Reviewer 1

This manuscript describes an analysis of ice thickness and snow depth from a combination of local observations and from CMIP models. Overall, I believe this article was well written and would be of interest to readers of the Cryosphere journal. I do have one minor suggestion for the authors. Instead of trying to pick model points closest to the observed sites, perhaps a better approach is to average over the whole Canadian Arctic Archipelago. As the authors point out, the CMIP models do not have the resolution to properly represent the channels in this area. So, a larger area average might be more meaningful. This could be compared to the average of the four observed locations. Also, perhaps some thoughts on how the relationships between land fast ice and snow depth could be better represented in the models would be helpful.

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We have pondered the reviewer's suggestion of using area averages instead of sample points but decided against it for two main reasons that are now explicitly spelled out in the manuscript based on suggestions from Reviewer 2. One of the reasons is that taking a regional average would have lumped together very different ice regimes, something we really wanted to avoid. Another reason is that we wanted to provide a benchmark for current and upcoming high resolution sea ice models. We are of the opinion that the higher resolution models should be held to a high standard and should be able to roughly describe the observed seasonal cycle at these observational sites. Regarding discussion on improving snow depth in models, we feel it would be too speculative on our part and outside the conservative nature of our conclusions.