Comparing 600 years of extremely hot Central European summers to future projections

Laura Lipfert, Ralf Hand, Stefan Brönnimann

September 28, 2025

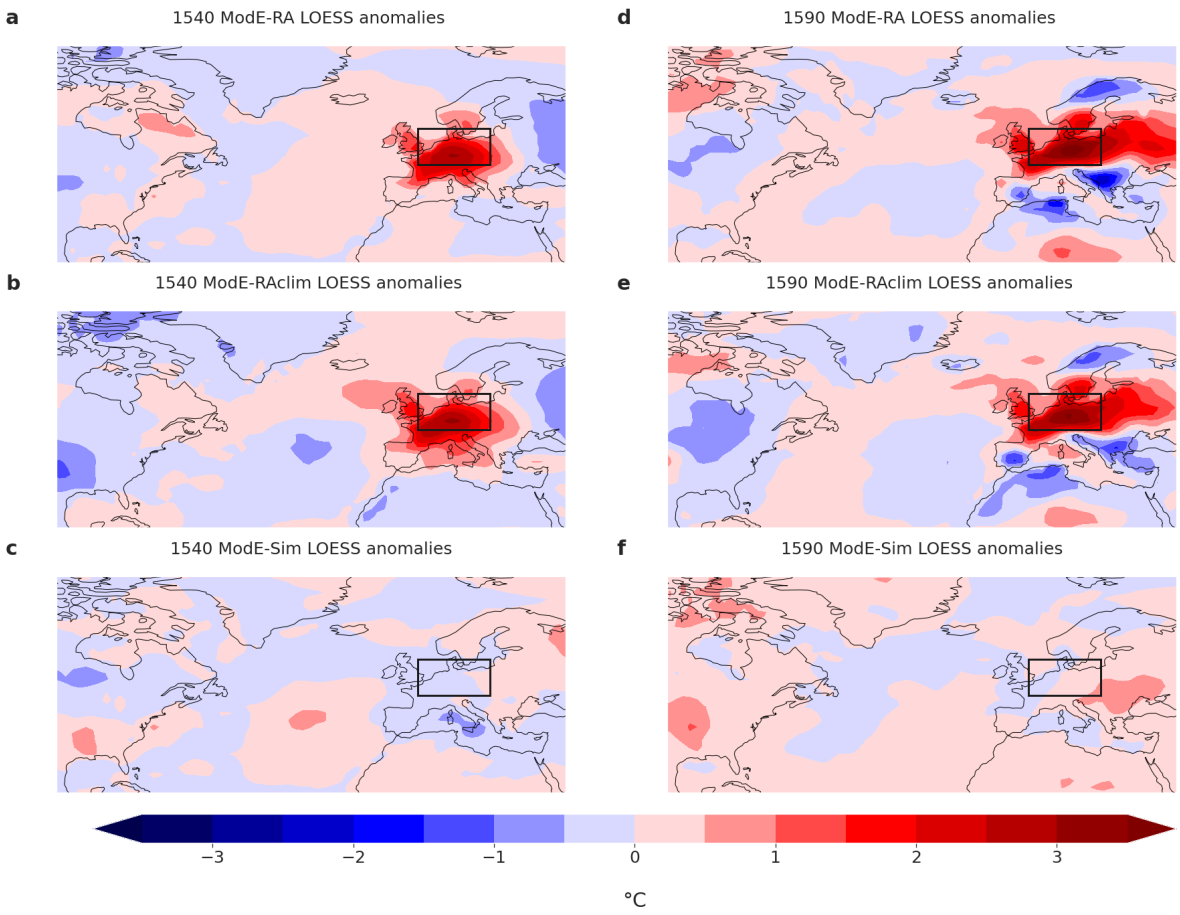

Figure S1: 1540 2m temperature anomalies with LOESS regression for a) ModE-RA, b) ModE-RAclim c) ModE-Sim and 1590 2m temperature anomalies with LOESS regression for d) ModE-RA, e) ModE-RAclim f) ModE-Sim

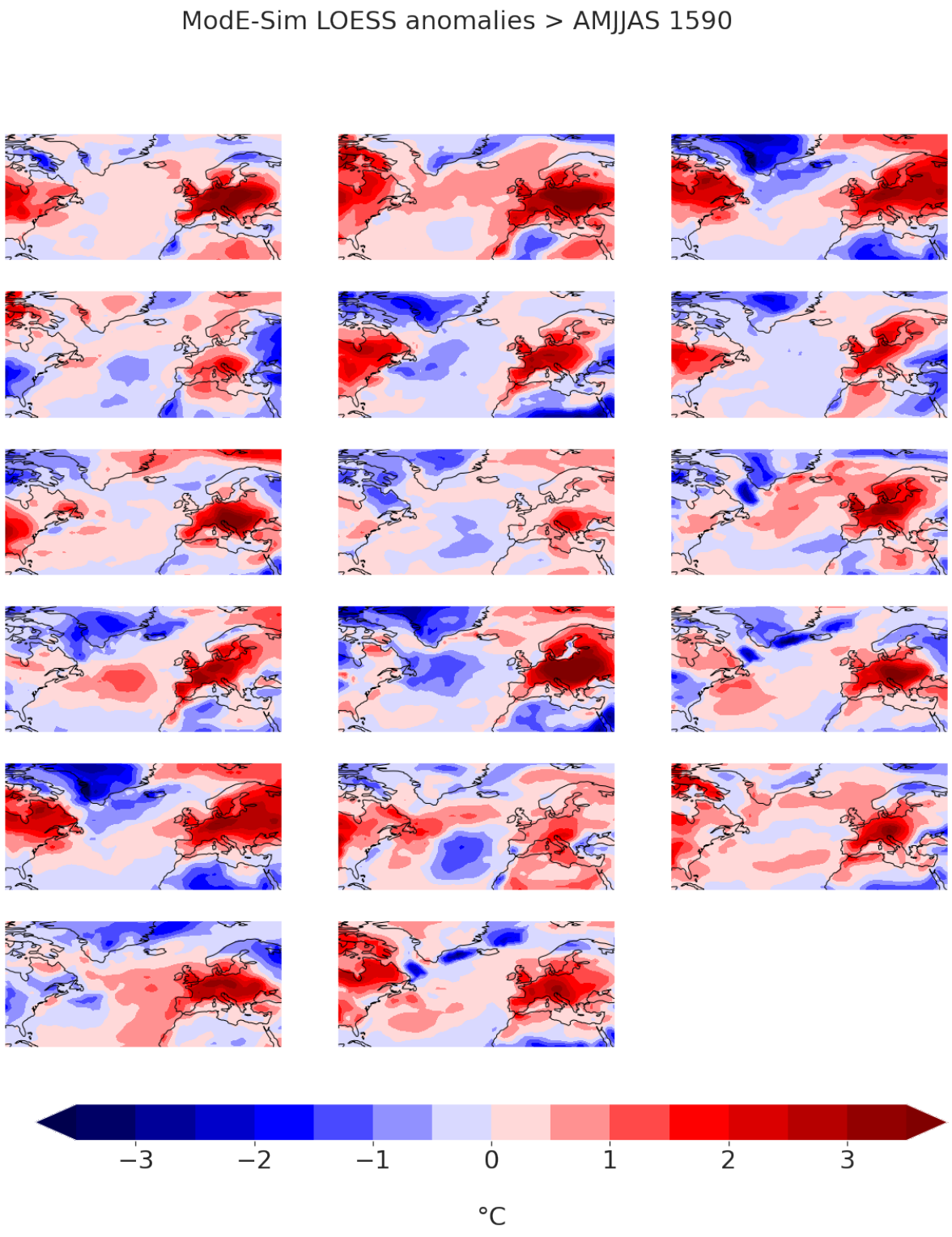

Figure S2: April-September 2m temperature LOESS anomalies for all ModE-Sim years (20 ensemble members) with anomalies higher than 2.17K (1540 AMJJAS anomaly)

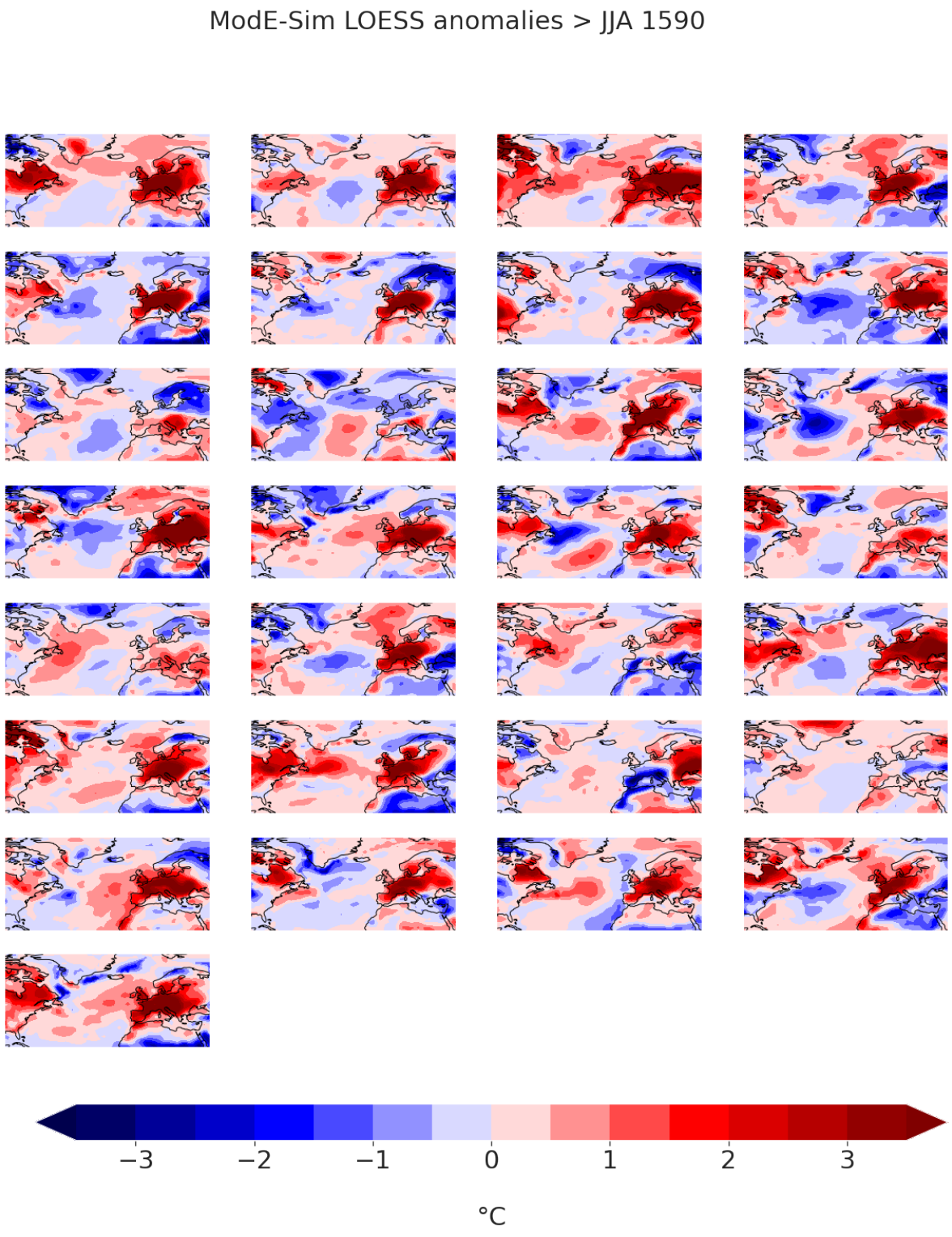

Figure S3: June-August 2m temperature LOESS anomalies for all ModE-Sim years (20 ensemble members) with anomalies higher than 2.8K (1590 AMJJAS anomaly)

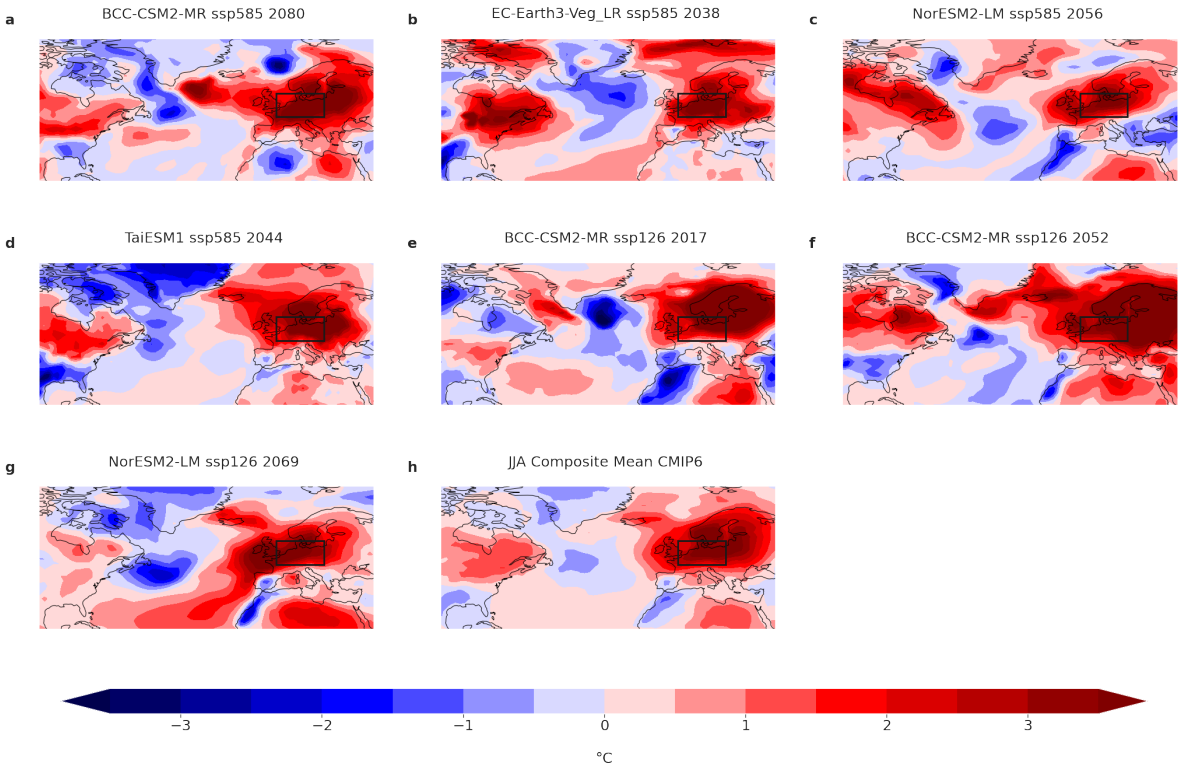

Figure S4: a-g) 2m temperature fields for all CMIP6 simulations with anomalies over Central Europe(0-20°E,47-57°N) greater than ModE-RAs June-August 1590 anomaly (2.8K). h) Composite mean of all CMIP6 simulations with anomalies over Central Europe greater than ModE-RAs 1540 anomaly.

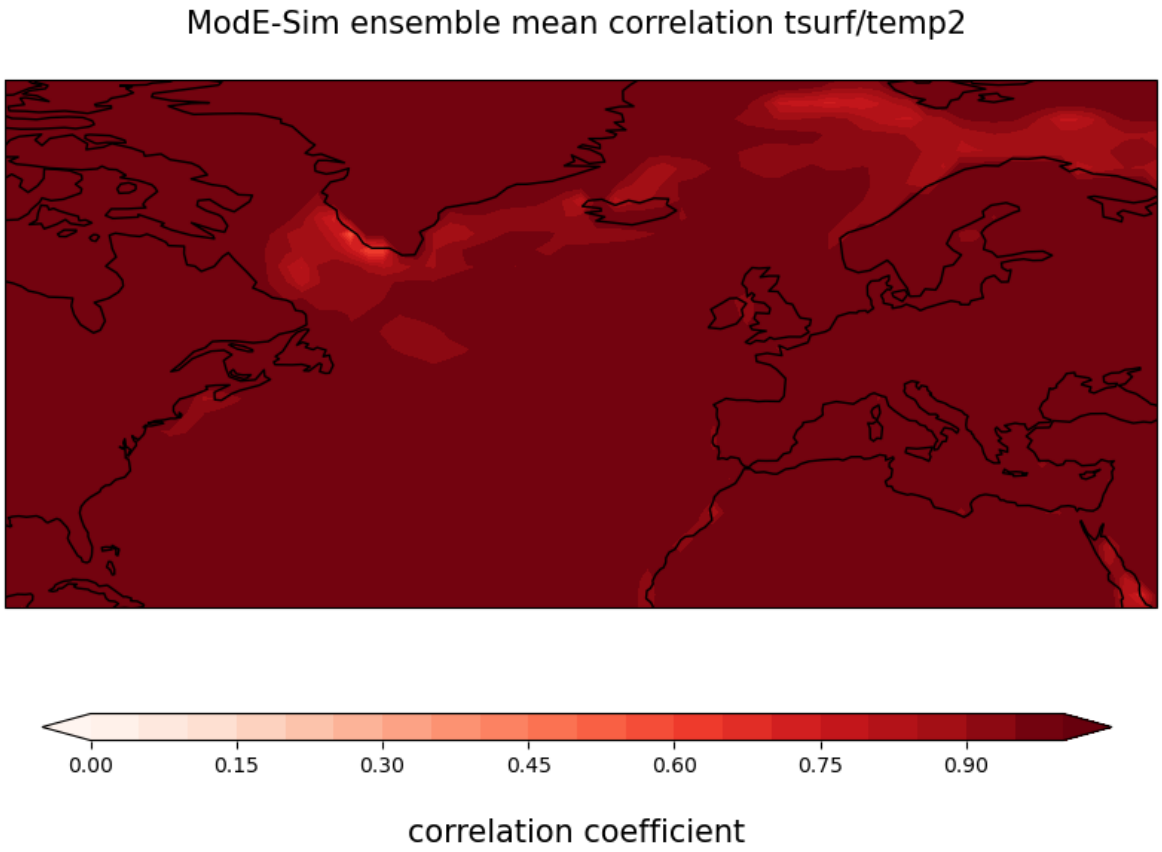

Figure S5: Correlation between surface temperature and 2m air temperature for June-August ModE-Sim ensemble mean