

Final Remarks on the Arctic ice extent outlook for September 2008

There two major impact factors and mechanisms:

- SST fields
- SLP and wind velocity forcing

When compare summer SST fields (fig.1,2) for 2007 and 2008 one can see that there were a more strong positive anomaly in 2008's North-Western Pacific SST and more strong negative one in 2007's North-Eastern Pacific SST. In contrast, the 2008's Nordic Seas was colder than 2007's field as well as all Russian margin Seas. As a result, in 2007 one can observe northward inflow of warm air to Eastern Arctic through Russian Far East area (fig.3), and in 2008 – similar inflow via high latitude domain of North America (fig.4). Thus the most free of ice areas at this September are located in Chukchi and Beaufort Seas, but in 2007 those were in Russian sector of Arctic. The Atlantic sector of Arctic was more ice covered as it was impacted by more cold incoming Atlantic water in 2008 with account to those for 2007. Lower SLP in summer 2007 was a causal of more intensive transport of warm Atlantic water in last year summer, which impact on more intensive ice melting in Kara and Barents Seas. That was a major motivation to predict a significant positive shift in Arctic ice extent for this September.

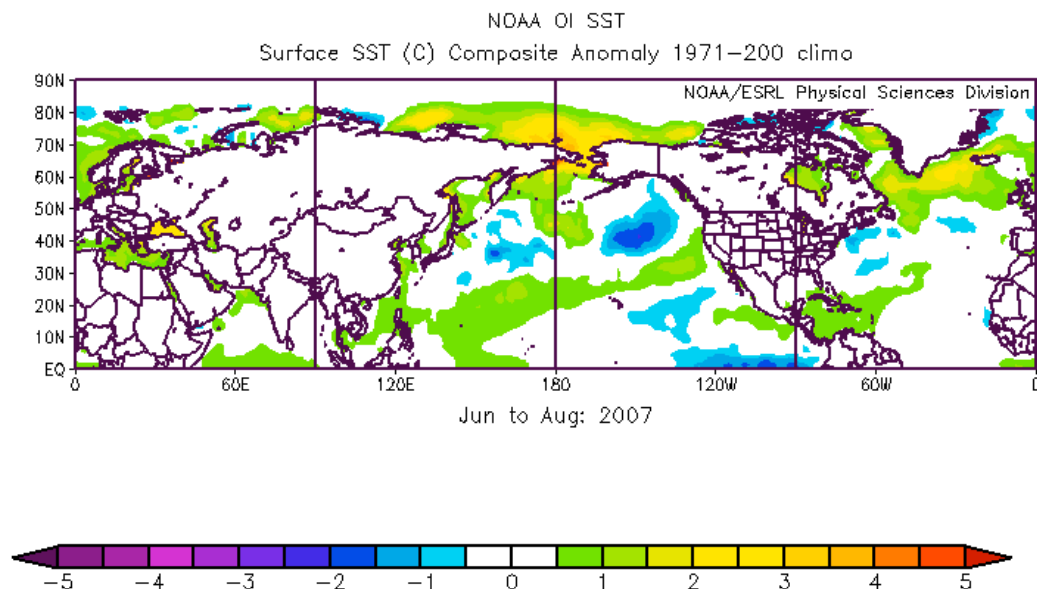


Figure 1. The SST anomaly field for summer 2007

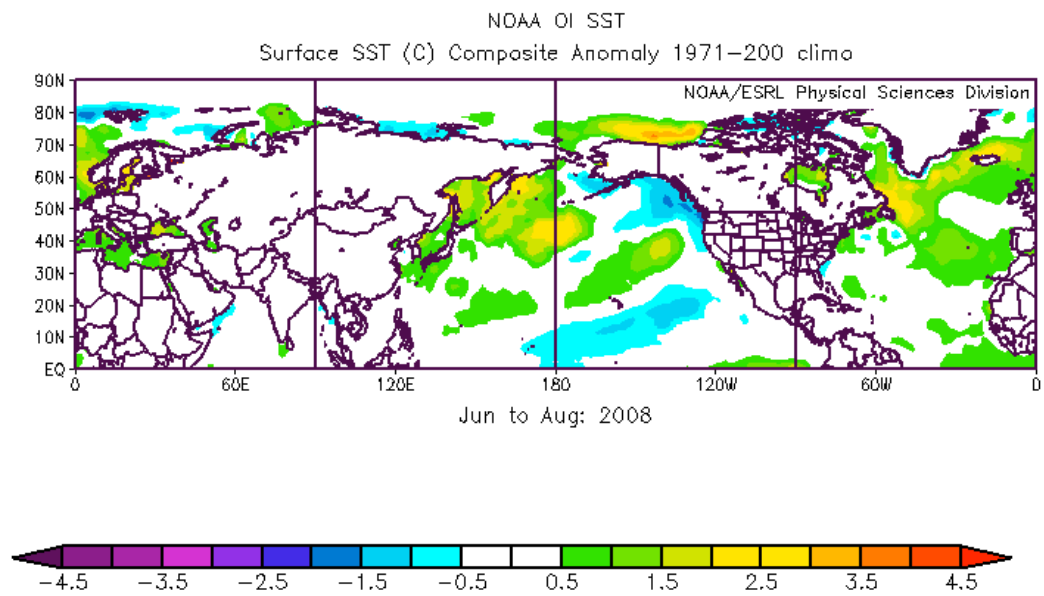


Figure 2. The SST anomaly field for summer 2007

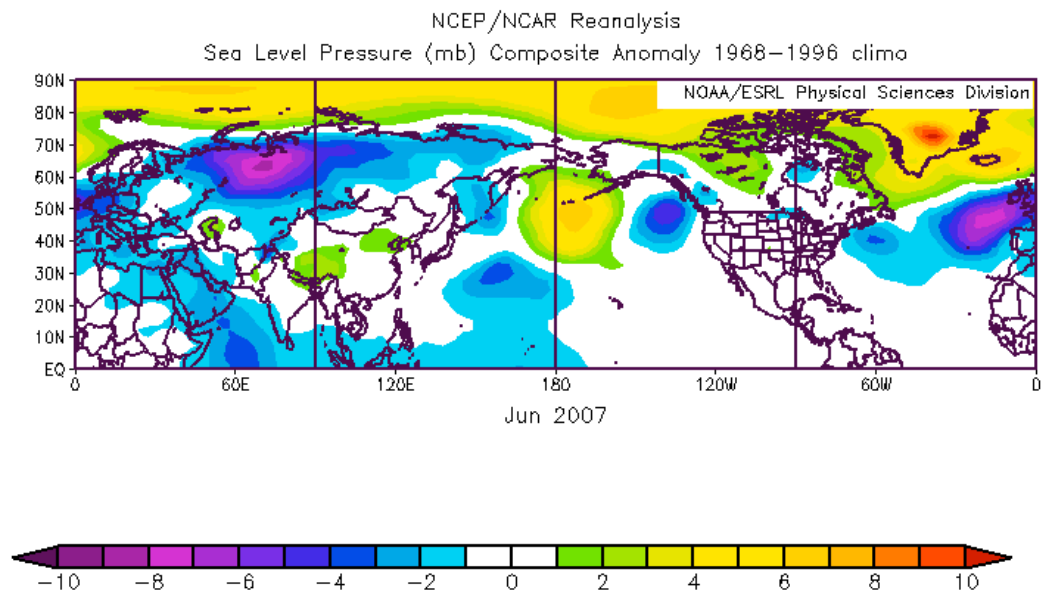


Figure 3. The SLP anomaly field for summer 2007

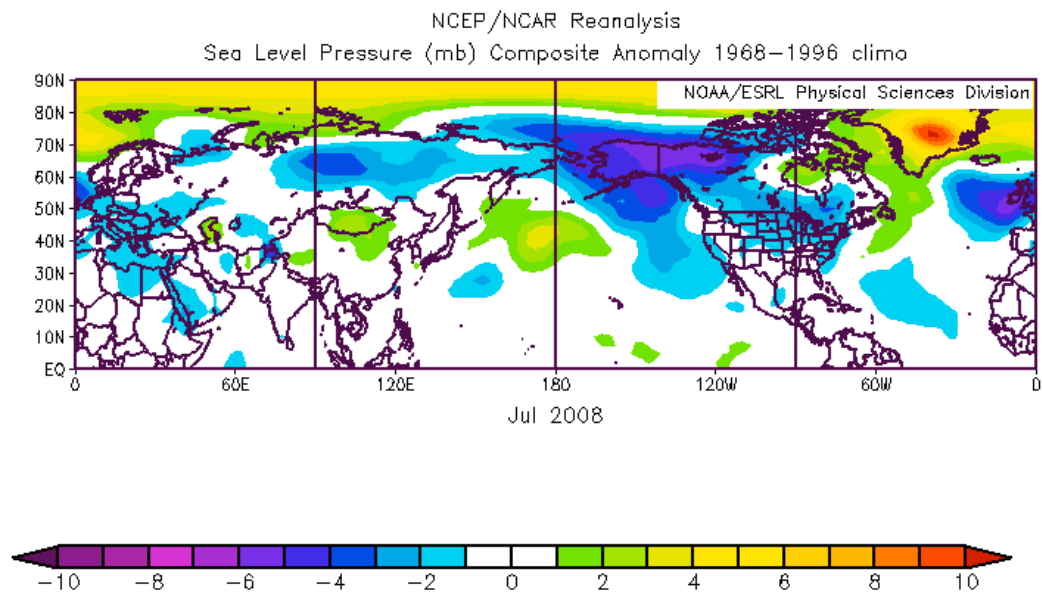


Figure 4. The SLP anomaly field for summer 2008