GR-A Submission #2: 2013JD021338

Reviewer comments for JGR-Atmospheres: 2013JD021338 (Ghan)

Submission #2 Reviewer #1 (Comments to Author):

I have very few detailed comments on this manuscript.

Too much of this paper consists of philosophical rants (e.g., accuracy vs. precision), several pages of basic radiative transfer theory to outline would should take only a few citations. The bulk of what the author presumably feels is novel here is completely wrong. In particular, the author has not actually shown that errors are propagating in future projections, but misunderstands the distinction between a base-state "forcing" and the uncertainties surrounding total cloud cover/forcing, from the uncertainties in climate change imbalances. The fact that GCMs do not have correct "absolute values" in variables such as TOA radiation balance, global mean temperature, cloud cover, etc is not novel.

There is no evidence provided by the author those known issues contaminate our understanding of attribution (which depends on the spatio-temporal evolution of patterns in stratospheric cooling, global OHC increases, etc) or in climate sensitivity (for example, the IPCC AR5 plotted absolute global mean temperature against the equilibrium climate sensitivity of the CMIP5 ensemble (Figure 9.42) and found no correlation between the absolute offsets in temperature and the sensitivity of the models). There is much further extensive discussion of the model performance and biases in that chapter, which I urge the author to read.

I have not seen all of the review comments to the previous manuscript, but I was provided with the author responses to those reviews, and was able to see several italicized portions of previous review comments. I think that previous reviewer #1, in particular, already diagnosed many of the problems in this current study. The responses provided by the author are not compelling.