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Extreme rainfall-runoff event in a small experimental catchment in the Bohemo-Moravian Highland

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Extreme rainfall-runoff event in the Kopaninský stream experimental catchment (7,1 km^2) is described. This catchment is localised in the Vltava (Moldau) river basin.

Precipitation during the heaviest rainstorm on 23. 5. 2005 is analysed. Data from seven rain gauges situated in or near this catchment are represented. The highest recorded total sum exceeds 170 mm per day. This rainfall amount is higher than 100-year rainfall. Two of rain gauges record the data automatically with minute accuracy. The highest recorded intensity exceeds 10 mm per 5 minutes.

Record of automatic ultrasonic water levels monitoring at the outlet profile was interrupted due to too high water levels. Peak discharge is estimated on the basis of traces along the stream.

As a consequence to this rainstorm the water levels in the stream rose, water spilled out from the river-basin and flooded areas along the stream. Rainstorm, hailstones and flood caused damage and losses on land and village localised downstream.

The runoff response is very quick with respect to the catchments area. Lag time between precipitation and runoff is only few hours.