

Basal melt rates ( $\text{m a}^{-1}$ )	Source	Brief description
$0.12 \pm 0.03$	Shabtaie and Bentley (1987)	Calculated from the measured ice flux into the Ross Ice Shelf and previous measurements
0.18–0.27	Hellmer and Jacobs (1995)	Calculated from a two-dimensional ( $y$ - $z$ plane) channel flow model forced by density differences between the open boundaries and the interior cavity
0.25	Assmann et al. (2003)	Calculated from a circumpolar numerical model
0.082	Holland et al. (2003)	Calculated from a regional numerical model (MICOM)
0.13–0.15	Dinniman et al. (2007)	Calculated from a regional numerical model (ROMS)
0.15	Dinniman et al. (2011)	Calculated from the ROMS model
0.6	Timmermann et al. (2012)	Calculated from a global finite-element ocean model (FESOM)
0.0 $\pm$ 0.1 for Ross West 0.3 $\pm$ 0.1 for Ross East	Rignot et al. (2013)	Calculated from radar measurements and output products from the Regional Atmospheric and Climate Model (RACMO2)
$0.14 \pm 0.05$	Depoorter et al. (2013)	Calculated from radar measurements and a regional climate model (for firn air content and compaction)
0.25 (without tidal forcing) 0.32 (with tidal forcing)	Arzeno et al. (2014)	Calculated from the ROMS model
$0.11 \pm 0.14$ (converted from the basal melt budget of RIS $dM/dt$ in Table 3 with an ice density of $918 \text{ kg m}^{-3}$ )	Moholdt et al. (2014)	Derived from Lagrangian analysis of ICESat (NASA’s Ice, Cloud, and Land Elevation Satellite) altimetry
0.24 (converted from basal melt in $\text{Gt a}^{-1}$ for the last year of simulation in R_MLT in Table 3 with an RIS area of $500\,000 \text{ km}^2$ and an ice density of $918 \text{ kg m}^{-3}$ )	Mathiot et al. (2017)	Calculated from a regional numerical model (NEMO)
0.25	This study	Calculated from quasi-equilibrium state of a global numerical model (MITgcm)