

Response to Chief Editor for the manuscript: “Estimating aerosol emission from SPEXone on the NASA PACE mission using an ensemble Kalman Smoother: Observing System Simulation Experiments (OSSEs)”

Dear Chief Editor,

Thank you for highlighting these issues.

Regarding your first comment we have upload our model simulations and SPEXone data to the following link:

https://zenodo.org/record/5902137#.YfE3u_XMJ-U

Your second comment relates to the unsuitability of the SVN repository provided. According to the software license agreement (link below) of the Max Planck Institute for Meteorology (MPI-M) under subsection 4.2 I am not allowed to distribute the software. Specifically: “You are not allowed to distribute the “Software” in its original or modified form. Third party users must obtain the “Software” directly from MPI-M.”

https://mpimet.mpg.de/fileadmin/projekte/ICON-ESM/mpi-m_sla_201202.pdf

Indeed the access to the SVN repository we provide requires registration, which is given to any researcher that wants to work with ECHAM-HAM. Registering can be done by contacting the managers of the website:

<https://redmine.hammoz.ethz.ch/projects/hammoz>

Further the ECHAM-HAM branch in the SVN repository we provide will be kept frozen to the version used for this study.

The code availability was modified in the revised version of the manuscript to include all the new information:

Code and data availability

The model simulations and the SPEXone simulated retrievals are available at the following link in zenodo: <https://zenodo.org/record/5902137#.YfE4dPXMJ-U>. The data assimilation software for aerosol emission estimation in ECHAM-HAM can be found in zenodo: <https://doi.org/10.5281/zenodo.5596328>. The ECHAM-HAM version that was used in this study can be found in the repository: https://svn.iac.ethz.ch/external/echam-hammoz/echam6-hammoz/branches/uni_amsterdam_vrije/ which can be accessed after registration at <https://redmine.hammoz.ethz.ch/projects/hammoz>. ERA-interim and ERA-5 are freely available in <https://cds.climate.copernicus.eu/> after registration.

Best regards,
Athanasios Tsikerdekis