

SEA ICE PREDICTION NETWORK (SIPN)

Template for Pan-Arctic Sea Ice Outlook Core Contributions

July Report (Using June Data)

**Required*

1. *Contributor Name(s)/Group

Mr. Persistence

2. *Type of Outlook projection

___model statistical ___heuristic

If you use a model, please specify:

Model Name Persistence

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)

5.9 or 5.5 or 5.2 x 10⁶ km²

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.

1) Daily anomaly persistence at 90 days lead time (so that I can go all the way to Sep 30th), then compute mean for Sept = 5.5

2) Persist the absolute anomaly from June to Sept (using NSIDC monthly value, not mean of daily). Sept = 5.9

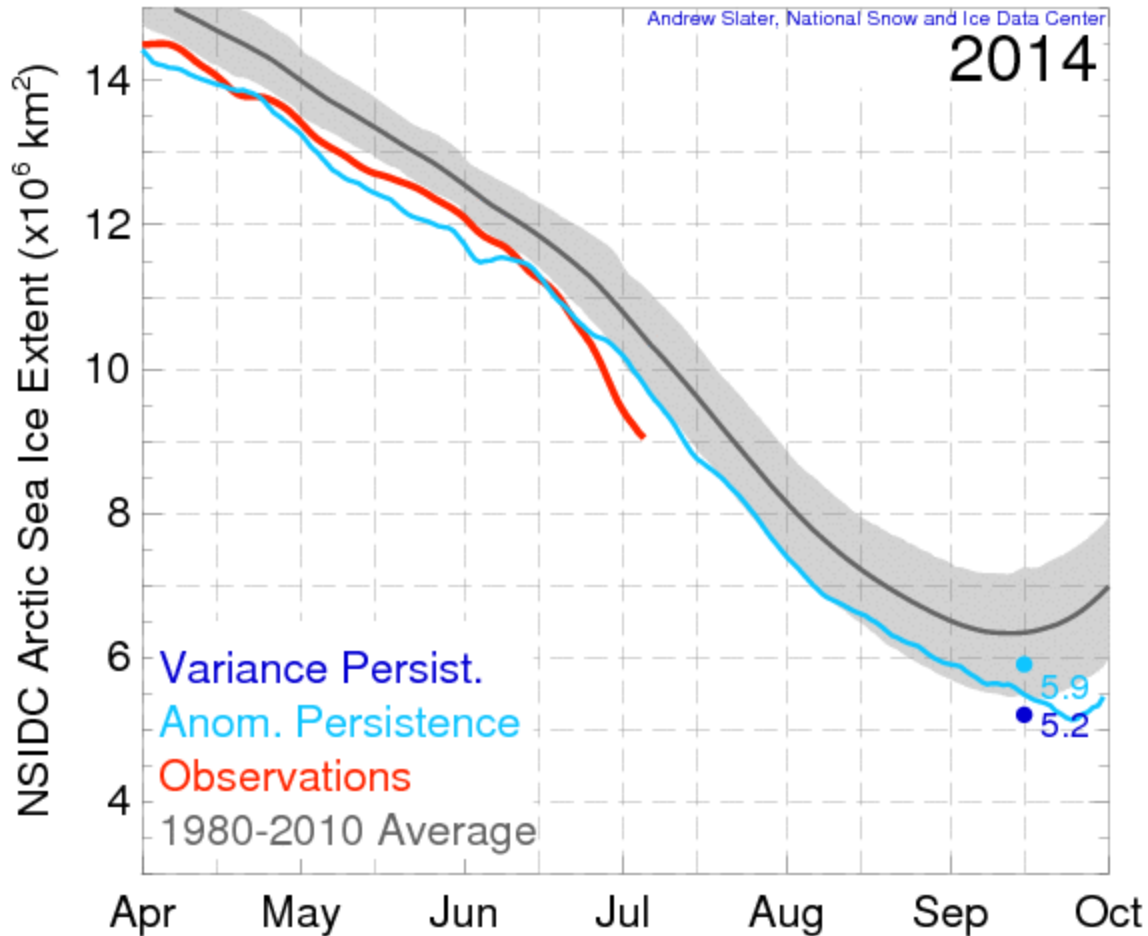
3) Persist the standard normal deviate from June to Sept (using NSIDC monthly). Labeled as "Variance Persistence". Sept = 5.2

All three methods have a skill value of less than 0. i.e. **no real skill!**

Skill = as per Schroder et al. 2014 (for +18yrs of data).

Shading on 1980-2010 Average is 1 Std. Dev. in the plot below.

Daily(90 dys) & Monthly(June) Persistence



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

No uncertainty estimates, but methods still have no real skill at the 90 day lead time.

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

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 long lead time. The methods contain no real skill at the 90 day lead time (cf. skill computed by Schroder et al.).