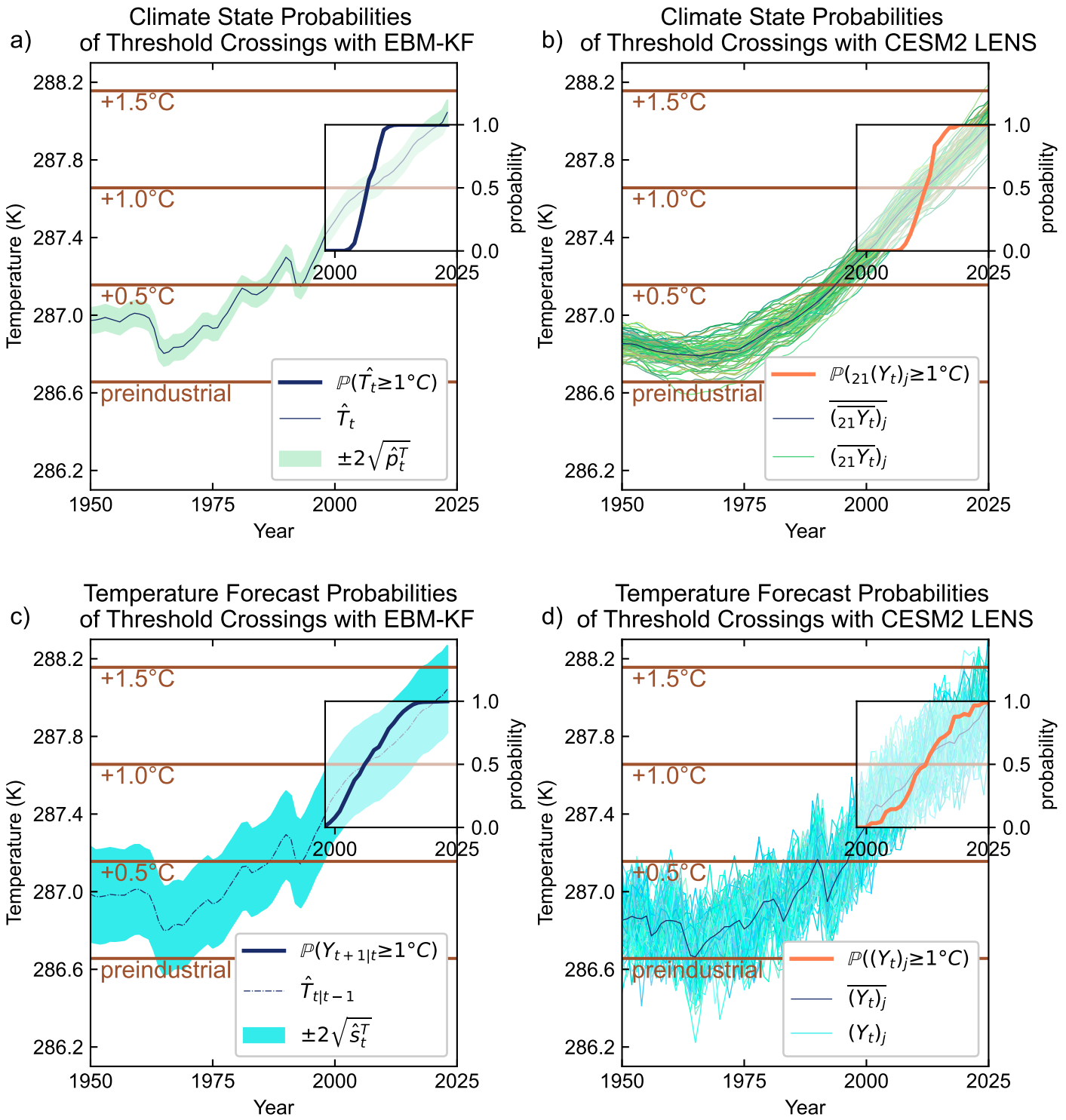
a)
Climate State Probabilities
of Threshold Crossings with EBM-KF
b)
Climate State Probabilities
of Threshold Crossings with CESM2 LENS
c)
Temperature Forecast Probabilities
of Threshold Crossings with EBM-KF
d)
Temperature Forecast Probabilities
of Threshold Crossings with CESM2 LENS
+1.5°C
+1.0°C
+0.5°C
preindustrial
Temperature (K)
Year
probability
288.2
287.8
287.4
287.0
286.6
286.2
1950
1975
2000
2025
1.0
0.5
0.0
$\mathbb{P}(\hat{T}_t \geq 1°C)$
$\hat{T}_t$
$\pm 2\sqrt{\hat{p}_t^T}$
$\mathbb{P}(_{21}(Y_t)_j \geq 1°C)$
$\overline{(_{21}Y_t)_j}$
$(_{21}Y_t)_j$
$\mathbb{P}(Y_{t+1|t} \geq 1°C)$
$\hat{T}_{t|t-1}$
$\pm 2\sqrt{\hat{s}_t^T}$
$\mathbb{P}((Y_t)_j \geq 1°C)$
$\overline{(Y_t)_j}$
$(Y_t)_j$