Sea Ice (Pan-arctic) Outlook for 2016 (July Report)
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1. Name of Contributors: **Xingren Wu** and **Robert Grumbine**

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3. Do you want your contribution to be included in subsequent reports in the 2016 season?
Yes, use this contribution for all of the 2016 SIO reports (this contribution will be superseded if you submit a later one).

4. Executive Summary
The projected **Arctic minimum sea ice extent** from the NCEP CFSv2 model with revised CFSv2 May and June initial conditions (ICs) using 61-member ensemble forecast is **4.09** million square kilometers with a standard deviation (**SD**) of **0.54** million square kilometers.

5. Type of Outlook Method**: dynamic model**

6. Dataset of initial Sea Ice Concentration (SIC) used: **NCEP Analysis** for the CFSv2 (May 1-June 30, 2016)

7. Dataset of initial Sea Ice Thickness (SIT) used: **NCEP CFSv2 model guess** with bias correction (May 1-June 30, 2016)

8. Dynamic model

a)	Model Name:	**NCEP CFSv2**	
b)	Component	Name	Initialization
	Atmosphere	**NCEP GFS**	**NCEP CDAS**
	Ocean	**GFDL MOM4**	**NCEP GODAS**
	ICE	**Modified GFDL SIS**	**SIC nudging**

c) 61 ensemble members (May 1-June 30 2016, each day at 00Z cycle)

9. Prediction of September pan-Arctic extent: **4.09 million square kilometers**

10. Prediction of the week that the minimum daily extent will occur: Week of 11 September

11. Short explanation of Outlook method:
We ran the NCEP CFSv2 model with 61-case of May and June 2016 revised ICs. The IC was modified from real time CFSv2 of each day at 00Z by thinning the ice pack (based on test from previous years' sea ice outlook). If this thinning would have eliminated ice from areas observed to have sea ice, a minimum thickness of 10 cm was left in place for the ice IC.