

Thursday 13th slides

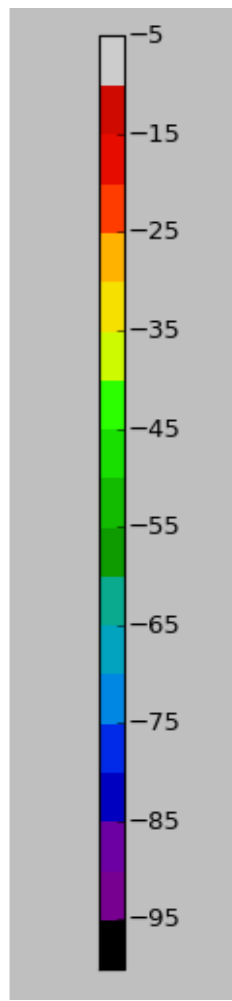
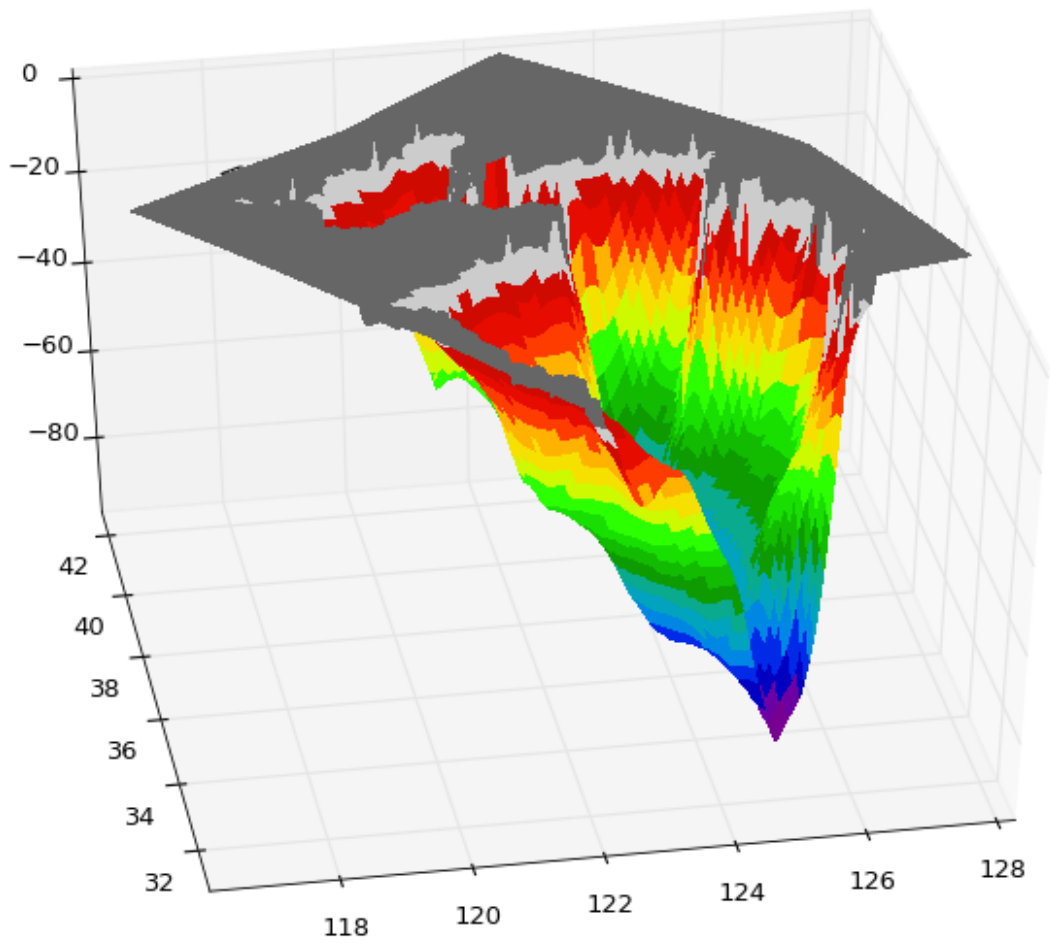
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Debugging Tips

- **You need to become a detective!**
- **Check that Build/analytical.f90 file for the code you think it should have**
- **Look carefully at everything: the cppdefs file, the ana_files, the output**
- **Debuggers are useful: totalview or gdb**
- **People sneer at print statements, but they still work**

- **Change Hout() in the input file to see the surface forcings, surface stresses/fluxes**
- **Look at them!**

Bonus Python Picture



Qair Warning

- **The ROMS CDL file contains the units expected by the trunk `bulk_flux.F` routine**
- **Qair there is percent**
- **Bulk_flux has to convert to specific humidity**
- **Atmospheric models often have specific humidity**
- **Can hack `bulk_flux` accordingly**
- **Also check for air pressure units**

Yellow Sea Next Step

- **Files in** `http://www.arsc.edu/~kate/ROMS/HK/Yellow_Sea`

- **Tides!**

```
#define UV_TIDES
```

```
#define SSH_TIDES
```

- **Make tides file with two NCL scripts and files from OTPS**

```
http://volkov.oce.orst.edu/tides/  
region.html
```

Tides Warning

- **This method gives you eight constituents without the 18.6 year tides**
 - The 18.6 year acts as a modulator on the diurnal and semidiurnal tides
 - Time origin is the year zero
 - Matlab script includes 18.6 year tide, but not appropriate for multi-decadal runs

SODA

- **Pyroms on github just got SODA capability**
- **Pyroms on these systems has been updated, but not on your home systems**
- **To update:**
`git pull origin master`
- **Then reinstall...**

Initial Conditions

- **Files are in Inputs.tar**
- **cd into Inputs/Initial**
- **Check path to SODA files**
- **Check xrange, yrange of indices in SODA_grid.cdf**
- **Case name here is YELLOW**
- **Need YELLOW in gridid.txt**
- **Need to set PYROMS_GRIDID_FILE**

- **Execute**

```
python make_remap_weights_file.py
```

```
python make_ic_file.py
```

- **First one creates all the mapping weights files needed**

- **Second generates the ROMS initial conditions**

Boundary Conditions

- **Files are in Inputs.tar**
- **Cd into Inputs/Boundary**
- **Check path to SODA files**
- **Check xrange, yrange of indices in SODA_grid.cdf**
- **Case name here is YELLOW**
- **Need YELLOW in gridid.txt**
- **Need to set PYROMS_GRIDID_FILE**

- **Execute**
 - python make_remap_weights_file.py
 - python make_bdry_file.py 2008
- **First one creates all the mapping weights files needed**
- **Second generates the ROMS boundary conditions**