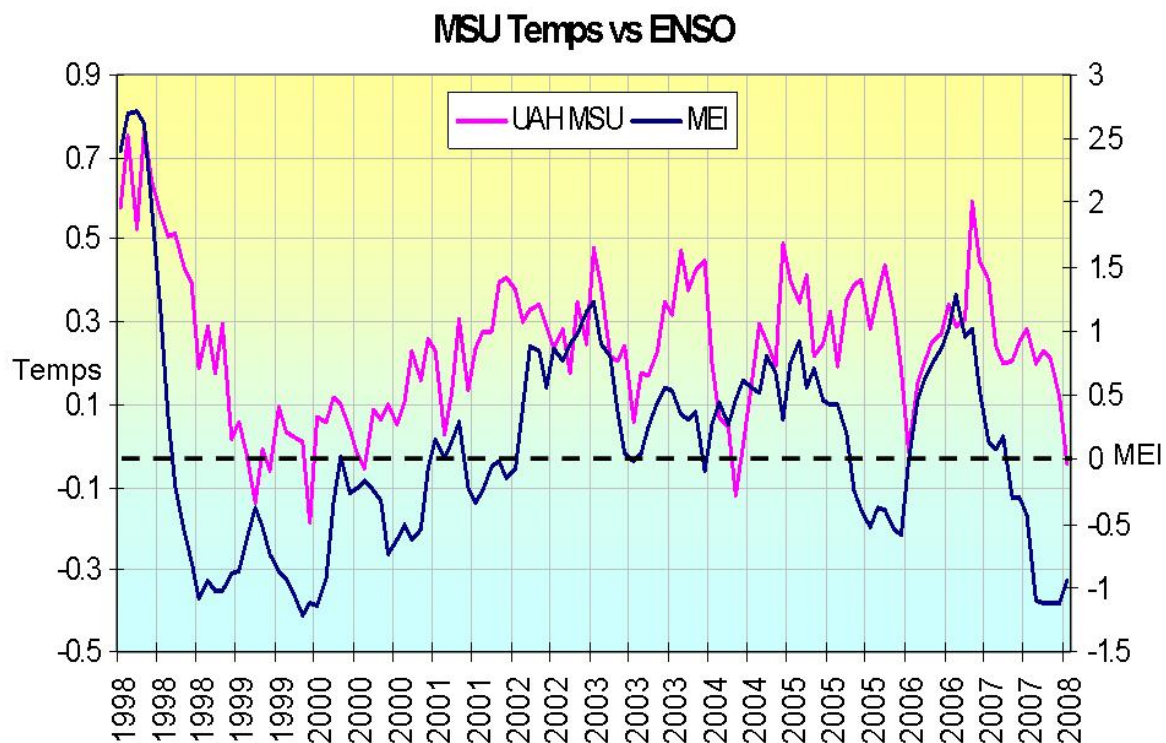


The La Nina and Global Cooling

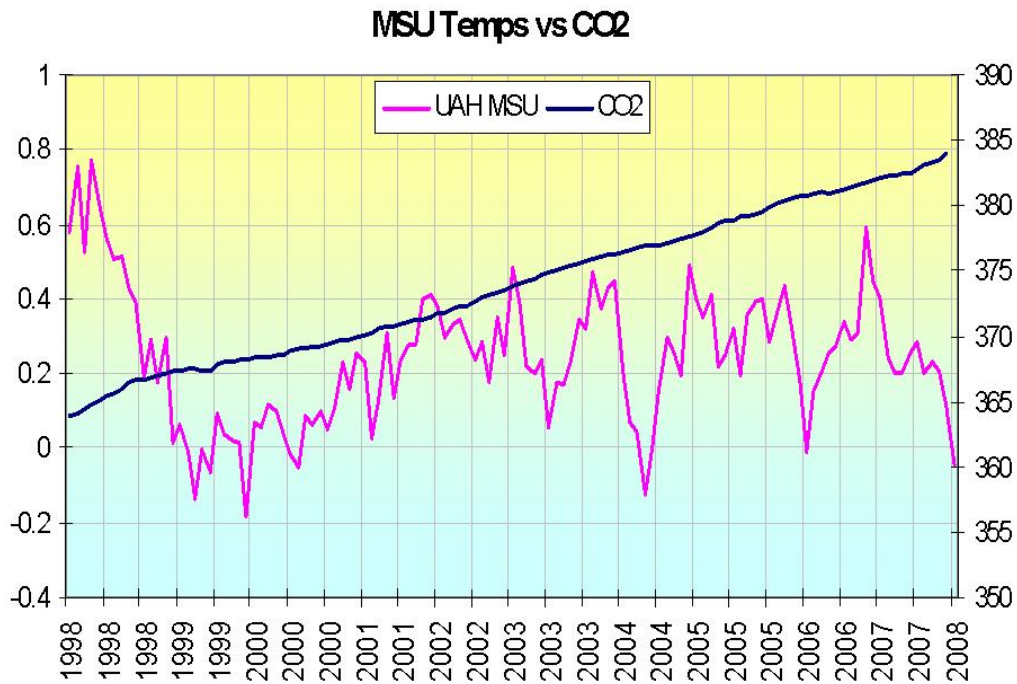
Early in January 2007, the Phil Jones of the UK Hadley center predicted that 2007 would be the warmest on record due to the El Nino, which some scientists including Hansen predicted could be the strongest in history. Well of course the El Nino quickly faded and La Nina slowly came on during 2007. Temperatures globally cooled, starting in the Southern Hemisphere winter and then transitioning into the Northern Hemisphere winter. At the end of the year, the Hadley center announced it was the 7th warmest, blaming the oncoming La Nina for the cooling and busted forecast.

With the recent global cooling that is the result of the moderate to strong La Nina, I thought I would again look at the last decade and see how well the global temperatures reacted to the transition from a super El Nino in 1997/98 to La Ninas from 1998 to 2000/2001, an El Nin in 2002/03 and borderline El Ninos in 2003/04 and 2004/05 and again 2006/07 followed by the return of La Nina in 2007/08/. I used the [MSU lower tropospheric temperatures](#) and the [Multivariate ENSO Index](#) of Wolter.

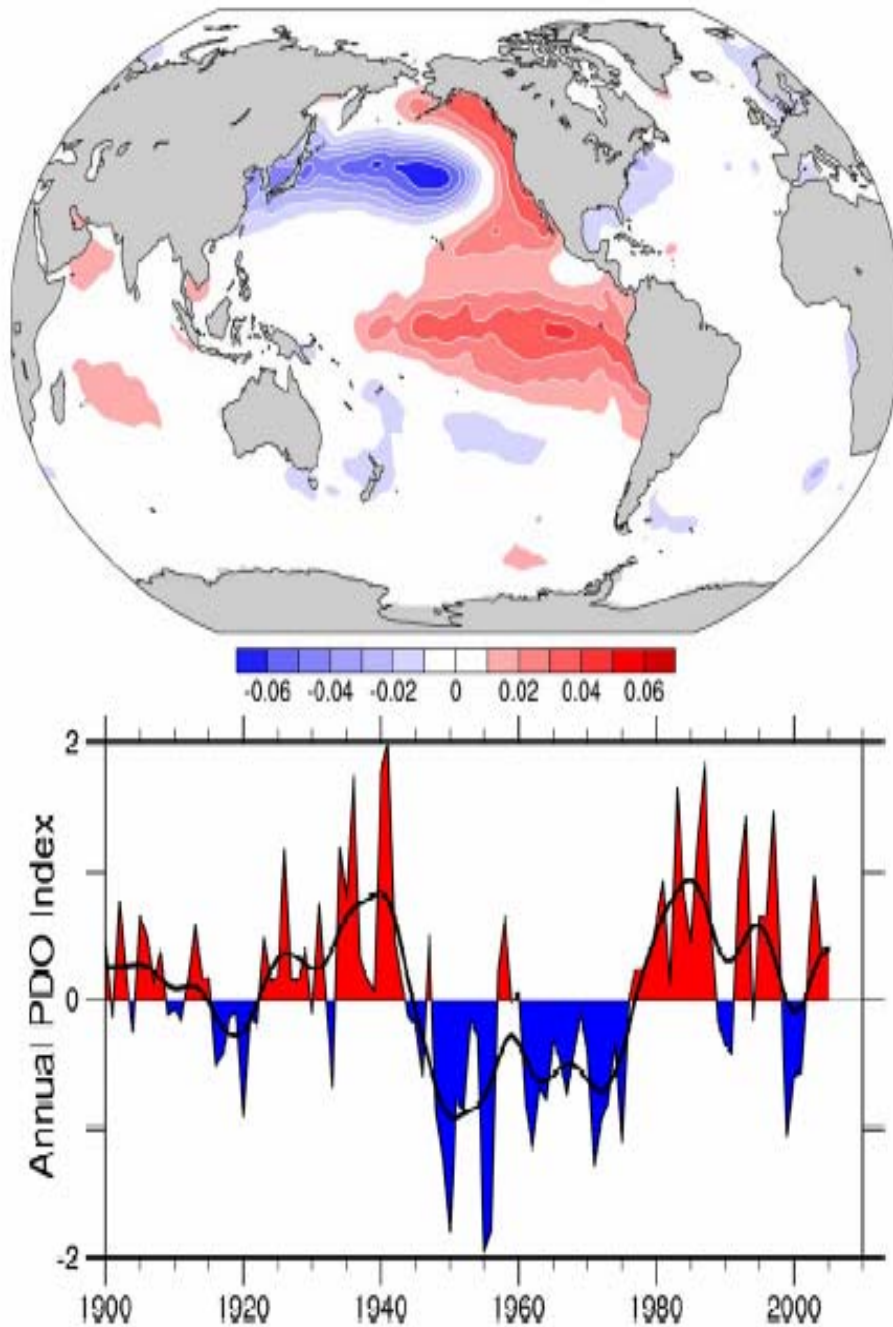


There is an apparent lag of 2 or more months of temperature to the MEI. With that lag applied, the Pearson correlation of the raw (unsmoothed data sets) is 0.67 (r-squared of 0.45).

For the same time period, the CO2 correlation is only 0.07 (r-squared of 0.005).

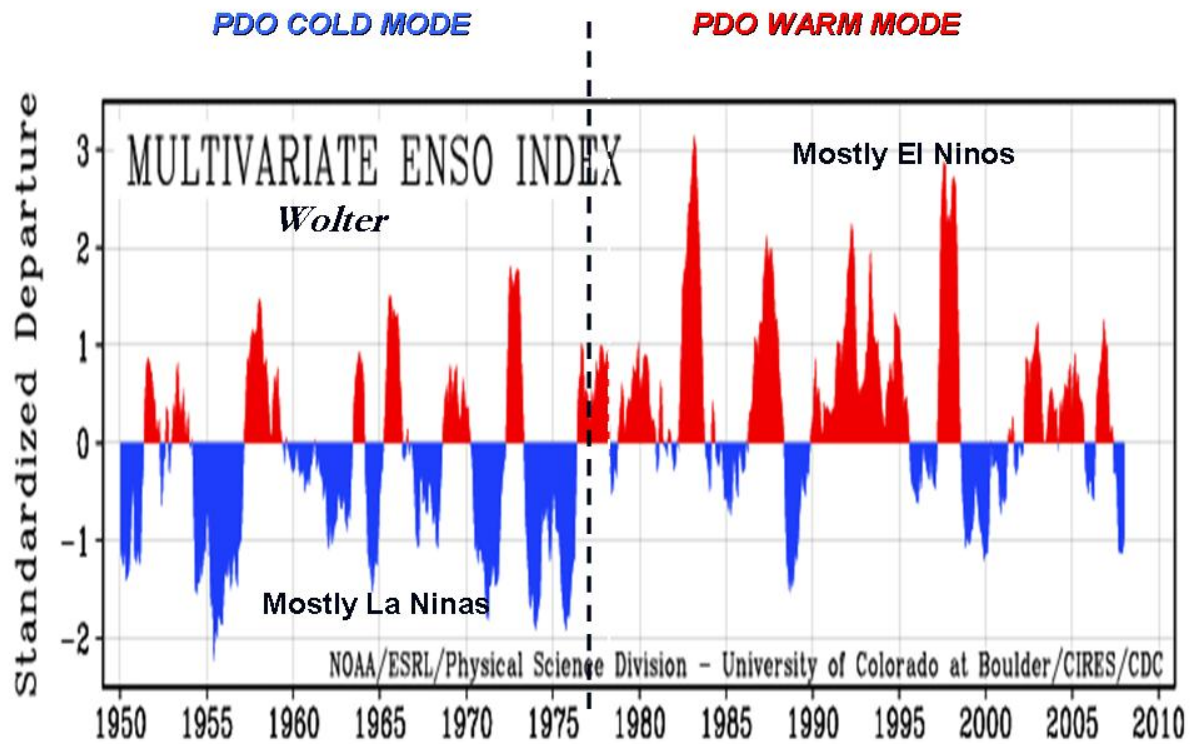


So how does this relate to earlier discussions about the Multidecadal Oscillation in the Pacific (PDO)? Well the positive PDO favors warm water in the tropical NINO regions of the Pacific as can be seen in the IPCC diagram below. This would imply the warm modes favor El Ninos and the cold modes with the mirror opposite sea surface temperature patterns, would favor La Ninas.



Note also the PDO graph beneath the map that shows the multidecadal behavior of the PDO with a warm mode from 1922 to 1947 a cold mode from 1947 to 1977 and a warm mode from 1977 to at least 1997. This would imply mainly La Ninas from 1947 to 1977 and mainly El Ninos after.

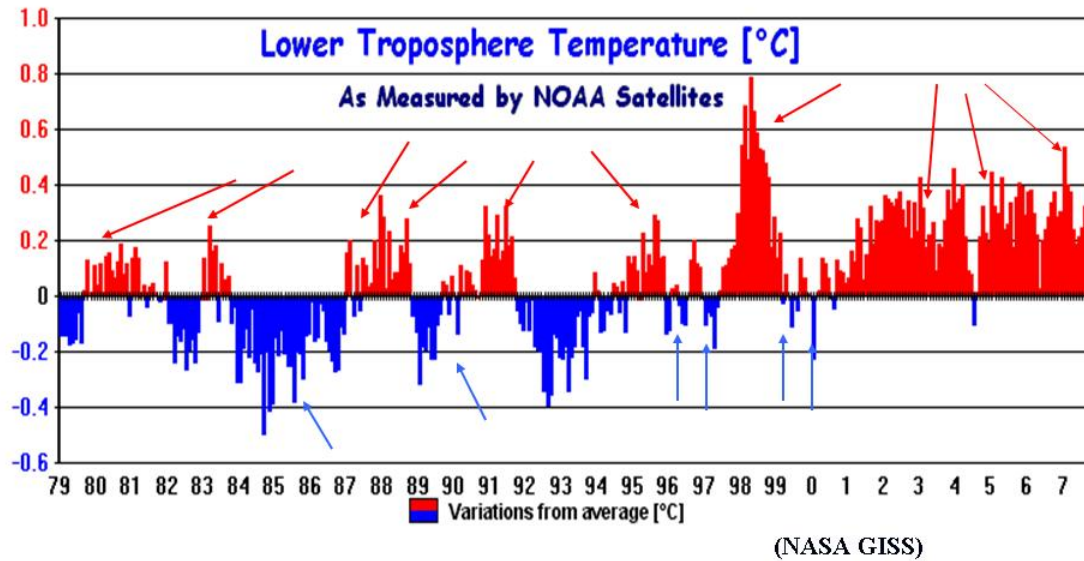
The plot of the MEI shows that relationship with El Ninos and La Nina frequency and PDO to indeed be the case.



The number tally in the table below shows the favored ENSO mode has almost twice the frequency and tends to be stronger.

# Years	Cold PDO 1947-1976	Warm PDO 1977-2006
El Nino		
Strong	3	8
All	7	13
La Nina		
Strong	8	3
All	13	7

You can see the bias of El Ninos towards global warmth and La Ninas to cooling by examining them relative to the USH MSU global lower troposphere temperatures below.



El Ninos lead to global warming and La Ninas to cooling



MSU data Spencer Christy

And with the El Ninos favoring global warmth and La Ninas, global cooling, one might expect the temperatures to have trended colder from the 1940s to the late 1970s then warmer, which has been precisely the case.

As to whether this strong La Nina and strongly negative PDO this winter is the start of the new cold period or just another false alarm like 1998-2001, the next year or so will tell. The last three phases each lasted 25-30 years and we are 30 years since the last change called the Great Pacific Climate Shift so it appears increasingly likely this time the change is for real.

If it is, you can expect more La Ninas, fewer weaker El Ninos and a global scale cooling. If indeed the sun which many solar scientists believe is about to go into a quiet mode seen only seen every 200 to 400 years, this may be very interesting indeed.

See more [here](#).