WINTER 2008/09 FORECAST VERIFICATION

By Joseph D'Aleo, CCM

The super El Nino of 1982/83 which coincided with world-wide weather extremes sparked significant research into the global atmospheric effects of this phenomenon. When strong correlations were found, a whole new era of long range climate forecasting began. Over the past decade, our understanding of ENSO and other climate factors or teleconnections has grown and extended and enabled skillful seasonal (and I might argue decadal) forecasting

Before the winter in October, we used the sun and ENSO (among other factors) to identify analog years. We picked 1961/62, 1964/64 as the best analogs with 1985/86 also within the window of expected solar and ENSO conditions.
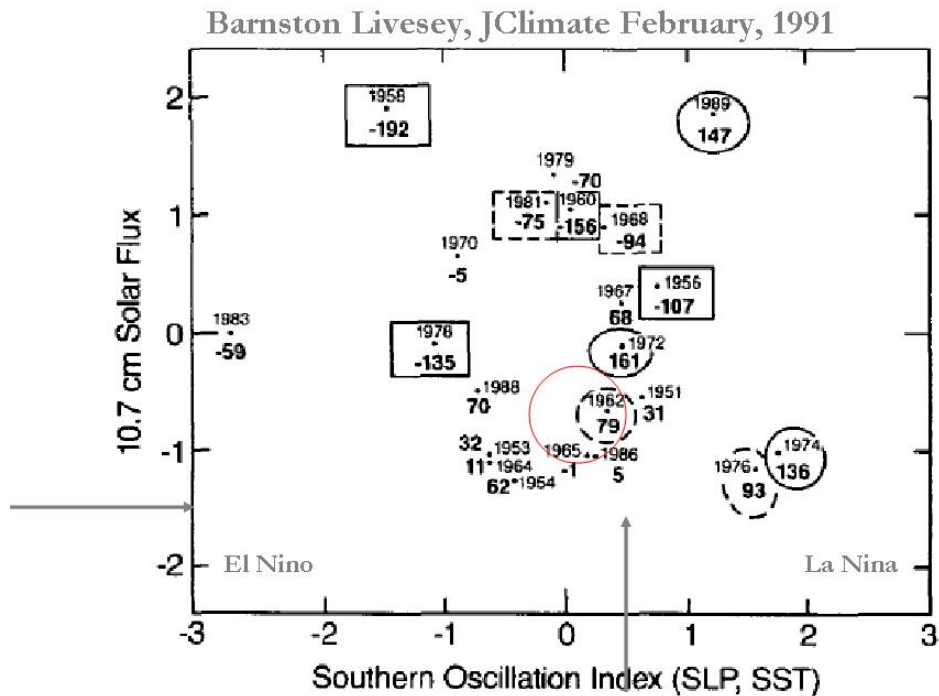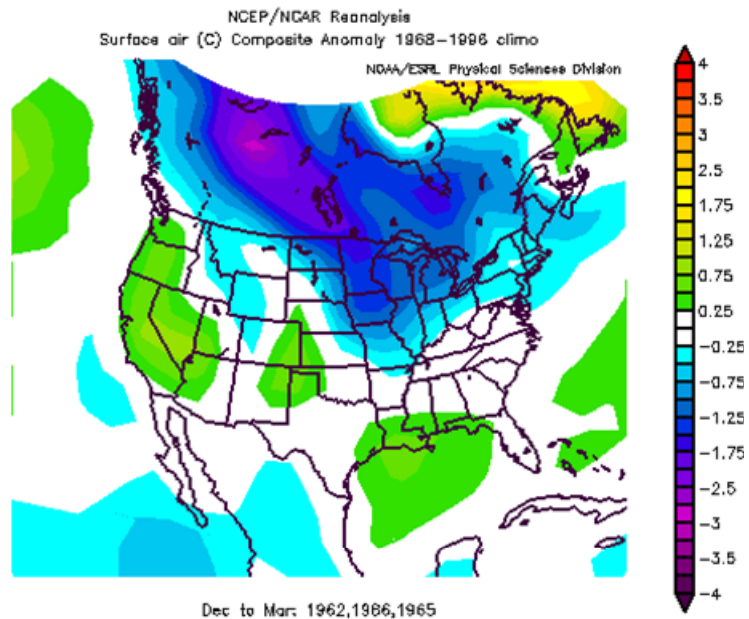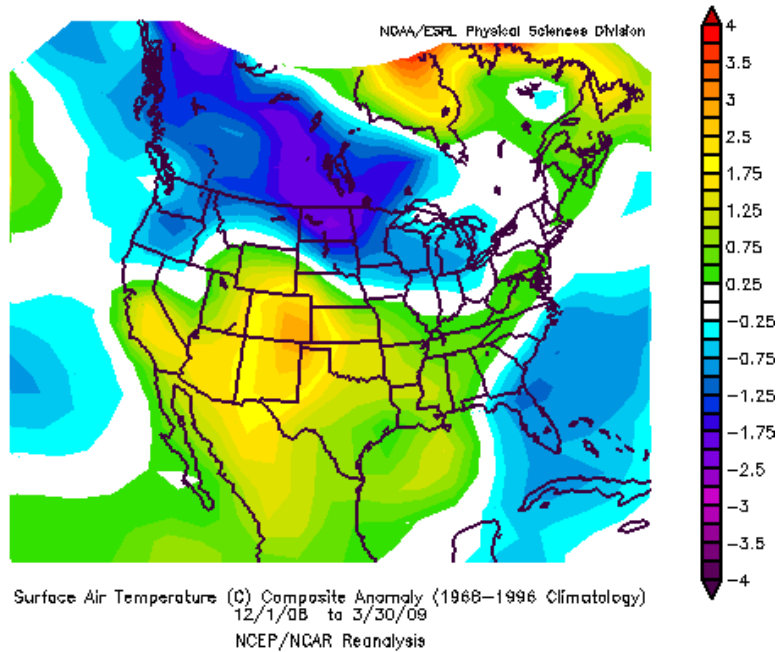

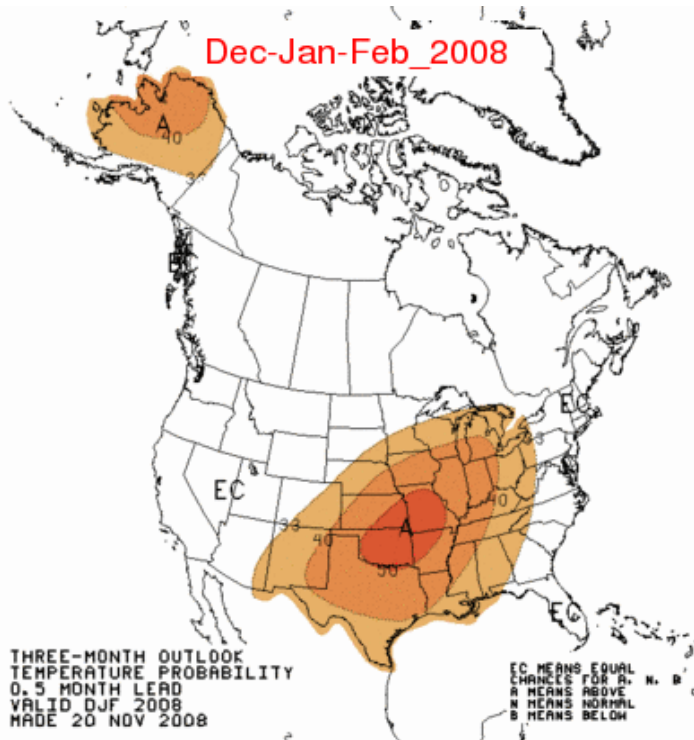FIG. 10. Three-way individual year scatter plot for west QBO phase

They suggested another cold north central winter.

NCEP/NCAR Reanalysis
Surface air (C) Composite Anomaly 1968-1996 climo

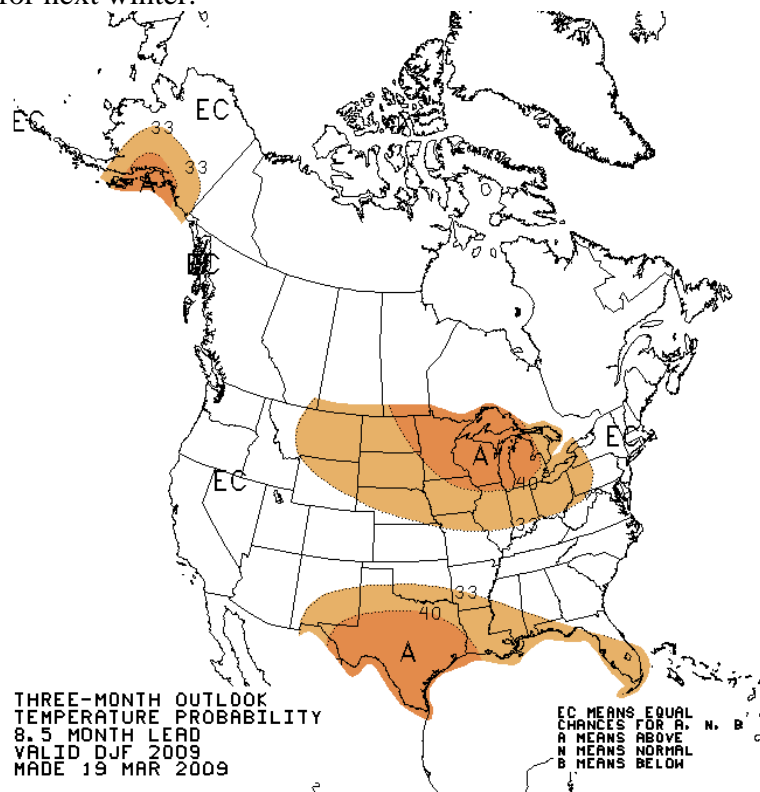NOAA/ESRL Physical Sciences Division

Dec to Mar: 1962,1986,1965

The actual temperatures generally were in line with those analogs, especially across the North Central. It was warmer in the southern Rockies and plains where it was dry. The cold in the northeast was concentrated in January.

NOAA/ESRL Physical Sciences Division

Surface Air Temperature (C) Composite Anomaly (1968-1996 Climatology)
12/1/08   to 3/30/09
NCEP/NCAR Reanalysis

Compare that to the CPC forecast from last October which in the absence of a clear ENSO state used trends as their tool.

Dec-Jan-Feb_2008

THREE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
0.5 MONTH LEAD
VALID DJF 2008
MADE 20 NOV 2008

EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW

They are at it again for next winter.

THREE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
8.5 MONTH LEAD
VALID DJF 2009
MADE 19 MAR 2009

EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW

Trends are a useful tool during the times when you are entrenched in a particular regime but can lead to bad forecasts when a new regime develops (like selling at the lows of a bear market or buying at the peak of a bull market). The trend they used was the trend

during the recent warm PDO, warm AMO, active solar decades of the 1980s and 1990s. Now with the PDO in its cold mode, the AMO turned negative and the sun in a superlong slumber, the trends should be and have been reversing both globally and regionally. Good luck CPC. You will need it.