

**The EtnaPlumeLab (EPL) research cluster:
advance the understanding of Mt. Etna plume,
from source characterisation to downwind impacts**

P. Sellitto, LMD-ENS, Paris

In 2013, a multidisciplinary research cluster named EtnaPlumeLab (EPL) was established, gathering experts from volcanology and atmospheric science communities. Target of EPL is to advance the understanding of Mt. Etna's gas and aerosol emissions and the related processes, from source to its regional climatic impact in the Mediterranean area.

Here, we present the cluster and its three interacting modules:

- EPL-RADIO (Radioactive Aerosols and other source parameters for better atmospheric Dispersion and Impact estimatiOns),
- SMED (Sulfur MEditerranean Dispersion),
- Med-SuV (MEditerranean SUpEr- site Volcanoes) Work Package 5.

First results have provided pioneering highlights on the relevance of Mt. Etna's plume impact at the Mediterranean regional scale. These results underline that further efforts need to be made to get insight into a synoptic volcanogenic-atmospheric chemistry/climatic understanding of volcanic plumes impact.