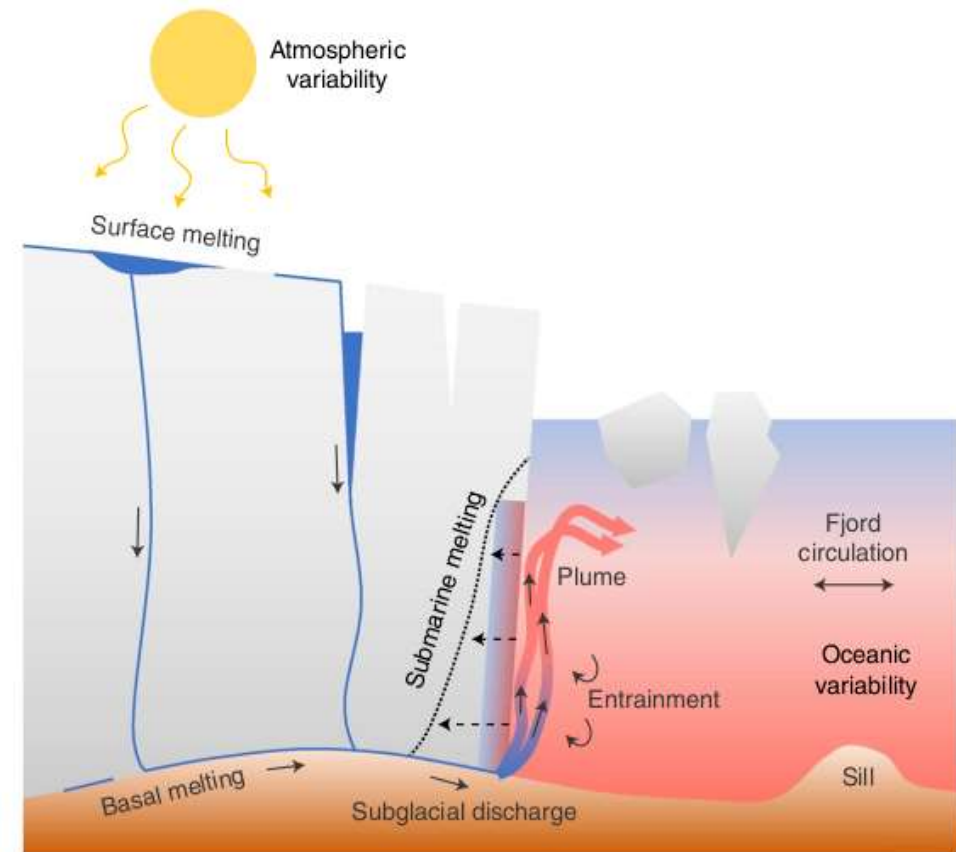
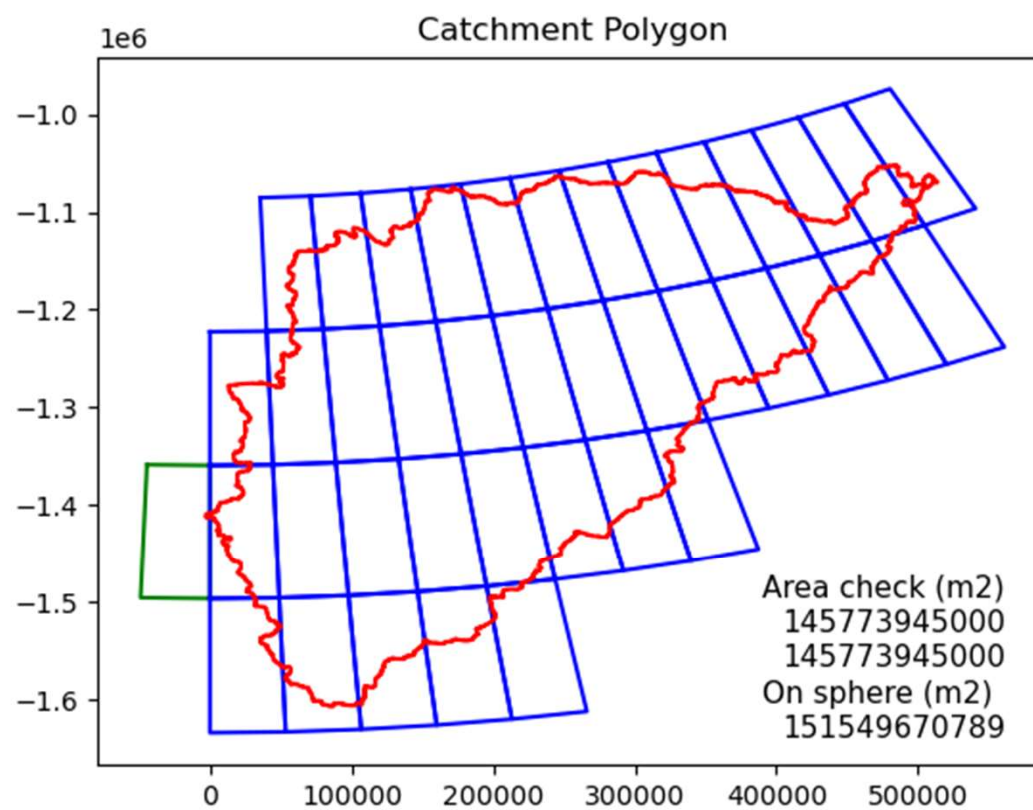
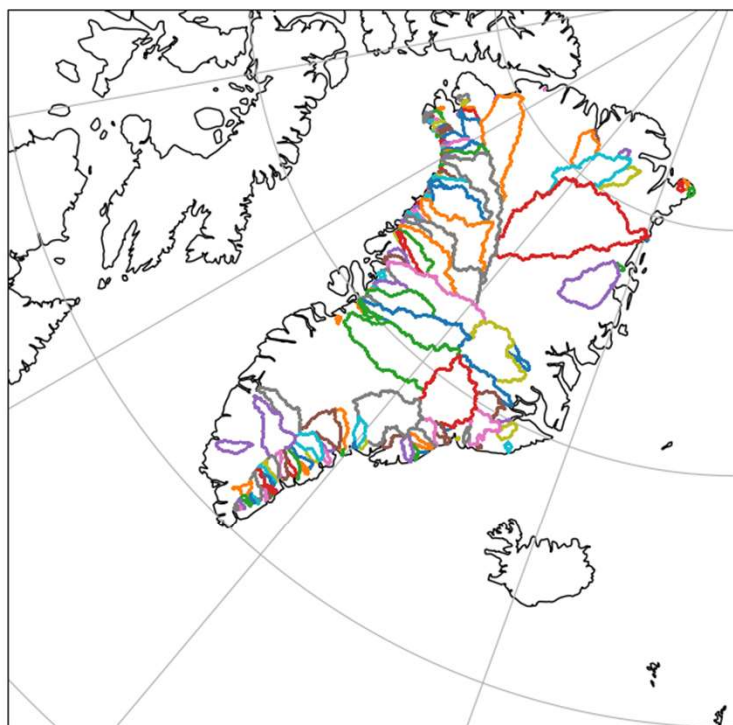


Parameterisation of submarine melting of glaciers in Greenland



Slater, 2022



Runoff from UM mapped onto drainage basins -> subglacial runoff

Thermal Forcing

Difference between the in situ temperature and in situ freezing point.

Average over 200-500m

TF Forcing (C):

Sector 1 = 6.39

Sector 2 = 6.12

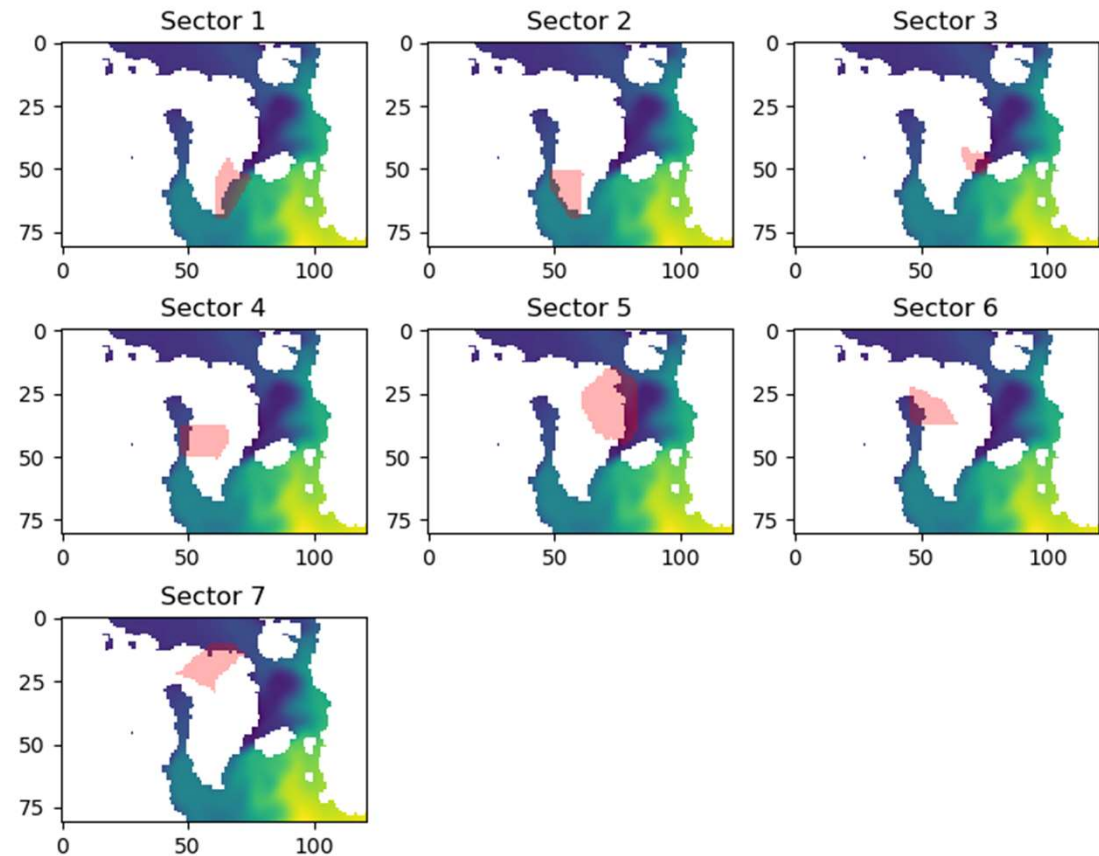
Sector 3 = 2.27

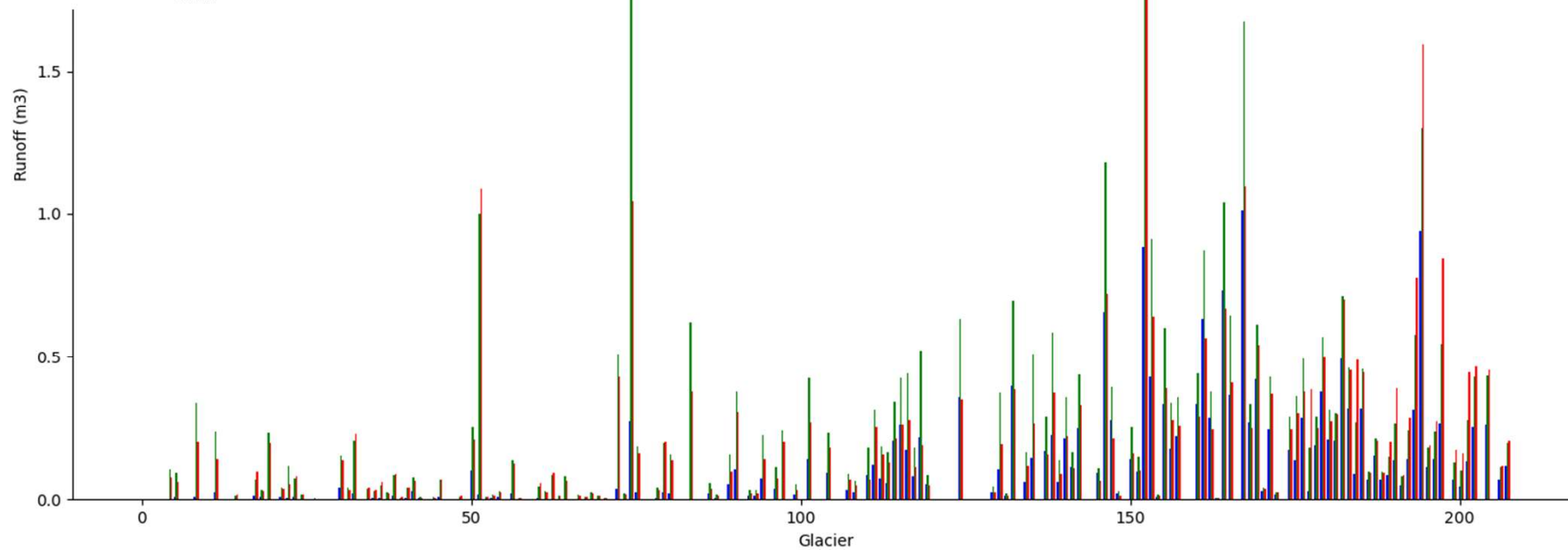
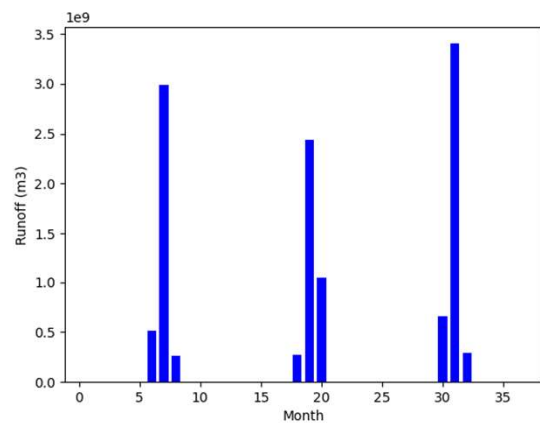
Sector 4 = 3.80

Sector 5 = 2.26

Sector 6 = 3.09

Sector 7 = 2.73





Results

Use anomalous melt rate wrt CTL to feed into BISICLES calving

$$Q_m = (A h Q^\beta + B) T F^\gamma$$

h = water depth at glacier terminus

$$\Delta L = \alpha (Q^{0.4} T F)$$

JJA parameters for year

