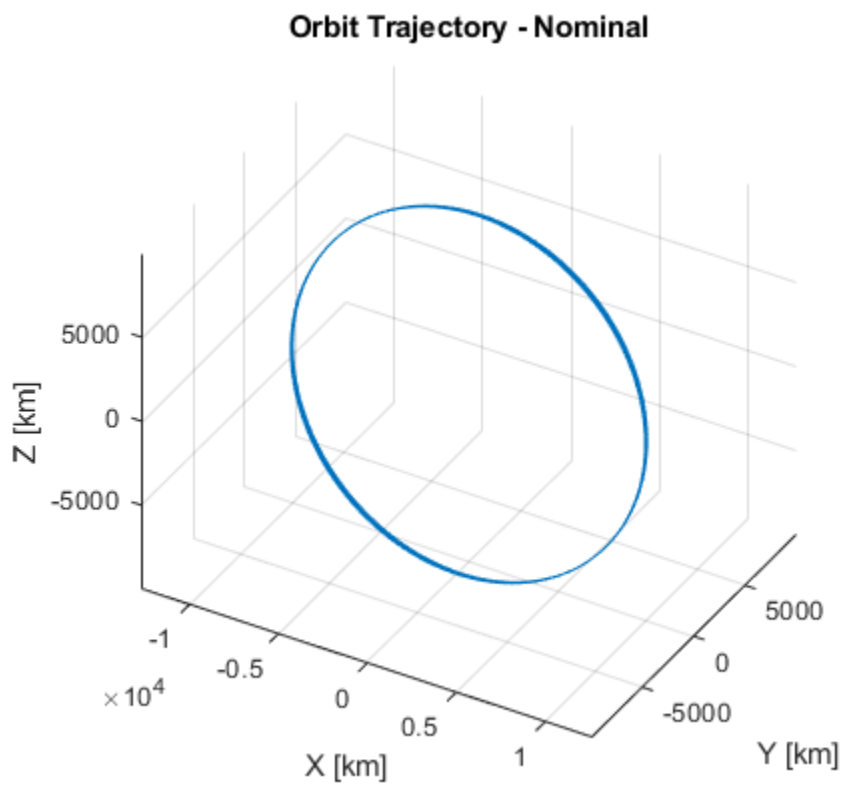

ASEN 6080 HW 1 Problem 2 Script

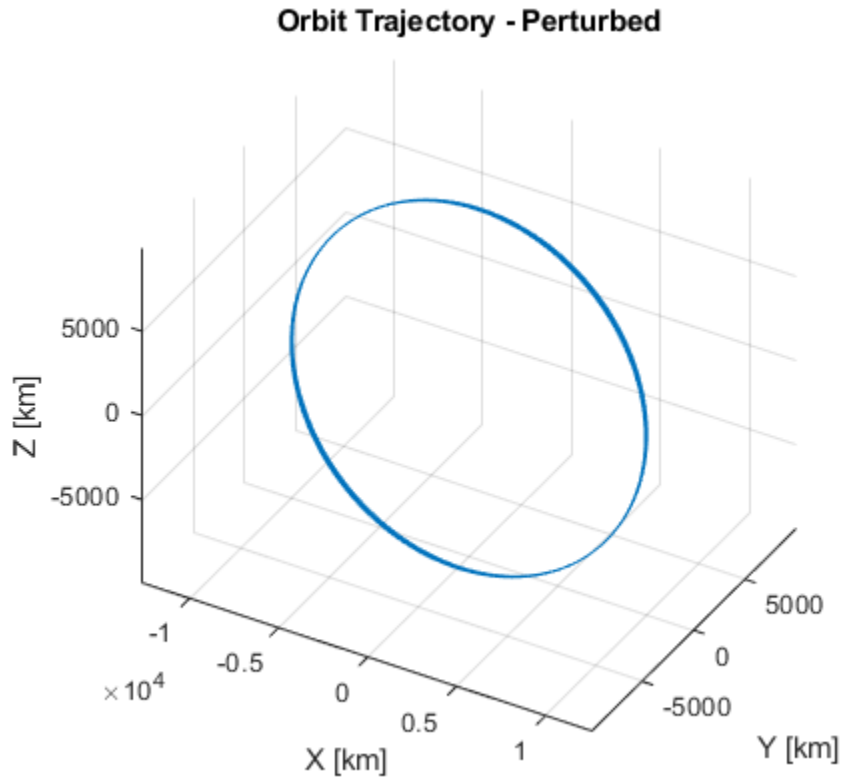
By: Ian Faber

Housekeeping

Part 2a

Gravitational parameters





Part 2b

XDot =

```

1.0e+12 *

0.0000000000000876
-0.0000000000000243
0.0000000000000167
-3.413686753568604
3.207050117068763
-0.357531958249240
0
    
```

PhiDot_mat =

```

1.0e+13 *

Columns 1 through 3

-0.0000000000000028    0.0000000000000140    0.0000000000000079
0.0000000000000060   -0.0000000000000137    0.0000000000000093
0.0000000000000178   -0.0000000000000029   -0.0000000000000049
    
```

```

0.374936725526471    0.220415198396986    0.712850905227827
-0.359462275935478  -1.330425361600812  -0.464009296480646
1.912845832957822    0.261325351717644    0.070365033084850
                        0                        0                        0

```

Columns 4 through 6

```

-0.0000000000000054  0.0000000000000093  0.0000000000000020
-0.0000000000000016  -0.0000000000000148  0.0000000000000043
0.0000000000000061  -0.0000000000000056  -0.0000000000000127
-0.973504410324571  -0.308043951672802    1.337366787539103
0.882180120948528   -0.310126639387312   -1.708438336510815
-0.326422999680118  -0.614276201454800   -0.012194092462935
                        0                        0                        0

```

Column 7

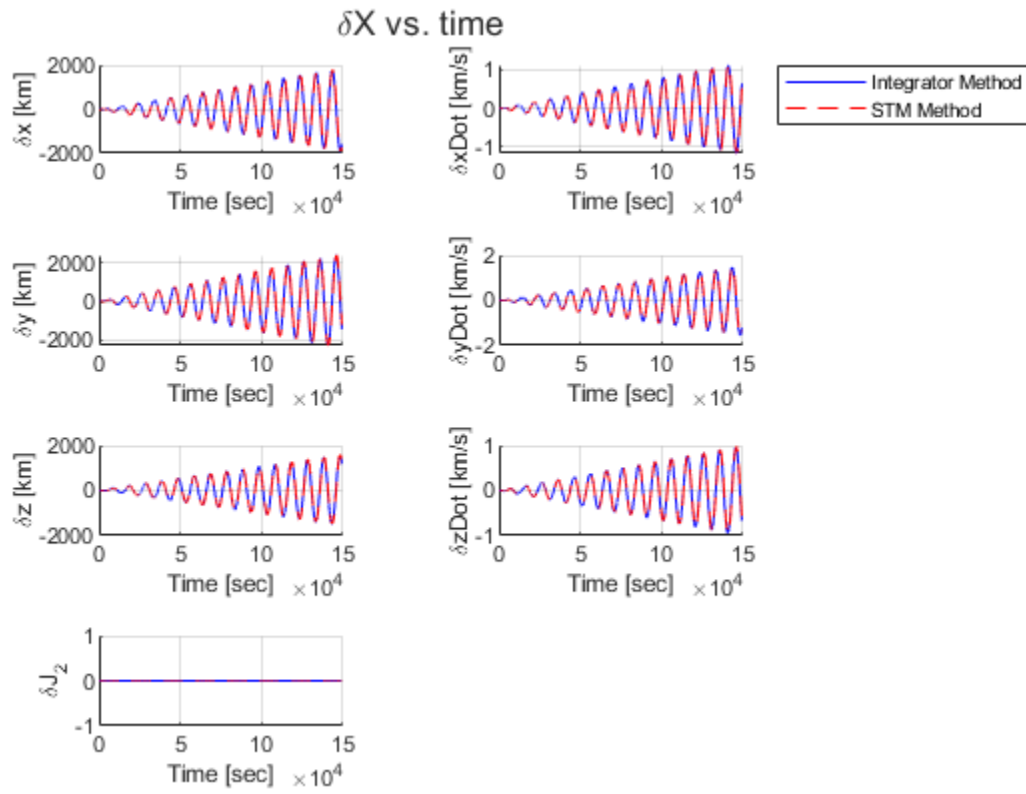
```

0.0000000000000004
0.0000000000000028
0.0000000000000006
0.622263144368798
-0.471646032233606
-1.110000530701040
0

```

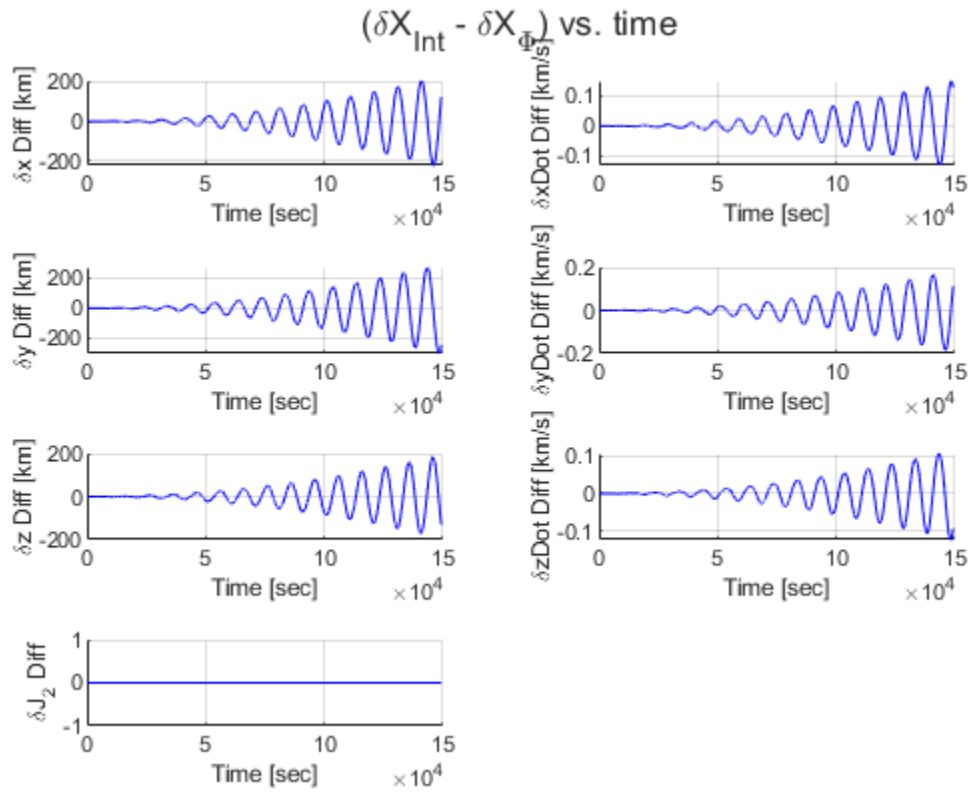
Part 2c

Integrate Phi across entire timespan



Part 2d

Find difference vector



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