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Investigating the life-cycle of summer convection activity using high temporal resolution satellite data and lightning measurements

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The aim of this work is to investigate the onset and life-cycle of convective activity during the warm period of the year, in selected areas of Greece, Italy and southern France. For that purpose, 5-min METEOSAT imagery (rapid scanning) is used, together with lightning measurements made by ZEUS lightning detection system. For selected days during spring and summer 2009, an analysis is performed in order to investigate the life-cycle of convective activity (of the order of a couple of hours) and how this life-cycle is related with the lightning measurements. The final aim is to provide a better insight on the lightning activity associated with different stages of the storm development (developing, mature, decaying stages).