

Compilation of Infrasound Ground-Truth Database Using Seismic Data

Infrasound arrays IS31, Kurchatov and Makanchy form Kazakhstani infrasound network. Kazakh National Data Center also process data of IS46, Russia in addition to data of three above mentioned stations. Signal detection technique at KNDC is PMCC. The detection bulletins are input information for the automatic event location. Network processing started on June 2014. Simultaneously systematic seismic network data processing takes place at the same region using data of numerous stations including 4 Kazakh seismic arrays. The processing includes discrimination of the event nature. Fusion of the infrasound and seismic bulletins allows not only to select unambiguously seismoacoustic events but also to locate them very accurately. Correlation technique is a very efficient instrument for selecting the events occurred at the same place, e. g. D. Schaff and P. Richards, 2016. This method is not applicable for infrasound records but works well with seismic data. The location accuracy after fusion is dramatically higher than the result of processing using infrasound technology only. KNDC is compiling ground truth data base using the concept. The events at the database are the quarry blasts. Association of the seismic and acoustic event is made in accordance with the technique used at IDC, N. Brachet, et al.2010.

Primary author: SMIRNOV, Alexandr (Kazakhstan National Data Centre)

Presenter: SMIRNOV, Alexandr (Kazakhstan National Data Centre)

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