Response to Reviewer #1
Supplementary document

Table 1: Total melt rates relative differences between different experiments for each ice shelf and for all ice shelves (total).

	Pine Island	Thwaites	Dotson	Crosson	Getz	Total
NOLOSCH121 - REF	-6.2%	55.6%	-1.7%	17.2%	14.4%	-7.7%
NOLOSCH121 - LOG121	-5.4%	0.6%	0.3%	4.2%	15.4%	-10%
NOLOSCH75 - REF75	2.5%	42.5%	-0.4%	14.0%	-4.0%	0.1%
NOLOSCH75 - LOG75	14.3%	50.8%	23%	31.0%	6.6%	13.0%
NOLOSCH75- NOLOSCH121	56.2%	30.9%	17.2%	32.3%	31.7%	32.2%

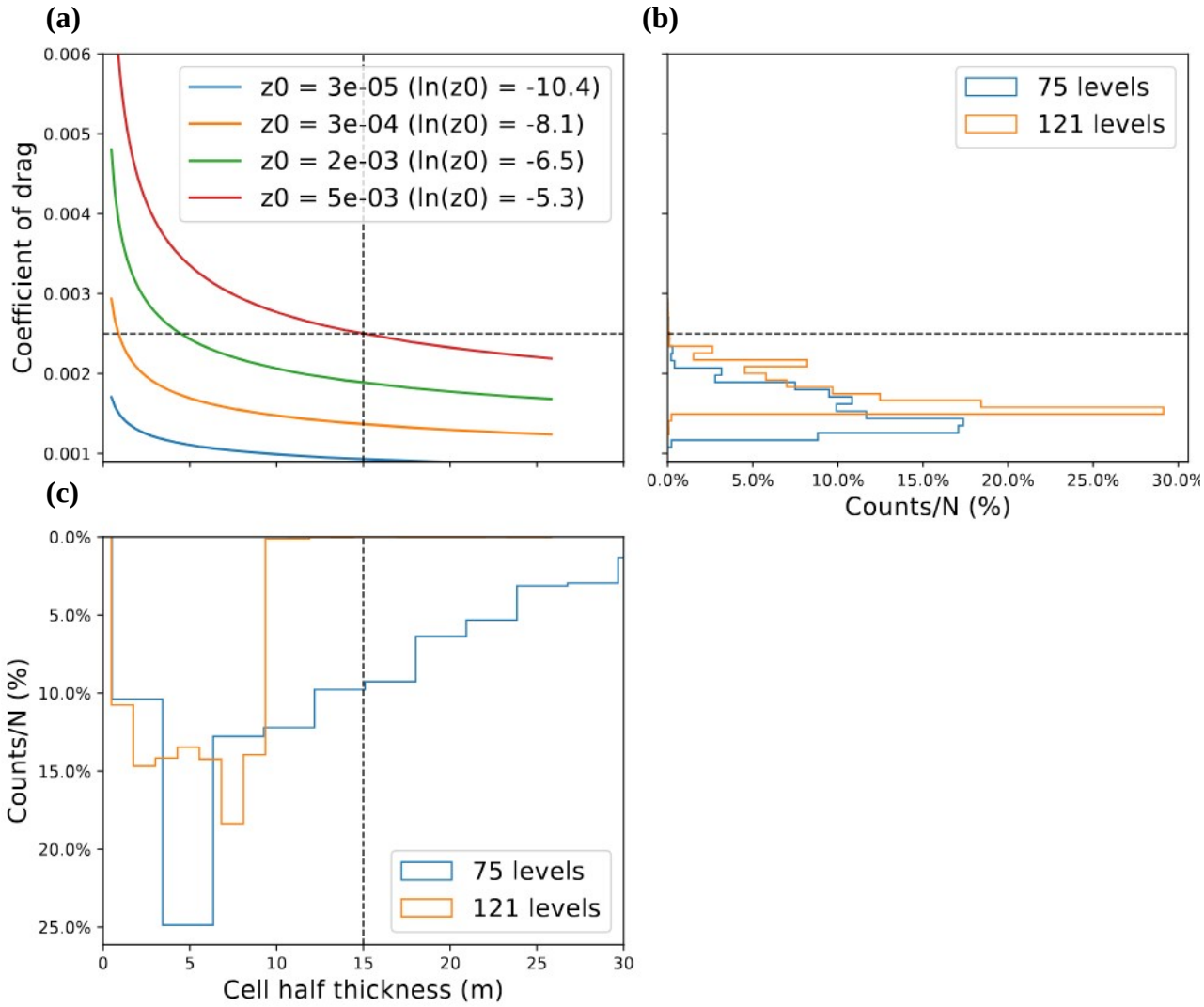

Figure 1: (a) Coefficient of drag following the law of the wall for four different z_0. The horizontal dashed line represents a coefficient of drag of 0.0025 and the vertical dashed line represents a cell helf thickness of 15 m (cell thickness of 30 m). (b) Histograms of coefficient of drag for z0 = 3e-4 m for 75 levels (blue) and 121 levels (orange) for all ice shelves. (c) Histograms of cell hlf thickness (m) for z0 = 3e-4 m for 75 levels (blue) and 121 levels (orange) for all ice shelves.

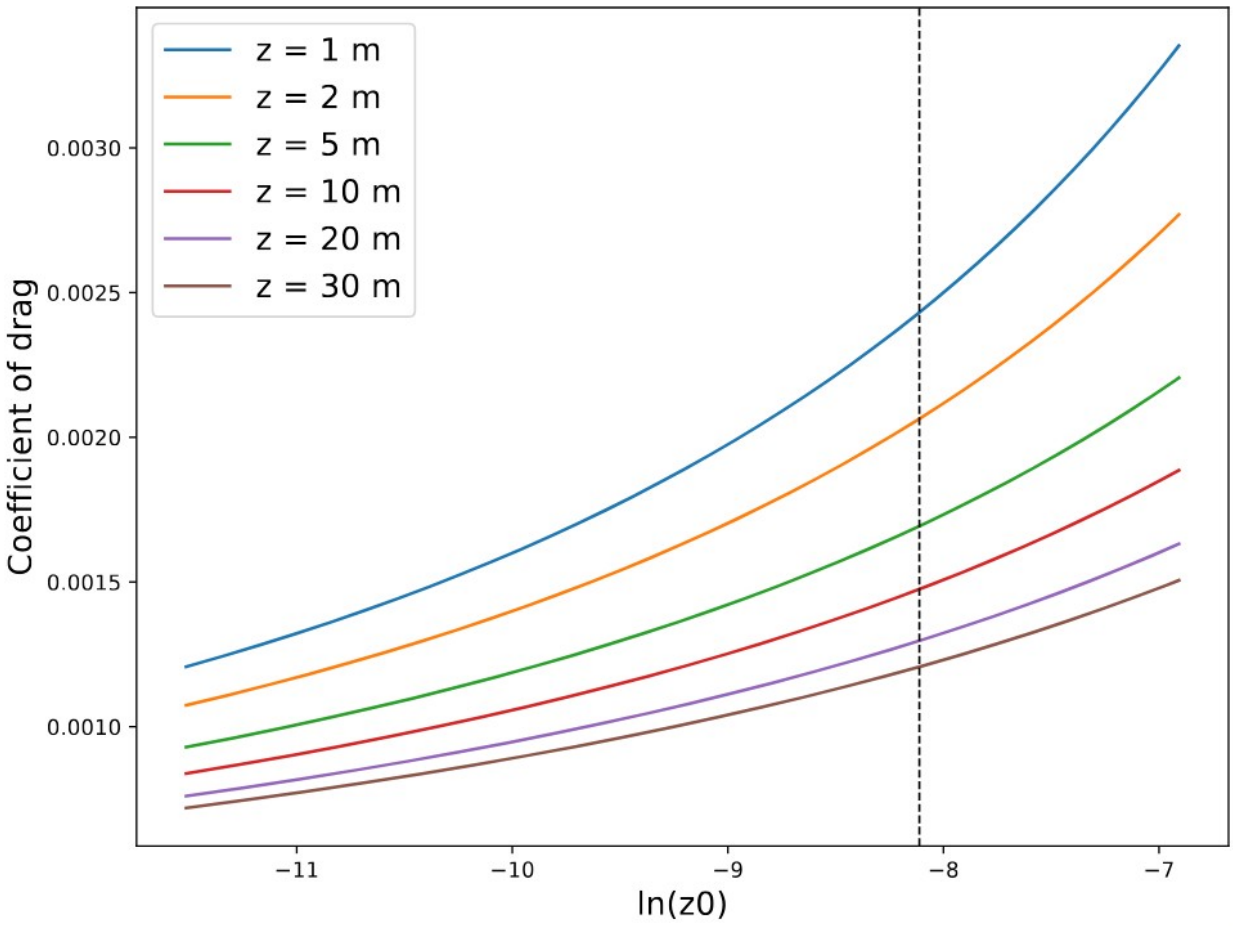

Figure 2: Coefficient of drag as a function of $\ln(z_0)$ for different first wet cell half thickness z. Vertical dashed line shows z_0 = 3e-4 m which is the value used in LOG.