

Interactive comment on “Spatio-temporal aerosol optical characteristics over the Arabian Sea during the pre monsoon season” by D. G. Kaskaoutis et al.

Anonymous Referee #2

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The paper reports on Angstrom wavelength exponent derived from AOD spectral measurements obtained with sun photometer onboard sagarkanya during the cruise period in premonsoon season 2006 over Arabian Sea (AS). The authors have presented nice scientific information which will be useful for future generation who is working on aerosol heterogeneity and derived parameters. But anyway some drawbacks have been identified while preparing the manuscript. Kind attention is needed in technical check up of English grammar before its publication in ACP. Some of my comments have been listed below. The authors are requested to pay attention in answering the questions.

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1. In abstract line 6, better to use “high accuracy” instead of “accurate”. Please correct the sentence in proper way.
2. In abstract line 11, error in AOD and alpha should be terminated to two decimals.
3. Page 22229, line 14, delete the sentence “while α contains information ... in the atmosphere”. Re-state that sentence.
4. Page 22232, line 8-9, correlations between errors in a_1 , a_2 and α is strongly positive. I think this is not that much strong significant correlation in my consideration. Give justification.
5. Page 22232, line 20 onwards, the authors are quoting that for calculation of a_1 and a_2 , AOD₁₀₂₀ is not taken into consideration as such it is associated water vapor strong absorption with produces larger uncertainties and errors. But almost in all figures the authors have been using AOD at 1020nm for the calculation of coefficients. Clearly justification is needed.
6. Page 22236, explain the terms ‘condensation’ and ‘coagulation’ processes which are helpful in producing fine mode aerosols.
7. Page 22242 lines 15-16, the authors are confusing the readers. Some bad sentences are constructed. What do you mean “free troposphere”.
8. Page 22243; mention the geographical coordinates for KCO and Maldives.
9. Page 22246, line 25, “part of AS, especially in Fig. 16a. Where is Fig. 16a?”
10. In figure 1, why the authors have taken the ship position at 05:30 UTC.
11. I request authors to take necessary care in aligning the figures 11-15 as such magnitudes of values and border lines are missing.

My overall opinion on the present discussion is the paper has written well and good scientific information on oceanic regions around India. The paper is suitable for publi-

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cation in ACP only after the authors pay attention to the comments raised above.

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