



TRMM and lightning observations of a low-pressure system over the Eastern Mediterranean

K. Lagouvardos, V. Kotroni

National Observatory of Athens, Greece (lagouvar@meteo.noa.gr)

The Mediterranean is an area where significant cyclone activity occurs, mainly during the cold period of the year. As the major number of these cyclones is formed over the sea, an especially useful tool for the observation of these systems is the use of spaceborne platforms. Moreover, during the cold period of the year, lightning usually occurs over the relatively warm surface waters and thus the study of the evolution of convective systems can be also assisted by the use of data from lightning detection devices. In this work the data explored are those provided by ZEUS lightning detection network, operated by the National Observatory of Athens as well as from TRMM satellite.

An example study of a storm over the Mediterranean (4 November 2004) is presented in order to show how the synergetic use of various spaceborne (low orbiting satellites) and ground based instruments (lightning detection systems) can be particularly useful for the observation of mid-latitude weather systems over the sea. For the same case high-resolution model simulations with MM5 model are validated against the same set of observations.