GEOS F4/693 Geodetic Methods – Homework 0

The following homework is to be turned in by **5 pm on Wednesday, October 28**. Late submissions will not be accepted. Please submit via blackboard (zip-archive with all necessary files.)

Problem 1

Write 1-2 paragraphs (1-inch margins, 11-pt font) on your background and your goals for this class. Do you have any experience in geodesy? What would you like to learn about? What's missing in the syllabus?

Problem 2

Write 1-2 paragraphs (1-inch margins, 11-pt font) on a potential term project that you could address using the tools of this class. Make sure to look ahead in the schedule and think about the examples I provided in the first lecture: What is an interesting problem that you'd like to investigate over the course of this semester? Do you have access to data (if not, see me) - where would they come from? Do you have a rough idea on how to address this problem (if so, write it out, if not, see me)?

If you can't come up with a good project idea talk to your advisor, or talk to me.

Problem 3

- Find an "interesting" GPS station time series in Alaska here: `http://geodesy.unr.edu/NGLStationPages/gpsnetmap/GPSNetMap.html`. This is one place to get processed GPS time series. We'll explore others later in the semester.
- Click on the plot to go to the full station page
- Download the **24 hours Final Solution, NA12, env** file for that site. Look at it in a text editor (not Word! Something like gedit, vi, sublime, etc.)
- Using Python and matplotlib (preferred) or another non-Excel plotting tool, create a plot of the **east component** of the data:
  - third column contains decimal year. These are the x-coordinates.
  - ninth column contains change in east postion in meters. That's the y-coordinates.
  - fifteenth column contains the sigmas in the east component. If you use errorbars (recommended), this is yerr.

Do not spend more than 1 hour on Problem 3! For this problem, turn in the data file, the script to make the plot and a PDF of the plot you made.