Reply to Reviewer #1:

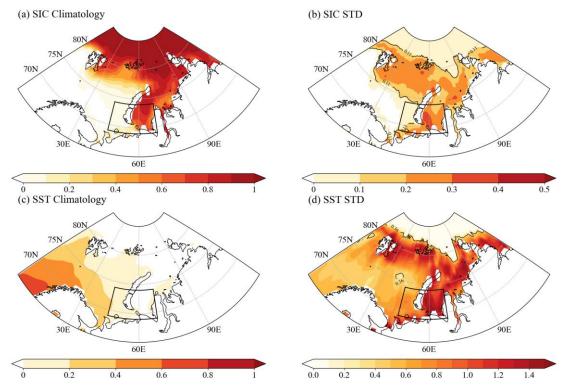


Figure R1: Climatological (a) SIC and (c) SST. Standard deviation of (b) SIC and (d) SST anomalies (shading).

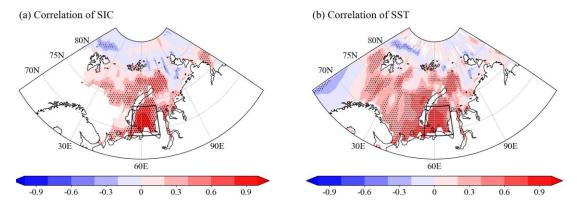


Figure R2: Distribution of correlation coefficients between the June SIC index over the Kara Sea $(69^{\circ} -74^{\circ} N, 55^{\circ} -69^{\circ} E, \text{black box})$ and (a) SIC anomalies, and between the June SST index and (b) SST anomalies during 1982 - 2021. The areas significant at the 90% confidence level are dotted.

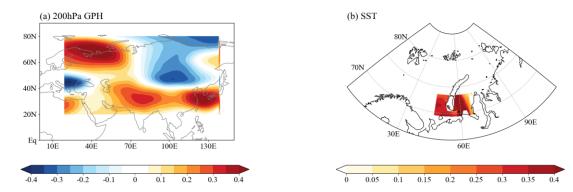


Figure R3: First leading SVD mode between geopotential height at 250 hPa (left) and SST (right) fields during June 1982-2021.