

## **Final Response to the Editor:**

### **Title: Ground-based MFRSR UV-Vis spectral retrievals of Saharan dust absorption at Izaña Observatory**

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*“Authors have made significant efforts into improving the article and making its weak points its strength. It now has no unsupported claims, and I do strongly believe that scrupulous approach to uncertainty characterization will increase its impact. Apart of a small typo in the conclusions line 677: "errors as large at  $\pm 0.6$  at UV wavelengths for  $AOD < 0.4$ ", where I believe it should be  $\pm 0.06$ , I have no other suggestions for further improvement.”*

We're glad that the Reviewer has accepted the changes and improvements included in our revised paper. On our part, we're truly thankful to all reviewers for providing constructive and meaningful comments that played an important role in clarifying several aspects of the presented work. Especially, inclusions characterization of errors involved in the aerosol absorption and adequately justifying the adoption of empirically derived dust shape factor distribution, backed by previous satellite-based retrievals work as well as demonstrated with the MFRSR observation in the paper, have substantially increased the scientific merit of the presented work.

#### **The typo noted by the reviewer has now been corrected.**

Furthermore, the first author identified a minor glitch in the data processing for Figure 12 (c). The problem was resolved, and the corrected Figure 12 is now included in the final version of the paper. This adjustment resulted in small changes to the statistics of the SSA comparison between MFRSR and AERONET. The relevant text referencing these statistics have been updated accordingly. **It is important to note that these changes do not impact any of the discussion or conclusions presented in the paper.**

Special thanks to the Editor for successfully handling the review process.

Sincerely,

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