

SEA ICE PREDICTION NETWORK (SIPN)
Template for Pan-Arctic Sea Ice Outlook Core Contributions
August 2015 Report

*REQUIRED

1. *Contributor Name(s)/Group – **Nightvid F. Cole**

1b. (Optional but helpful for us): Primary contact if other than lead author; name and organization for all contributors; total # of people who may have contributed to your Outlook, even if not included on the author list. **-N/A**

2. * Individuals submitting "public" contributions should self-identify here:
___(check)___ Yes, this is a "public" contribution.

3. *"Executive summary" about your Outlook contribution (max 300 words)
Say in a few sentences what your Outlook contribution is and why. To the extent possible, use non-technical language.

The purpose of this contribution is to make use of the extent of high-concentration ice on August 5 as a predictor of the September extent. Data was from MyOcean (TOPAZ4 model) once again; the concentration threshold is 60%.

4. *Type of Outlook projection
statistical

5. *September monthly average projection (extent in million square kilometers. To be consistent with the validating sea ice extent index from NSIDC, if possible please first compute the average concentration for the month and then compute the extent as the sum of area of all cells > 15%.)

3.90 Million km²

6. *Short explanation of Outlook method (max 300 words)

The region of ice concentration >60% on August 5 from MyOcean source was used as a predictor variable, and a linear regression was performed of September NSIDC extent vs. >60% concentration area on August 5. The years used to determine the slope and intercept of the regression line are 2012-2014. Area was determined using pixel counting in MATLAB, beginning from downloadable PNG file.

7. Projection uncertainty/probability estimate for September extent (only required if available with the method you are using)

+/- 0.17 Million km²

8. Short explanation/assessment of basis for the uncertainty estimate in #6 (1-2 sentences)

Margin of uncertainty is +/- 2 * σ , where σ is the standard deviation of the residuals found from regression, with 1 degree of freedom since 3 years are used and 2 parameters are derived from the data.