

GPGN 303

Assignment #G2: Forward Modeling, continued

Handout Date: Saturday, September 13, 2014

DUE DATE: Monday, September 22, 2014 - by 5PM to the TA!

Task:

Building off of the code you developed for Assignment #1, expand the algorithm to calculate and plot a new set of geophysical data: the five independent components of the gravity gradient tensor plus T_{zz} component for a point mass:

$$\mathbf{T} = \begin{bmatrix} T_{xx} & T_{xy} & T_{xz} \\ T_{yx} & T_{yy} & T_{yz} \\ T_{zx} & T_{zy} & T_{zz} \end{bmatrix}.$$

You need to assume a reasonable set of numbers for the sources (mass/density, depth, and horizontal location) and display the data in appropriate units.

What to Turn In:

1. The code you created (documented clearly with comments).
2. Images (contour) plots of your data results.

Please submit in electronic form (pdf).

Hint: Your final image should look similar to the following:

Example: Gravity & Gravity Gradient Data for Point Mass

