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Interactive comment on "FALL3D-8.0: a computational model for atmospheric transport and deposition of particles, aerosols and radionuclides. Part I: model physics and numerics" *by* Arnau Folch et al.

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We thank reviewer#2 (anonymous) for his constructive review.

Q1. The main change that I would like the authors to implement would be to add an appendix or a supplemental document highlighting the changes aimed at previous users.

R1. This is what (and why) has been deprecated:

Printer-friendly version

Discussion paper

- Estimate MER from H using the Degrutyer model: This parameterization gives very similar results to that of Woodhouse but, given the structure of meteo data profiles in the code, has a much larger computational penalty

- RAMS horizontal diffusion: This parameterization has been replaced by that proposed by Byun and Schere (2006), which is similar to RAMS option but preferable as allow for reducing the dependency of horizontal diffusion on grid resolution.

- SURFACE_LAYER vertical diffusion: Parameterizations for describing diffusivity tensor were updated adopting those used in the CAM-4.0 model (Neale et al., 2010)

- Meteo datasets: ERA40, ERA-Interim, NCEP reanalysis 1 and 2 at 2.5: Replaced by more updated equivalent datasets at higher resolution

These are actually few options, probably insufficient for an appendix. Will be added as a note in the model user's manual.

Q2. I found that even though the compiling and execution process has been streamlined considerably, and the namelist file has been reworked to be more user-friendly, it has changed to the extent that previous users require some guidance to adjust to the modified workflow.

R2. We understand the concern. This is now addressed in the model user manual available online: https://gitlab.com/fall3d-distribution/v8.0/-/wikis/home

Q3. Minor and technical comments (attached documnent)

R3. Changes accepted.

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