MESOSCALE AND SYNOPTIC CONDITIONS RELATED TO THE 30 SEPTEMBER 1997 FLASH FLOOD IN ALICANTE (SPAIN)

L. Cana(1), L. Gimeno(2), E. Hernandez(3), R. Garcia(3), J.Diaz(4)

1. Physics Department. ULPGC
2. Physics Department. Campus de Orense. Universidad de Vigo
3. Catedra de Fisica del Aire. Universidad Complutense de Madrid
4. C.U.S.P. Universidad Autonoma de Madrid

On 30 September 1997, a flash flood was registered in Alicante, placed at the SE Mediterranean coast of Spain. With 260 mm of precipitation in just 6 hours, the storm caused several loses in human lives. The development of a Mesoscale Convective System (MCS) started when a warm and moist air mass coming from the Mediterranean Sea mixed with a prefrontal zone related to a strong low-pressure system placed at the SW of the Iberian Peninsula. In order to show the conditions related to this development, the Skew T- Log P plot, IR and Visible NOAA images as well as the different charts for the standard pressure levels and other features of the mesoscale environment are shown.

A CASE OF DEEP CYCLONE ASSOCIATED TO EXTREME WEATHER IN THE MEDITERRANEAN

C. Estarellas, A. Jansá, A. Genovés, J. Campins, M. A. Picornell
Instituto Nacional de Meteorología, Centro Meteorológico Territorial de Baleares, Palma de Mallorca, Spain.
Estarellas.pma@inm.es

On the 6th October 1996 a deep cyclone formed in the Western Mediterranean and severe weather conditions took place in a widespread area. Heavy precipitation led to rainfall amounts of 104 mm in Sardinia, 72 mm in Mallorca and 67 mm in Corsica, on the 6th, and 96 mm in Mallorca on the 7th. Gale force winds were recorded on land sites, but it seems that the maximum wind speed occurred on the sea, where wave heights up to 7 m were measured.
Satellite imagery and grid fields from HIRLAM-INM are used to make a diagnosis of the event. Effort is put to analyse the contributions of the forcing factors leading to cyclogenesis and to the occurrence of extreme weather.