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## use of a Local Infrasound Mobile Array and the International Monitoring System IS42 Station in Monitoring Seismovolcanic Crisis on São Jorge Island, Azores in 2022

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The São Jorge seismovolcanic crisis in 2022 provided an opportunity to deploy a portable infrasound array (SJ1) on the island, in a collaborative work between the University of the Azores (UAc) and the University of Florence (UniFI). This four-element array became operational on 2 April 2022 firstly with a diamond geometry, and after 3 May 2022 with a centred triangular design. Therefore, SJ1 in association with the International Monitoring System infrasound station IS42, located on Graciosa Island at ~41 km distance, formed a temporary monitoring network, aiming to assist the monitoring activities related with the volcanic unrest in São Jorge Island. Both have different equipment, mainly regarding on sensor's type: SJ1 is composed of four differential pressure transducers and the signal is digitized at 100 sps, while IS42 is formed by eight absolute microbarometers rearranged into a three-element triangular small aperture within a five-element pentagonal aperture and signal digitized at 20 sps. We present here two examples of detections registered: (1) seismoacoustic signals associated to a low magnitude earthquake at São Jorge, and (2) a meteor offshore north of São Miguel Island, allowing to validate the overall detection capability and the importance of this type of solution to monitor local seismovolcanic activity.

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## **Promotional text**

Results of using an infrasound mobile array (SJ1) and an IMS station (IS42) in the detection capability and local monitoring of seismovolcanic activity: The case of the volcanic unrest on São Jorge Island, Azores, Portugal in 2022.

## **Oral preference format**

in-person

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