

Infrasound Analysis of 2013 DPRK Event and Russian Fireball

The first atmospheric event built only from infrasound arrivals was reported in the Reviewed Event Bulletin (REB) of the International Data Centre (IDC) of the Comprehensive Nuclear Test Ban Treaty Organization (CTBTO) in 2003. In the last decade, 45 infrasound stations from the International Monitoring System (IMS) have been installed and are transmitting data to the IDC. In early 2010 the IDC began routine automatic processing of infrasound data reviewed by interactive analysis; the detected and located events are now systematically included in the REB. This study focuses on 2 important infragenic events that occurred in February 2013 and were thoroughly analyzed at the IDC. On February 12, an underground seismo-acoustic event was recorded in the Democratic People's Republic of Korea. Alongside the seismic recordings, infrasound waves were generated that were detected by 2 IMS infrasound stations located up to 1200 kilometers away. On February 15 a fireball in the Chelyabinsk region (Russia) was observed generating infrasound waves that were recorded by 20 infrasound IMS stations located from Greenland to Antarctica. This event is the largest ever recorded by the infrasound component of the IMS network. Related seismic observations were also found.

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