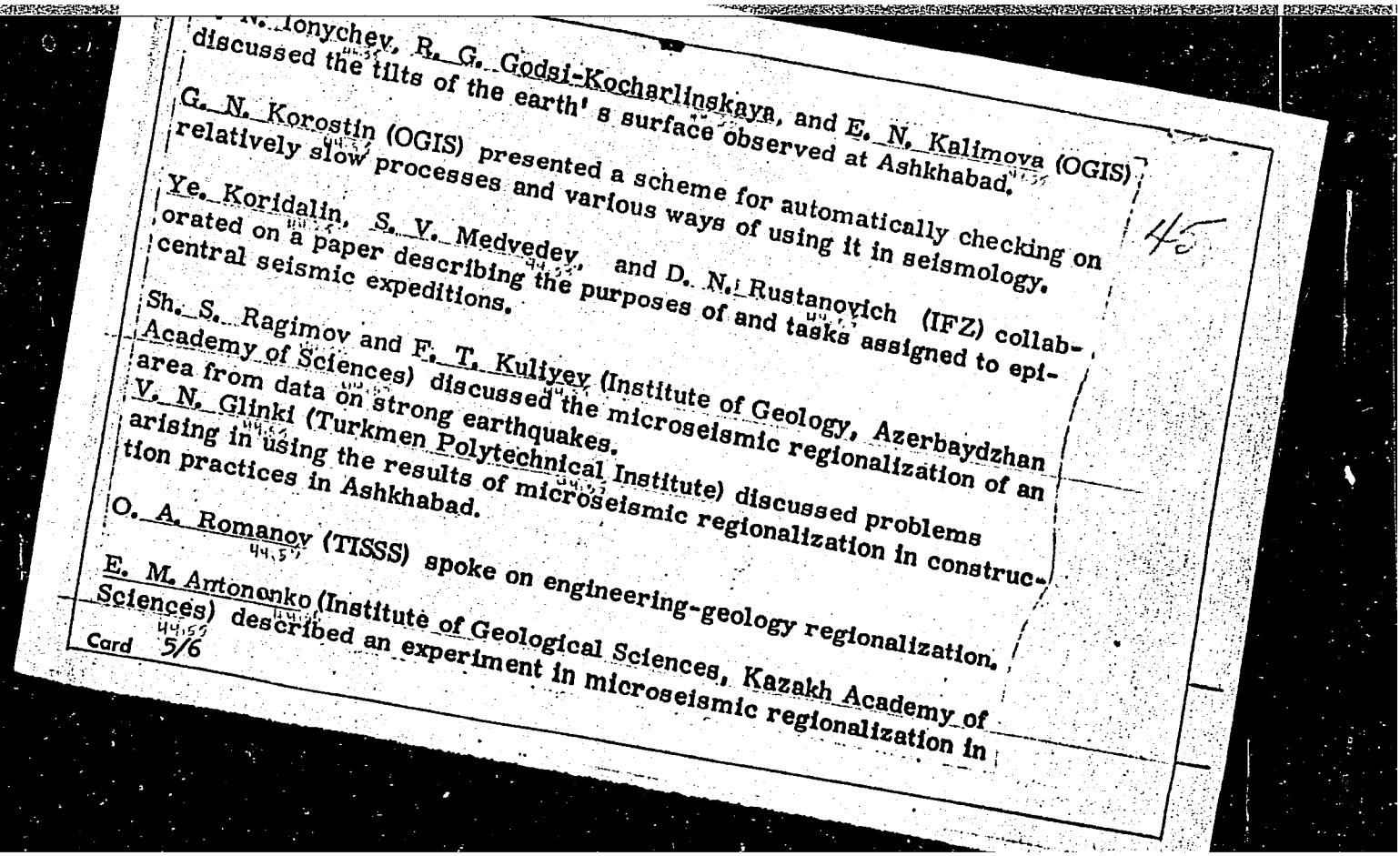
A paper by V. N. Gavakiy (Institute of Earthquake-Proof Construction and Seismology (TISSS), Tadzhik Academy of Sciences) was entitled "Some principal problems in studying the characteristics of seismic processes."

Yu. V. Riznichenko (Institute of Physics of the Earth (IFZ), Academy of Sciences USSR), presented a paper describing the quantitative relationships between seismic-regime indices and those for movements of rock masses occurring during several earthquakes.

L. B. Nevodchikova (Central Complex Special-Purpose Expedition of the Geological Administration and Science Division of the Council of Ministers of the Turkmen SSR) reported on the results of studies of neotectonic movements in southeastern Turkmenia.

A paper by S. V. Medvedev (Institute of Physics of the Earth) outlined the seismic regionalization of the USSR.

V. I. Lykov (OGIS) presented a paper on the structure of the earth's crust and mantle as determined from seismic data.



N. Ionychev, R. G. Godsi-Kocharlinskaya, and E. N. Kalimova (OGIS) discussed the tilts of the earth's surface observed at Ashkhabad.

G. N. Korostin (OGIS) presented a scheme for automatically checking on relatively slow processes and various ways of using it in seismology.

Ye. Koridalin, S. V. Medvedev, and D. N. Rustanovich (IFZ) collaborated on a paper describing the purposes of and tasks assigned to epicentral seismic expeditions.

Sh. S. Ragimov and F. T. Kuliyev (Institute of Geology, Azerbaydzhan Academy of Sciences) discussed the microseismic regionalization of an area from data on strong earthquakes.

V. N. Glinki (Turkmen Polytechnical Institute) discussed problems arising in using the results of microseismic regionalization in construction practices in Ashkhabad.

O. A. Romanov (TISSS) spoke on engineering-geology regionalization.

E. M. Antonenko (Institute of Geological Sciences, Kazakh Academy of Sciences) described an experiment in microseismic regionalization in

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the cities of southern Kazakhstan.

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A. N. Vakhtanova and E. Esenov (OGIS) presented a paper entitled "Comparison of some of the indices of the seismic properties of soils obtained by engineering-geological and instrumental methods."

T. I. Kukhtikova (TISSS) discussed the duration of oscillations. A. P. Sinitsyn (Military Engineering Academy, Moscow) presented a paper on the propagation of plastic and elastic waves in a layer.

The remaining 12 papers covered a wide range of topics in engineering seismology and the earthquake-proofing of several types of buildings and structures in various regions. [illegible] Vyp. 1, no. 17

SUB CODE: ES / SUBM DATE: none [illegible] / OTH REF: 000

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L 24124-66 EWT(1)/EWA(h) GW
ACC NR: AP6007876 SOURCE CODE: UR/0387/66/000/002/0084/0087

AUTHOR: Arkhangel'skaya, V. M.

ORG: none

TITLE: Moscow session of the scientific council on seismology, AN SSSR

SOURCE: AN SSSR. Izvestiya. Fizika Zemli, no. 2, 1966, 84-87

TOPIC TAGS: geophysic conference, seismology, earthquake, seismic wave, seismicity, seismic instrument, seismic station, tectonics, earth crust, Rayleigh wave, hydrostatic pressure, earth gravity, harmonic analysis, vibration analysis, elasticity

ABSTRACT: The Twenty-Seventh Session of the Scientific Council on Seismology and the Academic Council of the Institute of Physics of the Earth (IFZ) of the Academy of Sciences USSR met in Moscow on 22-27 April 1965 to discuss the work of the IFZ in seismology, particularly methods of investigating and combating the effects of of earthquakes and research on the structure of the earth's interior as interpreted from seismic data. More than 220 geophysicists representing the USSR Academy of Sciences, the republic academies, and other organizations heard 13 papers presented

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by leading IFZ scientists. The opening and welcoming addresses were delivered by Ye. F. Savarenskiy, Head of the Scientific Council on Seismology, and M. A. Sadovskiy, Director of the IFZ. The following papers were presented at the conference.

Yu. V. Riznichenko defined the most important problems in earthquake physics as determination of the causes and conditions producing earthquakes, investigation of the mechanisms controlling the formation and effects of a single fault on the continuity of rocks in the earth's interior and of series of faults expressing the seismic character of any particular area, and the study of the space-time changes in that seismicity. He emphasized that research should be carried out by theoretical, laboratory, field, and mine-shaft experiments, observing both earthquakes and manmade explosions. Such studies should be based on investigations of the structure and properties of the earth, using seismic, gravitational, geologic, and other methods, the theory of the strength and rupture of real solids, and physicochemical studies of rocks and other substances under various conditions, especially at the high temperatures and pressures existing within the earth's interior. Concepts described in detail included the faulting process and energies at earthquake foci, the statistical characteristics of long-term average seismicity, the possibilities for calculating maximum quakes, and the relation of

seismicity to rock mass movement. Important and practical problems originating from such research were listed as research to define more accurately the transition from strain energy to elastic-wave energy between the earthquake foci and the earth's surface in order to provide bases for a quantitative method of seismic regionalization, and possible methods and prospects for earthquake prediction.

In a paper entitled "Study of the mechanisms of earthquake foci," A. V. Vvedenskaya presented the results of studies of recordings of body waves during earthquakes, which demonstrated that these waves occur because shear stresses are released at the foci regardless of depth. Enormous hydrostatic stresses present in the earth's interior, particularly when the horizontal and vertical stresses differ, are released solely by mechanical processes in deep-seated rocks, with elastic energy released along fault planes. Use of the dislocation theory in studying stresses present at the foci makes it possible to determine the axes of the principal stresses predominating in the main seismic belts of the globe. Determination of the rate and duration of shear-zone development by analyzing earthquake recordings makes it possible to solve problems on stress magnitudes required to produce displacements.

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A paper on the dynamic characteristics of seismic waves was presented by L. V. Antonova, R. I. Kurochkina, I. L. Nersesov, and V. I. Khalturin. Data were given on the apparent periods of vibrations, the ratios of the maximum amplitudes of the principal seismic waves as functions of the dependence of their characteristics on epicentral distances, magnitudes, frequency characteristics of the apparatus, the region in which the epicenter is located, etc. Changes with distance of the maximum amplitudes of the vibrational rates of P waves and changes in their forms as functions of the apparatus were also discussed. The periods for the maximum amplitudes of surface waves were found to increase monotonically with distance and had almost no dependence on earthquake magnitudes between 4 and 6.5. On long-period instruments, the periods of maximum displacement of both head and surface waves were found to be about 1.5 to 2.0 times longer than on standard instruments. The L/P ratio was found to exhibit the following distinct regional characteristics: in the Soviet Far East, especially in the Sayan and Baykal belts, the L/P ratio is noticeably larger, and in the Mediterranean-Alpine belt, somewhat smaller than it is in other regions. The S/P ratio exhibits almost no regional differences. At short distances from foci, the S/P ratio averages 3.5—4, and there is almost no change

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with magnitude. The S/P ratio [sic], on the other hand, changes noticeably with magnitude. A value of 6.5 is therefore obtained for the coefficients relating the scale of magnitude to head and surface waves. Comparisons of earthquake records made at one station with different instruments showed that the amplitude/period ratio depends on the position of the long-period slope of the frequency characteristics of the apparatus.

S. A. Fedotov gave a paper on seismic cycles and long-range seismic prediction, in which the seismicity of the period 1911—1963 in 10 areas of the catastrophic earthquake foci in the Kuriles, Kamchatka, and Japan exhibited a cyclic character. The hypothesis of a constant seismic regime was demonstrated to be acceptable. Regularities in displacement of the foci of catastrophic earthquakes and the seismic cycle in the Kurile-Kamchatka chain make it possible to predict the probable location of imminent strong quakes, the probable magnitudes of the seismic activity, and the magnitudes of strong earthquakes. Long-range predictions were presented for the periods 1965—1970, 1971—1975, 1976—1980, and 1981—1985 for the Pacific Ocean focal zone on the shores of Kamchatka and the Kuriles.

Ye. E. Gal'perin presented a paper entitled "Study of the seismic-wave propagation process by observations of the internal points of a medium." The principal problem in most seismic research is the study of real media. New possibilities of experimental research on seismic waves in real media are realized by combining ground observations with studies of the internal points of the media. This technique makes it possible to determine the formation of the wave field and to find the principles for determining real media for the construction of their simplified models.

V. I. Kelis-Borok discussed the machine interpretation of seismic observation materials as involving three operational stages. Stage 1 consists of identifying a signal on the seismogram, a matter generally left to the seismologist's experience (filtration, regulated-adjusted method, correlation analysis). Stage 2 is the study of a single source. The hypocenter must be determined as that point which best conforms with a given series of arrivals, not their preliminary identification. Stage 3 is the solution of natural geophysical problems such as the study of the profile, its seismic character, and explosion identification. Solution of these problems leads to consideration of different combinations of the main features (dependence of length of record, and spectra of the displacements on epicentral dis-

tances, intensity of the source, depth of focus, and local conditions).

Ye. S. Borisevich, D. P. Kirnos, and D. A. Kharin gave a paper describing improved seismic instruments for seismic stations. They discussed requirements of seismic apparatus, progress in producing new apparatus in the USA and Japan and the new apparatus produced at the IFZ, including those of the general-purpose type, long-period instruments, highly sensitive instruments, semi-automatic registration devices, apparatus for registering strong earthquakes, and timing devices.

L. Ye. Shnirman discussed the automation of seismic observations.

Ye. F. Savarenskiy presented a paper entitled "Study of the earth's internal structure from body and surface waves," in which the status of studies on the mantle from the Moho discontinuity to a depth of 900—1000 km was presented. Special attention was given to studies of the astenosphere and the C layer and to regional features of the mantle in the Kurile-Kamchatka zone, the North Atlantic Ridge, and the mountains of the western United States, where reduced seismic-wave velocities, negative gravity

anomalies, and increased heat flows are observed at the mantle surface. Various methods of studying the mantle and the results obtained at the IFZ are discussed. The author saw the dispersion of Love and Rayleigh waves as one of the main phenomena being used to study the upper mantle. The periods of the harmonics of the natural vibrations of the earth make it possible to calculate phase velocities, taking into account the sphericity of the gravitating earth. Observations of Love and Rayleigh waves, repeatedly circling the globe from the 1960 Chilean and the 1964 Alaskan earthquakes, confirm the Guttenberg profile velocities in layer C, in which the transverse wave velocities decrease from 0.1 to 0.15 km/sec. However, this decrease in velocity is possible because of the effect of nonabsolute elasticity on long-period waves. Modeling of Rayleigh waves confirms the relationship of intense long-period waves to source spectra characteristics.

I. P. Kosminskaya's paper was devoted to contemporary problems of deep seismic sounding. In recent years the study of the earth's crust and upper mantle has been of a systematic and planned nature, facilitated by important advances made during the IGY and by the International Upper Mantle Project.

Deep seismic sounding is the main method of making a detailed study of the earth's crust on the continents and in the oceans. In the USSR it is widely used as a basis for tectonic regionalization of extensive territories. In recent years this method has produced significant changes in concepts of crustal structure, now delineating a multi-layer rather than a one- or two-layer crustal structure in continental areas. Analyses of travel-time curves and dynamic characteristics give evidence of the presence in crustal layers of both intermittent and continuous changes in velocity with depth. The first data have been obtained indicating that, like the crust, the upper mantle is layered. The principal methodological problems in deep seismic sounding are the determination of an adequately large number of physical parameters along profiles and the study of both the horizontal and vertical inhomogeneities of the earth's crust and upper mantle.

I. S. Berson discussed the utilization in seismology of wave-field interpretation methods developed originally for seismic exploration. These methods differ in that they make possible direct investigation of the parameters of a medium using various modifications of bore-hole study techniques,

i.e., they make it possible to establish directly the relationship between the structure of the medium and the wave fields formed in it. Results can be treated as they would be in a seismic modeling problem where direct determinations of the properties of the medium are impossible and the wave field is the primary source of information on its structure.

The author defines three main steps in making seismic observations for both seismic exploration and seismic research: 1) obtain waves in the best form for interpretation; 2) determine the types of waves registered; and 3) determine the structure of the medium from the registered waves. For the first step the current practice in seismic exploration is to use magnetic registration with subsequent reproduction with filtration and various methods of direct measurements. These methods also can be used to advantage in seismic research. The second step involves the joint analysis of different classes of waves, studies of their dynamic relationships, and comparisons with theoretical calculations for various models of real media. In recent years seismic exploration research has advanced to studies of complex models in which the layers are thin and contain first-

and second-order discontinuities. Spectral interpretation methods have been developed which permit detailed differentiation of real media, i.e., determination of the thickness of thin layers and the ratio of acoustic hardness at the interfaces. In many cases, wave velocities in the thin layers can be determined also. These spectral methods of interpretation should be used in seismic research to obtain new information on the nature of the discontinuities in the earth's crust, mantle, and core.

V. V. Belousov presented a paper which described some of the problems faced in studying the structure of the earth's crust and upper mantle, especially the role of seismic investigations in the Upper Mantle Project. Specific problems described included the study of waveguides in the upper mantle in various tectonic zones, more detailed studies of the relief of the Conrad and Moho discontinuities, and investigation of the structure of the Golitsyn layer at depths from 400—1000 km.

Ye. A. Koridalin presented the last paper at the symposium, which outlined international cooperation in seismic research, including the Inter-

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national Association of Geodesy and Geophysics, the IGY, and the International Geophysical Cooperation Years, and participation of Soviet geophysicists in these projects and in those recommended at UNESCO conferences. Soviet aid in setting up seismic stations and research programs in some countries as Cuba, Bulgaria, Yugoslavia, and Afghanistan, was mentioned. [FSB: v. 2, no. 4]

SUB CODE: 08, 20 / SUBM DATE: none

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AUTHOR: Arkhangel'skaya, V. M.

TITLE: Report on Conference on the Scientific Research Work of the Central Seismic Station Pulkovo and on the Investigation of Surface Waves

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1959, Nr 7, pp 1085-1086 (USSR)

ABSTRACT: This conference took place on February 10-14, 1959, at Pulkovo. The following organizations were represented: the staff of the station Pulkovo, Institute of Physics of the Earth, Academy of Sciences, USSR, station Simferopol', Moscow State University, Institute of Geophysics, Academy of Sciences Georgian SSR, Geological Institute Azerbaijan SSR. A. P. Lazareva (Pulkovo) reported on the work carried out by the station Pulkovo in the Arctic during 1957-1958. T. V. Matorina reported on the instrumental observations of the station Pulkovo during this period. A paper was read by T. B. Yanovskaya on the theory of nonstationary surface waves. A. P. Lazareva (Pulkovo), Ye. F. Savarenskiy

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Report on Conference on the Scientific Research Work of the Central Seismic Station Pulkovo and on the Investigation of Surface Waves

and O. N. Soloviyeva (Moscow) reported some results of experimental investigation of dispersion curves. S. F. Oborina gave a report on the earth crust of the Arctic.

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ACC NR: AP6013165

SOURCE CODE: UR/0387/66/000/004/0103/0106

AUTHOR: Arkhangel'skaya, V. M.

ORG: none

TITLE: Session of the Council on Seismology in Yuzhno-Sakhalinsk

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SOURCE: AN SSSR. Izvestiya. Fizika Zemli, no. 4, 1966, 103-106

TOPIC TAGS: geophysic conference, seismicity, seismic wave, earthquake, ground shock, seismograph, ground shock transmission, upper mantle, tsunami, seismic model, seismograph, seismologic station, microseism, tectonics, geophysic personnel

ABSTRACT: The Twenty-Eighth Session of the Council on Seismology of the Academy of Sciences USSR met in Yuzhno-Sakhalinsk from 18 to 22 December 1965. In addition to the Council members, the meeting was attended by 180 representatives of 31 scientific institutions. The 30 papers presented and discussed dealt with problems in seismicity, the abyssal structure of the Soviet Far East, tsunamis, and the forecasting of volcanic eruptions. These papers reflected the research of the following organizations: The Institute of the Physics of the Earth (IFZ), the Sakhalin Multipurpose Scientific Research Institute (SakhKNII), the Institute of Hydrodynamics of the Siberian Branch of the Academy of Sciences USSR, the State Hydrological Institute

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(Leningrad), the Far-Eastern Scientific Research Hydrometeorological Institute (DVNIGMI), the Scientific Research Institute of Hydrometeorological Instrument Construction, the All-Union Scientific Research Institute of Nonmetallic Construction Materials and Hydromechanization (VNIINerud) in Kuybyshev, Moscow State University (MGU), the Sakhalinsk Administration of the Hydrometeorological Service, the Institute of Volcanology of the Siberian Branch of the Academy of Sciences USSR, and the Second Hydrological Administration of the State Geological Committee of the USSR.

The following are brief abstracts of 28 of the 30 papers presented at the meeting.

V. N. Aver'yanova and S. L. Solov'yev reported the principal results of the work of the Seismology Division of the SakhKNII in 1957—1965 in 1) studies of the seismicity of the [Soviet] Far East and accomplishments in collaboration with other establishments in the seismic service in the Far East, 2) studies of the seismic conditions causing tsunamis, and 3) accomplishments of the seismic section of the service in tsunami warning.

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I. L. Nersesov, V. F. Pisarenko, T. G. Rautian, I. A. Smirnova, and V. I. Khalturin (IFZ) presented a paper entitled "Use of the recognition method to determine depths of foci from the dynamic traces of a record." Three methods of recognition are described by which shallow earthquakes (< 100 km) can be distinguished from deep earthquakes by using some of the dynamic parameters of the earthquake records. One method is described as the best for linear predictions of deep-seated earthquake foci with the selected parameters. Data on the Pamir-Hindu Kush earthquakes were used to illustrate the method.

The dynamic characteristics of the seismic waves in the Kurile-Kamchatka earthquakes were the subject of a paper by S. L. Solov'yev, O. N. Solov'yeva, Ye. A. Vorob'yeva, and A. I. Minin (SakhKNII). The mean amplitude curves of body waves (P and S) and surface waves from Kurile-Kamchatka earthquakes having depths of foci from 0 to 60 km for epicentral distances of 0.8 to 20° were determined by processing voluminous empirical data. The curves constructed can be used as a good supplementary method for estimating the depths of earthquake foci.

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N. V. Kondorskaya, L. N. Pavlova, A. I. Pustovitenko, and S. L. Solov'yev (IFZ, SakhKNII) presented a paper on the amplitudes of the spectra of the body waves from Pacific Ocean earthquakes. Data collected over the past 13 years on Kamchatka and in the Kurile Islands indicate a slower increase in tremor intensity than on the continent. When the magnitudes are identical, the tremors are stronger at the surface during earthquakes which occur at depths of 70—100 km than they are when the earthquakes are 30—50 km deep. The mean isoseismals are oriented along the island chain.

Yu. V. Riznichenko presented a paper entitled "Seismic activity and tremor conditions (intensity, duration, and area affected)." He proposed that the value of these conditions—the mean frequency of recurrence B at any point of shocks of a specific "force" I(expressed in standard intensities, but better expressed in physical values) — be obtained by the quantitative method for seismic regionalization purposes. The relationship was found between B and the foci of seismic activity A and with other values determining the foci of earthquakes. Theoretical and practical examples of calculating the state of tremors were presented. In seismology, these calculations are analagous to the direct problem of potential theory used in gravimetry and other geophysical methods.

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The joint interpretation of body and surface waves was the subject of a communication by V. P. Valyus, A. A. Levshin, and T. M. Sabitova (IFZ). Various experimental data (P and S travel times and four phase velocities of Rayleigh waves) for regions in Central Asia were jointly analyzed on an electronic computer, using the Monte Carlo method.

M. L. Gerver and V. M. Markushevich discussed the interpretation of travel times in the presence of waveguides. The propagation of seismic impulses in a spherical symmetrical body with a finite number of waveguides is discussed within the framework of geometric optics. The problem involves determination of the dependence of propagation velocity on radius. Solution of the problem is not simple. Conditions were formulated which are necessary and adequate to solve the velocity problem, and a large number of solutions are derived and supplemented by graphs. Travel times from deep sources are considered along with those from the surface sources.

R. Z. Tarakanov and N. V. Levin discussed a multi-astenospheric model of the Earth's mantle. The work showed that the upper mantle is layered in the Kurile—Japan zone of the Pacific belt. Four astenospheric layers, in which the propagation velocity of the longitudinal waves was

lower, were identified at depths of 65—90, 120—160, 230—300, and 370—430 km. These alternated with layers with higher velocities. The astenospheric layers are characterized by increased transverse seismic wave absorption, which gives evidence that the medium is plastic.

A paper entitled "Investigation of long-period oscillations from earthquake records in the area between the arrivals of P and S waves" was presented by A. A. Poplavskiy (SakhKNII). The behavior of long waves arriving immediately after the P waves was studied from records of Kurile—Kamchatka earthquakes at epicentral distances from 100—1200 km. From the data obtained, the author proposed that in the majority of cases, the waves investigated are longitudinal body waves with anomalously large periods (although the existence of PL waves is not discounted).

G. S. Pod"yapol'skiy discussed the differences between seismic fields originating from surface and deep-seated sources. The author treated a tsunami as a natural (similar to a Rayleigh wave) gravitational-elastic oscillation in a layer of elastic fluid (water) lying on a solid, elastic half-space (crust). The dependence of these oscillations on the main parameters of

the point source exciting them is determined in an earthquake model; the point source is located at an arbitrary depth beneath the base of the crust. Results are given for some specific calculations made with the formulas derived for dispersion curves, difference between the vertical and radial components of the shift of particles near the surface and near the bottom, the dependence of tsunami intensity on the direction of shift in the focus and its depth, etc.

V. N. Aver'yanova presented a paper on the topic "Shift in earthquake foci in the northerwestern part of the Pacific Ocean seismic belt caused by tsunamis."

O. Ye. Starovoyt gave a presentation on the determination of some of the parameters of earthquake foci from long-period surface waves. From the spectra of Love and Rayleigh waves repeatedly circling the globe, he made a preliminary estimate of the length of the faults and their rate of formation for earthquakes originating in the Kurile Islands (13 October 1965) and in Chile (22 May 1960). For the Kurile Island quake, the rate was $\sim$ 3 km/sec and the length $\sim$ 600 km, and for the Chilean quake, $\sim$ 4.5 m/sec and 950 km.

The frequency of occurrence of tsunamis in the Pacific Ocean was the subject of a paper by Ho Chan-nam and S. L. Solov'yev. Using factual materials, they investigated the frequency of occurrence of tsunamis in the Japanese, Kurile-Kamchatka, and South American zones of the Pacific Ocean seismic belt. They discovered that the probability for the occurrence of tsunamis in these zones was identical. The heights of tsunamis originating from earthquakes with $M \geq 8$ and $M = 7\ 1/2$ to $7\ 3/4$ were distributed in accordance with normal laws.

D. A. Deyeva, Yu. I. Bublikova, and V. S. Samoylova (DVNIGMI) discussed some of the factual data on tsunamis and seiches in the [Soviet] Far East. Clearly expressed tsunamis appeared during the strongest tsunami-producing earthquakes and usually consisted of several waves following each other, generally with equal periods (the main oscillations with periods of up to 45 min, and in the others, 7—15 min). Then, seiches continued for the next few days, obviously the result of the tsunamis. The periods of the seiches changed little with time, and their amplitudes became attenuated.

A. I. Militeyev (MGU) gave a paper on the topic "The tsunamis

from the Niigata earthquake of 16 June 1964." The area in which the tsunamis occurred was defined from Soviet observations and from Japanese literature. It was elliptical in shape and extended along the shoreline from Niigata to Sakata, with semi-axes of 50 and 20 km. The earthquake epicenter was located somewhat southwest of the tsunamic source. A diagram of the directivity of the source showed that it was stronger in a direction paralleling the coast than in the direction perpendicular to it. A graph showing the dependence of maximum wave amplitude on distance was also constructed. This indicated that wave attenuation was essentially inversely proportional to the first power of the distance in which the largest variations in amplitude relative to the mean dependency were observed.

S. L. Solov'yev (SakhKNII) presented a paper on the tsunami problem and its importance for Kamchatka and the Kurile Islands. Tsunamis are the most powerful of the numerous disasters on the Pacific Ocean shorelines of the USSR, and the most dangerous tsunamis are of seismic origin. Their strength becomes evident when horst- or graben-type movements occur on the continental slopes of the Pacific Ocean deep-water shelves. Long-term tsunami predictions are impossible at present since earthquake predictions have not been perfected. The tsunami prediction service now operating in the Pacific Ocean area (USSR, Japan,

USA) tends toward operational forecasts of tsunamis, i.e., determination of the extent of tsunami danger during earthquakes. At most, tsunamis can be predicted 10 to 15 min in advance in the most dangerous sectors. Currently, only the position of the epicenters and the energies of the earthquakes are used in making the predictions. To increase forecasting accuracy, it is of utmost importance that operational methods be developed to estimate the depths of foci of earthquakes and to set up remote (20—30 km) sea-level sensors. It is also equally important to have the corresponding automatic apparatus to achieve maximum prediction speed. For maximum understanding of tsunami phenomena, an observational system should be organized to observe the horizontal speeds of water currents during tsunamis, to model the appearance of a tsunami in a wedge of water, and to expand the nonlinear theory of gravitational waves and the theory of earthquake foci.

Ye. I. Bichenkov and R. M. Garipov (Hydrodynamic Institute, Siberian Division, Academy of Sciences USSR) presented a paper on wave propagation on the surface of a heavy liquid in a basin with an uneven bottom. The first part of the paper stated the linear and overall conditions of bottom relief used to solve the problem of waves caused by the initial disturbances on the free surface of the liquid and by initial

impulses. In the second part of the paper on the shallow-water approximation theory, the authors discussed the problem of the propagation of long waves in a basin with an uneven bottom and, using the approximation theory for shallow water, derived general equations for the nonstationary problem.

P. A. Kozlovskiy (Kuybyshev Polytechnical Institute) discussed the compressibility of water as an important factor under conditions when it is likely that tsunami will occur. He gives some theoretical calculations defining the order of tsunami wave-energy magnitudes in comparison with the energies of the settling of the free surface level.

R. A. Yaroshenya (DVNIGMI) presented a paper on the topic "Calculation of the zones along the shorelines of the Kuriles and Kamchatka reached by tsunamis originating from epicenters in the Kurile—Kamchatka tsunami-genesis zone." The Newton—Krylov theory of atmospheric refraction, as adapted by Shuleykin to the study of wave motion in shallow water, was taken as the basis of the calculations. As a result of the

calculations, the shoreline ranges were determined as functions of different epicentral positions in the Kurile—Kamchatka zone.

G. P. Gorshkov (MGU) presented a communication on the seismicity and seismotectonics of Japan.

I. M. Shenderovich (NIIMMP [?]) discussed modern instrumental means of studying tsunamis.

Improved seismic apparatus for the Tsunamis-Warning Service was the subject of a paper by A. V. Rykov (IFZ). At present the seismic unit of the tsunami station is equipped with short-period seismographs (0.1—4.0 sec) with magnifications ranging from 1 to 40. They satisfactorily assure determination of whether or not the earthquakes are tsunami-producing when M = 7.0—8.5 in the 100—2000-km range of epicentral distances. During earthquakes of these magnitudes, long-period body waves are generated which are weakly registered on the seismographs. Therefore improvement of tsunami-recording instruments should be directed to devising longer-period instruments. The IFZ has developed new seismographs with visible registration of seismic

waves in the 0.2—20-sec period range. In addition to improved registration of nearly tsunami-producing earthquakes, these seismographs will assure the registration of stronger, more distant earthquakes capable of causing the tsunamis which endanger the Pacific Ocean shores.

The automatic determination of the position of earthquake epicenters for short-term tsunami predictions was the subject of a paper presented by A. I. Varchenko (SakhKNII). Since 1963 the SakhKNII has been producing sets of instruments for automatic determination of earthquake epicenter positions and their magnitudes. At present the Experimental Plant of the Siberian Branch of the Academy of Sciences USSR is building experimental models of the "Sakhalin" station, which consists of a three-point electronic azimuth graph with a magnetic memory semi-automated for determination of epicentral distances, an instrument for determination of the tsunami-producing nature of earthquakes, a quartz generator operating at 1000 cps to provide correct time for the station, and a loudspeaker message device with magnetic recording.

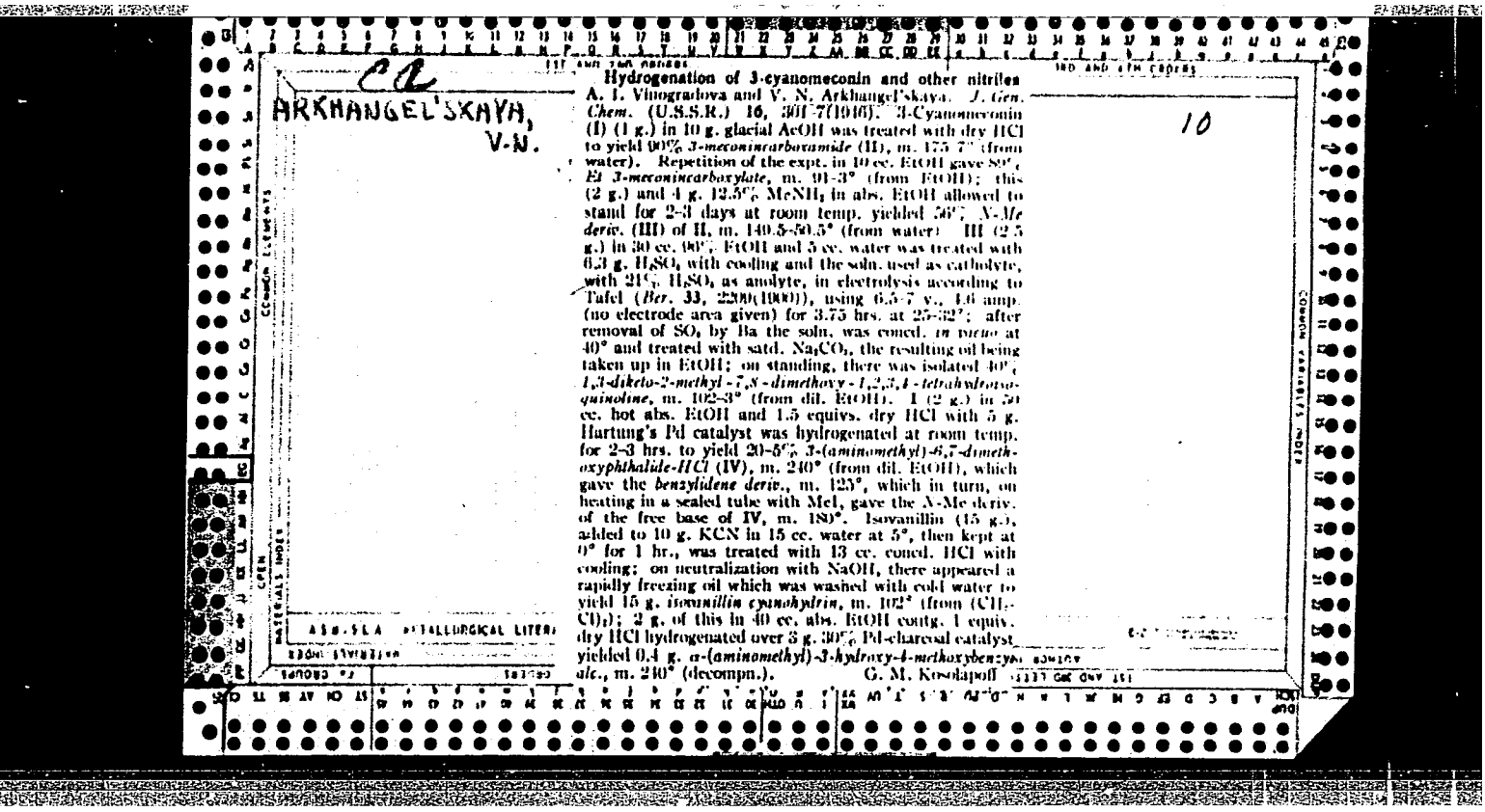
N. V. Kondorskaya, N. S. Landyreva, and P. Z. Tarakanov (IFZ and SakhKNII) presented a paper on the topic "Seismicity of the [Soviet] Far East from fixed station observations."

S. A. Fedotov, P. I. Tokarev, I. P. Kuzin, M. F. Bobkov, and A. M. Bagdasarova (IFZ and the Siberian Division, Academy of Sciences USSR) discussed the seismicity and deep-seated structure of Kamchatka and the Komandorskiy Islands according to detailed seismic observations made in 1961—1964. They showed that most Kamchatka earthquakes originate in the Pacific Ocean focal zone which emerges from the ocean bottom and crosses the tip of the eastern Kamchatka Peninsula. The upper part of the focal zone is inclined at an angle of 50° to the surface, and there is a "break" at a depth of approximately 250 km. In this area the matter in the upper mantle changes abruptly. The existence of a layer of increased plasticity is possible. On Kamchatka itself the earthquakes are shallow and are associated with Kamchatka mountain building. The seismic activity here is only one-tenth that in the focal zone.

P. I. Tokarev (Institute of Vulcanology, Siberian Division, Academy of Sciences USSR) spoke on the gigantic eruption of Sheveluch Volcano on 12 November 1964 and its seismicity. The eruption was preceded by numerous volcanic earthquakes with foci underneath the volcano at a depth of no more than 10 km. The eruptions were accompanied by intense volcanic tremors. The first minor earthquake having a focus under the

volcano was registered on 24 January 1964; in May a cluster of quakes indicated that the volcano was becoming active and that there was a possibility that it would erupt. The Institute of Vulcanology took steps to increase observations of the volcano. After some abatement in the volcano's seismic activity in June—September, it suddenly intensified in October. In the first ten days in November the seismic activity of the volcano began to intensify rapidly, and about 300 quakes were registered. The energy of the earthquakes increased along with the increased activity. After the eruption began the earthquakes ceased and continuous volcanic tremors occurred. After the eruption ceased, minor earthquakes continued for three days and then stopped.

S. L. Solov'yev, L. S. Oskorbin, and M. D. Ferchev (SakhKNII) gave a paper entitled "The seismicity and seismotectonics of Sakhalin." They discussed factual data on the earthquakes in Sakhalin during the period 1909—1964. In accordance with the historical development of seismic observations on Sakhalin, the seismicity of Sakhalin was analyzed for the periods 1909—1950, 1951—1960, and 1961—1964. The longest registration distance and the strongest earthquakes were noted for each period. Macroseismic information on Sakhalin earthquakes was analyzed. The irregularity of Sakhalin seismicity in both time and area was pointed



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Hydrogenation of 3-cyanomeconin and other nitriles A. I. Vinogradova and V. N. Arkhangel'skaya. *J. Gen. Chem.* (U.S.S.R.) **16**, 301-7(1946). 3-Cyanomeconin (I) (1 g.) in 10 g. glacial AcOH was treated with dry HCl to yield 90% *3-meconincarboxamide* (II), m. 175.7° (from water). Repetition of the expt. in 10 cc. EtOH gave 80% *Et 3-meconincarboxylate*, m. 91-3° (from EtOH); this (2 g.) and 4 g. 12.5% $MeNH_2$ in abs. EtOH allowed to stand for 2-3 days at room temp. yielded 56% *N-Me deriv.* (III) of II, m. 140.5-50.5° (from water). III (2.5 g.) in 30 cc. 80% EtOH and 5 cc. water was treated with 6.3 g. H_2SO_4 with cooling and the soln. used as catholyte, with 21% H_2SO_4 as anolyte, in electrolysis according to Tafel (*Ber.* **33**, 2380(1900)), using 6.5-7 v., 1.6 amp. (no electrode area given) for 3.75 hrs. at 25-32°; after removal of SO_4 by Ba the soln. was concd. *in vacuo* at 40° and treated with satd. Na_2CO_3, the resulting oil being taken up in EtOH; on standing, there was isolated 40% *1,3-diketo-2-methyl-7,8-dimethoxy-1,2,3,4-tetrahydroisoquinoline*, m. 102-3° (from dil. EtOH). I (2 g.) in 50 cc. hot abs. EtOH and 1.5 equivs. dry HCl with 5 g. Hartung's Pd catalyst was hydrogenated at room temp. for 2-3 hrs. to yield 20-5% *3-(aminomethyl)-6,7-dimethoxyphthalide-HCl* (IV), m. 240° (from dil. EtOH), which gave the *benzylidene deriv.*, m. 125°, which in turn, on heating in a sealed tube with MeI, gave the *N*-Me deriv. of the free base of IV, m. 180°. Isovanillin (15 g.), added to 10 g. KCN in 15 cc. water at 5°, then kept at 0° for 1 hr., was treated with 13 cc. concd. HCl with cooling; on neutralization with NaOH, there appeared a rapidly freezing oil which was washed with cold water to yield 15 g. *isovanillin cyanohydrin*, m. 102° (from $(CH_2Cl)_2$); 2 g. of this in 40 cc. abs. EtOH contg. 1 equiv. dry HCl hydrogenated over 3 g. 30% Pd-charcoal catalyst yielded 0.4 g. *α-(aminomethyl)-3-hydroxy-4-methoxybenzyl alc.*, m. 240° (decompn.). G. M. Kosolapoff

ARKHANGEL'SKAYA, V. N.

"Qualitative Semimicroanalysis" (Kachestvennyy Polumikroanaliz), I. P. Alimarin and V. N. Arkhangel'skaya, Goskhimizdat, Moscow/Leningrad, 1949, 192 pages and four enclosures, 7 rublis 10 kopeks.

SO: Uspekhi Khimii, Vol 18, #6, 1949; Vol 19, #1, 1950 (W-10083)

ARKHANGELSKIY, V.N.

EXCERPTA MEDICA Sec.12 Vol.11/3 Ophthalmology Mar57

504. ARCHANGELSKI V. N. Eye Clin. of the 1st Med. Inst., Moscow. * Treatment of newgrowths of the iris with diathermy coagulation (Russian text) VESTN. OFTAL. (Mosk.) 1955, 34/2 (36-42) Illus. 2

On the basis of war experiences, electrocoagulation has been used for the treatment of newgrowths of the iris since 1942. Up to now, 16 operations have been carried out according to a personal technique with strict indication. The observation time was up to 12 years. There were 2 angiomas, 1 haemangio-endothelioma and 4 non-pigmented endotheliomas; the rest were melanomas. The procedure consists of surgical exposure of the iridal area concerned, lifting it anteriorly, and coagulation with the needle electrode under the guidance of a binocular loupe. The normal iridal tissue is loose, infiltrated tissue is dense; the diathermic foci distinguish themselves by their darker colour. Postoperative treatment with 0.1% eserine and 10% albucid sodium. All the patients operated on so far have been free of recurrences. Two cases are described; one of these has had good visual acuity with correction since 1946.

(XII, 5, 16)

1. ARKHANGEL'SKAYA, V. V.

2. USSR (600)

4. Plants - Frost Resistance

7. Relation of frost resistance in transplant material to the area from which shoots were procured. Vin. SSSR 13 No. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

ARKHANGEL'SKAYA, V.V., kand. sel'skokhozyaystvennykh nauk.

Influence of temperature on the winterhardiness of grapes [with summary in French]. Izv. TSKhA no.1(20):103-122 '58. (MIRA 11:4)
(Viticulture)

Arkhangel'skaya, V. V.

15-1957-7-9291

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 7, pp 75-76 (USSR)

AUTHOR: Arkhangel'skaya, V. V.

TITLE: The Problem of the Basic Rocks on the Southern Border of the Aldanskiy Shield (K voprosu ob osnovnykh porodakh yuzhnoy okrainy Aldanskogo shchita)

PERIODICAL: Tr. Vses. aerogeol. tresta, 1956, vol 2, pp 163-166

ABSTRACT: Rocks of uniform gabbroic composition, forming dikes and occasional small masses, cut through the Precambrian and lower Paleozoic formations of the Aldanskiy shield. In the Gonam River basin, together with dikes of common composition and thickness, there occur three thick (up to 300 m) and long (tens of kilometers) dikes of quartz diabase which show the effects of extensive differentiation. It is possible that two of these are merely parts of one dike, separated by later faulting. The borders of the dikes consist of quartz-free diabase, locally containing olivine; this rock gives way toward the cen-

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The Problem of the Basic Rocks on the Southern Border of the Aldanskiy Shield (Cont.)

ter to quartz diabase, and further in to medium-grained gabbro-diabase; the central parts of the dikes (20-100 m) are composed of coarse- and medium-grained diabase containing nests of segregated dark pyroxene diorite with small quantities of quartz. The dikes were apparently intruded along large-scale northeasterly trending faults; the author believes that these faults are branches of the large regional Gonamskiy fault, which was apparently already in existence in Lower Cambrian time and was active repeatedly in later times.

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S. P. Bryzgalina

AUTHORS: Arkhangel'skaya, V.V., and Kats, A.G. SOV/12-90-6-6/23

TITLE: The Annular Mountain Range "Konder" (Kol'tsevoy khrebet Konder)

PERIODICAL: Izvestiya vsesoyuznogo geograficheskogo obshchestva, 1958, Vol 90, Nr 6, pp 537 - 541 (USSR)

ABSTRACT: In the Uchuro-Mayskiy Rayon, Amur Oblast', between the valleys of the Rivers Maya and Omnya (the right tributary of the River Aim), above the low swamped flat top mountains of the Aldan Plateau, rises the bare mountain of the Konder mountain range - one of the most interesting and peculiarly shaped forms of the relief of this region. The mountain was explored for the first time in 1936 by B.P. Kulesh, then in 1940 by A.K. Matveyev. There is no information on it in published literature. In 1956, the authors conducted geological research on and around the mountain. Some of the results are set forth in this article. They describe the outer appearance of the mountain range forming the mountain, and the deep crater-like hollow within the range. The depression is drained by the "Konder" River, which is formed by the confluence of numerous springs. The river

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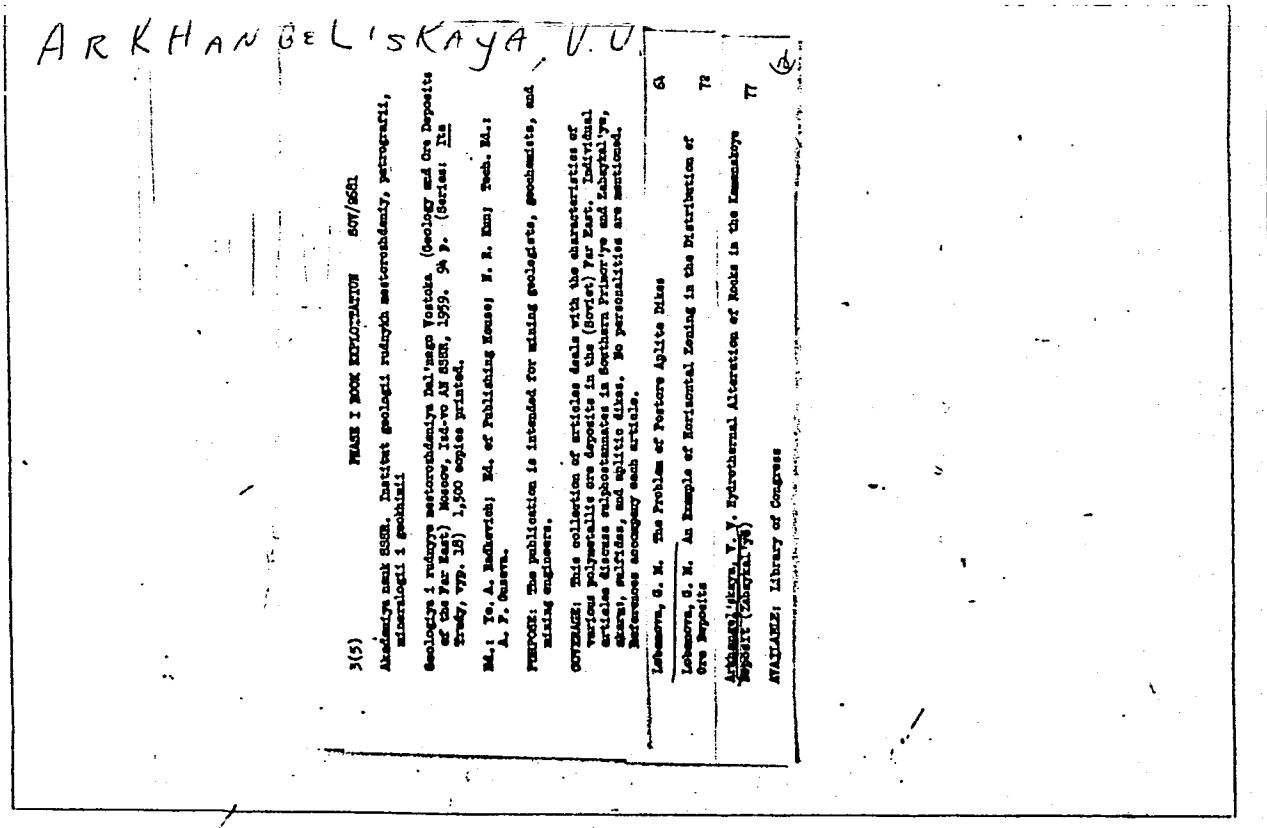
flows through the hollow in a meridional direction. The authors outline the geological structure of the range. In its positive form of relief, the mountain has undoubtedly risen because of endogenous factors. The aggregate of all the factors mentioned in the article caused the present morphology of this mountain "Konder". There are 1 photo, 1 geological chart and 2 Soviet references.



ARKHANGEL'SKAYA, V.U

PHASE I BOOK EXPLOITATION SOV/5521

3(5)

Akademiya nauk SSSR. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii

Geologiya i rudnyye mestorozhdeniya Dal'nego Vostoka (Geology and Ore Deposits of the Far East) Moscow, Izd-vo AN SSSR, 1959. 94 p. (Series: Its Trudy, vyp. 18) 1,500 copies printed.

Ed.: Yu. A. Bakhvalov; Ed. of Publishing House: N. P. Kuz'; Tech. Ed.: A. P. Gusev.

PURPOSE: The publication is intended for mining geologists, geochemists, and mining engineers.

COVERAGE: This collection of articles deals with the characteristics of various polymetallic ore deposits in the (Soviet) Far East. Individual articles discuss sulphotasmanites in Southern Primor'ye and Zakhpal'ye, skarn, salitids, and aplitic dikes. No personalities are mentioned. References accompany each article.

Table of Contents:

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ARKHANGEL'SKAYA, V.V.

Hydrothermal change in rocks of the Kamenka deposit (Transbaikalia).
Trudy IGEM no.18:77-95 '59. (MIRA 12:10)
(Transbaikalia--Ore deposits)

ARKHANGEL'SKAYA, V.V.; KATS, A.G.

Mesozoic igneous rocks in the eastern margin of the Aldan shield
Sov.geol. 2 no.4:67-82 Ap '59. (MIRA 12:7)

1. Vsesoyuznyy institut mineral'nogo syr'ya i Vsesoyuznyy aerogeologicheskiy trest.
(Aldan Plateau—Rocks, Igneous)

ARKHANGEL'SKAYA, V. V., POLYAKOVA, O. P., and TOMSON, I. N.

"Methodological Questions of Mapping Ore-controlling Zones of Increased Jointing and the Technique of Compiling Large Scale Metallogenic-forecasting Maps"

report presented at the First All-Union Conference on the Geology and Metallurgy of the Pacific Ocean Ore Belt, Vladivostok, 2 October 1960

So: Geologiya Rudnykh Mestorozhdeniy, No. 1, 1961, pages 119-127

ARKHANGEL'SKAYA, V.V.

Age relationship between the lead-zinc mineralization and quartz diorites in the Savinskoye No.5 deposit of eastern Transbaikalia. Geol.rud.mestorozh. no.5:69-76 '62. (MIRA 15:12)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR, Moskva.
(Transbaikalia—Ore deposits) (Transbaikalia—Geological time)

ARKHANGEL'SKAYA, V.V.; POLYAKOVA, O.P.

Some zones of ore deposition in eastern Transbaikalia and the basic stages of their development. Zakonom. razm polezn. iskop. 5:251-258 '62. (MIRA 15:12)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR.
(Transbaikalia—Ore deposits)

ARKHANGEL'SKAYA, V.V.; VOL'FSON, F.I., doktor geol.-mineral.nauk, otv. red.

[Geology of lead-zinc deposits in the Klichka ore region (eastern Transbaikalia).] Geologiia svintsovo-tsinkovykh mestorozhdenii Klichkinskogo rudnogo raiona (Vostochnoe Zabaikal'e). Moskva, 1963. 213 p. (Akademiia nauk SSSR. Institut geologii rudnykh mestorozhdenii, petrografii, mineralogii i geokhimii. Trudy, no. 93)

RADKEVICH, Ye.A.; ARKHANGEL'SKAYA, V.V.; POLYAKOVA, O.P.

Some problems of the genesis and characteristics of the distribution of lead-zinc deposits in eastern Transbaikalia. Trudy IGEM no.83:529-540 '63. (MIRA 16:11)

ARKHANGEL'SKAYA, V.V.

Lead-zinc deposits in the Klichka ore region. Trudy IGEM no.83: 94-140 '63. (MIRA 16:11)

ARKHANGEL'SKAYA, V.V.; ROZOV, B.S.; BYKHOVSKIY, L.Z.; CHETYRBOTSKAYA, I.I.

New types of scandium-bearing raw materials. Razved. i okh. nedr 29 no.6:9-14 Je '63. (MIRA 18:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya (for Arkhangel'skaya). 2. Geologo-geokhimicheskiy trest (for Rozov, Bykhovskiy). 3. TSentral'nyy nauchno-issledovatel'skiy gornorazvedochnyy institut tsvetnykh, redkikh i blagorodnykh metallov, Moskva (for Chetyrbotskaya).

ARKHANGEL'SKAYA, V.V.

Characteristics of the formation and composition of pegmatite-bearing granitoids. Geol. mest. rad. elem. no.22:13-60 '65.
(MIRA 17:7)

ARKHANGEL'SKAYA, V.V.

Synnyr Massif of alkali rocks and its apatites. Dokl. AN SSSR 158 no.3: 625-628 S '64. (MIRA 17:10)

1. Vsesoyuznyy institut mineral'nogo syr'ya. Predstavleno akademikom V.I.Smirnovym.

ARKHANGEL'SKAYA, V.V.

Concerning the prospects for apatite mineralization in the Synnyr massif of alkaline rocks in connection with the features of its geological structure. Razved. i okh. nedr. 30 no.11:1-6 N '64. (MIRA 18:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya.

ARKHANGEL'SKAYA, V.V.

Genesis of pseudoleucites in the Synnyr massif of alkaline rocks. Dokl. AN SSSR 164 no.3:662-665 S '65. (MIRA 18:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya. Submitted June 3, 1965.

ARKHANGEL'SKAYA, V. Ye.

ARKHANGEL'SKIY, I. I. (Professor) and KHOLDIN, K. I. (Scientific Coworker) and ARKHANGEL'SKAYA (Post-Graduate Student, Scientific Research Institute of Veterinary Medicine, Kazakh Branch of the All-Union Academy of Agricultural Sciences imeni Lenin.) On the pre-natal bacteriological diagnosis of paratyphoid of calves.

So: Veterinariya; 23; 1; January 1946; Uncl.
TABCON

ARKHANGEL'SKAYA, V.Ye.

[The bacteriophage and its use in veterinary medicine] Bakteriofag i ego primenenie v veterinarii. Alma-Ata, Kazakhskoe gos. izd-vo, 1950. 19 p. (MLRA 10:2)

(Bacteriophagy) (Veterinary medicine)

ARKHANGEL'SKAYA, V. Ye and ARKHANGEL'SKIY, I.

"On the Problem of Variability of the Anthrax Bacillus," Iz Ak Nauk Kazakh SSR, No 6, pp 18-21, 1950

W-24635

USSR/Medicine - Veterinary, Infectious Diseases ARKHANGEL'SKAYA, V. Ye.

ARKHANGEL'SKAYA V.Ye.

"Vaccines That Produce Immunity Against Paratyphoid in Calves," I.I. Arkhangel'skiy; P.F. Yarovoy, D.C. Novak, and V.E. Arkhangel'skaya, Candidates in Sciences; and K.I. Kholdin, Sci Worker, Vet Sci Res Inst of the Kazakh Branch of the All-Union Acad of Agric Sci imeni V.I. Lenin

Veterinariya, Vol 30, No 1, pp 21-26

Aluminum hydroxide vaccine produced more active immunization against paratyphoid in exptl rabbits and guinea-pigs than any other vaccine. Expts on calves and on cows in an advanced stage of pregnancy showed that aluminum hydroxide vaccine surpasses the formol vaccine in immunological properties. The aluminum hydroxide vaccine proved harmless to calves and to cows in an advanced stage of pregnancy.

256T52

USSR / Diseases of Farm Animals. Diseases Caused by Bacteria and Fungi. R-1

Abs Jour: Ref Zhur-Biol., No 2, 1958, 7292.

Author : I. I. Arkhangel'skiy, P. F. Yarovoiy, D. D. Novak, V. Ye, Arkhangel'skaya, Sh. T. Rasulyev, V. I. Nadbalin.

Inst : Not Given

Title : Wide Experience in the Use of Aluminous Paratyphoid Vaccine on Calves in Kazakhstan and Uzbekistan

Orig Pub: Nauch. tr. Uzbek. s-kh. in-ta, 1956, 10, 5-8

Abstract: By experiments on laboratory animals it has been shown that, the aluminous vaccine for paratyphoid of calves is more immunizing than Formol-vaccine. The aluminous vaccine proved entirely harmless to calves and expectant cows. Its use

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USSR / Diseases of Farm Animals. Diseases Caused by Bacteria and Fungi. R-1

Abs Jour: Ref Zhur-Biol., No 2, 1958, 7292.

Abstract: on farms having calves with paratyphoid, permitted the lowering of losses from paratyphoid to a minimum.

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USSR / Microbiology. Microbes Pathogenic to Man and Animals. Bacteria. Bacteria of the Intestinal Group. F-5

Abs Jour: Ref Zhur-Biol., No 16, 1958, 72165.

Author : Arkhangol'skaya, V, Ye., Bekchentayeva, R. A.
Inst : Institute of Veterinary Medicine of the Kazakh of the All-Union Academy of Agricultural Sciences imeni V. I. Lenin.

Title : Test of Active Properties of Tanker Paratyphoid Vaccine on Calves.

Orig Pub: Tr. In-ta vet. Kazakhsk. fil. VASKHNIL, 1957, 8, 118-124.

Abstract: No abstract.

Card 1/1

SUBBOTINA, A.I.; ARKHANGEL'SKAYA, Ye.A.; PETROV, A.M.

Chromatographic separation of sulfate and chromate ions. Trudy po khim.i khim.tekh. no.1:118-120 '63. (MIRA 17:12)

ARKHANGEL'SKAYA, Ye.D.; ZARIPOV, M.M.; POL'SKIY, Yu.Ye.; STEPANOV, V.G.; CHIRKIN, G.K.; SHEKUN, L.Ya.

Electron paramagnetic resonance of Cr^{3+} in $K_2Zn(SO_4)_2 \cdot 6H_2O$. Fiz. tver. tela 4 no.9:2530-2533 S '62. (MIRA 15:9)

1. Kazanskiy gosudarstvennyy universitet imeni V.I. Ul'yanova-Lenina.

(Paramagnetic resonance and relaxation)
(Tutton's salts)

L 41398-65 EEC(b)-2/EWT(1)/T Pi-4 IJP(c) GG
ACCESSION NR: AR5009691 UR/0058/65/000/002/D054/D054

SOURCE: Ref. zh. Fizika, Abs. 2D399

AUTHORS: Arkhangel'skaya, Ye. D.; Vinokurov, V. M.; Zaripov, M. M.; Pol'skiy, Yu. Ye.; Stepanov, V. G.; Chirkin, G. K.; Shekun, L. Ya.

TITLE: Investigation of paramagnetic resonance spectra in crystals

CITED SOURCE: Sb. Itog. nauchn. konferentsiya Kazansk. un-ta za 1962 g. Kazan', Kazansk. un-t, 1963, 3-4

TOPIC TAGS: electron paramagnetic resonance, epr spectrum, crystal field symmetry, spin Hamiltonian, paramagnetic ion

TRANSLATION: The results of research on epr in crystals are briefly listed. The spectrum of Gd^{3+} in CaF_2 is due to three types of Gd^{3+} ions, which are in fields of cubic, tetragonal, and trigonal symmetry. The epr effect in $BaTiSi_3O_3$ is due to Fe^{3+} ions in a trigonal field. The spectrum of the Cr^{3+} ions that replace Zn^{2+} in $K_2Zn(SO_4)_2 \cdot 6H_2O$ is interpreted as corresponding to two magnetic $Cr^{3+}(OH)_6$ com-

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ACCESSION NR: AR5009691

plexes. The constants of the corresponding spin Hamiltonians are obtained. The spectrum of Mn^{2+} in NH_4Cl is identified with the presence of three magnetically non-equivalent Mn^{2+} ions in a field of axial symmetry. The results of calculations of the energy spectrum of a paramagnetic ion situated in a field of axial symmetry, carried out in the approximation of a strong magnetic field, are used to determine the constants of the spin Hamiltonian of Mn^{2+} in calcite. A. Vashman.

SUB CODE: NP ENCL: 00

Card 2/2

ARKHANGEL'SKAYA, Ye. I.

ARKHANGEL'SKAYA, Ye. I.: "The dynamics of certain immunobiological reactions in staphyloderma patients under treatment with staphylococcal antiphagin using various methods of administration". Leningrad, 1955. Min Health RSFSR. Leningrad Sanitary-Hygienic Medical Inst. (Dissertations for the degree of Candidate of Medical Science.)

SO: Knizhnaya Letopis' No. 50 10 December 1955. Moscow.

[illegible]'skaya, Ye. I.

USSR/Medicine - Roentgenology

Card 1/1

Authors : Arkhangel'skaya Ye. I.

Title : X-ray diagnosis of affection of the stomach in systemic diseases of the lymphoid and reticulo-endothelial tissues

Periodical : Vest Rentgen i Radiol 1, 57-61, 1954

Abstract : When lymphogranulomatosis (Hodgkin's Disease) first appears in the stomach, it is difficult to distinguish it from cancer or ulcers by X-ray. Other symptoms to look for are pointed out. Three references. Five photographs (X-rays).

Institution : Central Clinical Roentgeno-Radiological Hospital, Ministry of Railways USSR.

Submitted : Presented at the 409th meeting of the Moscow Society of Roentgenologists and Radiologists on October 6, 1952.

ARKHANGEL'SKAYA, Ye. P.

ARKHANGEL'SKAYA, Ye. P. : "The dynamics of the blind spot of one eye following injuries to the other one." Published by the Acad Sci Uzbek SSR. Tashkent State Medical Inst imeni V. M. Molotov. Tashkent, 1956. (Dissertation for the Degree of Candidate in Medical Science.)

Knizhnaya letopis', No. 31, 1956. Moscow.