

-field detections of UniFI arrays, synergies with IMS infrasound arrays and early warnings

The last two decades witnessed a dramatic increase of scientific interest for infrasound technology: since the establishment of the CTBTO Preparatory Commission and the progressive development of the International Monitoring System (IMS) Network. The infrasound component of the IMS Network (completed by 82%) largely demonstrated its potential for the detection of a variety of man-made and natural events: these results prompted several scientific groups to establish additional infrasound arrays for monitoring specific sources and generating potential synergies with the Provisional Technical Secretariat. The Department of Earth Sciences, Florence University, Italy (UniFI) has established since 2000 in Italy six small-aperture infrasound arrays for volcano and avalanches monitoring, one large-aperture array (Mount Amiata) in the framework of the ARISE Project, two small aperture arrays in Japan, four small aperture arrays in Iceland and 2 small aperture arrays in South America. All the arrays have demonstrated their key contribution and potential for early warning purposes, setting the ground for complementing with near-field observations the IMS infrasound detections: a specific vDEC Project is currently under development. This work will present various UniFI detections in different geographical areas and will discuss their potential for synergies with IMS data, with special focus on early warnings' issuance.

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Track Classification: Analysis of Sources and Scientific Applications