ID: Type: **Poster**

evaluation of the pressure-to-seismic transfer function according data broadband seismic stations

The results of the evaluation of the pressure-to-seismic transfer function for periods between 1 to 100 s obtained on the base of the seismic and acoustic waves associated with the 2013 Chelyabinsk meteorite, Russia, are presented. According to NASA report, the meteorite's breakup was fixed around 03:20 UTC. In previous study was shown that coupling between the meteorite's shock wave and Earth's surface produces Rayleigh waves that were observed at distances up to 4000 km. Both the meteorite's shock wave and surface Rayleigh wave generated by it were registered by the nearest broadband sesimic station ARU (Iris/Ida global network) at the distance ~ 250 km. The transfer function was determined as a ratio of the spectra of vertical ground motion velocity and the shock wave. The comparison of the transfer function obtained and the local site-effect (H/V-ratio) shows the satisfactory agreement of the resonance frequencies. In the Baikal rift the seismic waves were registered by the broadband seismic stations MOY, YLYR, ZAK (BAGSR network) and TLY (Iris/Ida global network). Local H/V-curves were used as a transfer function. The acoustic signal calculated are well correlated with the signal measured by the infrasound station Tory located in the same region.

Primary author: DOBRYNINA, Anna (Institute of the Earth's Crust, Siberian Branch, Russian Academy of Sciences; Geological Institute, Siberian Branch, Russian Academy of Sciences)

Presenter: DOBRYNINA, Anna (Institute of the Earth's Crust, Siberian Branch, Russian Academy of Sciences; Geological Institute, Siberian Branch, Russian Academy of Sciences)

Track Classification: Poster session