Results from the network of rain gauges in association with the Doppler Weather Radar

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Precipitation measurement is an essential task for many purposes such as in severe weather and flood hazard warning.

Weather radar provides information about the intensity of precipitation with a spatial resolution of less than a kilometer and a temporal resolution of about one minute. An area of several hundred kilometers can be observed with one device. Radar gives the chance to identify dangerous precipitation regions before they appear at a specific site. The three-dimensional data sets allow the investigation of vertical structures and of dynamics of precipitation systems.

This analysis is done by using radar data obtained by Doppler S-band radar and rain gauge data obtained by synop reports and automatic rain gauges.

For those data correlation coefficients calculated for the period January to June 2013.

The quality of the radar data is variable in time and space. In the investigated area, radar data around town of Belgrade are corrupted by clutter and partial beam blockage while for the other areas is of good data quality.

For the adjustment and verification procedure, a good quality of rain gauge information is necessary. For this reason rain gauge data were checked by a comparison between neighboring stations, and periods of uncertainty were rejected before further work.