Title: ABSTRACTS OF TEN ARTICLES ON SEISMOLOGY AND GRAVIMETRY (1949)

V. F. Bonchkovskiy

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ABSTRACTS OF TEN ARTICLES ON SEISMOLOGY AND GRAVIMETRY (1949)

V. F. Bonchkovskiy, editor

(Note: The following are abstracts of the ten articles that appeared in the book entitled 'Symposium of Articles and Lectures' (which is No. 5 (132) in the series entitled 'Works of the Geophysical Institute) edited by Professor V. F. Bonchkovskiy and published 1949 in Moscow and Leningrad by the Academy of Sciences USSR Press.)

1. "The Earthquake of 2 November 1946 and the Epicentral Zone of Its After-Shocks," Ye. A. Rozova and M. K. Chernyavkina, pp 1-32

The first part of this work, written by Ye. A. Rozova, gives the position of the epicenter of the Chatkala Mountains earthquake of 2 November 1946, found from instrument data of Middle Adiatic seismic station by construction of hyperbolas and azimuths. The second part of the work, written by M. K. Chernyavkina, gives the geographical coordinates of the aftershocks. The epicentral zone of these shocks was determined by mathematical statistics and it was established that it coincides with the line of the main Fergana fracture. The center of this epicentral zone is displaced slightly to the east in comparison with the position of the epicenter of the main shock.

2. "Earthquakes in the Mt. Kazbek Region," A. Ya. Levitskaya, pp 32-38

This article is a study of earthquakes in the Kazbek region using data of the Caucasian seismic network of the Academy of Sciences USSR to accomplish the following: a) a map of epicenters of earthquakes, b) hodographs of longitudinal and transverse waves were constructed, and c) determination of the depth of centra and thickness of the earth's crust in the Mt. Kazbek region.

3. "An Experiment in New Regional Division of the Moldavian SSSR According to Zones of Seismic Activity," S. V. Medvedev

A regional division of the Moldavian SSSR and adjoining regions according to zones of seismic activity is described. Evaluates the seismic danger from the standpoint of frequency of earthquakes.

4. "The Method of Measuring Tilts of the Earth's Surface," V. F. Bonchkovskiy, pp 49-61

The possible reasons for distortion of tiltmeter readings and their theoretical background are discussed. Possible errors are calculated and measures to eliminate them indicated. At the end of the paper is given results of comparing the readings from tiltmeters of two different types.

5. "Some Results of Studying Tilts of the Earth's Surface in Stalinabad and Obi-Garm in 1946 and 1947," N. V. Gedovkina, pp 61-67

Results of processing tilt observations in Stalinabad and Obi-Garm are given. The diurnal behavior of tilts from records of the entire tilt complex are dirived and its amplitude for the two regions are determined. Laws governing the diurnal behavior and similarity between the diurnal behavior of tilts and the diurnal behavior of air temperature are established.

6. "A Portable Film Four-Ribbon Oscillograph PO-4," Ye. S. Borisevich, pp 67-76

The construction of a new oscillograph designed by the author is described and basic data and characteristics are given. This oscillograph was basically designed for airplane tests. The weight is 6 kilograms, and the dimensions are 195 x 145 x 150 millimeters.

7. "A New Value of Gravitational Acceleration for the Geophysical Institute of the Academy of Sciences USSR," Yu. D. Bulanzhe, pp 76-94

Results are given of a new determination of gravitational acceleration made in June 1948 with a Norgard gravimeter for the Geophysical Institute, Academy of Sciences USSR. As a starting point, the gravimetric point in the State Astronomical Institute imeni P. K. Shternberg was used, which is the basic initial gravimetric point of the USSR having direct connection with Potsdam.

8. "Preliminary Results of a Determination of a First-Class Gravimetric Point in the Village of Obi-Garm," Yu. D. Bulanzhe, pp 94-100

Preliminary results of determining a first-class gravimetric point in Obi-Garm are given. This work was done as part of the work of the Garm complex expedition of the Geophysical Institute, Academy of Sciences, USSR, in 1945-1946.

9. "A New Gravimetric Connection of the All-Union Scientific Research Metrology Institute With Pulkova," Yu. D. Bulanzhe, pp 100-115

Results of a new gravimetric connection of the All-Union Scientific Research Metrology Institute imeni D. I. Mendeleyev with Pulkova, accomplished with Norgard gravimeters in May 1948.

10. "Methods of Processing Repeated Geodesic Measurements Made to Reveal Horizontal Deformations of the Earth's Crust," V. V. Danilov

A new method is given for processing repeated measurements to clarify horizontal local-type deformations of the earth's crust; namely, the transformation method. Using as an example the processing of repeated observations

after the Japanese earthquake of 1923, the author illustrates the use of this method and shows the misunderstandings caused by the old method of one rigid point used by the Japanese.

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