Atmospheric Measurement Techniques Discussions

Atmos. Meas. Tech. Discuss., referee comment RC1
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Comment on amt-2021-290

Anonymous Referee #1

Referee comment on "Simulated multispectral temperature and atmospheric composition retrievals for the JPL GEO-IR Sounder" by Vijay Natraj et al., Atmos. Meas. Tech. Discuss., https://doi.org/10.5194/amt-2021-290-RC1, 2021

The authors present a detailed computation of DOFs for atmospheric retrievals for a notional multispectral sounder. The paper is well presented and high-quality a-priori data that has been used for other instruments is used for their DOF estimates. I don't think their are any surprises here, but the paper does give decisions makers and proposers a feel for the benefits of their notional sounder (most likely a very expensive one indeed).

However, I think the discussion on OSSEs near the end is uneeded and gives the reader the wrong impression. No OSSEs are done here and I don't think it is warranted to talk about what you are going to do in the future. A sentence will do.