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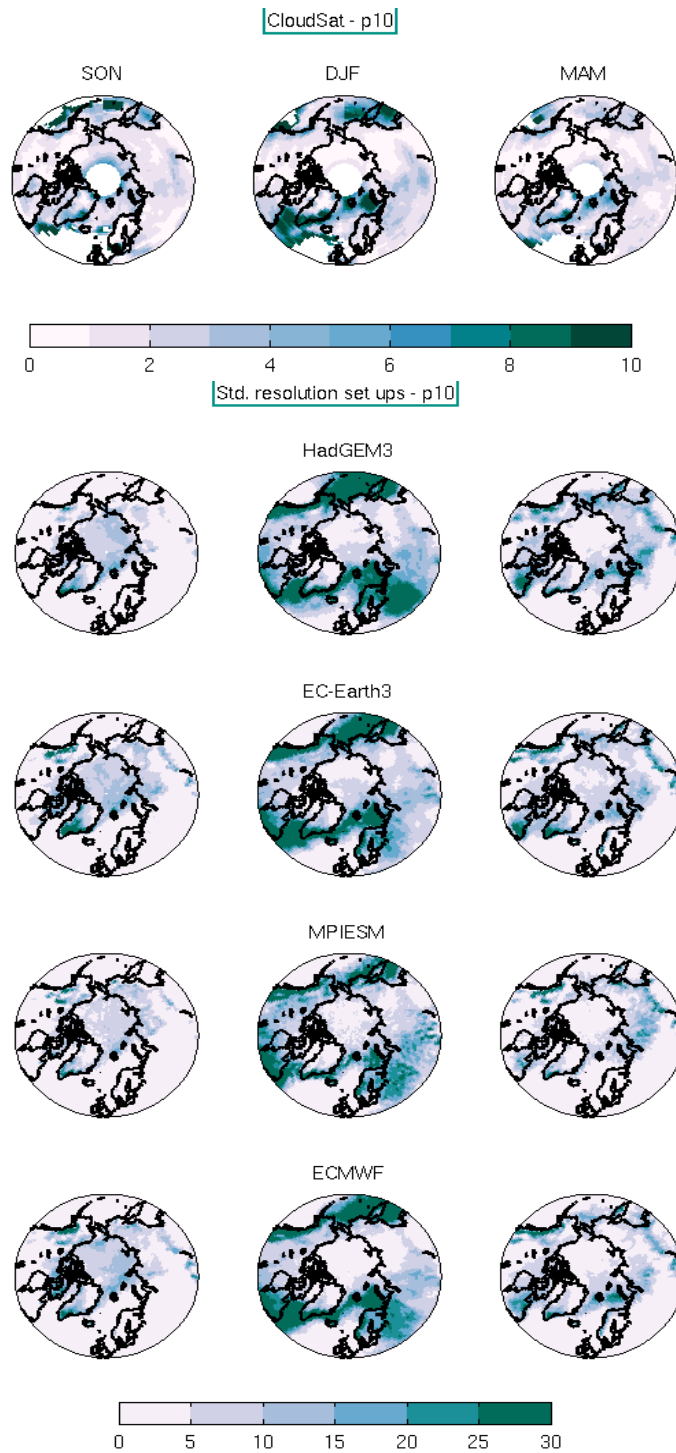
*Supplement of*

**Snowfall distribution and its response to the Arctic Oscillation:  
an evaluation of HighResMIP models in the Arctic using  
CPR/CloudSat observations**

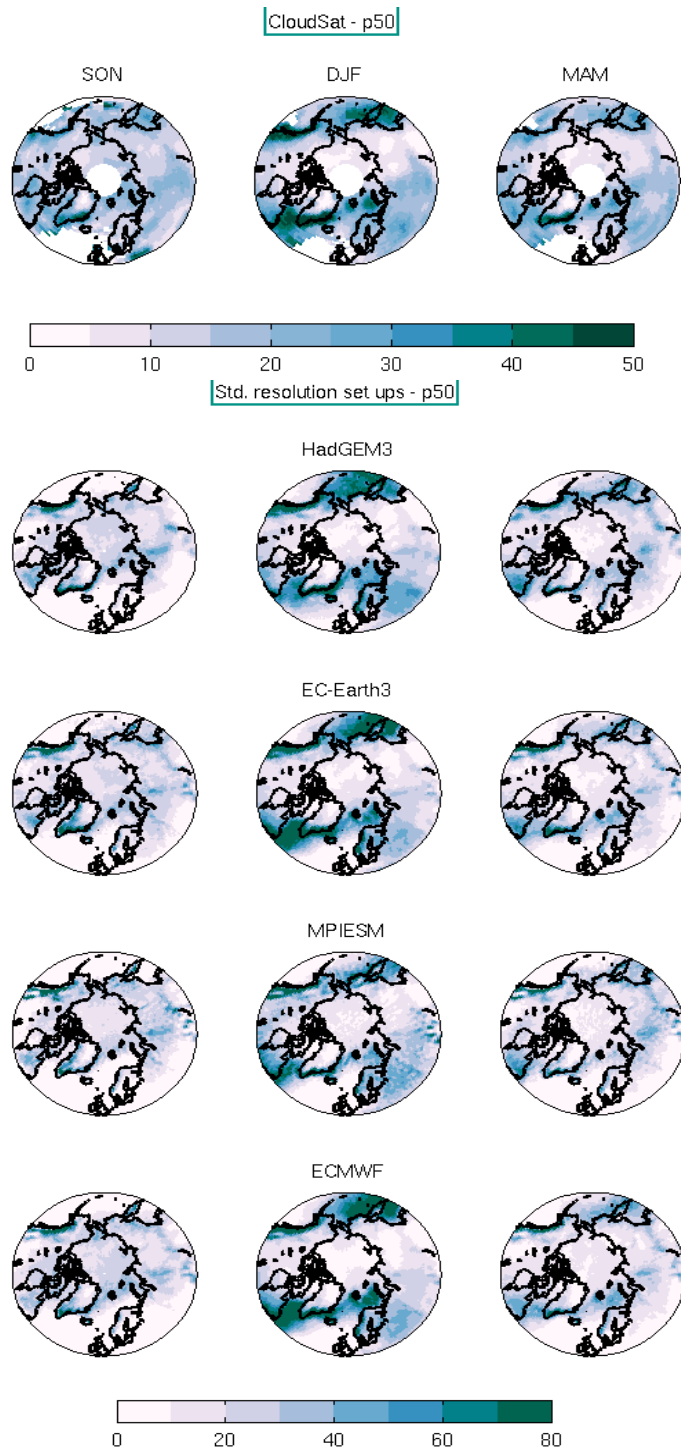
**Manu Anna Thomas et al.**

*Correspondence to:* Manu Anna Thomas (manu.thomas@smhi.se)

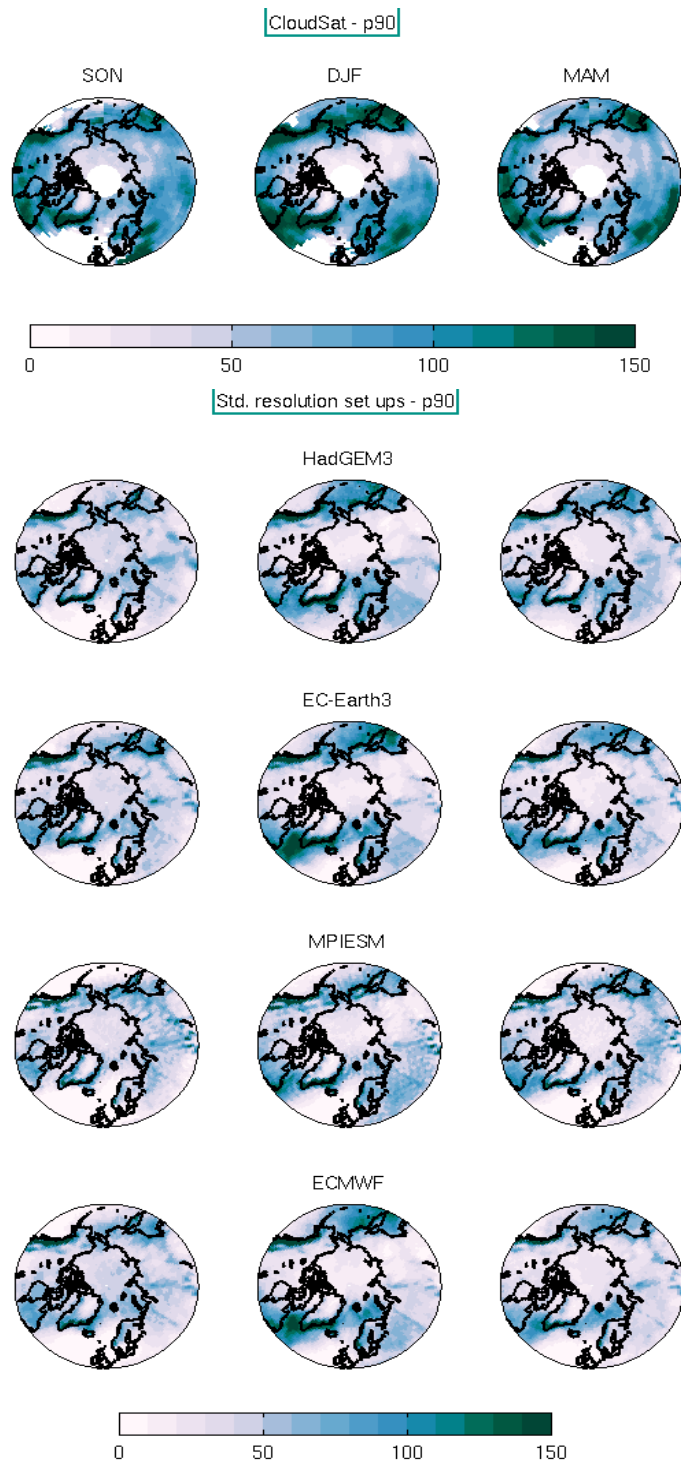
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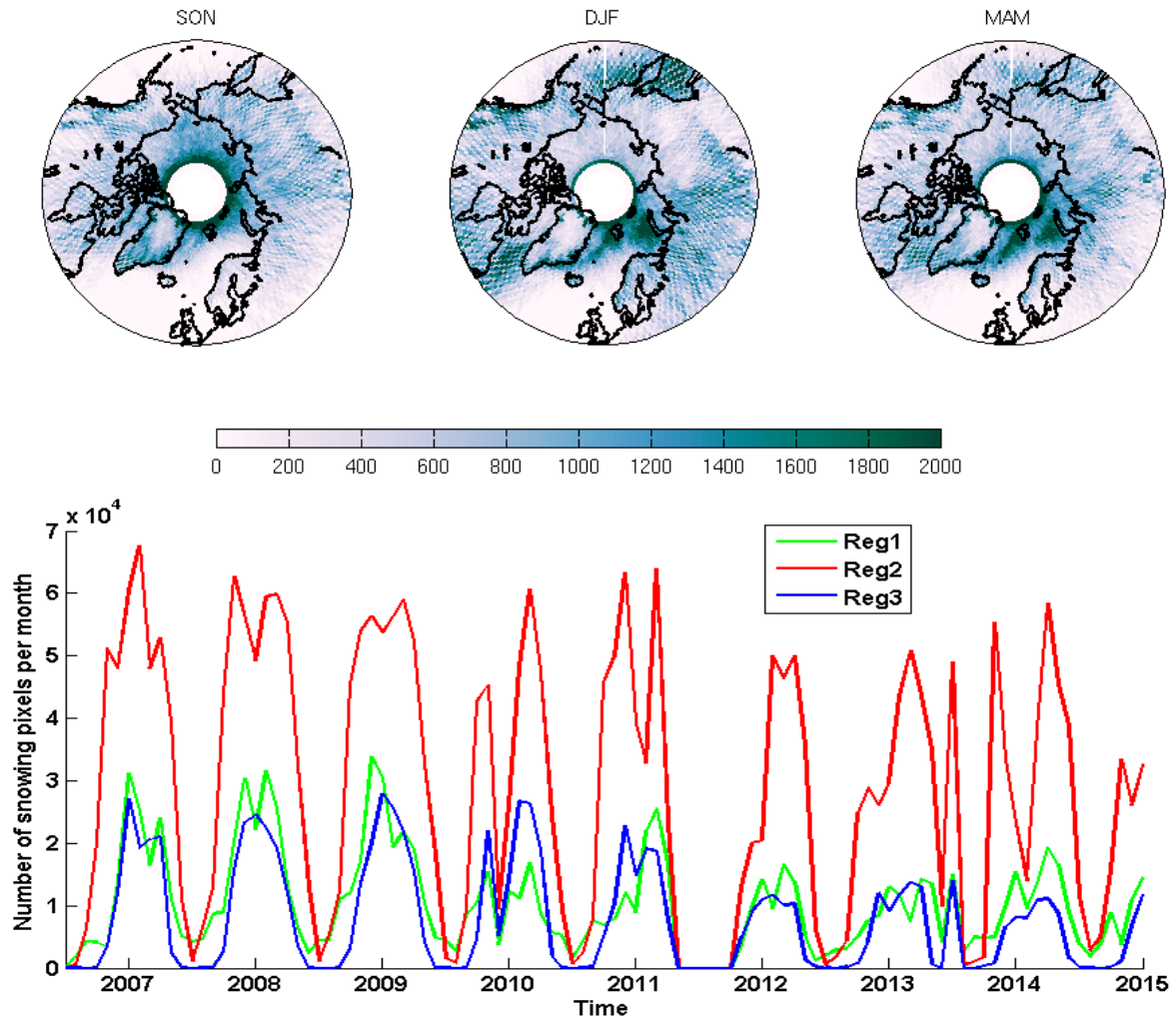
**Figure S1.** 10-percentile thresholds of monthly snowfall accumulations (mm/month) for the SON, DJF and MAM months in the 3 columns respectively. The top row shows the CloudSat observations and the other four rows below show snowfall from the Low-Res (or Std-Res) setups of HadGEM3, EC-Earth3, MPIESM and ECMWF respectively.



**Figure S2.** Same as Fig. S1, but, at 50-percentile threshold.



**Figure S3.** Same as Fig. S1, but, at 90-percentile threshold.



**Figure S4.** (top) Spatial distribution of the total number of snowfall pixels accumulated for each season; (bottom) Time series of the number of snowing pixels per month for the three regions defined in Fig. 5.