

VOLCANIC ASH

Monitoring and Forecasting between Sicily and Malta Area and Sharing of Results for Aviation Safety

Volcanic clouds disperse a great amount of volcanic ash that constitutes a major hazard to aviation. The accidental encounter between volcanic ash and airplanes can be fatal.

This project realizes an automatic system for the monitoring and forecasting of volcanic ash dispersal between Sicily and Malta in the case of an Etna eruption. New instruments have been installed both in Sicily and at the University observatory facility at Giordan lighthouse and at Xewkija, Gozo and these, together with the use of tephra dispersal models, will be able to forecast the location and height of volcanic ash clouds.

The developed system will be able to monitor the region between Malta and Sicily and will produce alerts regarding volcanic emissions dangerous to aviation in this area. The results will be of direct use to the local communities and air travel in the Central Mediterranean region under Malta FIR.

The Giordan Lighthouse station, together with the Istituto Nazionale di Geofisica e Vulcanologia, Osservatorio Etneo, and the observatory on Mount Etna, will provide actual measurements of Ash and SO₂ plumes and provide adequate warnings to the competent Civil authorities and Catania and Malta airports in the case of eruptions from Etna.

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