(a)

Given $A \in \{60, 100, 150\}$ and $C_P \in \{1, 1.2, 1.35, 1.5\}$, do

Model period

Find $c_l$ that matches the 2015-2019 surface velocities — 2010 2019

Find $C_{M,<1980}$ that matches the 1980 DEM — 1947 1980

Find $C_{M,>1980}$ that matches the 2010 DEM — 1980 2019

Find $c_u$ that matches the identified 1960 ice on line 3 — 1947 2019

*if parameter set converged*

(b) Calibrated parameters

| | A=60 | A=100 | A=150 |
|---|---|---|---|
| $C_P$= 1.5 | (33,27) (1.02,1.07) | (28,9) (1.00,1.05) | (25,1) (1.00,1.03) |
| $C_P$= 1.35 | ~~(33,50)~~ ~~(0.92,0.95)~~ | (28,22) (0.89,0.94) | (25,1) (0.86,0.91) |
| $C_P$= 1.2 | ~~(33,50)~~ ~~(0.80,0.85)~~ | ~~(28,46)~~ ~~(0.77,0.84)~~ | (25,8) (0.74,0.82) |
| $C_P$= 1 | ~~(33,50)~~ ~~(0.64,0.69)~~ | ~~(28,50)~~ ~~(0.62,0.68)~~ | ~~(25,50)~~ ~~(0.60,0.68)~~ |

Parameter set in each cell: $(c_l, c_u)$ $(C_{\mathrm{M},<1980}, C_{\mathrm{M},>1980})$