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Supplement of

An abrupt slowdown of Atlantic Meridional Overturning Circulation during 1915–1935 induced by solar forcing in a coupled GCM

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Supplementary Figures S1-S5

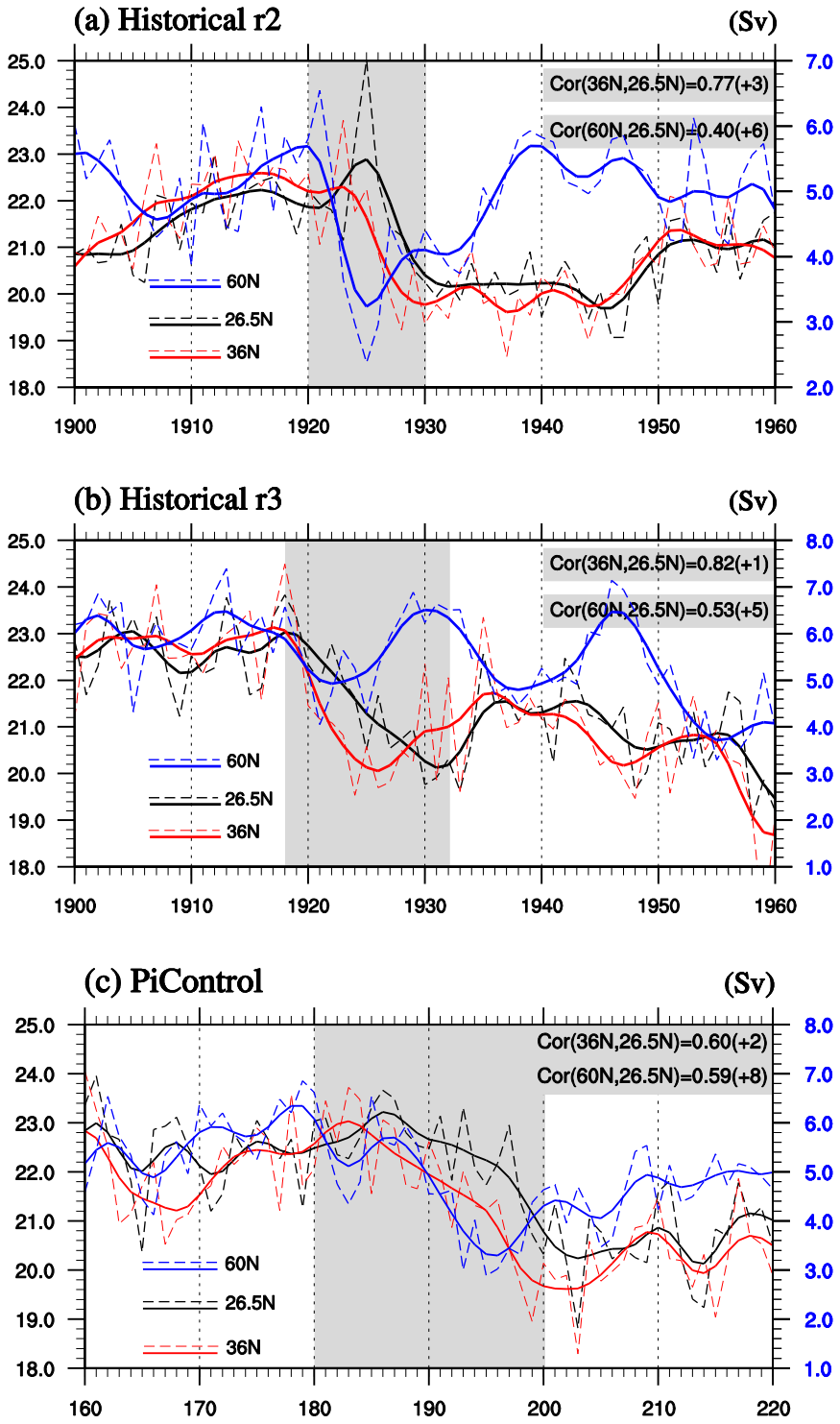
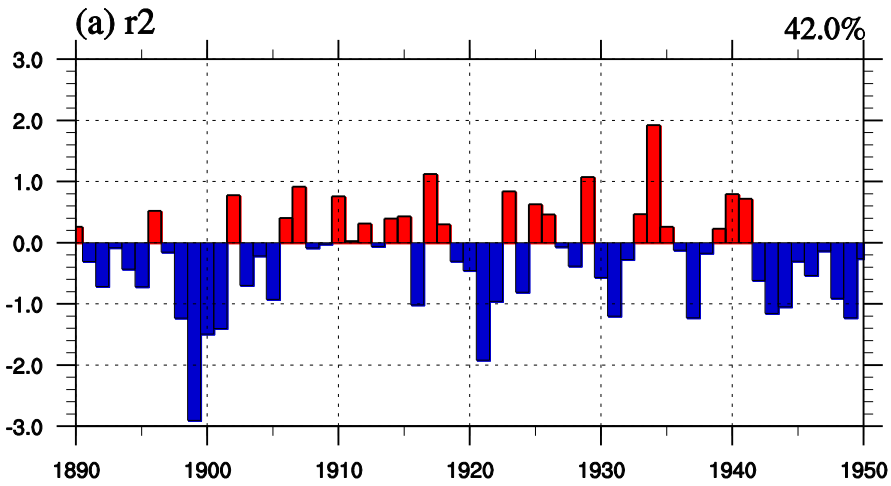
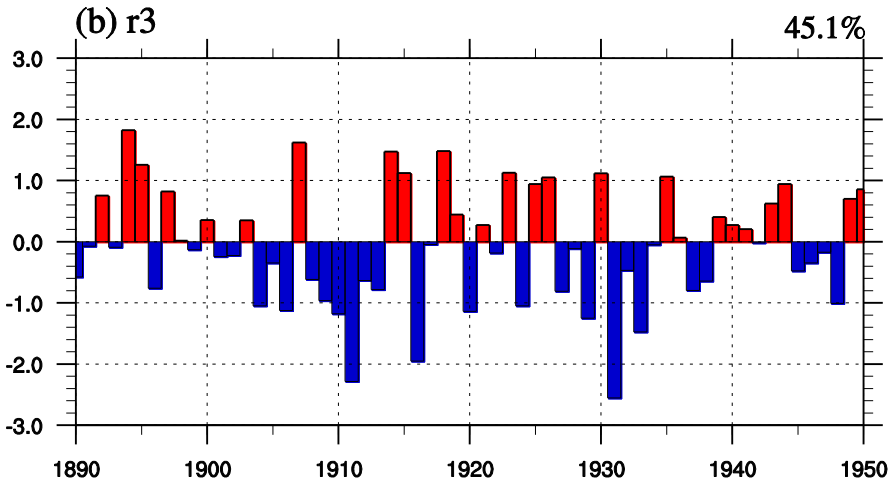


Figure S1. (a) and (b) same as Figure 1a except for the other two historical runs. (c) same as (a), but for the PiControl run. The shading periods in three plots are for the abrupt periods, respectively.





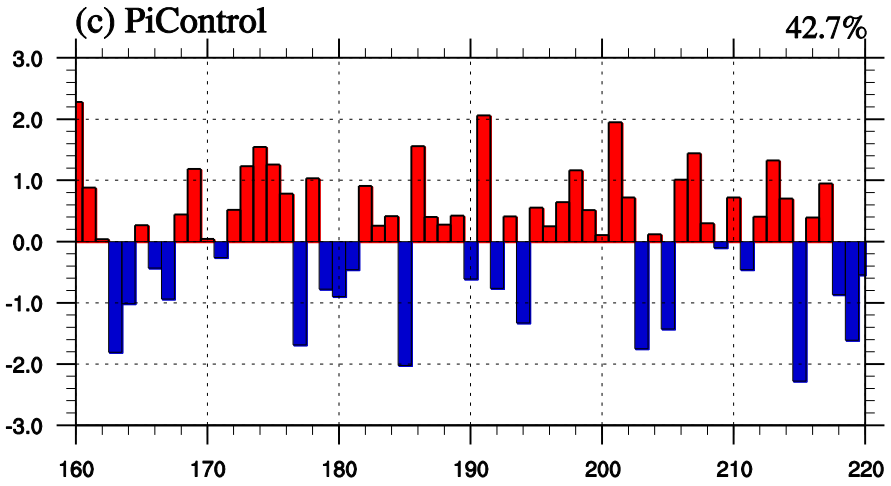


Figure S2. The leading multivariate EOF PC of annual mean sea level pressure and wind stress over the North Atlantic region (90 ℃W–40 ℃E) for other two historical runs (a and b) and PiControl run (c). The percentage of variance explained by the first EOF is shown in the top right corner of each plot.

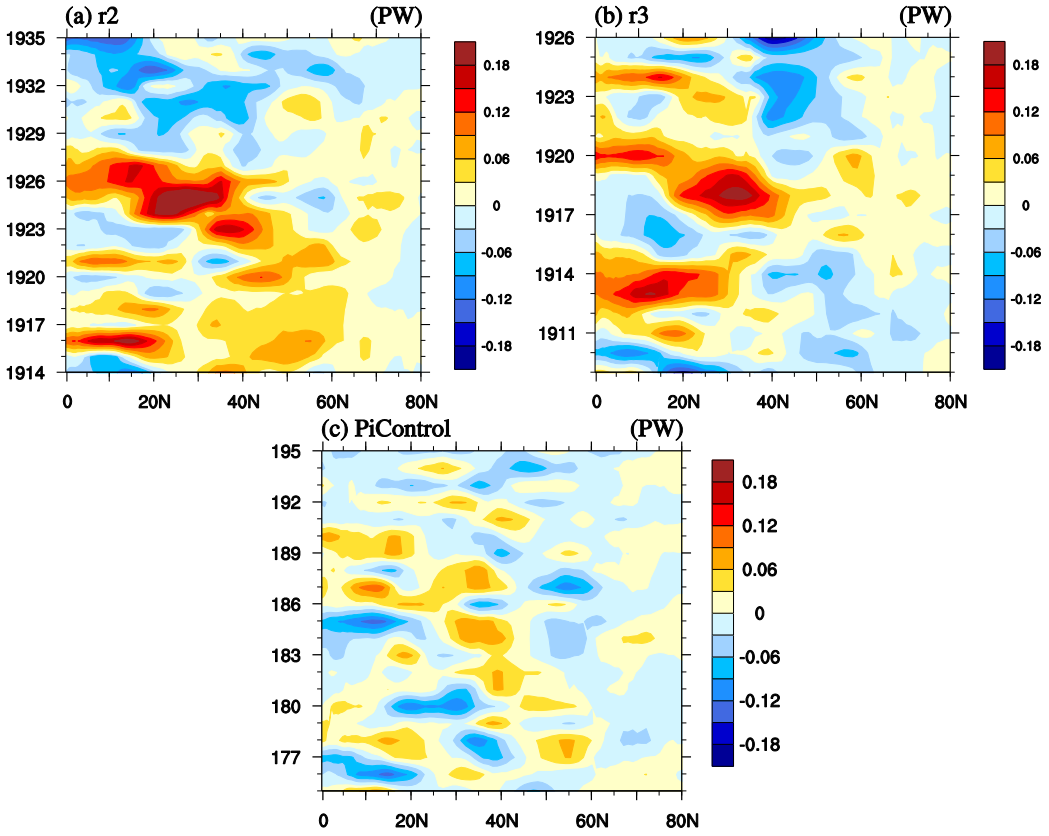


Figure S3. Latitude-time diagrams of northward ocean heat transport (PW; 1 PW = 10^{15} W). Anomalies are relative to 1880–1900 in the North Atlantic Ocean for other two historical runs (a and b) and PiControl run (c).

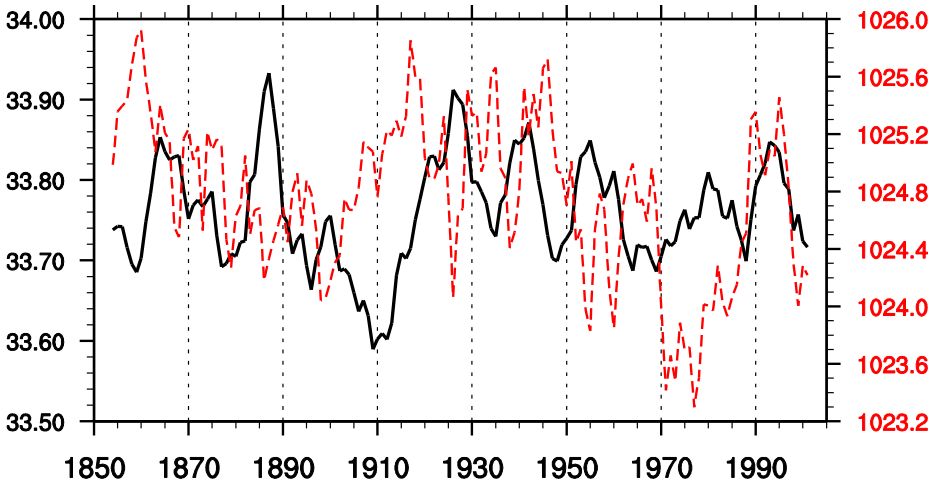


Figure S4. The regional (142 °E–142.5 °E, 27 °N–27.5 °N) averaged sea surface salinity (SSS, black line) in the historical run. The regional averaged winter sea level pressure (SLP, red line) over northeast Asia (110 °E–130 °E, 45 °N–60 °N). The results are for the nine-year running mean values.

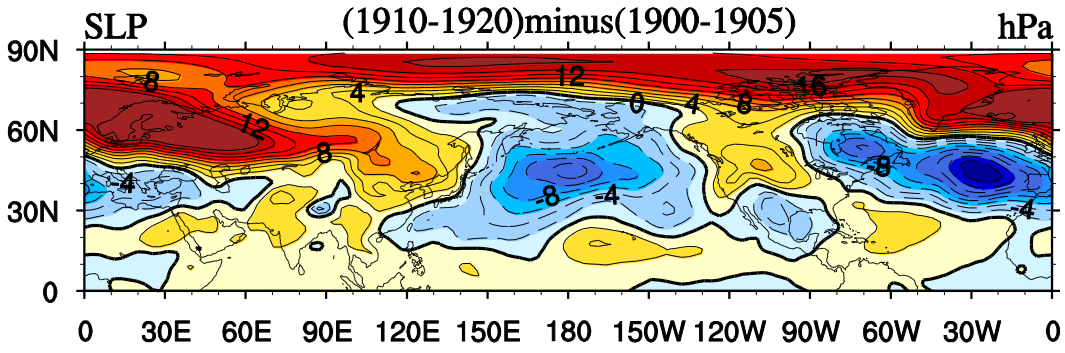


Figure S5. Sea level pressure (SLP) differences between the periods after (1910–1920) and before (1900–1905) the freshening.