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Interactive comment on "Comparative Analysis of MODIS, MISR and AERONET Climatology over the Middle East and North Africa" *by* Ashraf Farahat

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This is not a review, only a short comment about the data versions used in this study. I work on or with the teams responsible for these data products (MODIS, MISR, AERONET). All three recently (within the last year) released new data versions, and older versions should be considered obsolete. It is not clear which versions were used here in some cases, and I'd strongly encourage use of the latest versions, so the paper is not outdated before it is published. These new versions quantitatively change the spatial patterns and magnitude of the AOD, and so directly influence all the results presented in this study.

The author is using version 22 MISR data. The latest version is version 23. Version

Printer-friendly version

Discussion paper

23 has numerous algorithm/calibration improvements. The MISR part of this study is therefore out of date.

So far as I could tell, the author does not state which version of MODIS data is being used. The latest is Collection 6.1. Collection 6.1 also has a lot of updates over the previous Collection 6. The data set description the author provides in the paper is for the Dark Target algorithm. However, Dark Target does not provide data over the bright surfaces analysed in this study. I therefore think that it is likely that the author is instead using data derived using the Deep Blue algorithm. Deep Blue and Dark Target are distinct algorithms; I encourage the author to double-check and update data version and descriptions as necessary.

I also did not see which AERONET data version the author is using. The latest is version 3. This also has numerous improvements over version 2. Note that "version" and "level" mean different things in AERONET: the right data version to use is version 3, level 2 data.

This analysis includes time series and trend calculations. The latest MODIS and MISR versions include updated sensor calibration, which is important because it corrects artificial calibration drifts which can cause apparent false trends in AOD. The impact on the trends is hard to state because it depends on many factors (it isn't a simple linear mapping of calibration drift into AOD drift). It is therefore likely that, if the latest versions of the data are used, different results will be obtained for the trend calculations.

Since it looks like the author got the data through the Giovanni visualisation interface. It is generally best to go to the official data centers to make sure you get the latest data versions and accompanying information. These links are:

MODIS: https://ladsweb.modaps.eosdis.nasa.gov/

MISR: https://eosweb.larc.nasa.gov/

AERONET: https://aeronet.gsfc.nasa.gov

All these data sets are freely available. I am not sure when/if these updates will be reflected in Giovanni, as that website is not maintained by the algorithm teams.

I'd be happy to help if the authors has questions about obtaining and using these latest data versions.

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