

August 2012 Sea Ice Outlook – AWI/FastOpt/OASys contribution

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August, 2012

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1. Extent Projection

We estimate a monthly mean September sea-ice extent of 4.46 +/- 0.38 million km².

2. Methods/Techniques

Sea ice-ocean model ensemble run

3. Rationale

For a more detailed description we refer to our July report. The ensemble model experiments for the August outlook all start from the same initial conditions on July 30th 2012. The simulated daily ice extent for all 20 realizations of the ensemble is shown in Figure 1 from the initialization until end of September. Note that August and September atmospheric conditions similar to 2007 would result in a September minimum of 3.6 million km² (thick black line in Figure 1). Atmospheric forcing similar to the years 2008 and 2010 would give a September mean of about 4.0 million km².

The mean September value of the ensemble mean is 4.46 million km² (bias corrected). The standard deviation of the ensemble is 0.38 million km² which we provide as uncertainty estimate of the prediction.

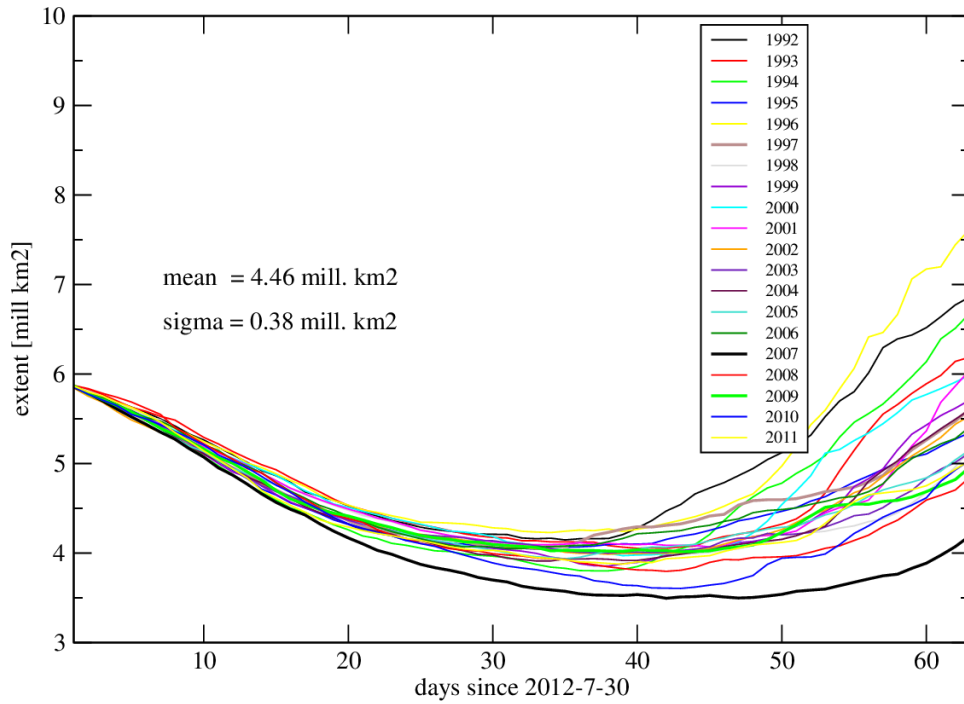


Figure 1: Simulated evolution of the ice extent [million km²] when forced with atmospheric data from 1992 to 2012 until end of September. The abscissa gives the days since the initialization of the forecast on July 30th 2012. Model-derived ice extents are averaged over day 34 to 63 and have been adjusted assuming a bias (see text).