

Statistics and Failure Analysis of International Monitoring System Seismic, Hydroacoustic and Infrasound Stations

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The International Monitoring System (IMS) is one of the four elements of the Provisional Technical Secretariat (PTS) verification regime. The seismoacoustic component of the IMS network is comprised of seismic, infrasound and hydroacoustic stations participating in the underground, air, and underwater explosion monitoring. The minimum requirement in terms of data availability for each station is 98%. This means that each station should be able to send data to the International Data Center over 98% of the time, regardless of the challenging environment in which they are located. When an issue occurs at a station, it is discussed through the IMS Report System (IRS). Failure analysis based on information in the IRS has been performed since Nov. 2011 with the objective of triggering the required engineering activities, initiating further analysis when needed (root cause analysis), using trends to anticipate future failures, and verifying that the implemented engineering solutions led to improvements in reliability. This poster presents historical results on data availability metrics, categorization of failures leading to station downtime, and engineering projects aiming to enhance station robustness to downtime.

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Promotional text

Historical statistics on failure analysis of International Monitoring System seismic, hydroacoustic and infrasound stations from November 2011 onwards.

Oral preference format

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