SEA ICE OUTLOOK
2016 Report

Template with Core Requirements for Pan-Arctic Contributions and Guidelines for Submitting Optional Alaskan Regional Outlook, Figures, and Gridded Data

Submission Guidelines:

The submission deadline is 6:00 pm (AKDT) Monday, 13 June 2016 (firm) and all submissions should be sent to sio2016@arcus.org. Contributions received after the deadline will be posted to the website but not incorporated into the Outlook report or discussion.

Questions may be directed to Betsy Turner-Bogren, ARCUS (betsy@arcus.org)

Core Requirements for Pan-Arctic Contributions:

* REQUIRED

1. Todd Arbetter[1], Mark Potts[2]

1b. [1] Institute at Brown for Environment & Society, Brown University, Providence, Rhode Island
[2] Redline Solutions LLC, Rockville, Maryland
(total contributors: 2)

2. * Contributions submitted by a person or group not affiliated with a research organization, please self-identify here:
   _____ Yes, this contribution is from "Citizen Scientists."

3. * Do you want your contribution to be included in subsequent reports in the 2016 season?
   _____ Yes, use this contribution for all of the 2016 SIO reports (this contribution will be superseded if you submit a later one).
   ___X____ No, I/we plan to submit separate contributions for subsequent reports.
   _____ No, I only want to participate this time.

4. This method is based on the Arctic Regional Ice Forecast System (Drobot et al., International Journal of Climatology, 2009) with additional modifications done by Arbetter at National Ice Center; followed by rewriting and parallelizing the code done by Potts. It uses sea ice, sea level pressure (NCEP), 2-meter surface air temperature (NCEP), and cumulative freezing degree days. 10 years of data are used to establish correlations between conditions at the start week and forecast week. Forecasts are done for 12-16 weeks in the future to cover melt and refreezing.

5. *Type of Outlook method:
   ___dynamic model _X_statistical ___heuristic ____mixed or other (specify)

6. NASA GSFC Bootstrap, 2005-2016 (acquired from NSIDC.org)

7. n/a

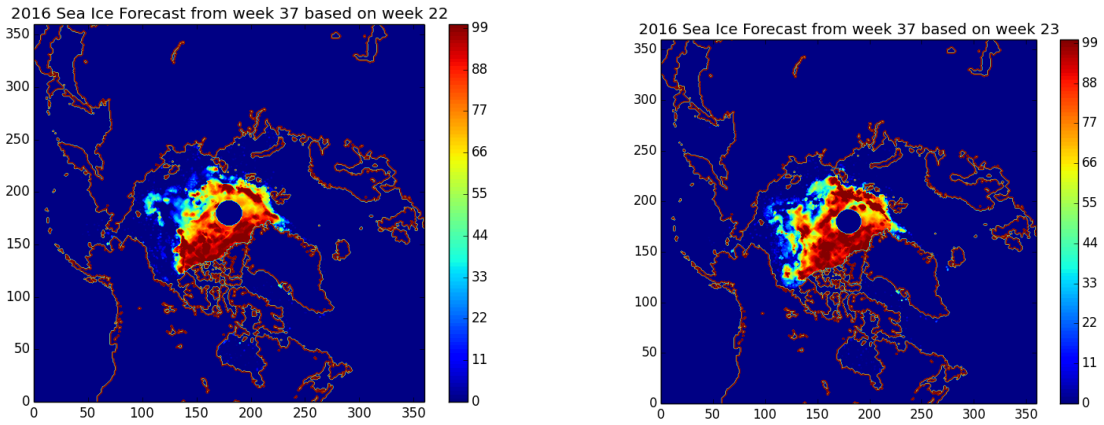
8. n/a

9. 3.64 million km^2 (based on June 3 data)
   4.32 million km^2 (based on June 10 data)

10. week of September 21 (both forecasts)

11. Multilinear Regression/Correlation of forecast conditions using 10 years history of start week and forecast week. Forecasts for all weeks in August/September/October are conducted to establish a time series and the lowest sea ice extent is identified.

12. n/a



Sea ice extent for week of September 21, 2016 based on June 3 data (left) and June 10 data (right)