Name of contributor or name of contributing organization:

ANSO IAP-LASG

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.

Primary contact ： Qing Bao (LASG, IAP)
LASG, Institute of Atmospheric Physics Chinese Academy of Sciences.

Total number of people ：5
Bian He
Jinxiao Li
Lei Wang
Xiaofei Wu
Plateau Atmospheric and Environment Key Laboratory of Sichuan Province, School of Atmosphere Sciences, Chengdu University of Information Technology

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.)

Include this submission in both the July and August 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.

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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.

The prediction for the sea ice outlook June 2020 was carried out on China's Tianhe-2 supercomputer, with a dynamic model prediction system CAS FGOALS-f2 S2S V1.3 . The dynamic model prediction system, named FGOALS-f2 (ice-ocean-atmosphere-land model), provides a real-time predictions in the subseasonal-to-seasonal (S2S) timescales. FGOALS-f2 S2S system has been established in 2017 by R&D team of FGOALS-f2 from both LASG Institute of Atmospheric Physics Chinese Academy of Sciences and PAEKL Chengdu University of Information Technology. The FGOALS-f2 S2S prediction results are used in three major national operational prediction centers in China. Basing on the 4-month lead dynamic model prediction from July 13th, 2020 the outlook predictions of Sea Ice Extent are 4.0 million square kilometers for pan-Arctic in September 2020.

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

FGOALS-f2 S2S V1.3 is a global coupled dynamic prediction system. The initialization of this prediction system is based on a nudging scheme, which assimilates wind components (U and V), Temperature (T) in atmosphere and potential temperature in ocean from 1 Jan 1980 to 1 June 2019, and 48 ensemble members are generated by a time-lag method. The predictions are

available here for 12 months. This real-time S2S prediction system is fully operated on China's Tianhe-2 supercomputer.

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

None

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

None

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:

[DynamicModelType]

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

Median

3.76

Ranges

3.09-4.18

Standard Deviations

0.2

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

The uncertainty was estimated by the ensemble member spread.

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

Model bias that is removed is calculated based on 2019 retrospective forecasts and corresponding observations.