

Arctic Ice Extent Outlook for September 2008(June)*Oleg M. Pokrovsky*

Current observing data confirm previous ice extent forecast. I expect higher ice extent magnitudes (at least 0.1 million km²) in September 2008 than those occurred in 2007. But, ice coverage will be quite different with account to those of 2007. More significant ice extent retreat is expected in Canadian/Alaska sector of Arctic due to enhance of warmer air inflow. In contrast, Russian sector will demonstrate more complicated picture. Less ice coverage is expected in Barents and Kara seas. In contrast, more strong ice sheet will be in Eastern Seas (Laptev and East-Siberian Seas). Latter might be explained by two factors:

- (i) Remained basin of warm waters in Barents Sea,
- (ii) Cold water basin in Bering Sea (fig.4) and colder air inflow in Eastern Siberia.

This assumption might be explained by following data:

- Higher ice extent values during January-May of 2008 with respect to corresponding data for 2007 (table).
- Lower SAT values in May 2008 with respect to corresponding data for 2007 ((with an exception of Arctic coast of Alaska and Canada)) (fig.1)
- Absence of persistent northward wind in North Pacific (fig.2a) directed to and entered in Arctic Ocean, which was a major cause of unprecedented ice melting and destruction in Eastern sector of Arctic last summer (fig.2b)
- The SST attains lower values in most Arctic margin seas (with an exception of Eastern Chukchi Sea) (fig.3)
- There is a negative tendency in the SST in the Arctic Mediterranean and in the North Pacific during last 3 years (fig.4). Thus, more cold waters will arrive in Arctic in next years.

Table. Comparison of the Arctic ice extent values between winter and spring months of 2007 and 2008.

Year/month	Arctic Ice extent (million sq. km)
2007/Feb	14.5
2008/Feb	15.0
2007/March	14.7
2008/March	15.2
2007/April	13.9
2008/April	14.5
2007/May	13.0
2008/May	13.2
2007/June	11.5
2008/June	11.4

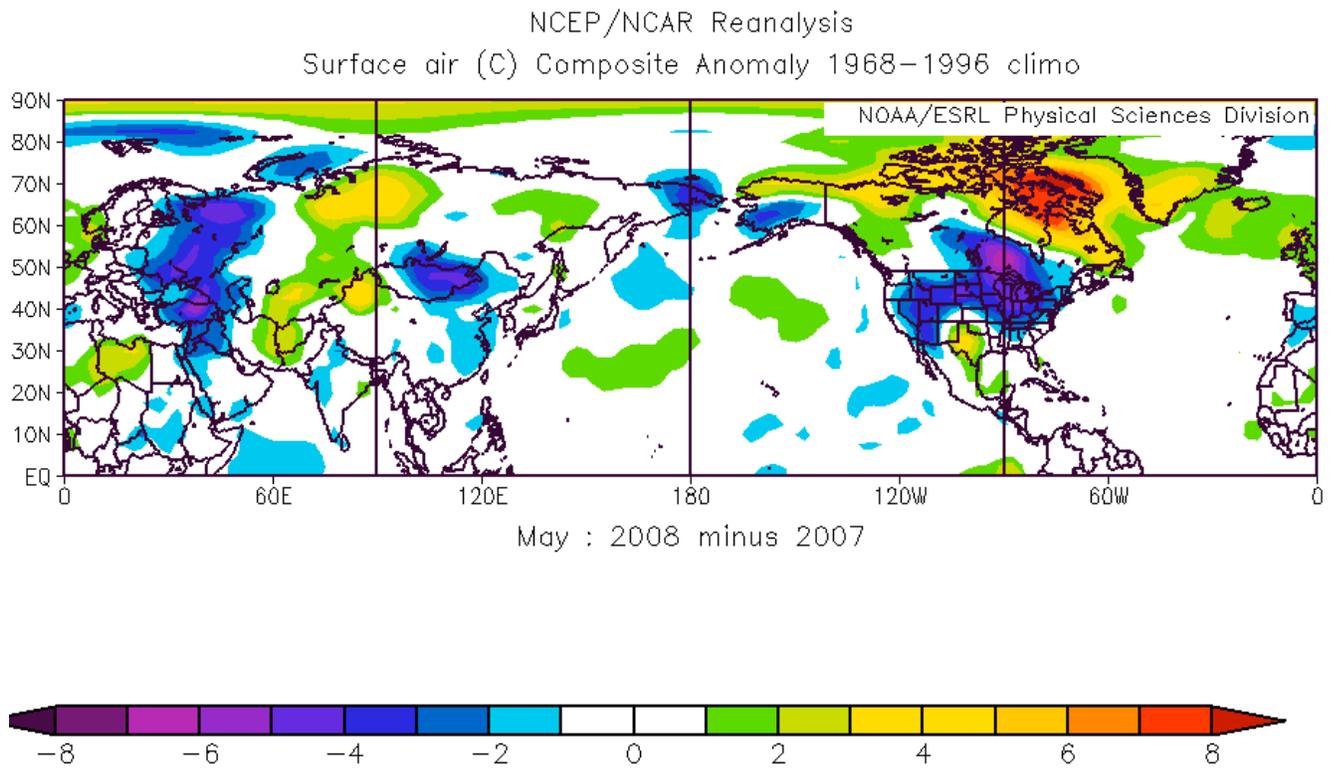


Figure 1: The SAT difference between May 2008 and May 2007.

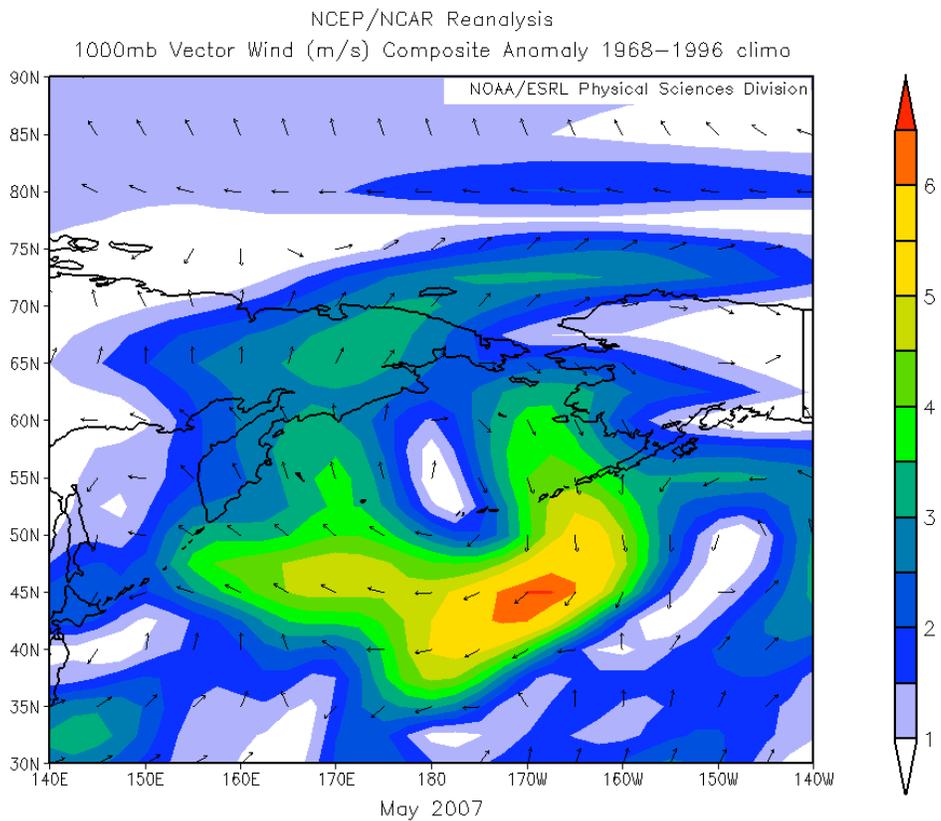
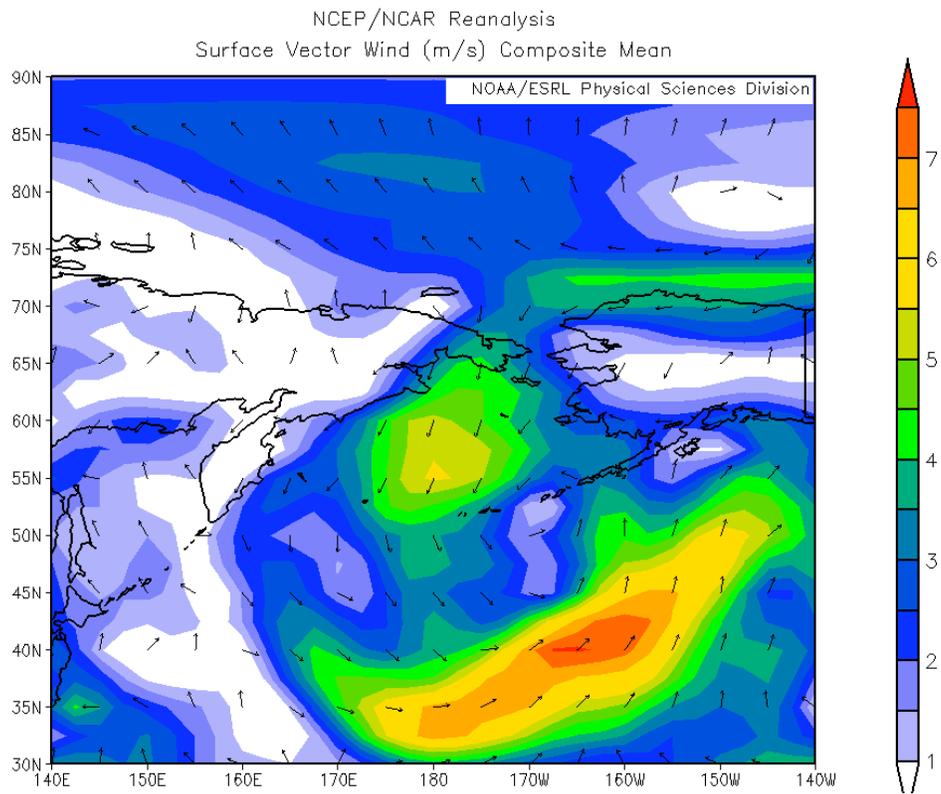


Figure 2: Vector wind fields: a) in May 2008; b) in May 2007

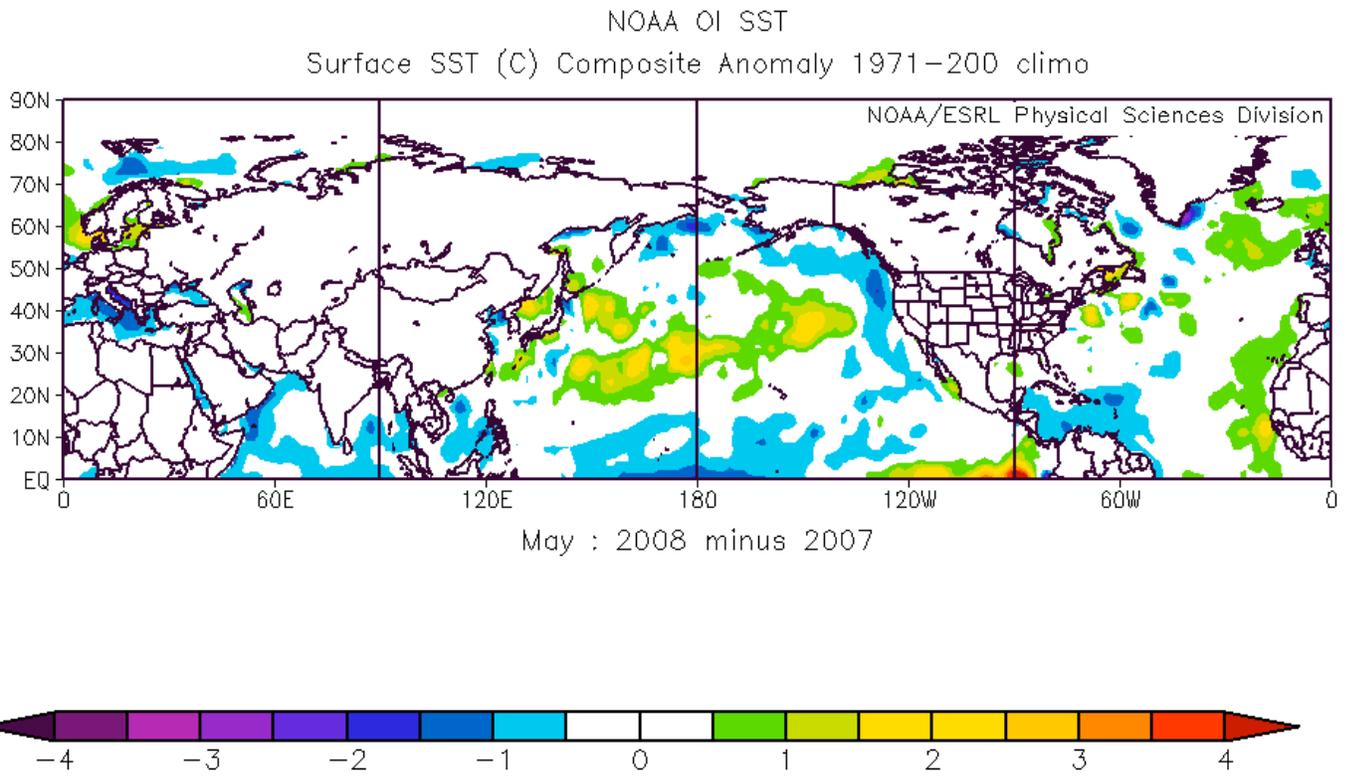


Figure 3: The SST difference between May 2008 and May 2007.

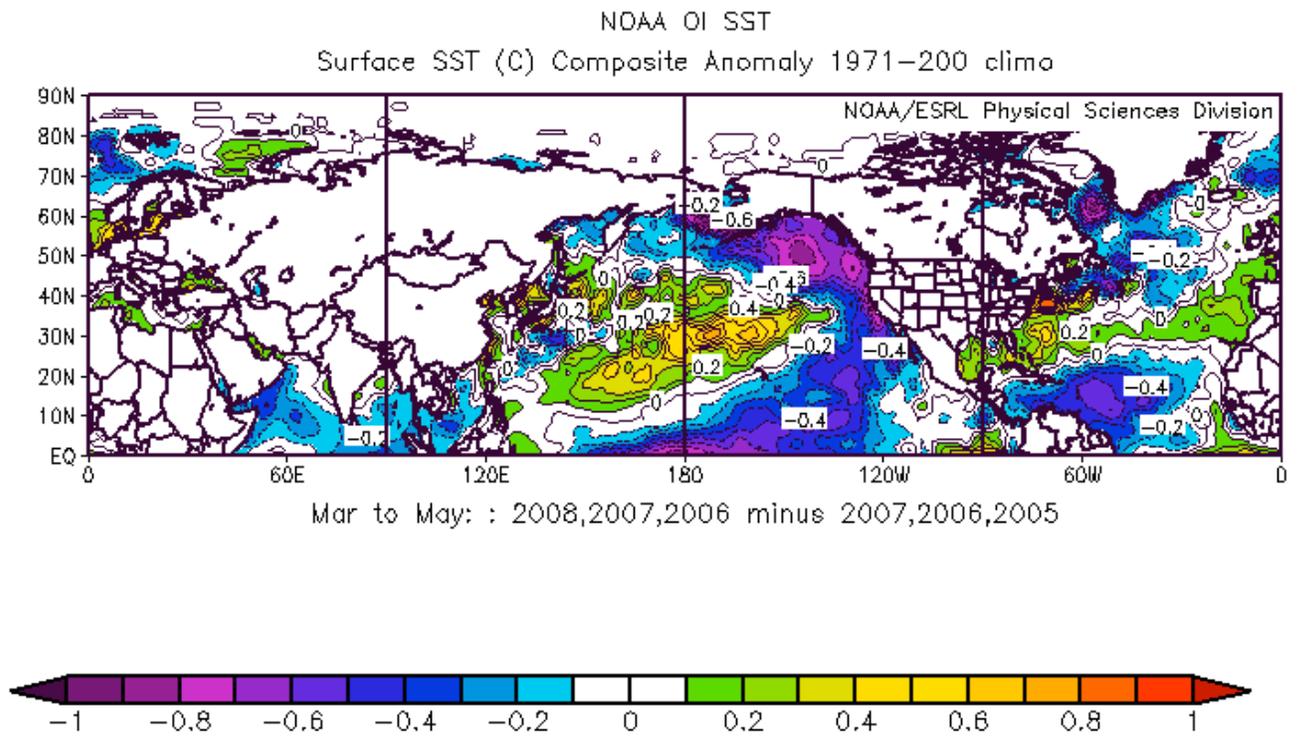


Figure 4: The SST difference between March-May of 2008-2006 and March-May 2007-2005.