

Same as June Outlook, with updated value for July:

Our projection using the NCEP CFSv2 with 30-case of June 2014 revised initial conditions (ICs) is:

September monthly average: 5.1 million square kilometers

Uncertainty: 0.56 million square kilometers

Although the uncertainty dropped from the case of May to June IC, it is still much higher than the previous years.

Sea Ice (Pan-arctic) Outlook for 2014

Xingren Wu, Robert Grumbine and Wanqiu Wang
NOAA/NCEP

1. Contributor Names: Xingren Wu, Robert Grumbine and Wanqiu Wang

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: **4.8** million square kilometers

4. Short explanation of Outlook method

We ran the NCEP CFSv2 model with 31-case of May 2014 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: **0.65** million square kilometers

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

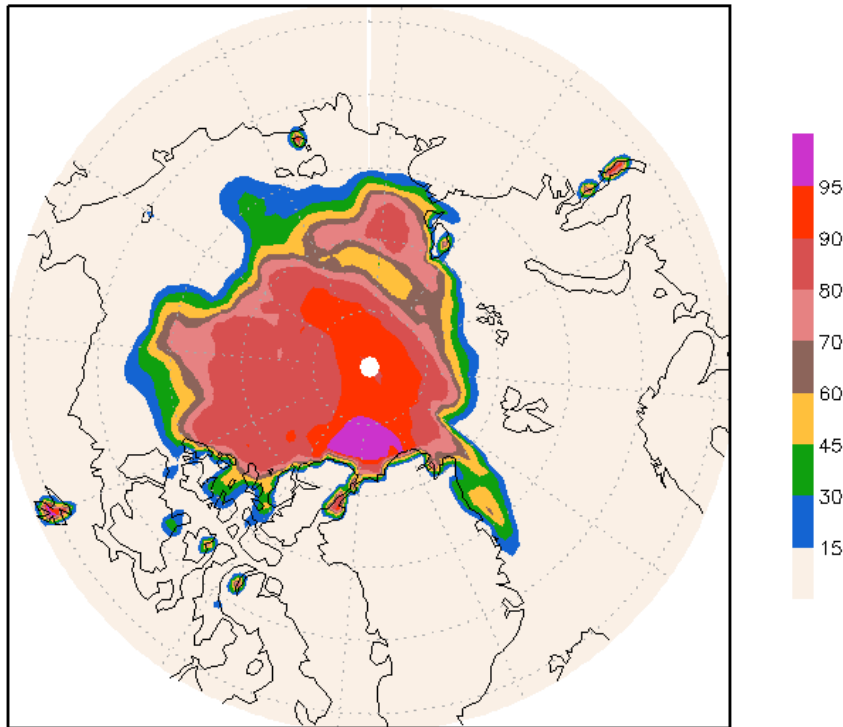
The uncertainty is based on the standard deviation (SD) from the 31-case forecast. The spatial distribution of the mean and SD for sea ice

concentration is attached. The sea ice extent based on the mean sea ice concentration from the 31-case is 5.3 million square kilometers, which is higher than the mean sea ice extent from the 31 cases, as expected.

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 4.8 million square kilometers with a SD of 0.65 million square kilometers. The maximum and minimum value for the Arctic sea ice extent from the 31-member ensemble prediction is 3.64 and 5.85 million square kilometers, respectively.

Ice Conc (%) Predicted for Sept 2014 w/ May IC



Ice Conc (%) S.D. for Sept 2014 w/ May IC

