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Characterisation of the coherent infrasound sources recorded by the infrasound International Monitoring System station I48TN in Tunisia (Mines & Quarries)

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The I48TN is one of the 60 International Monitoring System (IMS) stations of the Comprehensive nuclear Test Ban Treaty Organization (CTBTO) characterized by its location in the heart of the IMS Infrasound network (Figure 1.a). The ability of the IMS infrasound network to detect atmospheric nuclear explosions and other signals of interest is strongly dependent on station-specific ambient noise. This ambient noise includes both incoherent wind noise and real coherent infrasonic waves. This abstract will focus on defining and characterizing the mines and quarries in the region as the most important real coherent infrasonic noise to I48TN in order to provide the infrasound data analyst with the most important local coherent infrasound sources in the region (mines and quarries) as recorded by I48TN and also to demonstrate how useful is the synergy between Infrasound and seismic data for the characterization of the acoustic sources. DTK_GPMCC, and DIVA software are used to perform this study (Cansi, 1995; Le Pichon et al., 2010). Also, Geotool software from the International Data Centre (IDC) will be used to analyse KEST seismic data. The result of this study will allow to characterize the most important coherent local infrasound sources (mines and quarries) for I48TN.

Promotional text

I48TN and KEST stations are used to define and characterize mines and quarries in the region showing the synergies between Seismic and Infrasound technologies and the propagation of infrasound data from the coherent infrasound sources in the region.

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