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Performance of high-resolution X-band radar for rainfall measurements in The Netherlands

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We present a comparison of X-band radar rainfall estimates to rain gauge measurements for 195 rainfall events in The Netherlands with accumulations of at least 1 mm and durations of at least 30 min. Our results show that the point rainfall accumulations from radar and rain gauges differ by less than a factor 2 for 95% of the events. For event rainfall accumulations in excess of 10 mm (as determined from gauge measurements) the radar slightly but systematically underestimates rainfall with respect to the gauges. Attenuation correction is not able to completely compensate for this effect. However, for event rainfall accumulations not exceeding 10 mm the correspondence between radar and gauges is on average very good.