

## Responses to reviewers (2): GMD-2023-162

Stefan Rahimi et al.

Reviewer comments are presented with underlined responses.

### Referee 1

L166-167: “Because coupling WRF to an atmospheric chemistry model is 6-20 times more computationally expensive, transient aerosol forcings were not explicitly considered in our study.” Here should be “interactive aerosols” if coupling WRF to an atmospheric chemistry model is mentioned. The transient aerosol forcing can be taken from CMIP6 or other sources. The authors should clarify whether the aerosol climatology is used in the simulations or not. If not, what else?

Reply: Changed ‘transient’ to ‘interactive’. The transient aerosol forcings and their effects on dynamic variables are contained within the GCM boundary condition data

L309: typo at “absence”

Reply: I could not find this typo at this location but corrected the same typo at the end of Sec. 2.3. I think there might be a discrepancy in the line numbering between the reviewers’ versioning of the revised manuscript.

L613: should be numbered as Section 5 (not 7)

Reply: I cannot find this error at line 613 but have checked to make sure that it was removed at line 516.

### Referee 2

No comments to address