

Authors Responses

How polar-midlatitude atmospheric teleconnections depend on regional sea ice fraction and global warming level

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Editor comment

The authors have done an excellent job responding to the review comments. Reviewer #1 has a minor suggestion that I would like the authors to consider. Other than that, great work!

Thank you for your encouraging words! Please see the response to reviewer 1's comments below.

Reviewer 1

The authors have revised the manuscript in response to previous reviews, clarifying scope, improving framing, adding model-skill context, and testing methodological sensitivity. The revised manuscript reads more clearly and the scientific purpose is now better articulated. Yet, I just have one minor suggestion.

Antarctic section: The lack of regional decomposition is somewhat understandable, but the text could more explicitly explain why Antarctic treatment is intentionally streamlined and what future work could expand.

*We now add the following sentence to the start of the Antarctic section (section 4, line 395-398):
“We leave an analysis of regional dependencies of Antarctic sea ice- atmospheric circulation linkages for future work, partly due to space constraints, but also due to a lack of previous literature on atmospheric responses to regional Antarctic sea ice variations with which to compare our findings before moving on to explore dependencies on global warming level.”*

We thank the reviewer for taking the time to review our manuscript and for their helpful suggestions.

Reviewer 2

I appreciate the authors' responses and revisions. While I would have preferred that the authors further pursue the causal interpretation in this study, I understand their decision to leave this to future work. Aside from this limitation, I see no reason to prevent publication.

We thank the reviewer for taking the time to review our manuscript and for their understanding regarding the causality aspect.