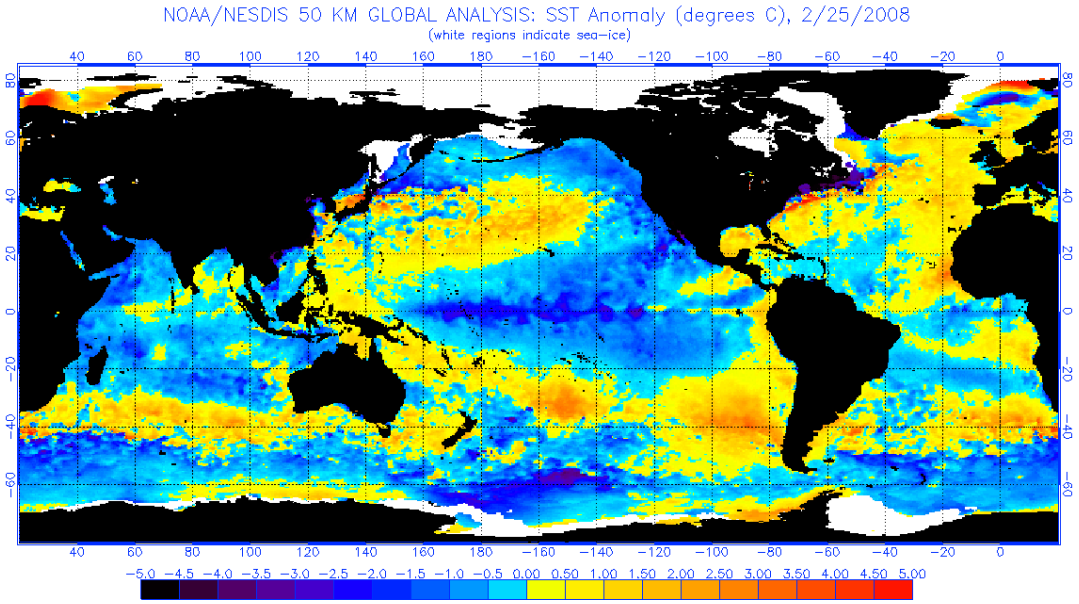
This La Nina Likely To Have Legs

By Joseph D'Aleo, CCM

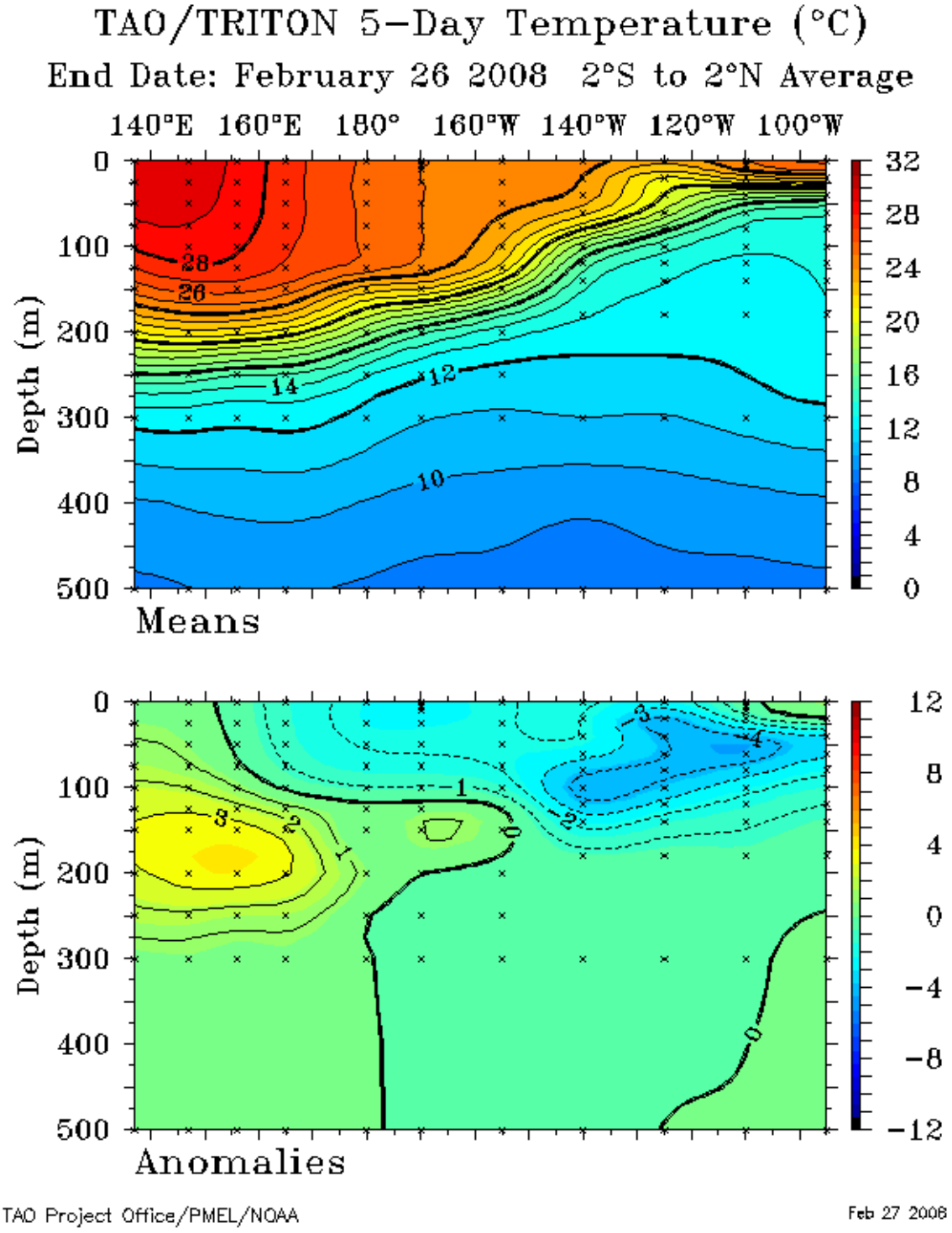
Evidence is growing this La Nina will be a longer term event. Most similar important La Ninas are often multi year events (1949-1951,1954-1956, 1961-63, 1970-1972, 1973-1976, 1998-2001).

Though the easternmost Pacific near South America has warmed at the surface as the seasonal weakening of the tropical easterlies led to weakened upwelling, it is still cold beneath.

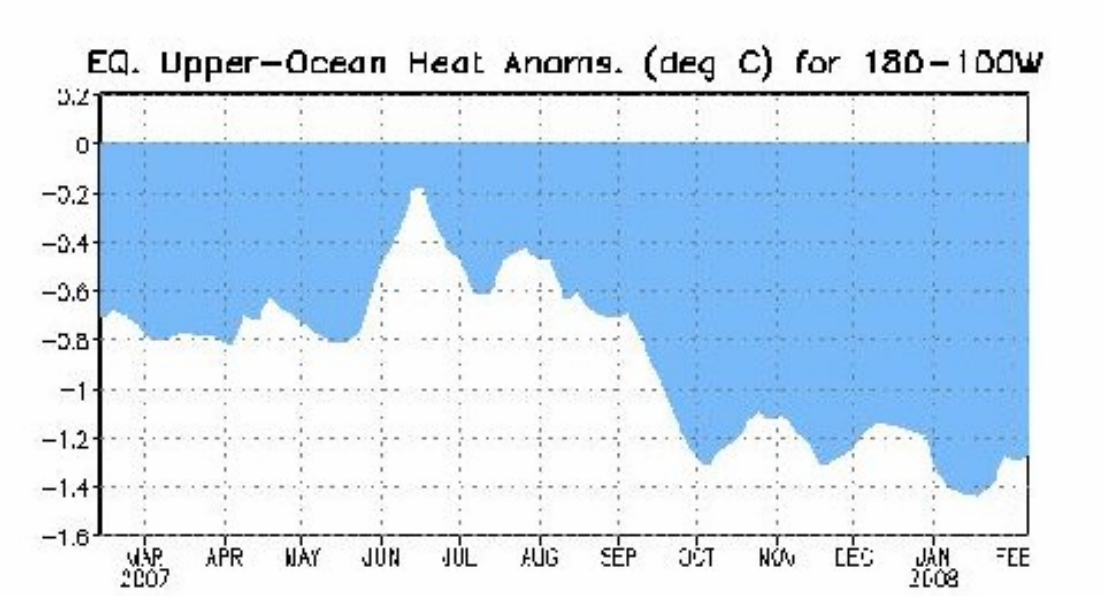


This is the latest NESDIS sea surface temperature anomaly chart. Note the cold La Nina waters in much of the tropical Pacific although some warming near the South American coast. This is surface temperatures.

Below you can see the latest depth-section of ocean temperatures (top) and anomalies (bottom). Temperature are in degree Celsius. Note the large reservoir of subsurface anomalously cold water (up to 4 degrees C) in the eastern tropical Pacific at 50 to 100 meters.

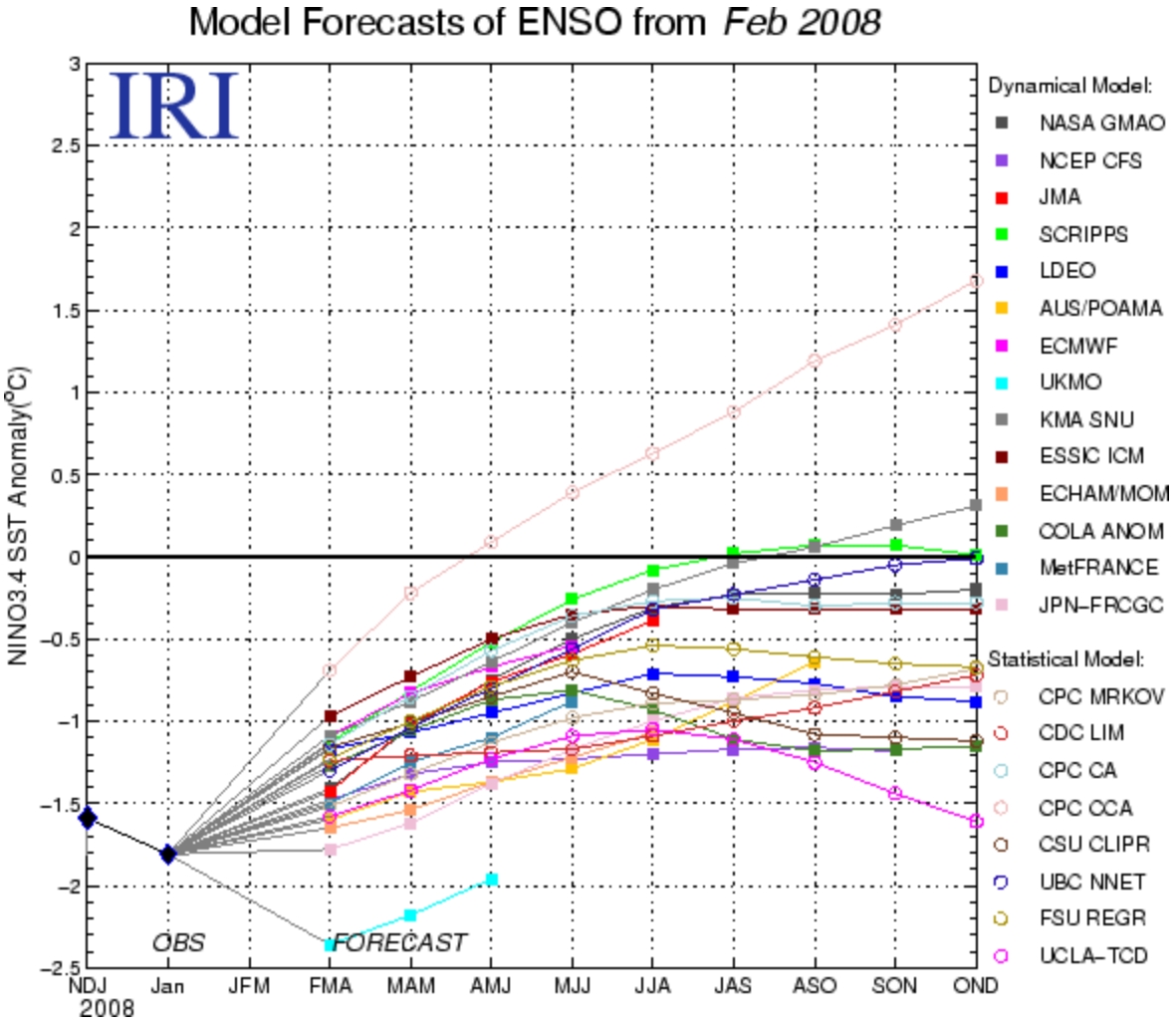


Also check out the latest CPC depicted ocean heat content in the tropical Pacific. This shows the heat content remains at near maximum deficit levels. It suggests this La Nina will be a multi-year event.



These suggest as the easterlies increase again, cooling will return to the east Pacific and La Nina will persist at least well into 2008.

Indeed most all dynamical and statistical models suggest this. The three letters at the bottom represent the average for a three month periods (for example JJA is June, July and August). A value of -0.5C for NINO region 34 used here is the threshold for La Nina.



THE PDO

The Pacific Decadal Oscillation (PDO) has dropped strongly negative (latest value from NCEP is -1.54 STD). This decline may represent another Great Pacific Climate Shift as the PDO warm and cold phases tend last 25 to 30 years and the last change , to a warm Pacific, occurred in 1976. See more in this pdf here.

If indeed the PDO shift is the real deal, we might expect more La Ninas and fewer weaker El Ninos over the next few decades with a net tendency for cooling. Add to that a quieter sun and eventually a cooling Atlantic, and you have a recipe for global cooling.

However, this has its own drawbacks, La Ninas bring more drought and summer heat waves, landfalling hurricanes, large tornado outbreaks, spring floods, winter snows and cold outbreaks than their more famous counterpart, El Nino. A while back, Stan Changnon did an interesting analysis which I reported on recently here that suggests the era we have gone through since the late 1970s with dominant El Ninos was unusually

benign with more benefits than damages and will be looked on as the golden era, a modern climate optimum.

Even if all this is correct, you might expect the media and alarmists ‘evidence’ we are affecting our climate to morph from warming and ice melt to the climate extremes characteristic of La Ninas.