

SEA ICE PREDICTION NETWORK (SIPN)

Template for Pan-Arctic Sea Ice Outlook Core Contributions

August 2015 Report (Using July Data)

1. *Contributor Name(s)/Group

Andrew Slater

2. *Type of Outlook projection
___model statistical ___heuristic

If you use a model, please specify:

Model Name **SPIE**

Components of the model: Atmosphere___, Ocean___, Ice___, Land___, Coupler___

For non-coupled model: Ice , Ocean___, Forcing___

3. *September monthly average projection (in million square kilometers)

4.55 ± 0.35 × 10⁶ km²

4. *Short explanation of Outlook method (1-3 sentences)

I have extended my model prediction out to a lead time of 53 days. The method is effectively the same as my "standard" 50 day forecast.

<http://cires.colorado.edu/~aslater/SEAICE/>

The method has real skill (as measured by Schröder *et al.* [2014]) at 53 days over the period 1995-2013. I believe(?) this forecast has equal or greater skill *at this lead time* than the Schröder *et al.* method.

5. Projection uncertainty/probability estimate (only required if available with the method you are using)

0.35 × 10⁶ km²

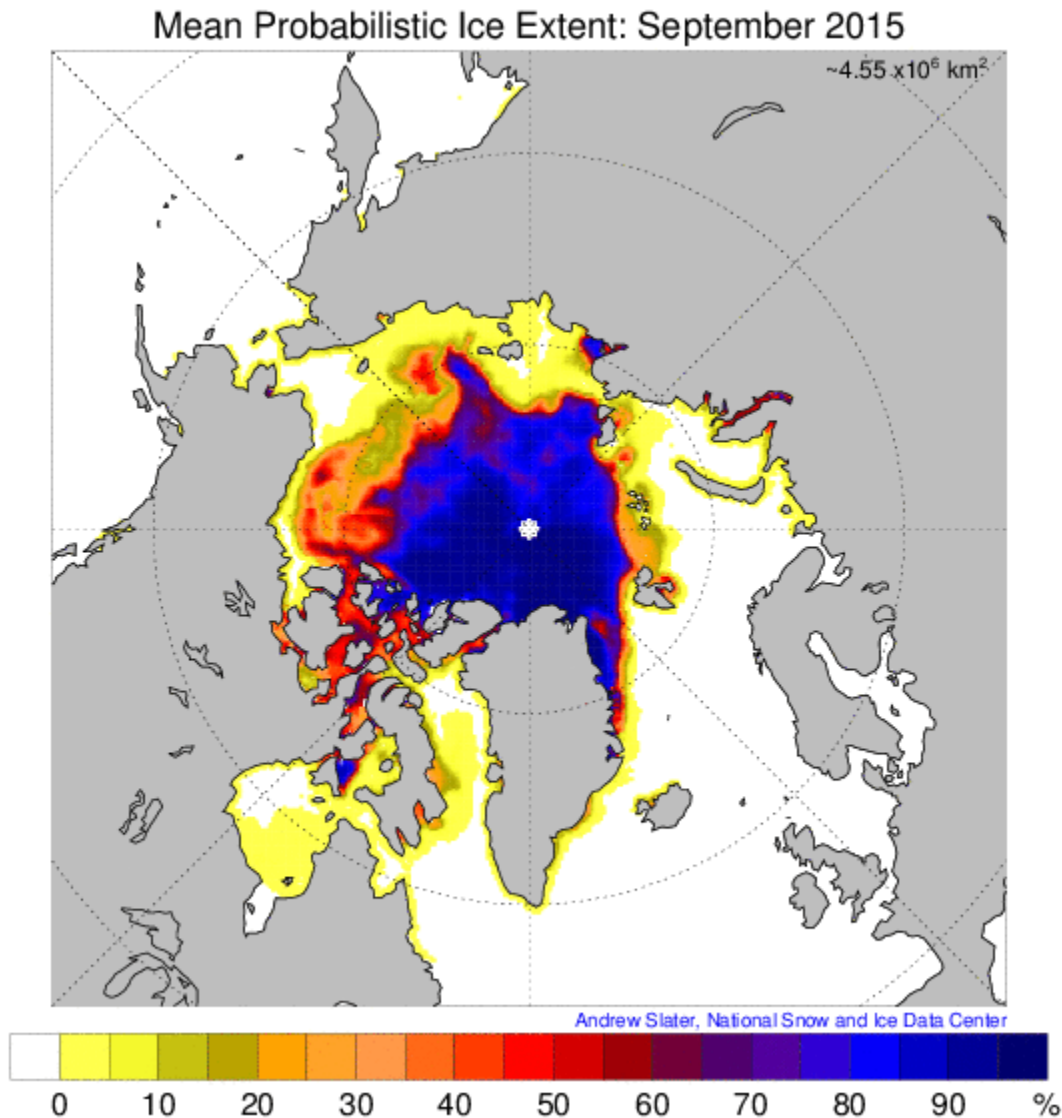
6. Short explanation/assessment of basis for the uncertainty estimate in #5 (1-2 sentences)

0.35 × 10⁶ km² is the RMSE of my results for Sept. mean at 50-days over the period 1995-2013.

7. * "Executive summary" about your Outlook contribution

In a few sentences what your Outlook contribution is and why. To the extent possible, use non-technical language.

This is a 53-day lead time probabilistic forecast, covering all days in September. The current dispersed ice situation (Beaufort, Chukchi, ESS) means there is a large area particularly vulnerable to weather events, but at the same time much ice has to drop to 15% concentration to reach my forecast of $4.55 \times 10^6 \text{ km}^2$. The model was skillful in recent years (in SIO/SPIN results) for both total mean extent and spatial distribution, but has also missed by as much as $0.6 \times 10^6 \text{ km}^2$ on occasion.



July was very warm, but August had returned to cool temperatures.
http://cires1.colorado.edu/~aslater/ARCTIC_TAIR/

It seems likely that dynamics will play a significant role in the final result of ice extent, whether that be a high or low value.