

Responses to comments of “Susceptibility of Marine Warm Clouds to Aerosols in Different Monsoon Periods over the South China Sea” (Manuscript ID: egusphere-2025-5935) to *Atmospheric Chemistry and Physics*.

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We are grateful to the reviewers for their thoughtful and constructive comments, which are very helpful for improving the quality of this manuscript. We have thoroughly revised the manuscript to address all comments with the point-by-point responses. We hope that the revised version can obtain favorable approval and meet the journal requirements. The referee’s comments are reproduced (*black, italic*) along with our replies (*blue*) and changes made to the text (*red*) in the revised manuscript. All the authors have read the revised manuscript and agreed with the submission in its revised form.

Responses to Editor

Before publication, please correct the abstract to define AI. In addition, please perform a final check for minor language, grammar, and clarity issues throughout the manuscript.

Response: We thank the Editor for pointing out this issue. We have corrected the abstract by defining the aerosol index (AI). To comply with the journal’s 250-word limit after adding this definition, we further condensed the abstract without changing its meaning. In addition, we have carefully checked and revised the manuscript for minor language, grammar, and clarity issues.

Changes in Manuscript:

[Page 2 Line 14-17 (in the “Track Changes” version)]

Using long-term satellite observations and reanalysis data, we investigate ACI in non-raining warm liquid clouds over the SCS across three monsoon phases: the southwest monsoon wet (SWMW), northeast monsoon wet (NEMW), and northeast monsoon dry (NEMD) periods.

[Page 2 Line 25-26 (in the “Track Changes” version)]

Limitations of the aerosol index (AI) as a marine cloud condensation nuclei (CCN) proxy and satellite retrieval biases may affect these conclusions.

Again, please to check this revised manuscript version and response files. We hope that the above responses can meet the concerns of the reviewers and the requirements of the journal. Thanks.

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