

Atmos. Chem. Phys. Discuss., referee comment RC3 https://doi.org/10.5194/acp-2022-164-RC3, 2022 © Author(s) 2022. This work is distributed under the Creative Commons Attribution 4.0 License.

Comment on acp-2022-164

Anonymous Referee #1

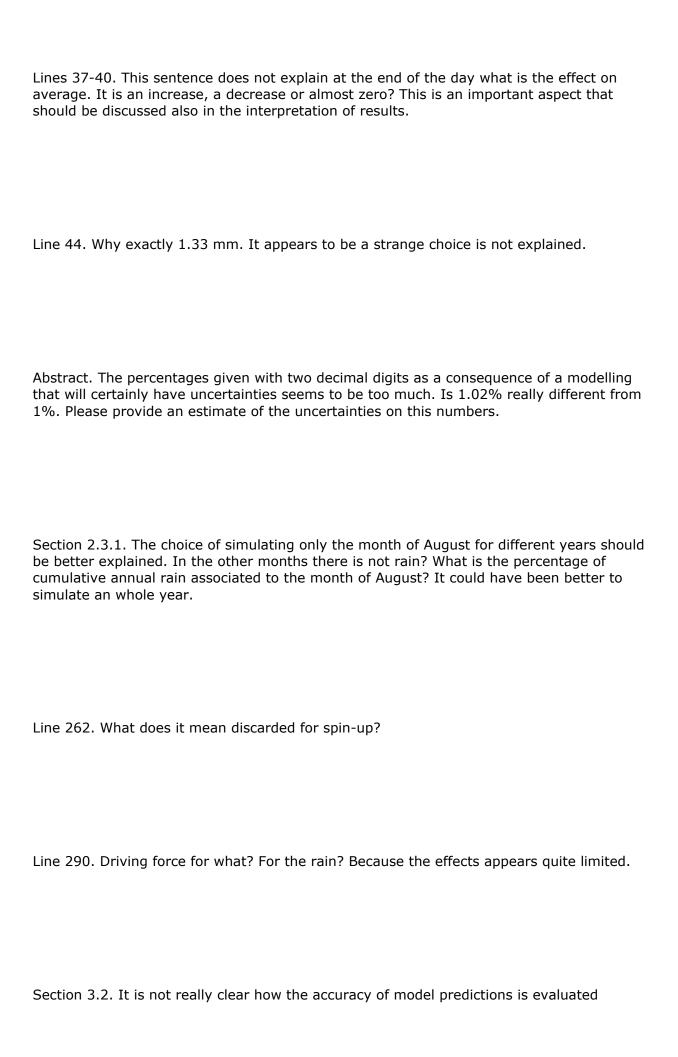
Referee comment on "Effect of dust on rainfall over the Red Sea coast based on WRF-Chem model simulations" by Sagar P. Parajuli et al., Atmos. Chem. Phys. Discuss., https://doi.org/10.5194/acp-2022-164-RC3, 2022

General comment

The paper reports an analysis of the effects of dust on rainfall over the Red Sea area. The study was performed using WRF-Chem simulations and a focus was given on direct and indirect effects of dust. The paper is interesting and suitable for the Journal. However, there are some limitations not properly discussed and some aspects not very clear (see my specific comments) that need a revision.

Specific comments

Line 21. I would say "important" rather than "the main element".



considering that no comparison with measured data is reported. It would be better to provide some kind of comparison for this goal. This will also give more information about the uncertainties of model outputs.

Table 3. Again, I see a lot of decimal digits in the prediction of the effects on rainfall arriving at 0.001 mm of H2O. Is this really a figure obtainable by this simulations with a reasonable accuracy?