



The 2006 eruption of Mt. Etna (Italy): new multidisciplinary approach implemented by the UFSO staff of INGV Catania Section

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During the latest (2006) eruptive activity of Mount Etna (Sicily - Italy) multidisciplinary instrumental networks and observations produced useful and significant data in order to understand the eruptive dynamics of this volcano. In this context, the staff of the INGV Catania Section Department called Unità Funzionale Sala Operativa (UFSO) actively participates in national and European research projects dealing with the development and use of new systems with high technological content useful, in particular, during eruptions or seismic crises. Another aspect of this work is represented by the development of software for the supervisory and automatic control of the working systems. For example during the last few weeks of 2006, ash-rich columns several km in height, and consequent fallout characterized the eruption of Mt Etna and severely hampered the functioning of the nearby International Airport of Catania. Therefore, for a better evaluation of real time systems a new dedicated web site has been realized, improving the availability of fundamental data for the Italian Department of Civil Defence (DPC). The DPC staff, using also INGV scientific data, releases daily bulletins to Italian government authorities. Multidisciplinary data are collected and well represented in risk maps. Moreover, various algorithms have been implemented and used to make simulations of eruptive clouds from Mt. Etna. All realized maps also use wind forecasts at different altitude and different scenarios are available in a new software able to plot different parameters like, for example, temperature and wind speed/direction in different isobaric levels, precipitation rate and total cloud cover.