

Upper mantle structure beneath Bulgaria

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Receiver function technique is applied to seismological data from 11 broad band seismic station from National Seismological Network to study earth's crust and upper mantle structure. As starting velocity model for the upper 100 km the velocity model obtained from Raykova [1] is used and iasp91 [2] below 100km. Three groups of profiles were selected for the study, which cross the territory of Bulgaria in different directions – W-E, SW-NE and NW-SE. For each profile the structure up to 800 km is estimated and the main discontinuities in the mantle transition zone are identified. Besides the phases from a depth about 410-420 km and 660-670 km, some other phases coming from mantle transition zone are observed. Some of them can be identified as coming from 330 and 520 discontinuities.

1. Raykova, R., S. Nikolova, *Stud. Geophys. Geod.*, **51** (2007), 164-180.
2. Kennett, B., E. Engdahl, *Phys. Earth planet. Inter*, **25** (1981), 297-356