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Use of infrasound data for early notification of Volcanic Ash Advisory Centres

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Continuous progress has been made in the potential use of infrasound data in support of the International Civil Aviation Organization (ICAO) International Airways Volcano Watch. This work was initiated by a collaboration between CTBTO and the Toulouse Volcanic Ash Advisory Centre (VAAC), resulting in the development of the Volcanic Information System (VIS), under the ARISE (Atmospheric dynamics Research Infra-Structure in Europe) project. VIS provides notifications of possible volcanic activity based on infrasound observations by stations in the IMS (International Monitoring System) and other national or research installations. After successful tests using recent eruption data, an alerting bulletin prototype based on VIS has been designed for Toulouse VAAC. Two types of notifications are worthwhile: one in the far field (for early detection of eruptive activity and possible ash emission from poorly instrumented explosive volcanoes); and one in the close field (to enrich the description of the kinetic energy of the eruption and of the volcanic ash release). ICAO and World Meteorological Organization (WMO) encourage the effort to continue with the extension of the proposed approach to other VAACs. This essential step will help in designing new automated products that could contribute to reducing the impact of ash clouds on aviation.

Promotional text

With the recent progress in the potential use of infrasound data in support of the International Airways Volcano Watch, another step forward has been made towards the implementation of an early notification of ash clouds by an information system based on infrasound data.

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