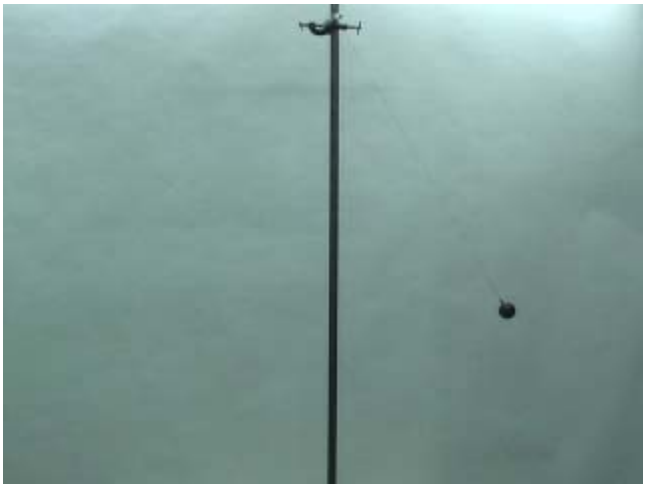
Question #339

In the previous question we saw that the period of a pendulum with large amplitude is slightly longer than that of the same pendulum with a smaller amplitude. We also used the more general equation for the period of a pendulum to help understand why. In this case the period of the small angle pendulum is 2.01 seconds and the period of the same pendulum swinging about 50^o is about 2.08 seconds.

The angle of swing for the large angle pendulum used in Question #338, shown in the photograph at the left, is about 50^o. Now suppose that we observe the same pendulum swinging at an angle of about 30^o, as seen in the photograph at the right above.

What will be the period of this pendulum, compared with the period of the larger angle oscillation?

The period will be closest to:

- (a) about 2.01 seconds (60.2 frames).
- (b) between (a) and (c).
- (c) about 2.07 seconds (62.0 frames, midway between (a) and (e)).
- (d) between (c) and (e).
- (e) about 2.12 seconds (63.7 frames).

Click here for Answer #339 after March 23, 2009.

Question of the Week

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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.