

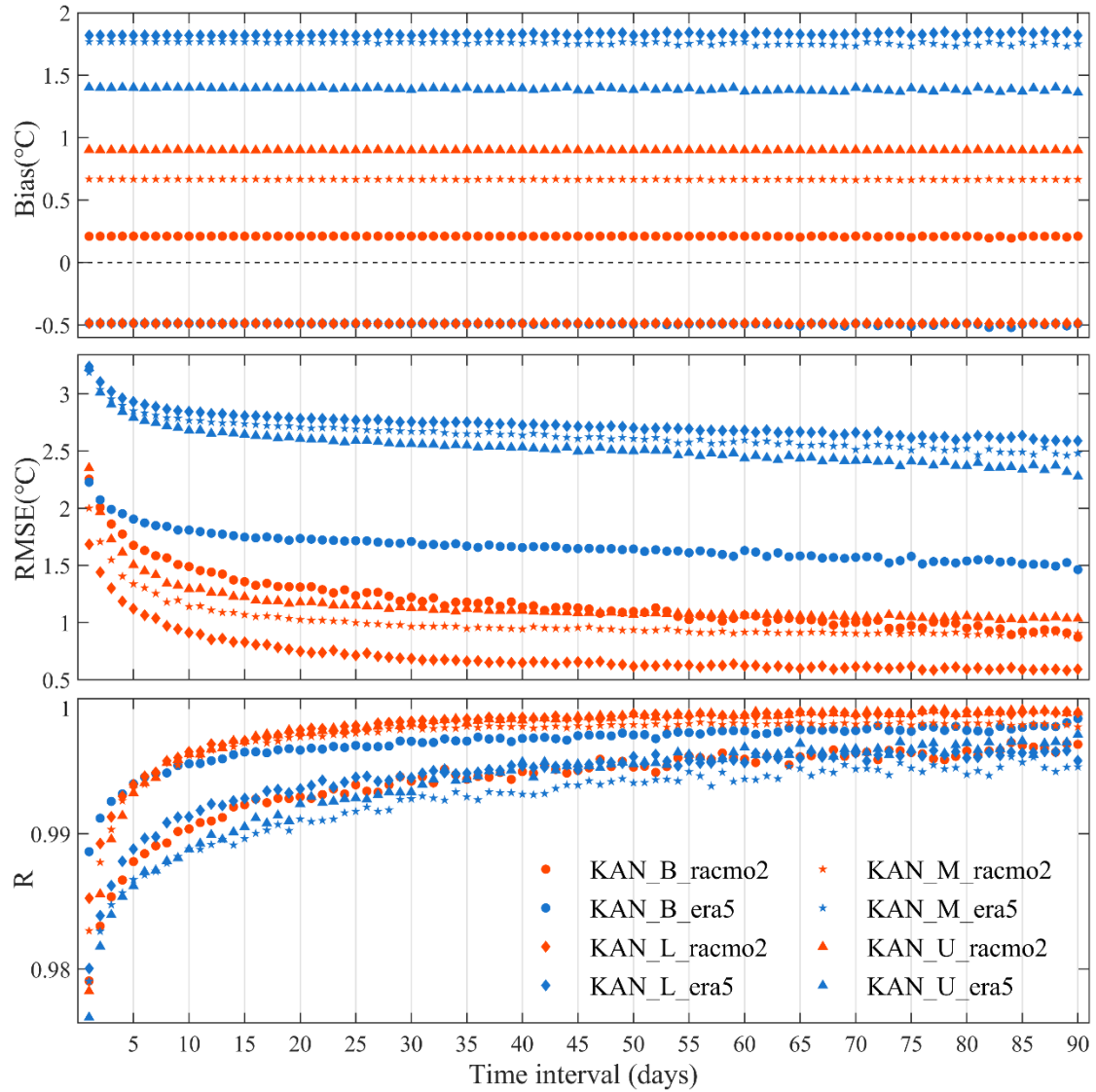


## Supplemental Material

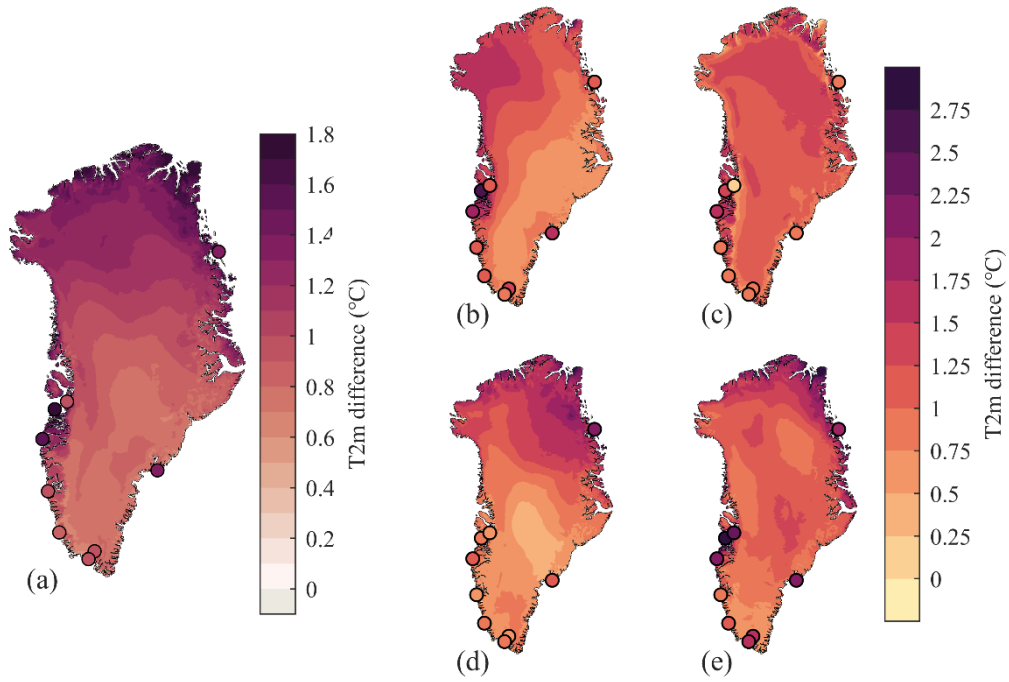
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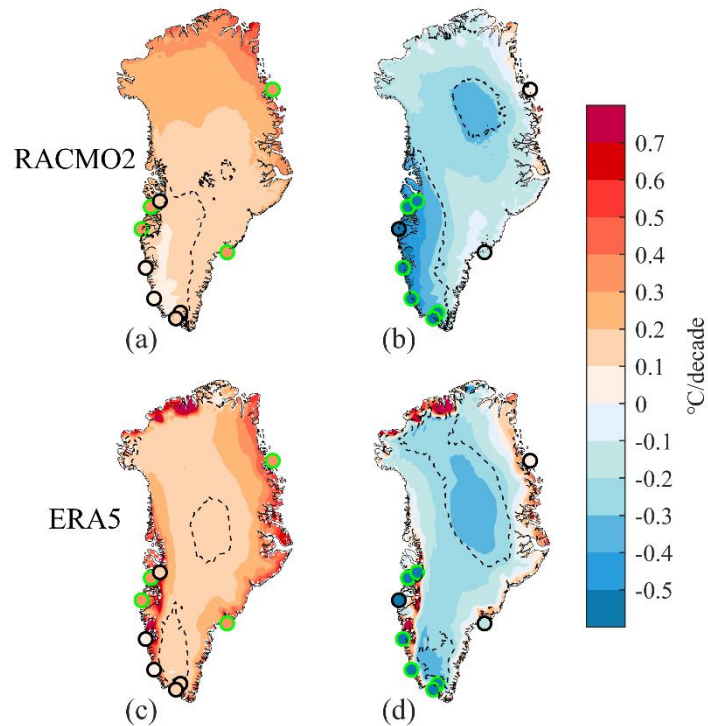
## Supplemental Material



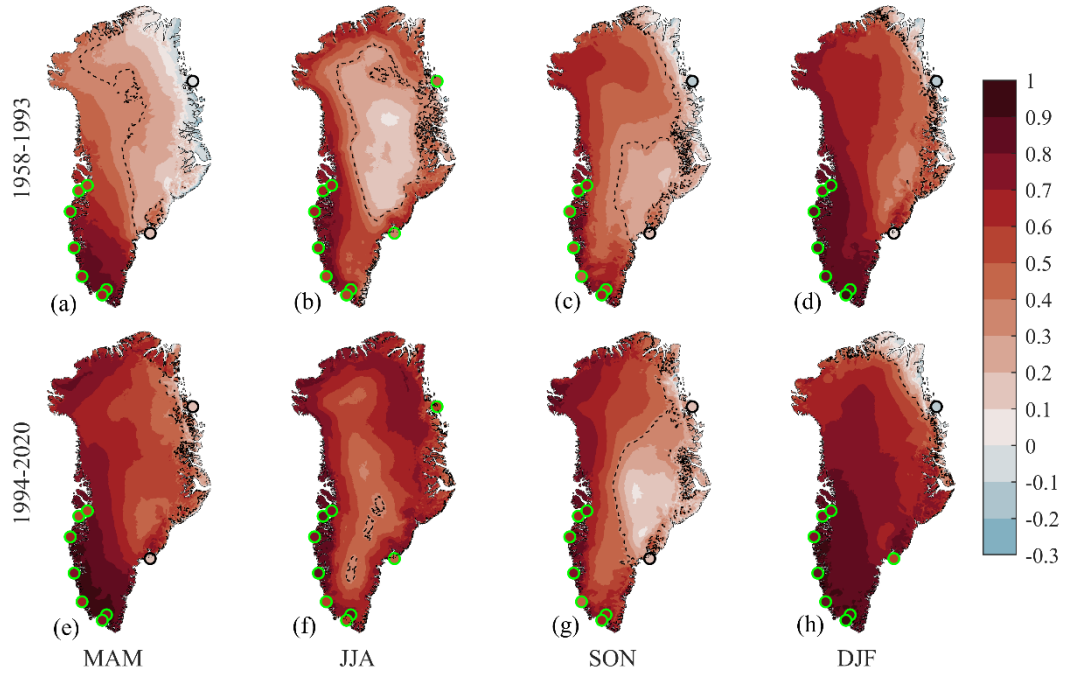
**Fig. S1.** Correlation coefficients ( $R$ ), mean difference ( $BIAS$ ) and root mean square error ( $RMSE$ ) of different time interval mean  $T2m$  from ERA5 and RACMO2.



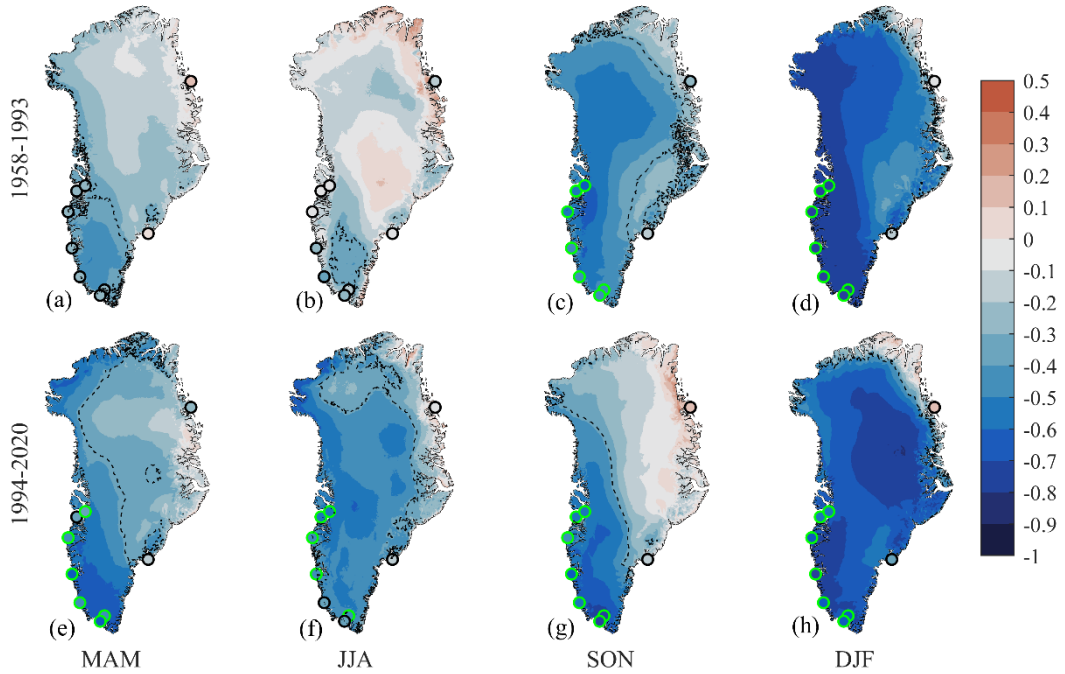
**Fig. S2.** RACMO2 T2m difference (°C) before and after the temperature jump, in (a) annual, (b) MAM, (c) JJA, (d) SON, (e) DJF, respectively. 1995 is chosen as the jump year. The dots represent DMI stations using the same color scale.



**Fig. S3.** Map of annual T2m trend (°C-decade<sup>-1</sup>) from RACMO2 during (a) 1958-2020; (b) 1958-1994; and ERA5 during (c) 1958-2020; (d) 1958-1994. The dashed line represents the 95% significance level contour. The dots represent DMI stations using the same color scale. For stations, the green circle indicates that the trend passes the 95% significance test.



**Fig. S4.** The spatial distribution of the correlation ( $R$ ) between GBI and seasonal  $T2m$  from RACMO2. The four upper maps represent the period 1958-1993 and the four lower maps the period 1994-2018. The dashed line represents the 95% significance level contour. The dots represent DMI stations using the same color scale. For stations, the green circle indicates that the trend passes the 95% significance test.



**Fig. S5.** As in Fig. S4, but for the correlation ( $R$ ) between NAO and seasonal  $T2m$  from RACMO2.