A study of the evolution of the cloud cover over Cáceres(Spain) along 1997 estimated from (2001)

Titulo:A study of the evolution of the cloud cover over Cáceres(Spain) along 1997 estimated from Meteosat images Autores:A. Astillero, A. Serrano, M. Nuñez, J. A. García, M. Macías, H. M. González Tipo:Oral Congreso:The 2001 EUMETSAT Meteorological Satellite Data Users' Conference Publicación:Meteorilogical Conferences (ISBN: 92-9119-04-7) (ISSN:1011-3932) Lugar:Antalya (Turquía) Año:2001 Abstract:This particular work is aimed at the study of the evolution of cloud cover along the year 1997. The area of interest corresponds to a 5x5 Meteosat pixel window around the meteorological station of Cácere (Spain). The cloud cover is estimatedand classiied by means of a Back Propagation neural network applied to smultaneous images of visible and infrared channels of Meteosat. The neural network classifies each pixel in one of the following classes: land, sea, fog, low clouds, middle clouds, high clouds and clouds with vertical growth. Once the neural network is set up after a learning step, it is applied to all the images corresponding to the year 1997. Then, percentages of the different classes for the area of interest are calculated, and the annual evolution of these percentages are analysed. As main results, the study shows the existence of a minimum of daily cloudiness during July and August, and a maximum during November and December. Aso, it can be sen that the fog has a maximum during December and January, which is in agreement with the synoptic situations prevailing during those months over the Iberian Peninsula.