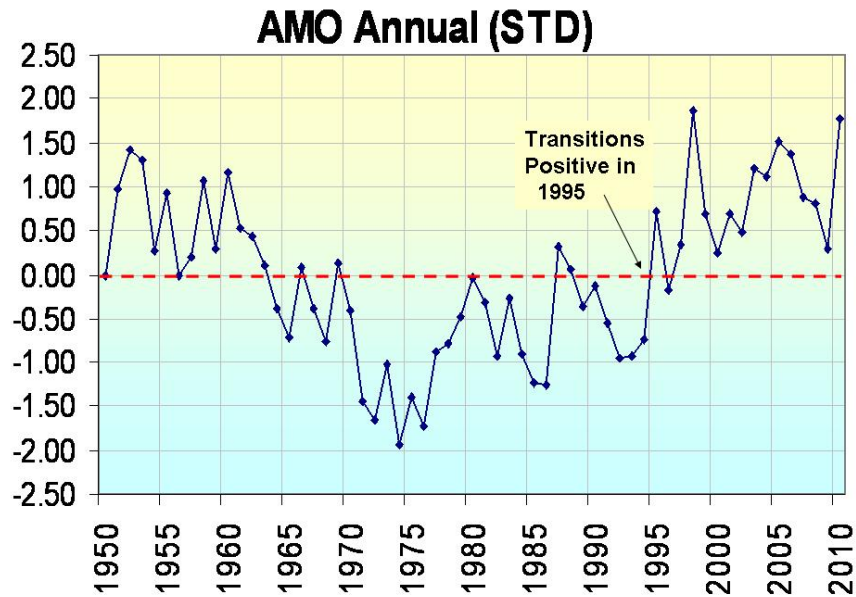


Atlantic through the AMO drives apparent “global warming”

By Joseph D'Aleo, CCM

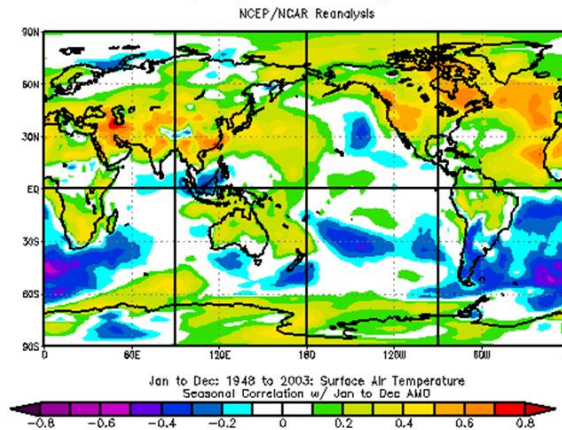
The North Atlantic undergoes a multidecadal oscillation appropriately called the Atlantic Multidecadal Oscillation or AMO. It is officially the mean sea surface temperature anomaly from the equator to 70 degrees North. It went above the longer term mean in 1995. The AMO has a long term cycle of about 60-70 years.



When the AMO is positive (warm) the Northern Hemisphere is warmer than normal on an annual basis across the continents. When it is cold, it is colder. The positive state is associated with a warmer arctic and Greenland and more summer hurricanes in the Atlantic Basin.

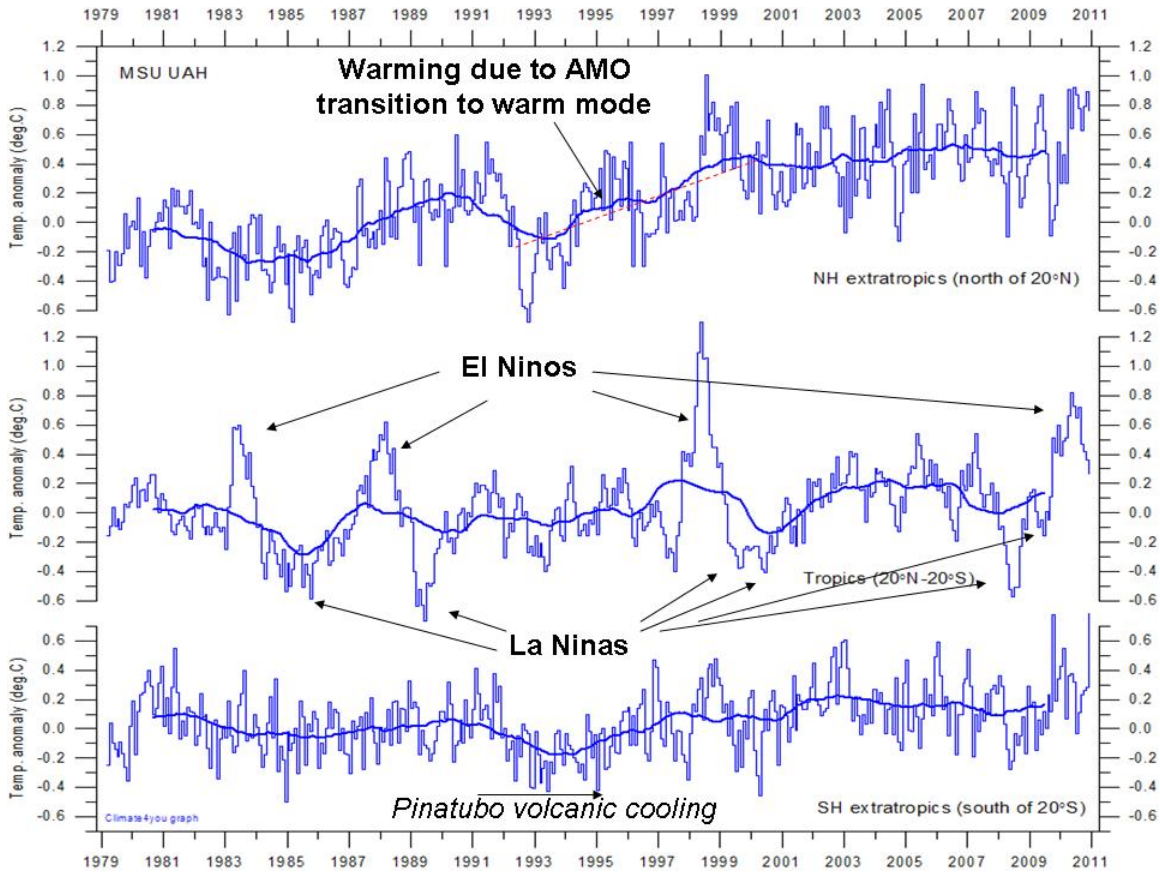
Atlantic Multidecadal Oscillation

*Correlates with Northern Hemisphere warmth,
statistically significant in places*



Correlation of annual temperatures with the AMO. Yellows to reds are positive and blues negative correlations with the AMO state.

This can be also seen in the satellite derived temperatures for the Northern Hemisphere (north of 20N). There is little continuous trend since 1979. Most of the warming is in the 1995 transition from AMO negative to positive. Note the temperatures in the tropics reflect the ENSO state but has no perceived trend. There is also no trend in the Southern Hemisphere. The only significant departure was with the volcanic cooling also seen in the Northern Hemisphere after Pinatubo in 1991-1994.



UAH Satellite temperatures by latitude zone - Northern Hemisphere poleward of 20N, tropics, 20N to 20S, Southern Hemisphere poleward of 20S.

The AMO tracks to the solar irradiance with a lag of about 8 years. This suggests the current warm AMO state will end by around 2015. With the cooling of the Pacific now and more La Ninas, look for net cooling especially in the tropics until then.