

Title: *Utilization of radar echo extrapolation for quantitative precipitation forecast*

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Abstract:

At present time weather radar data are essential for national meteorological services. Utilization of this data for quantitative precipitation forecast and severe weather prediction for short period (nowcasting) becomes more and more common. Increasing interest for quantitative precipitation forecasts can be noticed in hydrological applications, where it can give early warning on flash floods and can improve large scale precipitation forecasts. This paper verifies usability of COTREC nowcasting method based on extrapolation of radar echo for quantitative precipitation forecast. Quality of COTREC forecast up to 3 hours was investigated on data from 1.4.2006 to 30.9.2006. Comparison of COTREC method with Aladin NWP model forecasts was also made. Hourly mean precipitation estimates on catchments were chosen for comparison because of verification focused mainly on utilization of the forecasts in hydrological applications. Forecasted precipitation estimates were compared with optimal operationally available precipitation estimate – adjusted radar estimate combined with available raingauge measurements.

Keywords: *extrapolation, COTREC, nowcasting, precipitation estimates, radar*