Electronic Supplementary Material to:
The Influence of Arctic Sea Ice Concentration on Subseasonal Prediction of North Atlantic Oscillation Event*

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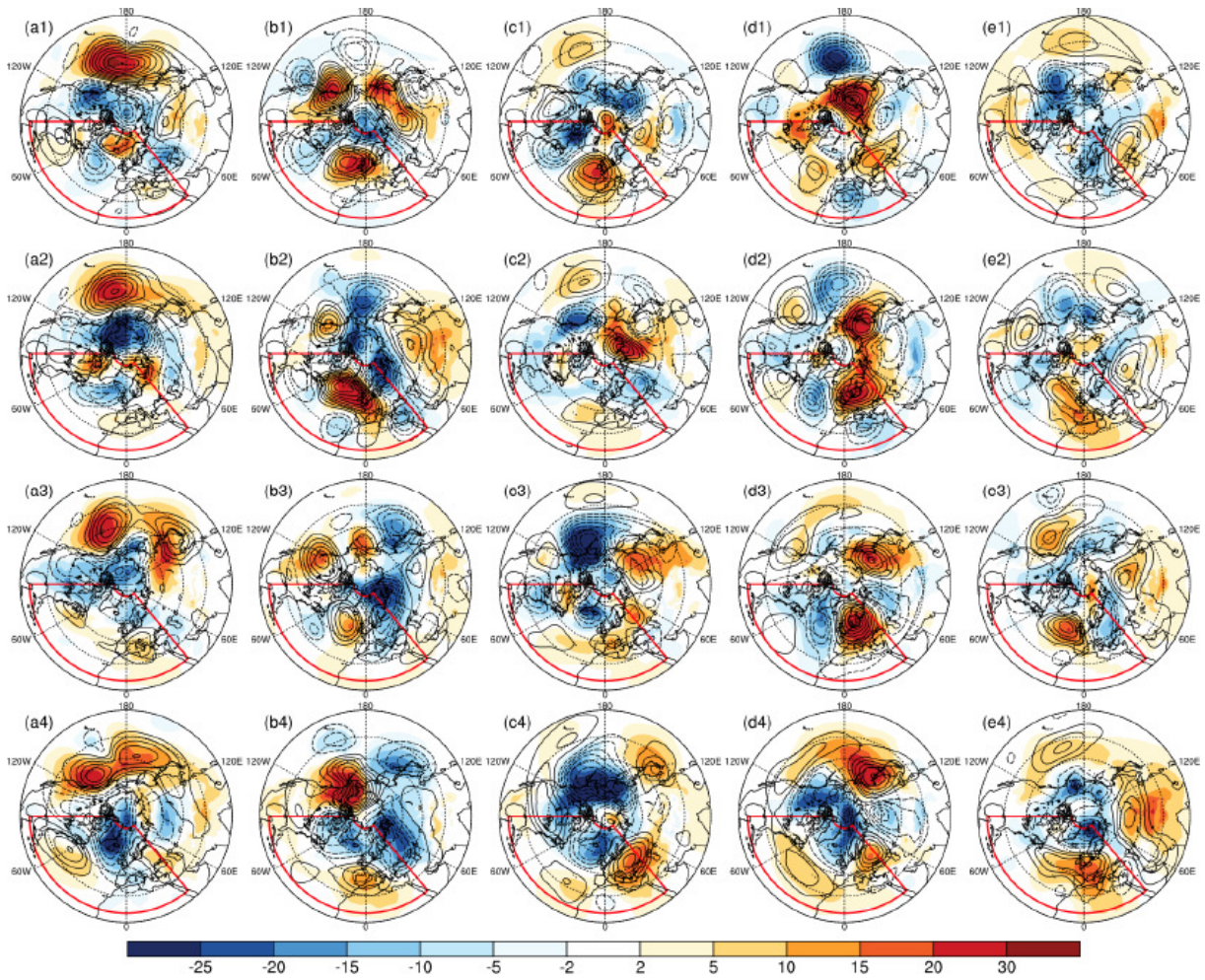
Fig. S1. The evolutionary behavior of the 5 simulated NAO+ events. (a1)−(a4) are the pentad-average SLP anomaly (shading, units: hPa) and Z500 anomaly (contour, CI = 40 gpm) for the first simulated NAO+ event. Pentads 1-4 are defined as lag-15 to lag-11, lag-10 to lag-6, lag-5 to lag-1 and lag 0 to lag+4 days. (b1)−(b4), (c1)−(c4), (d1)−(d4) and (e1)−(e4) correspond to the 2nd, 3rd, 4th and 5th simulated NAO+ events in the investigation.
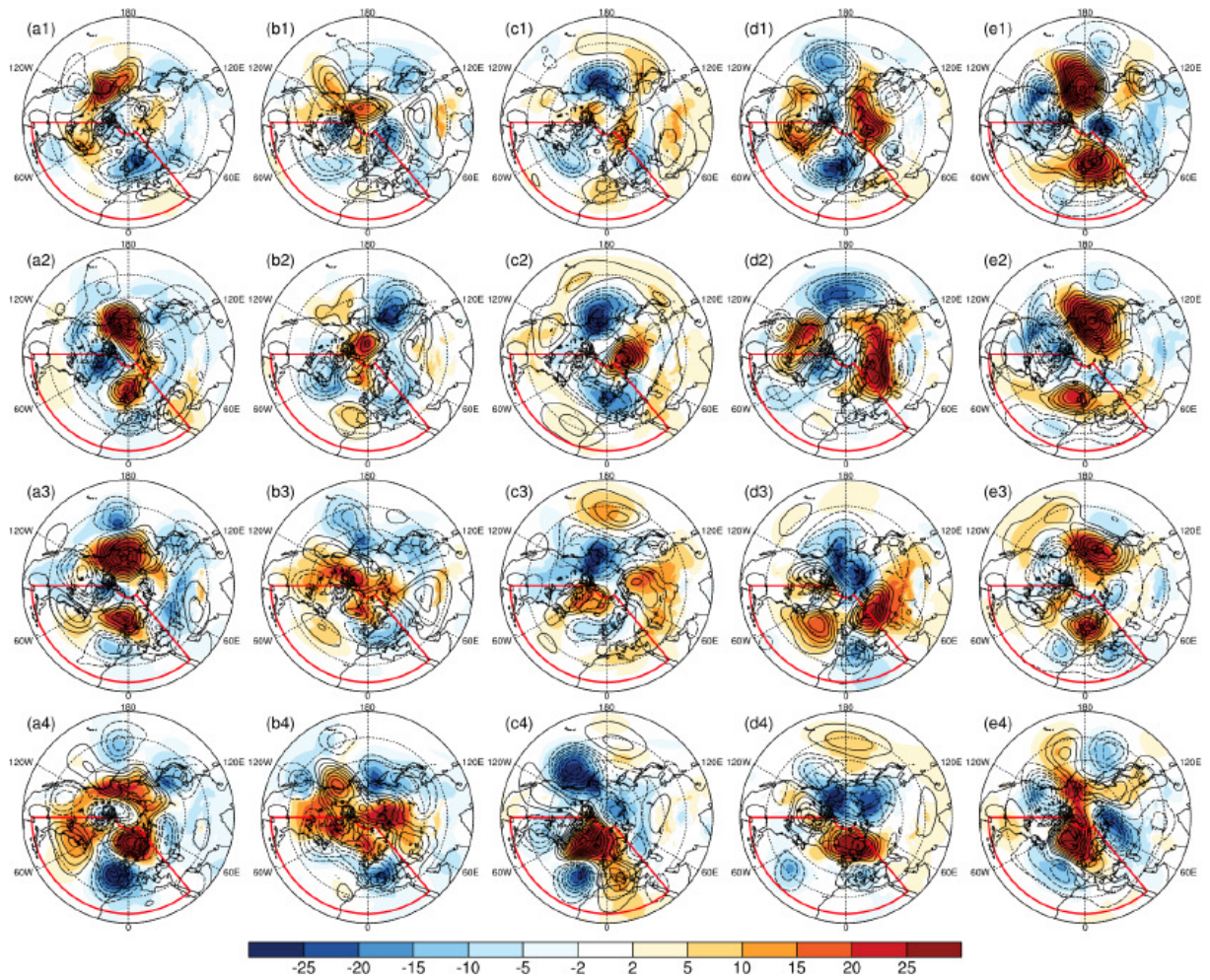
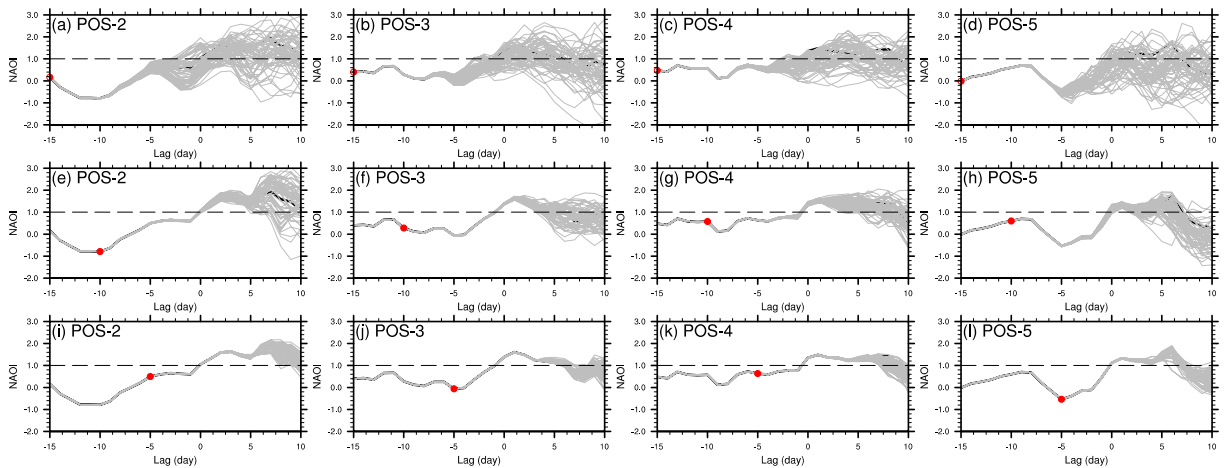**Fig. S2.** As in Figure S1, but for the five simulated NAO- events.

Fig. S3. NAO responses to Arctic SIC perturbations with different lead times for the remaining 4 simulated NAO+ events. (a)−(d), (e)−(h) and (i)−(l) correspond to Arctic SIC perturbations 15, 10 and 5 days in advance of NAO+ event onsets.
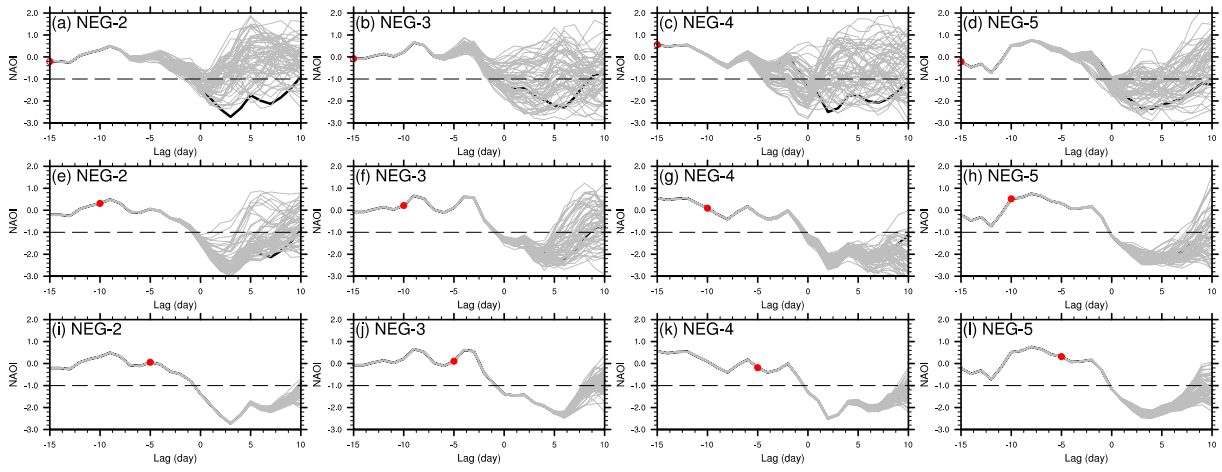
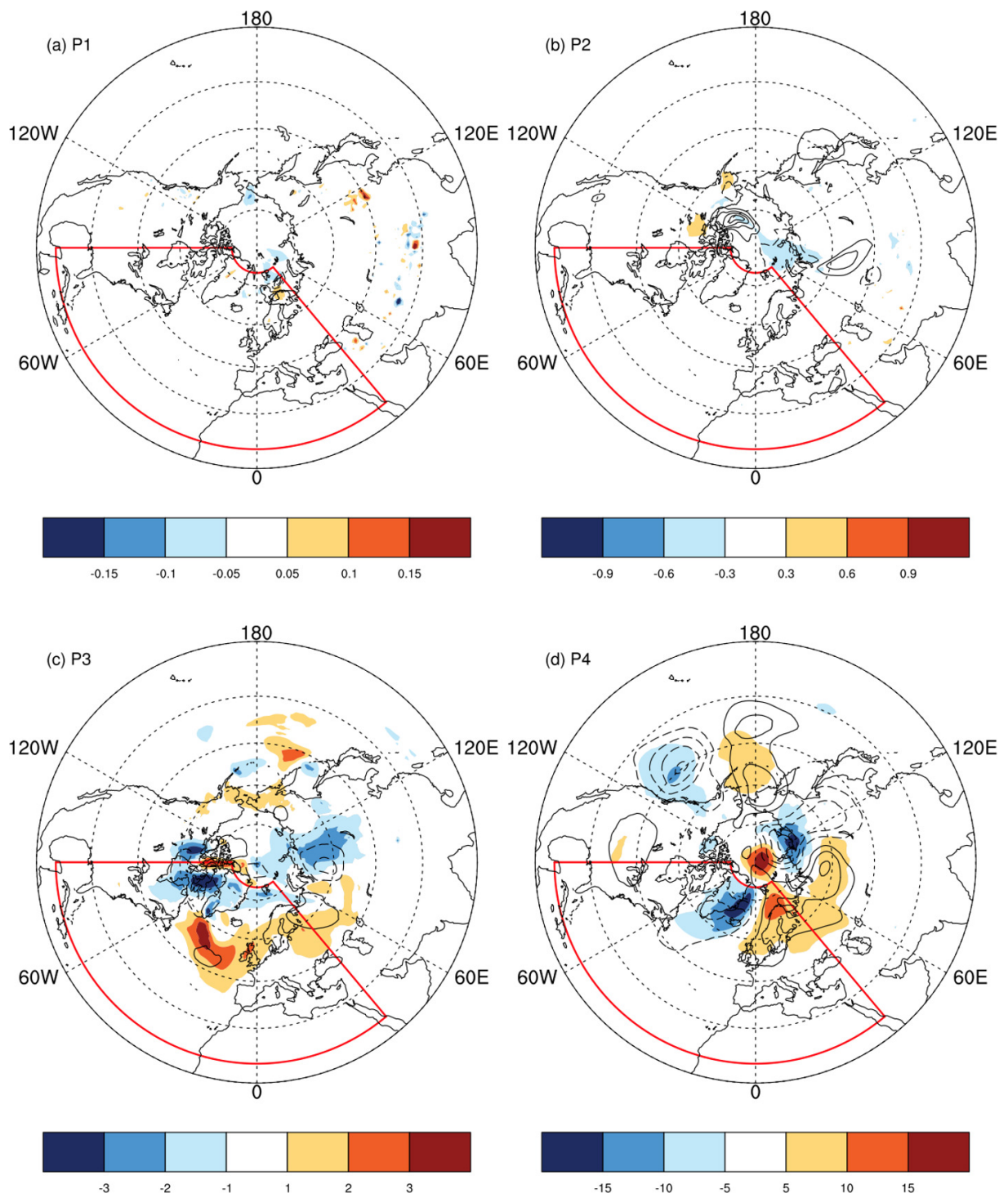**Fig. S4.** As in Figure S3, but for the remaining 4 simulated NAO- events.

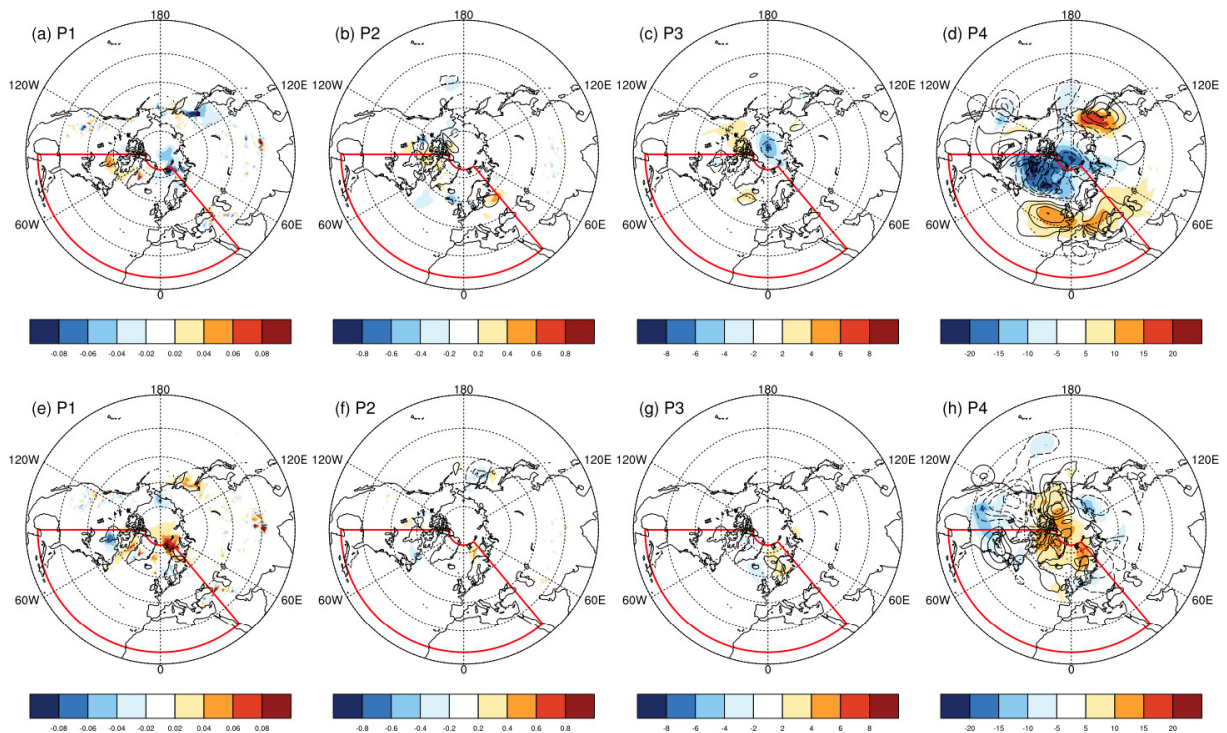**Fig. S5.** As in Figure 5, but for type-2 SIC perturbations.

Fig. S6. SLP (shading, units: hPa) and Z500 response (contour, units: gpm) to type-1 optimal SIC perturbations during the (a) 1st pentad (CI = 0.5 gpm), (b) 2nd pentad (CI = 2.0 gpm), (c) 3rd pentad (CI = 20 gpm) and (d) 4th pentad (CI = 40 gpm) for the first simulated NAO- event. (e)−(h) are similar to (a)−(d) but for type-2 optimal SIC perturbations. The red box in each panel indicates the North Atlantic sector (20°N−80°N, 90°W−40°E).