

The authors would like to thank Jeff Reid for his review (and pre-review).

**1. Abstract: In the second half there are quite a few metrics thrown around, and it is not entirely clear what the authors mean. For example, in the sentence starting “When all adjustments are included” and RMSE’s are provided for the RA and SA, it is not clear if it is the SA or if it is your own simulation of the SA. Or, we estimate that if these were incorporated into the SA, the RMSE would reduce by . . .” A bit more wordy, but it pays to be clear here.**

It seems we have introduced some confusion with our wording here. The results for the SA are always from the SA without any of our modifications (with the exception of additional cloud-screening), as we do not have a code that will run the SA. We have corrected the wording to indicate that we are talking about the SA itself, as appropriate.

**2. P7839 L26+: I think the authors need to be more clear on the relationships between the SA and RA, and how these are used in the community. For us mere mortals, we are dependent on the SA, and if we grovel hopefully someone at GSFC can run the RA for specific cases or field campaigns. But from the point of climatology datasets, the community must rely on the SA due to computational resources requirements.**

We have added a comment in the introduction stating that it is not practical to release the RA publicly or to generate a global climatology with the Research code. We understand that this does not really address the issue, but we do not work with operational code, and do not have the resources at present to create an operational code. (It’s really just the two of us...)

**3. P7841 L24+: Andy picked up a little of this, but really the authors are purposely excluding cloud clearing, which is THE big dog in satellite AOT product errors. Please see the recent paper by Shi, Y., Zhang, J., Reid, J. S., Liu, B., and Hyer, E. J.: Critical evaluation of cloud contamination in the MISR aerosol products using MODIS cloud mask products, Atmos. Meas. Tech., 7, 1791-1801, doi:10.5194/amt-7-1791-2014, 2014.**

**We know over oceans that most products (including MISR) have large cloud induced errors. Such errors are seen in MAN data, are much more prevalent in AERONET comparisons, and, due to verification data collection constraints, are likely much more significant for when verification data is not available. This needs to be laid out. The authors show some improvement by limiting cases to cloud fraction to <50%, but there is no doubt sampling bias embedded in this number. I think given the circumstances, the authors can use the escape clause, saying that all things being equal and given good clear sky radiances, this is the uncertainty. But this should not be confused with the**

**real uncertainty in the product, which is likely greater in practice. But all things being equal, you can show that the modifications performed result in a better retrieval-which is just fine. But based on this, I am not so sure you can say ‘This is the error bar when I do a retrieval for such and such a case’**

The authors are familiar with the recent paper (one of us was a named reviewer, as you know), but Jeff makes an excellent point here. It is very likely that without the benefit of additional cloud screening as provided by AERONET/MAN, our uncertainty would be higher than we indicate. However, because we are comparing the RA to both a control version of the RA and the SA (which do not include the median-or-min technique, but are already somewhat cloud-cleared by AERONET/MAN), it is also likely that our % reduction in RMSE would be higher than what we state in the text for our cases reported if we could compare with absolute truth. Considering the way validation is done (which generally involves using AERONET cloud-screened products), we don't see a better way to state the uncertainty other than adding a qualifier under the data selection section (2.2), stating that the data is AERONET cloud-screened and quality assured, which we have added. (The review of Shi et al. actually made a similar point.)