Assignment 5

Geosc 597-003
Techniques of Geophysical Experimentation

Due: 29 March

Activity: Pylook Data Reduction

Use pylook to reduce the raw data from an biax friction experiment. Then
generate a brief report with plots, a processed data file, and a Readme
file.

Grading Rubric	
Topic	*Points*
jupyter notebook	70
brief report w/ plots	15
reduced data file	5
README	5

- Load in *p5468S04Mug5l* – the 'l-file'.

- Note: data['Time'] = np.cumsum(data['Time']/10000) – b/c we
  down-sample from 10kHz recording rate.

- Convert from bit to physical units.

  - The NI recorder is a 24-bit system
  - Calibrations are found on the experiment runsheet

- Correct for any offsets (review notes of runsheet for reference).

- Correct for zeros points in data.

- Calculate the coefficient of friction. Is this reasonable – why/not?
  Cite source(s).

- Include plots in the Jupyter Notebook.

What to upload to Canvas

You should upload the following with *consistent file names*:

- Jupyter Notebook

  - **Fully comment your code!**
  - **Naming convention:** p5468_look_username.ipynb
  - Put all Arduino codes for this assignment in a project folder.

- Brief report

  - Brief description of experiment.
  - Relevant figures with proper labels and brief captions (one figure per page).

- Reduced/processed data file in a standard format (e.g. *.csv, *.txt).

- README – a file that describes files in directory.

- Zip directory and upload to Canvas. (p5468_username.zip)