



## **Intraseasonal temperature variability over Europe in a future climate scenario**

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An ensemble of regional climate model (RCA3) integrations driven by several GCMs (ECHAM5, CCSM3, and BCM) is used to investigate possible changes in near-surface temperature variability on intraseasonal time scales between present (1961-1990) and future (2071-2100) climate under the SRES A1B scenario. For analysis the daily anomalies are calculated by subtracting the daily climatological annual cycle for respective periods and then low-frequency and synoptic processes are separated by applying a 7-day low-pass filter. In winter, both low-frequency and synoptic variability of temperature is significantly reduced over northern Europe while no significant changes are found over central and southern Europe. In summer, a distinct feature is a significant increase in low-frequency and synoptic variability over continental Europe, south of 55N. Over northern Europe there are some weak signs of a decrease in variability as in winter period but spatial patterns are not uniform between members of the ensemble. The results obtained suggest that in the future climate scenario magnitude of extreme daily temperature anomalies about a new mean state is reduced over northern Europe in winter and enhanced over central and southern Europe in summer.