Sea Ice Outlook
2019 August Report
Individual Outlook

Name of contributor or name of contributing organization:

NMEFC (Zhao, 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.

Jiechen Zhao, Chunhua Li, Xi Liang, Lin Zhang, National Marine Environmental Forecasting Center (NMEFC), China

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.

5.62

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.

This Sea Ice Outlook is a part of the official sea ice service for Chinese Arctic activities during summer 2019, targeting for icebreakers and commerical ships.

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

The sea ice prediciton was carried out by National Marine Environmental Forecasting Center (China), using a ocean-sea ice coupled model, MITgcm. The prediction was initialized on August 1, 2019 and run for 3 months, forced by CFS operational forecast initialized on 2019080100 . The initial condition came from a operational assimilation system by assimilating sea ice concentration and thickness. The sea ice outlook was a mean value from ensemble runs of 10 radom initial conditions.

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

AMSR2

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

SMOS, CryoSat-2

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:

Ocean-sea ice

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).