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# Accident related events as part of civil applications of IMS

Paulina Bittner, Sherif M. Ali, Pierrick Miallle, and Ronan Le Bras
CTBTO, IDC, Vienna, Austria (paulina.bittner@ctbto.org)

The International Monitoring System (IMS) was established as the verification regime of the Comprehensive Nuclear Test Ban Treaty (CTBT). Three waveform technologies support the detection of any test of nuclear weapons that would be a treaty violation: seismic for underground, hydroacoustic for underwater and infrasound for atmospheric tests. In addition to the main mission of the IMS, recorded data are very relevant to civil and scientific applications such as tsunami warning, improvement of aviation safety, climate change research, etc...
The majority of events listed in the International Data Centre (IDC) Reviewed Event Bulletin (REB) are natural seismic events, e.g. earthquakes. Earthquakes which take place at the coastal regions generate underwater energy recorded as T-phases. These phases are the most common hydroacoustic signals associated to the REB events. Infrasound events listed in the REB are usually human generated, i.e. suspected sonic booms or quarry blasts but also include the acoustic manifestations of meteorite entries and volcanic eruptions.
IMS data can also be used to assist with the investigation of accidents such as plane crashes in remote areas or uncontrolled explosions. Several such events, although fortunately quite rare, were recorded by the IMS network and appear in the IDC bulletins. This study will provide examples of accident related events detected by the IMS network.