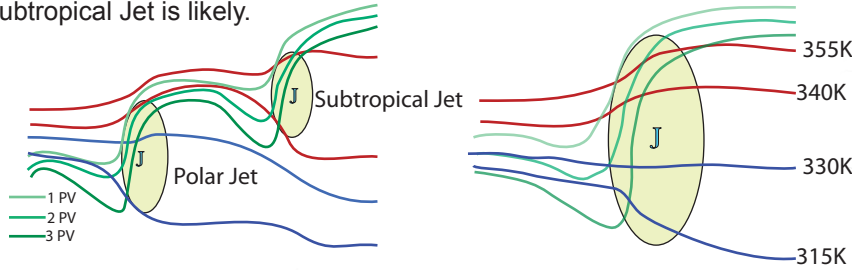
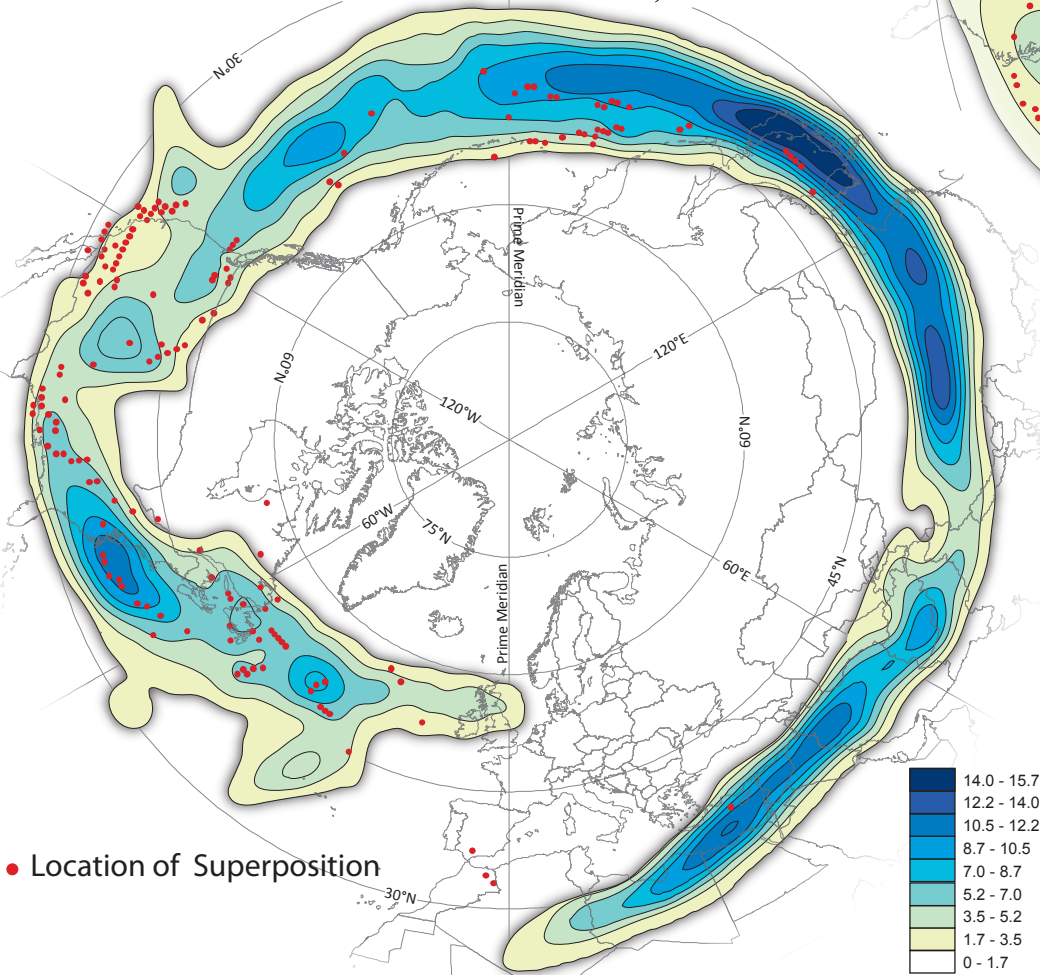


OCTOBER 2011 NORTHERN HEMISPHERE JETS AND SUPERPOSITIONS

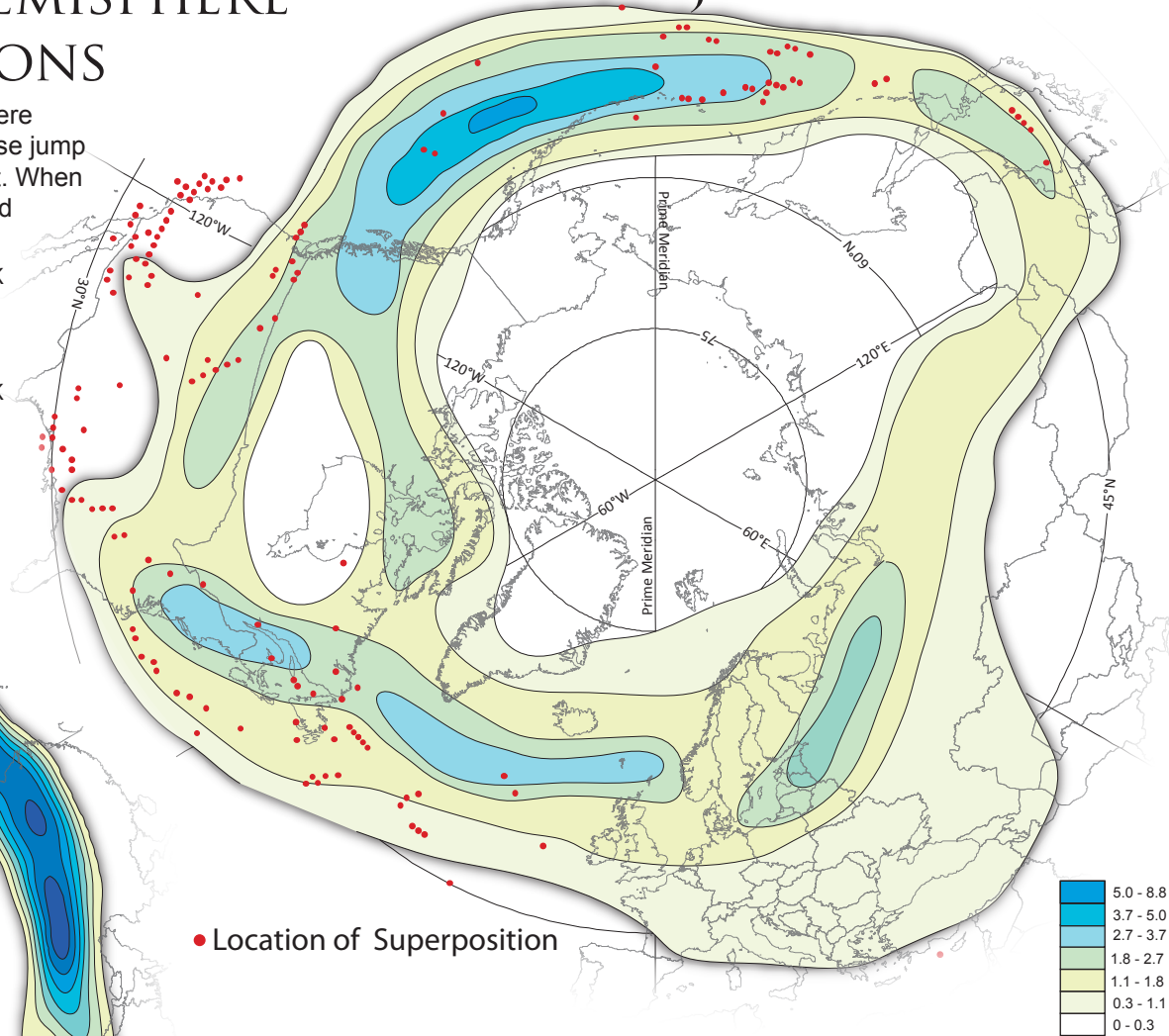
The tropopause, located between the troposphere below and the stratosphere above is represented by the 1, 2 & 3 PV isopleths. In regions of a tropopause jump the wind speeds are maximized in the form of the Polar and Subtropical Jet. When there is a single, amplified tropopause jump a superposition of the Polar and Subtropical Jet is likely.



SUBTROPICAL JET



POLAR JET



• Location of Superposition

Societal Impacts: Superposition events, though rare, can produce significant weather events that are destructive and sometimes deadly. The severe weather outbreak from April 2011, a three day event that swept across the central United States was one of these rare events. It resulted in wide spread devastation and unfortunately many lives lost. Further research needs to be done to understand what atmospheric conditions are favorable for superposition events and the climatology of Superposition events.

October 2011 Statistics:

- 41,594 grid points identified for the STJ
- 23,628 grid points identified for the POLJ
- 172 Superposition grid points identified

Classification Scheme: Natruaal Breaks (Jenks) 7 Classes (POLJ) 9 Classes (STJ)

Data: NCEP, NOAA, ESRI, UW-Madison - AOS & Natural Earth

Projection: North Pole Azimuthal Equail Distance

Interpolation Method: Kernel Density

Cartographer: Croix Christenson