

Positive Direction	GLDAS-1				GLDAS-2
Variable Name	Noah (1 & 0.25deg)	CLM	Mosaic	VIC	Noah
Total evapotranspiration	Upward	Upward	Upward	Upward	Upward
Snowmelt	Solid to Liquid	Solid to Liquid	Solid to Liquid	Solid to Liquid	Solid to Liquid
Net shortwave radiation	Downward	Downward	Downward	n/a	Downward
Net longwave radiation	Downward	Downward	Downward	n/a	Downward
Latent heat flux	Upward	Upward	Upward	n/a	Upward
Sensible heat flux	Upward	Upward	Upward	n/a	Upward
Snowfall rate	Downward	Downward	Downward	Downward	Downward
Rainfall rate	Downward	Downward	Downward	Downward	Downward
Ground heat flux	Downward	Downward	Downward	n/a	Downward
Surface incident shortwave radiation	Downward	Downward	Downward	Downward	Downward
Surface incident longwave radiation	Downward	Downward	Downward	Downward	Downward
Subsurface runoff	Out of grid	Out of grid	Out of grid	Out of grid	Out of grid
Surface runoff	Out of grid	Out of grid	Out of grid	Out of grid	Out of grid

Positive Direction	NLDAS-2	
	Noah	Mosaic
Total evapotranspiration	Upward	Upward
Direct evaporation from base soil	Upward	Downward
Canopy water evaporation	Upward	Downward
Sublimation (evaporation from snow)	Upward	Downward
Transpiration	Upward	Downward (Upward on/after 9 March 2008)
Snowmelt	Solid to Liquid	Solid to Liquid
Snow phase-change heat flux	Solid to Liquid	Liquid to Solid
Net shortwave radiation	Downward	Downward
Net longwave radiation	Downward	Downward
Latent heat flux	Upward	Upward
Sensible heat flux	Upward	Upward
Snowfall rate	Downward	Downward
Rainfall rate	Downward	Downward
Ground heat flux	Downward	Downward
Surface incident shortwave radiation	Downward	Downward
Surface incident longwave radiation	Downward	Downward
Subsurface runoff	Out of grid	Out of grid
Surface runoff	Out of grid	Out of grid