

Phys 410

Fall 2013

Homework #7

Due Thursday, 31 October, 2013

All problems are from Taylor, *Classical Mechanics*.

- 1) Problem 7.31 Pendulum with oscillating point of suspension
- 2) Problem 7.34 Harmonic oscillation with spring of non-zero mass
- 3) Problem 7.35 Rotating loop with bead
- 4) Problem 7.37 Rotating mass on table
- 5) Problem 7.41 Bead on a rotating parabola
- 6) Problem 8.1 Two-particle problem
- 7) Problem 8.3 Two particles interacting by means of a spring
- 8) Problem 8.6 Angular momentum
- 9) Problem 8.9 Two-dimensional harmonic motion
- 10) Problem 8.12 Planetary angular momentum

Extra Credit

- 1) Problem 8.14 Orbits with different central force laws