



Supplement of

Brief communication: Improving ERA5-Land soil temperature in permafrost regions using an optimized multi-layer snow scheme

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Text S1

Figure S1 showed the comparisons of observed snow depth and soil temperatures time-series with simulations at selected sites from different geographic regions. The results indicate the snow depth overestimation was reduced in Exp. MLS-Dis+Den with multi-layer snow scheme, leading to a better representation of soil temperatures with lower bias compared to ERA5-Land.

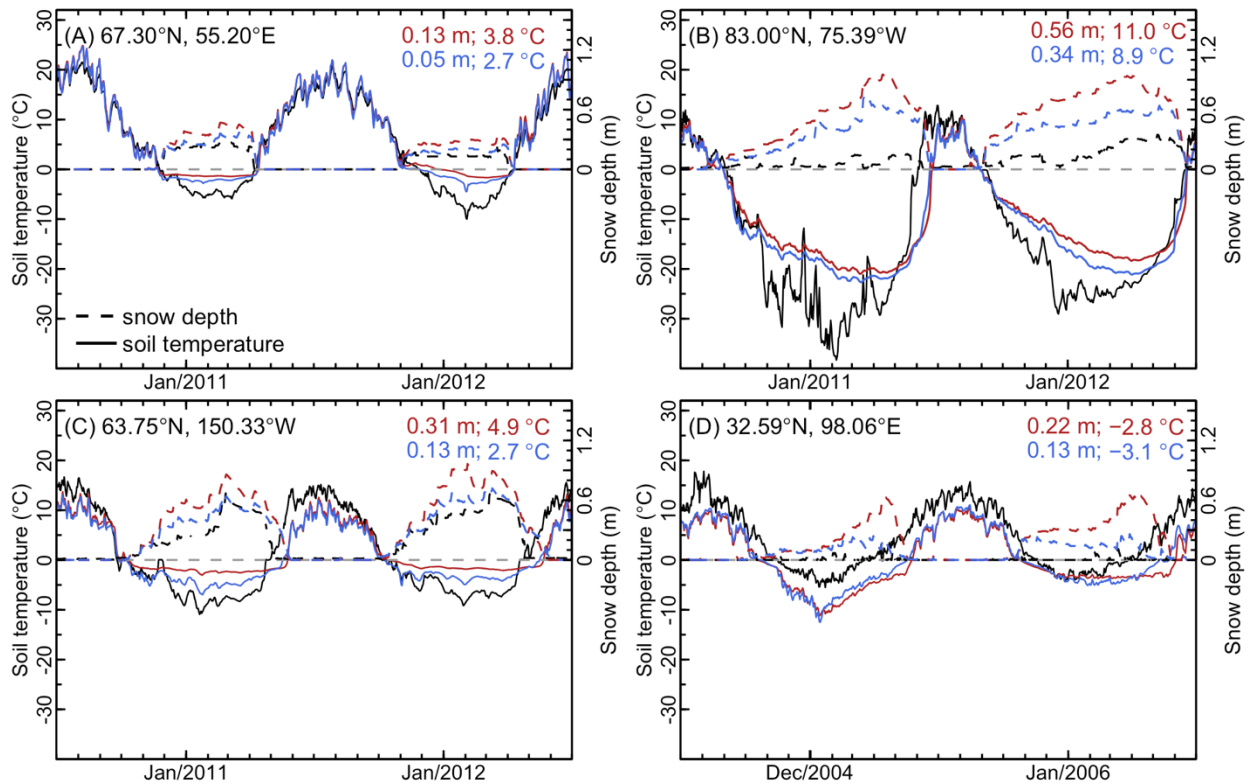


Figure S1. Daily snow depth (dash lines) and soil temperatures (solid line) from observations (black), ERA5-Land (red), and Exp. MLS-Dis+Den (blue) at selected sites from different geographic regions. Color numbers are estimated snow depth (m) and soil temperature (°C) bias in winter for ERA5-Land and simulation experiment.