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An automatic satellite system (RST based) for early warning and monitoring of natural/environmental hazards.

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An automatic satellite monitoring system has been developed at IMAA to monitor major natural and environmental hazards, by using high temporal resolution satellite data. This system, based on a multi-temporal data analysis of co-located satellite records, named as RST (Robust Satellite Technique), uses both polar (e.g. NOAA-AVHRR, EOS-MODIS) and geostationary (e.g. MSG-SEVIRI) satellites data, which automatically processed in real time by applying an original change detection scheme, to detect and monitor different features such as hotspots (e.g. fires, volcanic thermal anomalies), volcanic ash clouds, flooded areas etc. Recently, a collaboration with administrators, decision makers and local agencies of Italian territory (Regional Administration, Italian Civil Protection and Italian Forest Service), has been performed to better assess reliability of this monitoring system in hotspot detection. Results of this study, together with other results concerning different kinds of natural/environmental hazards, will be shown and discussed in the following.