Electronic Supplementary Material to: Extreme Cold Events in North America and Eurasia in November–December 2022: A Potential Vorticity Gradient Perspective*

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Fig. S1. The daily evolution of surface air temperature anomaly (shading, units: K) and geopotential height (contour, units: gpm, contour interval = 100 gpm) at 500 hPa from 26 November to 1 December. The green dotting region indicates the area with snowfall more than 3 mm. The 5880 gpm contour is represented by a thick black line. All the anomalies are calculated relative to the mean condition of 1979–2020.



Fig. S2. Distributions of the trajectory contribution and moisture count for the Five Great Lakes snowfall based on the Lagrangian back moisture tracking: (a, c, e) moisture contribution (mm d^{-1}); (b, d, f) trajectory count (d^{-1}). (a, b), (c, d) and (e, f) represent 17, 18 and 19 November 2022, respectively.



Fig. S3. Distributions of the trajectory contribution and moisture count for the Altay snowfall based on the Lagrangian back moisture tracking: (a, c) moisture contribution (mm d^{-1}); (b, d) trajectory count (d^{-1}). (a, b), and (c, d) represent 25 and 26 November 2022, respectively.