

Atmos. Meas. Tech. Discuss., referee comment RC2
<https://doi.org/10.5194/amt-2021-71-RC2>, 2021
© Author(s) 2021. This work is distributed under
the Creative Commons Attribution 4.0 License.

Comment on amt-2021-71

Anonymous Referee #2

Referee comment on "Introducing the MISR level 2 near real-time aerosol product" by
Marcin L. Witek et al., Atmos. Meas. Tech. Discuss.,
<https://doi.org/10.5194/amt-2021-71-RC2>, 2021

The **Standard** MISR aerosol optical depth data product is a well established data set which has been used for multiple reanalyses and investigations related to aerosol forcing of climate and air quality research. The recently availability of the NRT MISR aerosol product has open the door for time sensitive applications such as air-quality foercasting and monitoring. Therefore, a peer reviewed publication documenting the strengths and weaknesses of the algorithm is not only welcome but necessary for proper use of the data. Therefore, I strongly support its publication.

The paper is well written and for the most part documents the shortcoming of the NRT product, primary due to the absence of upstream datasets that impact the cloud screening process. Currently, there are 3 MISR aerosol products: 1) the NRT product being documeted here, 2) a FIRST LOOK product that has similarities to the NRT product, and 3) the final, refined **Standard** product that is availablewith 3-6 months latency. While the MISR Final Product in 3) is the golden standard among all their products, it is curious that the authors chose the FIRST LOOK product, which suffers from many of the same limitations , as a reference. I strongly encourage the team to redo the calculations using the MISR Standard product as reference.

Please see in-line comments in the attached document for additional suggestions for improving the manuscript.

Please also note the supplement to this comment:

<https://amt.copernicus.org/preprints/amt-2021-71/amt-2021-71-RC2-supplement.pdf>