

Sea Ice Outlook  
2017 July Report  
Individual Outlook

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**Name of contributor or name of contributing organization:**

Reid, Davies, Massom

**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.**

Phil Reid (Australian Bureau of Meteorology and Antarctic and Climate Ecosystems Cooperative Research Centre), Laura Davies (Australian Antarctic Gateway) and Rob Massom (Australian Antarctic Division and Antarctic and Climate Ecosystems Cooperative Research Centre. Phil Reid is primary contact

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

Yes automatically include my contributions in July and August 2017

**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.**

**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.**

17.7

**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 provide an outlook of the net Antarctic sea-ice extent for September 2017, based on observations up to and including the 8th July 2017. We use a statistical method that matches current observations with those from the past.

We obtain a mean-September extent of  $17.7 \times 10^6$  kms<sup>2</sup> and a annual daily maximum value of  $17.8 \times 10^6$  kms<sup>2</sup> occurring on the 22 September.

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

Basic statistical analysis:

1. Match current (past 30-days) of pattern of sea –ice extent and growth rate with past observations (1979-2016) for the same time of the year. Note that this is not matching the net-extent, but the pattern of sea ice and growth rate.
2. Use best match from (1), along with current conditions to provide outlook.

**Tell us the dataset used for your initial Sea Ice Concentration (SIC). Include name and date (e.g., "NASA Team, May 2017"). We also encourage you to submit initial fields to the dropbox, see <https://www.arcus.org/sipn/sea-ice-outlook/2017/june/call> in the section on "Submitting Figures and Gridded Data of Full Spatial Fields (Optional) of Forecasts and Initial Conditions" for detailed instructions. Required if sea Ice concentration is used.**

NASA Team 1979 through current.

**Dataset of 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:**

**If available from your method for pan-Arctic extent prediction, please provide**

**a) Uncertainty/probability estimate such as median, ranges, and/or standard deviations (specify what you are providing).**

**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).**