Operational cloud classification for the Iberian Peninsula using Meteosat-8 and Aqua-Airs image fusion

C. Casanova (1,2), A. Romo (2), E. Hernández (1) and J. L. Casanova (2)

(1) Department of Earth Physics II, Faculty of Physics, University Complutense of Madrid, Spain.

(2) Remote Sensing Laboratory, LATUV, Department of Applied Physics, Faculty of Sciences, University of Valladolid, Spain.

The aim of this work is to show an operational method of cloud classification for the Iberian Peninsula. We start from the premise of an acceptable trade-off between calculation speed and accuracy in the output data. For this reason, several channels of the METEOSAT-8 satellite (Meteosat Second Generation) were used alongside data provided by the AIRS (Atmospheric Infrared Sounder) probe onboard AQUA polar satellite. A historical database of mean temperatures at ground level was also used. The analysis of different significant synoptic and mesoscale situations highlighted the efficacy of this method in the representation of the different cloud structures that normally appear in these situations. Considering the results of the study and given its speed and accuracy, it can be concluded that the method is appropriate for monitoring cloud systems in real time.