Mobile FINE DUST Aerosol Spectrometer

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The impact of the new guidelines for aviation introduced in Europe during some volcanic eruptions and the consequences were studied by the EU. On requests by several users in Europe we build a compact, light weight flying device for aircrafts to monitor the movement of the ash cloud as event by using various instrumentations as remote sensing techniques.

Our contribution to this concept was to build a fast monitoring sensor measuring the Aerosol
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size distribution in the NANO and MICRO size range at any altitude and air speed, so that ash plume model forecasts could be evaluated against actual remote sensing data based on satellites and ground-based instruments.

The paper will describe the technology, evaluation tests and the experiences made at different installations allowing volcanologists, chemists and geological expert to monitor all of over Europe for disciplines.