Sea Ice Outlook
2019 August Report
Individual Outlook

Name of contributor or name of contributing organization:

CPOM (David Schroeder)

Is this contribution from a person or group not affiliated with a research organization?

Name and organization for all contributors. Indicate primary contact and total number of people who may have contributed to your Outlook, even if not included on the author list.

Do you want your June contribution to automatically be included in subsequent reports? (If yes, you may still update your contribution via the submission form.)

This is a new submission.

What is the type of your Outlook projection?

Statistical

Starting in 2017 we are accepting both pan-Arctic and pan-Antarctic sea ice extent (either one or both) of the September monthly mean. As in 2016, we are also collecting Alaskan regional sea ice extent. To be consistent with the validating sea ice extent index from NSIDC, if possible, please first compute the average sea ice concentration for the month and then compute the extent as the sum of cell areas > 15%.

a) Pan-Arctic September extent prediction in million square kilometers.

4.1

b) same as in (a) but for pan-Antarctic. If your method differs substantially from that for the Arctic, please enter it as a separate submission.

c) same as in (b) but for the Alaskan region. Please also tell us maximum possible extent if every ocean cell in your region were ice covered.

"Executive summary" of your Outlook contribution (using 300 words or less) describe how and why your contribution was formulated. To the extent possible, use non-technical language.

We predict the September 2019 ice extent will be 4.1 +/- 0.5 million km2. This means there is a 79% likehood it will be among the lowest 3, 66% among the lowest 2, and 16% it will be a newmininum record. The simulated melt pond fraction in June 2019 has been higher when in any June before.

Brief explanation of Outlook method (using 300 words or less).

This is a statistical prediction based on the correlation between the ice area covered bymelt-ponds in May and ice extent in September. The melt pond area is derived from a simulationwith the sea ice model CICE in which we incorporated a physically based melt-pond model1.See our publication in Nature Climate Changehttp://www.nature.com/nclimate/journal/v4/n5/full/nclimate2203.html for details2.References:1. Flocco, D., SchrÌ¦der, D., Feltham, D. L. & Hunke, E. C., 2012: Impact of melt ponds onArctic sea ice simulations from 1990 to 2007. J. Geophys. Res. 117, C09032.2. SchrÌ¦der D., D. L. Feltham, D. Flocco, M. Tsamados, 2014: September Arctic sea-iceminimum predicted by spring melt-pond fraction. Nature Clim. Change 4, 353-357, DOI:10.1038/NCLIMATE2203.

Tell us the dataset used for your initial Sea Ice Concentration (SIC).

Tell us the dataset used for your initial Sea Ice Thickness (SIT) used. Include name and date.

If you use a dynamic model, please specify the name of the model as a whole and each component including version numbers and how the component is initialized:

Not Specified

 If available from your method.
a) Uncertainty/probability estimates:

Median

Ranges

3.6 - 4.6

Standard Deviations

0.5

b) Brief explanation/assessment of basis for the uncertainty estimate (1-2 sentences).

The given uncertainty is the mean forecast error based on forecasts for the years 1984 to 2018.

c) Brief description of any post processing you have done (1-2 sentences).