

## Tutor Questions:

- **Question:** How can you prove that the orbit is actually circular?
- **Expected Answer:**

Aside from just eyeballing it, we can add in a graph of the distance from the center of Earth!

```
#MotionMap/Graph
separationGraph = PhysGraph(numPlots=1)

#Calculation Loop
    separationGraph.plot(t,mag(Satellite.pos))
```



- **Question:** Can you simulate other trajectories with your program?
- **Expected Answer:** We can change the initial conditions of radius and velocity to show this.
- **Question:** Can you use your program to demonstrate your answer from Tuesday about the dependence on mass?
- **Expected Answer:** Yes, changing the mass doesn't change its motion.
- **Question:** What does  $dt$  stand for? What happens if you make it bigger? What is going on here? (*Remember when increasing/decreasing  $dt$  you must accordingly decrease/increase the rate by the same factor.*)
- **Expected Answer:** It is the step in time that passes every loop of the calculation loop. Increasing the time step makes for a “rougher” approximation to the real world phenomenon.