

Supplementary material (GMD-2022-246)

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Supplementary material for “*Reconstructing tephra fall deposits via ensemble-based data assimilation techniques*” by Mingari et al. (2022).

Codes and datasets have been archived on Zenodo at <https://doi.org/10.5281/zenodo.7259531>.

Datasets

- Assimilation dataset: “POST_DATA/gr154177.csv”
- Validation dataset: “POST_DATA/reckziegel.csv”
- Full dataset including errors: “POST_DATA/deposit.csv”

Model configuration

- FALL3D model input parameter file: “calbuco.inp”

Assimilation methods

- GNC method: “POST_GNC/gnc_method.py”
- GIG method: “POST_GIG/gig_method.py”

Preprocessing scripts

- Merge observational datasets and compute errors: “POST_DATA/clustering.py”

Postprocessing scripts

- Plot emission profiles from the source inversion procedure: “POST_GNC/source.py”