European Conference on Severe Storms 2015
14–18 September 2015, Wiener Neustadt, Austria
ECSS2015-47

Relation of radar and hail parameters in the continental part of Croatia

Damir Počakal
Meteorological and Hydrological Service of Croatia, research, Zagreb, Croatia (dhmz-rc@vz.htnet.hr)

Continental part Croatia is exposed, mainly in the summer months, to the frequent occurrence of severe thunderstorms and hail. In the 1960s, aiming to protect and reduce the damage, a operational hail suppression system was introduced in that area. The current protected area is 26800 km2 and has about 580 hail suppression stations (rockets and ground generators) which are managed with 8 radar centres (S-band radars).
In order to obtain objective and precise hailstone measurement for different research studies, hailpads were installed on all this stations in 2001. Additionally the dense hailpad network with the dimensions of 20 km x 30 km (1 hailpad per 4 km2), was established in the area with the highest average number of days with hail in Croatia in 2002.
This paper presents analysis of relation between radar measured parameters of Cb cells in the time of hail fall with physical parameters of hail (max. diameter, number of hail stones and kinetic energy) measured on hailpads in period 2002 -2014. In addition are compared radar parameters of Cb cells with and without hail on the ground located at the same time over the polygon area.