



## Extreme value analysis based on a 10-year radar-based precipitation reanalysis

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Weather radars provide reflectivity measurements at high spatial and temporal resolutions. At the Royal Meteorological Institute of Belgium, the volume scans of a C-band radar have been archived since 2005. Using the three-dimensional observations allows a careful processing of the reflectivity measurements to derive surface rainfall. It includes the mitigation of non-meteorological echoes and application of a correction based on the vertical profile of reflectivity. In a final stage, radar-based estimates are combined with dense raingauge measurements. A reanalysis for the period 2005-2015 is evaluated against an independent raingauge network. To show the potential of the dataset, an extreme value analysis is performed for different durations and compared to gauge results.