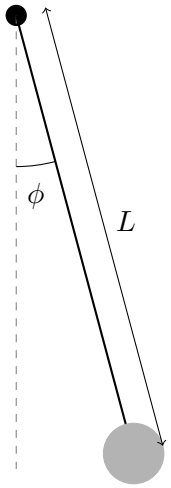
PHYS 310: Lab 0 Assignment

Background

The oscillation period of a simple pendulum depends on a number of variables. In this experiment, you will be provided with a simple pendulum and photo-gate timer.



Instructions

1. Measure the dependence of the period of the pendulum T as a function of its length L.
2. Starting from Newton's second law, determine a theoretical expectation of the relationship between these two variables. Clearly state any assumptions you make in the derivation.

Analysis

1. Using python, make a linear plot to reflect the dependence of L and T. Comment of the significance of the intercept and slope.
2. Discuss the uncertainties in your measurements. Consider how you might represent uncertainties on your plots.
3. Using the "brief lab summary" (BLS) template, type up a final report of your results using Latex.

Due Date

The final report and scans of notebook are due by Monday Jan 26 at 5:00 pm. All notebooks should be uploaded during the work session in which they are completed.