

Supplementary Material for
“Comparing regional precipitation and temperature
extremes in climate model and reanalysis products”

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Keywords: extremes, evaluation, event attribution, CAM5.1, MIROC5, HadGEM3-A-N216

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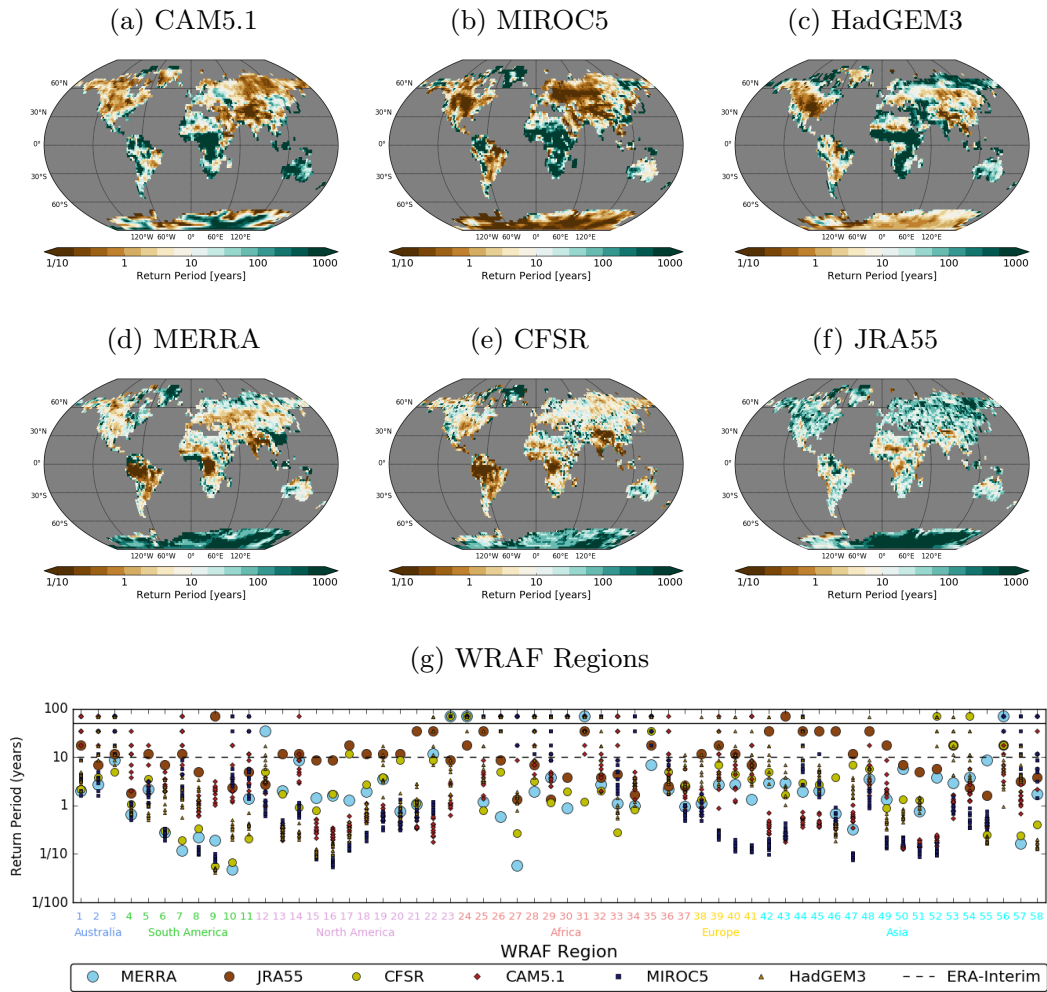


Figure S1: Return periods of 1-in-10-year hot days defined from ERA-Interim. To account for mean bias, the data have been corrected towards ERA-Interim over each grid cell based on 1979-2013 means. Data from the full period have been used to calculate return periods. Panels shown are CAM5.1 (a), MIROC5 (b), HadGEM3 (c), MERRA (d), CFSR (e), and JRA55 (f). Panel g shows the same but for hot extremes occurring over the Weather Risk Attribution Forecast regions. Numbers and colours on the x-axis refer to regions and continents in figure 1 (in the main text) respectively. Markers above the solid line have a return-period of infinity, i.e. the event did not occur in the dataset. The dashed line represents the return period of the reference (ERA-Interim).

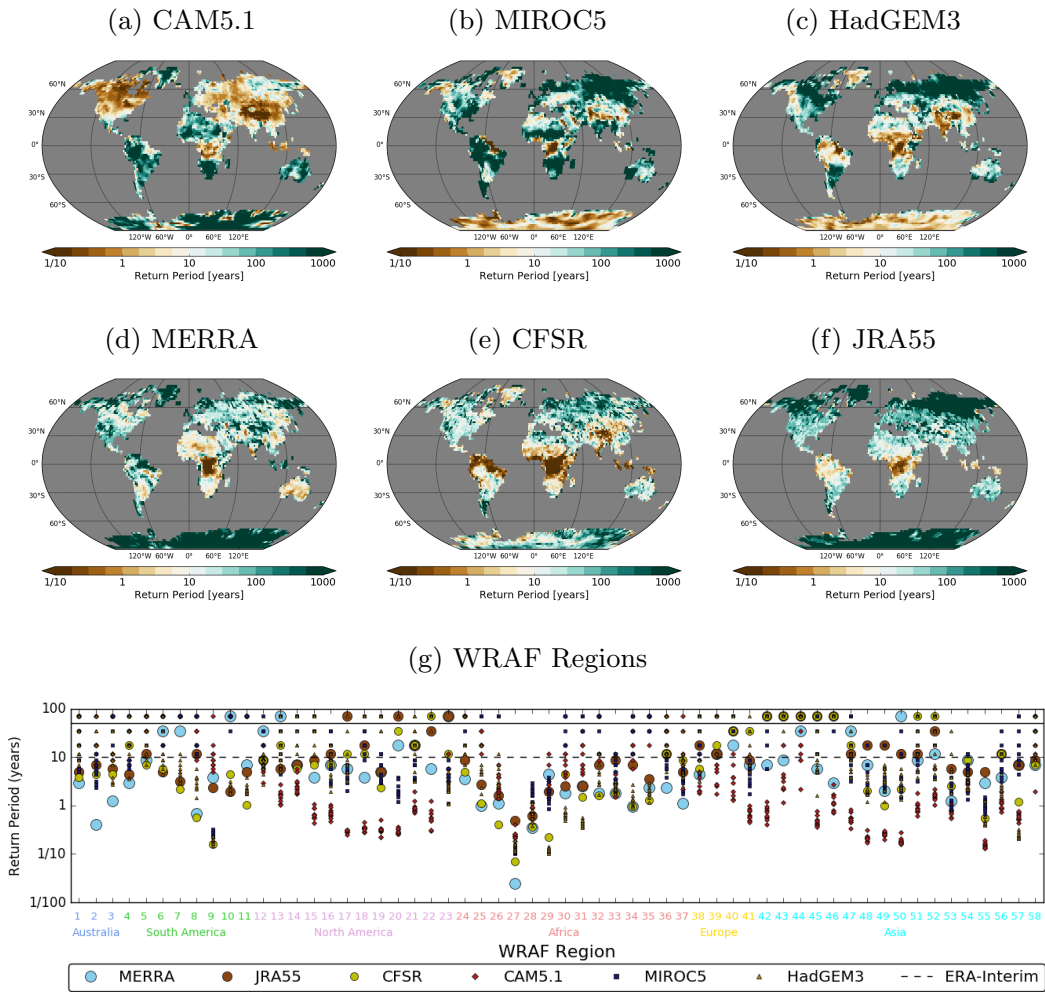


Figure S2: Same as fig. S1 but for 1-in-10-year cold days.

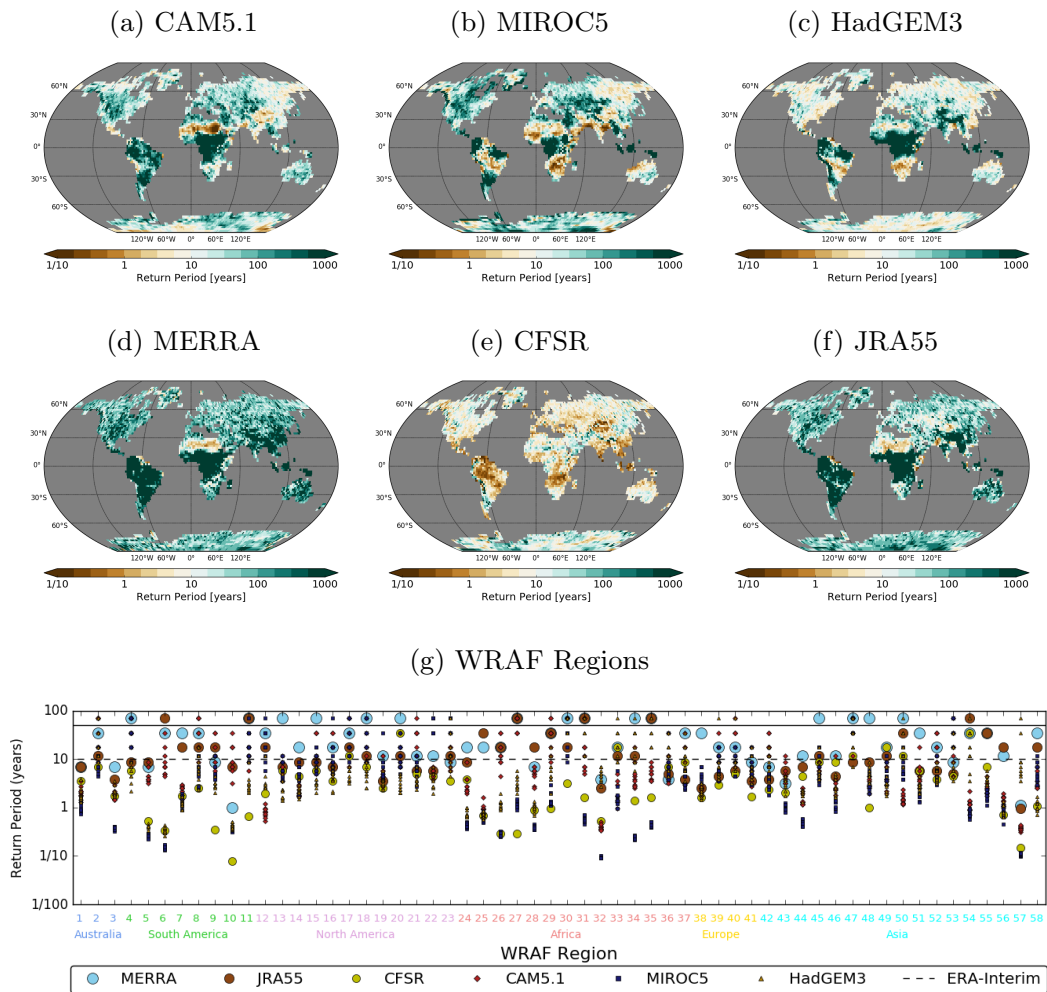


Figure S3: Same as fig. S1 but for 1-in-10-year wet days.

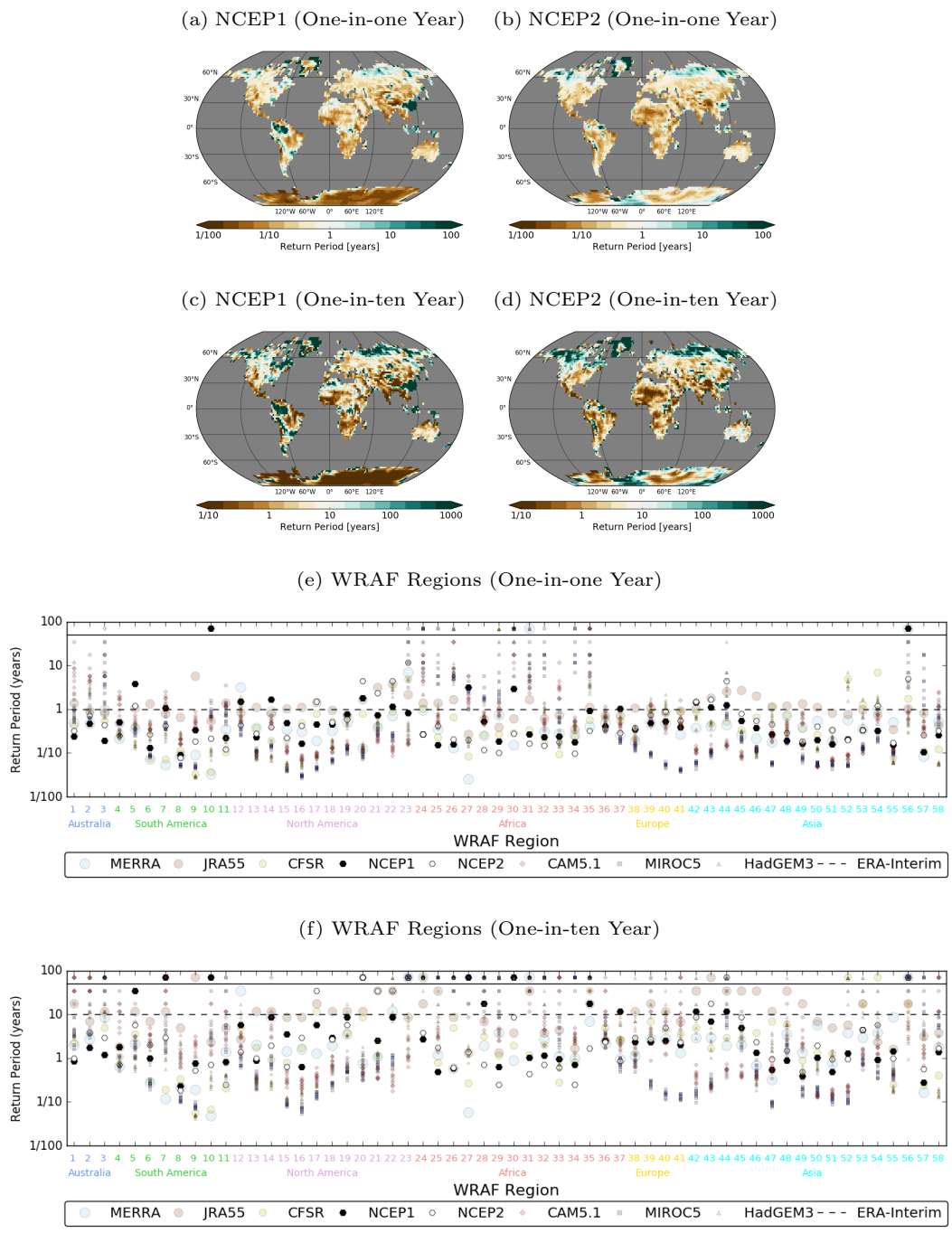


Figure S4: Return periods for 1-in-1 and 1-in-10 year hot days (as in figures 3 and S1 respectively) from NCEP1 and NCEP2. Panels e and f are the same as fig 3g and S1g, except with the addition of NCEP1 and NCEP2.

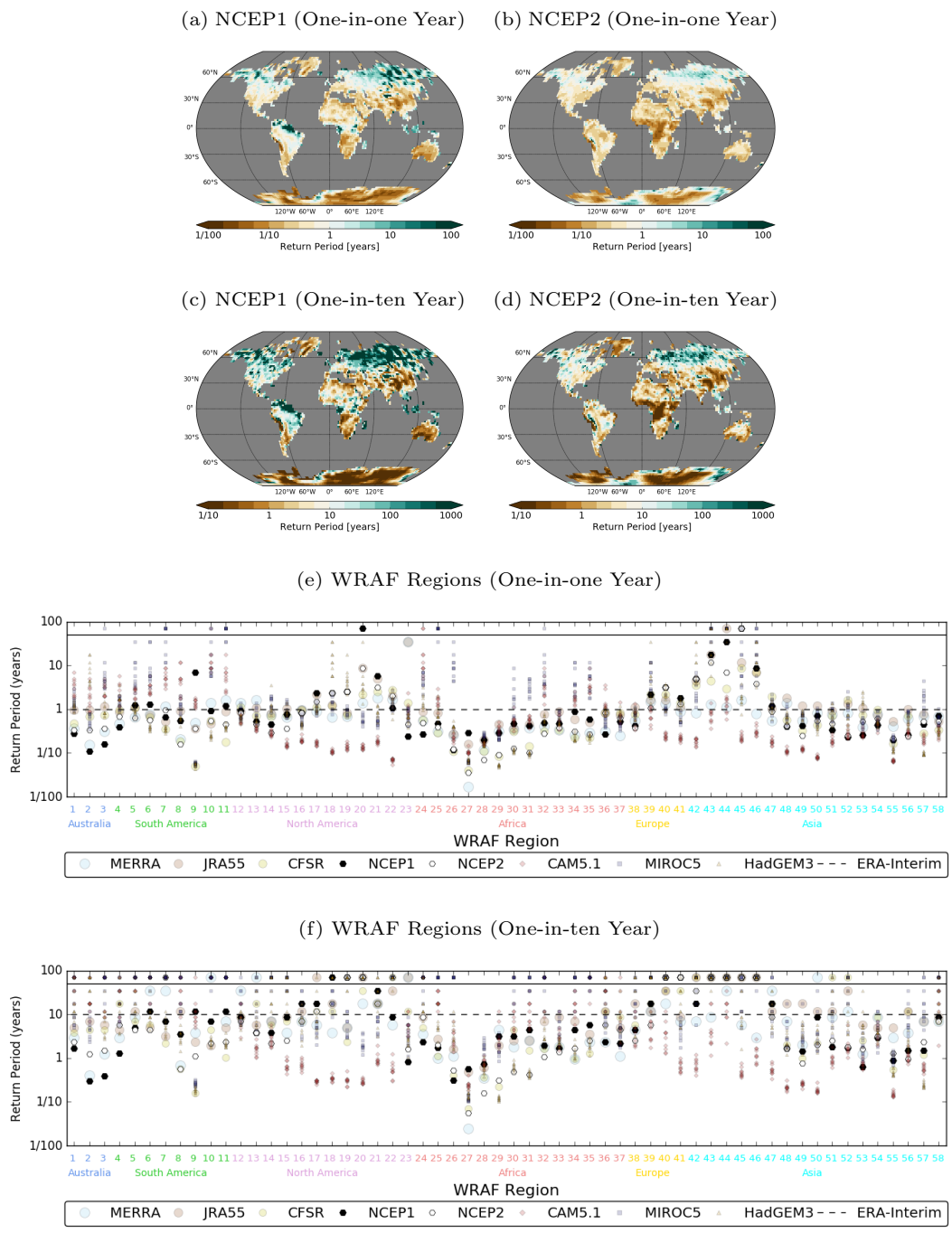


Figure S5: Return periods for 1-in-1 and 1-in-10 year cold days (as in figures 4 and S2 respectively) from NCEP1 and NCEP2. Panels e and f are the same as fig 4g and S2g, except with the addition of NCEP1 and NCEP2.

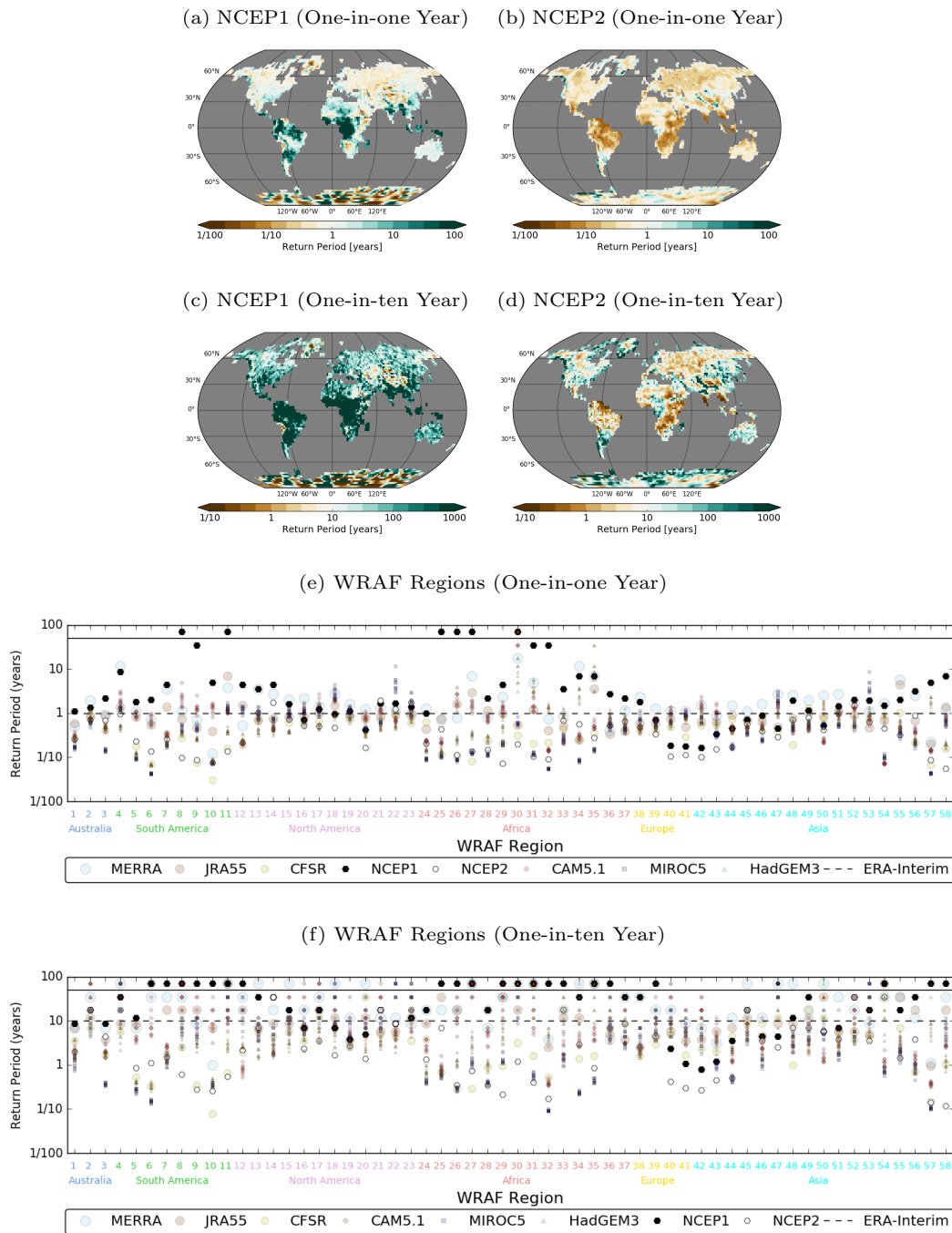


Figure S6: Return periods for 1-in-1 and 1-in-10 year wet days (as in figures 5 and S3 respectively) from NCEP1 and NCEP2. Panels e and f are the same as fig 5g and S3g, except with the addition of NCEP1 and NCEP2.

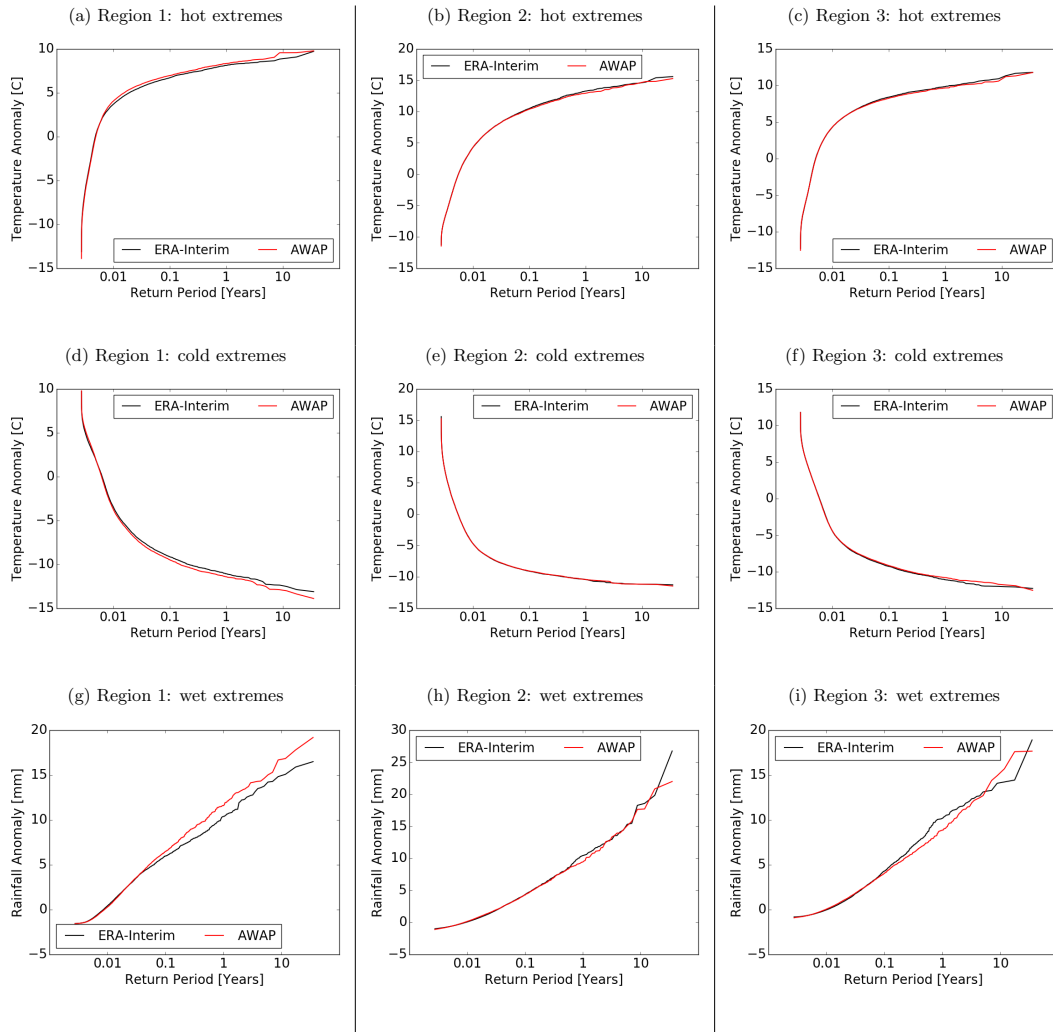


Figure S7: Return period curves of 1979-2013 daily temperature and rainfall anomalies (relative to climatologies over the same period) for three regions over Australia – regions 1 (Northeastern Australia), 2 (Southeastern Australia), and 3 (Western Australia) from figure 1 in the main document. The black curve is ERA-Interim Reanalyses and the red curve is gridded observations from the Australian Water Availability Project (AWAP).