

Dear Editor,

As per the comments put forth by Reviewer #3 and the editor, we have made the necessary changes to the manuscript. Here are the point-by-point responses to the comments. We take this opportunity to thank the reviewers and the editor for their valuable feedback, which helped us improve the manuscript and publish the results with all necessary inputs.

Best regards,
Rohith Thundathil

Comments:

* line 91: change to "we aim to further investigate"

Thank you for the correction. This has now been changed.

Line 91:

“In this study, we aim to further investigate the potential of TGs through a sensitivity experiment.”

* lines 125 and 146: the citation should be "Dousa et al., 2016" (drop the first name Jan).

Done. Please refer to lines 125 and 146. “Douša et al., 2016”

* line 150: "to comply" instead of "to complying"

Corrected.

* line 155-156: drop the sentence "In order to compare the simulations with respect to independent GNSS observations, we removed excluded 18 stations from our dataset for validation purposes": this information is provided in the forthcoming sentences and is therefore repetitive.

Sentence removed. Now the line 156 reads “In line with the approach of Thundathil et al. (2024), we intentionally excluded 18 stations in Germany from our dataset for validation purposes.”

* line 182: "squared" instead of "square" (I think)

Since it is a matrix type and not raised to a power, it should be called a square matrix. No changes have been made.

* line 193: "six-hourly" instead of "Six-hourly"

Corrected. Thank you.

* line 195: "input" instead of "inputs"?

Thank you. Done.

* line 200: as mentioned by referee #3: the RUC has not explained before, as it has been removed from an earlier version of the manuscript.

RUC has been replaced by six-hourly DA cycle. Please refer to line 199.

* line 214: "excluded stationS"

Thank you. Corrected.

* line 260: has A large error

Done.

* line 264: drop the , after TGs

Done.

* line 321: drop total before number (now it reads: "the total number of profiles totaled 1100", with is rather awkward).

Done.

* line 326: replace "she/he" with "one"

Done.

* line 365: where is Table A1? And replace "will summarize" with "summarizes"

Thank you for pointing it out. Table A1 has been replaced by Table 1. Please refer to line 364.