



## The Small Angle Approximation – Data Files

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### ROTARY MOTION SENSOR DATA

The data files provided for this experiment are .cml files that can be opened with Logger Pro.

The files follow the same general naming format:

ReleaseAngle\_X.XX.cml

X.XX indicates the nominal amplitude (in radians) from which the pendulum was initially dropped. The amplitude that you measure using a fit to the data may not agree with this value and will be more accurate.

### LENGTH MEASUREMENT PHOTOGRAPHS

An additional two photographs are posted in the data that can be used to make your own measurement of the length of the pendulum. These files are:

**RotaryMotionSensor.jpg:** The top of the pendulum at the rotary motion sensor. The pendulum swings about the axis of rotation.

**PendulumBall.jpg:** The mass at the bottom of the string.

I recommend that you use the photographs to make your own length measurement (and associated uncertainty) of the pendulum rather than relying on the measurements that are provided in the videos.