

## Responses to the Editor's comments

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Journal: *Atmospheric Chemistry and Physics*

Title: Measurement Report: Summertime fluorescence characteristics of atmospheric water-soluble organic carbon in the marine boundary layer of the western Arctic Ocean

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Prof. Alex Huffman  
Editor  
Atmospheric Chemistry and Physics

Dear Professor Huffman,

We express our gratitude for allowing us to submit a revised version of our manuscript for publication in *Atmospheric Chemistry and Physics*. Your dedication and efforts in providing feedback on our paper are deeply appreciated. We are grateful for your insightful comments and valuable contributions, which have significantly improved the quality of our work. We have thoroughly incorporated all the suggestions that you provided.

We eagerly await your response regarding our submission and remain available to address any further queries or comments you may have.

Thank you for your consideration.

Sincerely,  
Jinyoung Jung

Here is a point-by-point response to the editor's comments and concerns.

Note: The editor's comments are highlighted in **black**, while our responses to the editor are in **blue**. All modifications in the manuscript have been highlighted in **yellow**.

### **Editorial comments:**

Thank you for your manuscript submission to Atmospheric Chemistry and Physics and for your detailed point-by-point responses to the two sets of referee comments. I think the data is important and can be useful for the community. I also think that the revisions you have processed for this version have improved the clarity of the presentation and I appreciate the addition of some statements about broader implications. As originally mentioned by Referee #1, however, I still feel that the scope of those broader atmospheric implications is still not very broad. While I think the manuscript is worth publishing, I think it would be better suited to the journal as a measurement report. For this change, you only need to re-submit a newly revised manuscript with the words "Measurement Report: " appended to the beginning of your title. After doing so, I will quickly review to verify the change and will then accept the manuscript for publication.

(Response) We greatly appreciate the editor's careful review and thoughtful comments. According to the editor's insightful comment, we have revised the title of our manuscript to "Measurement Report: Summertime fluorescence characteristics of atmospheric water-soluble organic carbon in the marine boundary layer of the western Arctic Ocean" (page 1, line 1).

Additionally, I noted below a few grammatical points in the abstract that I suggest changing for better clarity:

L17: Move "in the rapidly changing Arctic Ocean" to before "including its summer time fluorescence characteristics" if you mean to imply the rapid changes are related to the WSOC and not just the fluorescence components

(Response) We greatly appreciate the editor's insightful comment. According to the editor's comment, we have relocated the phrase "in the rapidly changing Arctic Ocean" to before "including its fluorescence characteristics" (page 1, line 16).

L22: change to "high rates of sea-air gas exchange"

(Response) We greatly appreciate the editor's insightful comment. According to the editor's comment, we have revised "high sea-air gas exchange" to "high rates of sea-air gas exchange" (page 1, line 23).

L23: "increasingly available"

(Response) We greatly appreciate the editor's insightful comment. According to the editor's comment, we have revised "increasing available" to "increasingly available" (page 1, line 24).