Sea Ice (Pan-arctic) Outlook for 2014

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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

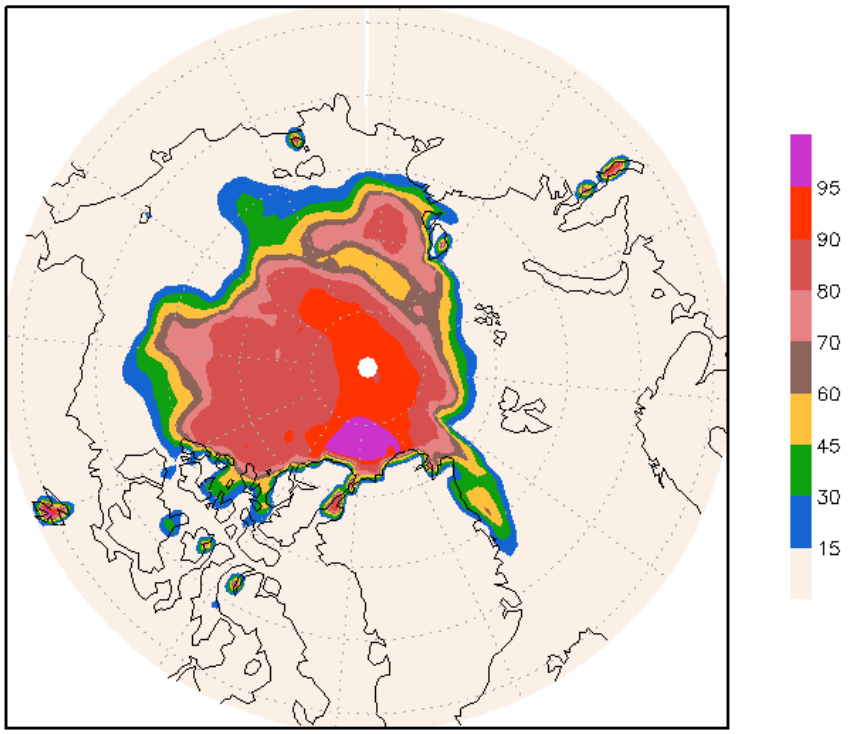
4. Short explanation of Outlook method
We ran the NCEP CFSv2 model with 31-case of May 2014 revised initial conditions (ICs). The IC was modified from real time CFSv2 of each day at 00Z by thinning the ice pack (based on test from previous years' sea ice outlook). If this thinning would have eliminated 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