

Arctic Oscillation spoiling NASA GISS party

By Joseph D'Aleo, CCM

In a [recent post](#) to counter the snow and cold in the news, the timing of which was spoiling the announcement by Dr. Hansen that it was the warmest year on record and the predicted warming trend intact, NASA GISS authors note for November:

“Northern Europe had negative anomalies of more than 4°C, while the Hudson Bay region of Canada had monthly mean anomalies greater than +10°C. The extreme warmth in Northeast Canada is undoubtedly related to the fact that Hudson Bay was practically ice free. It is for this reason that some of the largest positive temperature anomalies on the planet occur in the Arctic Ocean as sea ice area has decreased in recent years.

The cold anomaly in Northern Europe in November has continued and strengthened in the first half of December. Combined with the unusual cold winter of 2009-2010 in Northern Hemisphere mid-latitudes, this regional cold spell has caused widespread commentary that global warming has ended. That is hardly the case. “



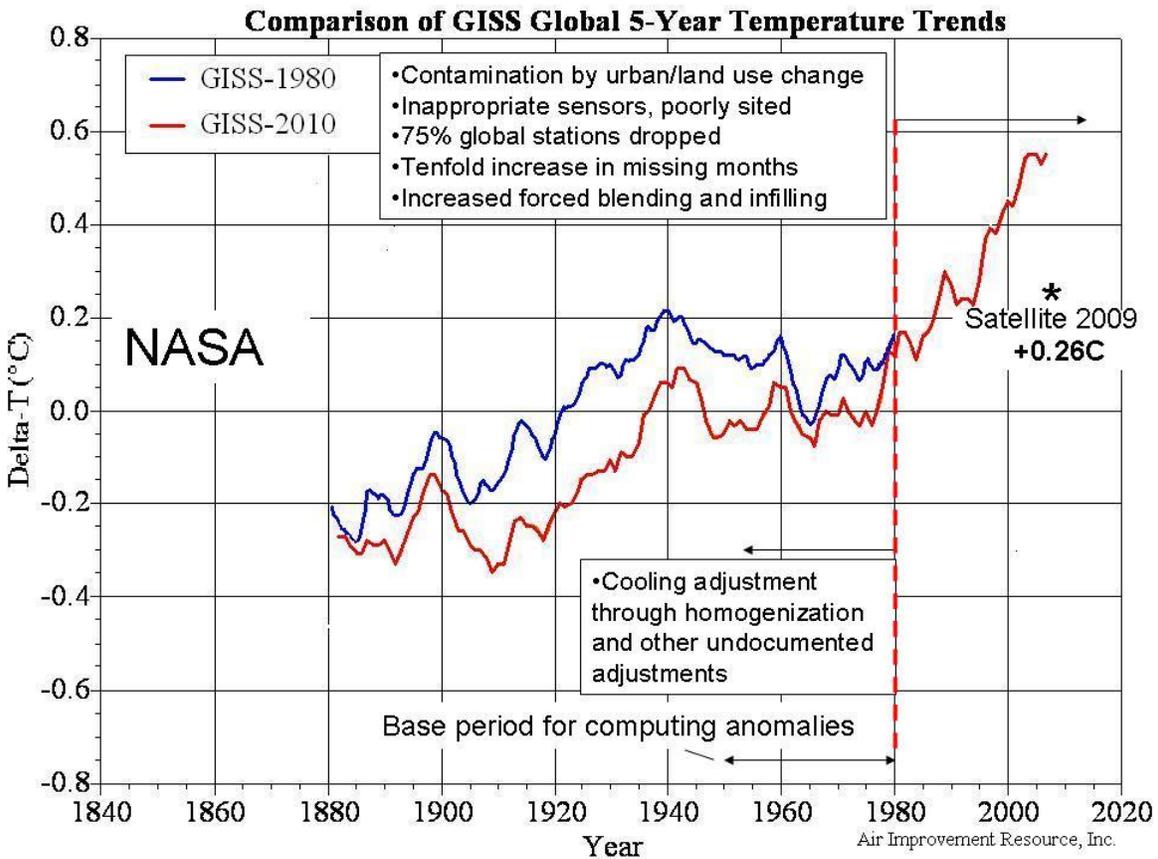
See in this Steve Goddard post [here](#) how Hansen blamed the cooling in recent years on La Nina but now has decided this El Nino warming is global greenhouse warming.

Bob Tisdale has relevant posts on Watts Up With That that [here](#) shows how NASA GISS removed arctic and Southern Ocean sea surface temperature data and then used 1200km smoothing that uses land stations to refill in the data (resulting in a warming) and [here](#)

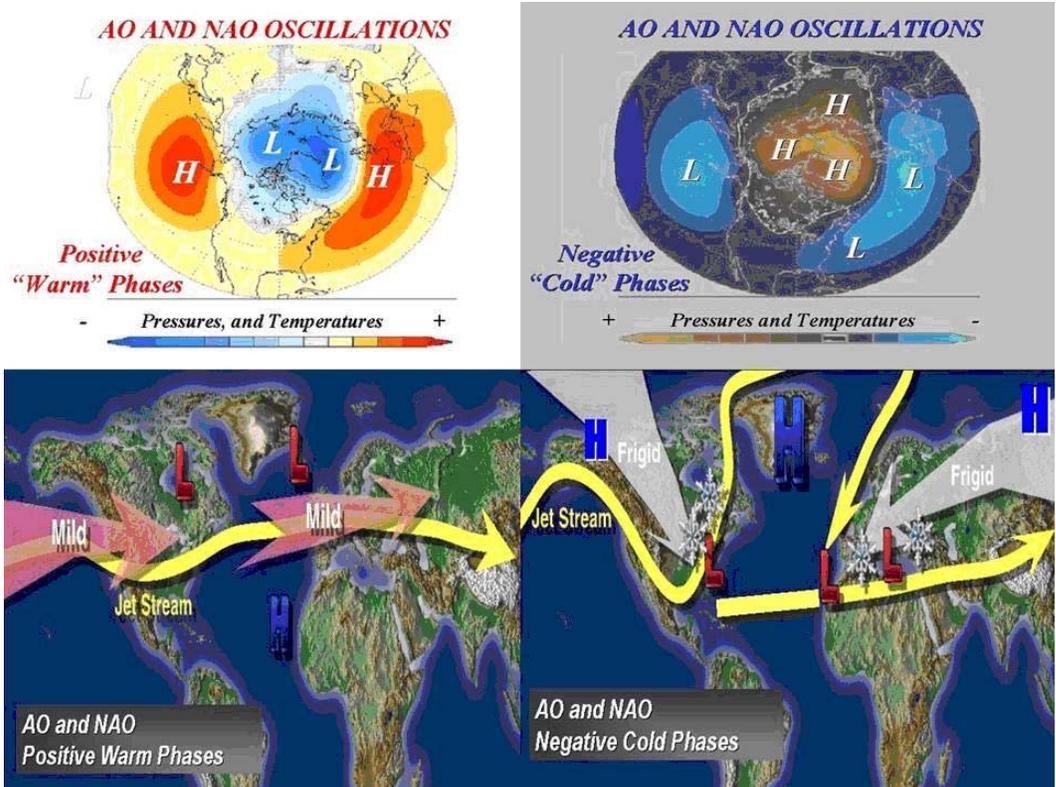
how leftover warm water from a strong El Nino gets spun up into the Kuroshio-Oyashio Extension (KOE) where it continues to release heat to help explain why the 'global warmth' has persisted into the early stages of the current La Nina.

Even Kevin Trenberth, head of climate analysis at the National Center for Atmospheric Research in Colorado, [admitted](#): “We have seen rapid warming recently, but it is an example of natural variation that is associated with changes in the Pacific rather than climate change.”

We have shown how NASA and the other data centers have mined the data for warmth and manipulated the data - new and old – to enhance the apparent warming. This includes a cooling of the pesky warm period from the 1920s to 1950s right up to 1980. This includes the base period for anomalies of 1951 to 1980. Numerous data issues post 1980 have exaggerated the warmth.



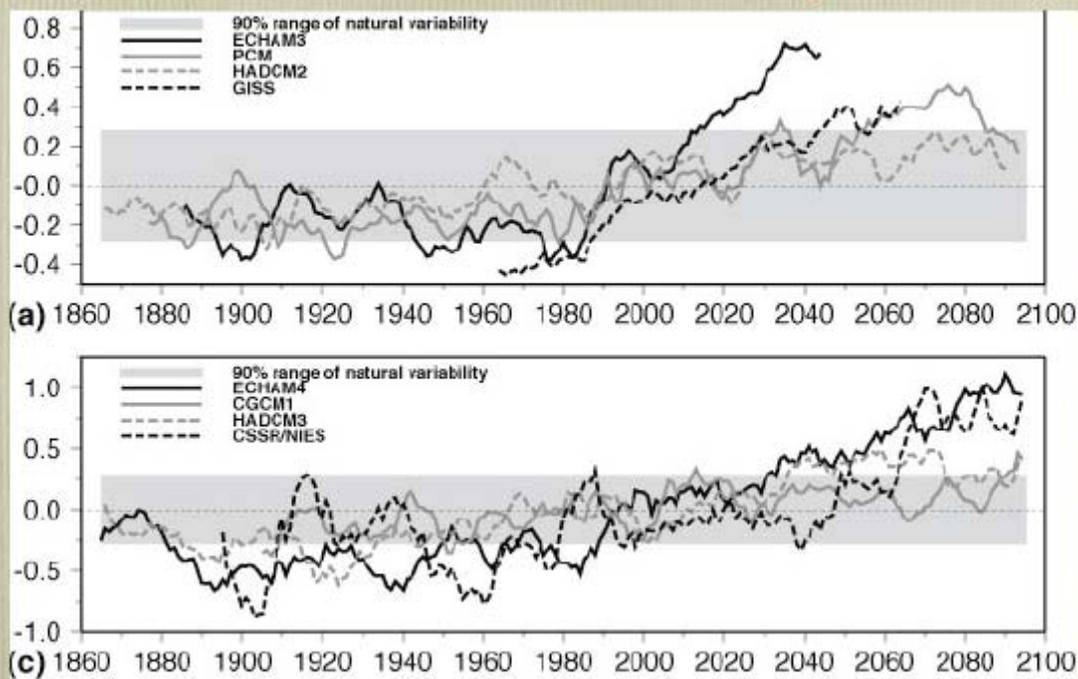
The warming NASA remarked about this fall in northeast Canada and Hudson Bay is part of the very strong negative arctic oscillation pattern we have seen the last few years, in part related to the long solar minimum and [high latitude volcanoes](#).



The positive AO state is characterized by an anomalously strong polar vortex that traps cold air in high latitude and more zonal mid-latitude jet stream that allows maritime Pacific air to invade North America and Atlantic air to flood Europe often as far east as the Urals. In the negative mode, high pressure dominates the polar region and North Atlantic, shunting arctic air south in North America and Siberian air west to Western Europe.

The greenhouse models all predict an increase in the frequency and strength of the positive arctic oscillation in time, most (2/3rds) exceeding the 90% range of natural variability.

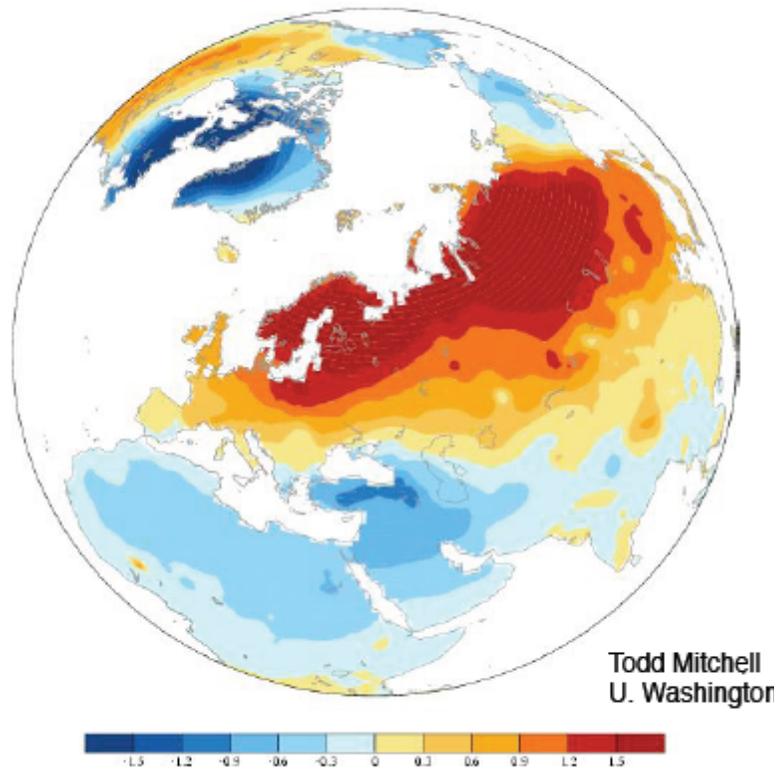
The AO in 8 GCMs forced by GHGs



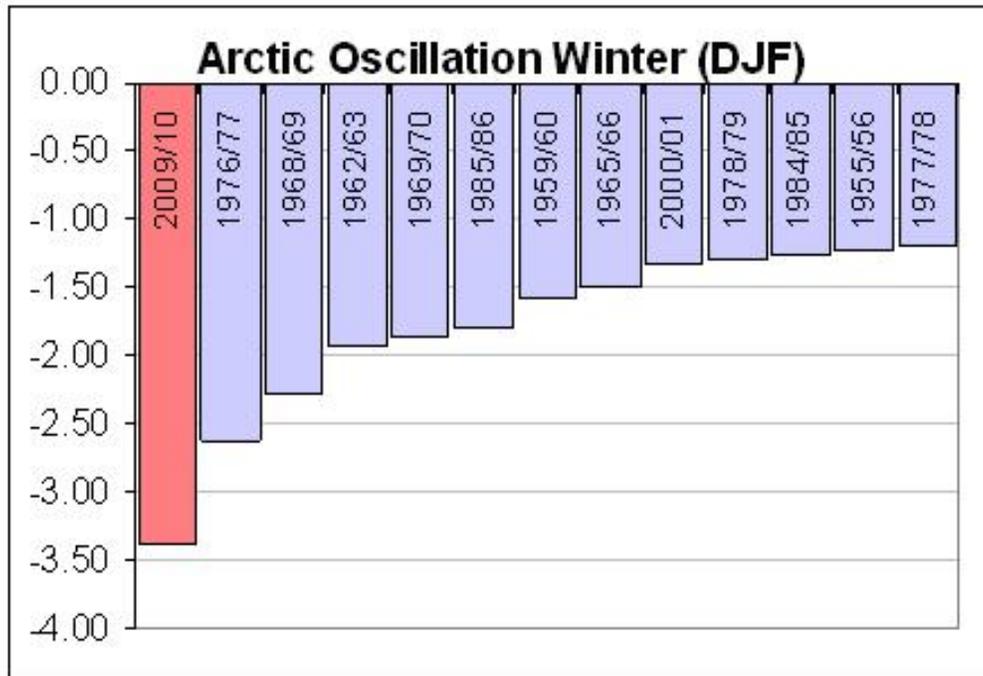
Rauthe, Hense & Paeth, 2004

A positive AO would lead to increasing temperatures in the Northern Hemisphere continents with colder than normal air trapped in the arctic down to the northern parts of Canada and Hudson Bay. The following from Mitchell shows the warmth over Eurasia.

Surface temperature correlation with Arctic Oscillation, 1950-96 (C)

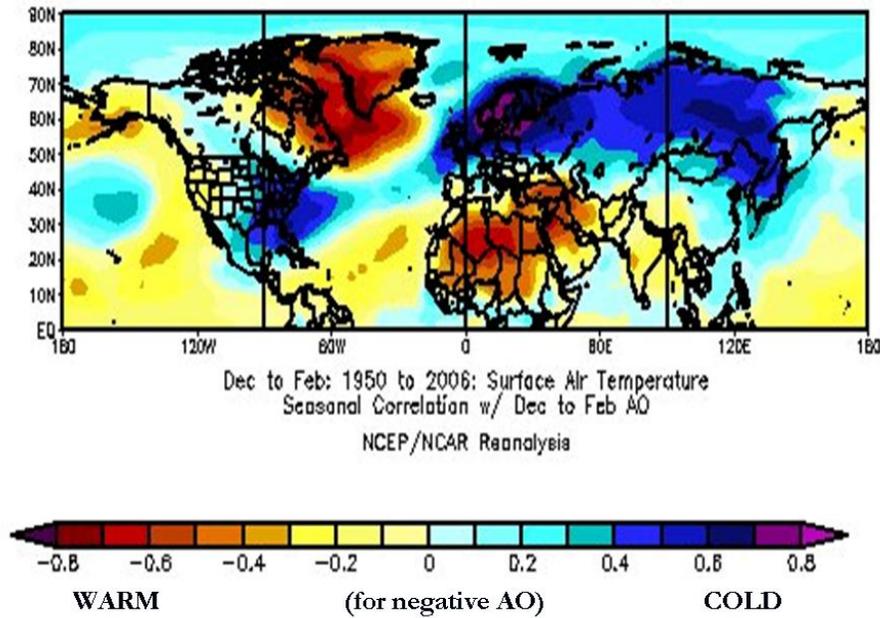


Last winter saw the most negative AO of the record back to 1950.

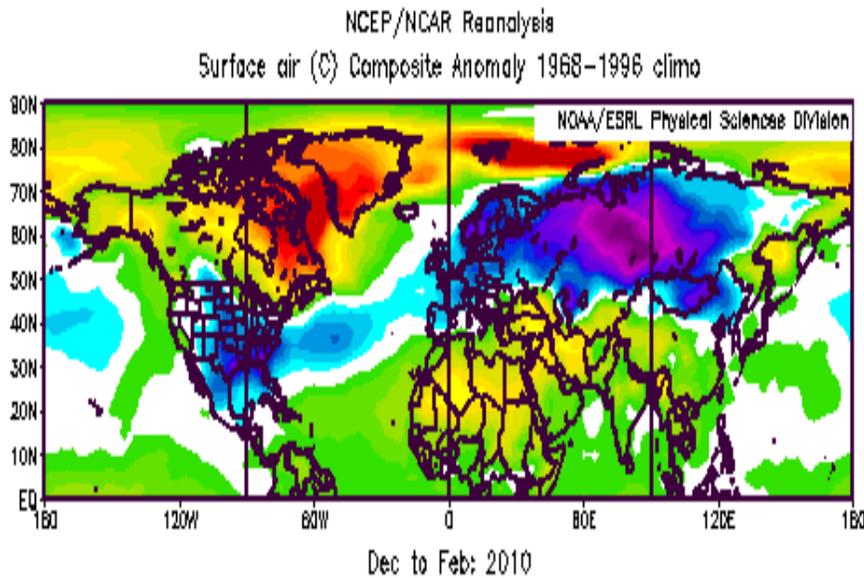


The global anomalies with a negative winter AO are as follows:

AO and Surface Temperatures (DJF)

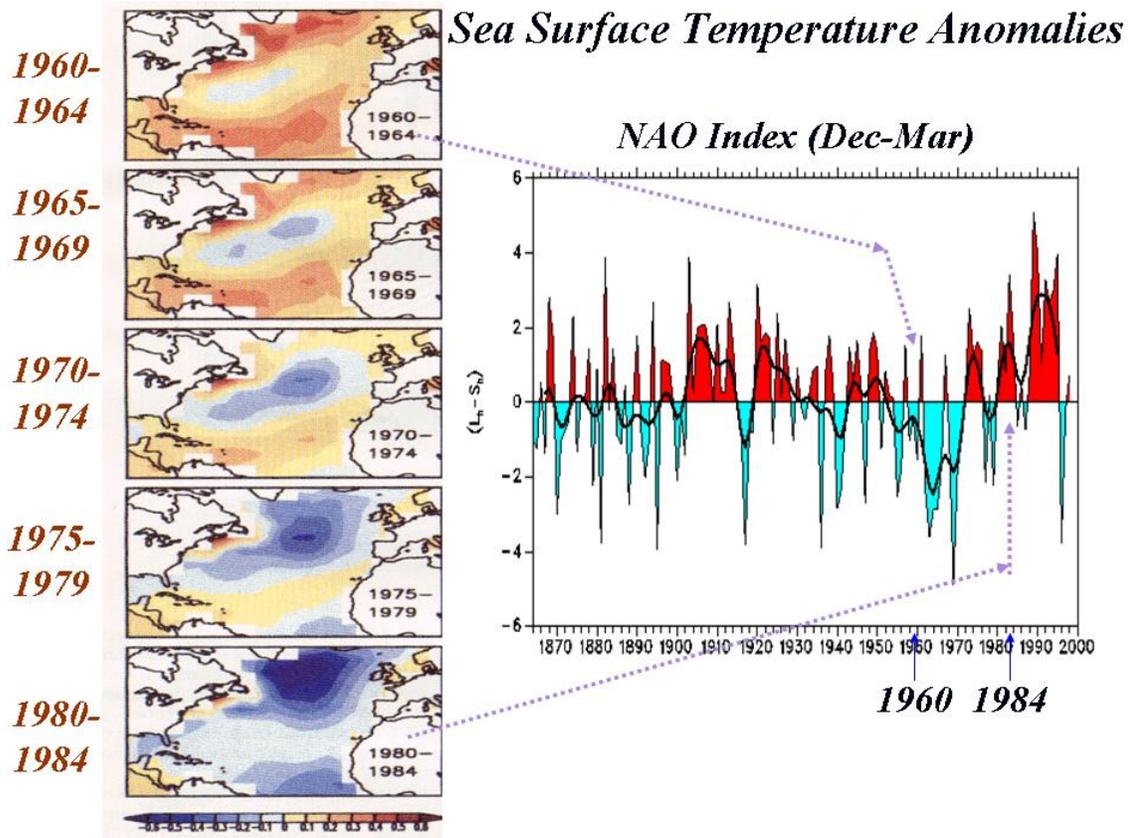


See how well that verified this past winter. No GHG need apply.



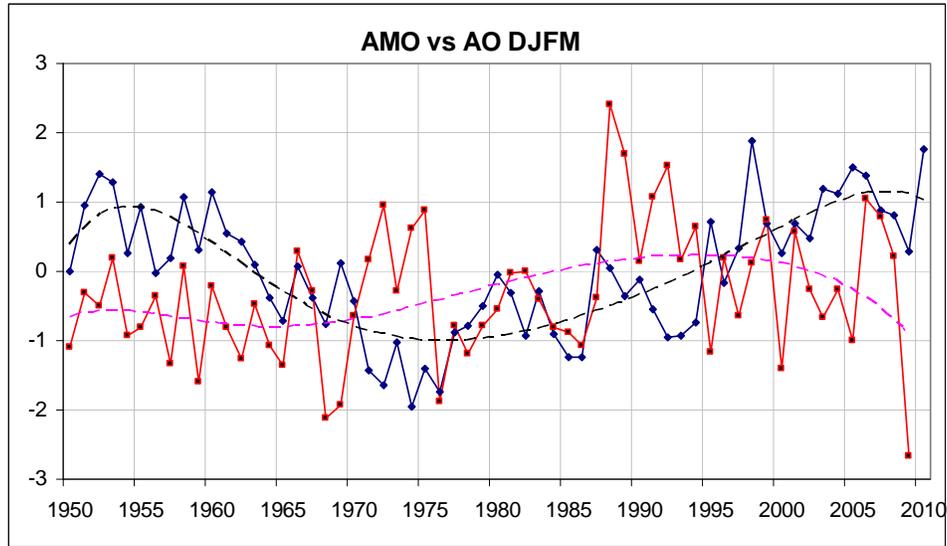
As noted, the North Atlantic Oscillation, an important component of the overall arctic oscillation varies with the ocean temperature tripole in the Atlantic, known as the AMO or Atlantic Multidecadal Oscillation. When the Atlantic is in the warm positive AMO mode as is currently the case, the NAO and AO tend to be more

negative.



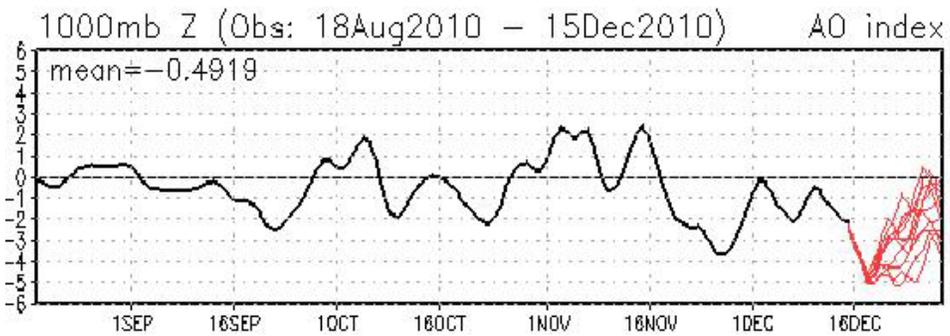
When the AMO is positive with warm water in the North Atlantic and in the Tropical Atlantic, the NAO was mainly negative (1960s). When the North and Tropical Atlantic turned cold in the 1980s, the NAO was mainly positive (Data in chart above through 1999). Note the AMO flipped positive (warm) in 1995 with a big dip in the NAO.

See the inverse relationship with the AO in the graph below. Data for both is averaged for the December through March periods and standardized.



So far this late fall, the AO has been mainly negative and forecast by the model ensembles overnight to reach 5 standard deviations negative the next few days.

AO: Observed & ENSM forecasts



This explains not only the brutal cold in Europe and Asia but also the amazing 11F negative anomalies in the southeastern United States.

