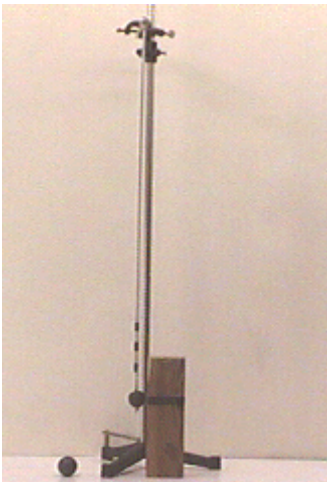
Question #77

A superball or a small ball of vacuum mud (a material sort of like clay) with the same mass are attached to a rigid rod, which in turn rotates about an axis near the top of the apparatus as shown in the photograph below. The rod is rotated to a horizontal position and released so that the ball strikes a section of 4"x4" wooden block when it falls back to the configuration shown in the picture. When the superball strikes the wooden block it engages in a relatively elastic collision; on the other hand, the ball of vacuum mud is more plyable so it engages in a relatively inelastic collision with the wooden block.



The question involves what might happen when either ball hits the wooden block. In particular, the question is whether the block might tip over when either of the balls strike it in the experiment described above.

When a ball strikes the block:

- (a) neither ball is likely to tip the wooden block over.
- (b) the superball is more likely to tip the wooden block over than the mud ball.
- (c) the mud ball is more likely to tip the wooden block over than the superball.
- (d) both balls are likely to tip the wooden block over.

Click here for Answer #77 after August 13, 2001.

Question of the Week

Outreach Index Page

Lecture-Demonstration Home Page

For questions and comments regarding the *Question of the Week* contact Dr. Richard E. Berg by e-mail or using phone number or regular mail address given on the Lecture-Demonstration Home Page.