

ABOUT CORRELATION BETWEEN MODERN DEFORMATION FIELD AND DEEP GEOELECTRIC STRUCTURE OF THE CENTRAL TIEN SHAN ACCORDING TO GPS AND MT DATA

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The work examines deformations of the Central Tien Shan Earth's crust using the method of calculation of two-dimensional deformation field according to the results of Global Positioning System (GPS) observations. New data on geoelectric structure of the regional lithospheric scale as interpretation results of detailed magnetotelluric soundings along the NARYN profile that indicate deep geoelectric image of the Central Tien Shan orogen along the 76° E meridian are discussed. There was held a joint analysis of the obtained deformation field and the parameters of deep geoelectric cross-section of the Central Tien Shan along the NARYN profile. In the northern part of the profile we have received the 0.84 correlation coefficient between the values of 2D deformation on the surface and the integral conductivity of the lithosphere in the depths interval 10-60 km. Such correlation shows that deformation observed on the Earth's surface by means of GPS techniques contains information about horizontal structure of plastic flow of substance in the lower crust of the region.

Global Positioning System observations, magnetotelluric soundings, regional deformation field

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