

Interactive
Comment

Interactive comment on “Projected effects of declining aerosols in RCP4.5: unmasking global warming?” by L. D. Rotstayn et al.

Anonymous Referee #3

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In this study historical and future aerosol effects for radiation budget, temperature, and precipitation are discussed basically using the CSIRO-Mk3.6 general circulation model, especially along RCP4.5. The authors indicate that declining aerosols toward the end of this century can have comparable or larger influence in comparison with that by increasing carbon dioxide and then more efforts for understanding the future aerosol effects are needed to quantify the climate change. This manuscript is generally written well, therefore I suggest that it will be able to be published if the authors address minor revisions indicted below.

1. page 18623, line 3-5: The projected surface warming is larger than what?
2. page 18623, line 5-6: Explain "r" and "p".

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3. page 18623, line 22: "the" is repeated.
4. Section 2.2: Add horizontal and vertical resolutions in this study.
5. page 18633, line 2: "to" is repeated.
6. page 18633, line 11: Is it only for the shortwave to call double? According to the description after here, it seems that the aerosol effects in the longwave radiation are also included.
7. page 18634, line 20: Where is the error range in the figure?
8. Section 4.2: Add observational data in Fig. 7a as same as Fig. 6a and discuss their comparisons in the text although reconstructions of historical precipitation are uncertain.
9. page 18642, line 21: Explain "r" and "p" as commented for Abstract.
10. Fig. 1a: Emission in this figure is annual total, not annual mean.

Interactive comment on Atmos. Chem. Phys. Discuss., 13, 18621, 2013.

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