



Variability of warm-season clouds over Europe

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A dataset consisting of 5 years of Meteosat IR data every half hour has been exploited to investigate the span and duration of convective system over Europe and the Mediterranean during summer months (May-August). Power spectra analysis was also conducted to assess the daily cycle of convection. The European domain was split in two parts to better identify the different latitudinal regimes, especially discriminating between the North Atlantic jet and the circulation from North Africa which interests the western and central Mediterranean. The northern and southern domains span 44-54 N and 30-44 N, respectively, and the longitude domain is 15 W - 40 E. May to August data were considered. The role of orography in determining the convection strength and propagation is evident. The Atlas, Pyrenees, Alps and Carpatians heavily influence the circulation and convective cloud development. At the same time the propagation and convective re-generation component of the mesoscale systems is observed. An analysis of NCEP reanalysis data for the period is also conducted and first results presented. A longer term reanalyses of Meteosat data and a routine processing for the future is envisaged using precipitation products such as CMORPH.