

1 Surface temperature comparison of the Arctic winter  
2 MOSAiC observations, ERA5 reanalysis, and MODIS  
3 satellite retrieval.

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13 **Supplementary Material**

14 This article contains one supplementary figure.

- 15 • Figure S1. Time series of surface temperature for all sites. Surface temper-  
16 ature [ $^{\circ}C$ ] along the MOSAiC trajectory of sites L1 (a), L2 (b), L3 (c) and  
17 MetCity (d) from 9 Oct 2019 to 26 Feb 2020 for MOSAiC observations  
18 (blue), MODIS satellite observation (black) and ERA5 reanalysis (orange).  
19 *Hits, misses and false alarms* of ERA5 simulating the radiatively clear state  
20 according to  $LWN < -35 Wm^{-2}$  are shown by background colouring  
21 (green, red, grey). (PNG)

