

Homework AE4E08, lecture 4

Answers:

1. GPS week = 1212; $t = 378384$ s

Date and time are: 3 April 2003, 9:06:24

This is on Thursday, time in week is:

4 days * (24*3600 seconds) + 9 hours * (3600 seconds) + 6 minutes * (60 seconds) + 24 seconds

2. 11

3. 24429063.4964

Observations of satellite 23 are in the 6th record (each record has 2 lines), and the C1 observation is the third value in that record.

4. $t_{0c} = 381600$ s ; [as in Question 1, but now the time is 10:00:00]

$a_{f0} = 6.801914423704e-06$ s; $a_{f1} = 1.364242052659e-12$ s/s ; $a_{f2} = 0.000000000000e+00$ s/s²

[the last 3 values in the first line for satellite 18, after the date and time]

$\delta t^s = 6.7975e-006$ s

5. $a^{1/2} = 5153.741949081$ m^{1/2}

[find the record for satellite 3, $a^{1/2}$ is the last value in the third line]

6. $T = 43080$ seconds = 11h58m