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# Future changes in North Atlantic winter cyclones in CESM-LE – Part 2: A Lagrangian analysis

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## 1 Figures

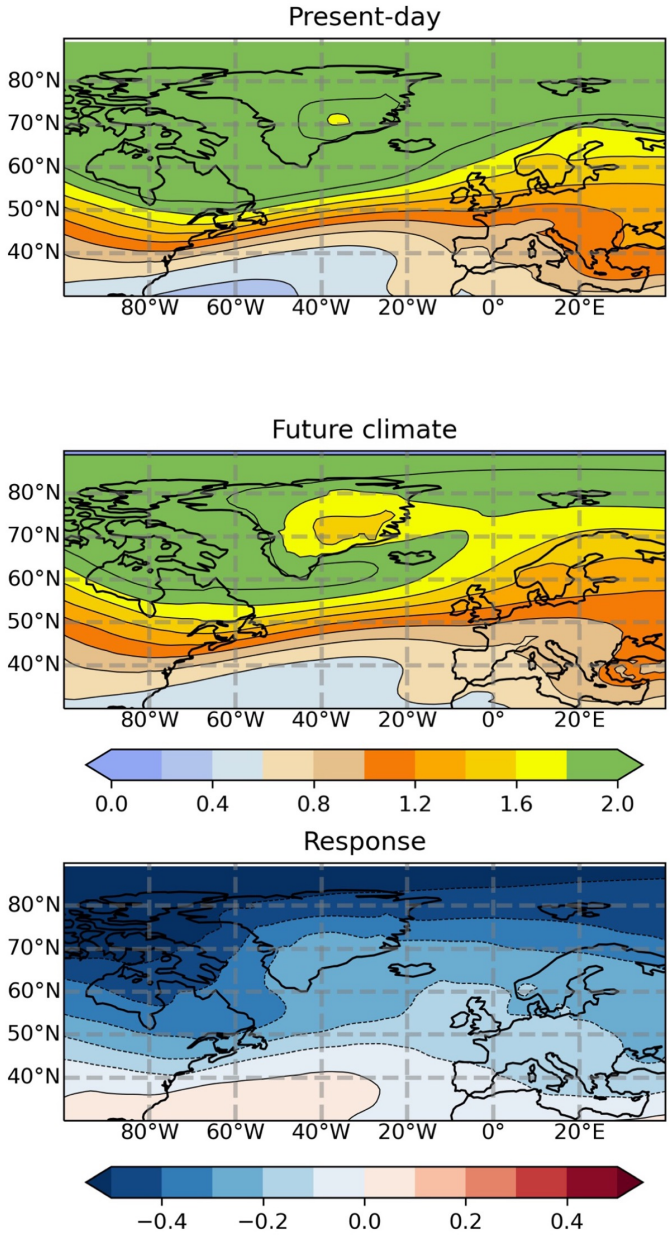


**Figure S1.** PV climatology at 300 hPa for the extended winter (October to March) in the North Atlantic region in present-day climate, future climate and their difference (response to climate warming).

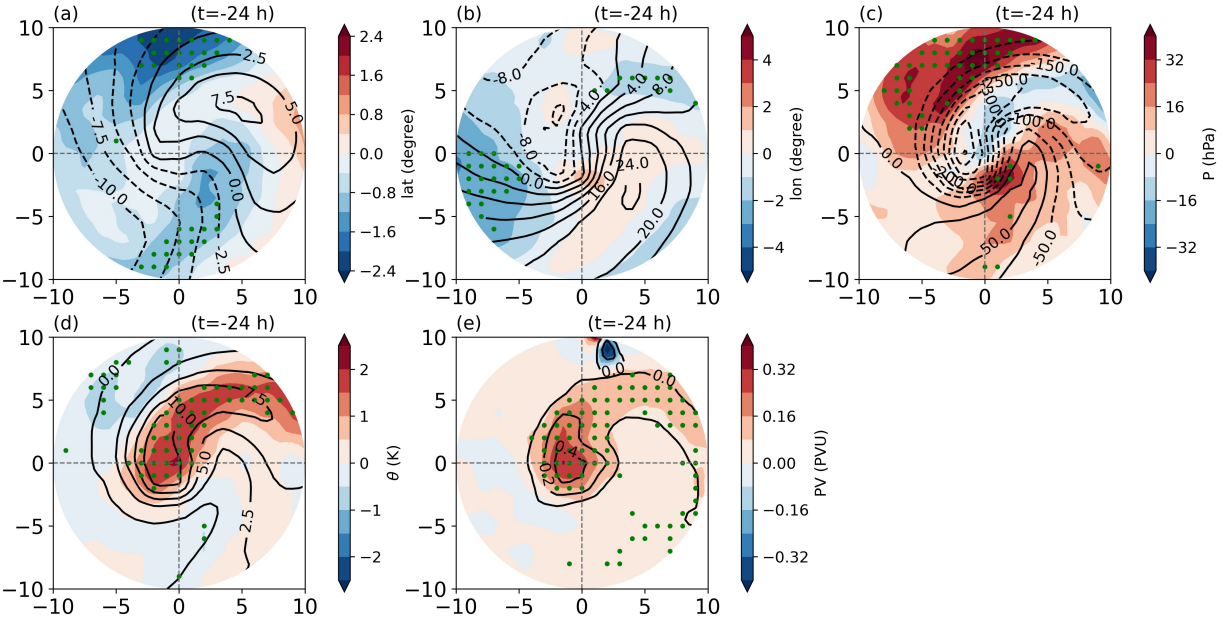


**Figure S2.** Composites of Lagrangian tendencies along backward trajectories initialized at 500 hPa in the last 24 hours before arrival in the cyclone area of (a) latitude, (b) longitude, (c) pressure, (d) potential temperature and (e) PV. Contours show present-day Lagrangian tendencies and the color shading indicates the response to future climate change (difference in the Lagrangian tendencies between future and present-day climate). Longitude and latitude are relative to the movement of the cyclone (i.e., with the 24 h longitude and latitude changes of the cyclone center subtracted). Green dots denote regions of ensemble agreement on the sign of change; i.e., more than 80% of the ensemble members indicate a future change of the same sign.