Comparison of haildata recorded on polygon in Austria and Croatia (2002-2016)

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Measurement and registration of hail is because of temporally and spatial variations very complicated. For receiving objective and exact hail data on the ground, several measuring instruments were developed. Very good results in practical measuring of hail on the ground where received from a simple device, a hailpad. Purpose of installing a dense hailpad network in specific areas, was a start of different scientific research programs (climatology, evaluation and others).

One of the first such polygons was installed in Austria on the location „Weiz—Gleisdorf“ in year 1982. In north-west part of Croatia in year 2002 a very similar polygon was installed. Both regions are characterized by a very high hail frequency inside Europe, especially around the Alps, caused by very similar climate conditions. This close polygons (distance is about 100 km) are similar according they area and the number of total hailpad-stations. Austrian polygon is 700 km$^2$ wide and with 180 hailpads and Croatian polygon has a size of 600 km$^2$ and 150 hailpads, both with a grid of 2 km.

For each hit pad we are receiving following parameters: number of hailstones, diameter, mass and kinetic energy, all per m$^2$.

The goal of this paper is to compare all hailpad data for the time period 2002 – 2016, and to find out, if there exist differences regarding all hail parameters, or not. First preliminary results show for some parameters not expected great differences, especially in the average amount of kinetic energy.