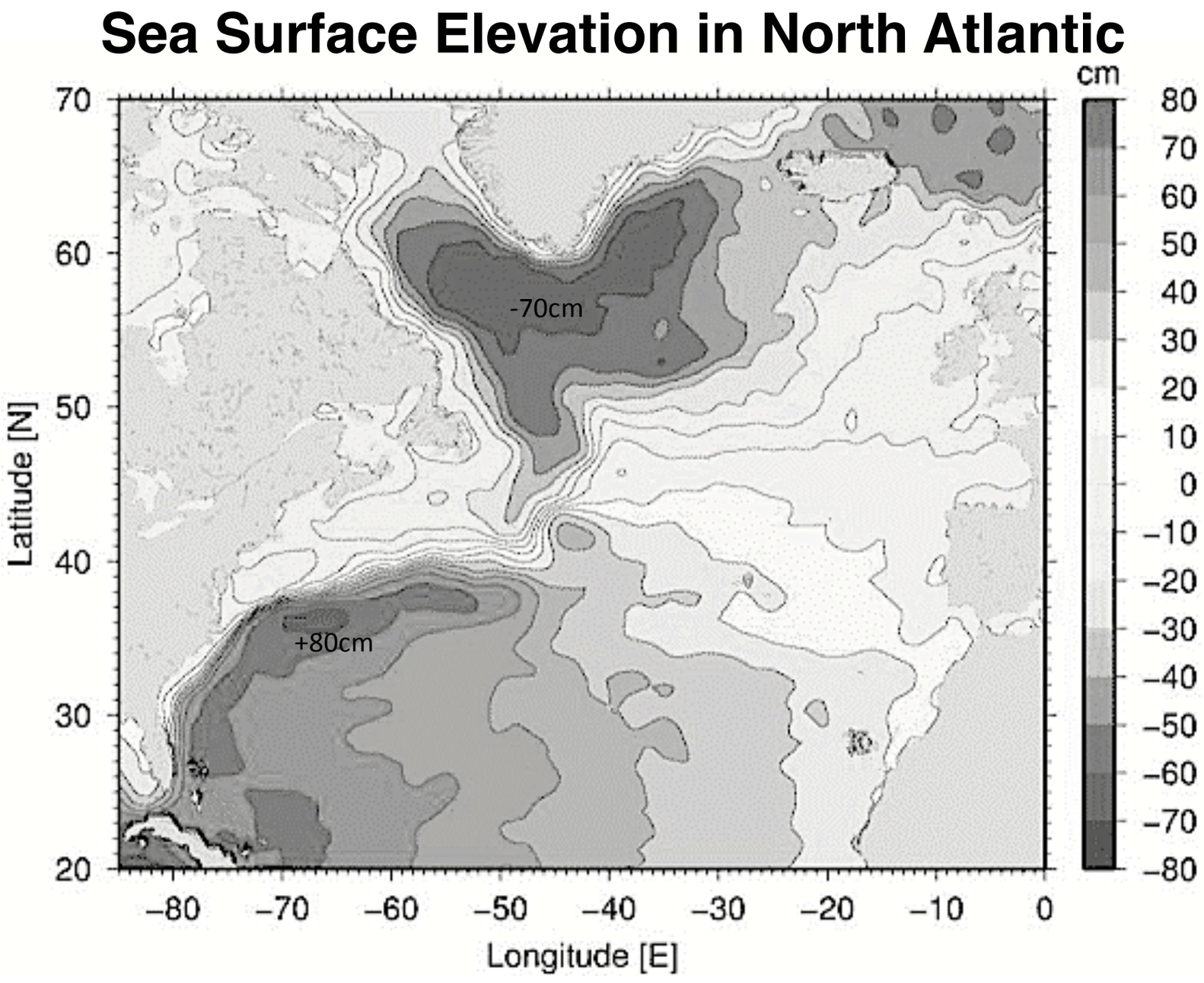
AOS 103

Week 6 Discussion

Midterm Questions



1) Use arrows to sketch the direction and strength of the surface circulation

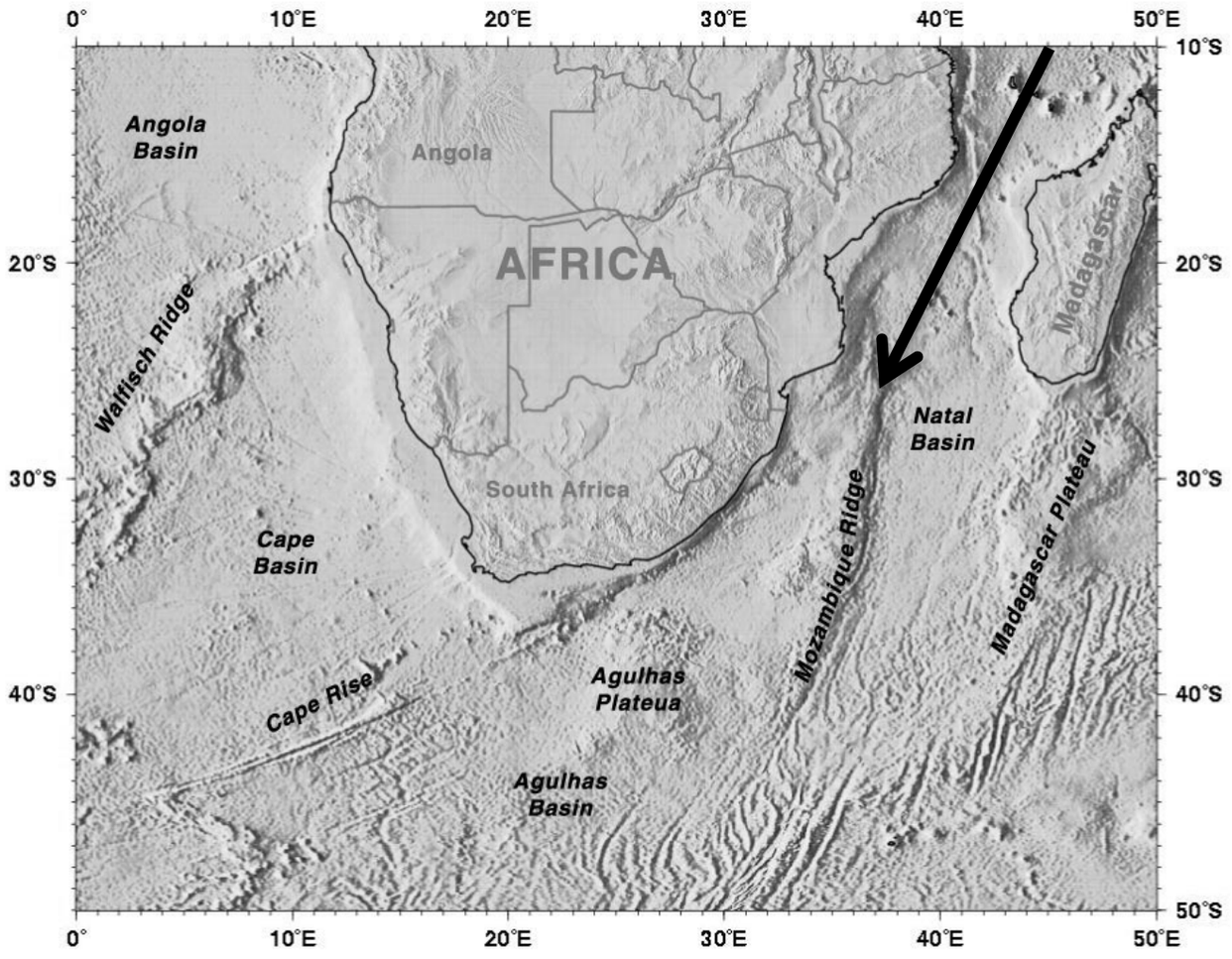
2) Label subtropical gyre, subpolar gyre, and Gulf Stream

When you see data…use it, do not try to recreate what you saw on a lecture slide based on a similar looking figure

Use what you know about pressure gradients from sea surface elevation and geostrophic currents to draw the arrows BASED ON THE DATA IN THE FIGURE

Midterm Questions

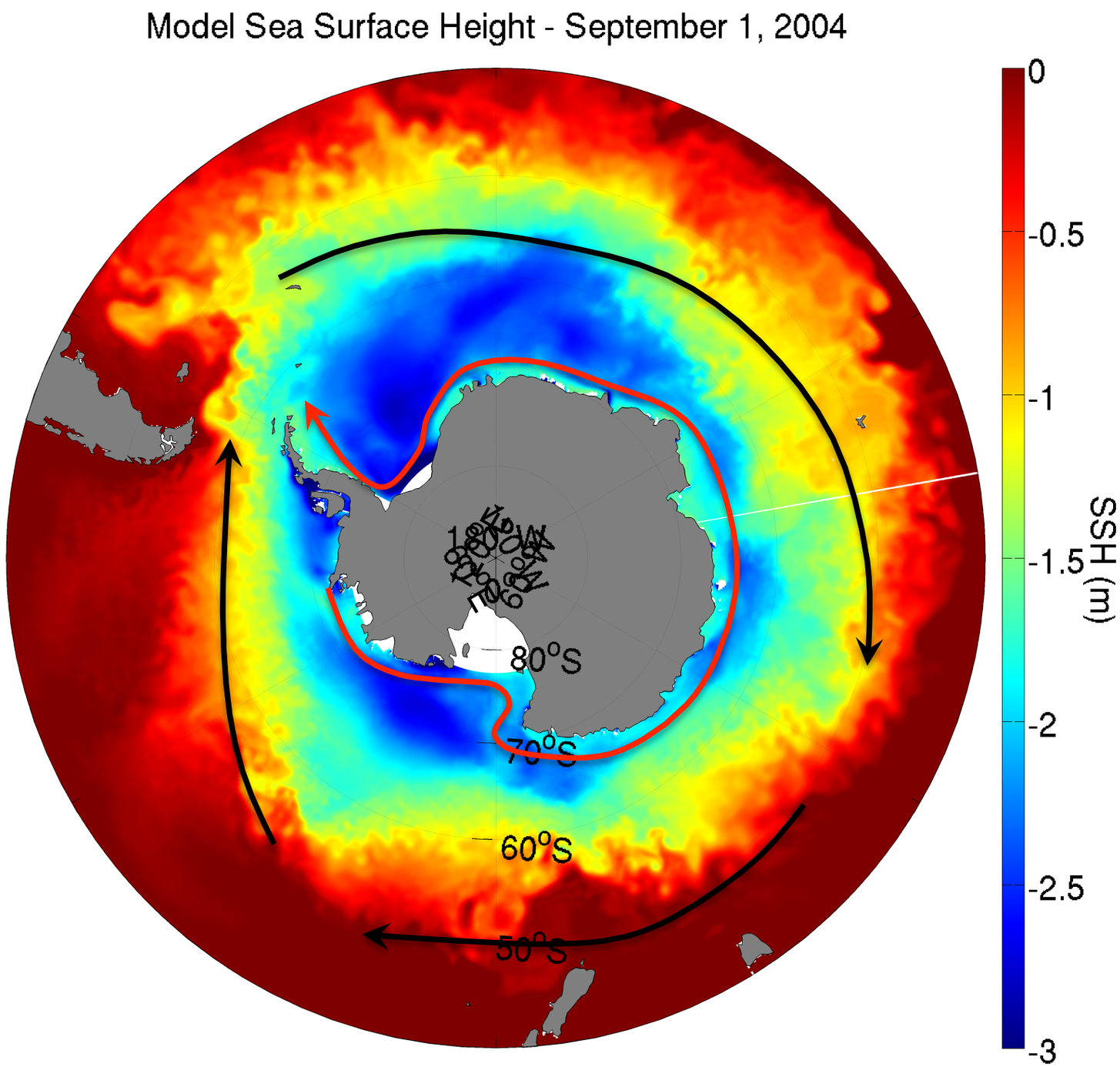
Agulhas (or Mozambique) Current



1) Calculate total volume transport

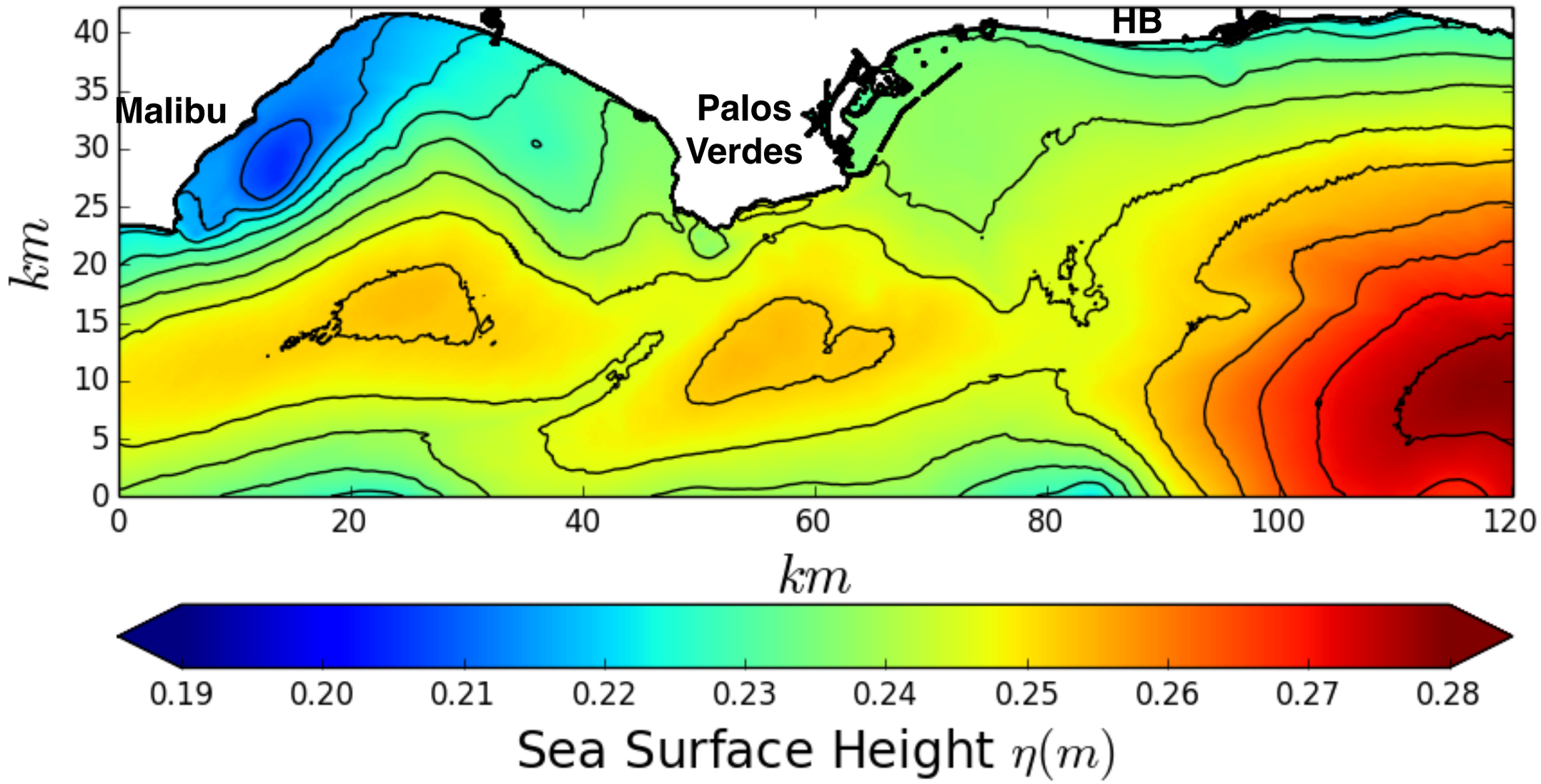
2) Assuming the current is *barotropic* calculate the difference in sea surface height between the western and eastern sides of the channel

ACC SSH Plot


Model Sea Surface Height - September 1, 2004
0
-0.5
-1
-1.5
-2
-2.5
-3
SSH (m)
80°S
70°S
60°S
50°S

Interpreting Data

Tell a story from this plot

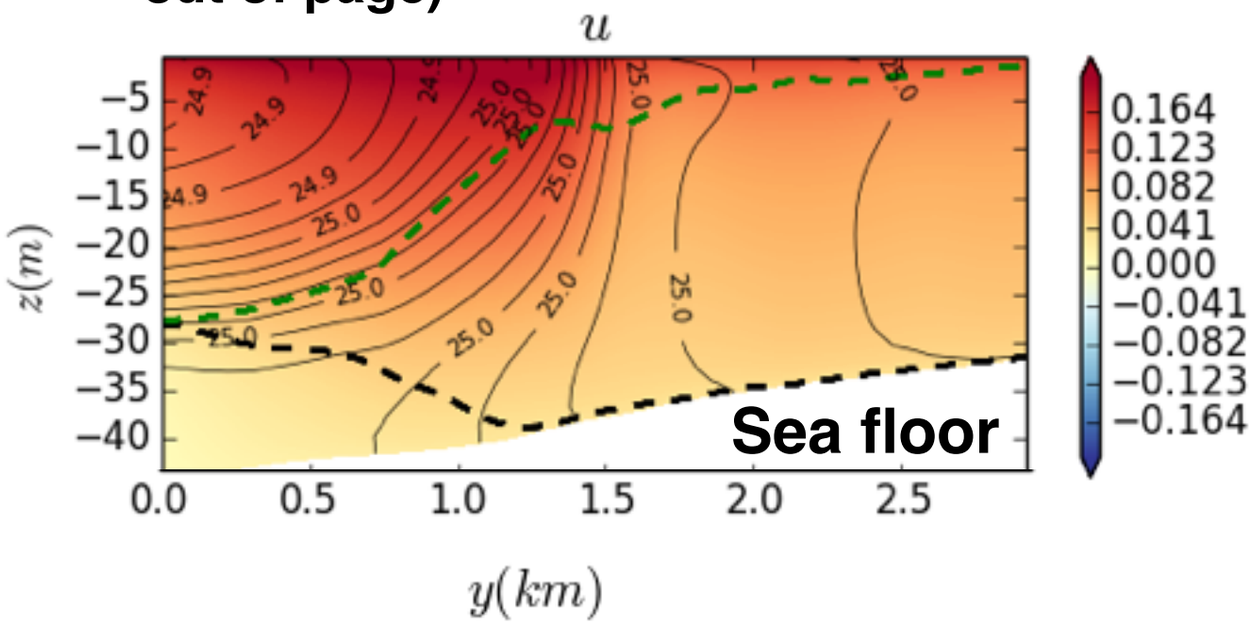


***Snapshot of SSH is from a ROMS (Regional Oceanic Modeling System) simulation of Santa Monica and San Pedro Bay**

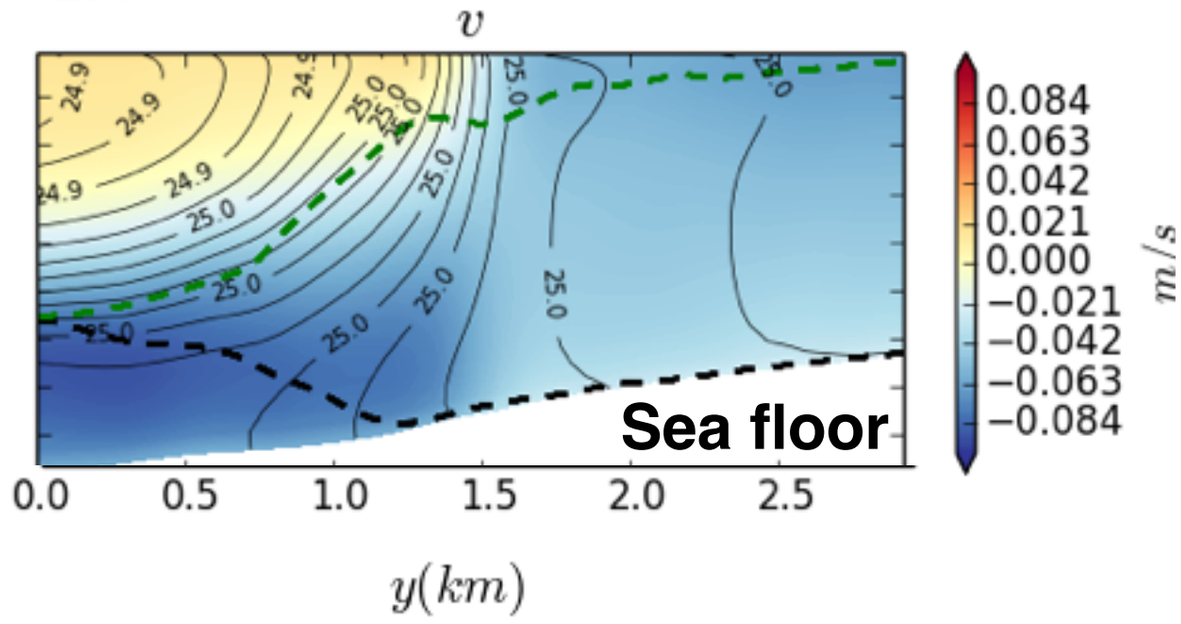
Interpreting Data

Tell a story from this plot

Velocity in/out of page (positive is out of page)



Positive is to the right along the y-axis



Black contours are potential density, and dashed lines indicate surface and bottom boundary layer depths (don't necessarily focus on the boundary layer depths)

***Cross-sections from a ROMS (Regional Oceanic Modeling System) simulation of Santa Monica and San Pedro Bay**