SEA ICE PREDICTION NETWORK (SIPN)

Template for Pan-Arctic Sea Ice Outlook Core Contributions

July 2016 Report (Using May Data)

1. *Contributor Name(s)/Group

Mr. Persistence (Andrew Slater)

2. *Type of Outlook projection
___model _**X**__statistical ___heuristic

If you use a model, please specify:
Model Name Multi-Persistence
Components of the model: Atmosphere__, Ocean__, Ice__, Land__, Coupler___
For non-coupled model: Ice _**X**_, Ocean___, Forcing___

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

4.95 or 5.06 or 3.59 x 10^6 km^2

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

Persistence can be computed in several ways. I have looked out to Sept. for the sake of comparison and as a very basic benchmark.

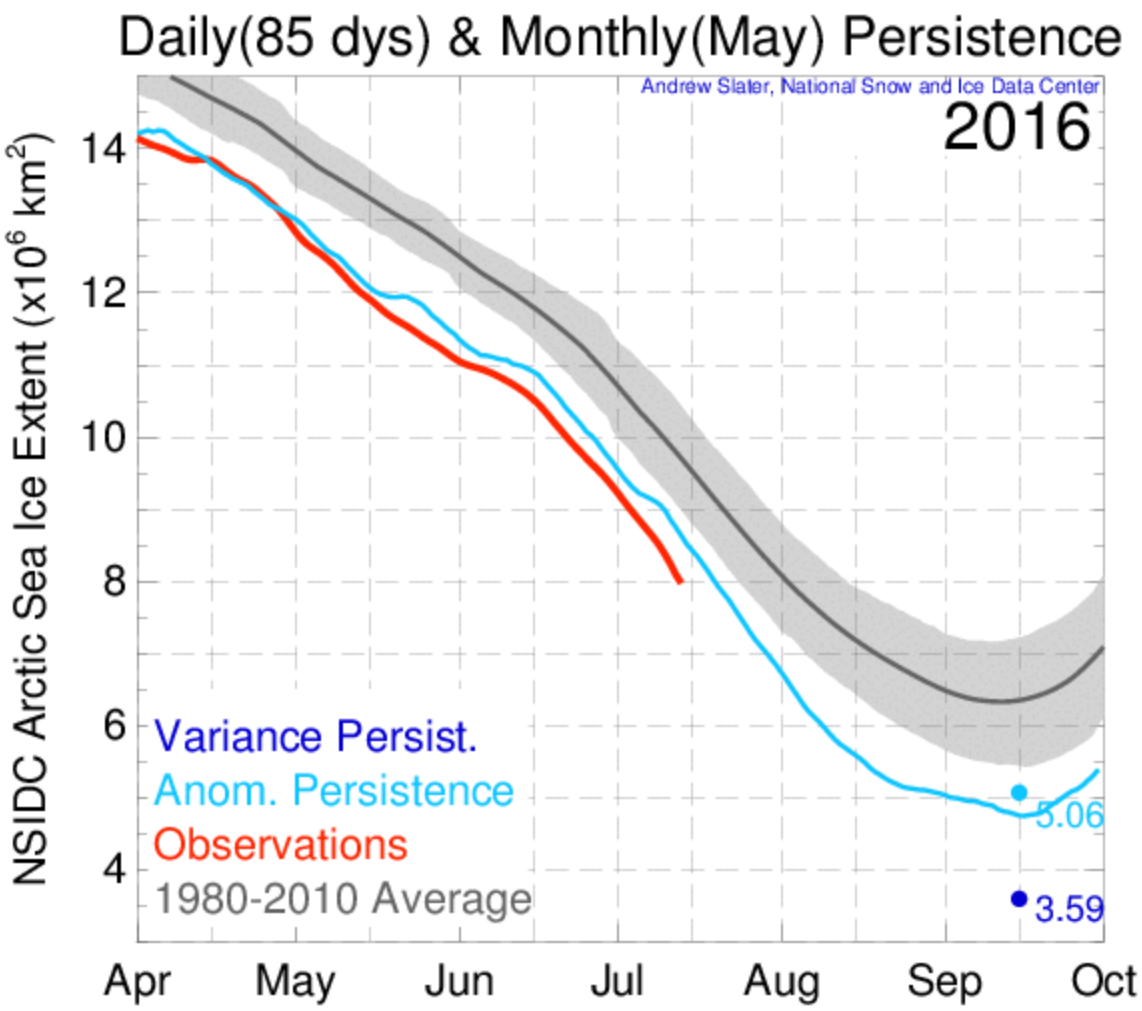
1) Daily anomaly persistence at 112 days lead time (so that I can go all the way to Sep 30th), then compute mean for Sept = 4.95

2) Persist the absolute anomaly from May to Sept (using NSIDC monthly value, not mean of daily). Sept = 5.06

3) Persist the standard normal deviate from May to Sept (using NSIDC monthly). Labeled as "Variance Persistence". Sept = 3.59

None of these methods have true skill at this long lead time. For April-June the daily persistence at 85-day lead time looks like a nice forecast (and is giving better results than a 50-day lead time), however, this is pure coincidence.

These methods are different from the "damped persistence" that Ed Blanchard-Wriggleswoth calculates (as I have no damping mechanism built in) …. I/we should throw that one in there as well.



(Note: this plot includes a longer smoothing window than my operational 50-day forecast and the observed data sets are different)

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

Large error!

7. * "Executive summary" about your Outlook contribution
1-3 sentences, to be used in Outlook summary: say in a few sentences what your Outlook contribution is and why. To the extent possible, use non-technical language.

Three different types of persistence forecasting at 85-day or 3 month lead time. The methods contain marginal skill at this timescale.