



Supplement of

Improving model-satellite comparisons of sea ice melt onset with a satellite simulator

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Supplementary Material

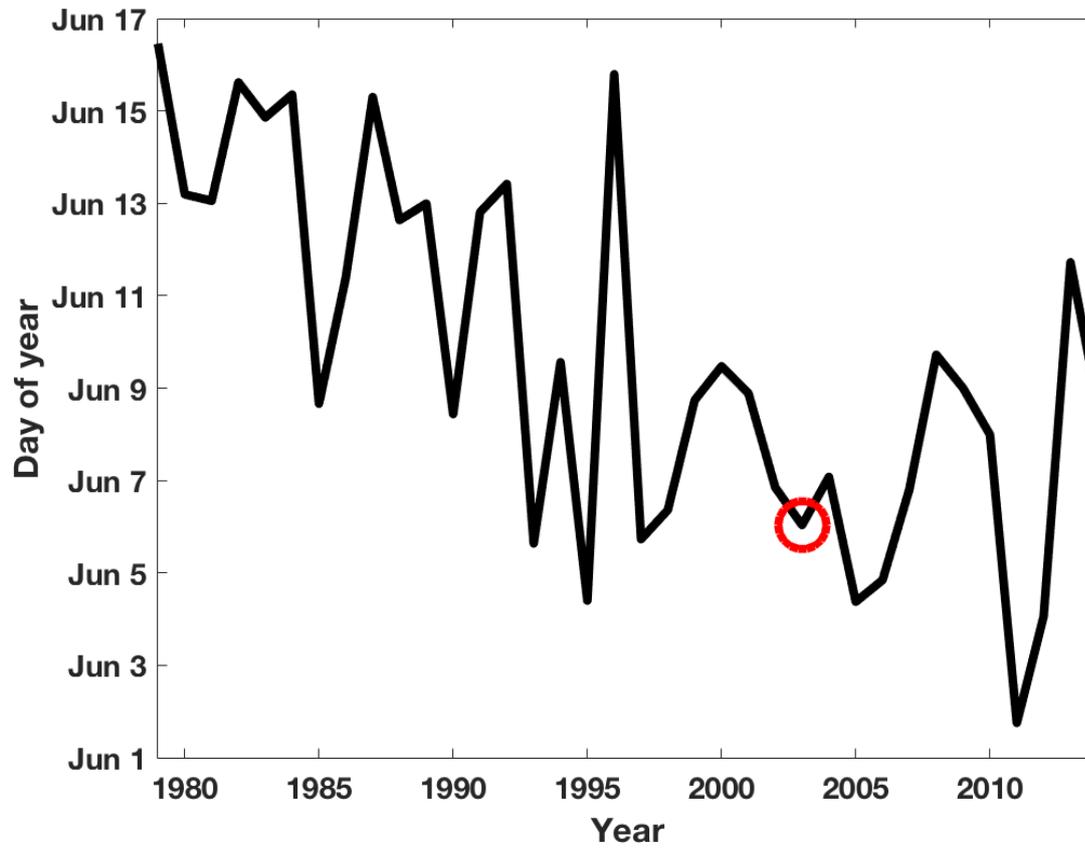


Figure S1. Average pan-Arctic melt onset dates north of 66 °N from 1979-2014. The year utilized for this analysis, 2003, is circled in red.

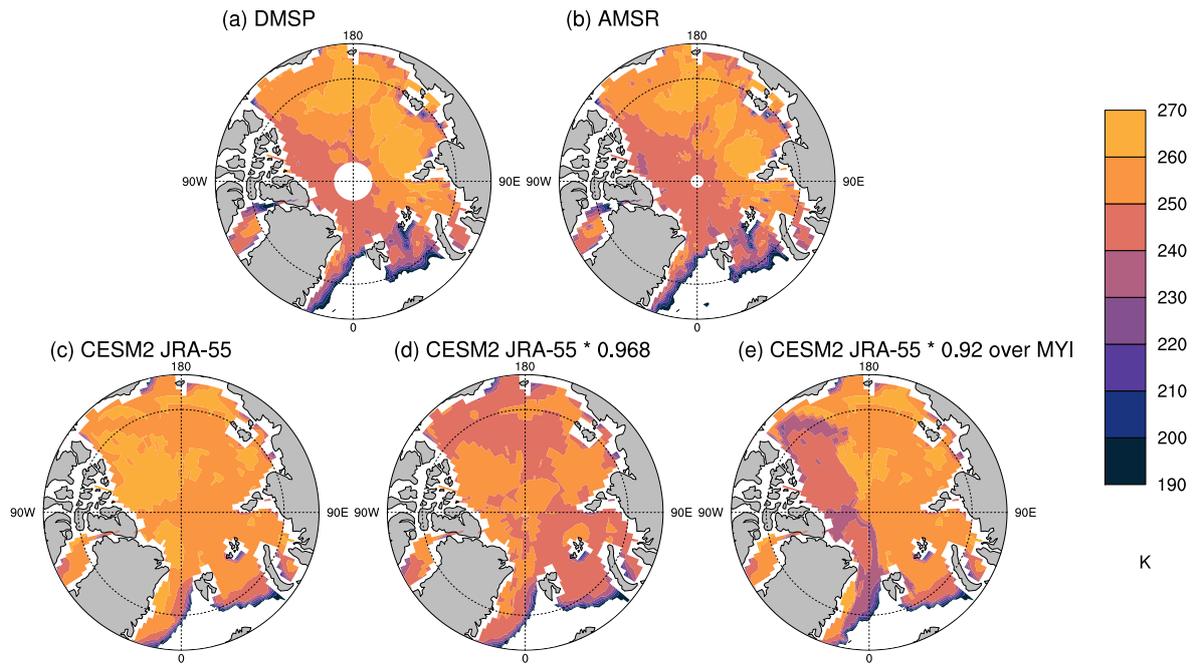


Figure S2. Brightness temperatures on June 1, 2003 using (a) DMSP (b) AMSR (c) CESM JRA-55 and (d) CESM2 JRA-55 with 0.968 correction as in Burgard et al. (2020a, b) and (e) CESM2 JRA-55 with 0.92 correction applied only to areas of multi-year ice.

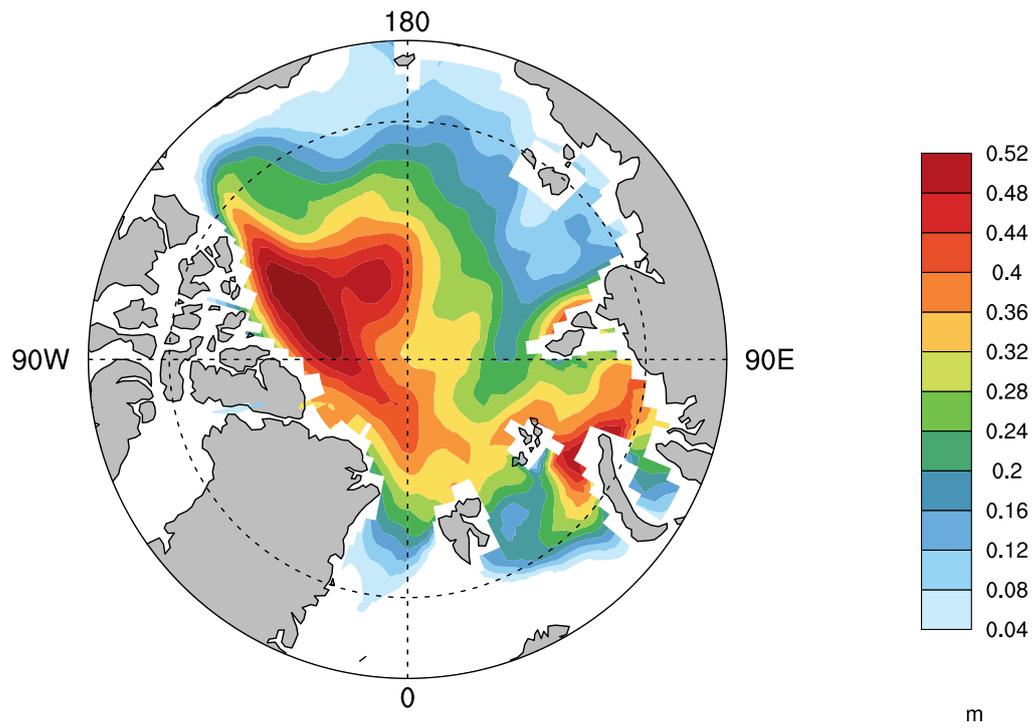


Figure S3. CESM JRA-55 snow on sea ice depth on 1 June, 2003 (m).

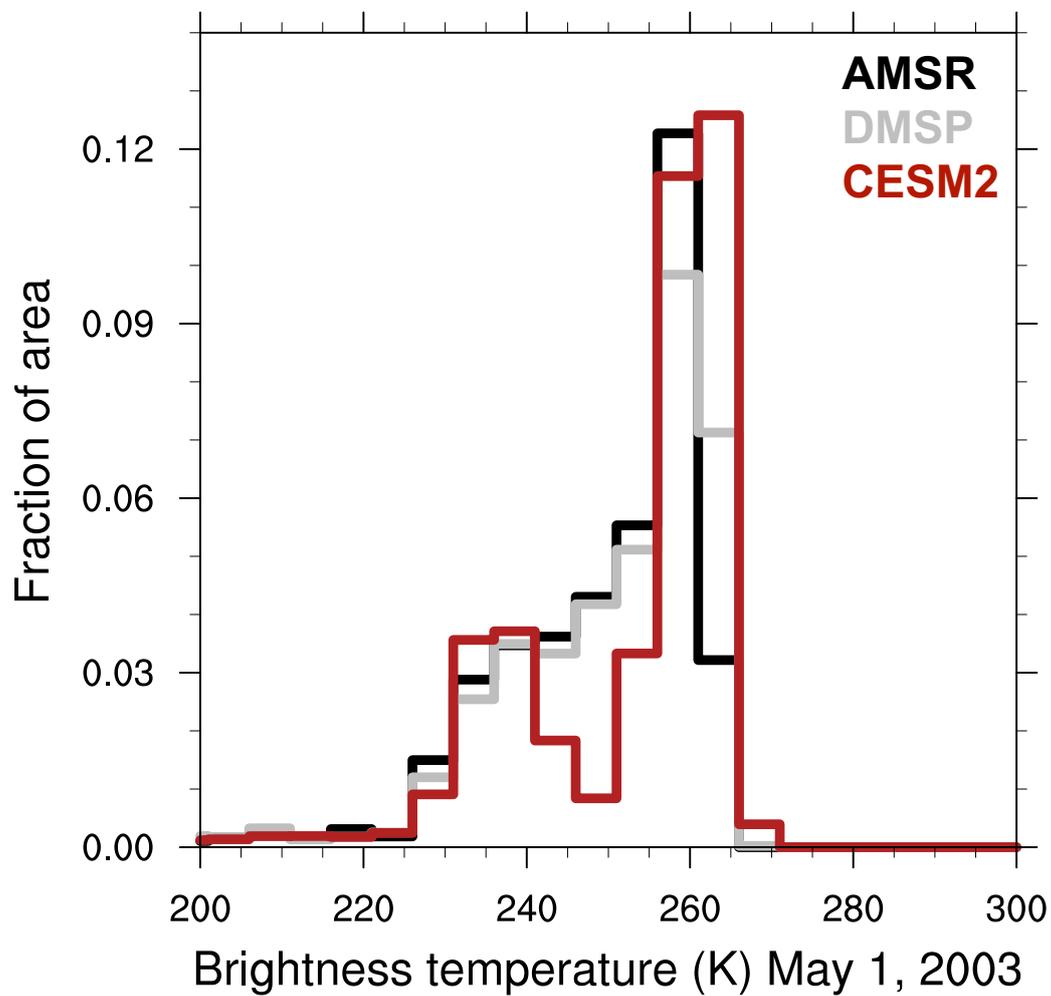


Figure S4. Areal distributions of brightness temperatures (K) over 66-84.5 °N from AMSR (black), DMSP (grey) and CESM2 JRA-55 (red) shown on on 1 May, 2003, near the timing of the earliest melt estimation dates show in Fig. 7.