

The Cryosphere Discuss., author comment AC7
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Reply on RC7

Jinlei Chen et al.

Author comment on "Perspectives on future sea ice and navigability in the Arctic" by Jinlei Chen et al., The Cryosphere Discuss., <https://doi.org/10.5194/tc-2021-35-AC7>, 2021

R1: Thanks for your detailed annotation and constructive suggestion. Indeed, it is better to distinguish sea ice types at first, and then use sea ice thickness and concentration as indicators. ATAM is hard to do that now. This limitation was mentioned in the revised manuscript. We have read the recommended literature and got a lot of inspiration. We also read another paper: Huang, L. F., Li, M. H., Romu, T., Dolatshah, A., Thomas, G.: Simulation of a ship operating in an open-water ice channel. Ships Offshore Struc. Both of them were cited in the revised manuscript.

R2: Thanks for your suggestion. This paper used monthly sea ice data. The navigable days can be calculated by daily scale sea ice data. However, there are few models provided it, and this will increase the uncertainty of the outcome. We will try to do that in the future study.