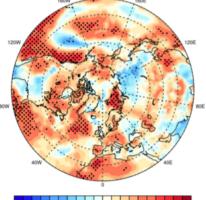


(a) T2M ACC: SE(Topo-I),ERAI

Anomaly Correlation Coefficients (ACC)

Anomaly Correlation Coefficients (ACC)

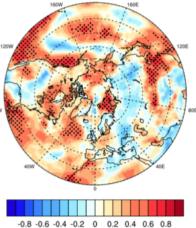
Early Winter (b) T2M ACC: FV(Topo-I),ERAI



-0.8 -0.6 -0.4 -0.2 0 0.2 0.4 0.6 0.8 Anomaly Correlation Coefficients (ACC)

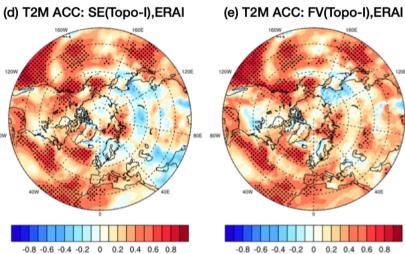
Late Winter

(c) T2M ACC: FV(Topo-II),ERAI



0.8 -0.6 -0.4 -0.2 0 0.2 0.4 0.6 0.8 Anomaly Correlation Coefficients (ACC)

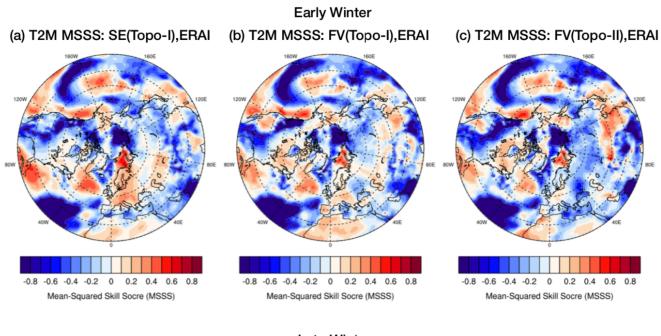
(f) T2M ACC: FV(Topo-II),ERAI



-0.8 -0.6 -0.4 -0.2 0 0.2 0.4 0.6 0.8 Anomaly Correlation Coefficients (ACC)

-0.8 -0.6 -0.4 -0.2 0 0.2 0.4 0.6 0.8 Anomaly Correlation Coefficients (ACC)

Figure S 1: Same as Figure 3 except for the filled mask on the ocean area.



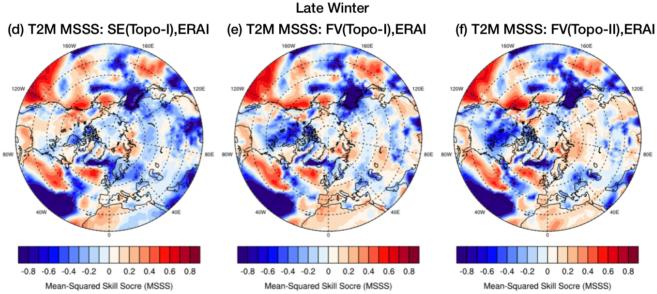


Figure S 2: Same as Figure 4 except for the filled mask on the ocean area.

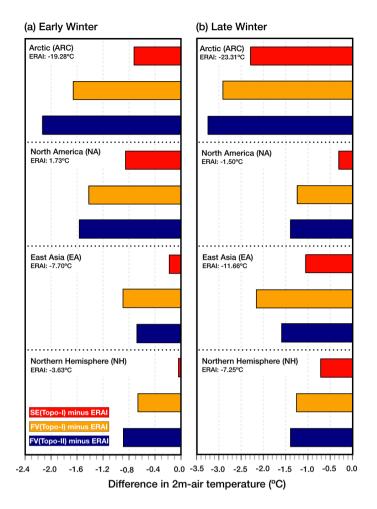


Figure S 3: Difference in 2m-air temperature between models and ERA-Interim reanalysis (ERAI) during (a) early winter, (b) late winter. Difference for SE (Topo-I) (red), FV(Topo-I) (yellow), FV(Topo-II) (blue) model on Arctic (ARC), North America (NA), East Asia (EA), and Northern Hemisphere (NH).