

Signals from the Sinabung Volcanic Eruption on 19 February 2018

Monitoring our global environment with the infrasound array network to verify compliance with the Comprehensive Nuclear-Test-Ban Treaty (CTBT), has also proved useful in several other man-made and natural phenomena, particularly in geo-hazards applications. Infrasound waves emissions from natural phenomenon such as volcanic eruption travel through the atmospheric layers resulting in pressure and temperature perturbations. Infrasound due to its low frequency acoustic waves has a very low attenuation rate when propagated in the atmosphere, and can be detected from long distances. An infrasonic array data collected after the eruption of Sinabung Volcano, Indonesia on the 19 February 2018 indicated that the vents of the eruption emitted infrasound waves. The low frequency signals were recorded by three International Monitoring System (IMS) infrasound stations such as I06AU, I19DJ and I52GB which were associated with the eruptive event of the Mount Sinabung. These infrasound signals propagated over a long distance >6000 km to be observed as far as the I19DJ station in Djibouti.

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