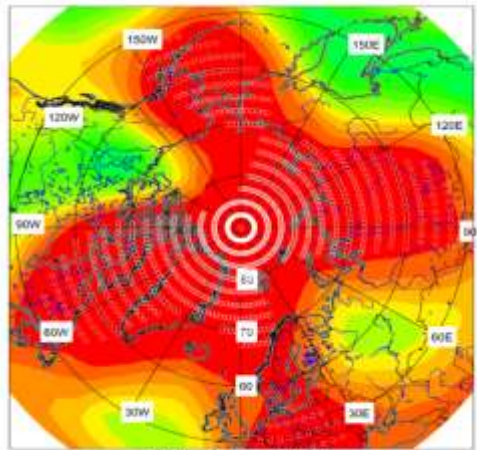


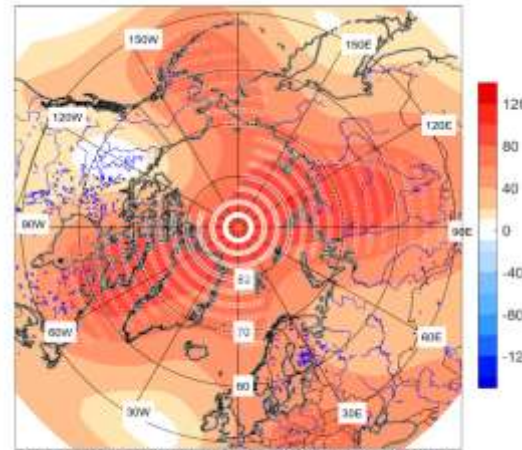


Atmospheric circulation for summer 2019

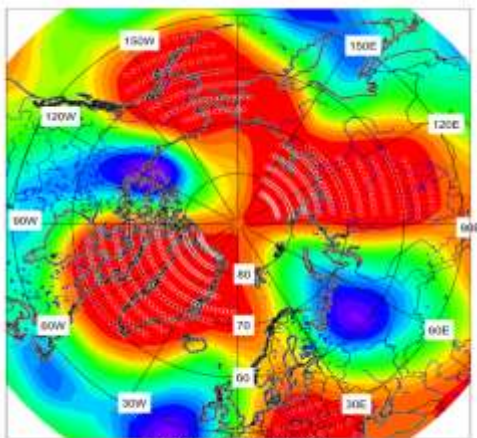
Atmospheric circulation and rankings in the stratosphere and troposphere



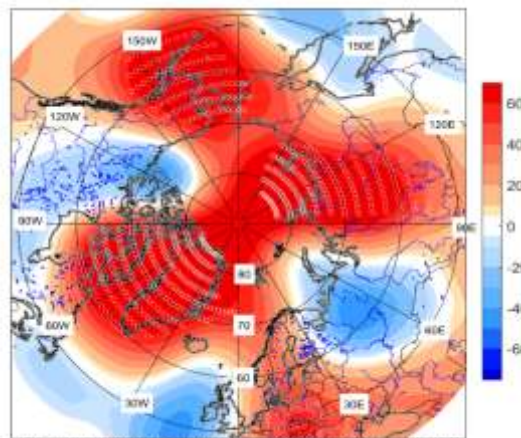
H100 Rank JJA 2019.



H100 gpm anomalies (norms 1981-2010). JJA 2019.



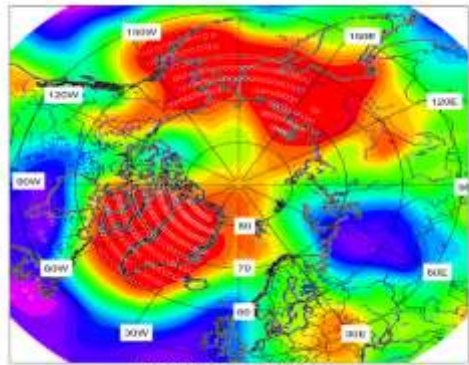
H500 Rank JJA 2019.



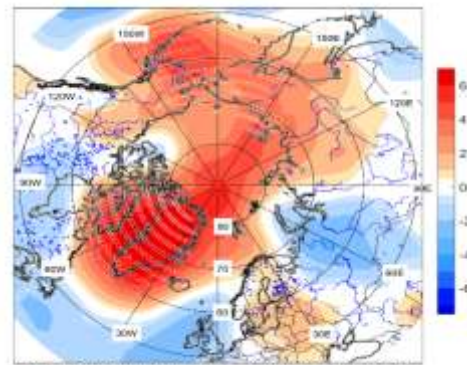
H500 gpm anomalies (norms 1981-2010). JJA 2019.

- Intense stratospheric anticyclone
- The weak tropospheric polar vortex and its splitting into two centers, the negative phase of the Arctic oscillation;
- The negative phase of NAO (NAO), intensification of meridional processes and blocking processes in the troposphere;
- The deep and strong cyclone over the northern part of European Russia;
- The most intense anticyclone was located over northern Canada and Greenland.

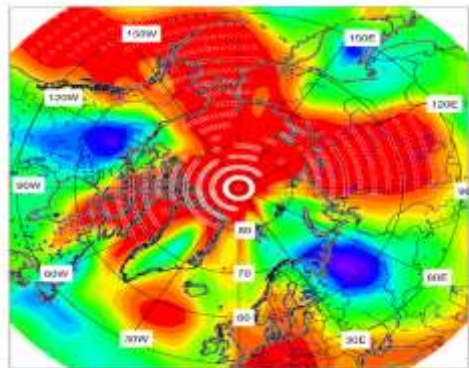
Temperature and precipitation anomalies and rankings



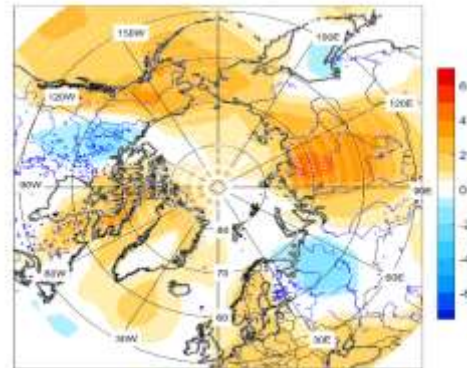
MSLP Rank JJA 2019.



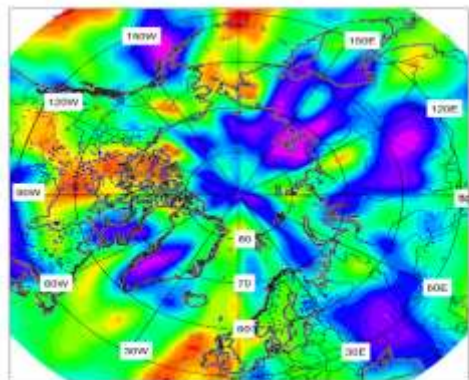
MSLP hPa anomalies (norms 1981-2010). JJA 2019.



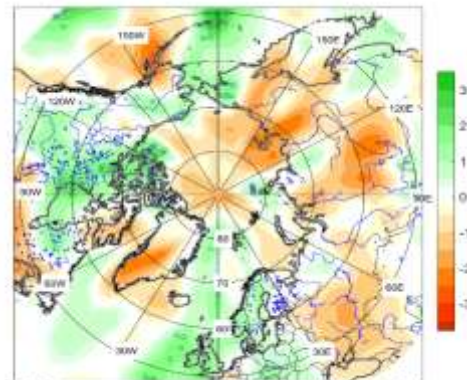
T2M Rank JJA 2019.



T2M deg anomalies (norms 1981-2010). JJA 2019.



PREC Rank JJA 2019.



PREC sigma anomalies (norms 1981-2010). JJA 2019.

- In the polar region, long existing anticyclones led to the formation of large positive air pressure anomalies;

- A deep cyclone was observed in the north of European Russia and in the north of the Urals. Under the influence of the cyclone, temperature was below normal, and precipitation was above normal;

- Active cyclonic activity in the south of Siberia and the Far East contributed to the formation of negative air pressure anomalies, which caused an excess of precipitation, and in some areas led to flooding;

- In the area of high atmospheric pressure in most of Siberia, except of the southern regions, there was a deficit of precipitation and temperature was above normal. A record temperature anomaly was observed in Eastern Siberia, + 2.9 ° C.