

Interactive comment on “Historical (1750–2014) anthropogenic emissions of reactive gases and aerosols from the Community Emission Data System (CEDS)” by Rachel M. Hoesly et al.

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This paper documents input datasets to CMIP6 simulations, and as such is an essential part of the entire CMIP6 process. Below are some comments to help improve the paper.

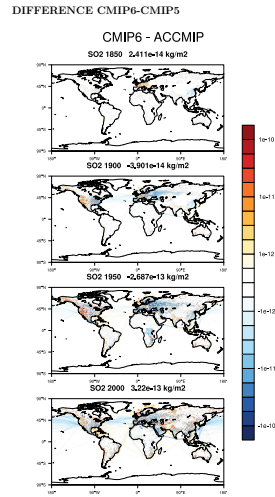
- insist more on the comparison with the Lamarque 2010 paper, official CMIP5 dataset. Please include spatial comparisons between CMIP5 and CMIP6 total emissions by species, possibly for a selection of years. These maps put light in the discussion. Figures of differences would also be informative.

C1

- although global estimates of SO₂ for CEDS and CMIP5 are very similar, spatial plots of the differences (see figure attached untitled DIFFERENCE CMIP6-CMIP5) reveal interesting features (large homogeneous or patchy distributions). Whether in the end you include or not such spatial plots in your paper, please include comments on these differences.
- in Table 2, it is not clear what "(SI-Text 6.3" (and similar references) point to. Please include clarification information.
- in para 3.3 please refer to the figures and/or the tables explicitly.
- please report in a summary Table in this article on the known uncertainty level of emissions, at least by species for a selection of years.

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Fig. 1.

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