Sea ice variations and trends during the Common Era in the Atlantic sector of the Arctic Ocean

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Figure S1. Original data from the records from Group 1 (cluster analysis after removing the global trend).
Figure S2. Original data from the records from Group 2 (cluster analysis after removing the global trend).
Figure S3. Original data from the records from Group 3 (cluster analysis after removing the global trend).
Figure S4. Arctic (latitudes > 60° N) air temperatures based on McKay and Kaufman (2014) and on numerical models CESM1 and MPI-ESM data.
Figure S5. Sea ice extent trends based on numerical models CESM1 and MPI-ESM data, considering the Northern Hemisphere (left column) and region around Greenland (right column), and summer (minimum extent) and winter (maximum extent) seasons.
Figure S6. Results of empirical orthogonal function (EOF) analysis (PC1: normalized first principal component; EOF1: first EOF mode loadings) of the sea ice fraction based on CESM1 data, considering summer and winter seasons. First column: Data with annual resolution. Second column: 100-year running mean data. Third column: 100-years mean chunks data.
Figure S7. Results of empirical orthogonal function (EOF) analysis (PC1: normalized first principal component; EOF1: first EOF mode loadings) of the sea ice fraction based on MPI-ESM data, considering summer and winter seasons. First column: Data with annual resolution. Second column: 100-year running mean data. Third column: 100-years mean chunks data.
Figure S8. Wavelet analysis of sea ice reconstructions from records A and B. (a) Original time series. (b) Wavelet power spectrum and (c) global wavelet of the normalized signal on the time-frequency domain. Marked regions on the wavelet spectrum indicate significant power to a 95% confidence interval. The areas under the cone of influence show where edge effects are important.
Figure S9. Wavelet analysis of sea ice reconstructions from records C and D. (a) Original time series. (b) Wavelet power spectrum and (c) global wavelet of the normalized signal on the time-frequency domain. Marked regions on the wavelet spectrum indicate significant power to a 95% confidence interval. The areas under the cone of influence show where edge effects are important.
Figure S10. Wavelet analysis of sea ice reconstructions from records E and F. (a) Original time series. (b) Wavelet power spectrum and (c) global wavelet of the normalized signal on the time-frequency domain. Marked regions on the wavelet spectrum indicate significant power to a 95% confidence interval. The areas under the cone of influence show where edge effects are important.
Figure S11. Wavelet analysis of sea ice reconstructions from records G and H. (a) Original time series. (b) Wavelet power spectrum and (c) global wavelet of the normalized signal on the time-frequency domain. Marked regions on the wavelet spectrum indicate significant power to a 95% confidence interval. The areas under the cone of influence show where edge effects are important.
Figure S12. Wavelet analysis of sea ice reconstructions from records I and I’. (a) Original time series. (b) Wavelet power spectrum and (c) global wavelet of the normalized signal on the time-frequency domain. Marked regions on the wavelet spectrum indicate significant power to a 95% confidence interval. The areas under the cone of influence show where edge effects are important.
Figure S13. Wavelet analysis of sea ice reconstructions from records J and K. (a) Original time series. (b) Wavelet power spectrum and (c) global wavelet of the normalized signal on the time-frequency domain. Marked regions on the wavelet spectrum indicate significant power to a 95% confidence interval. The areas under the cone of influence show where edge effects are important.
Figure S14. Wavelet analysis of sea ice reconstructions from records L and M. (a) Original time series. (b) Wavelet power spectrum and (c) global wavelet of the normalized signal on the time-frequency domain. Marked regions on the wavelet spectrum indicate significant power to a 95% confidence interval. The areas under the cone of influence show where edge effects are important.