

1.2-P10. HETEROGENEITIES OF SHORT-PERIOD SHEAR WAVES ATTENUATION FIELD AND GEODYNAMIC PROCESSES AT SEMIPALATINSK TEST SITE REGION

The records of calibration chemical explosions from Semipalatinsk Test Site region recorded by near temporary stations allowed investigating the structure of attenuation field in the Earth crust and upper mantle at the region of Degelen and Balapan sites. The characteristics of short-period S-coda envelopes were analyzed. It was determined that Balapan region having two large fault zones experiences abnormally high attenuation of S-waves in the range of 10-120 km depth. Degelen region has much lower attenuation at the same depths. However, at more than 200 km depth the Q factor at the region increases sharply. Using the records of more than 260 UNE recorded by TLG station at epicentral distances 730-770 km, and 170 recorded by BRVK station at epicentral distances 610-700 km, the temporal variations of Lg and Pg waves amplitudes ratio were studied. It was determined that this parameter changes in time significantly for sites Murzhik, Degelen, and Balapan. It is assumed that spatial-temporal variations of attenuation field structure are due to uplift of juvenile fluids along large faulting zones stipulated by long and intensive influence of powerful explosions. This mechanism allows explaining also existence of large thermal anomaly at the region of north-east Kazakhstan including STS.

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