

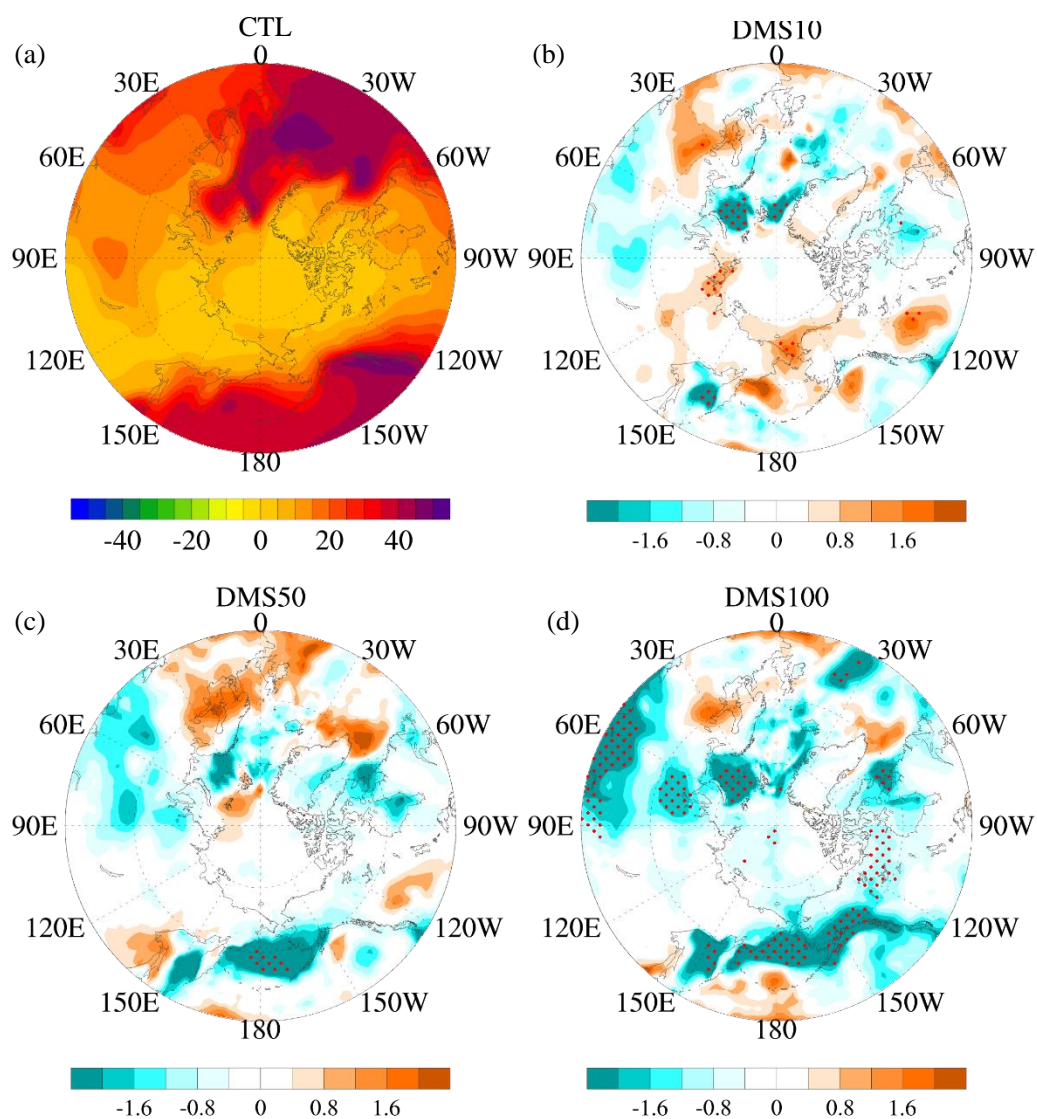
Supplementary Materials:


Figure S1. Longwave cloud radiative effect (LCRE) at top of atmosphere (a) and the differences of LCRE (W m^{-2}) between DMS10 and CTL (b), DMS50 and CTL (c), and DMS100 and CTL (d) experiments. These results are for winter season (December, January, and February) during 1971–2000 in the Arctic region (45°N – 90°N). Red stipples indicate the regions where the null hypothesis of “no difference of seasonal average LCRE between CTL and increased DMS experiments” is rejected at 5% test level.

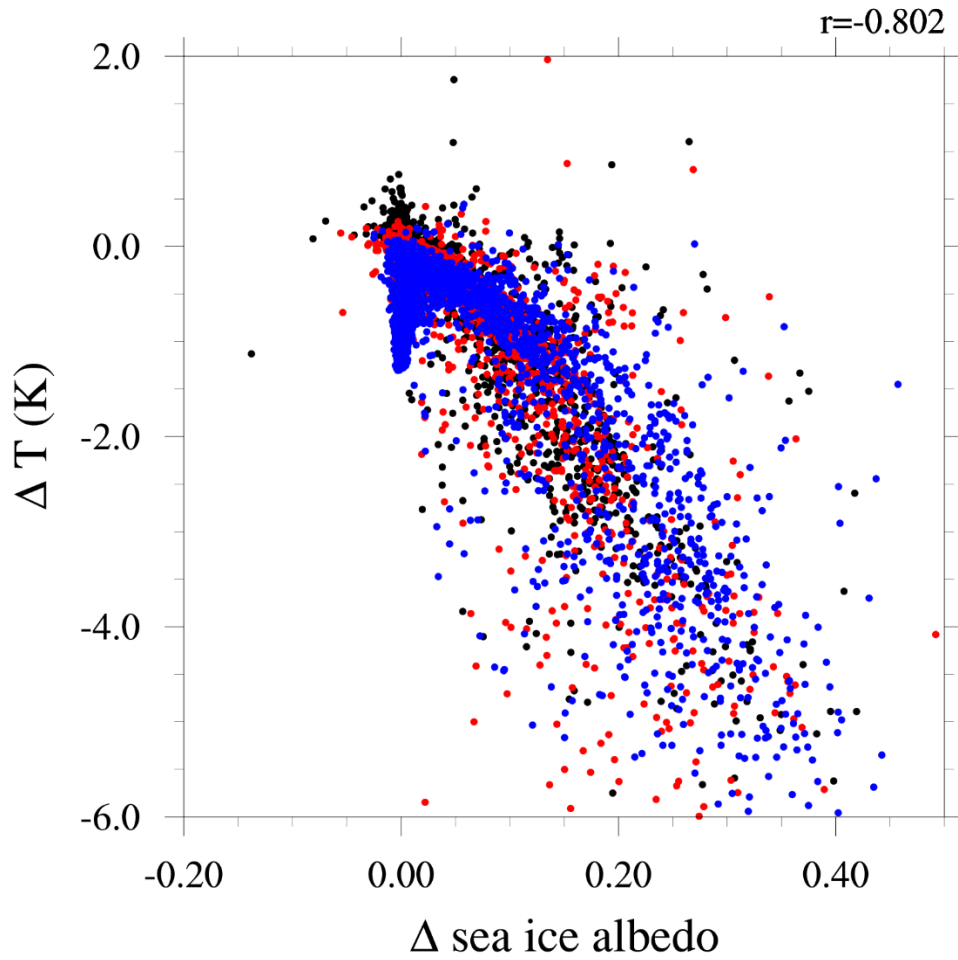


Figure S2. Scatter plot of temperature at 1.5 m altitude and sea ice albedo in 50°N–90°N during summer season (JJA). Each dot represents the difference between DMS10 and CTL (black dots), DMS50 and CTL (red dots), and DMS100 and CTL (blue dots) for each grid point.