

Atmos. Meas. Tech. Discuss., referee comment RC2  
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## Comment on amt-2020-506

Anonymous Referee #1

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Referee comment on "Real-time UV index retrieval in Europe using Earth observation-based techniques: system description and quality assessment" by Panagiotis G. Kosmopoulos et al., Atmos. Meas. Tech. Discuss.,  
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### General Comments

The manuscript evaluates the UV index generated from the UV- Index Operating System (UVIOS) and also conducted sensitivity tests to quantify the uncertainty caused by the different input parameters. The system is important for providing early warning, which will benefit the general public. The evaluation of the UV estimation against ground observation is thorough. However, the presentation of the manuscript can be improved, and I have provided some detailed comments as follows. Lastly, English needs to be improved. There are grammar errors in some sentences.

- The manuscript mentions that the UVIOS system provides both now-casting and forecasting UV index products. It is not clear how different they are and it would be helpful to provide some information on these two products.
- Line 319-322 talks about the different stations. It can be moved to the next paragraph where it focuses on describing the geographic and climate information about each station.
- I suggest changing title 3.1 to Overall performance of the UVIOS system.
- Line 368: how did you decide the criteria for low, moderate and high UVI differences?
- For Figure 4, it would be nice to show a map of the annual UV index values from the UVIOS system overlaid with ground observational data.
- Besides Figure 5, it would be helpful to have a scatter plot here to better show the overall performance for all the stations together.
- Table 3 is hard to read. Figure 11 can be used as a complement. I would suggest showing a histogram distribution of the errors for all the stations together rather than showing each station on one plot with different lines. Histogram for individual station can also be shown as supplementary plots.
- Figure 9 and Figure 15 can be put together into one figure.

Corrections:

Line 98: what is "0 to 8/8"?

Line 99-102: This sentence has some grammar errors, please check and reorganize the sentence.

Line 105: It is not necessary. Or what is the main conclusion of Calbo et al. (2005)?

Line 117: what does it mean by in contrast to ozone"? Is ozone column not important for the trend?

Line 170: change next section to Section xx.

Line 292: change Aeronet to AERONET.

Line 344: which section is it for the cloud effect section?