Dear Prof. Huang,
Thanks for your effort to review the manuscript and constructive comments concerning our manuscript “An aerosol vertical data assimilation system (NAQPMS-PDAF v1.0): development and application” (MS No. : gmd-2021-374).

Responses to the comments:

Comment: 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
GMD can not accept embargoes such as registration or previous contact with the authors to get access to data or code. Therefore, please, to be able of considering your paper for publication you must publish the code and data that you have used for your work in one of the appropriate repositories according to our policy.
We understand that some files used in your study can be large (e.g., full output from models). In such cases, instead of storing the complete files, you should at least keep the variables or final fields computed and used in your work.
Please, when publishing the code, be aware that If you do not include a license, the code continues to be your property and can not be used by others, despite any statement on being free to use. Therefore, when uploading code, you could want to choose a free software/open-source (FLOSS) license. We recommend the GPLv3. You only need to include the file 'https://www.gnu.org/licenses/gpl-3.0.txt' as LICENSE.txt with your code. Also, you can choose other options that Zenodo provides: GPLv2, Apache License, MIT License, etc.

Reply:

Thanks for your advice. For the code of NAQPMS-PDAF in our manuscript, we have already set the access as “Open Access” on 31 December 2021 and the source code have been downloaded four times now, which can be found in the following Figure (Figure EC1). The source codes, observation data and model output can be directly downloaded without any access restriction.

We also appreciate the reviewers' comments, which help us to improve the quality of the article. Therefore, in this round of revision, in addition to opening up the source code and data mentioned above, we also upload all the data in the figures and tables in the manuscript into the open-source space together, so that we can share and discuss them easily. We have uploaded all of them to ZENODO (https://doi.org/10.5281/zenodo.6344181) and detailed information can be found in Table EC1.

Table EC1. The path of model output and observation data

	Label	Path
Figure 1	Diagram	*
Figure 2		*
Figure 3	Observation data	~/Obs
Table 1	Summary	*
Figure 4	Timing information	~/Output/Timing
Figure 5		
Figure 6		
Table 2	Summary	*
Figure 7	Model output	~/Output/PriorRMSE_TotSpread
Figure 8	Model output + observation data	~/Output/EXT
Figure 9		
Figure 10		~/Output/PM2.5-STAT
Figure 11		
Figure 12		~/Output/EXT ~Output/CALIPSO
Figure 13		~/Output/AERONET
Figure 14		~/Output/EXT ~/Obs
Figure 15	Model output	~/Output/ENS
Table S1	Summary	*
Figure S1	Model output + observation data	~/Output/EXT
Figure S2		
Figure S3	Model output	~/Output/Sensitivity
Figure S4		

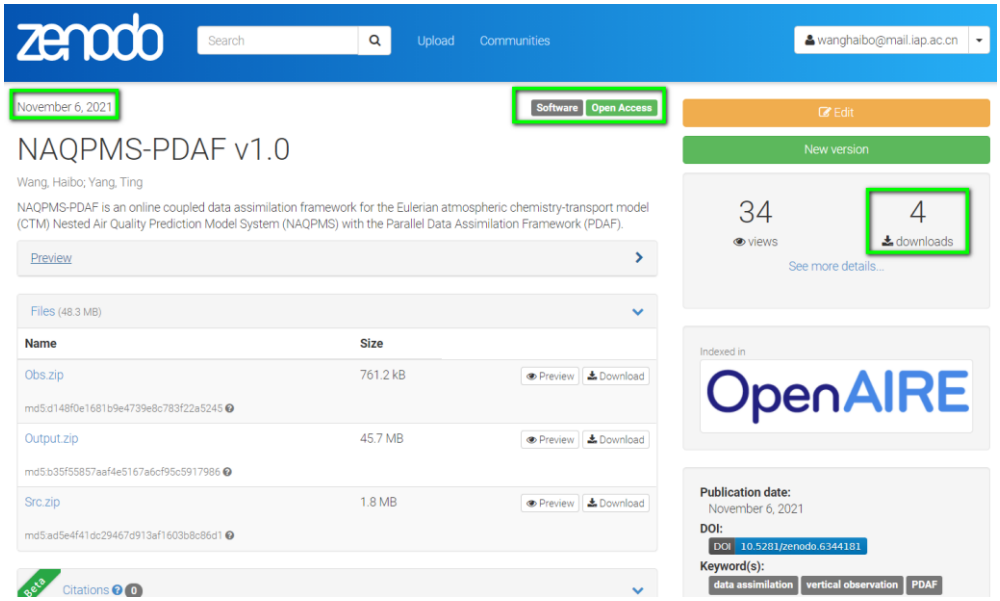

Figure EC1. Webpage screenshot of the source code of NAQPMS-PDAF (http://doi.org/10.5281/zenodo.6344181)