

Interactive comment on “A spurious jump in the satellite record: is Antarctic sea ice really expanding?” by I. Eisenman et al.

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We appreciate this thoughtful comment. The comment raises a few points, which we will address here in turn.

We agree regarding the usefulness of extending the Bootstrap Version 1 dataset, which we have included in the revised manuscript as “Bootstrap Version 1B”, and we have summarized trends and confidence intervals from both Bootstrap versions for comparison with the IPCC AR4 and AR5 in a new Table S1. We also agree with these comments regarding the title, although we have nonetheless decided to revise it in the hope that our new title will better convey the main message of the paper. See our response to Grant Foster.

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Regarding the comments about our paragraph regarding “physical grounds” in the Conclusion, we have removed this speculative argument from the revised manuscript in order not to detract from the quantitative results that are the focus of the paper. Note that in Sec. S2.4 of the revised manuscript we clarify that whichever dataset proves to be more accurate, the actual sign and magnitude of the trend is the relatively small residual between large regional sea ice contractions and expansions which are occurring in both Bootstrap versions. These changes carry a signature in observed temperature trends, as discussed in this comment.

Lastly, we address the spatial structure of the bias in the data in Fig. S11 of the revised manuscript supplement.

Interactive comment on The Cryosphere Discuss., 8, 273, 2014.

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