ID: Type: **Oral**

1.1-O4. Towards a Volcanic Notification System with infrasound data

Powerful volcanic eruptions, such as those of Mt. Kelud in 2014 or Eyjafjallajökull in 2010, may cause disturbances in the different layers of the atmosphere. These fluctuations are measured by infrasound stations and analyzed in order to extract parametric data that best characterize the volcanic source. The remote monitoring of volcanic activity with infrasound is of interest to the Volcanic Ash Advisory Centres (VAAC) that are responsible for coordinating and disseminating information on volcanic ash clouds that may endanger aviation. The synergy between the CTBTO and ARISE (Atmospheric dynamics Research Infrastructure in Europe) partners offers a unique opportunity for the establishment of a Volcanic Notification System (VNS) using infrasound data from a global station network. The VNS makes best use of the infrasound component of the IMS together with the operational capabilities of the IDC. ARISE advanced products provides valuable parametric inputs on the atmosphere dynamics that drives the infrasound wave propagation. These results may serve as quality indicators increasing the VAACs confidence when receiving notification messages. The proposed approach is tested with VAAC Toulouse, mandated by the International Civil Aviation Organization, and demonstrates the usefulness of infrasonic data to International Airways Volcano Watch.

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