



Contribution of infrasound data at the International Data Centre

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In its final configuration, the International Monitoring System (IMS) of the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) Preparatory Commission will operate 60 infrasound stations distributed uniformly over the globe. The International Data Centre (IDC) in Vienna, Austria currently receives and processes in near real-time data from 37 of the 60 planned infrasound stations. Specialized software has been developed for the infrasound data analysis. The daily use of array processing cross correlation (PMCC algorithm) technique has facilitated a better understanding of the different types of signals observed and detected on the IMS network.

The IDC produces timely, high quality Reviewed Event Bulletins (REBs) using the three waveform technologies: seismic, hydroacoustic and infrasound. At the present time, the contribution of infrasound data to the REB has been intentionally limited as new software was developed, tested and adapted to the IDC operational environment. Non-operational use of infrasound data has made significant progress in the identifying and characterizing infrasound sources and indicates potential for strong synergy with other technologies. A large collection of infrasound reference events has been built by the IDC during the last few years, but only a small fraction of them meet REB event definition criteria considering the Treaty verification mission of the Organization. Candidate events types for the REB include atmospheric explosions, large surface explosions, bolides, rocket launches, signals from large earthquakes and explosive volcanoes.