Supporting Information for:

Sensitivity of Arctic clouds to ice microphysical processes in NorESM2 climate model

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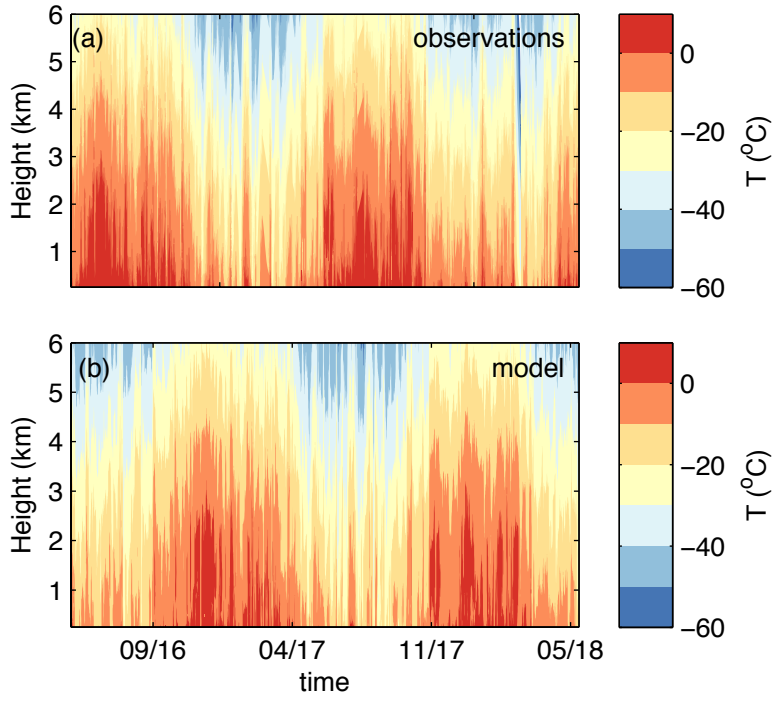

FIG. S1: Time-height cross-section of temperature (T, °C) for (a) Ny-Ålesund radiometer observations and (b) CNT (control) simulation.

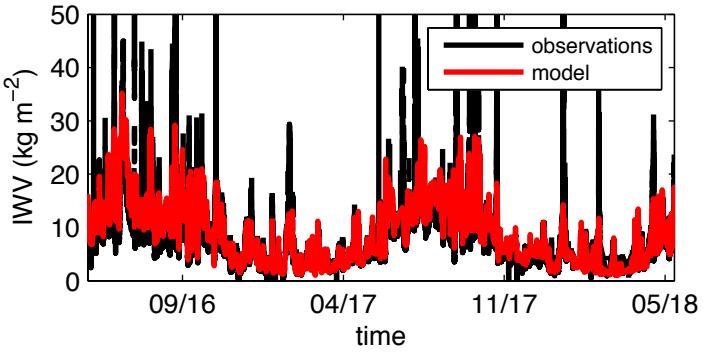

FIG. S2: Timeseries of Integrated Water Vapor (IWV, kg m^{-2}) for Ny-Ålesund radiometer observations (black) and CNT (control) simulation (red).

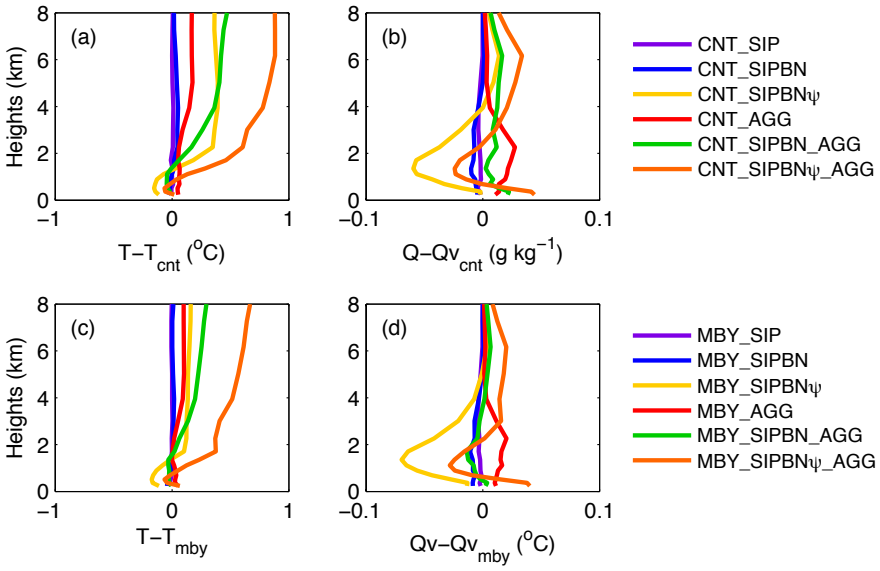

FIG S3. Difference in (a, c) temperature and (b, d) specific humidity profiles between control (CNT or MBY) the different NorESM2 sensitivity simulations. The first (second) row of panels presents simulations conducted with prognostic (diagnostic) PIP.

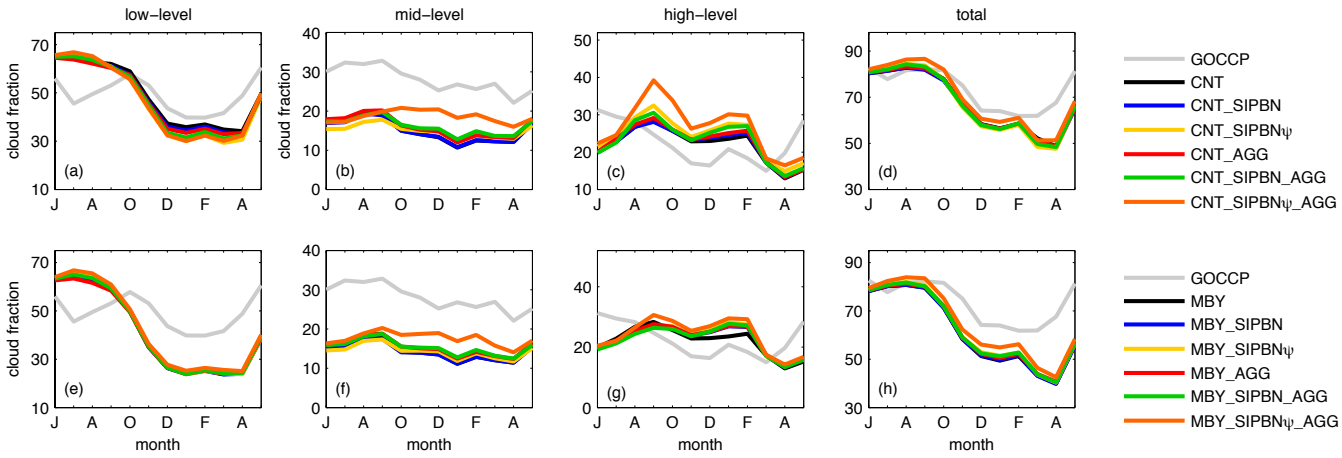

FIG S4. Timeseries of mean monthly (a, e) low-, (c, f) mid-, high- (c, g) and (d, h) cloud cover (model for the different NorESM2 sensitivity simulations. All model data are derived using the COSP satellite simulator. Grey lines represent the GOCCP product. The first (second) row of panels presents simulations conducted with prognostic (diagnostic) PIP. Data are averaged between 66°N and 82°N for the period June 2016-May 2018.