



## Heavy Mediterranean precipitation

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There is a particular climate regime in the Mediterranean region. One of the characteristics of this regime is a high concentration of the precipitation in a few episodes. A large part of the annual precipitation falls in one or a few days of heavy rain. Amounts of daily maximum rainfall are over one hundred, even several hundreds of mm. Such large amounts of precipitation during a relatively short time demand important water availability and an efficient mechanism of water supply to the precipitation system.

Some kind of meteorological structure of the precipitation system seems necessary. In some of the most important Mediterranean precipitation events a mesoscale convective systems can be identified, but not in all the cases. Anyway, in most of the cases of the heavy rainfall events the precipitation system is a mesoscale structure, but these mesoscale structures are at the same time organised by larger scale wind-pressure structures. The presence of a cyclone and/or a low level jet seems to be very relevant. The orographic factor is also very important in most of the cases.

The organisation of the Mediterranean heavy rain structures by larger patterns gives, in principle, major predictability to these events, although this predictability becomes conditioned by the predictability of the larger structures, the cyclones in particular.

Finally we can mention that not only the Mediterranean cyclones can condition the Mediterranean heavy rain events, but also the heavy rain event can condition some Mediterranean cyclones.