

Author's Response to Executive Editor

Dear Dr. Añel,

Thank you for your kind reminder, and we appreciate your effort in reviewing our manuscript.

Below, we have provided our point-by-point responses to the comments.

Please contact me if there is any further clarification is needed.

Best regards,

Yiguo Pang

Point-by-point responses:

- **Executive Editor:** Unfortunately, after checking your manuscript, it has come to our attention that it does not comply with our "Code and Data Policy".

https://www.geoscientific-model-development.net/policies/code_and_data_policy.html

Response: Thank you for the reminder. We have reviewed the policy carefully and will make every effort to address the necessary adjustments to ensure our manuscript meets the high standards required for publication in GMD.

- **Executive Editor:** First of all, for the WRF code you link a GitHub site. However, GitHub is not a suitable repository for scientific publication. GitHub itself instructs authors to use other long-term archival and publishing alternatives.

Response: Thank you for your valuable feedback. To clarify, we have archived the source code modifications to the original WRF model on Zenodo (<https://zenodo.org/records/16751293>), which provides a long-term, citable repository for these changes. All necessary modifications required to reproduce the results are available in this Zenodo repository. The original version of WRF, developed by NCAR and UCAR, is publicly accessible via GitHub. We will make this clarification in the next revision of the manuscript.

- **Executive Editor:** Also, for many of the data sources you cite webpages that are not repositories. It is necessary that you store all the data that you have used in repositories that we can accept, with a DOI. This includes the CarbonTracker, IGRA, OCO3, etc.

Response: Thank you for your kind reminder. The DOI was previously attached in the references, we will update the manuscript to replace the URLs with the corresponding DOIs for the data sources. The updated data source references will include:

- NCEP-FNL reanalysis meteorological data (<https://doi.org/10.5065/D65Q4T4Z>, last access: 11 October 2025)
 - Carbon Tracker profiles (<https://doi.org/10.25925/Z1GJ-3254>, last access: 11 October 2025)
 - CoCO2 inventory (<https://doi.org/10.24380/0a9o-v7xe>, last access: 11 October 2025)
 - EDGAR inventory (<https://doi.org/10.2905/b54d8149-2864-4fb9-96b9-5fd3a020c224>, last access: 11 October 2025)
 - GONGGA flux inversion dataset (<https://doi.org/10.5281/zenodo.8368846>, last access: 11 October 2025)
 - IGRA v2.0 radiosonde profiles (<https://doi.org/10.7289/V5X63K0Q>, last access: 11 October 2025)
 - OCO-3 retrievals (<https://dx.doi.org/10.5067/970BCC4DHH24>, last access: 11 October 2025)
 - SMARTCARB dataset (<https://doi.org/10.5281/zenodo.4048228>, last access: 11 October 2025).
- **Executive Editor:** Therefore, the current situation with your manuscript is irregular. Please, publish the WRF code and all the data in one of the appropriate repositories and reply to this comment with the relevant information (link and a permanent identifier for it (e.g. DOI)) as soon as possible, as we can not accept manuscripts in Discussions that do not comply with our policy. Also, you must include a modified 'Code and Data Availability' section containing the information

of the new repositories, which you must include in a potentially reviewed manuscript too.

Response: The specified modifications to the original WRF are archived in Zenodo (<https://zenodo.org/records/16751293>). Since the original WRF code is publicly available on GitHub (published by NCAR and UCAR), it is not necessary to upload it again. All code required for building driving files, WRF configuration files, and post-processing are included in the Zenodo repository. We will make it clear in the 'Code and Data Availability' section for the next revision.

- **Executive Editor:** I must note that if you do not fix this problem, we cannot accept your manuscript for publication in our journal.

Response: Thank you again for your kind reminder, and I will do whatever I can to make the manuscript meet the high-standard demand of GMD. All the issues mentioned in the comments will be addressed in the next revision.