

ASEN 6060

ADVANCED ASTRODYNAMICS

Week 4 Discussions

Question 1

Question 1: Under what conditions is a trajectory that is periodic in the rotating frame also periodic in the inertial frame?

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Group Brainstorming:

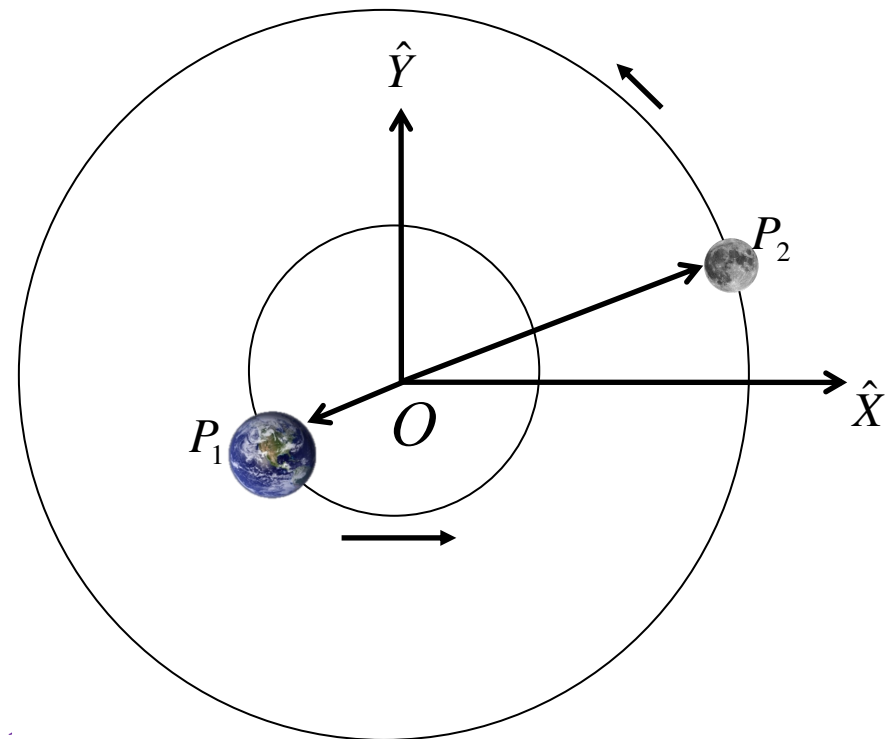
Question 2

Question 2: Consider states that produce a) prograde and b) retrograde motion relative to P_1 in the rotating frame. What could their direction of motion possibly be (relative to P_1) in the inertial frame? (prograde, retrograde, or either)?

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Question 3

Question 3: You and your colleague are each numerically generating a trajectory associated with the same initial state $[x_0, y_0, 0, \dot{x}_0, \dot{y}_0, 0]^T$ and integration time. You are each using your own code or using off-the-shelf software. Do you expect to recover the exact same state as your colleague after the integration time? Why/why not?

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