



Favorable meteorological conditions for different types of organized convection

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Socio-economic impact of convective storms depends strongly on the type and intensity of convection. Organized convection (squall lines, mesoscale convective systems, mesoscale convective complexes, etc.) usually cause severe damage due to downbursts, large hail, heavy rainfall, flash floods or tornadoes. The improvement in nowcasting and forecasting of the organization of convection is extremely important due to possible damage, in some extreme situations also possible fatalities, that can be caused during such events. In this study, warm part of the year 2016, from April 15 to September 15 is analyzed in order to find typical meteorological conditions that are suitable for different types of organized convection. Days with convective activity are selected using the lightning data detected by the International Lightning Detection Network (LINET). After detecting the days with convection, the organization of convection is subjectively estimated using satellite and radar data. Thermodynamic conditions are determined with the help of proximity radiosounding data. Also, by analyzing the synoptic situation, synoptic pattern is assigned to each case. In this manner typical synoptic patterns are connected to different types of organized convection over the area of Croatia, with the main goal of improvement of forecast of severe weather conditions caused by different kind of convective storms.