PH 429/529 **WS #1** Spring 2000

1. Work through the Maple worksheet `/usersB/tevian/maple/ph429/Check.mws` in which you will construct a solution to the differential equation derived in class.

   Turn in a printout of your Maple session.

2. Work through the Maple worksheet `/usersB/tevian/maple/ph429/Record.mws`.

(a) Make sure you understand the default pictures.

(b) Try the canned examples at the end, thus reproducing all 6 examples in Figure 10-4 on page 389 of Marion & Thornton.

(c) Try your own initial configurations. Compare initial velocities pointing in with those pointing out. Compare initial velocities in the direction of rotation with those in the opposite direction. Compare different values of Ω.

(d) Try to produce a boomerang, that is a configuration which returns to its initial position as seen by the rotating observer.

(e) Try to produce a right angle, that is a configuration which makes a sudden turn of 90° as seen by the rotating observer.

Turn in any single picture describing a situation different from any of the preconfigured examples. Each member of a group should turn in a different picture. Indicate the values of all parameters used, and describe briefly in words how both the rotating and nonrotating observers would describe the motion.