Supporting Information for "Changes in the North Atlantic Oscillation over the 20th Century" Paper

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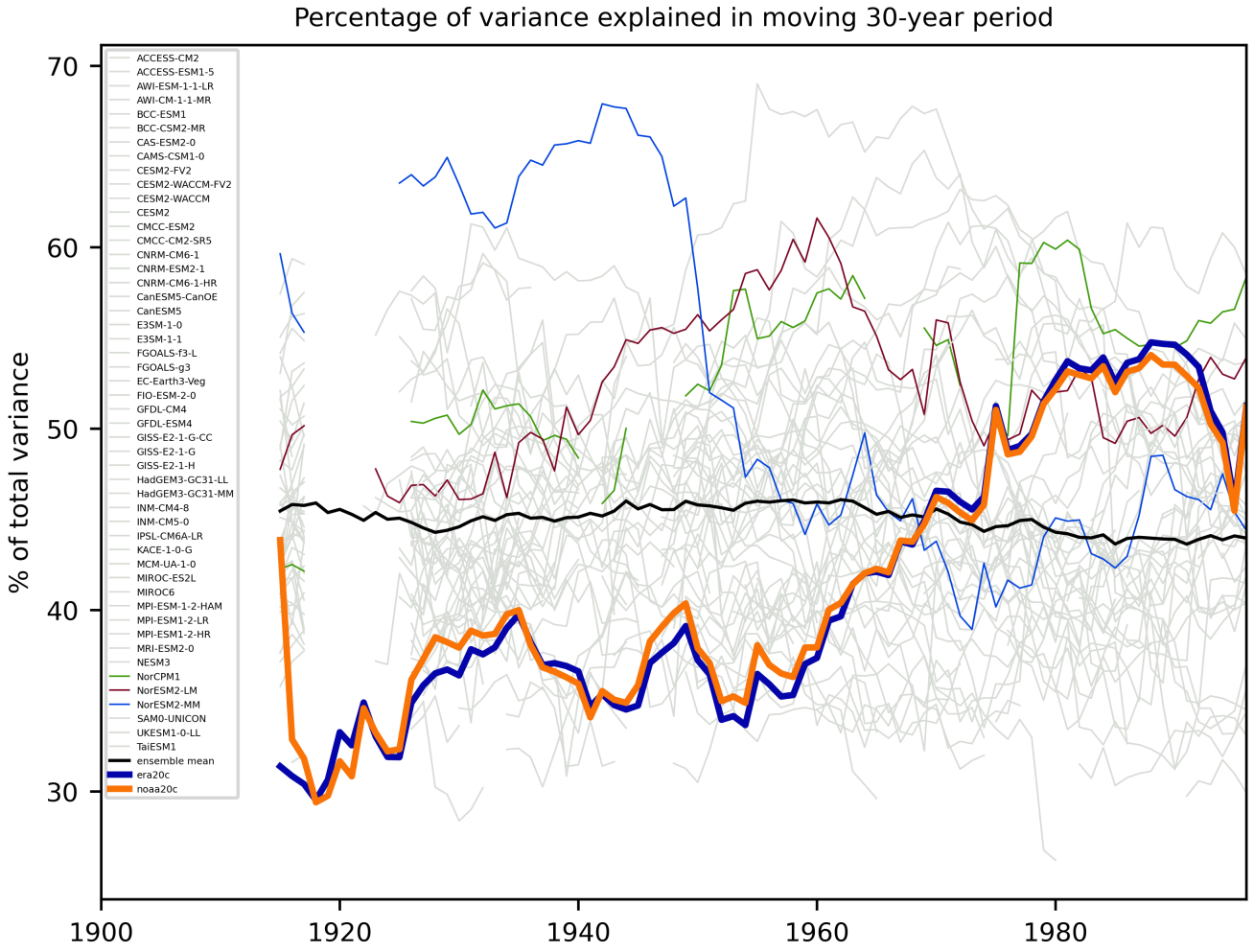

Figure 1. Percentage of variance explained by the first mode of EOF in the reanalyses and EOF in the CMIP6 models in a moving 30-year period. ERA20C and NOAA20c reanalyses are shown in bold in blue and orange respectively. CMIP6 models are shown by thin lines in grey, except for NorESM2-LM (red) and NorESM2-MM (blue). Multi-model ensemble mean is shown in thick black line. Individual models are only shown when the projected pattern correlates to the projected pattern of the first mode of EOF in the ERA-20C reanalysis at or above the 80% level.

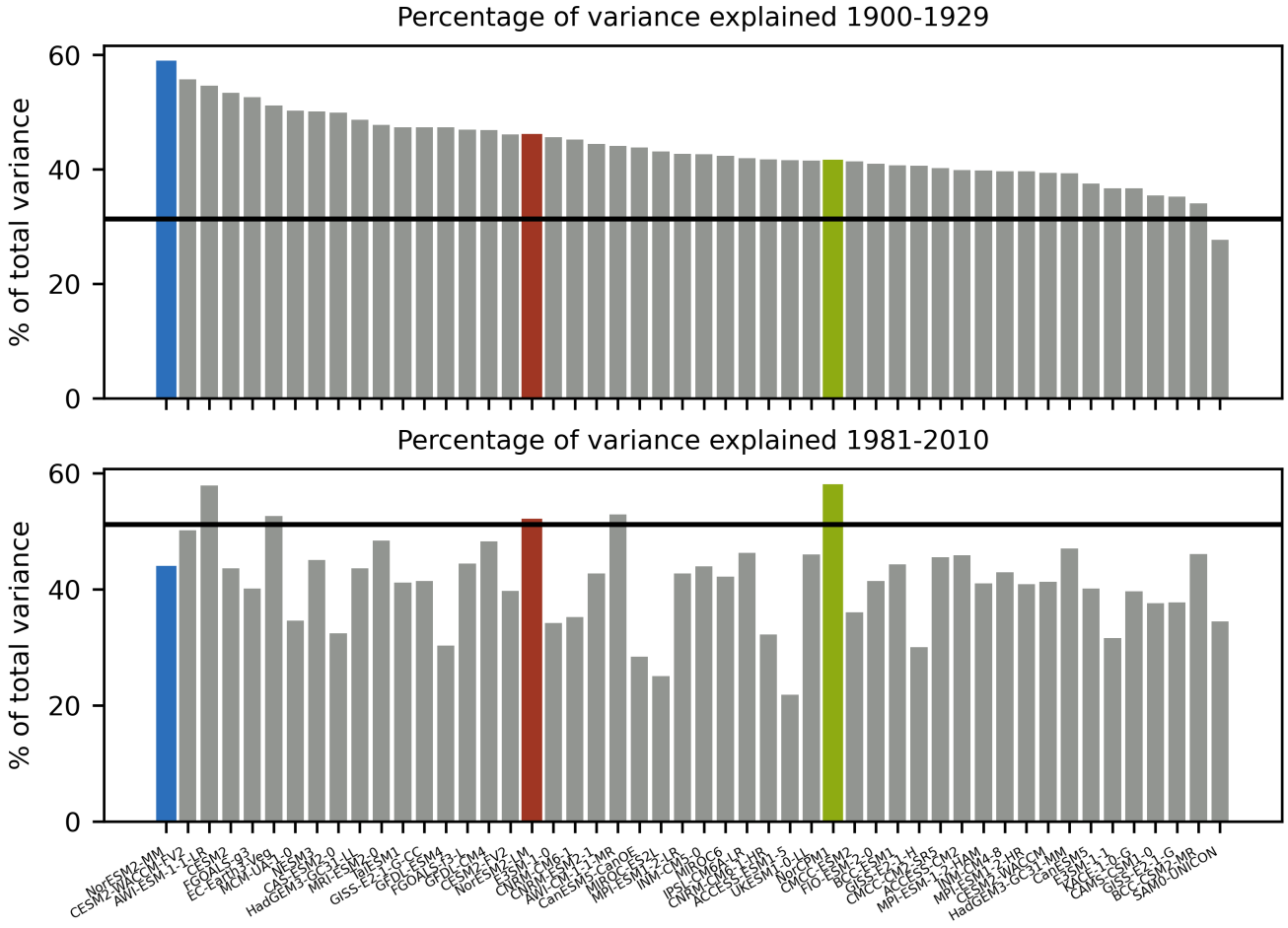

Figure 2. Percentage of variability explained by the first mode from the Common Basis Function for each of the models in 30-year periods at the start and end of the full time series, 1900-1929 (top) and 1981-2010 (bottom). Models are ordered in both plots by the amount of variability explained for the initial period of 1900-1929. The horizontal black line in both plots gives the amount of variability explained by the first mode of EOF in ERA 20th Century reanalysis, upon which the CBFs are based. CMIP6 models are shown in grey, except for NorESM2-LM (red) and NorESM2-MM (blue).

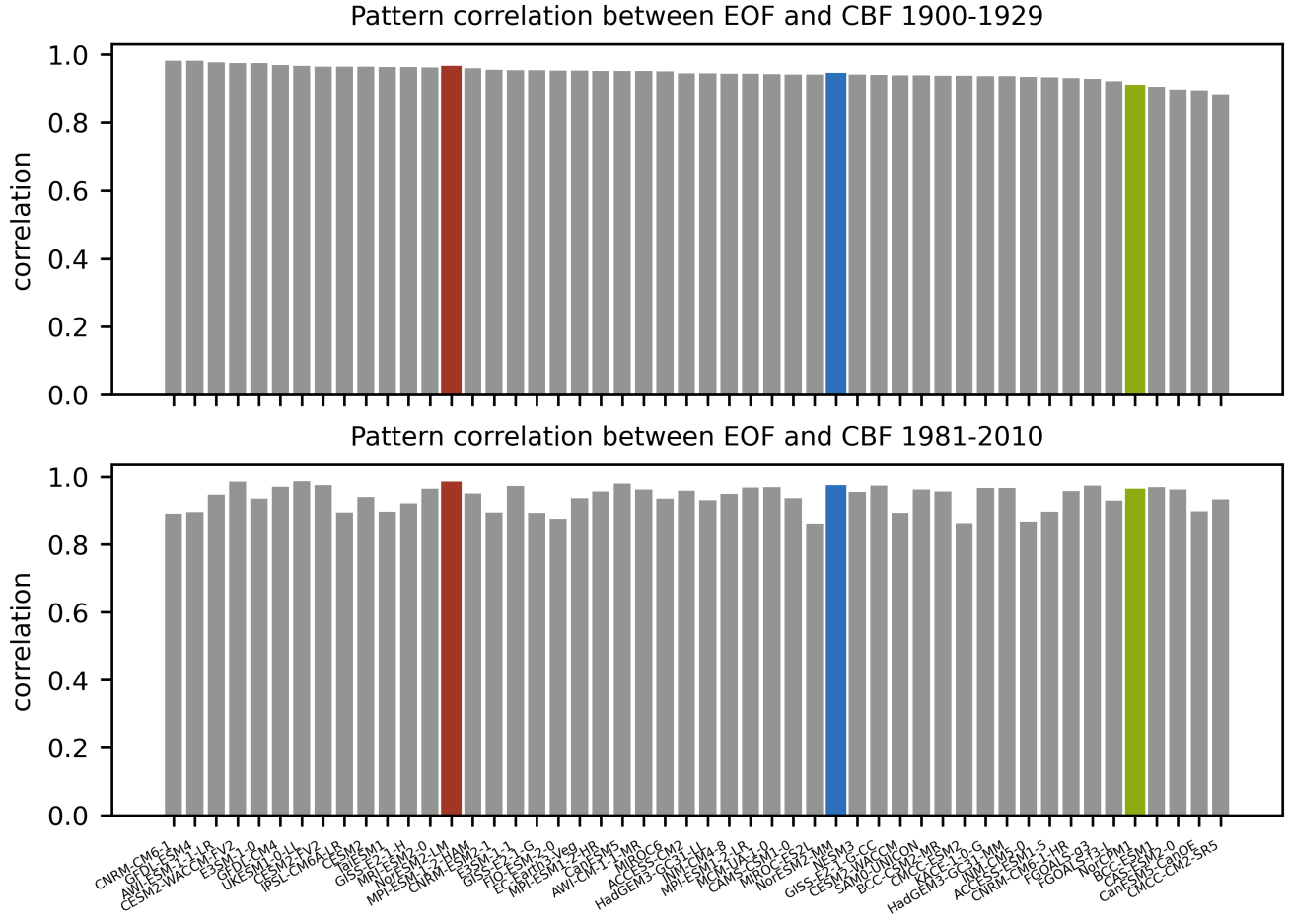

Figure 3. Correlation of the spatial pattern of the first mode from the Common Basis Function and the first mode of EOF from the ERA-20C reanalysis for each of the models in 30-year periods at the start and end of the full time series, 1900-1929 (top) and 1981-2010 (bottom). Models are ordered in both plots by the pattern correlation for the initial period of 1900-1929. CMIP6 models are shown in grey, except for NorESM2-LM (red) and NorESM2-MM (blue).

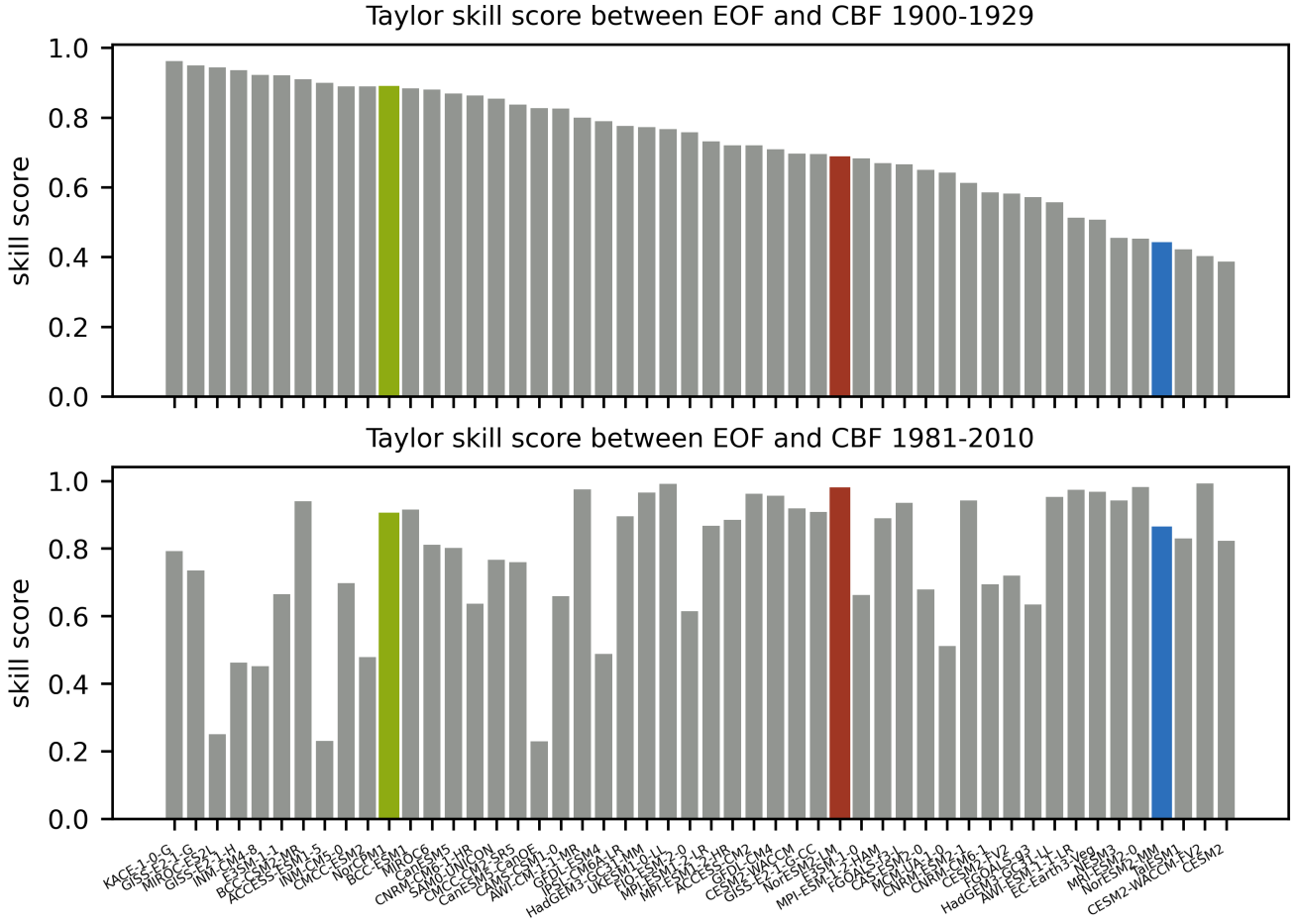

Figure 4. Taylor skill score between the first mode from the Common Basis Function and the first mode of EOF from the ERA-20C reanalysis for each of the models in 30-year periods at the start and end of the full time series, 1900-1929 (top) and 1981-2010 (bottom). Models are ordered in both plots by the skill score for the initial period of 1900-1929. CMIP6 models are shown in grey, except for NorESM2-LM (red) and NorESM2-MM (blue).