

# Homework 10 Data Adj. I

## GPS Pseudorange

assigned Wed 28 Nov  
due Friday, 7 Dec  
(beginning of class)

1. Find one epoch of GPS data in accompanying file  
rinex02.120. Use column C1: pseudorange on C/A  
code.

2. Get final orbit data for same day at

[www.ngs.noaa.gov](http://www.ngs.noaa.gov)

↳ data & imagery

↳ orbit data

↳ orbit data

↳ orbit availability

↳ select by GPS week number

SSS nnnn x. qqq. Z  
igs GPS Sp3 unix  
igm week day compressed  
number

igm: ultra rapid

igr: rapid (13 hour)

igs: final (12-14 days)

0 = Sunday

6 = Saturday

3. make LS adjustment.

$$PR_{corr} = PR_{raw} + c \cdot dt_s, \quad c = 299792458 \text{ m/s}$$

for adjustment use units km & μsec (dt<sub>s</sub> given in μsec)

(filter out any observations below elevation angle = 10°)

give the observations weight = 1.

4. what is  $\hat{\sigma}_0$  ?