

Sea Ice (Pan-arctic) Outlook for 2016 (June 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Yes, use this contribution for all of the 2016 SIO reports (this contribution will be superseded if you submit a later one).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 initial conditions (ICs) using 31-member ensemble forecast is **3.95** million square kilometers with a standard deviation (**SD**) of **0.41** million square kilometers. The Minimum and Maximum values for the Arctic sea ice extent in the 31-member ensemble prediction are 3.35 and 4.89 million square kilometers, respectively.

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

6. Dataset of initial Sea Ice Concentration (SIC) used: **NCEP Analysis** for the CFSv2 (May 1-31, 2016)

7. Dataset of initial Sea Ice Thickness (SIT) used: **NCEP CFSv2 model guess** with bias correction (May 1-31, 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) 31 ensemble members (May 1-31 2016, each day at 00Z cycle)

9. Prediction of September pan-Arctic extent: **3.95 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 31-case of May 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 20 cm was left in place for the ice IC.