

We thank the editor for again reading the manuscript very carefully and for providing numerous suggestions on how to improve the manuscript. Each comment will be addressed in the following.

Comment:

Line 56: I believe this should be “within one scan”.

Answer:

Thank you for this correction. We have replaced the wrong word “once” with “one”.

Comment:

“This and the fact that both QVP methods loose spatial information due to the azimuthal averaging that includes the whole 360° PPI measurement range, limit the use of QVP methods in combination with other measurement equipment further away from the PPI scanning radar as the extracted QVPs might not fully correspond to the measurements of the off-site equipment.” This sentence is too long and very hard to follow. Suggestion: “This combined the fact that both QVP methods loose spatial information due to the 360° azimuthal averaging limit the use of QVP methods in combination with vertically measurement equipment further away from the PPI scanning radar since the extracted QVPs might not adequately represent the measurements of the off-site equipment.”

Answer:

Thank you for this suggestion. We have implemented it accordingly.

Comment:

Legend of Figure 1: “Shown are also all operational cloudnet sites (yellow) and the two dedicated radar systems (blue) utilized for comparison.”

Answer:

Thank you for this correction. We have added the word “blue” in brackets.

Comment:

Line 135: “spatially separated radar systems” (instead of radars).

Answer:

Thank you for this correction. We have removed the “s”.

Comment:

Legend of Figure 2: Add a period at the end.

Answer:

Thank you for this correction. We have added a period at the end of the sentence.

Comment:

Legend of Figure 3: “Dedicated and operational radars are marked red and blue, respectively.” It seems like the colors are reversed in this sentence.

Answer:

Thank you for this correction. The colors were indeed reversed. We have changed the description of Figure 3 accordingly.

Comment:

Line 310: Suggest change “The method therefore automatically puts more weight in the measured volumes that most closely represent the contents of the height bin.”

Answer:

Thank you for this correction. We have implemented it accordingly.

Comment:

Line 311: Suggest remove “Following”. “This procedure allows ...”

Answer:

Thank you for this suggestion. We have removed the word “following” from the beginning of the sentence.

Comment:

Line 352: Add a period at the end of the sentence.

Answer:

Thank you for this correction. We have added a period at the end of the last bullet point.

Comment:

Line 422: Add commas: "which, as seen in Fig. 8 (e), offers mostly gapless coverage..."

Answer:

Thank you for this correction. We have added the commas accordingly.

Comment:

Lines 466-467: "In general, the lowest elevation angles are strongly influenced by clutter and therefore little to no reliable signature of hydrometeors for lower altitudes is measurable." This sentence seems to suggest that the lowest scans are consistently unreliable, which is kind of misleading. It is better to include some additional information saying that this is the case for gates close to the radar but not everywhere.

Answer:

Thank you for this suggestion. We have modified the sentence to be less absolute: *The lowest elevation angles are often influenced by clutter and therefore little to no reliable signature of hydrometeors for lower altitudes with range gates close to the radar is measurable.*

Comment:

Legend of figure 11: Replace "for a more stratiform time period..." with "for the stratiform time period..."

Answer:

Thank you for this correction. We have implemented it accordingly.

Comment:

Line 506: Correct the typo "through the measurement region."

Answer:

Thank you for this correction. We have added the "h" to the word "trough".

Comment:

Line 534: "in roughly 3 km height..." I think "in" is not the correct preposition to use here. Suggest rewriting "around 3 km height..."

Answer:

Thank you for this suggestion. We have rephrased the respective part of the sentence: *at heights of about 3 km*

Comment:

Line 584: "has to be expected" replace with "was expected."

Answer:

Thank you for this correction. We have implemented it accordingly.

Comment:

Legend of figure 13: Close brackets after (b). "MHP (b and differential reflectivity in a BA-CVP"

Answer:

Thank you for this correction. We have added ")" after "(b".

Comment:

Line 684: Replace "even finer details" with "even fine details" (finer suggests a comparison : finer than...)

Answer:

Thank you for this correction. We have replace "finer" with "fine".

Comment:

Lines 693-694: "over the whole Germany"

Answer:

Thank you for this correction. We have added the word "the" before "whole Germany".

Comment:

Appendix A: It makes sense to include the corresponding radial resolution and indicate that the different PRF (and radial resolution) correspond to the specific events.

Answer:

Thank you for this suggestion. We have added the range resolution for both case studies to the table. Please note that the different PRFs do not correspond to the specific case studies and are not related to the change in range resolution. The operational scan strategy of the DWD includes PRF staggering for the lowest 7 scans. To make this more clear, we have added a short notice to the table description: *Two values for the PRF indicate PRF staggering.*