

I appreciate the authors' response and the revision. Many points are made clearer in the revision, and the paper has been improved. I have a few additional minor comments:

L163-164: ERA-I is not equivalent to observations. Labeling ERA-I as observations can be misleading (especially in figures). For example, ERA-I can still have large biases compared to CloudSat+CALIPSO or CERES-EBAF when it comes to downwelling shortwave surface fluxes in the Arctic (as large as ~ 30 W/m²). LWP biases can be as large as ~ 50 g/m² in the Norwegian and Barents Sea. I suggest the authors to replace "observations" with "reanalysis" when it's referring to ERA-I.

L224: Same as above.

L275: I do not understand why the authors keep showing figures of TCA, but the discussion is only relevant for LCA. Mid and high clouds can also affect TOA radiative fluxes, if they are optically thick enough, though it does not seem to be the case here. There is not a single figure showing that LCA is the dominant cloud type in the Arctic in SAM0. I suggest the authors replace TCA figures with LCA in the manuscript.

L400: repetitive title in reference

Figure 2: I appreciate the authors' efforts to show ground-based observations from NSA. Since the absolute values are large for FSDS and FLDS, I suggest to plot the difference between observations and models instead of absolute values, so that the readers can see right away which months show the largest improvements.