

# Author's response:

ESSD-2023-300 Data description paper

## Reanalysis of multi-year high-resolution X-band weather radar observations in Hamburg

Dear Editor,

we thank you and the two anonymous reviewers for the time and effort they invested in handling and reviewing our revised manuscript and data set. This document holds a point-by-point response to the reviews and the documentation of all relevant changes made in the manuscript. We use colors to structure the document: (1) comments from referees in black, (2) author's response in blue, (3) author's changes in manuscript in red.

### Answers to reviewer 1

Review of the manuscript and data Reanalysis of multi-year high-resolution X-band weather radar observations in Hamburg from Burgemeister et al. (round 2).

I want to thank the authors for their thorough revision and the well-structured answers to the reviewer's comments which make it easy to follow the changes and explanations. The accessibility fo the data was improved a lot and the abstract is more structured and focuses more on the actual content of the dataset. Overall, I do not have general comments only a view minor issues which should not delay the publication of the manuscript.

1) Regarding my comment: 20) "L182ff Please elaborate on the choice of N and W for the four filters" and your answer "The choice of the parameters for the four filters were determined empirically by processing different case studies: You could add this statement to the manuscript just to be clear about it.

We added the suggested sentence to the manuscript: " *The choice of the parameters for the four filters were determined empirically by processing different case studies (not shown).*". (Added sentence, L187-188 in the revised manuscript.)

2) L197 "spin" in capital letters as above

This is correct, we changed it. (Corrected word, L199 in the revised manuscript.)

3) L198/199 there seems to be an unintentional line break and indentation

This is correct, the reviewer found a missing end of a sentence. There is a missing dot. The new paragraph after the sentence is intentional. (Added dot, L200 in the revised manuscript.)

PS: I like the animation!

### Answers to reviewer 2

This is my second review of the manuscript. The authors have improved the abstract, so that now it is only about this study and not about former work that has been done. The bug with start- and end-date when downloading the data has been fixed and the dataset itself is more cf-compliant now. Also more detail on the effectiveness of the clutter filters is given in the manuscript. I still think, that the description of the noise removal could be a bit clearer, but I

would recommend publishing the manuscript.

Technical comments:

1) P.9, L.199: I think, that the word “and” should be removed from this first sentence.

This is correct, we removed the second ”and”. (Removed word, L201 in the revised manuscript)

2) P.10, L.247: I would suggest writing the reference Hitschfeld and Bordan in brackets here.

There are missing brackets, we corrected the writing of the reference. (Added brackets, L249 in the revised manuscript)

## Additional changes

1) We noticed that the data set DOI and in-text citation is missing in our abstract, as required in the submission guidelines.

We added the DOI and in-text citation to our end of the abstract: ” *The radar reflectivities and rainfall rates are available at [https://doi.org/10.26050/WDCC/LAWR\\_UHH\\_HHG\\_v2](https://doi.org/10.26050/WDCC/LAWR_UHH_HHG_v2) (Burge-meister et al., 2024).*”. (Added sentence, L16-17 in the revised manuscript.)