

Interactive comment on “Smoothing error pitfalls” by T. von Clarmann

J. Worden (Referee)

john.worden@jpl.nasa.gov

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This response represents my "formal" review of the paper.

In general the paper is well written and easy to understand and has a point that has not yet been formally stated in the literature, i.e., that the smoothing error cannot directly be linearly related (or mapped) from one grid ding to another. In that respect, I can say that the paper is publishable with some minor changes (e.g., add references to the Bowman et al. 2006 and Worden et al. 2004 papers where we discuss the effects of mapping on the calculated errors)

On the other hand, in the papers current state, its unclear how often the paper would be referenced because most well characterized retrievals have already addressed the issue discussed in this paper by supplying the instrument operators (averaging kernels

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and constraint vector), as well as the observation errors.

It is for this reason that I would suggest adding some "real-life" examples (e.g., from the SPARC comparison) that I think would make this paper more relevant to the remote-sensing community.

Interactive comment on Atmos. Meas. Tech. Discuss., 7, 3301, 2014.