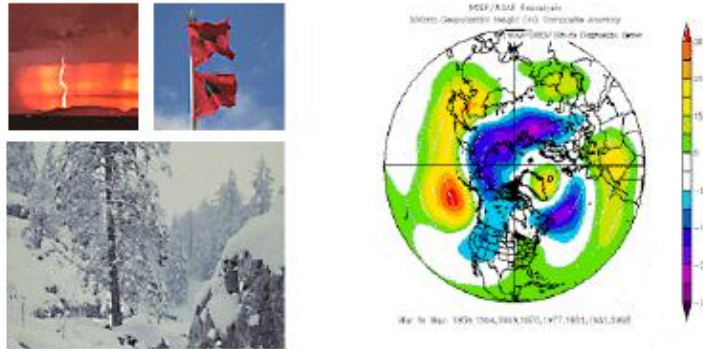


The Pennsylvania Observer

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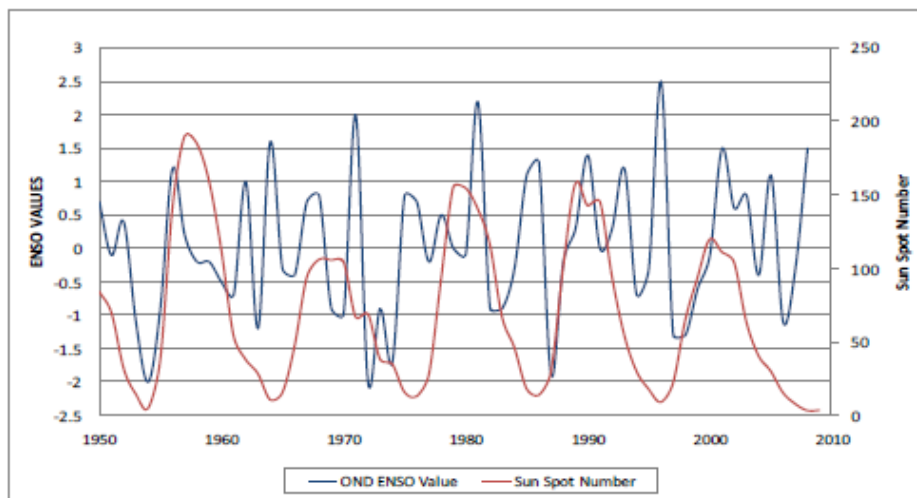
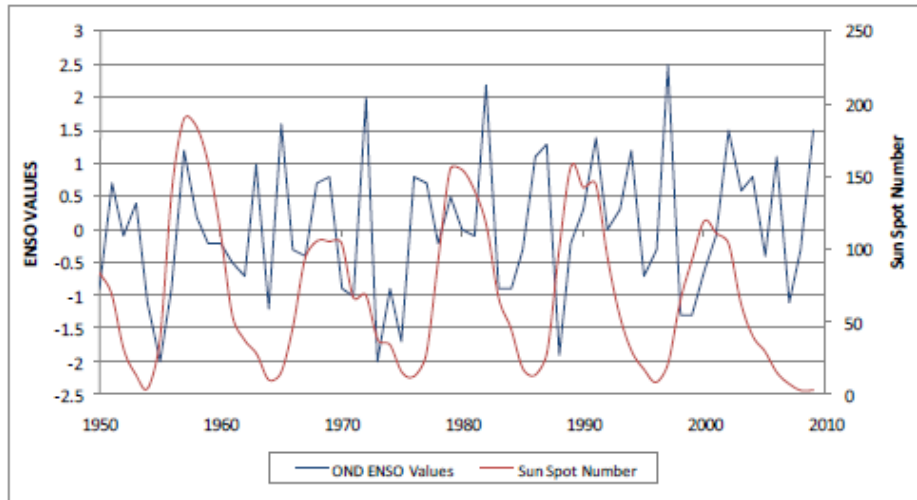


September Climate Highlight:

By: Nick Vita

This month's climate highlight looks at the relationship between the solar cycle and the phase of the El Niño/La Niña Southern Oscillation (ENSO) by comparing archive sun spot numbers with the October-November-December values of the ENSO.

This autumn will bring a moderate to strong La Nina (cooler than average water temperatures in the equatorial Pacific). Last autumn (2009) featured a strong El Nino. In comparing the solar cycle for the entire year (total number of sunspots) with the phase of ENSO (positive values = El Nino, negative values = La Nina), it is interesting to notice the relationship between low solar sunspots and the frequency of La Nina events. The first graph shows the October-November-December values of ENSO in the same year while the second graph shows a one-year lag; that is the OND ENSO value is for the following year. The physical relationship is not well understood.



Figures 1 and 2: The relationship between solar sunspots and the phase of ENSO. One year lag values are shown in the second graph.