EMS7/ECAM8 Abstracts,
Vol. 4, EMS2007-A-00529, 2007
7th EMS Annual Meeting / 8th ECAM


# Flood events over the area of Cyprus

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Almost every year, localised and in some cases more widespread floodings affect parts of Cyprus, causing extensive damage to property, destruction of infrastructure and sometimes the loss of human life. Various factors such as the prevailing meteorological situation, the total precipitation and intensity, the geomorphology, the geology and the human intervention to geomorphology are responsible for flood events. In the present study, only the meteorological situation and the associated mechanisms are examined, in an attempt to gain the essential knowledge for the improvement of local weather forecasts. The study period covers 13 years, namely from 1994 to 2006, during which 43 cases of flooding were reported. The dominant favorable weather conditions for flood events are the presence of a depression in the area and thermal instability conditions. According to these two factors, the flood events were classified into two categories, respectively: the “depression” category which includes widespread flood events of long duration and the “instability” category which includes isolated flood events of short duration. For both categories, several synoptic, dynamic and thermodynamic characteristics were calculated and studied. For the necessary calculations, the rainfall data base of the Cyprus Meteorological Service, the radiosonde data for 1200UTC from Athalassa synoptic station and the NCEP/NCAR global analyses were used.