

Outlook of September 2011 sea ice extent based on NCEP CFSv2

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1 Arctic sea ice extent projection for September 2011

$(5.0 \pm 0.46) \times 10^6 \text{ km}^2$

2 Methods/Techniques

The outlook is based on a CFSv2 ensemble of 40 members initialized from May 17-26, 2011. The model's systematic bias has been removed based on its retrospective forecasts for 1982-2010.

3. Rationale

The CFSv2 has shown long-term decrease of sea ice extent during the past 3 decades, as in the observation.

4. Executive Summary

The projected Arctic sea ice extent from CPC based on NCEP ensemble mean CFSv2 forecast is $5.0 \times 10^6 \text{ km}^2$ with an estimated error of $\pm 0.46 \times 10^6 \text{ km}^2$.

5. Estimate of Forecast Skill

The skill estimated as the forecast correlation with observation based on retrospective forecasts for 1982-2010 is 0.78. Forecast uncertainty taken as the RMS error based on 1982-2010 retrospective forecasts is $0.46 \times 10^6 \text{ km}^2$.

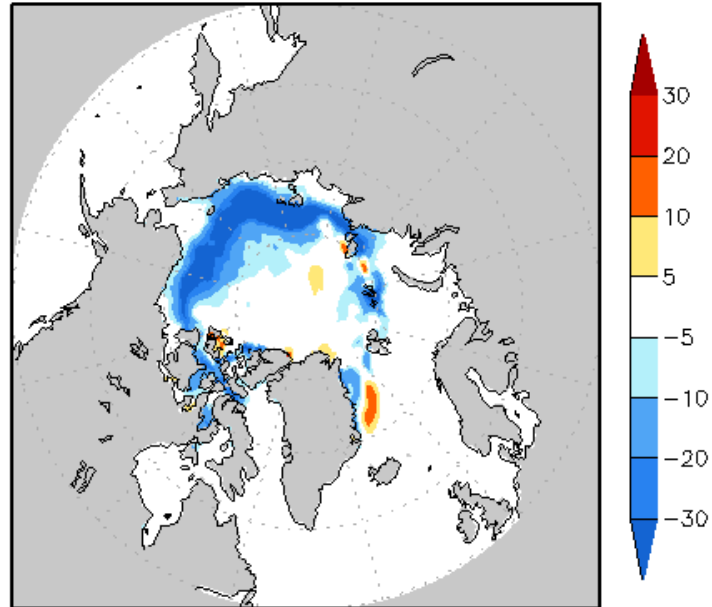
6. Spatial maps of sea ice concentration

The attached maps are CFSv2 forecast sea ice concentration anomalies (upper panel) and total (lower panel).

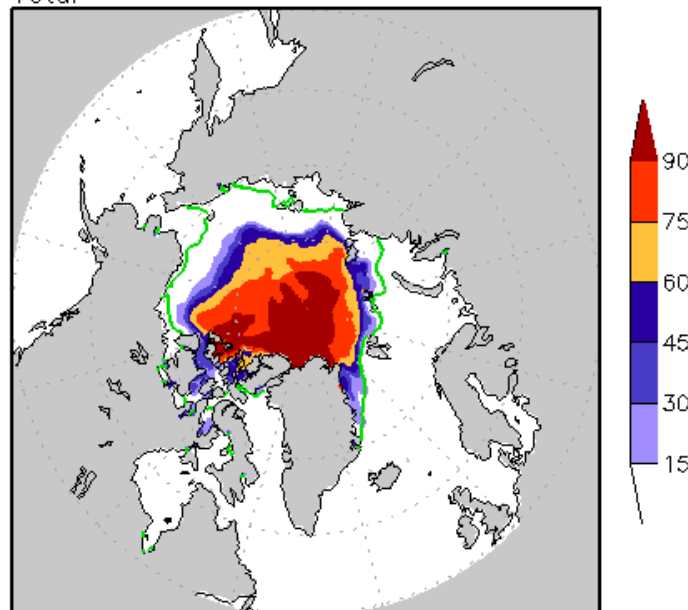


Sep 2011 sea ice concentration from CFSv2

Anomalies



Total



Green curves are 15% concentration contours of NSIDC 1982–2010 climatology.

CFSv2 forecast sea ice concentration anomalies (upper panel) and total (lower panel). The forecast is computed as an ensemble average of 40 forecast runs initialized from May 17-26, 2011.