Sea Ice Outlook
2019 July Report
Individual Outlook

Name of contributor or name of contributing organization:

Wu, Tallapragada and Grumbine

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.

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NOAA/NCEP/EMC

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?

Dynamic Model

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.

4.58

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.

20.18

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.

The projected Arctic minimum sea ice extent from the NCEP CFSv2 model with revised CFSv2 May and June initial conditions (ICs) using 61-member ensemble forecast is 4.58 million square kilometers with a standard deviation of 0.72 million square kilometers. The corresponding number for the Antarctic (maximum) is 20.18 million square kilometers with a standard deviation of 0.61 million square kilometers.

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

We ran the NCEP CFSv2 model with 61-case of May and June 2019 revised initial conditions (ICs). The IC was modified from real time CFSv2 of each day at 00Z by thinning the Arctic ice pack (based on test from previous yearsâ€™ sea ice outlook). If this thinning would have eliminated ice from areas observed to have sea ice, a minimum thickness of 10 cm was left in place for the ice ICs. Bias correction was applied to the Antarctic sea ice extent.

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

Include source (e.g., which data center), name (algorithm), DOI and/or data set website, and date (e.g., â€œNSIDC NASA Team, https://nsidc.org/data/nsidc-0081, https://doi.org/10.5067/U8C09DWVX9LM.â€)

NCEP Sea Ice Concentration Analysis for the CFSv2 (May 1-June 30, 2019)

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

NCEP CFSv2 model guess with bias correction for the Arctic (May 1-June 30, 2019)

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:

Coupled

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

Median

Ranges

Standard Deviations

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

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