

Periodicity of Deep Crust Irregularities: Bureinsky Massif (Russian Far East)

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The interpretation of recent geophysical data (DSS, gravity, and space images) is made using an original technology. Deep crust structures are analysed through the distribution of seismic waves' reflections/refractions in a cross-section along the DSS line. Periodic discontinuities of MOHO are observed at range about 110 km, and are traced through the crust by zones of seismic transparency (ZST). The ZST is characterised by a cup-like shape sizing 50 to 80 km in diameter. In the middle and upper crust (0-30 km) ZST correlates to the zones of density deficit, which looks like the area of ancient granitization. At the lower crust density defects are not fixed, and the corresponding part of ZST is considered as the area of energy/matter intrusion from the upper mantle into the crust. The MOHO discontinuity responds to lineaments crest-crossing the DSS line and being interpreted as deep faults by space images' analysis. Metallogenic meaning of the said irregularities is analysed as well.