

First Look at December to March Global Patterns

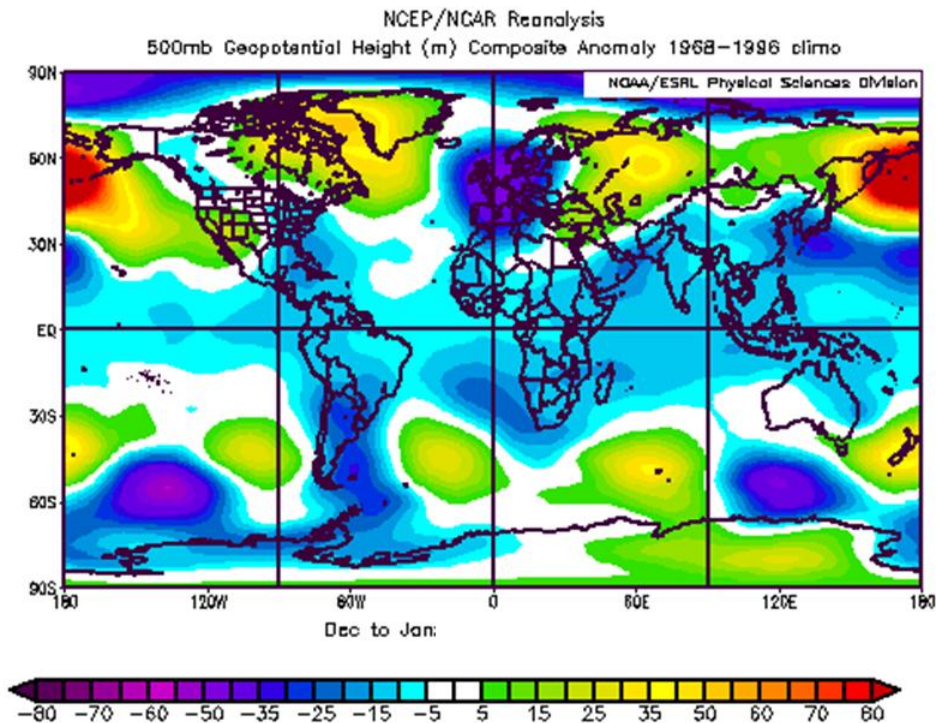
By Joseph D'Aleo

Last winter despite a strong El Nino was very cold (all-time coldest in some areas) in many parts of the Northern Hemisphere. A strong La Nina has come on during the summer, a very hot one (all-time in some of the very same areas where the winter was very cold). Other areas had record cool summer. The anomalies were not so much a case of extremes just persistence of the same pattern due to a stuck jet stream configuration.

Persistence is a characteristic of low solar years. The last several years have seen a lot of persistence within seasons. Strong El Ninos and La Ninas also tend to exhibit higher persistence.

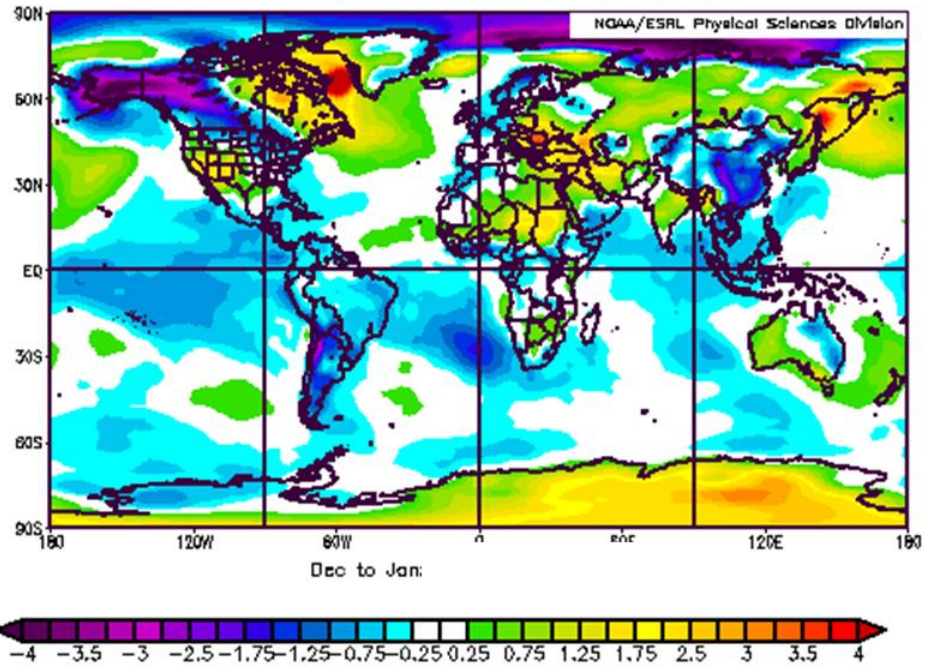
What about this winter? Well with a strong La Nina, cold PDO, warm Atlantic (AMO), QBO transitioning to westerly and a still low solar suggests the following.

The 500mb geopotential height anomalies for the globe for December/January:

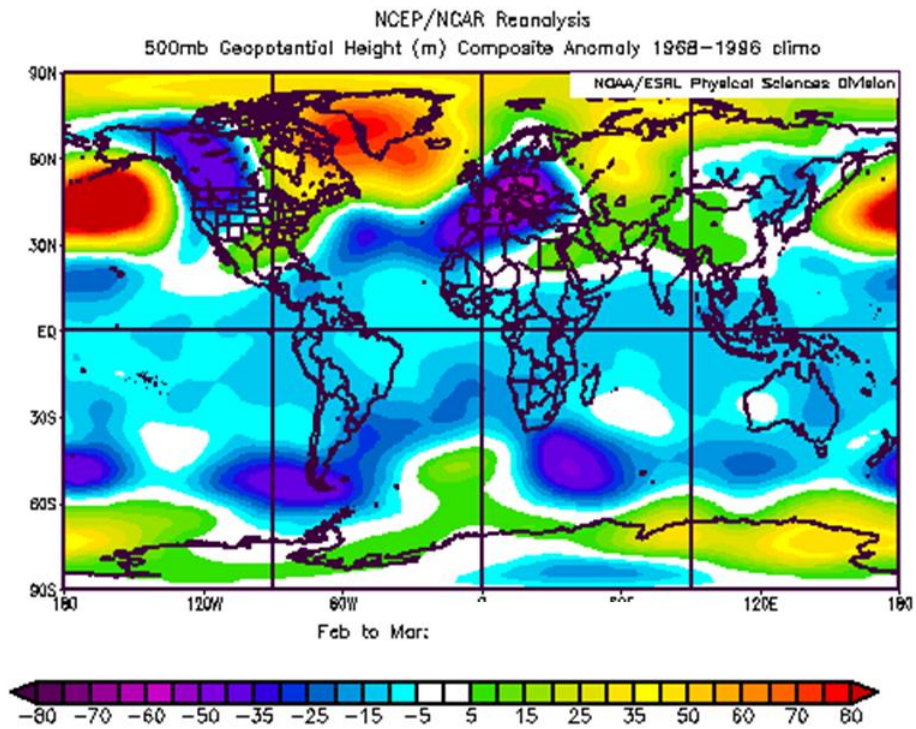


The surface temperature anomalies globally for December/January:

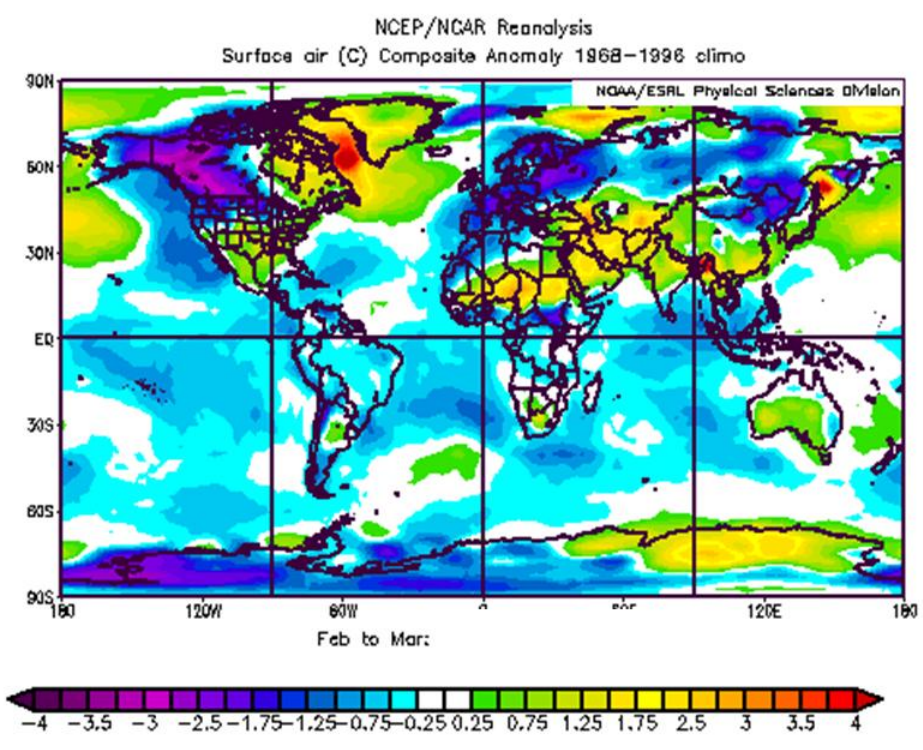
NCEP/NCAR Reanalysis
Surface air (C) Composite Anomaly 1968-1996 climo



The 500 mb geopotential height anomaly for February/March:



The surface temperature anomaly for February/March:

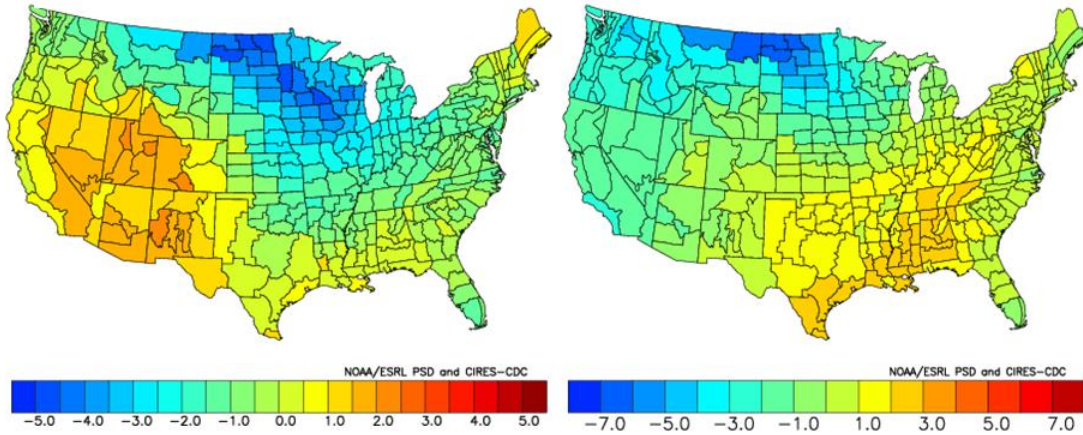


The winter (December/January and then February/March) for the United States.

Winter 2010/11

Composite Temperature Anomalies (F)

Composite Temperature Anomalies (F)



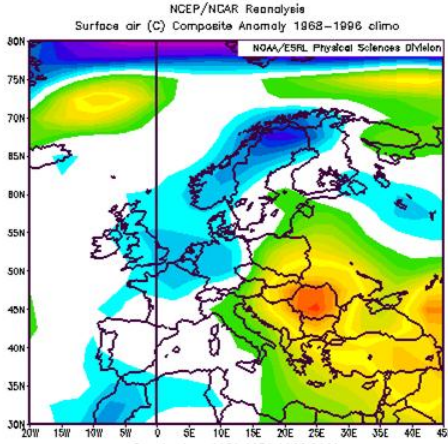
December/January

February/March

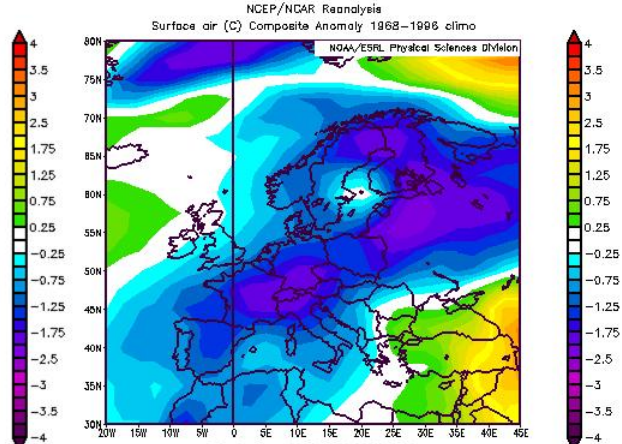
For the US, this implies another cold winter for the upper Midwest, probably again heavy snows for the northwest, Rockies, Northern Plains, Midwest and northern New York and New England with ice storm threat(s) further south.

The same for Europe and western Asia.

Winter 2010/11



December/January



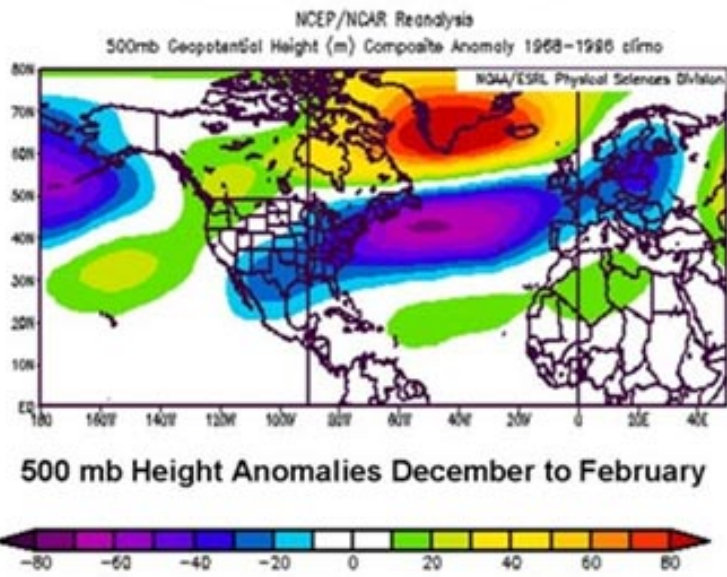
February/March

This should mean more snow and cold for Great Britain and eventually much of Europe where they are getting used to weather more like the Dalton Minimum with snowy winters and long cold spells.

The winter should start out cold in central and eastern United States, Western Europe and China. A cool summer start seems in the cards for South America. The late winter looks very cold in Europe and western Asia, while it retreats west in the United States. Blocking in the Arctic/North Atlantic, last year at a 60 year record level, appears to be again a major factor.

If you ask does this approach work, see how it worked last year when in the fall we predicted this pattern (height anomalies which correspond to surface temperature anomalies) for the winter at 500mb:

El Nino East Low Solar



This is what the 500mb anomalies actually looked like.

