

# ***Interactive comment on “Using a coupled LES-aerosol radiation model to investigate urban haze: Sensitivity to aerosol loading and meteorological conditions” by Jessica Slater et al.***

## **Anonymous Referee #3**

Received and published: 8 May 2020

### General comments

Coarse-resolution models have been used to investigate the aerosol-radiation-meteorological feedback. The authors have developed the coupled LES-aerosol radiation model to investigate the sensitivity to aerosol loading and meteorological conditions. The results presented in this paper are interesting and the readability of the main text is excellent. I have some minor comments and questions to improve this paper.

### Specific comments

p.4, l.83: Please define cloud and fog in the model. How did you consider the interaction with aerosols?

Printer-friendly version

Discussion paper



p.5, l.127: How did you consider the lens effect?

p.8, l.196: How did you set up the cloudless with varying aerosol concentrations?

p.8, l.201: Please specify the small absorbing component of OC.

p.8, l.203: How did you consider the gravitational setting of aerosols? Please explain the boundary condition for aerosols.

p.12, l.236, Figure 6: Why don't you show the mass concentration as in Figure 5? You do not have to repeat the constant aerosol profile.

Technical comments

p.3, l.57, p.5, l.109, p.8, l.203, p.10, l.231, p.17, l.294: Please check a period.

---

Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2020-260>, 2020.

Printer-friendly version

Discussion paper

