



Long term validation of Robust Satellite Techniques (RST) for thermal volcanic activity monitoring

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A multi-temporal scheme of satellite data analysis, named RST (Robust Satellite Techniques), already successfully used to study and monitor several active volcanoes, has recently been tested on a long time series of NOAA-AVHRR records acquired over Mount Etna area for a full assessment of its performances. Satellite records acquired at different time of pass (e.g. day/night, winter/summer), from 1995 to 2008 (14 years of satellite records analyzed), processed following RST prescriptions, have been strictly validated using ground based information reported in the volcano bulletins freely available on the web. In this work results of this detailed validation analysis will be presented, discussing performances of such an approach for an automatic satellite monitoring of thermal volcanic features. Moreover, RST capabilities in detecting even abrupt changes in thermal signal related to the beginning of new eruptive events, by using data provided by geostationary satellite like MSG-SEVIRI, will be investigated, for a possible implementation of such an approach within an integrated Early Warning System devoted to volcanic hazard mitigation.