

Running ROMS and Viewing Output (Some ways to do it)

**Kate Hedstrom
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Outline

- **Run ROMS**
- **Ncview**
- **ROMS Fortran plotting programs**
- **NCL**

Did it Compile?

- **The names of ROMS**

- oceanG – the name when compiling with debugging turned on
- oceanS – the optimized serial code
- oceanM – the optimized MPI code
- oceanO – the optimized OpenMP code

Running ROMS

- **Command line (serial):**

```
oceanS < ocean_case.in > ocean.out
```

- Note this is redirecting stdin and stdout

- **Debugger:**

```
totalview oceanG
```

- **MPI:**

- System dependent – might be:

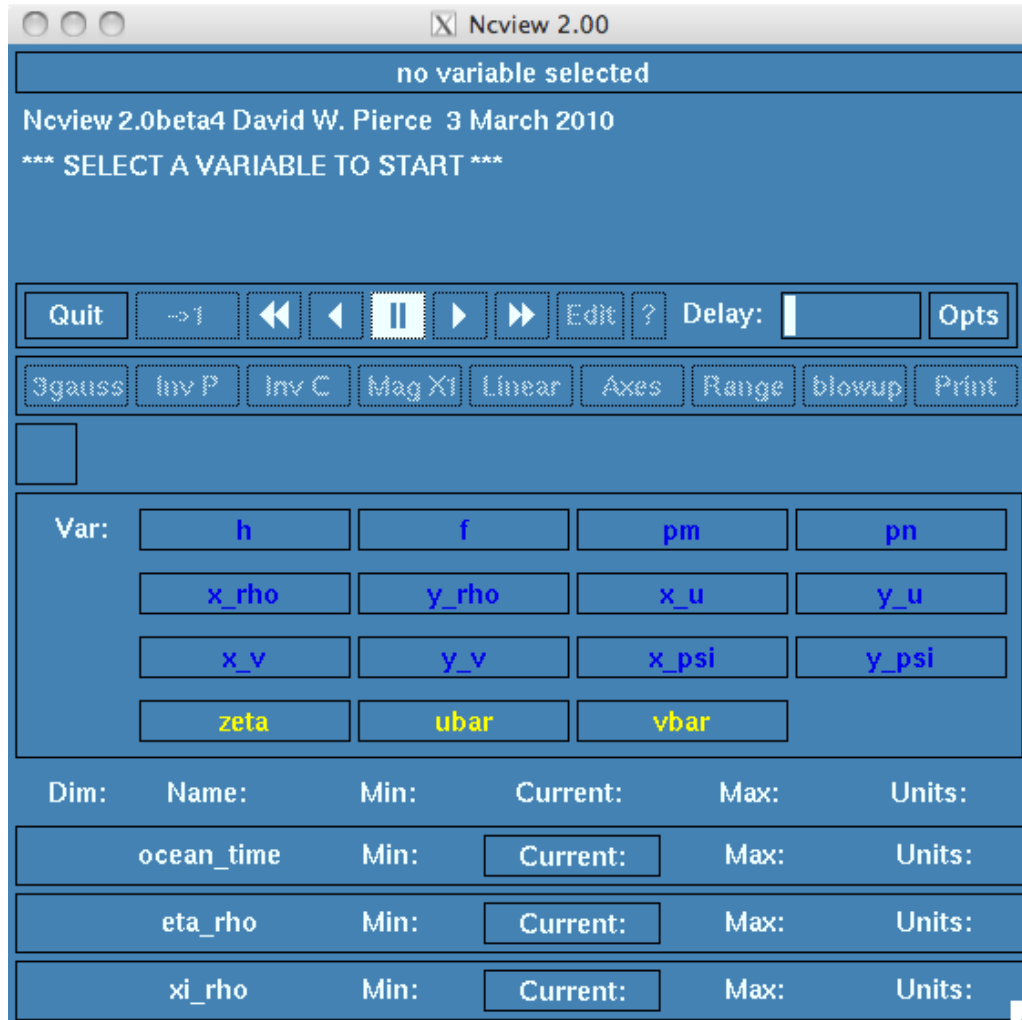
```
mpirun -np 16 oceanM ocean_case.in
```

- Note this is not redirecting stdin

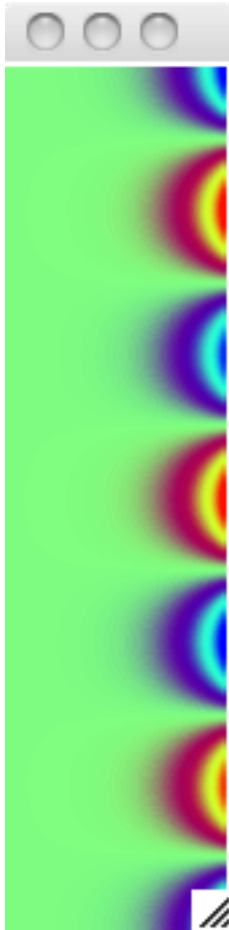
ROMS Output

- **The amount of output is determined by the cppdefs and by the input file**
- **The CIRCLE problem provides a restart file with two records, a history file with 41 records, and a bunch of stdout**

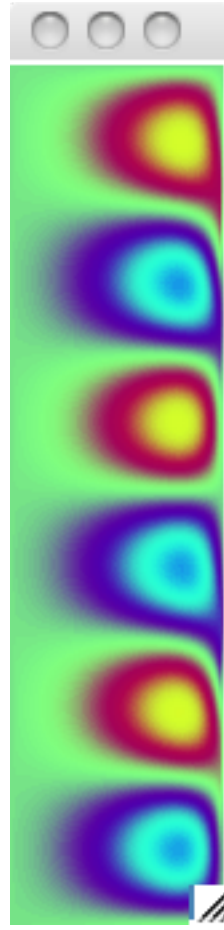
Ncview on History File



Some Fields



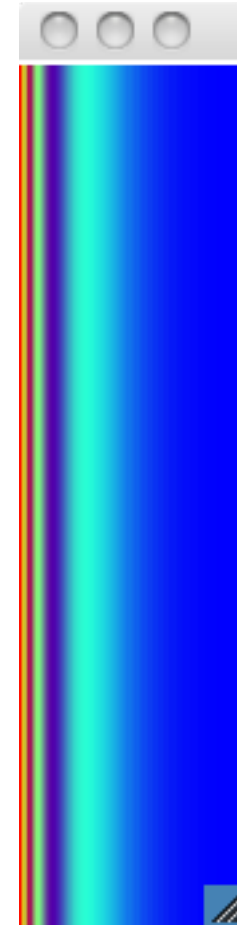
v_{bar}



u_{bar}



x_{rho}



pn

Let's try it...

- **Animate the time dependent fields**
- **Adjust the frame rate**
- **Adjust the color scheme**
- **Adjust the size**

Ccnt and Friends

- **Ncview is great, but the previous example is for a donut-shaped domain**
- **Hernan wrote some Fortran plotting programs before ROMS, then converted it for ROMS use**
- **Download here:**

<https://www.myroms.org/svn/src/plot>

- **Download either via svn:**

```
svn checkout --user you
```

```
https://www.myroms.org/svn/src/plot
```

- **Or git:**

```
git svn clone --username you -r 515
```

```
https://www.myroms.org/svn/src/plot
```

Compile...

- **I've got some optional changes you can download here:**

<http://www.arsc.edu/~kate/ROMS/HK/plotcode.kate>

- **Apply the changes with:**

```
Patch -p1 < plotcode.kate
```

- **Makefile is in src directory**

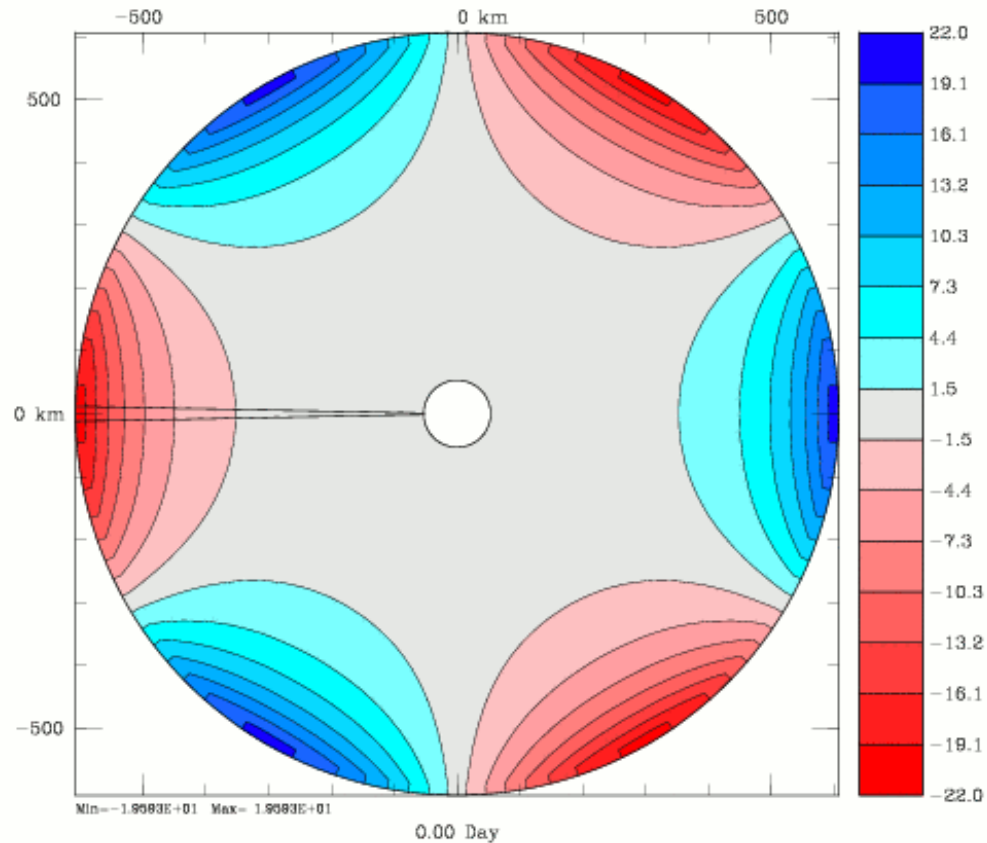
Four Executables

- **Ccnt – color contours in the horizontal direction**
- **Cnt – black and white companion**
- **Csec – color contours of vertical sections**
- **Sec – black and white companion**

Inputs to ccnt

- **Color palettes**
- **Coastline files**
- **varid.dat**
- **default.cnt**
- **stdin (ccnt.in)**
- **Many can be set once and forgotten**
- **Let's look at ccnt_circle.in...**

Results

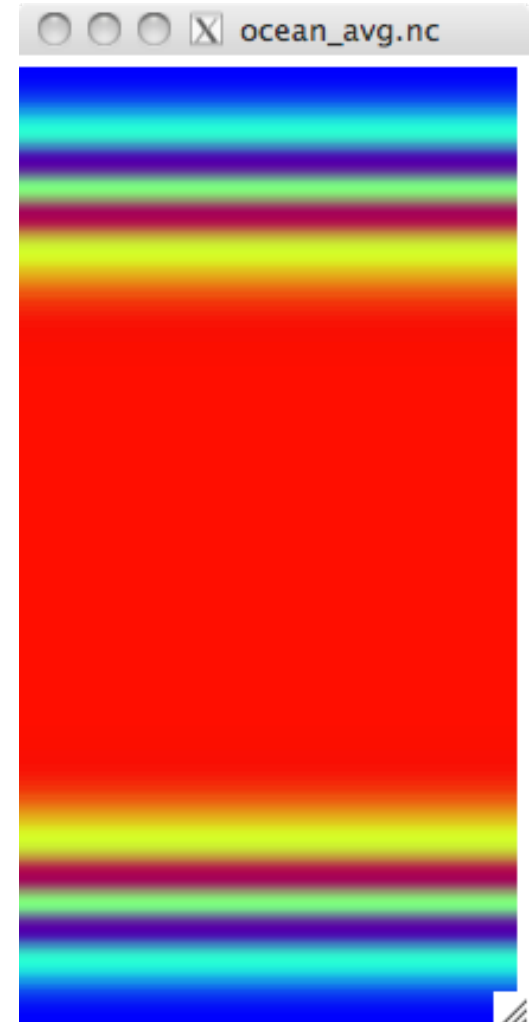
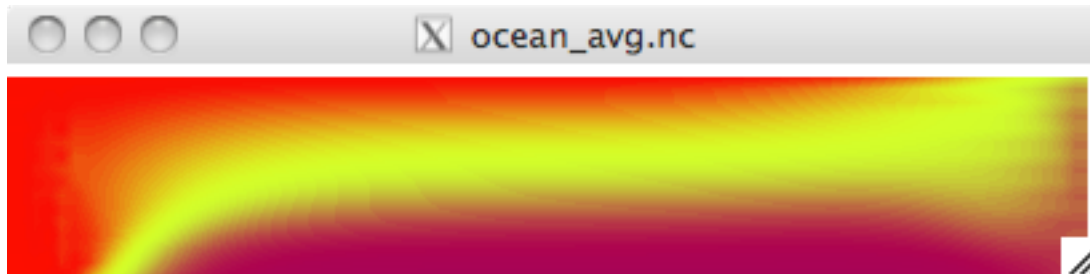
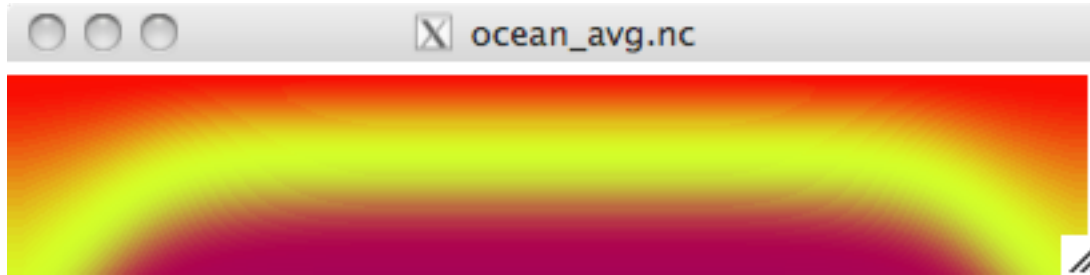


NCGM Files

- **It actually created a gmeta file**
- **View in idt**
- **Create animated gif with a script called mkmovie, then crop in gimp**

Upwelling Example

- **Ncview first...**



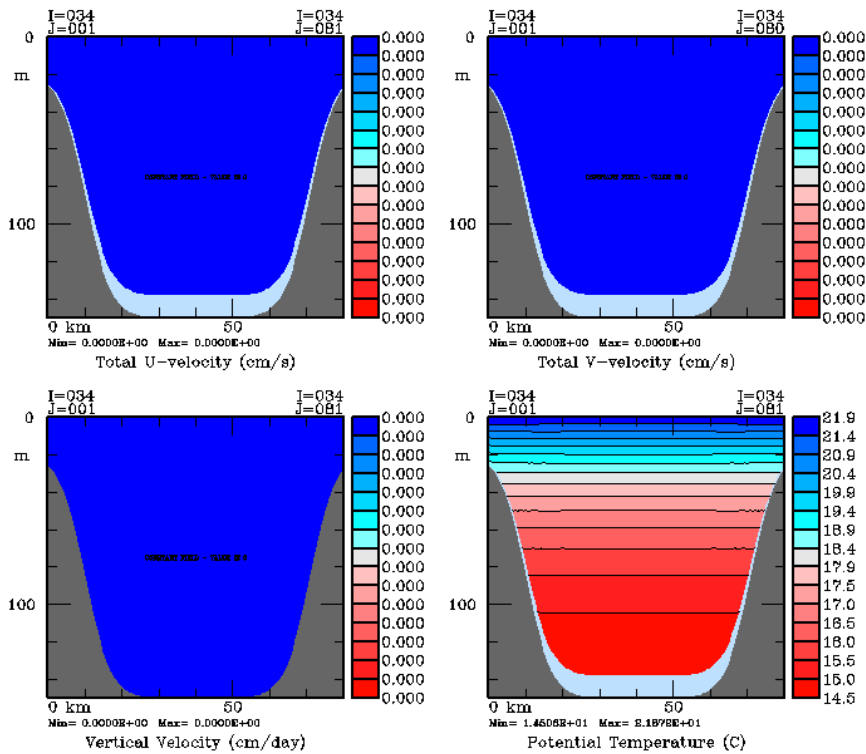
Csec View

ROMS 3.0

Form Stress Test over Steep Shelf/Slope with Across-Shelf Canyon

Upwelling/downwelling

0.00 Day



ROMS 3.0

Form Stress Test over Steep Shelf/Slope with Across-Shelf Canyon

Upwelling/downwelling

5.00 Day

