Atmospheric Measurement Techniques Discussions

Atmos. Meas. Tech. Discuss., referee comment RC2
https://doi.org/10.5194/amt-2022-284-RC2, 2022

Comment on amt-2022-284

Anonymous Referee #2

Referee comment on "Relationship between the sub-micron fraction (SMF) and fine-mode fraction (FMF) in the context of AERONET retrievals" by Norman T. O'Neill et al., Atmos. Meas. Tech. Discuss., https://doi.org/10.5194/amt-2022-284-RC2, 2022

The authors presented a simple sub-micron fraction versus fine mode fraction linear equation that makes it possible to better understand the well recognized empirical result of SMF being greater than FMF. The paper is well-constructed, and the statistical method is serious analyzed and has scientific value. Overall, publication is recommended after addressing the following minor revisions.

- **Line 91: "governed by that relationship", Maybe it would be better for the reader to understand the paper by stating in the text which relationship is governed by.**
- **Table1 and line 208-212: for the classification of aerosol types at AERONET sites, maybe some citations for aerosol types needed here as a basis for the classification of different aerosol types.**
- **Figure 3: Maybe it should be "$1 - \varepsilon_c - \varepsilon_f$" instead of "$1 - \varepsilon_f$"?**
- **Line 213: First line indent.**
- **Line 244: First line indent.**
- **Line 253, 261 and 273: figure S1 was not found in the paper.**
- **Line 275: As well, Figure S2 was not found in the paper**
- **Figure A1 caption: maybe it should be "τ_f vs τ_f'" instead of "η' − η vs ð□□□ð□□□"?**