

## Authors' Response to Reviews of

# UV-Indien Network ground-based measurements: comparisons with satellite and model estimates of UV radiation over the Western Indian Ocean.

K. Lamy, T. Portafaix

*Earth System Science Data*, *essd-2021-55*

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EC: *Editors' Comment*, AR: Authors' Response

EC: *Editor's Comments to the Author:*

*Dear authors,*

Thank you for your submission to ESSD. Based on the first two reviews, I recommend that you carefully consider whether or not you can demonstrate the usefulness of this dataset. This purpose of ESSD is to publish data sets that can be used by others. As pointed out by reviewer 2, ground-based observations are usually used to validate satellite data/model output. Although a thorough inter-comparison is presented in the paper, it is not clear which dataset is being validated. Can an argument be made that the UV-Indien network can be considered as the ground-truth and perhaps be used to evaluate models and satellite observations? If this can not be demonstrated, then I would agree with the reviewers that it is not suitable for publication in ESSD and advise you to consider publication in another journal.

On the other hand, if a strong argument for this can be made, then I suggest the authors follow the recommendations of both reviewers and shift the focus of the manuscript to be more on the details of how the data was gathered and processed as outlined by the reviewers. In addition, re-orient the intercomparison of the data products to demonstrate how the UV-Indien network can be used to validate other data products (e.g. satellite observations, model output). Efforts should also be made in making the data product more user friendly.

If you choose to submit a revised version, please make sure to address each of the reviewers' comments, point by point.

Please let me know if you have any further questions.

Best regards,

Nellie Elguindi

AR:

The dataset from the Indian UV network is of high quality, it is composed of regularly recalibrated mid to high range instruments, the data processing procedure before distribution is thorough and the feedback from reviewers on the files has been corrected. We therefore believe that the Indian UV network can be considered as the reference for ground-based measurements and be used to evaluate and validate models. It is also very useful for other users in a particularly data poor region. This region also shows a diversity of environmental observation sites sampled as best as possible by the UV-India network. These arguments are outlined in the new version of the manuscript that we have produced in accordance with the recommendations of the two reviewers and in response to all their concerns. We believe that the focus of the manuscript is now well aligned with the Aims and Scope of ESSD.

Best regards,

Kevin Lamy