



## **Estimation of a Z/R-relationship to compute rainfall intensities from radar data using inverse hydrological modelling**

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The quality of hydrological modelling is limited due to the availability of high resolution temporal and spatial input data such as temperature, global radiation, and precipitation. Rain gauge measurements give accurate information about the rainsum at a single point while radar measurements provide good spatial information. On the other hand, it is difficult to estimate areal precipitation from rain gauge measurements and absolute rainfall intensities from radar data. In this study, a method to calibrate rain intensities calculated using a Z/R-relationship from radar reflectivities is presented. River gauge measurements from catchment sizes around 100 km<sup>2</sup> are used to estimate areal precipitation and finally Z/R-relationships using a calibrated hydrological model. The study is performed in the well known alpine Ammer watershed with very short reaction times of the river gauges to rainfall events.

Results from the calibration and validation of the hydrological model as well as results from the estimation of Z/R-relationships are shown.