

Author Response to Anonymous Referee 1

General Comment: *I already performed a review of the paper at ACP(D):*

<https://www.atmos-chem-physdiscuss.net/acp-2019-351/>

All relevant points from this first review were considered in the new submission. The quality of the manuscript increased clearly and it is well suited for publication in GMD(D). However, before I can recommend the manuscript for publication in GMD some minor issues need to be fixed:

Response: We would once again thank the referee very much for taking the time to review our manuscript and for his/her helpful comments. In the following, we provide a response list to the remaining minor issues.

Minor Comment 1: *The authors performed a lot of simulations and when looking at the Figures (e.g. Fig. 10) I feel totally lost. There are so many abbreviations which I simply cannot remember (I know that Table 3 lists all of them). Of course the naming of simulations is always a discussion point and I see where it is problematic to find names which everyone 'likes'. However, I would suggest that the authors spend some lines of text about the naming convention of their simulations so that the reader gets familiar with your naming convention.*

Response: In the revised manuscript, we have added a paragraph describing the rationale behind our abbreviations so that they can be grasped more easily by the reader (see lines 192-197). Thanks for pointing this out.

Minor Comment 2: *Figures 2-3 and 6-7 show statistical measures over the sub figures (SBIAS etc.). The text is simply too small for reading. Either put the numbers in separate tables, increase the size or delete them.*

Response: You are absolutely right, the text in the headers of these figures can be hardly read. Following your advice, we have removed these headers and now provide the respective results in an additional table (Table 4 of the revised manuscript).

Technical comment 1: *Please run a full spell checking of the revised manuscript. While reading I found some errors which should be found by a spell checker.*

Response: We have carefully corrected the manuscript with a spell checker, as suggested by you.

Technical comment 2: *p3 l71: horizontal*

Response: This typo has been corrected in the revised manuscript.

Technical comment 4: *p3 l74ff: The sentence is unclear. It is also unclear why you cite Pay et al 2019 (they used CMAQ).*

Response: Here we mean that long-range transport events such as e.g. Saharan dust intrusions are not simulated by *CHIMERE* itself but are passed through from C-IFS at *CHIMERE*'s lateral boundaries instead. In the revised manuscript, this is now more clearly pointed out in lines 73-77. Also, Pay et al. (2019) are no longer cited in this sentence.

Technical comment 2: *p9 l24: high hores?*

Response: This has been corrected in the revised manuscript.

Technical comment 3: *P17 l525: troposphere*

Response: This error has also been corrected.