Evaluation of Convective Precipitation Schemes during the Warm Season of the year 2006 – 2007 over Greece.

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This study is devoted to the evaluation of the role of various convective parameterization schemes on the quantitative precipitation forecasts during the warm season of the year at regional scale. For this reason the non-hydrostatic model MM5 is used. Namely the schemes proposed by Kain – Fritch, Betts – Miller and Grell are evaluated. The analysis is based on the simulation of 16 cases of heavy precipitation that occurred over Greece during the warm season (May – September) of 2006-2007. Precipitation forecasts provided by MM5 model at 8-Km grid increment are verified against the observational data from the local rain gauges network. Further, as warm season precipitation is often convective and localized a further verification of the model performance is made using lightning observations provided by the Zeus Lightning Network generated by the National Observatory of Athens.