

# **SAF-CM water vapor products and their relationship to large and intense precipitation over Europe during 2005**

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Climate data available by Satellite Application Facility (SAF) on Climate Monitoring (CM) represent a new important data source to investigate on climate changes, hydrology, and environmental sciences.

The behavior of some atmospheric parameters like Cloud water liquid path (CWLP) and Humidity Composite Products (HCP) can be essential to understand the generation of intense and large events of precipitation.

In this work temporal and spatial evolution of CWLP and HCP fields patterns over the CM-SAF baseline area during the year 2005 are analysed in connection to flooding episodes and extreme rainfall events.

Furthermore, CLWP connections to North Atlantic Oscillation and Mediterranean Oscillation are shown.

The area of analysis includes the European continent, the Mediterranean sea, and parts of North Atlantic and Middle East, ranging from 30° N up to 80° N and from 60° W to 60° E.

CLWP product is derived from data obtained by instruments on-board of polar orbiting NOAA satellites (AVHRR) and the Meteosat Second Generation (SEVIRI) geostationary satellite. The products have a spatial resolution of 15 Km<sup>2</sup>.