

-Korean Nuclear Tests of 2006, 2009, 2013 by Data of Kazakhstan Monitoring Network

Since 1994 the IGR RK monitoring network consisted of 4 small aperture, one medium and one large aperture seismic arrays, 7 three-component stations and 2 infrasound arrays has been operating successfully on the territory of Kazakhstan. Owing to good stations location from geological view and characteristics of seismic noise, well considered arrays configuration, most stations positioning in boreholes, integration of broadband and short-period instruments all system stations are high-sensitive to regional and teleseismic events. Despite the fact that all IGR RK stations were located at teleseismic distances from North Korean Test Site Punggyeri (distance range is 3725-5350 km) all 3 North-Korean nuclear tests (10.6.2006, 05.25.2009, 02.12.2013) were recorded by the stations. The stations data were used by different seismological agencies to determine the explosions parameters. Despite large distances from the explosions, and stations location within narrow azimuth to source range, the Kazakhstan Data Center managed to determine quite accurately the explosions parameters in operative mode, in particular the explosions magnitude. Comparative analysis of waveforms from 3 North Korean tests was conducted by data of Kazakhstan seismic stations.

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