

June Report: Outlook Based on May Data

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1. Extent Projection

5 million square kilometers

2. Methods/Techniques

A diagnosis based on the analysis of remote sensing (AMSR-E) data within the past 7 years

3. Rationale

Multi-year ice fraction was estimated from AMSR-E brightness temperature data. Also, AMSR-E sea-ice concentration was used for estimating sea-ice extent which is available at <http://www.ijis.iarc.uaf.edu/cgi-bin/seaice-monitor.cgi?lang=e>.

The fraction of multi-year ice seems to be the smallest this spring within the last 7 years, although the spring sea-ice extent itself became the largest this May due to the cooler air temperature. Thus, the spring sea-ice condition is in a good position to melt similarly to what we saw in 2007 and 2008. However, at this moment, it is difficult to estimate how much summer weather patterns will accelerate the melting.

4. Supplemental images

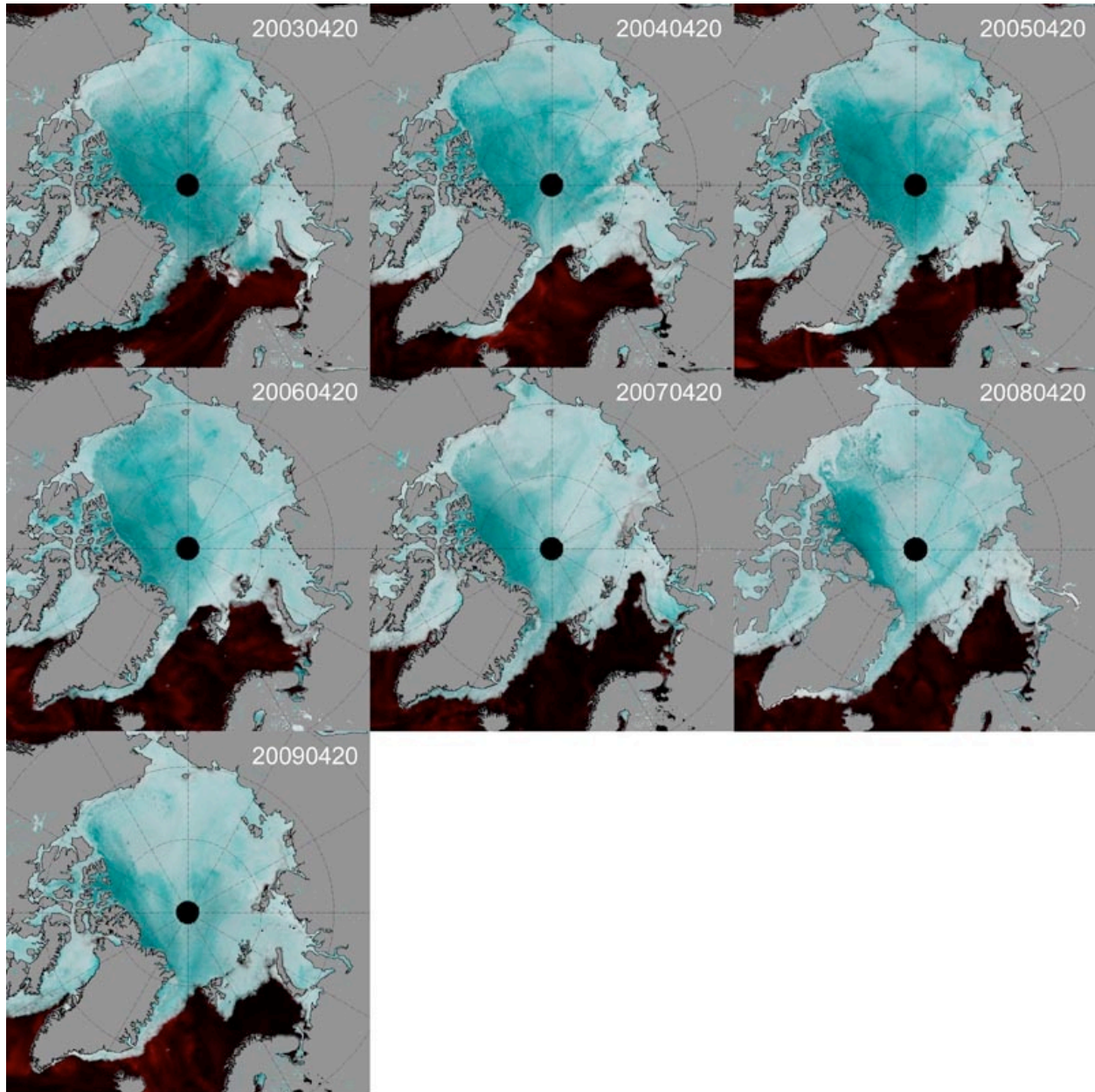


Fig.1 RGB color composite images of AMSR-E brightness temperatures at the 36GHz-V and 18GHz-V channels captured on April 20 during 2003 to 2009 which indicate rough estimates of the spatial distribution of the sea ice thickness (thick multi-year ice is shown in dark blue, and thin young ice in light blue).

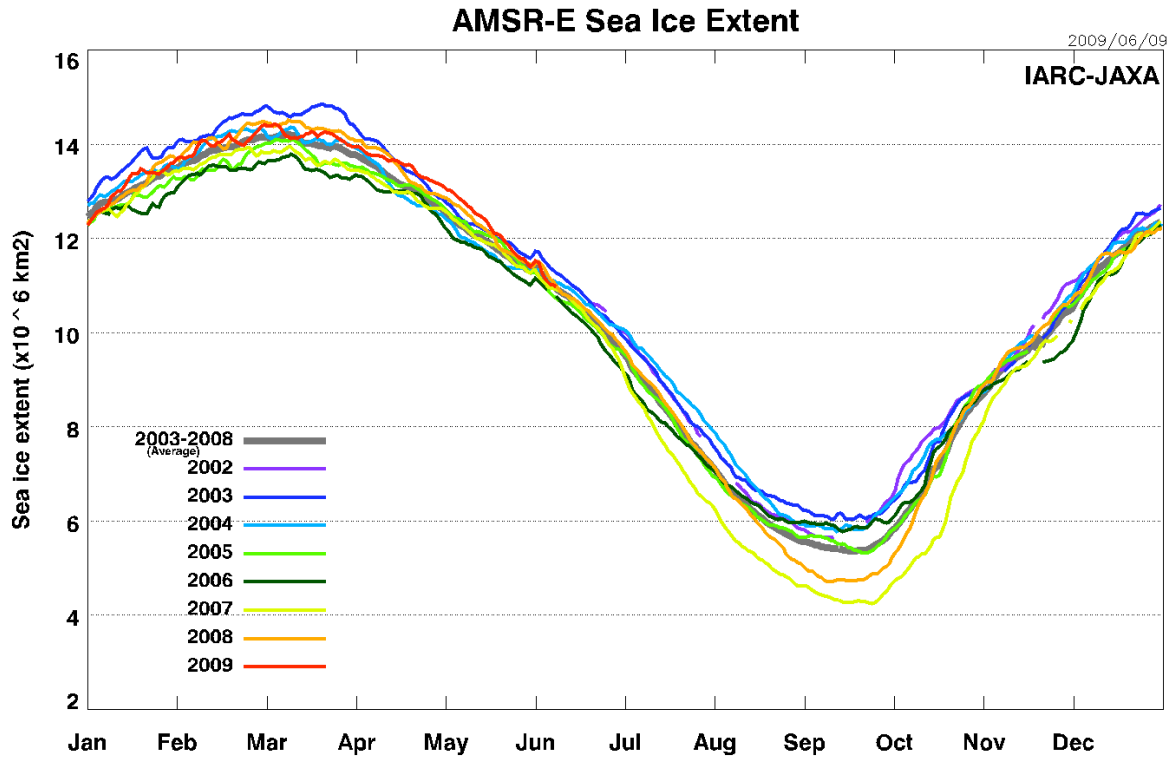


Fig.2 Seasonal variations of the Arctic sea ice extent during recent 7 years.