

## Sea Ice (Pan-arctic) Outlook for 2015

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1. Contributor Names: Xingren Wu and Robert Grumbine

2. Type of Outlook projection: Model

Model Name: **NCEP CFSv2**

Atmosphere: **NCEP GFS**, Ocean: **GFDL MOM4**, Land: **NOAH**,

ICE: **Modified GFDL SIS**, Coupler: **NCEP CFS**

3. September monthly average projection: **4.6** million square kilometers

4. Short explanation of Outlook method

We ran the NCEP CFSv2 model with 31-case of May 2015 revised initial conditions (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. There is no correction from the forecast data.

5. Projection uncertainty estimate: **0.44** million square kilometers

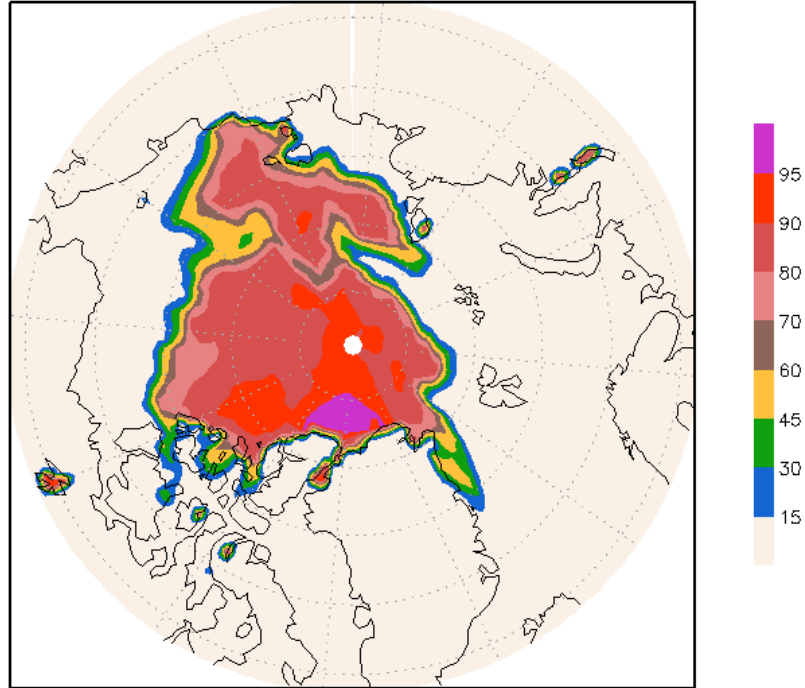
6. Short explanation/assessment of basis for the uncertainty estimate:

The uncertainty is based on the standard deviation (SD) from the 31-case forecast. The spatial distribution of the mean and SD for sea ice concentration is attached.

7. Executive Summary

The projected Arctic minimum sea ice extent from the NCEP CFSv2 model with revised CFSv2 May ICs using 31-member ensemble forecast is 4.56 million square kilometers with a SD of 0.44 million square kilometers. The Minimum and maximum values for the Arctic sea ice extent from the 31-member ensemble prediction are 3.67 and 5.30 million square kilometers, respectively.

Ice Conc (%) Predicted for Sept 2015 w/ May IC



Ice Conc (%) S.D. for Sept 2015 w/ May IC

