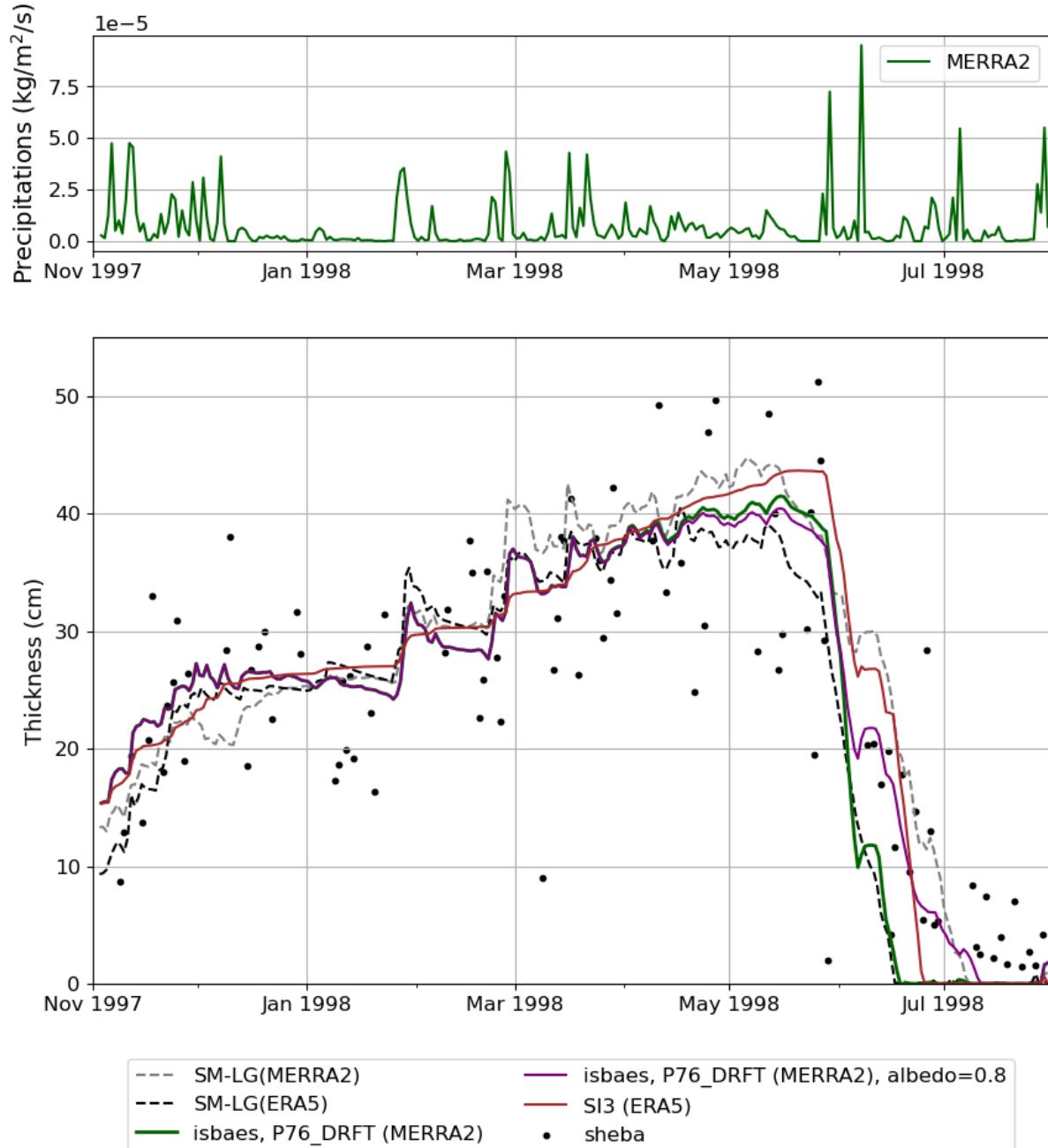


## Supporting materials



**Figure S1: Observed (black dots) and simulated (lines) snow thickness at SHEBA during the November 1997 - September 1998 period. The purple line represents the snow thickness for a simulation using the P76\_DRFT configuration, but for which the albedo is fixed to 0.8. This simulation is more consistent with SM-LG(MERRA2) during the melt period.**