

Interactive comment on “Mechanisms for a remote response to Asian aerosol emissions in boreal winter” by Laura Wilcox et al.

Anonymous Referee #2

Received and published: 4 January 2019

The topic is interesting to ACP readers and the paper includes useful and informative results. I would recommend that the paper is published in ACP after addressing the following comments:

Section 2.1 states “We compare simulations with time-varying anthropogenic aerosol emissions (1975-2007) against simulations where Asian anthropogenic emissions were fixed. Is it possible to conduct simulations for a longer time period for example 1975-2015?”

Figure 1a should include a box showing where the sources for emissions are considered, and the color bar should show negative and positive values clearly for all figures, for example in Figure 1a many areas are white, which is not possible to distinguish the negative and positive values.

C1

Figure 1b shows significant negative values around 60 degrees South. The paper should explain the reason for these negative values.

Fig 3b shows (1993-2007)-(1979-1993) difference in precipitation, again it is hard to distinguish negative and positive values and compared to Liu et al. (2018) Fig 1, these values are much smaller and the pattern is not clear. Of course, they look at annual values and this paper focuses on boreal winter but it is needed to look at the annual values too and compare it with PDRMIP models because this paper uses only one model.

Fig6 compares HadGEM3-GC2 with LUMA qualitatively only, it should also include values.

Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2018-980>, 2018.

C2