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# IMS IS13 and IS14 Stations to Analyse Strong Seismic and Volcanic Activity in Chile

Under a collaborative work between the Geophysics Department of Universidad de Chile and the Chilean Nuclear Energy Commission, a long-term project was started based on the infrasound data from stations IS13 (Easter Island) and IS14 (Robinson Crusoe Island) in order to improve the natural phenomena hazard assessment by developing remote monitoring tools with already existing infrastructure in Chile. The first step was to analyze the IMS infrasound data to investigate the spatial and azimuthal resolution of time series that can be associated with seismic and volcanic activity of strong events. The DTK-PMCC tool from the Chilean National Data Center was used with data collected around Maule tsunamigenic earthquake (M8.8) on February 27th, 2010, Puyehue/Cordón Caulle volcano eruption in June, 2011 and Calbuco volcano eruption in April, 2015. It was found that it is possible to use the infrasound stations to parametrize big events in the Chilean territory, providing insights about the infrasound fingerprint of natural phenomena that can complement seismic observations. Although promising results have been obtained, more data analysis is needed to have full knowledge about the physical phenomena that is generating the infrasound signals around strong energy earthquakes and volcano eruptions in Chile.

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