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Hydrology and Earth System Sciences
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Discussions

Interactive comment on "5 year radar-based rainfall statistics: disturbances analysis and development of a post-correction scheme for the German radar composite" *by* A. Wagner et al.

Anonymous Referee #2

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Comments to A. Wagner's reply from 3 April 2015

1. "holistic methodology" It is not only the VPR correction which is important in this context. From our experience, radar data quality is subject to time varying disturbances due to maintenance actions, season of the year or meteorological conditions. This means that data could be corrected with a constant clutter map and beam blockage correction for a certain time only, and after that, data quality conditions might change substantially. Therefore, the proposed correction scheme over a year's data (or longer) is not exploiting the correction potential of the data.

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2. Use of PX product / methodology I do not understand the sentence on page C865, starting "The necessarily transfer ...": If the data are corrected on a polar grid, no additional work needs to be performed to do the same job suboptimally on a cartesian grid.

We acknowledge the change of data quality in the year 2004 due to the installation of Doppler facilities at many radar sites and that this fact has been taken into account by the authors.

To my knowledge, the DX product has been archived since 2000 - at least it is our experience that we could use such data whenever we requested it from DWD.

3. Detailed comments - spoke correction (page C868): a correction based on mm/h requires a previous conversion from dBZ. I assume that this is then an image-wise correction of rain rates (not rain amounts as was stated in the authors' comment). Which function has been used? Does this imply that similar values in dBZ could be corrected in different ways?

Table 1: it is surprising that there is no evaluation of clutter area for Ummendorf and Feldberg radars with level. Do you have an explanation for that?

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 12, 1765, 2015.