

Sea Ice Outlook
2022 September Report
Individual Outlook

Name of contributor or name of contributing organization:

NCEP-EMC (Wu et al.)

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.

NCEP-EMC (Wu et al.)

**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.)**

[Do you want your contribution for this month to automatically be included in subsequent reports?]

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.

5.01

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.

18.94

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 August initial conditions (ICs) using 124-member ensemble forecast (4 cycles each day August 1 to August 31) is 5.01 million square kilometers with a standard deviation of 0.47 million square kilometers. The corresponding number for the Antarctic (maximum) is 18.94 million square kilometers with a standard deviation of 1.01 million square kilometers.

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

We used the NCEP CFSv2 model with 124-case of August 2022 initial conditions (4 cycles each day August 1-31) and model.

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

NCEP Sea Ice Concentration Analysis for the CFSv2 (August 1 to August 31, 2022)

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

NCEP CFSv2 model guess (August 1-August 31, 2022)

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:

a) Model Name: NCEP CFSv2

b) Component Name Initialization

Atmosphere

NCEP GFS

NCEP CDAS

Ocean

GFDL MOM4

NCEP GODAS

ICE

Modified GFDL SIS

SIC nudging

c) 124 ensemble members (August 1-August 31 2022, each day from all 4 cycles)

If available from your method.

a) Uncertainty/probability estimates:

Median

Lower error bound

Lower error bound

Standard Deviation

0.47

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).