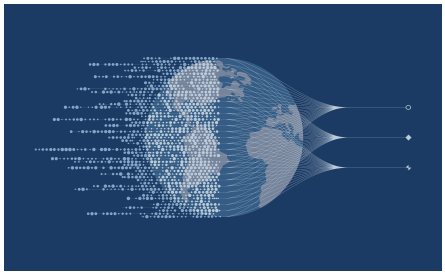

ID: **O3.5-597** Type: **Oral**

Azores infrasound network: Statistical analysis and characterisation of the main detections

Tuesday 9 September 2025 16:45 (15 minutes)

Monitoring techniques based on infrasound arrays have contributed to the detection, location, characterisation and quantification of volcanic and seismic activity at local as well as regional distances. Currently, the Azores infrasound network comprises an International Monitoring System (IMS) station IS42 on Graciosa Island and two low-cost arrays (SJ1 and TER), located on São Jorge and Terceira Islands. The three arrays allow monitoring the Azores area more comprehensively, improving the detection of seismo-volcanic activity, as well as enhancing characterisation of important atmospheric events such as storms and fireballs.
In this work we present a statistical analysis of infrasound detections from the updated network since June 2024, with the identification of persistent sources, variation of noise level and analysis of selected events, which allow to demonstrate its performance and sensitivity. Besides the persistent infrasound activity, we recorded other infrasound sources such as local earthquakes and airplanes. Furthermore, a first approach to correlate infrasound and seismic data from the region is also presented to try to demonstrate the benefit of this monitoring technique in the context of the archipelago.

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