# Near- and far-field infrasound monitoring of Etna volcano

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The significant number of active volcanoes on the Italian territory represents a serious threat for the society and highlights the importance of using infrasound arrays as monitoring tool to study their activity.

The Department of Earth Sciences of the University of Florence (UniFi) is operating since several years a number of portable infrasound arrays, for the monitoring of volcanoes activity.

Two small-aperture infrasound arrays are deployed at Etna and Stromboli volcanoes, respectively. The arrays are providing continuous data, which permit a systematic study of the near-field infrasound sources, setting thus the basis for the development of a plan for volcanic risk management.

In the course of the last years Etna volcano had a significant level of activity, recorded in the near-field by the UniFi infrasound array. Simultaneous records in near- and far-field would help improving the understanding of the volcanic source characteristics, as well as of the portion of the atmosphere lying along the source-to-station path.

A study of the near-field signals from Etna recorded by the UniFi infrasound array established on the vicinity of Etna crater and of the far-field signals recorded by European infrasound stations, belonging to the CTBTO IMS Infrasound Network and to European infrasound research groups is presented.