Title: March 13, 2012 Research/Programming Notes & Progress
Date: March 13, 2012 3:47 PM
Category: Work
Tags: research, Henyey code, Bodenheimer code, python, finding initial conditions, from home

March 13, 2012 4:00 PM

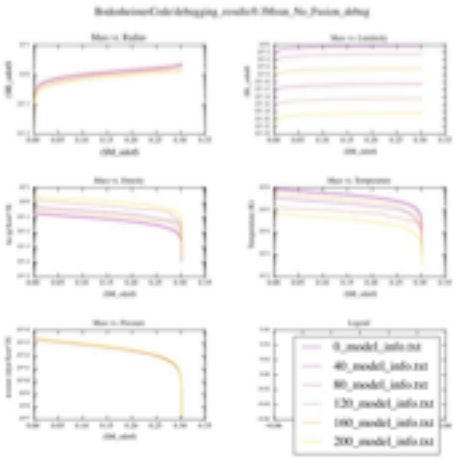
Location: at home
Computing context: Macho-Mac2

From last time:

- ☐ *Try looking at the iterations as this setup attempts to move towards convergence...*
  - ☐ *This means I'll need to write myself a python script to plot the output...*
    Working on it.
    Currently adding successful ipython commands to:
    /Users/laurel/Desktop/Research/BodenheimerCode/plot_iterations.py

- *Now, need to do the following, with the python*
  - ~~*Learn how to get it to read in the names of the files in the current directory*~~
    - import os
    - currentdir = os.getcwd()
    - files = os.listdir(currentdir)
  - ~~*And then sort the model_info.txt files into strict numerical order*~~
    - Done. See plot_iterations.py for the code that does this.
  - ~~*And then figure out which/how many of those files to plot*~~
    - Done. See plot_iterations.py for the code that does this.
  - ~~*Get it to plot those files automatically*~~
    - ~~*and color code them*~~
    - ~~*and put a legend on the result*~~
    - Done. See plot_iterations.py for the code that does this.
  - *It'd be great if I could write a python script that did the model #/ iteration #/ corrections #/ evolution/ dTthresh plotting stuff all from the same script...*
  - Still remains to be done... Pick up with this tomorrow, maybe.
  -

The beautiful plot resulting from all of this effort is included here:



ModelIterationSummary

- Note to self:
  - ~~Before running the python plotting script on the models, I need to replace the existing headers in all of the model files to add a heading id for the 'convection or not?' column... (so that python can read these data in without barfing)~~
  - To run a command (in the following example, 'head -n2') on all files matching a certain pattern, use the following command:
    - find . -type f -name "*txt" -exec head -n2 {} \;
  - So, to do this en-masse file editing, enter this:
    - ~~find . -type f -name "*model_info.txt" -exec sed -i 's/J/J c/g' {} \;~~
    - ~~sed 's/J/J c/g' test.txt~~
    - ~~find . -name "test.txt" -exec sed -i -e 's/J d/J c d/' {} \; <-- This one actually seems to work better on my system...~~
    - ~~grep "J d" <model_info.txt>~~
    - THE COMMAND THAT ACTUALLY SEEMS TO WORK:
    - find . -name "test.txt" -exec sed -i -e 's/J * dM/J c dM/' {} \;
    -

BodenheimerCode/debugging_results/0.3Msun_No_Fusion_debug