

Northeast Atlantic storminess in centennial reanalyses

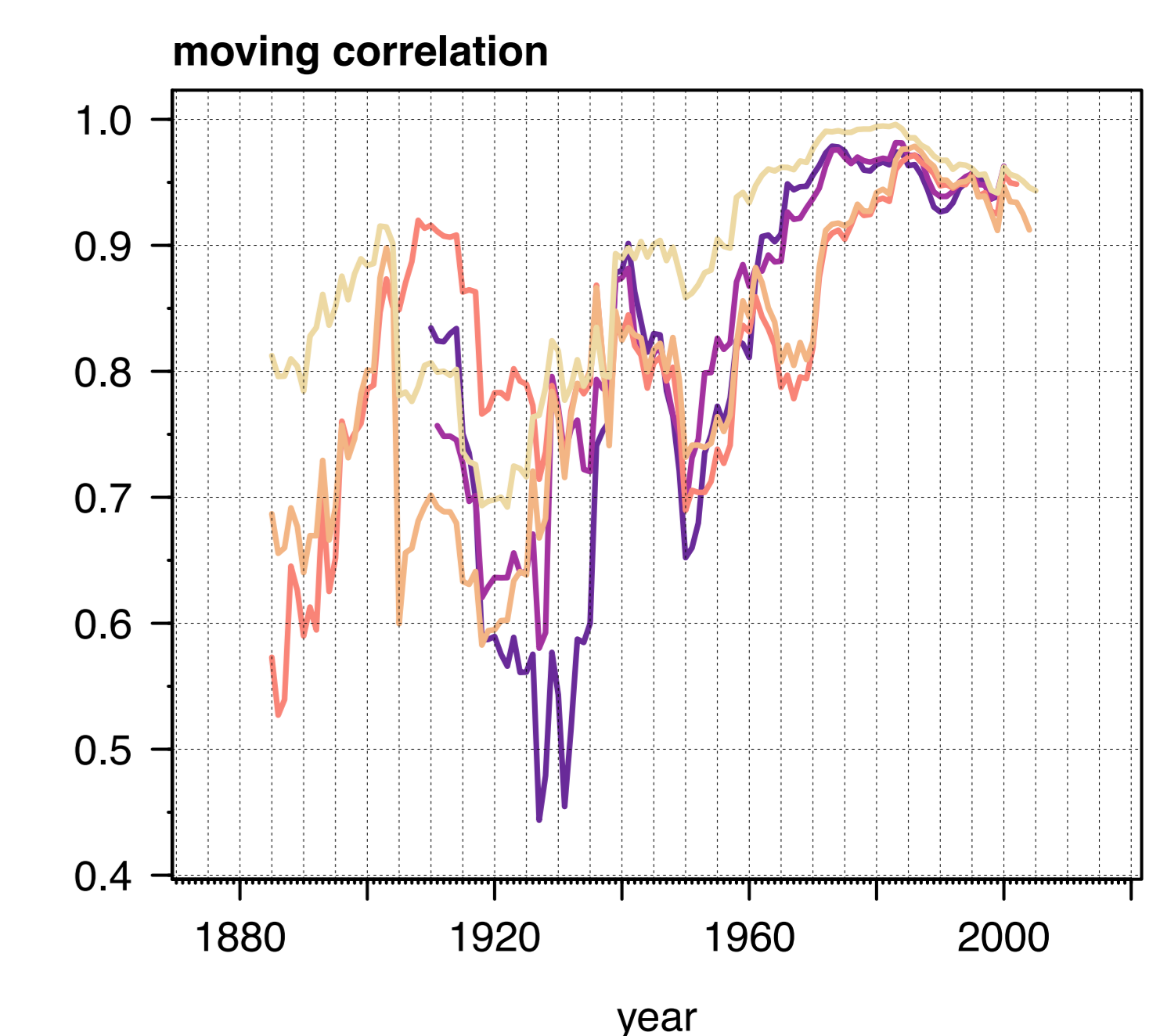
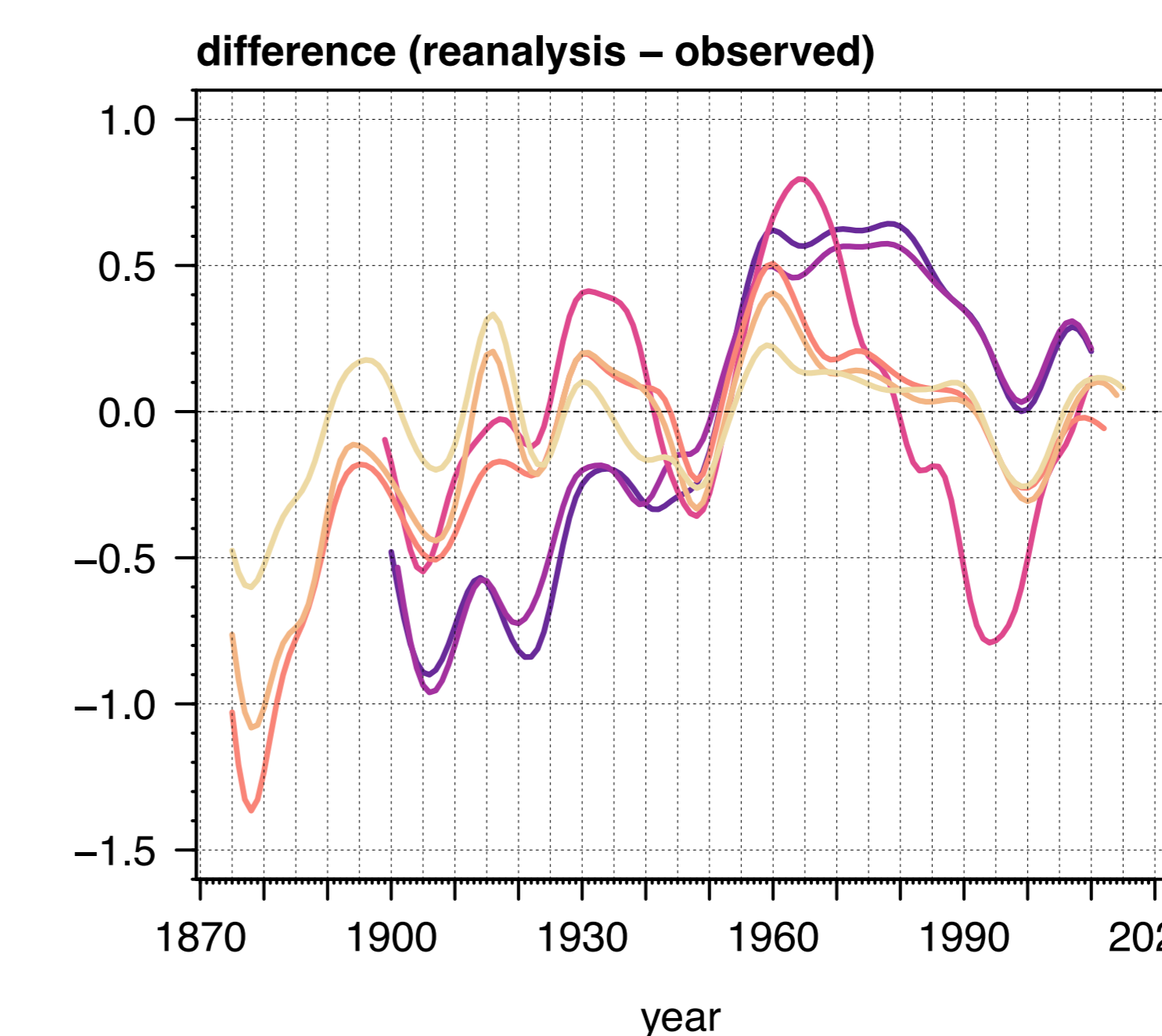
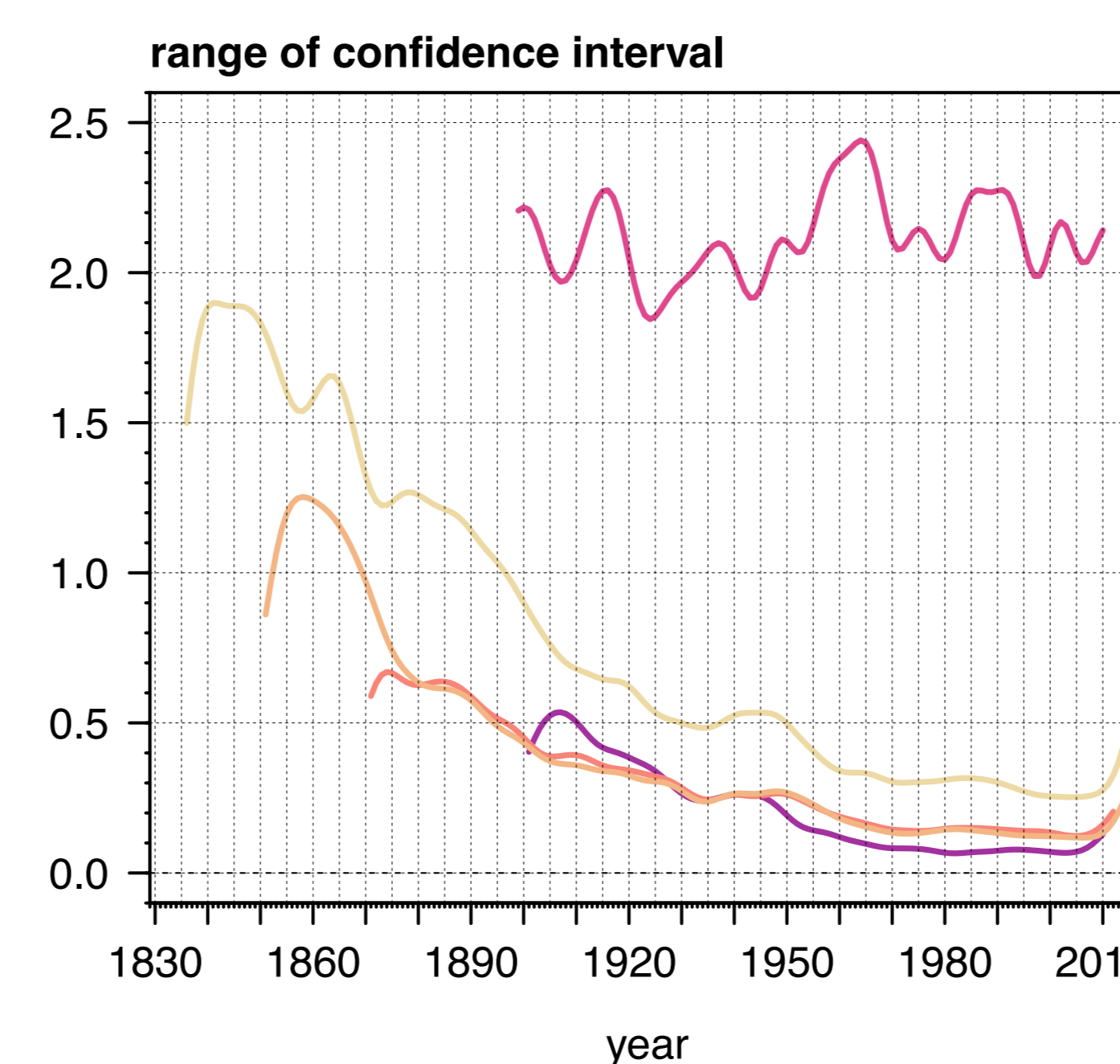
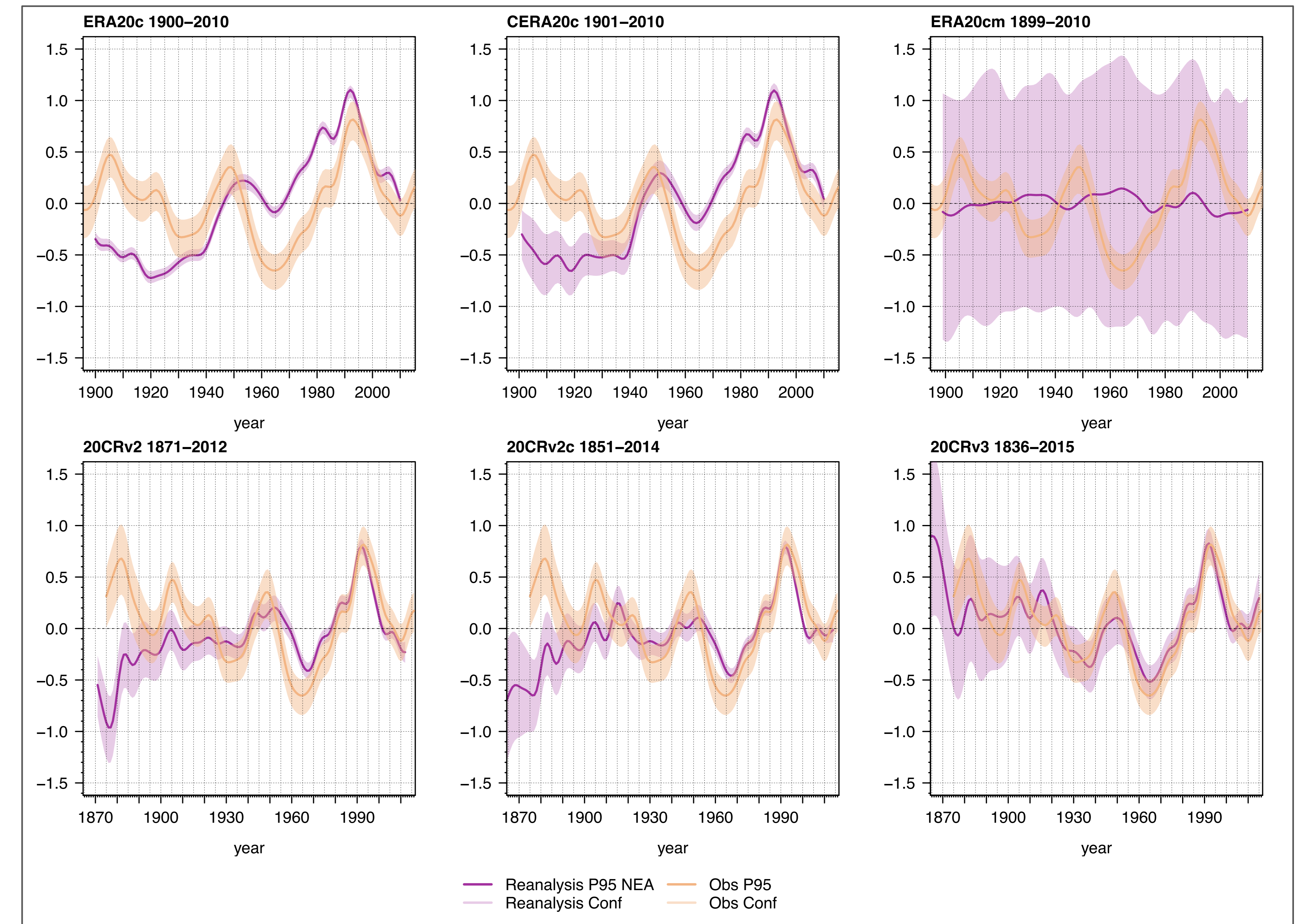
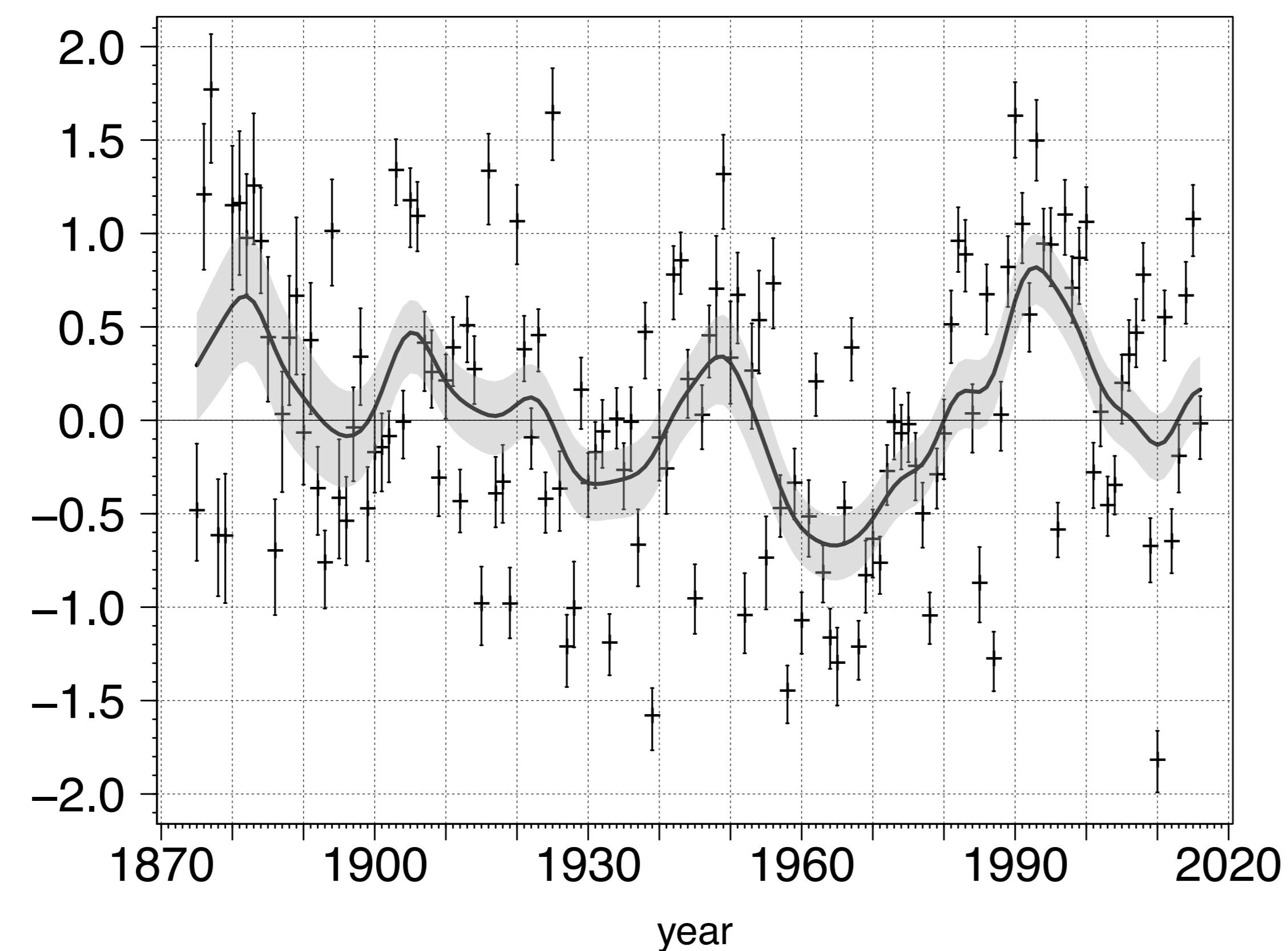
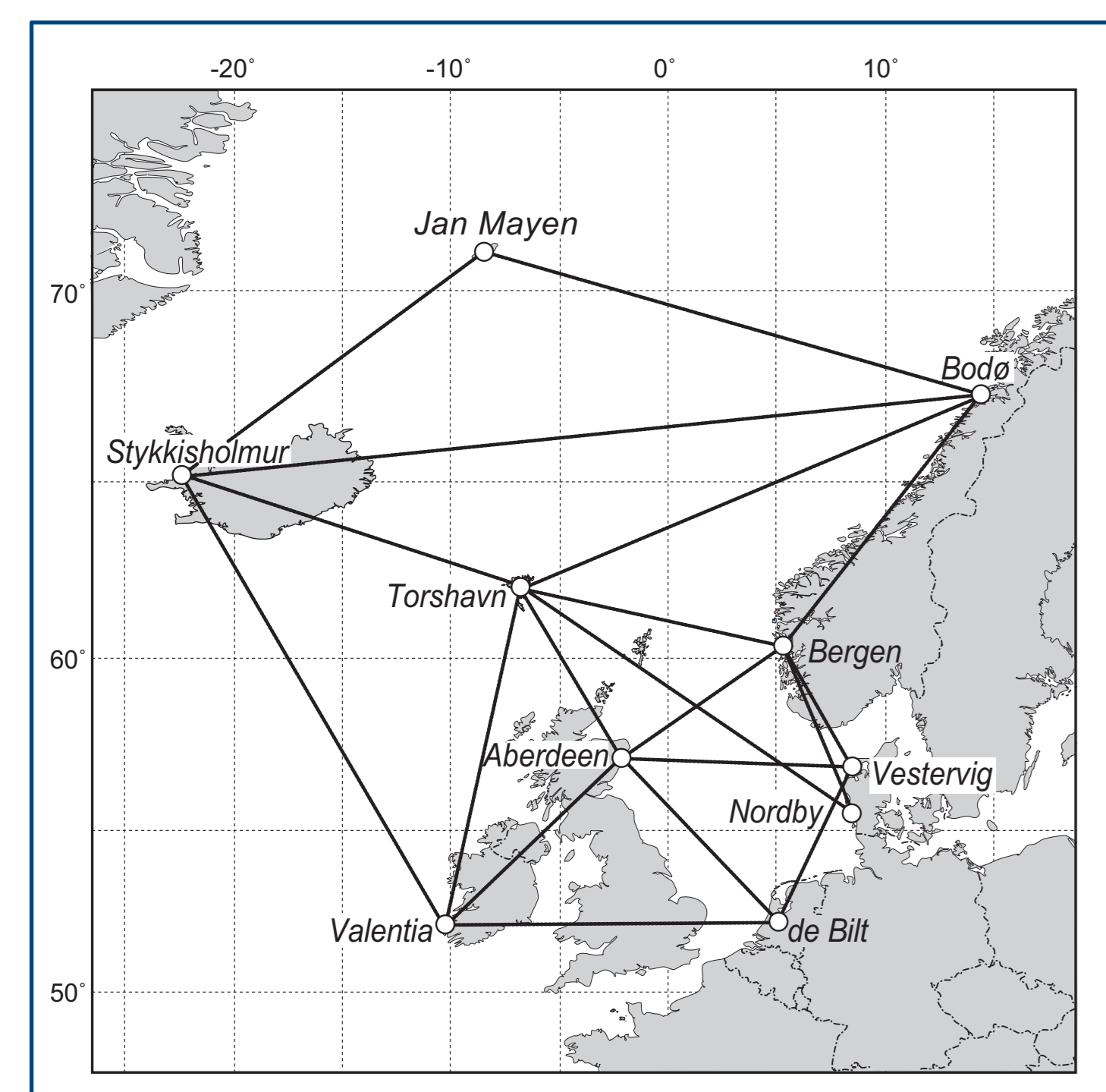
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- Use of established storm index derived from higher annual percentiles of geostrophic wind speeds from pressure observations at sea level from 10 stations in the northeast Atlantic region and from nearest grid points in centennial reanalyses.
- Results indicate that the examined centennial reanalyses are not able to represent long-term trends of storm activity over the northeast Atlantic, particularly in the earlier years of the period examined.
- 20CRv3 shows markedly improved results with increased uncertainty.



Figures

above: observational stations and triangles used (left) and derived storm index time series from sea-level pressure records

upper right: low-pass filtered storm activity in reanalyses and observations

lower right: range of confidence intervals of low-passed storminess time series, difference between index time series from reanalyses and observations, and correlations between index time series from reanalyses and observations computed in a 21-year moving window