

2.3-P04. Analysis of events recorded at seismic and infrasound stations in IDC operations

A system based on four technologies has been established to monitor compliance with the Comprehensive Nuclear Test Ban Treaty (CTBT). Three of them, so called waveform technologies (seismic, hydroacoustic and infrasound), help to detect and locate events. Infrasound technology, based on detection of low frequency acoustic waves is the most appropriate for detection of atmospheric sources. Routine analysis of infrasound data started in 2010 in International Data Centre (IDC) operations. IDC analysts validate and improve automatic system solutions and identify events missed by the automatic system. Since February 2010 the IDC Reviewed Event Bulletin (REB) included almost 6500 infrasound events, about 50% of all validated infrasound events. Majority of infrasound events published in the REB contain phases observed at seismic stations. Examples of these events are large atmospheric events (e.g. 2013 Chelyabinsk fireball), volcanic eruptions (e.g. Mt. Kelud Feb. 2014), mining blasts or earthquakes (e.g. Tohoku 2011). This presentation will provide a summary of events recorded at both seismic and infrasound networks of the International Monitoring System (IMS). Results of this study may help analysts to decide about correct associations of infrasound phases and improve location of small seismic events with infrasound associations.

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