ESCI7205 hw6

**due Tue., Oct. 11, 2009.**

**Part A:**

1) We are now going to work on using GMT to make some maps. On Feb 27, 2010, a M8.8 earthquake occurred in Chile. First find the

latitude \_\_\_\_\_\_\_\_\_\_\_

longitude \_\_\_\_\_\_\_\_\_\_\_

depth \_\_\_\_\_\_\_\_\_\_\_\_

origin time \_\_\_\_\_\_\_\_\_\_\_\_

of the earthquake.

Next make a global map showing the location of the earthquake.

Select a city or place on each of the continents and draw the great circle path between the earthquake and the selected locations (ideally I should get a different set of selected locations from each student. Use your hometown for one of the locations.).

Also plot color shaded topography and draw the plate boundaries on this map. Use different colors for the great circle paths and each type of plate boundary.

Modify the shell script from the last homework to make the new map [This way you don’t have to retype all the definitions at the beginning, etc.]. Be careful not to erase last week’s homework. You may have to read the man pages for psxy a bit).

Rewrite the part that plots the plate boundaries to use SHELL (not awk) arrays for the plate boundary types and associated colors.

Before you start – make a flow chart showing what steps you will need to take, both to collect the necessary information (e.g. google search for location of Atlantis) and to write the shell script. This will be a “living document” in that you should update it as you progress through the process.

Separately, explain clearly what each of the GMT calls is doing by reading the man pages or examples in the documentation and describing what each switch does.