

Symbol	Description	Units
$\sigma_{ij}$	Stress tensor	Pa
$\tau_{ij}$	Deviatoric stress tensor	Pa
$\tau_e$	Effective deviatoric stress	Pa
$\delta_{ij}$	Kronecker delta	
$\dot{\epsilon}_{ij}$	Strain rate tensor	$s^{-1}$
$\dot{\epsilon}_e$	Effective strain rate	$s^{-1}$
$\mu_e$	Effective ice viscosity	Pa s
$\gamma$	Ice stiffening factor	
$n$	Glen's flow law exponent	
$m$	Basal friction law exponent	
$\mathbf{u}, u_i$	Horizontal ice velocity vector	$m s^{-1}$
$u_n$	Component of horizontal advective ice velocity normal to cell edges	$m s^{-1}$
$\mathbf{u}_b$	Bed-parallel basal slip velocity vector	$m s^{-1}$
$\bar{\mathbf{u}}$	Depth-averaged velocity	$m s^{-1}$
$A$	Ice flow rate factor	$s^{-1} Pa^{-n}$
$A_0$	Ice flow rate factor constant	$s^{-1} Pa^{-n}$
$\beta$	Basal friction coefficient	$Pa yr m^{-1}$