# PSET 5

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## 1

A. We are looking for areas in the plot that feature tightly packed contours, as this indicates a steep gradient. A steep gradient also indicates high speeds for our jet stream.

B. On average, the jet stream flows westerly. Looking at the H and the L directly to its left in the plot, we know that $d\psi$ flows strictly in the $-y$ direction, thus, $u = +y$ and $v = 0$, indicating a flow from the "bottom" of the plot to the "top". Because the plot is a polar projection oriented with the North Pole at the center, this means the jet stream is flowing from west to east.

C. Over the western United States, the jet stream is meandering southward, as the contours are sloping downwards. Thus, temperatures would be colder as the jet stream brings in colder air from the north.

D. Over the eastern United States, the jet stream is meandering northward, as the contours are sloping upwards. Thus, temperatures would be warmer as the jet stream brings in warmer air from the south.

E. From our analysis in B, we know circulation around the lows is counterclockwise.

F. From our analysis in B, we know circulation around the highs is clockwise.