IS42: A new IMS certified infrasound station in the Graciosa Island, Azores, Portugal

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ABSTRACT

In order to establish an International Monitoring System (IMS) infrasound station in the Azores Islands, located in the middle of the North Atlantic Ocean, the cooperation between the Preparatory Commission for the Comprehensive Test Ban Treaty Organization (CTBTO) and the Azores Government, the Centro de Vulcanologia e Avaliação de Riscos Geológicos (CVE), the microbarometer array, the CRF Telescopic and the Terceira Metropolitan Airport (ATN), leads to the establishment, installation and certification of the station on the island of Graciosa. The station has been established 1 km from the central point of the Graciosa Island, in a heavily forested area that gives true infrasonic low noise. The array comprises eight data acquisition elements (451 Hz) and one central recording facility (8000 Hz) where the data are collected and transmitted to Vienna. The geometry of the array, defined as having the central element (CED) at an azimuth of 0 ° and a radius of 1000 m from the CED, guarantees a maximum distance of 3.1 km for infrasounds that are generated 100 km away from the station. The central element (CED) is aligned to the center of the Azores Archipelago, and is considered the most significant station for monitoring the PIRO region. The Crab station, which is located near the central point of the Graciosa Island, is aligned to the center of the Azores Archipelago, and is considered the most significant station for monitoring the PIRO region.

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Acknowledgments:

Governo dos Açores

The Crab station is used in the PIRO region, with a central coordinate of 36° 03′ 20″N 25° 50′ 11″W, and is considered the most significant station for monitoring the PIRO region. The Crab station, which is located near the central point of the Graciosa Island, is aligned to the center of the Azores Archipelago, and is considered the most significant station for monitoring the PIRO region.

Conclusions

On 3 December, 2019, the IMS infrasound station was certified and integrated into the International Monitoring System (IMS). This station contributes to the global monitoring network, bringing new data to the scientific community. Data collected by the IMS infrasound station are used for research and to improve the understanding of volcanic activity. The station will also be used to monitor seismic events and support regional cooperation.

References:
