Review for "The influence of snow on sea ice as assessed from simulations of CESM2" written by Marika M. Holland et al..

Snow plays a critial role in the Earth's climate system due to its high albedo and effective thermal insulating effect. Its presence can delay sea ice growth in winter and surface melting in summer, and also can contribute significantly to the sea ice mass through formation of snow-ice which is a major contributor for sea ice mass in the Antarctic and becomes more and more important in the Arctic. It is also a difficult parameter in the model to be represented because of lack of obsevations in the poles. The article written by Holland et al. accessed the influence of snow on sea ice in experiments using the Community Earth System Model, version 2 for a pre-industrial and a 2xCO2 climate state, and found that the sea ice in the Arctic and Antarctic responses differently to increasing snow accumulation on sea ice. Through their study, Holland et al. underscore the importance of accurately representing snow accumulation on sea ice in coupled earth system models. The article is well structured, and well written. Snow is a hot topic in the recent studies and the articl is worth to be published. Thus I recommend publish this article after some minor revison.

General comments:
For figures, I suggest to set same limit for the y-axis for easy comparison, for example, Figure 2, using [-220, 220] for y-axis whether in the Antarctic and Arctic. Similar for the other figures.

Specific Comments:
Line 15-16: To check "increasing snow results in a decrease in both sea ice growth and sea ice melt". From Figure 8, the decrease in congelation ice growth and basal ice melting is correct, but it is not ture for the other type of ice growth and melting.

Line 39: Snow ice was observed in Arctic (e.g., Granskog et al., 2017, JGR) and potentially becomes more and more common in the Arctic (Merkouriadi et al., 2020, GRL). Please add one statement about snow ice in the Arctic also.

Line 70-71, Rewrtite this sentence to make it more understandable.

Line 76-77: Wind-driven blowing snow into leads leads to snow loss on sea ice in the Antarctic, whici is typically not represented in climate models. This means that snow in the climate models tends to be overestimated, right? Could you disccuss a little bit about this effect affect the snow simulation in the CESM2 and how it affects your results in the whole article?

Line 148-149: citation of references with earlier publish year in front

Line 180, Change "make small contributions" to "only contribute slightly"

Line 195-197: It is a too long sentence, hard to udnerstand. Suggest to rewrite it.

Line 226, remove "("and ")", and for before Fsnow. And how about for Fsnow 1.5 and 1.75

Line 229: Please check it is Fig. 3a or Fig. 3b?

Line 231: Refer to Fig. 3C aslo? It is much easier to see in Fig. 3c.

Line 257: "This will feedback" is difficult to understand for me. Could you rewrite it?

Line 259-260: citation references with earlier publish year in front

Line 302: remove "that is present"

Line 323-324, Combine "This dominates …. This is balanced by" two sentences into one.

Line 410: For Figure 11, set same upper limit for x-axis for the SH and NH