Supplement of Earth Syst. Dynam., 11, 1013–1031, 2020
https://doi.org/10.5194/esd-11-1013-2020-supplement
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Earth System Dynamics
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Supplement of

Comparing interannual variability in three regional single-model initial-condition large ensembles (SMILEs) over Europe

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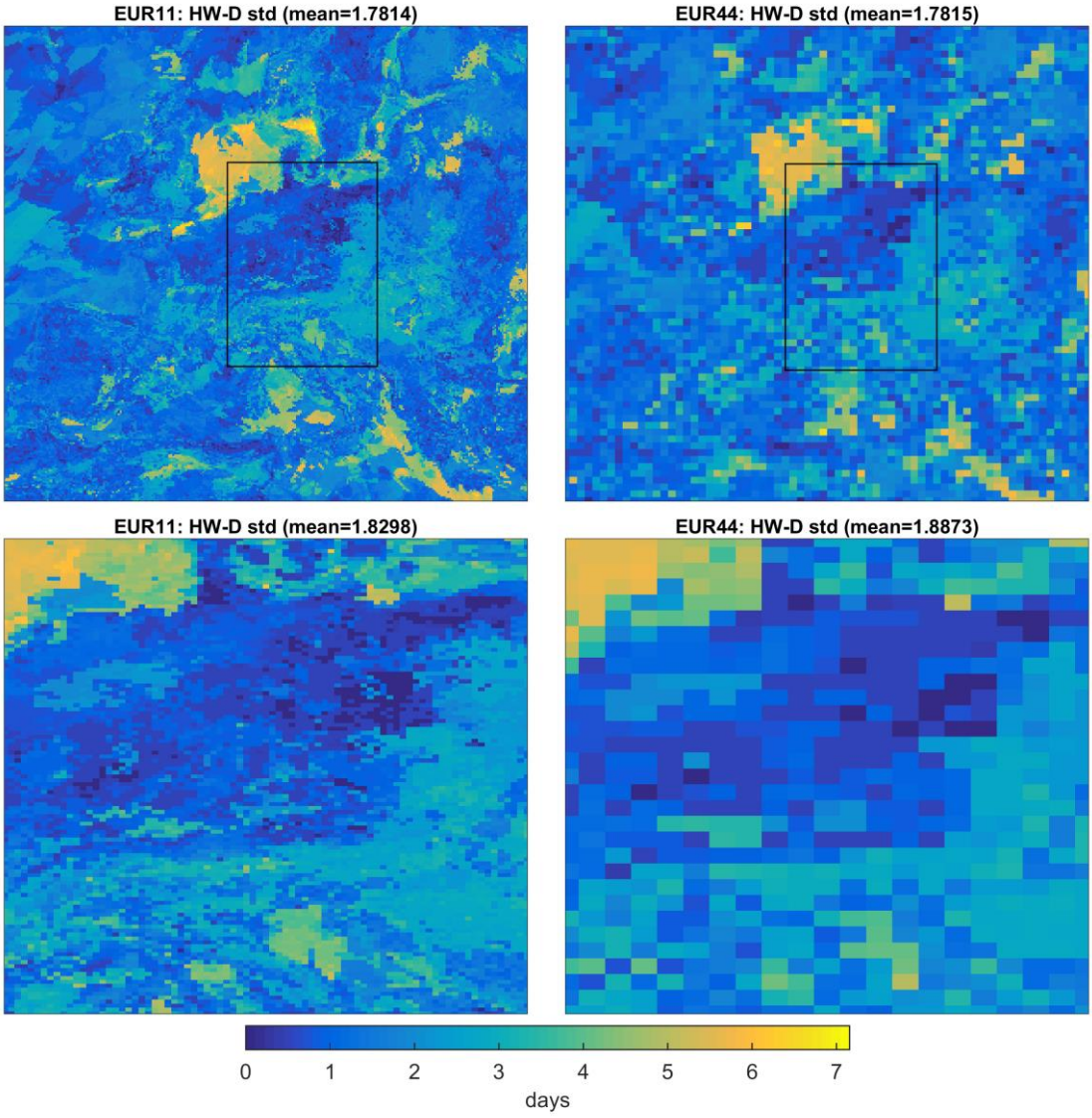

Figure S1: Standard deviation of tas-HW-Nr over five members of the CRCM for the original 0.11° data (left side) and aggregated 0.44° data (right side), for the whole CRCM domain (top row), and a cut-out over central Europe (lower row, see rectangle in top row). The spatial mean for each domain is given in the headings.

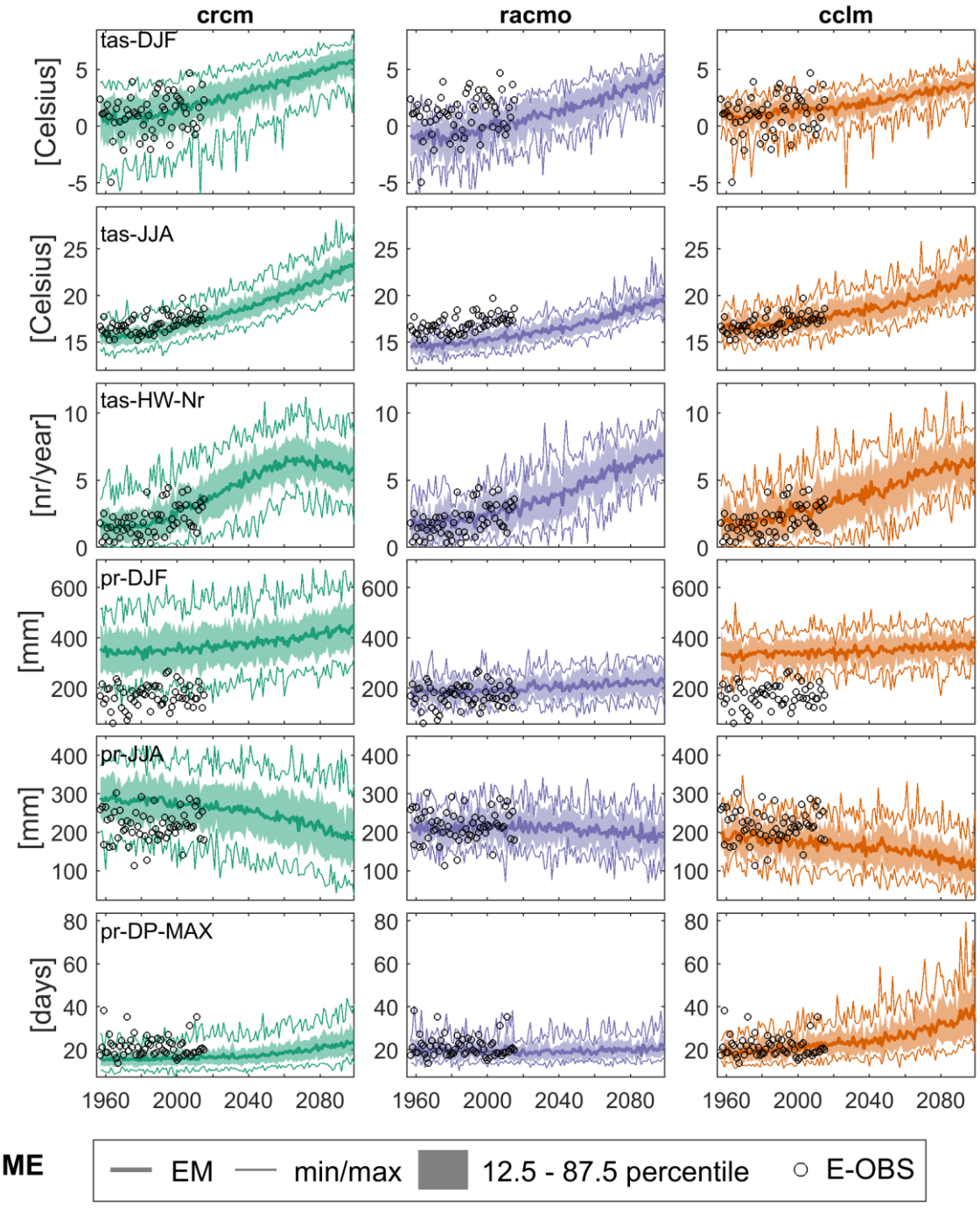

Figure S2: same as Figure 4 from the main text, but with absolute values showing the bias of the models. EM=ensemble mean

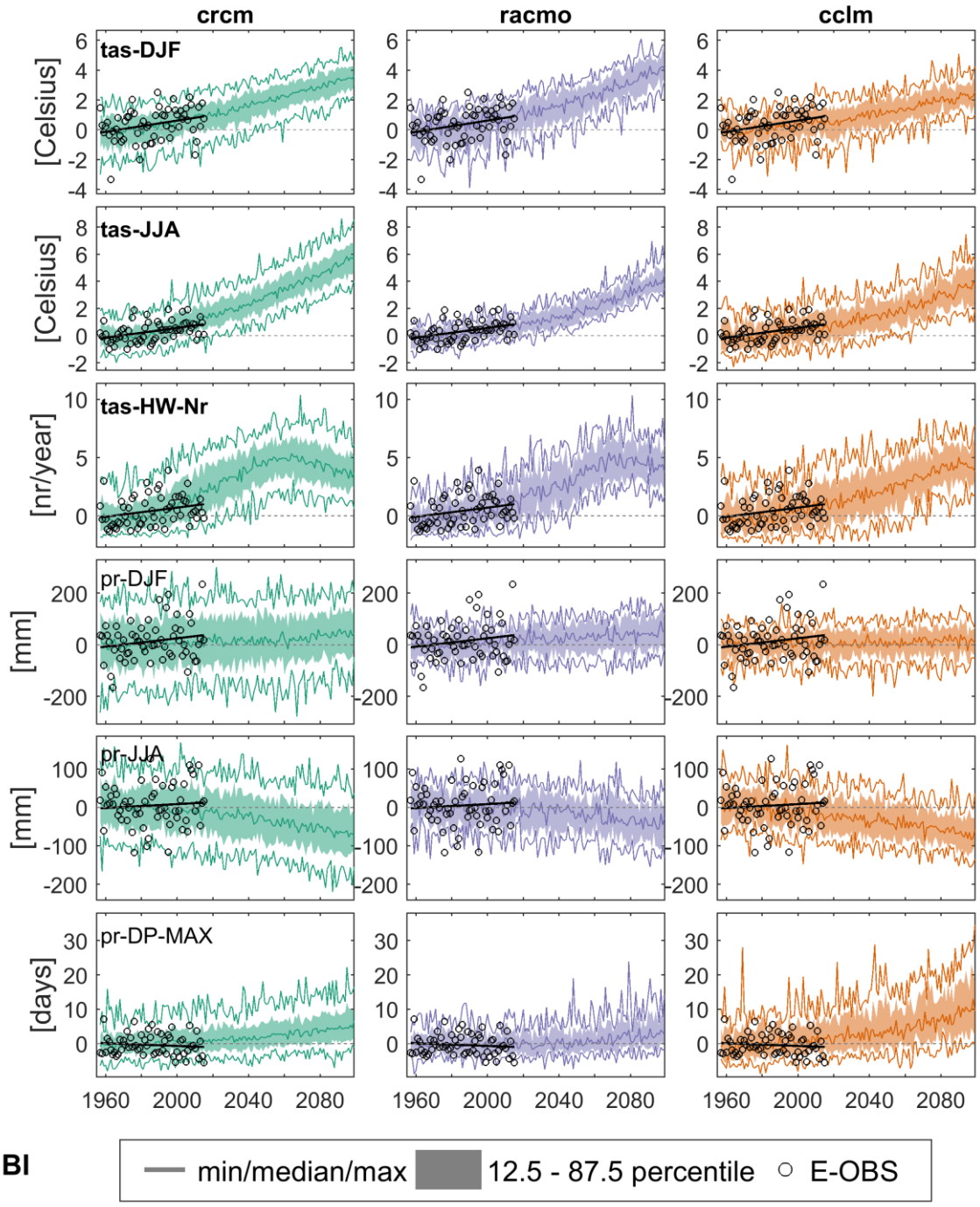

Figure S3: Anomalies from 1961-1990 of the 6 indicators over the British Isles (BI) for E-OBS (circles 1957-2015) and the three ensembles (1957-2099), represented by the median, minimum and maximum (solid lines) of the ensemble and an area from the 12.5th and 87.5th percentile, spanning the range of the inner 75 % of the members (shadings). Black lines show the linear trend for the E-OBS points. The indicator names are in bold when the trend is significant via a Mann-Kendall test (alpha=0.05).

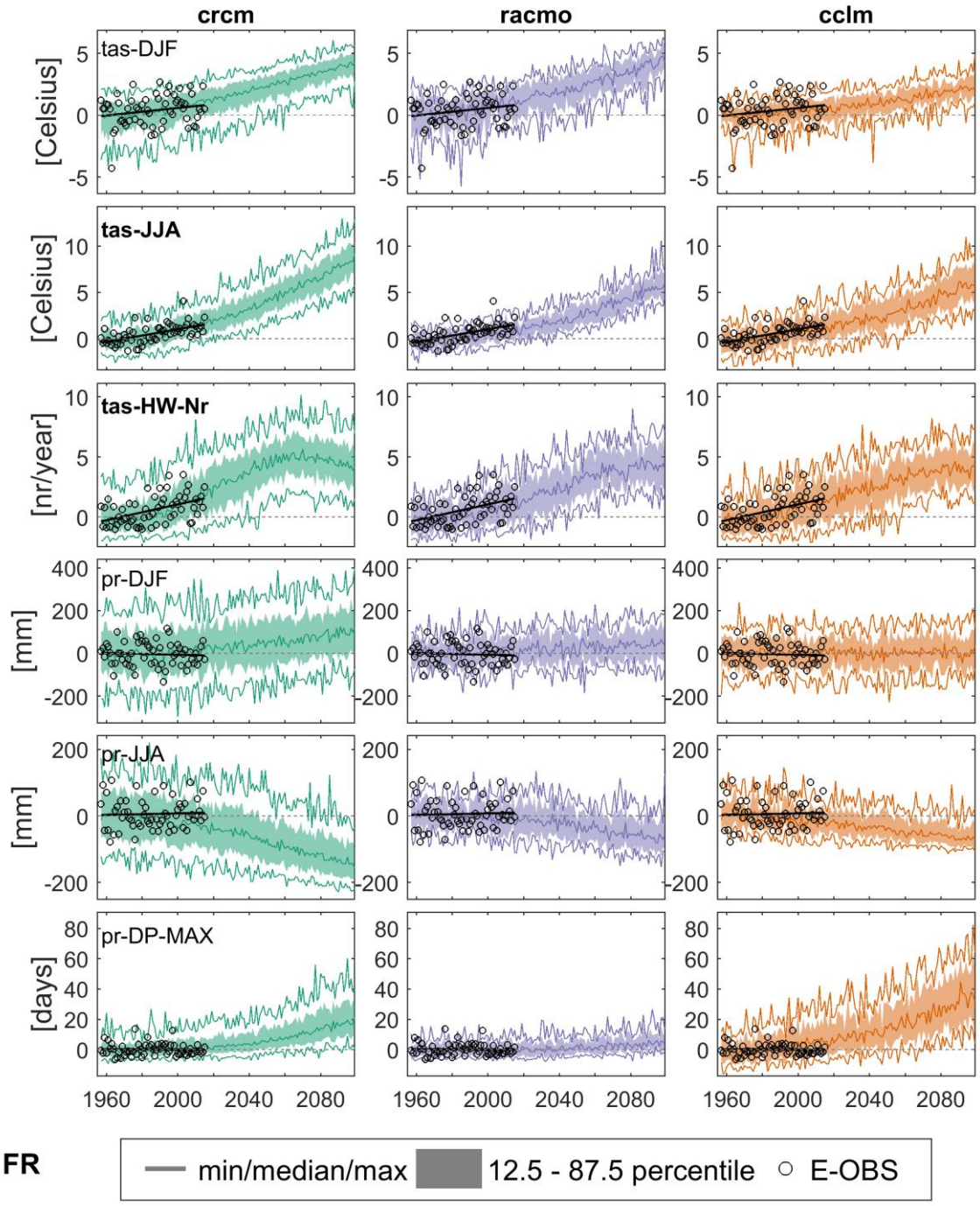

Figure S4: Anomalies from 1961-1990 of the 6 indicators in France (FR) for E-OBS (circles 1957-2015) and the three ensembles (1957-2099), represented by the median, minimum and maximum (solid lines) of the ensemble and an area from the 12.5th and 87.5th percentile, spanning the range of the inner 75 % of the members (shadings). Black lines show the linear trend for the E-OBS points. The indicator names are in bold when the trend is significant via a Mann-Kendall test (alpha=0.05).

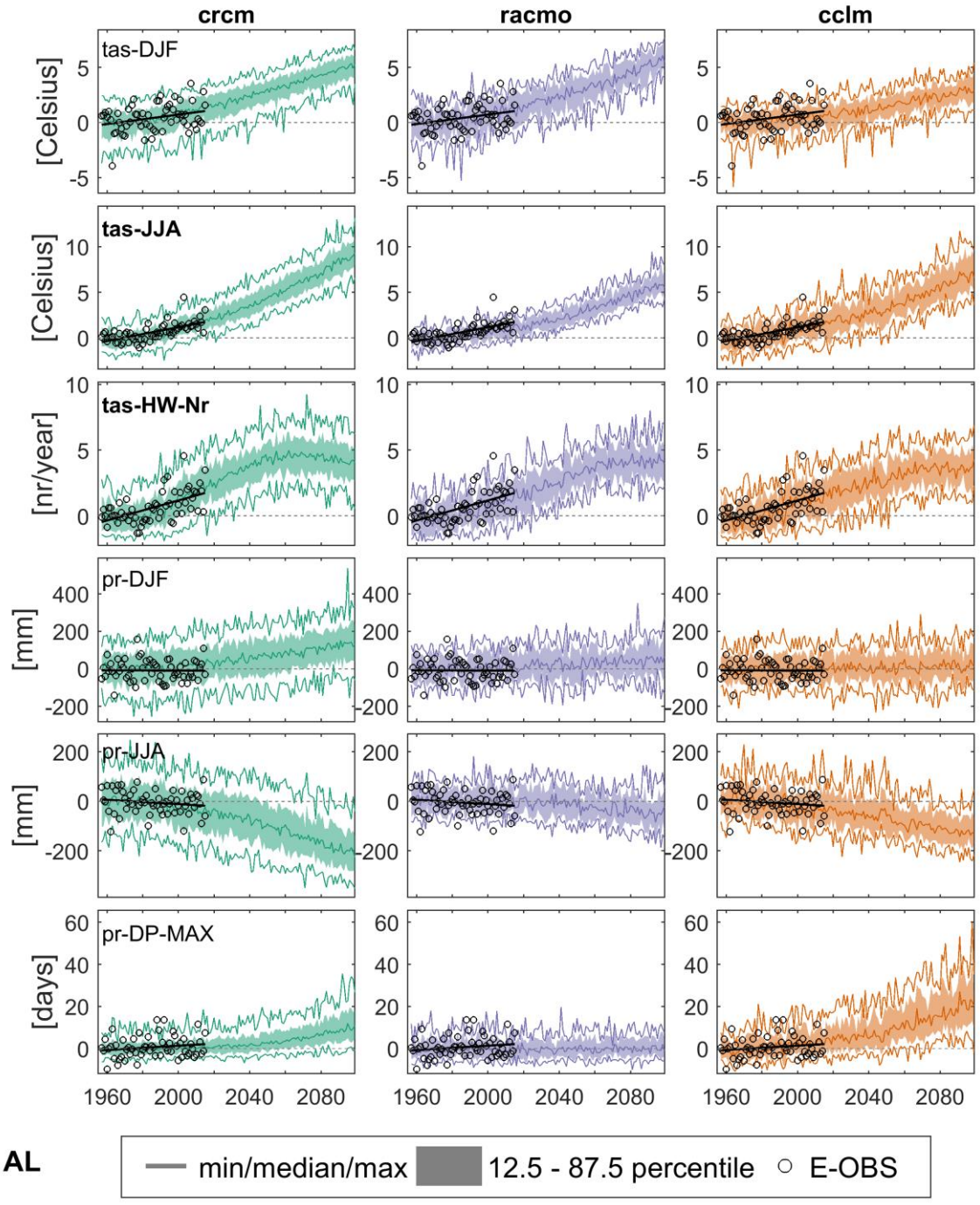

Figure S5: Anomalies from 1961-1990 of the 6 indicators in the Alps (AL) for E-OBS (circles 1957-2015) and the three ensembles (1957-2099), represented by the median, minimum and maximum (solid lines) of the ensemble and an area from the 12.5th and 87.5th percentile, spanning the range of the inner 75 % of the members (shadings). Black lines show the linear trend for the E-OBS points. The indicator names are in bold when the trend is significant via a Mann-Kendall test (alpha=0.05).

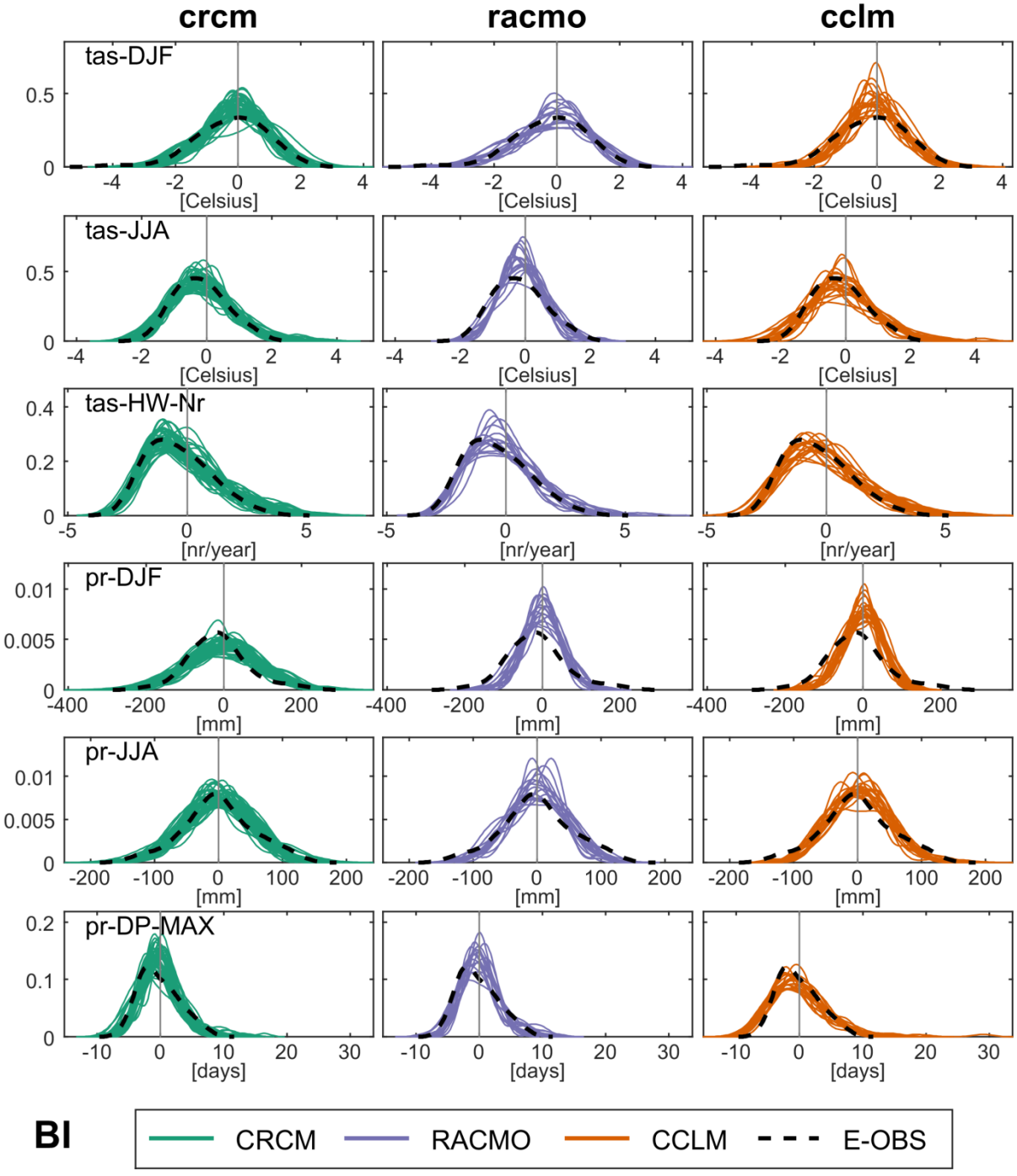

Figure S6: Probability density functions of the annual anomalies in the period 1957-2015 in E-OBS and each ensemble member for all 6 indicators in British Isles (BI).

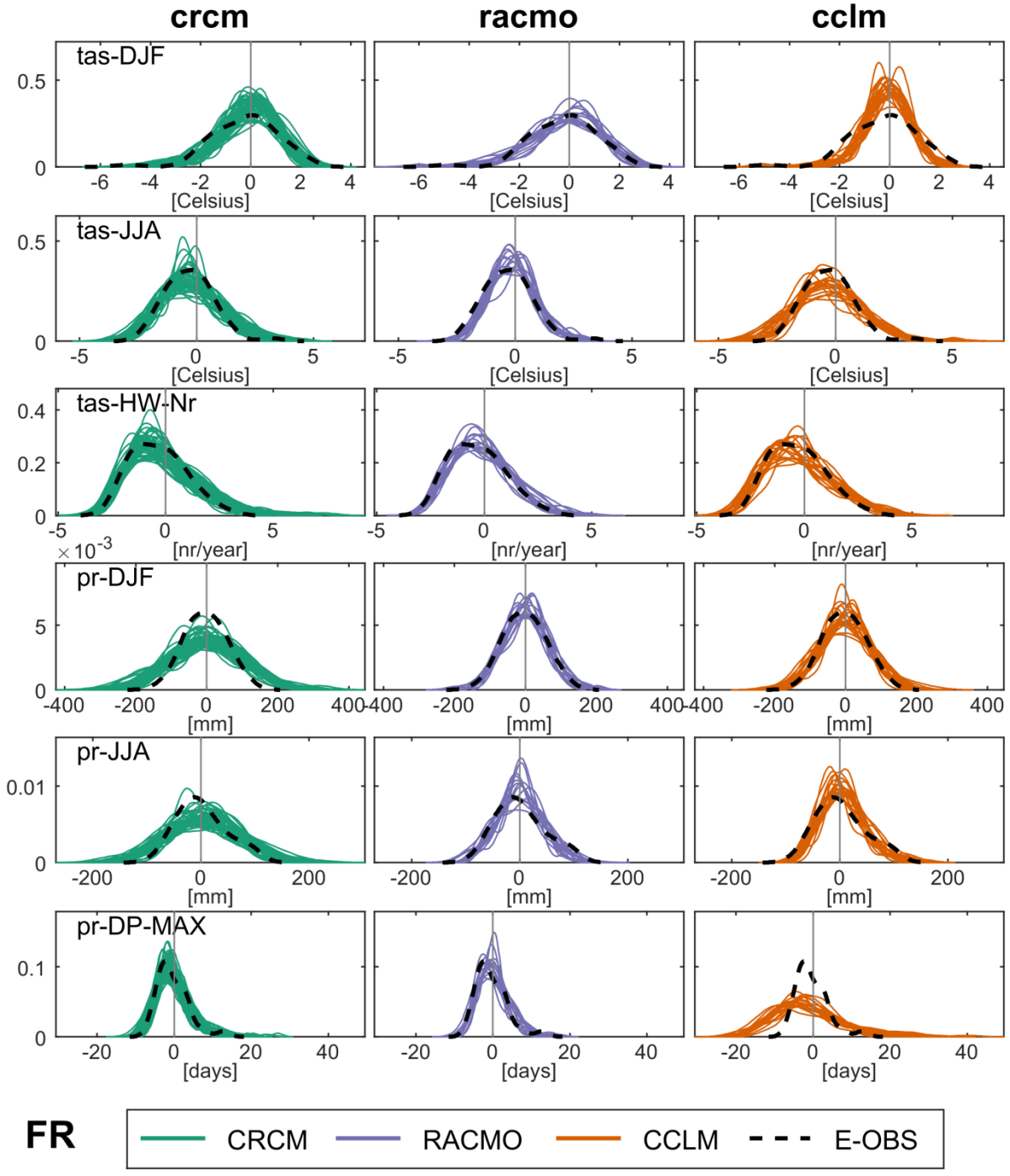

Figure S7: Probability density functions of the annual anomalies in the period 1957-2015 in E-OBS and each ensemble member for all 6 indicators in France (FR).

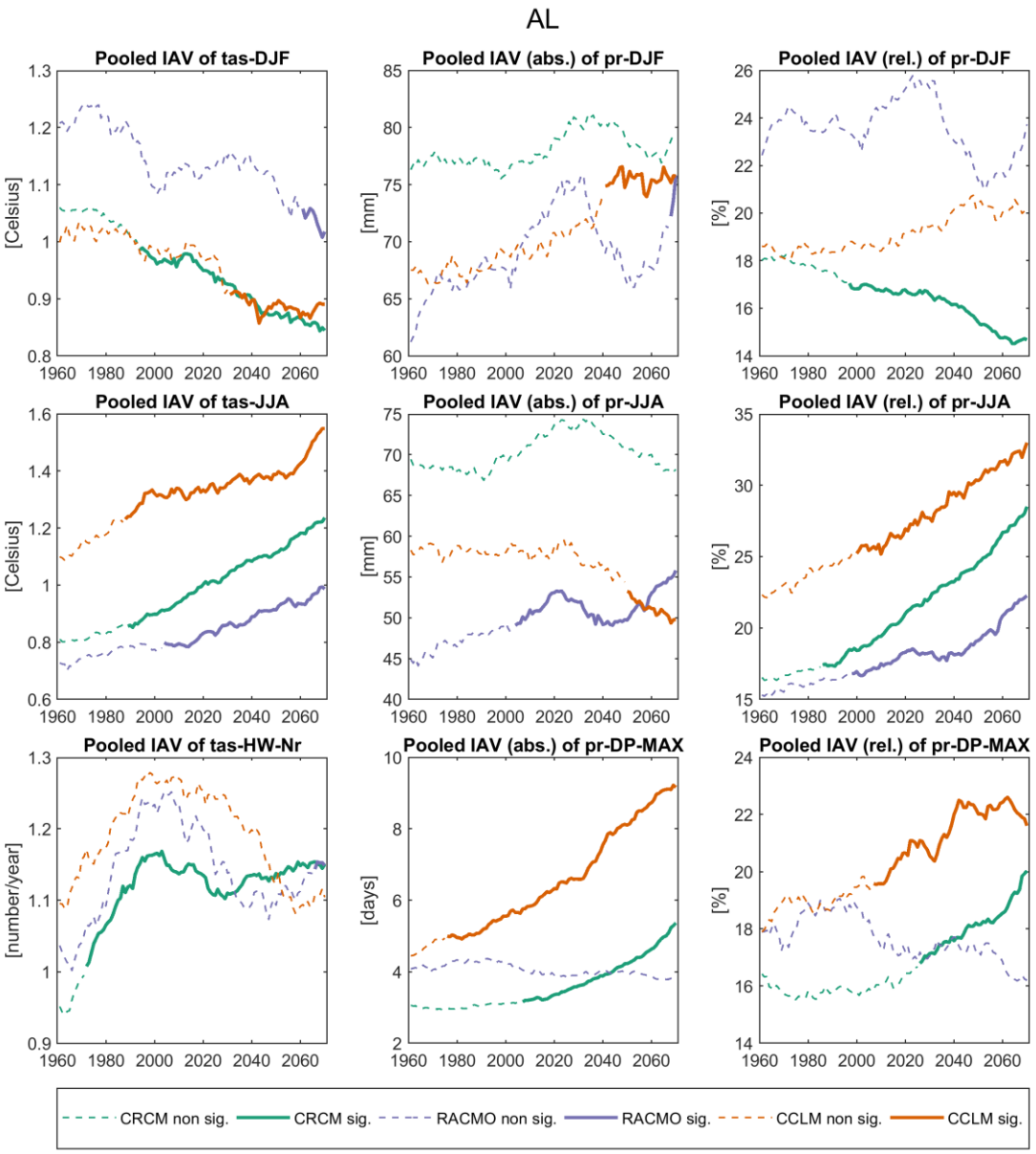

Figure S8: "Pooled IAV" for the Alps. The analysis is based on residuals after removing the EM from each member. Temperature-based indicators are shown in absolute terms (left column). Precipitation-based indicators are shown both in absolute terms (central column) and relative to the ensemble mean (right column).

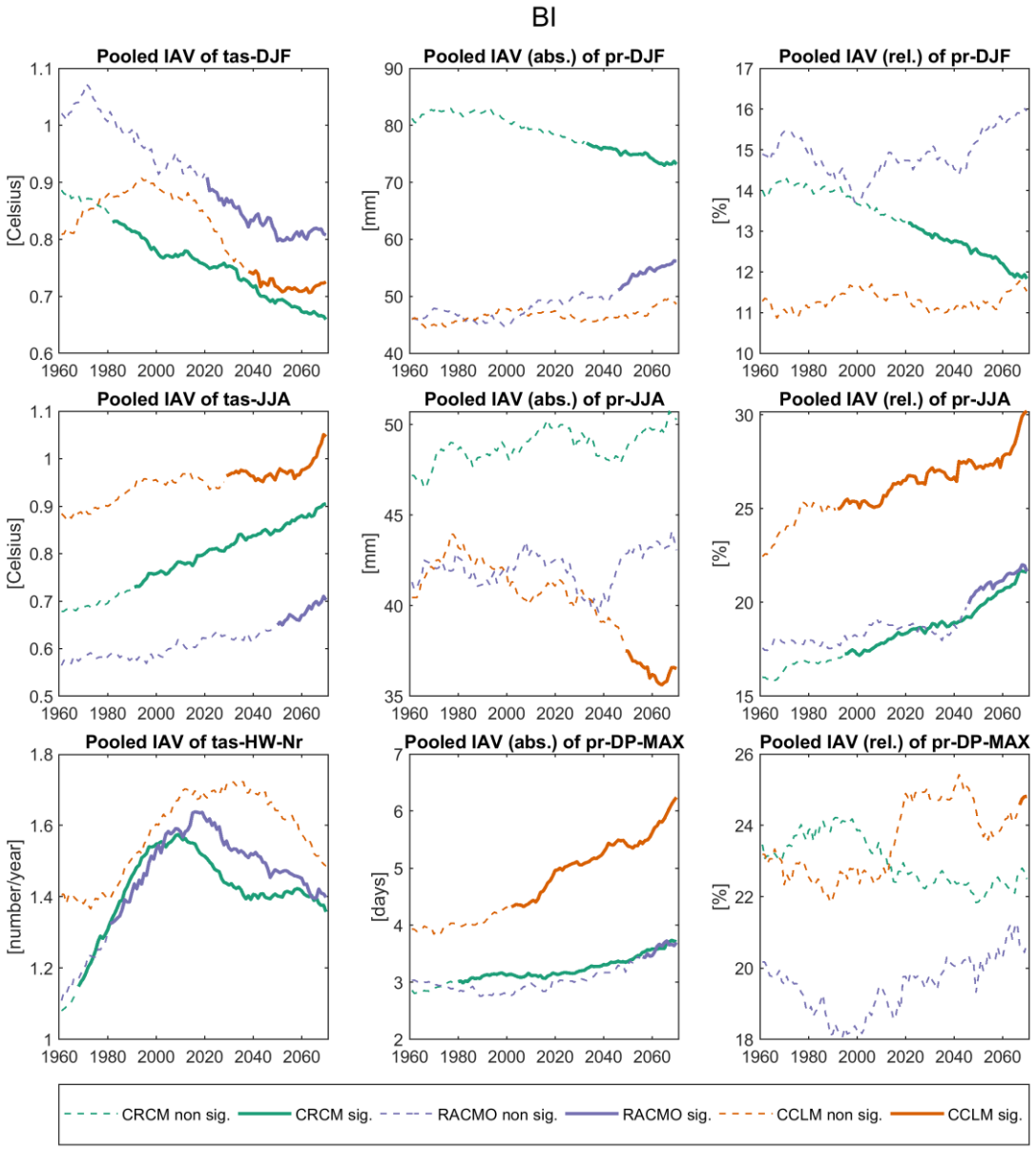

Figure S9: "Pooled IAV" for the British isles. The analysis is based on residuals after removing the EM from each member. Temperature-based indicators are shown in absolute terms (left column). Precipitation-based indicators are shown both in absolute terms (central column) and relative to the ensemble mean (right column).

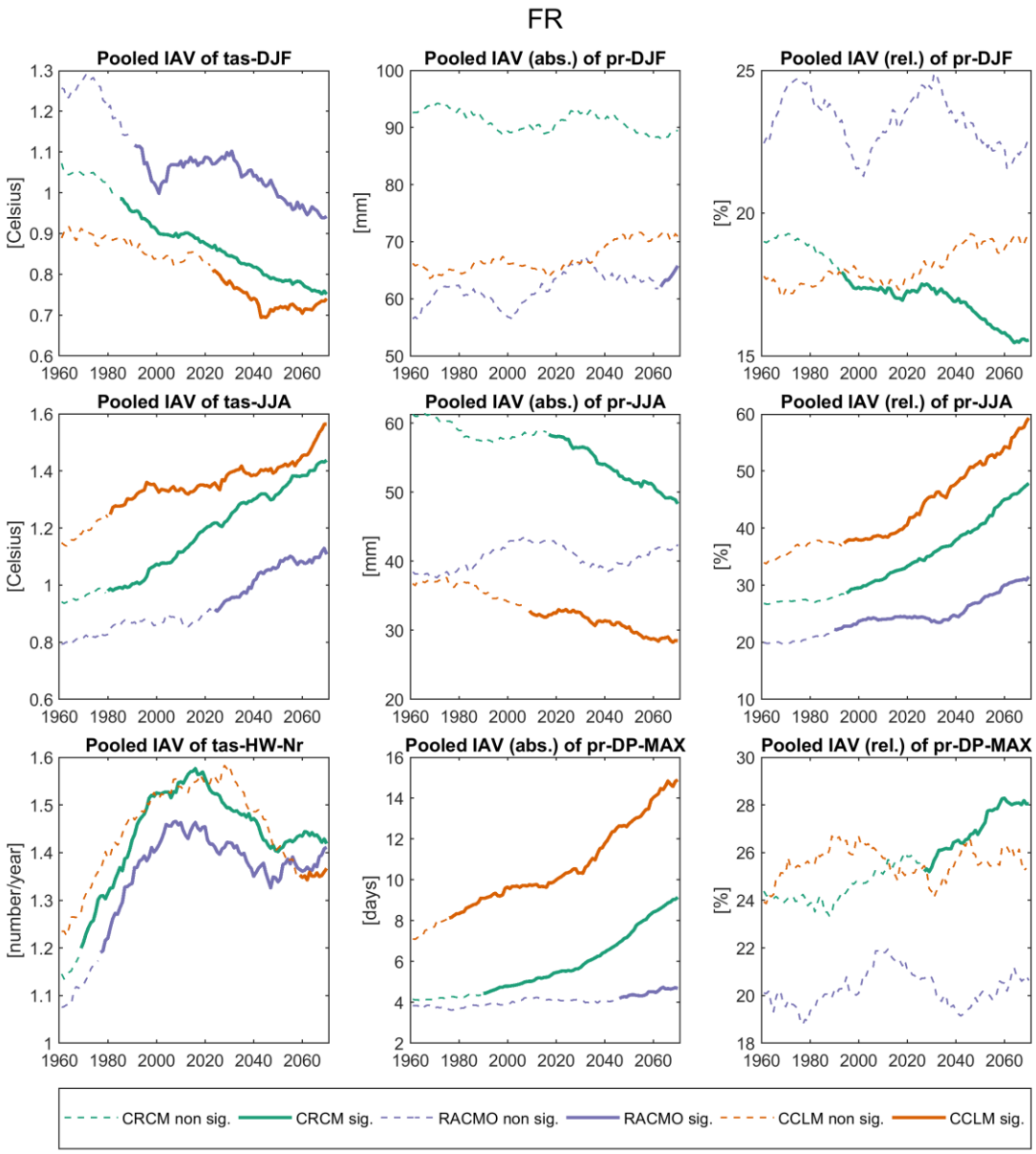

Figure S10: "Pooled IAV" for France. The analysis is based on residuals after removing the EM from each member. Temperature-based indicators are shown in absolute terms (left column). Precipitation-based indicators are shown both in absolute terms (central column) and relative to the ensemble mean (right column).

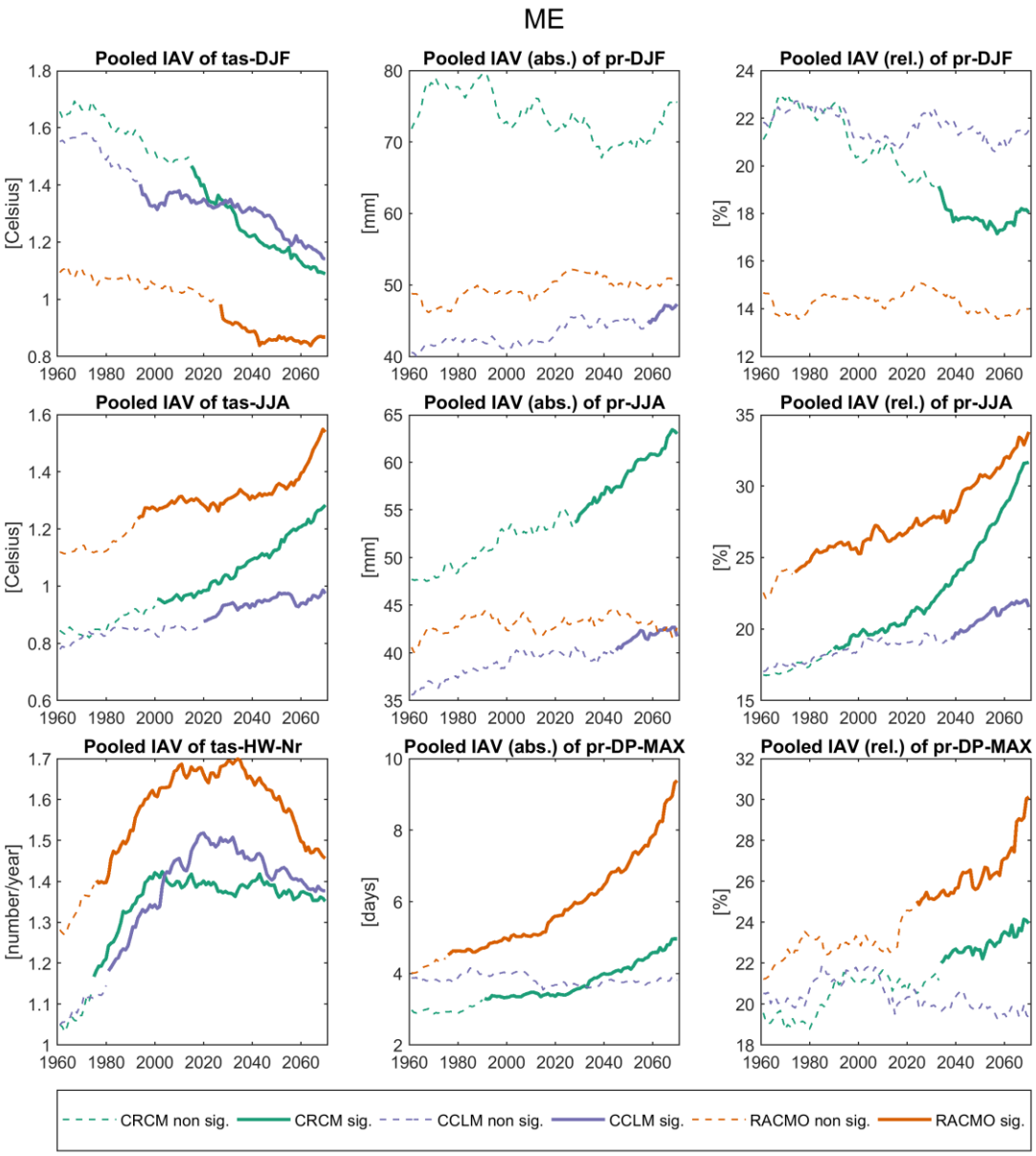

Figure S11: same as Figure 10 from the main text but with only the first 16 members of the CRCM ensemble