

INFRASOUND GROUND TRUTH DATA COLLECTION
BY LOCAL SEISMIC NETWORK AT QUARRIES IN RUSSIA

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The presentation is devoted to problem of “ground truth” data collection for infrasound signals generated by large mine blasts at some quarries of Russia. Such information about a place and time of event is very important for improvement of the international monitoring under the Comprehensive Test Ban Treaty (CTBT), and also for monitoring of the atmospheric top layers status for the meteorological purposes.

RIPT in cooperation with other Russian institutes conducts the seismic-acoustic researches of infrasound background and noise for the sake of CTBTO (ISTC Project #1341). For signal association and identification of noise sources related to large mine blasts, it is offered to use local seismic networks of the system of monitoring large chemical explosions. The prototype of such system is developed in the framework of the ISTC Project #1221. The data of observation are input and archived in the CSS3.0 format.

Some results of large mine blasts (tens and hundreds tons) location for quarries in different regions of Russia are presented. The submitted results and their comparison with factographical data confirm the possibility of “ground truth” data collection about sources of seismic-acoustic signals. The location accuracy essentially depends on heterogeneity of geological structure (zones of faults) and available data on the local travel time curves.