



## **Monitoring soil wetness variations by a multi-temporal passive microwave technique**

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Microwave remote sensing offers emerging capabilities to monitor global hydrological processes. In particular, in the last years, its potential in soil moisture retrieval has been largely demonstrated.

Recently, an innovative Soil Wetness Variation Index (SWVI) has been proposed, using data acquired by the microwave radiometer AMSU which flies aboard NOAA satellites. SWVI is based on a general approach for multi-temporal satellite data analysis (RST- Robust Satellite Techniques) which, by means of a change detection technique applied over long-term multi-temporal satellite records, is able to identify anomalous values of the observed signal. Results achieved up to now by such an index, nevertheless quite satisfactory, need to be further investigate assessing their reliability with detailed ground information and/or comparing them with other satellite measurements. First outcomes of such a kind of analysis are presented in this work. In fact, results obtained applying the SWVI to the flooding event which affected some European countries during the summer 2002, have been compared with AMSRE soil moisture products. Preliminary results of such a comparison will be shown and discussed in this work.