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The use of high resolution lightning information at the Italian Air Force Meteorological Service

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Italian Air Force Meteorological Service has recently set up a new lightning sensors network (LAMPINET network) providing detailed information about atmospheric electrical activity (intensity, polarity, space and time localization).

First employments of lightning data are presented:

- a new nowcasting-oriented image product obtained by merging ***satellite*** (*cloudiness from MSG IR 10.8 μm channe*l), ***radar*** (*Surface Rainfall Intensity estimation)* and ***lightning*** (*spatial and temporal localization of electrical activity*) data;
- preliminary results of the use of lightning data for verification purposes: the thunderstorms forecasts, provided by the deterministic post-processing system for the local weather forecasts in operation at the Italian National Air Force Met Centre, have been tested.
- a study on the comparison of lightning data and the output of an innovative nowcasting systems for detection and evolution of convective cells, based on neural network algorithm.