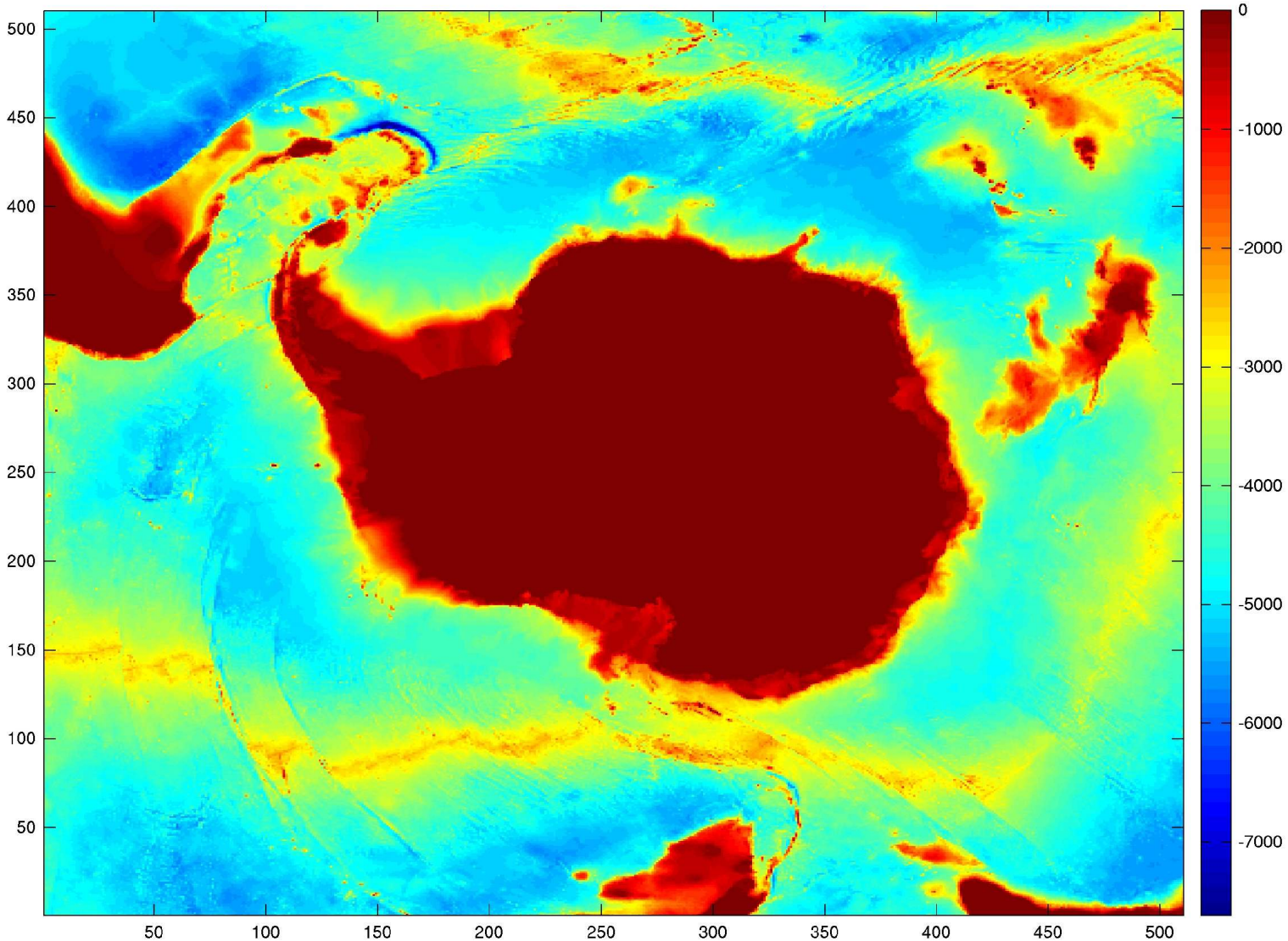
Milestone: Ice Shelf Ocean Interaction

BEDMAP:
Ice Shelf Thickness
Water Column Thickness

=> Draft + Water Column Thickness =
Bathymetry beneath Ice Shelves

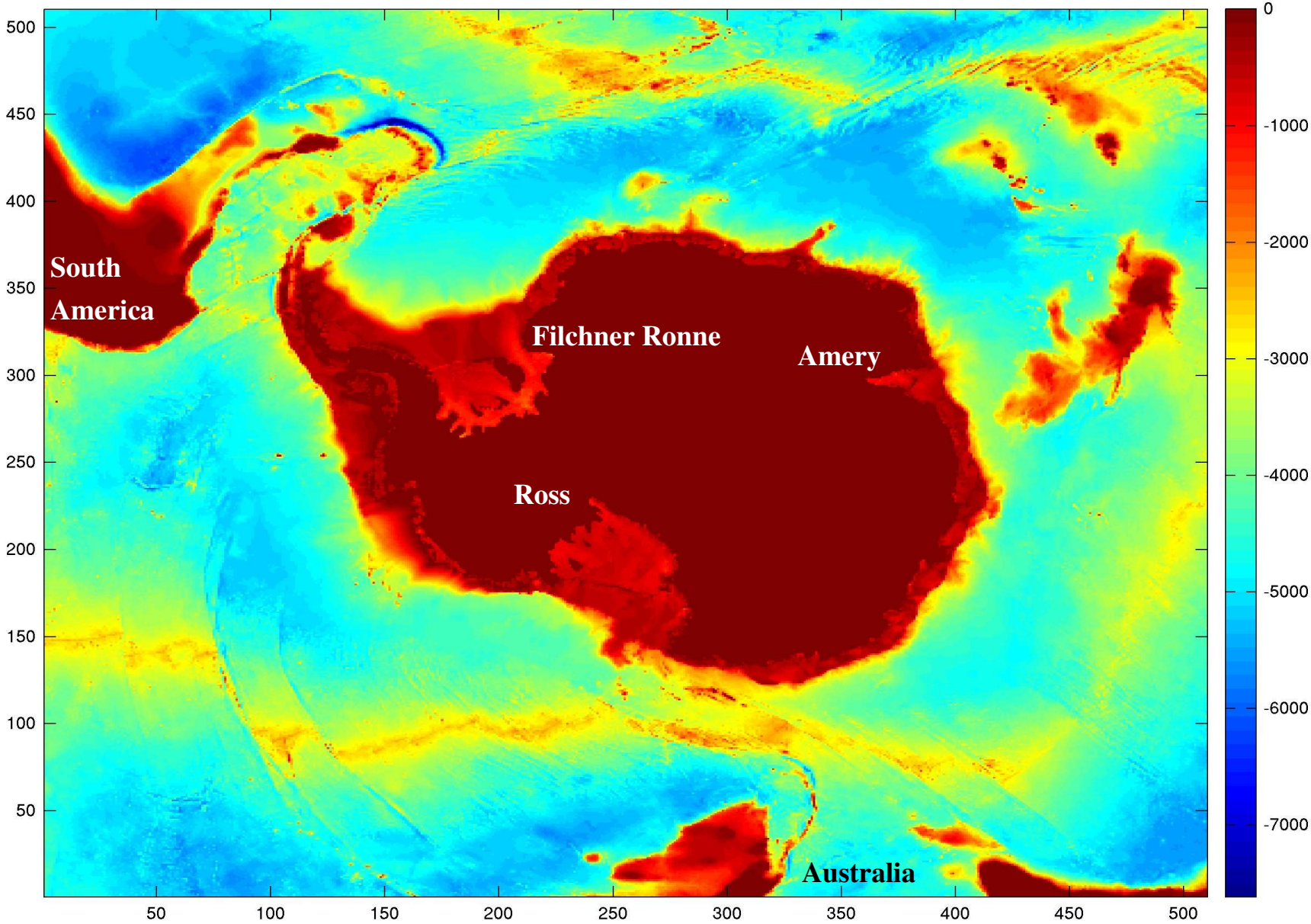
GEBCO:
Bathymetry to Ice Shelf Edge

Next:
IceSAT – GLAS – Dataset of Iceshelf Thickness (E. Rignot)

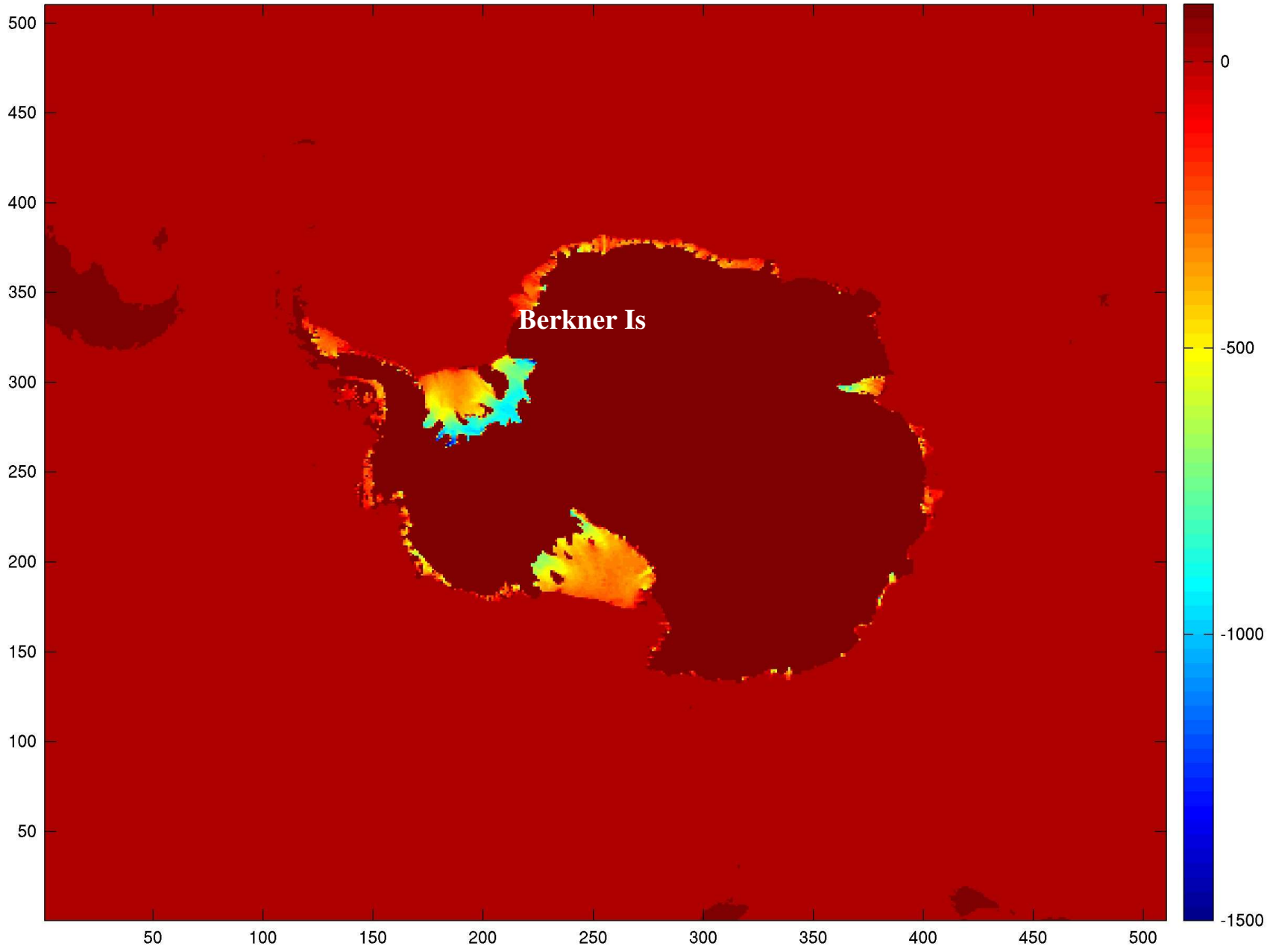


GEBCO 1 min on CS 510 grid

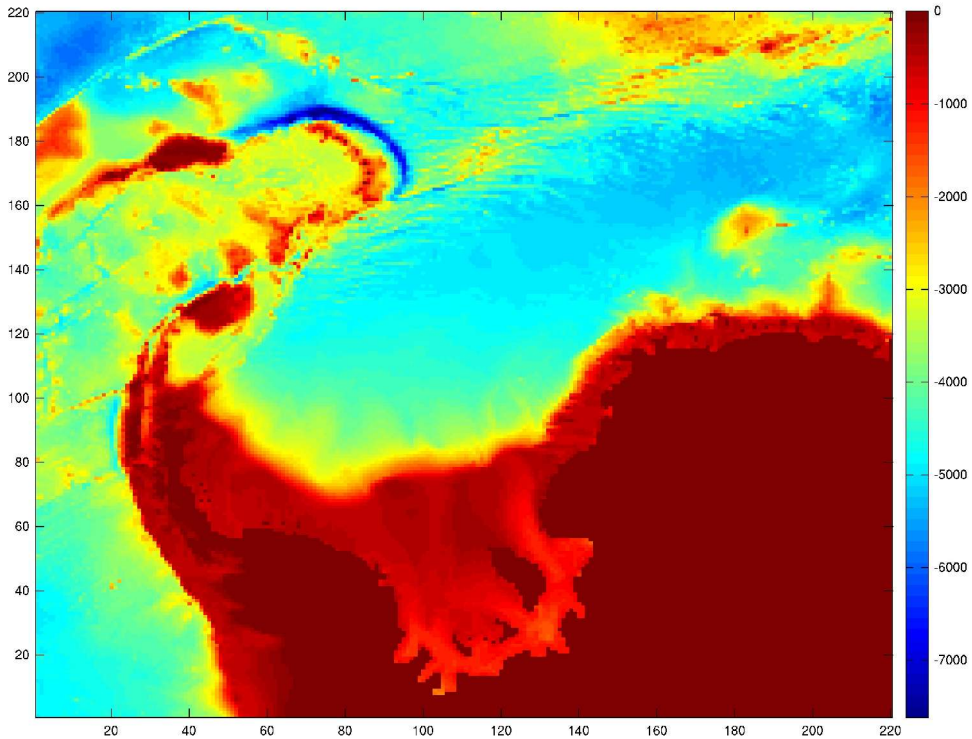
combined data sets

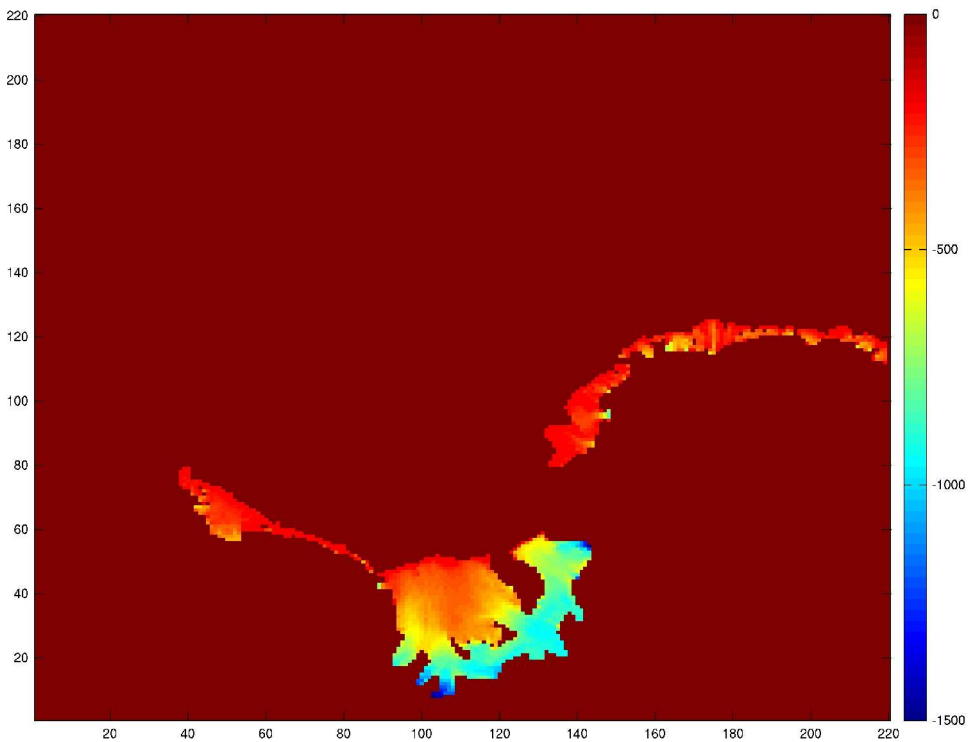


Ice Shelf Thickness on CS 510

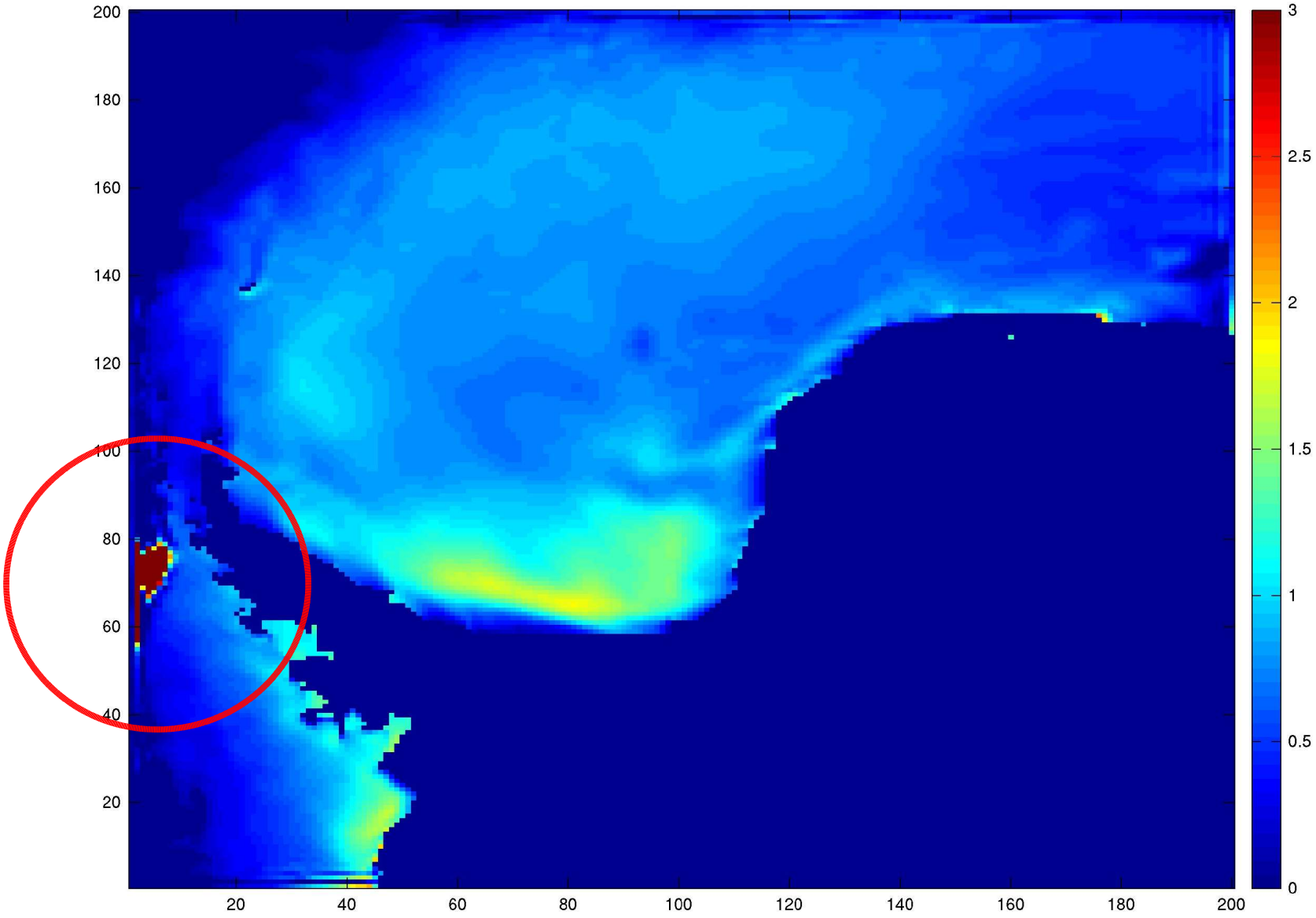


Weddell Sea Domain
220x220
- editing of thickness and bathymetry

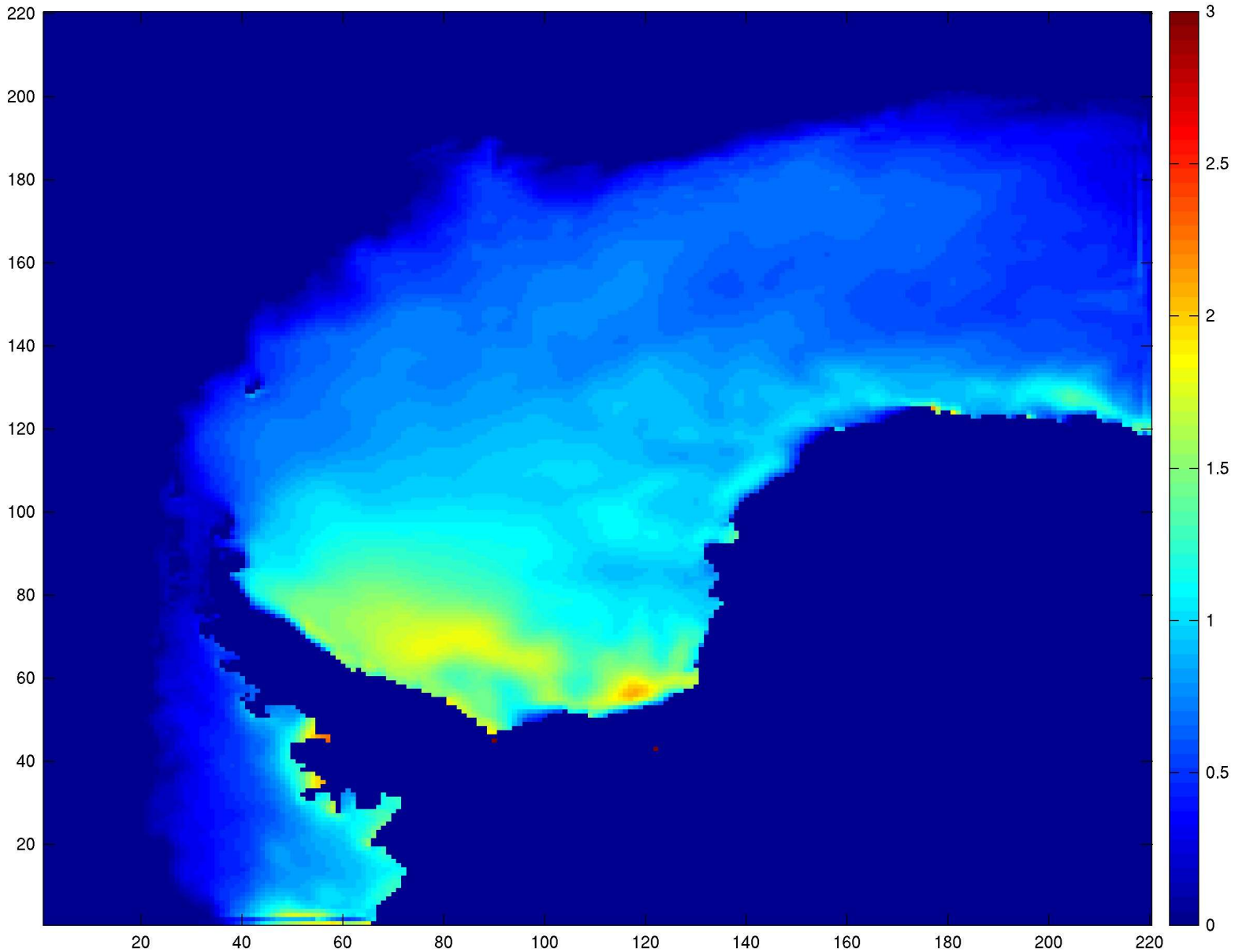




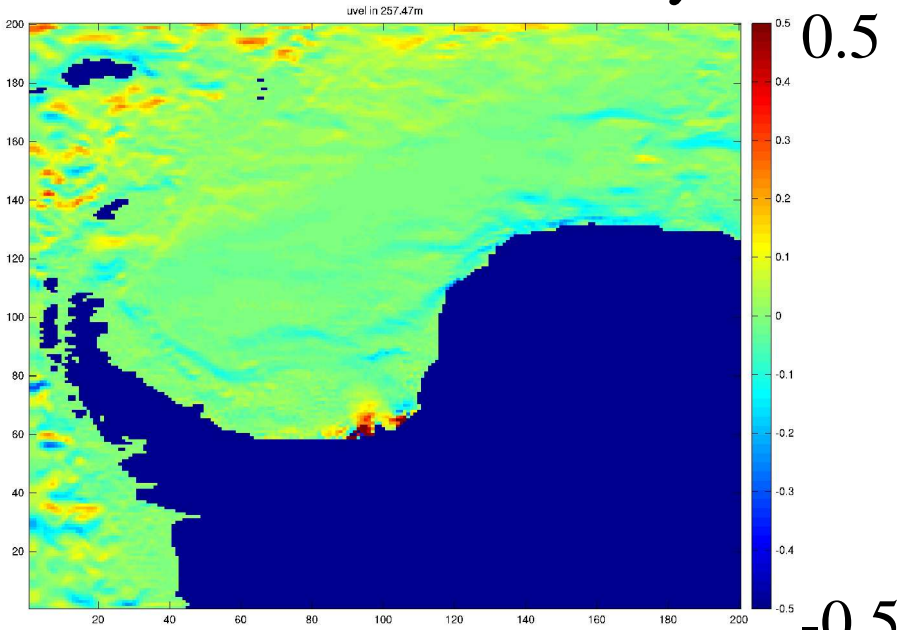
Sea Ice Thickness 200x200 - August 1992

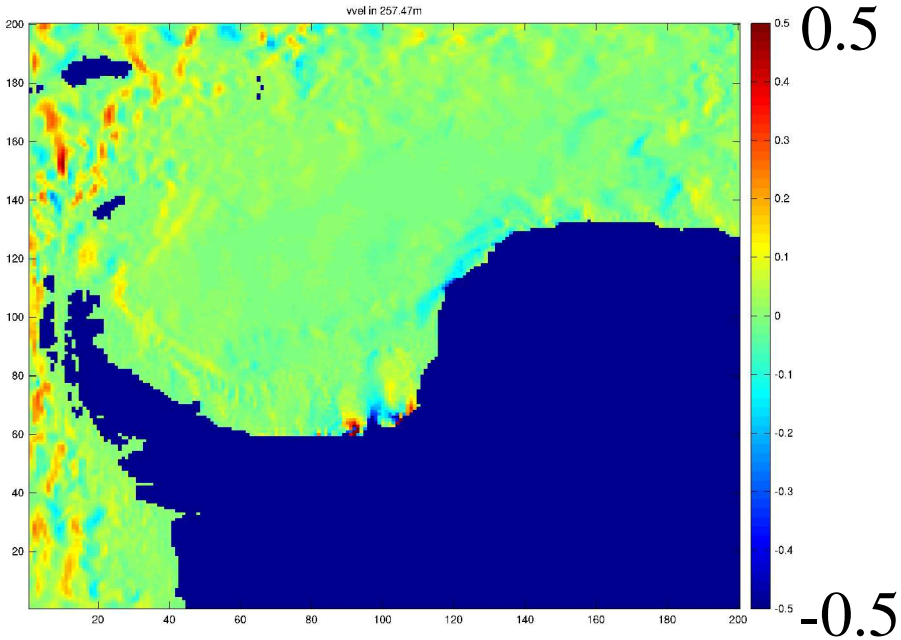


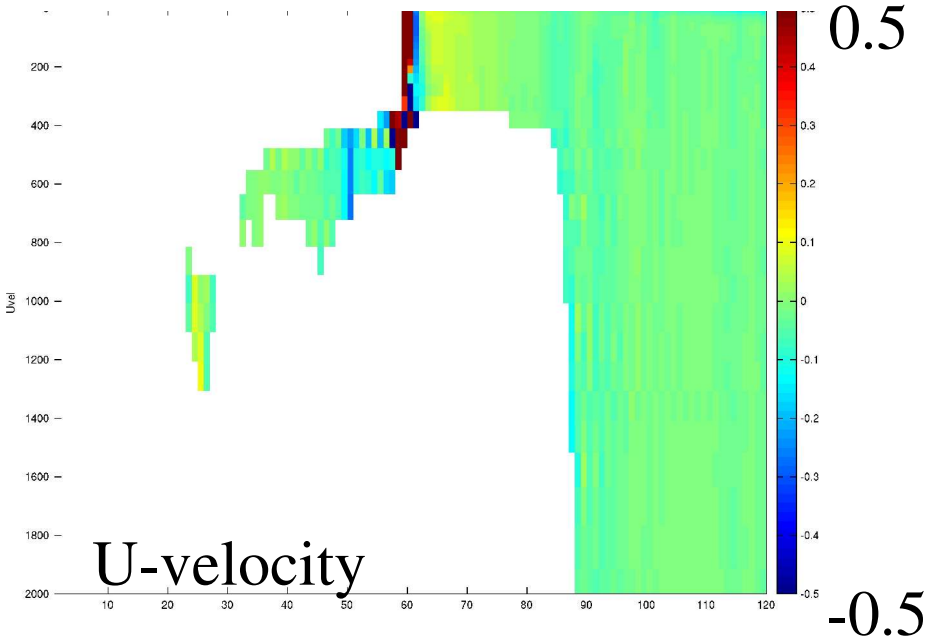
Sea Ice Thickness 220x220 - July 1996

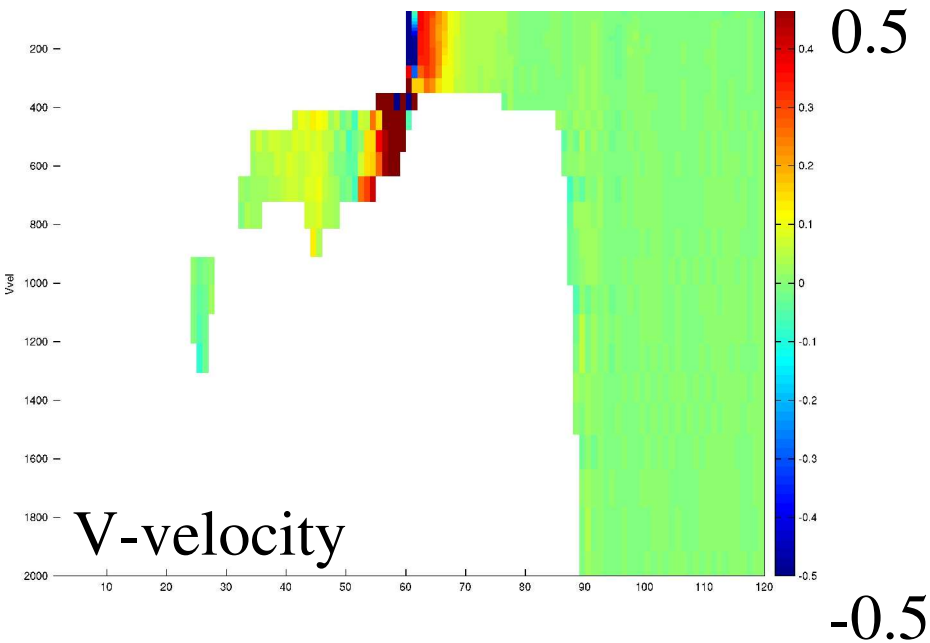


numerical instability due to violation (sic?) of cfl criterium





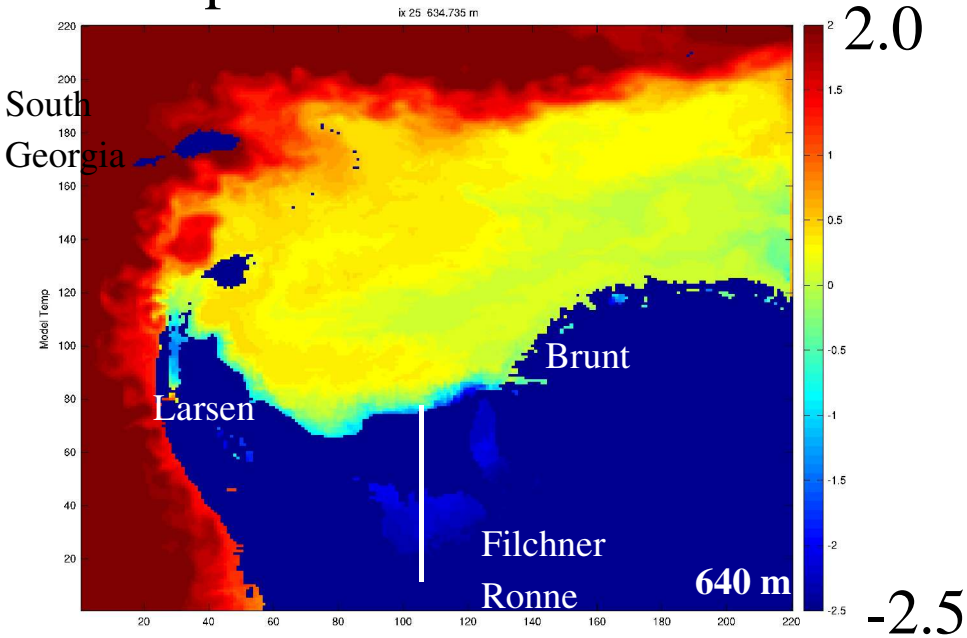




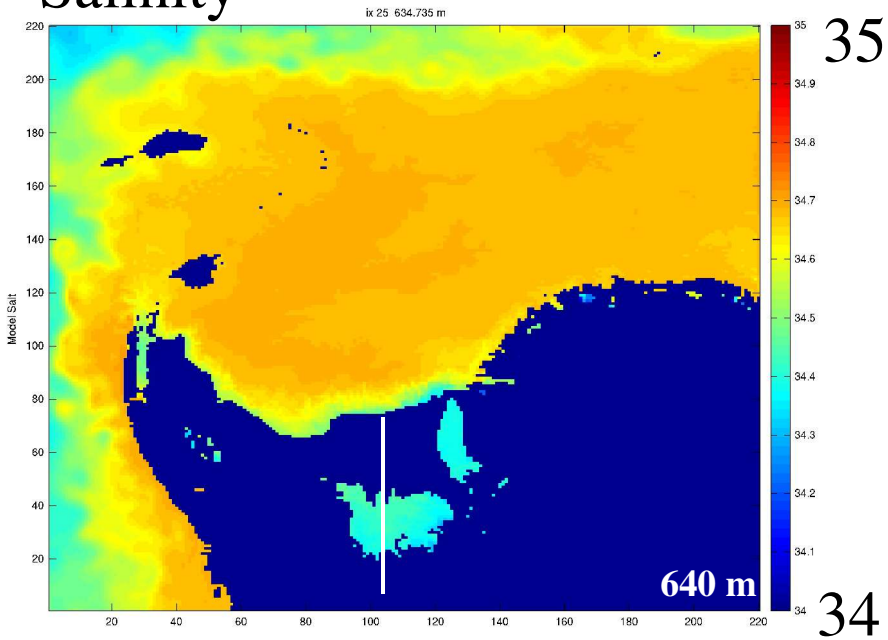
Weddell 200x200

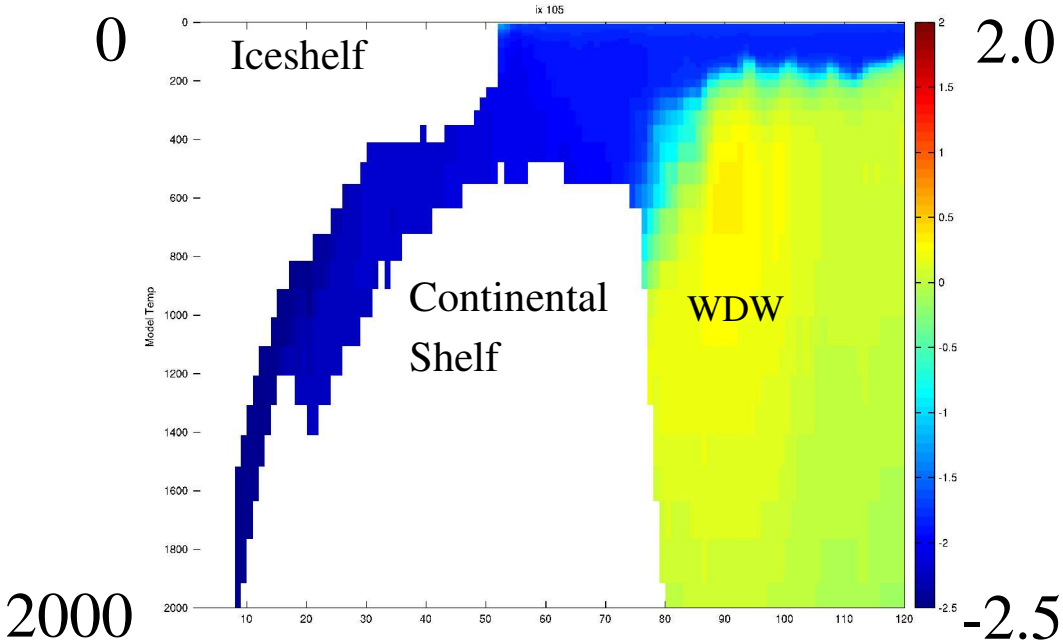
Weddell 220x220 January 1998

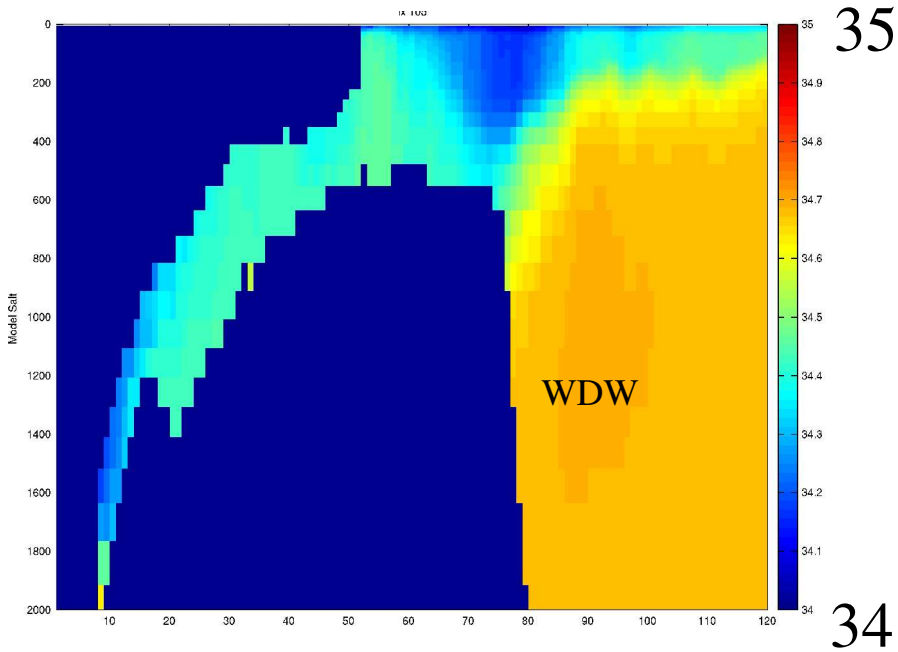
Temperature



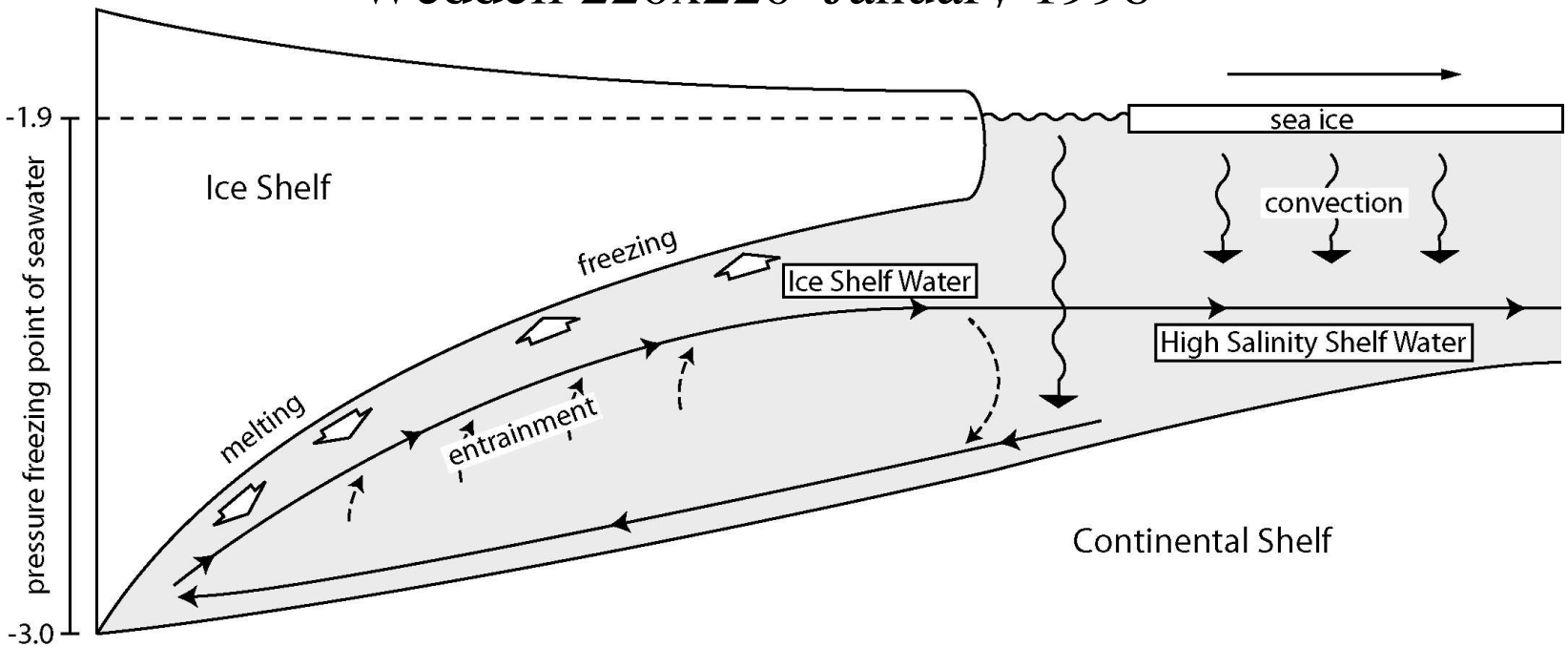
Salinity

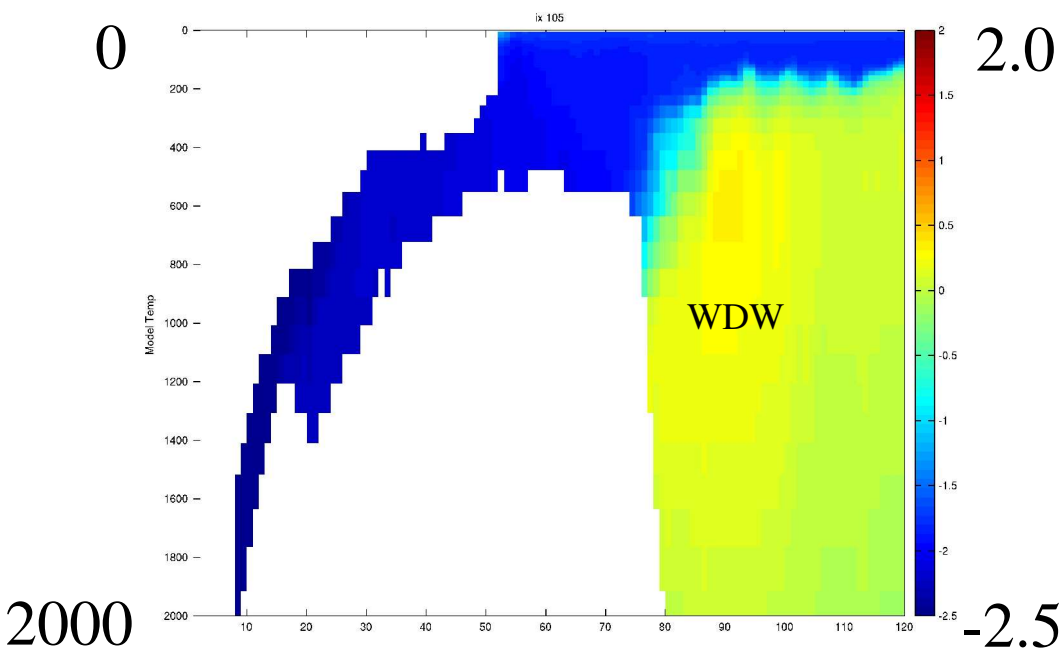




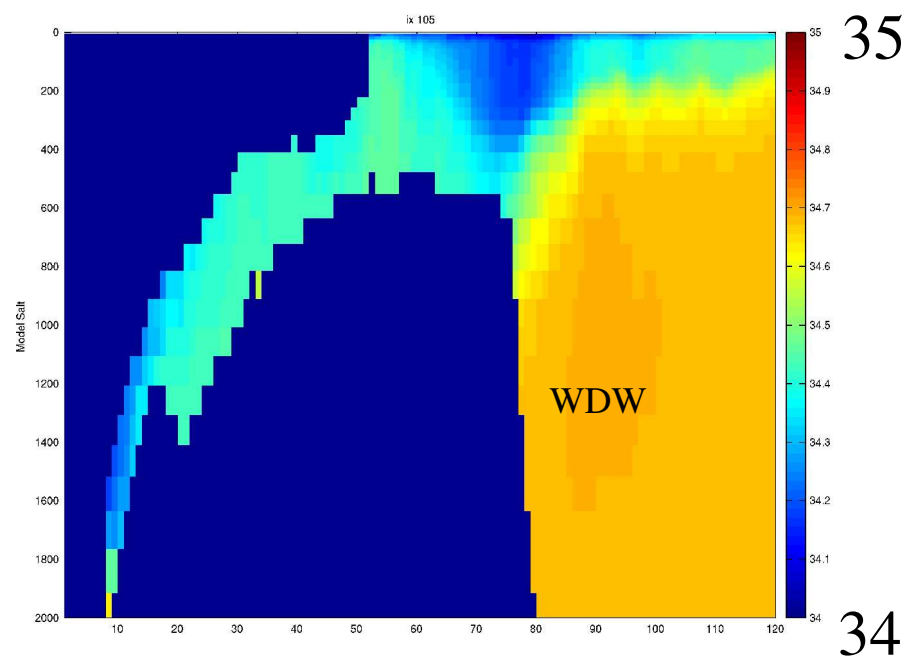


Weddell 220x220 January 1998



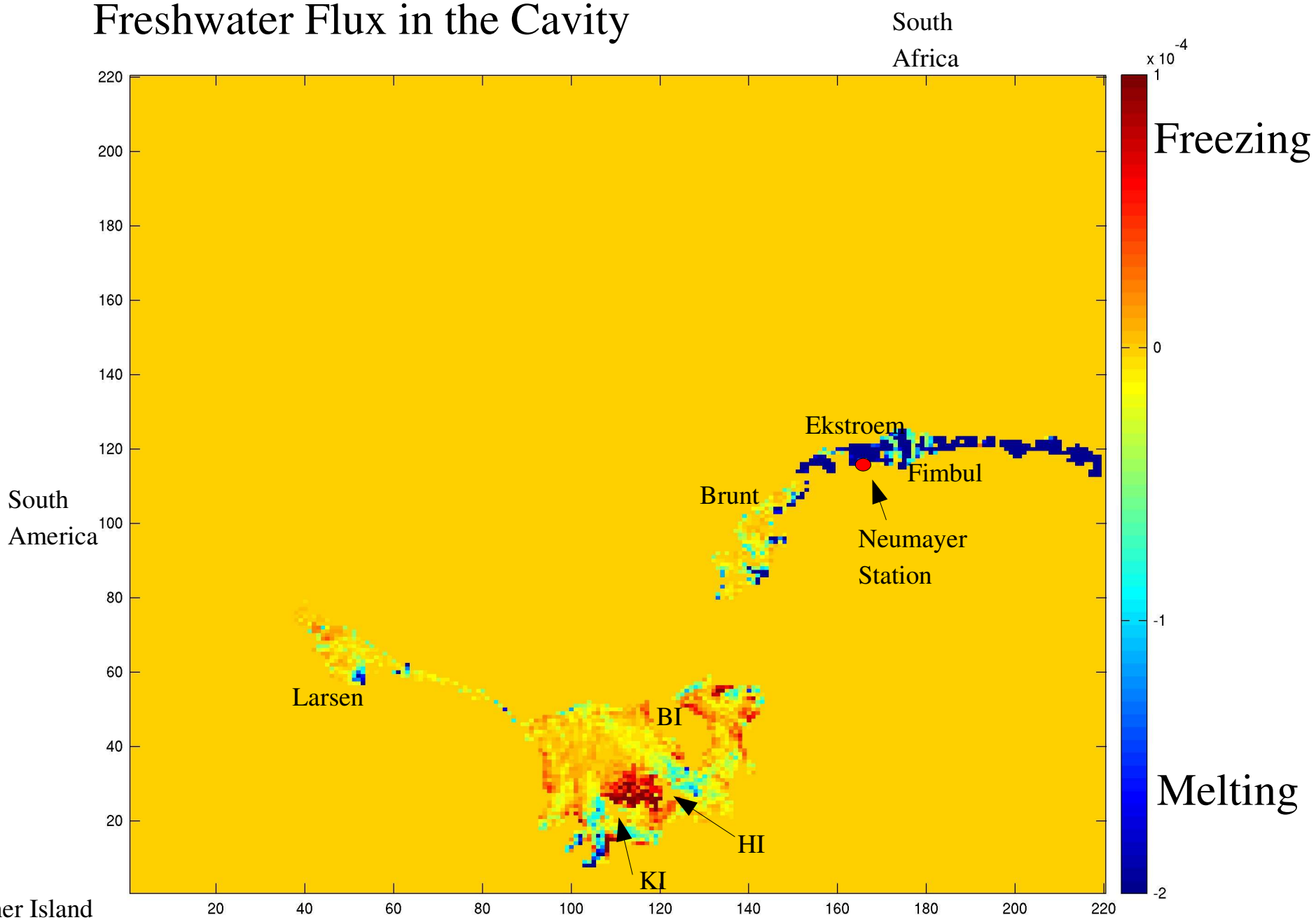


Temperature



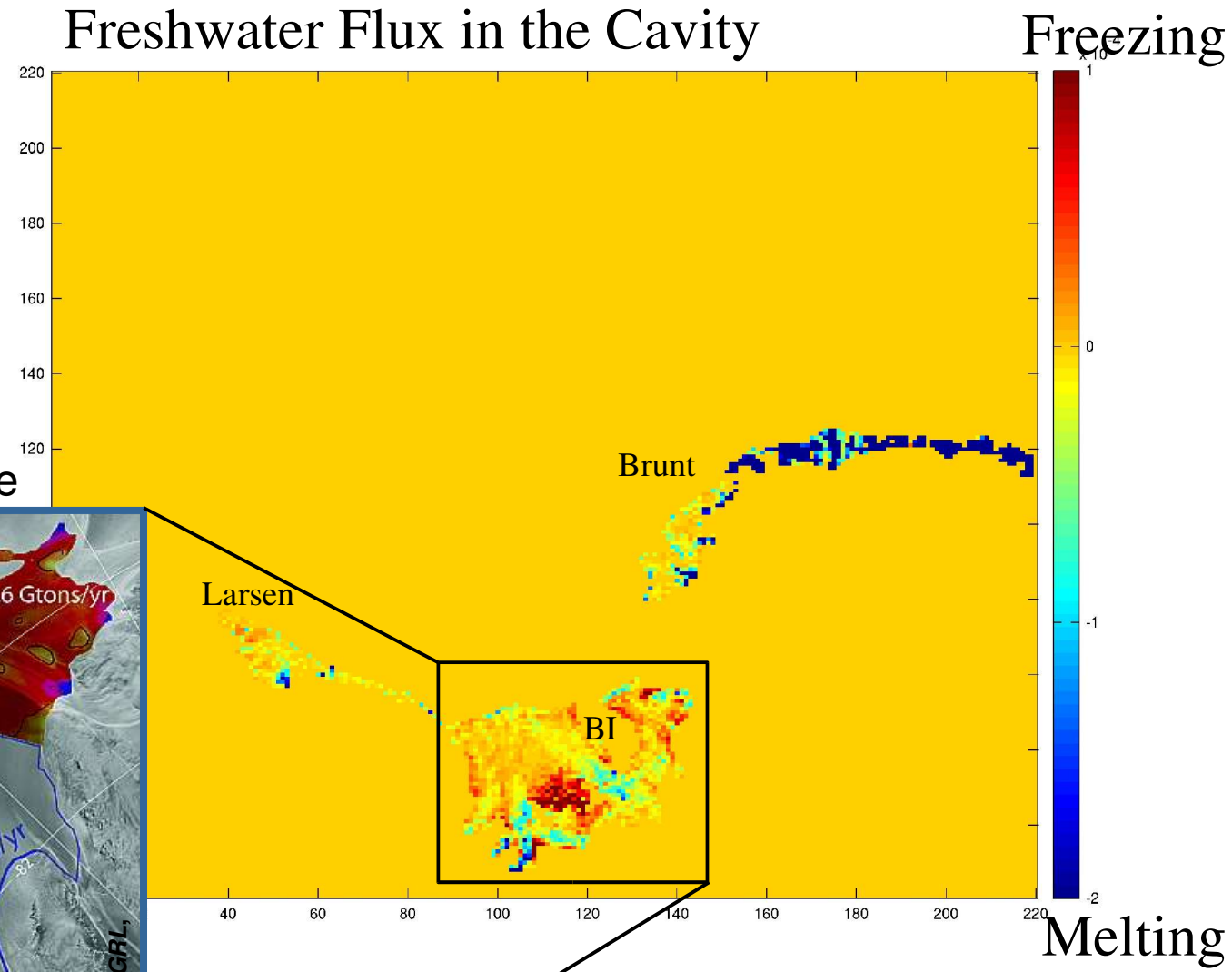
Salinity

Freshwater Flux in the Cavity

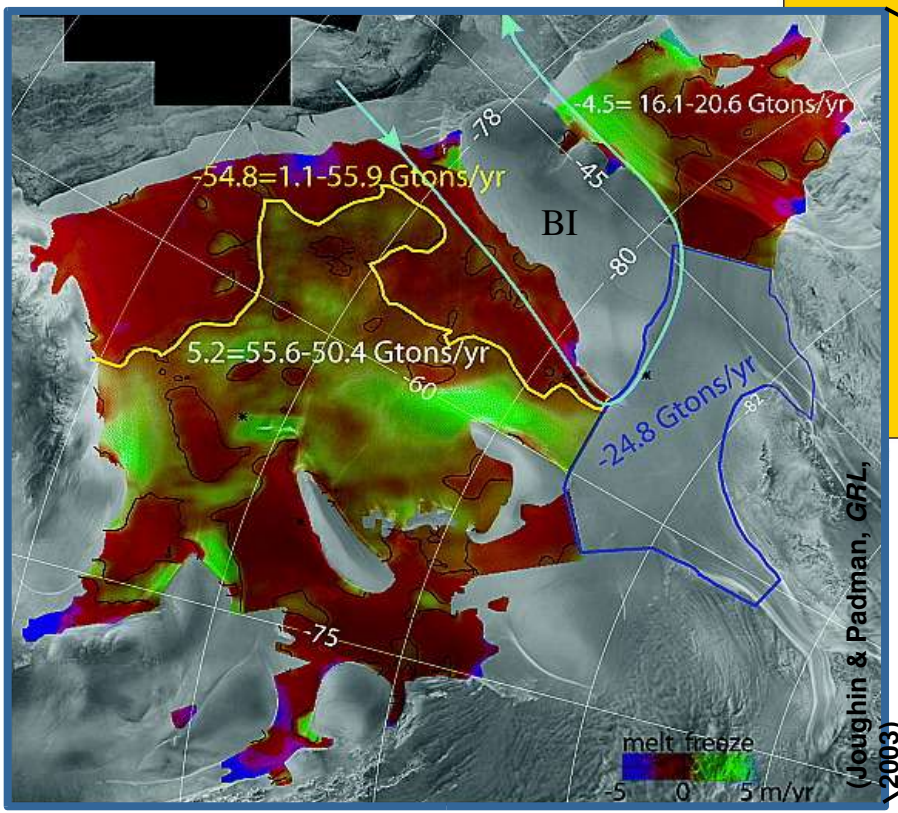


BI-Berkner Island
KI-Korff Ice Rise
HI-Henry Ice Rise

Freshwater Flux in the Cavity



Distribution of Basal Melt/Freeze



(Joughin & Padman, *GRL*, 2003)

green: freeze

first results:

-> convert into meltrates/year