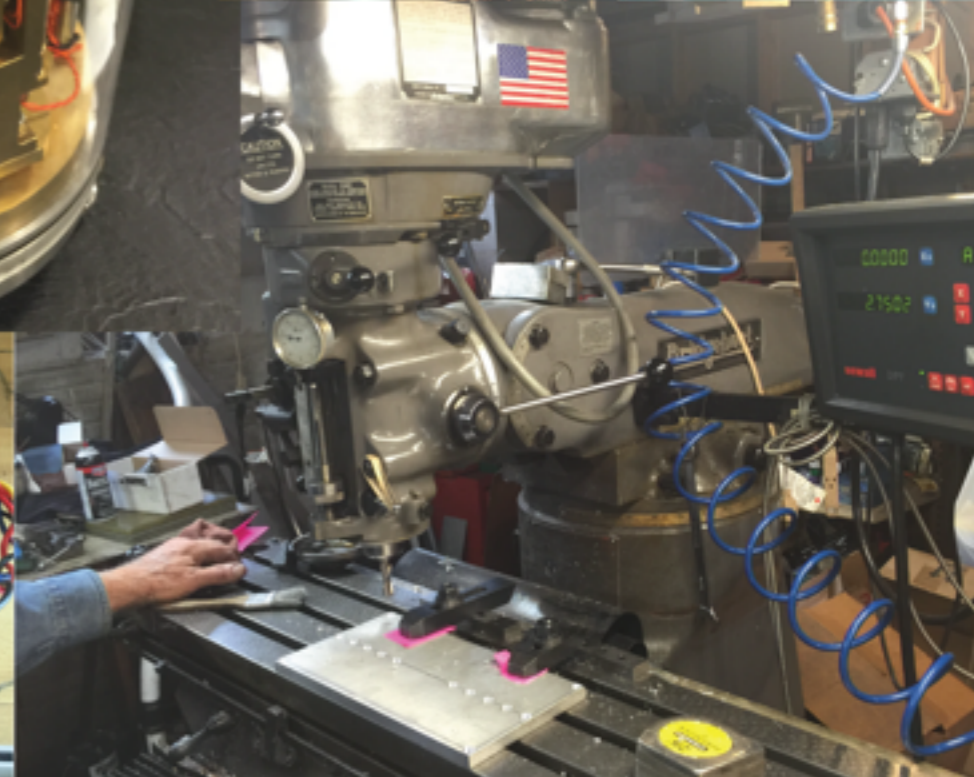
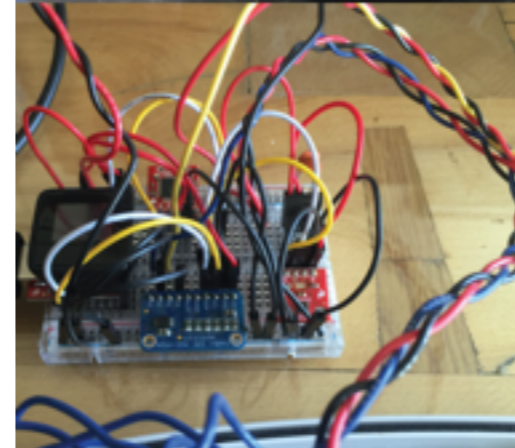
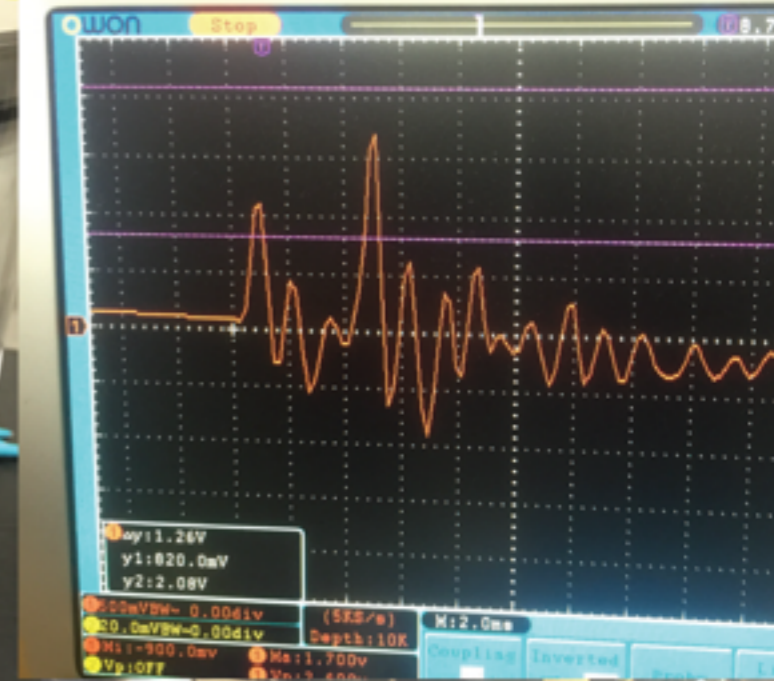
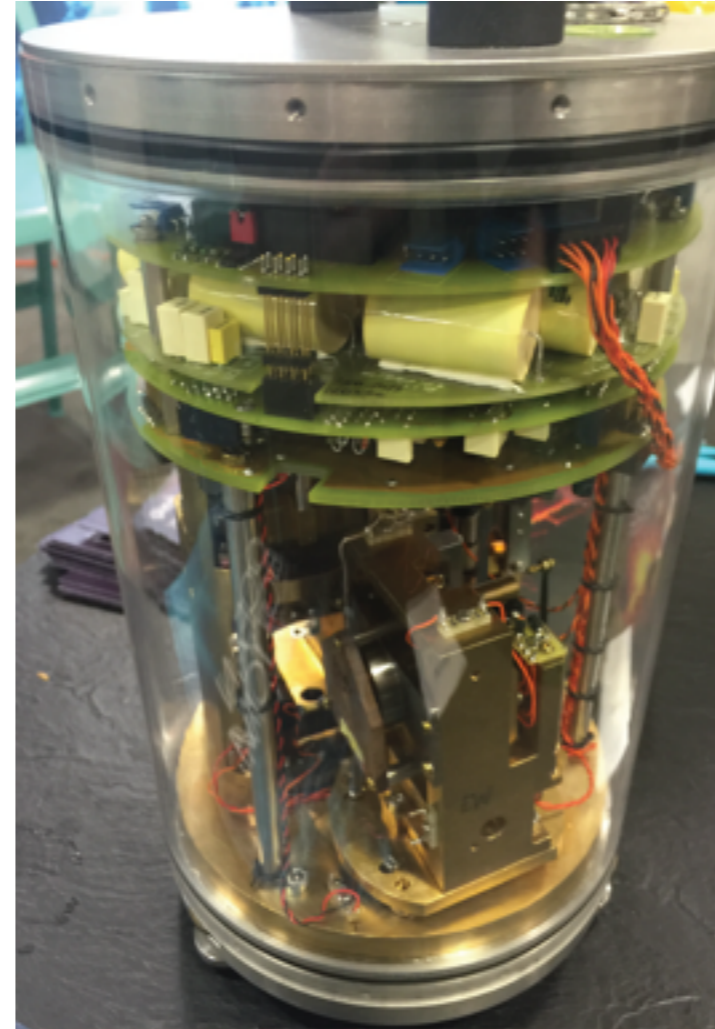


Calibration

J.R. Leeman and C. Marone

Techniques of Geoscientific
Experimentation

October 20, 2016



Calibrations are how we connect the output of a transducer to the real-world values it measures

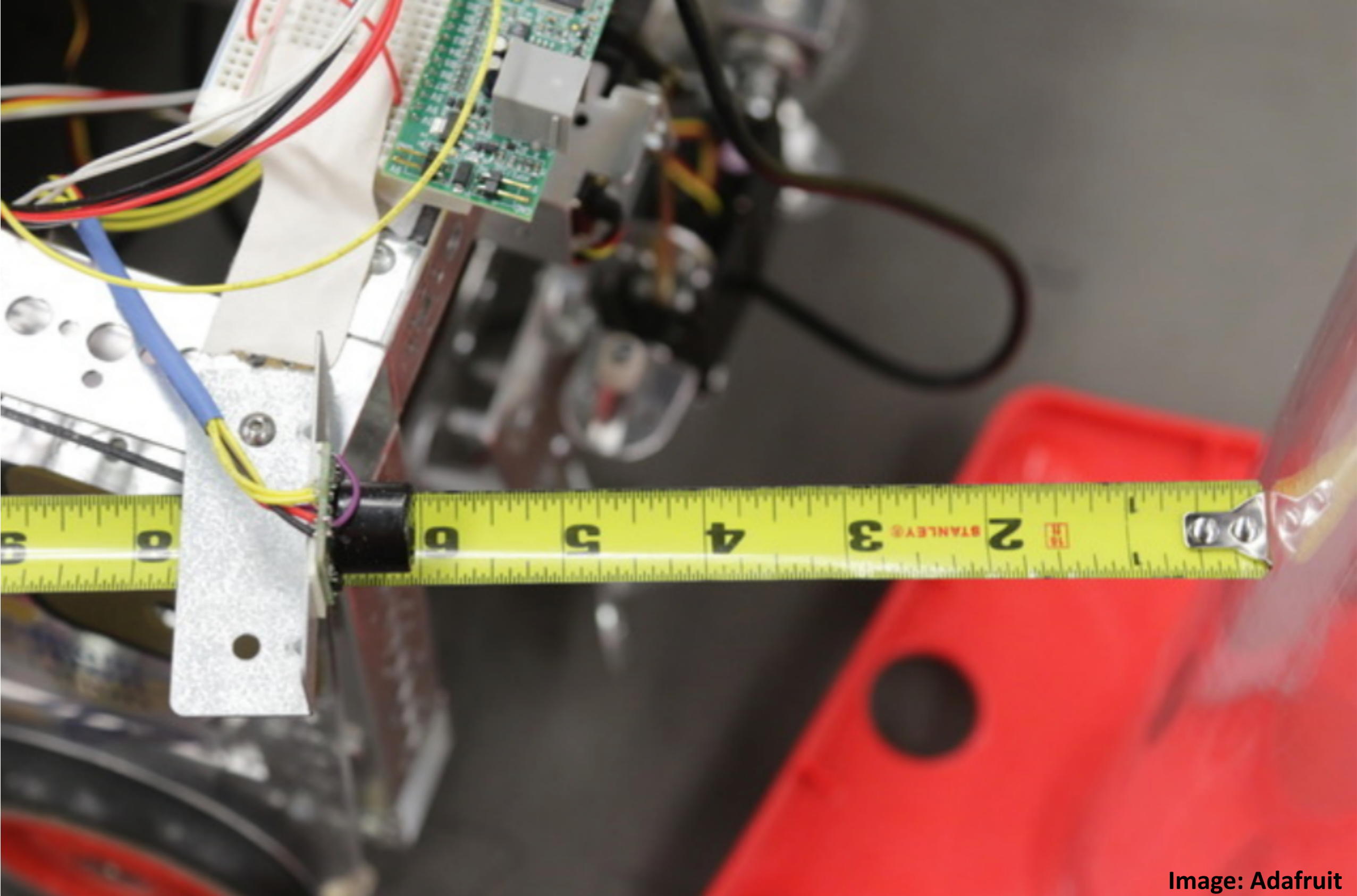
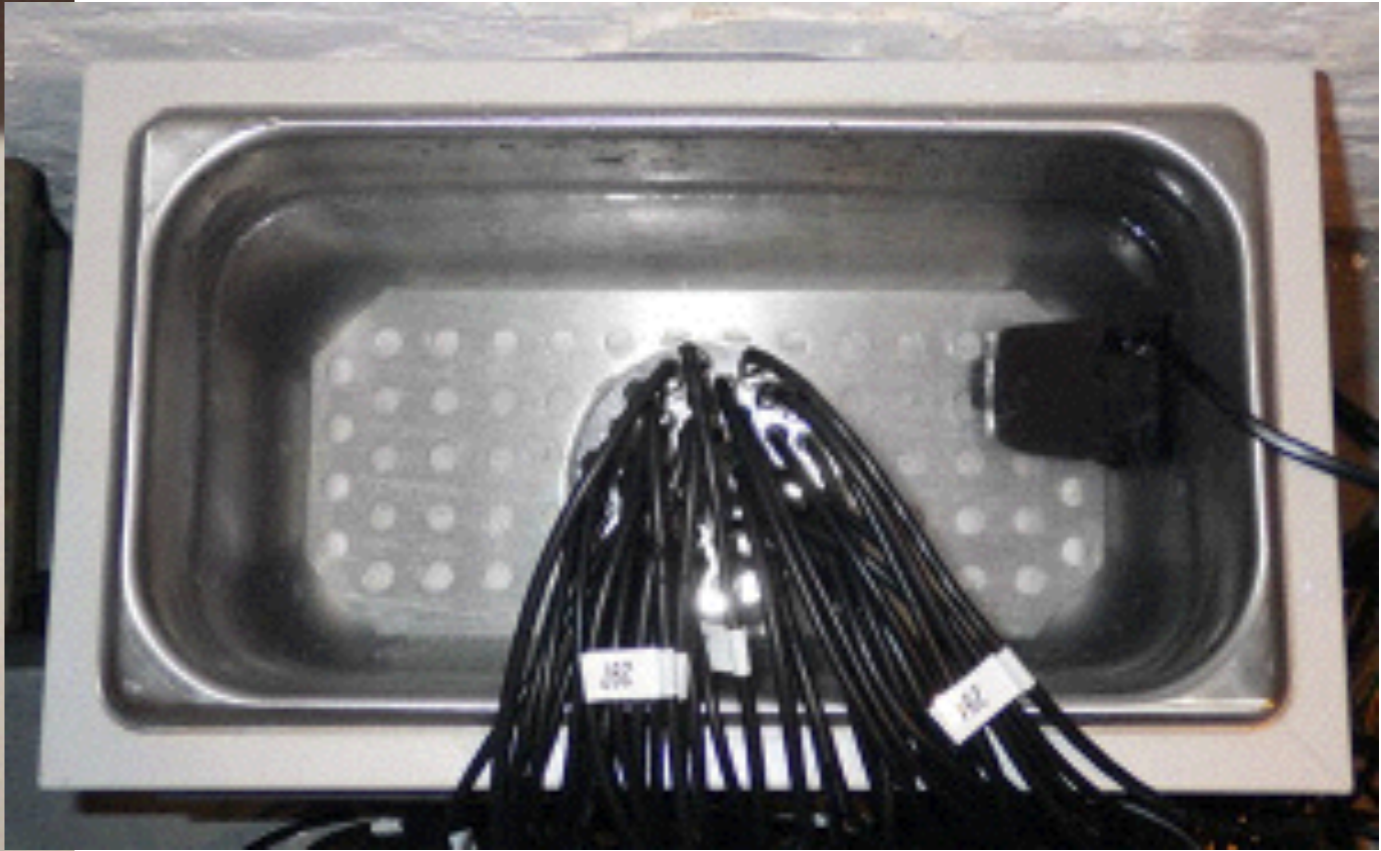
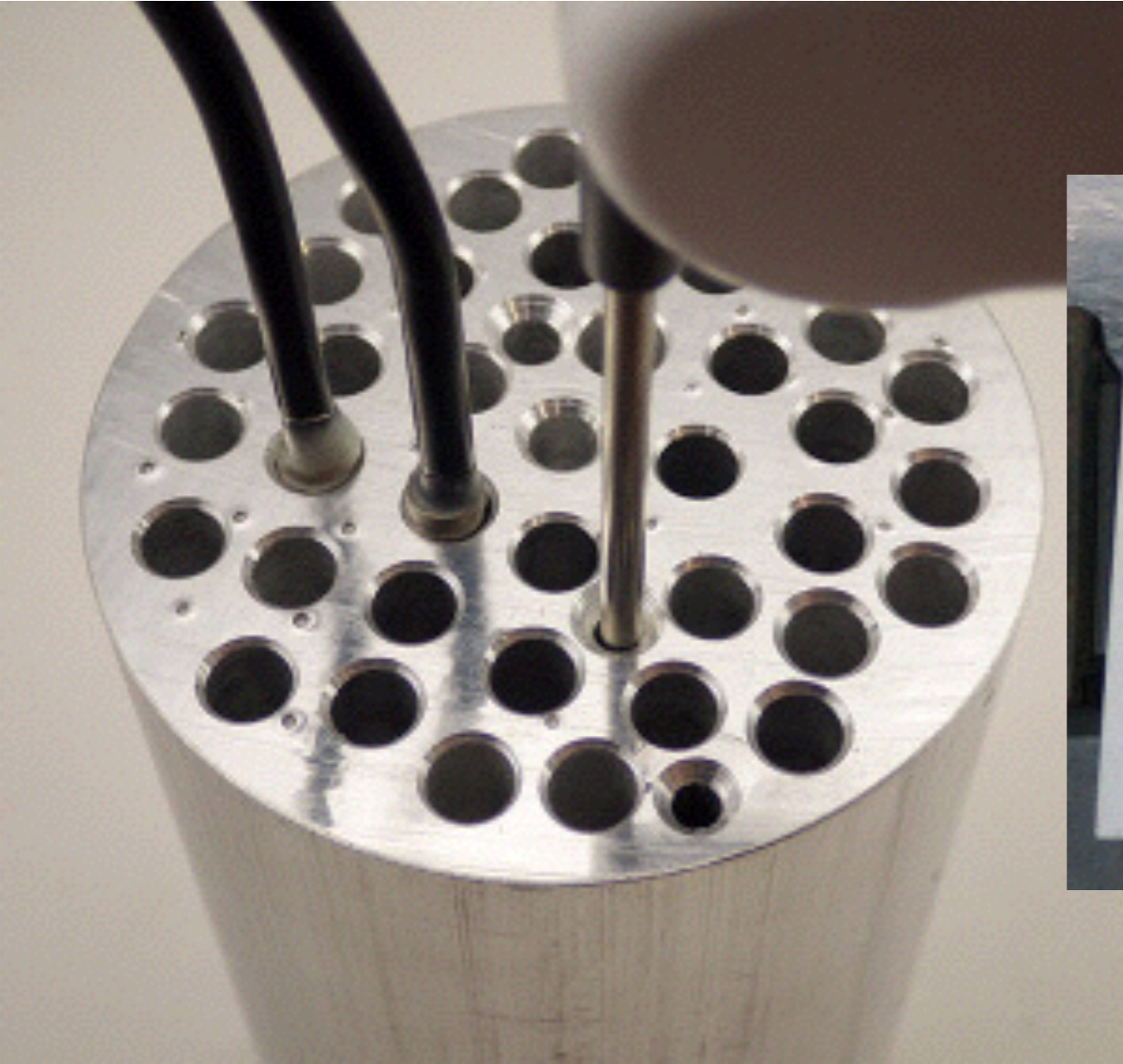
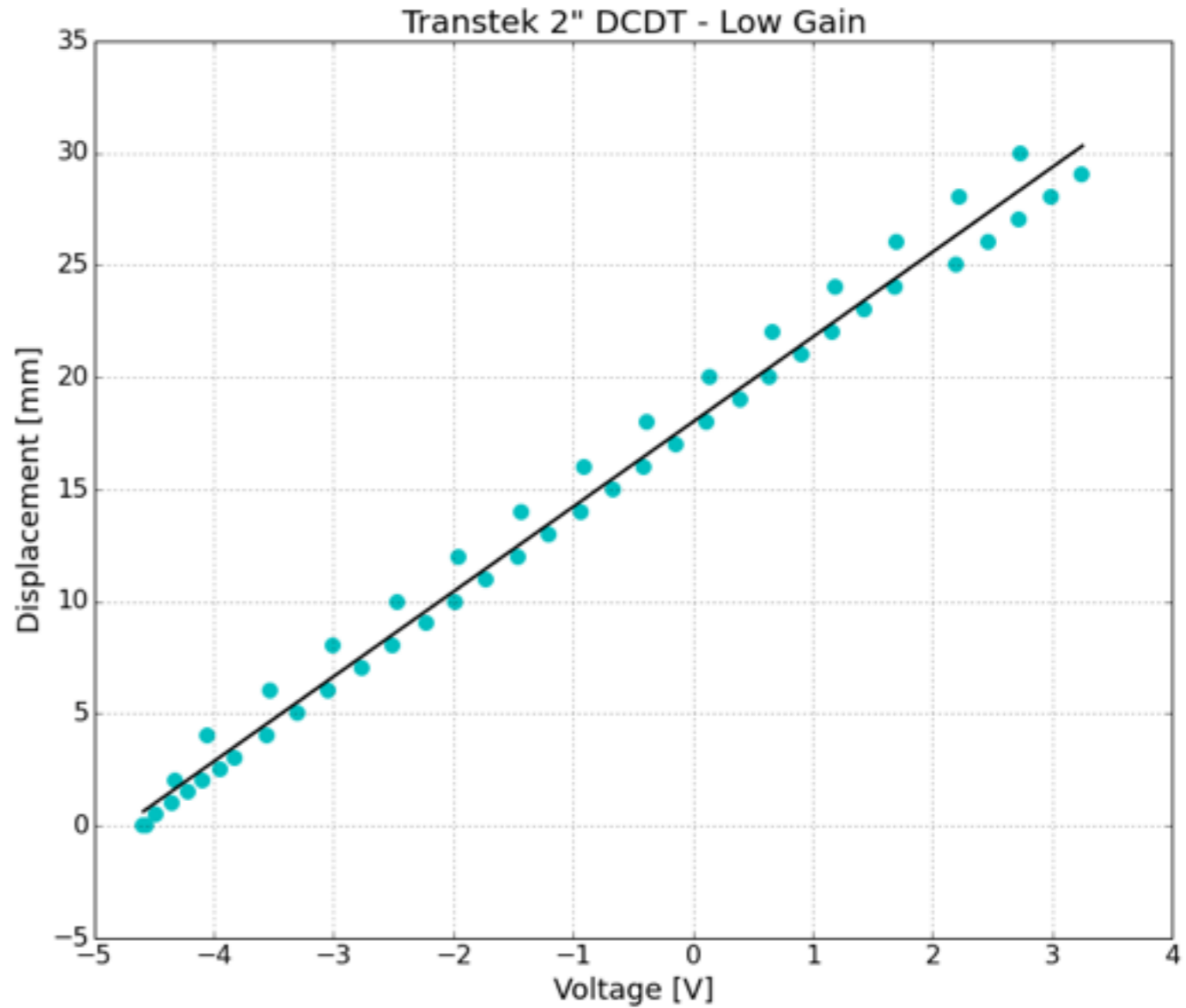
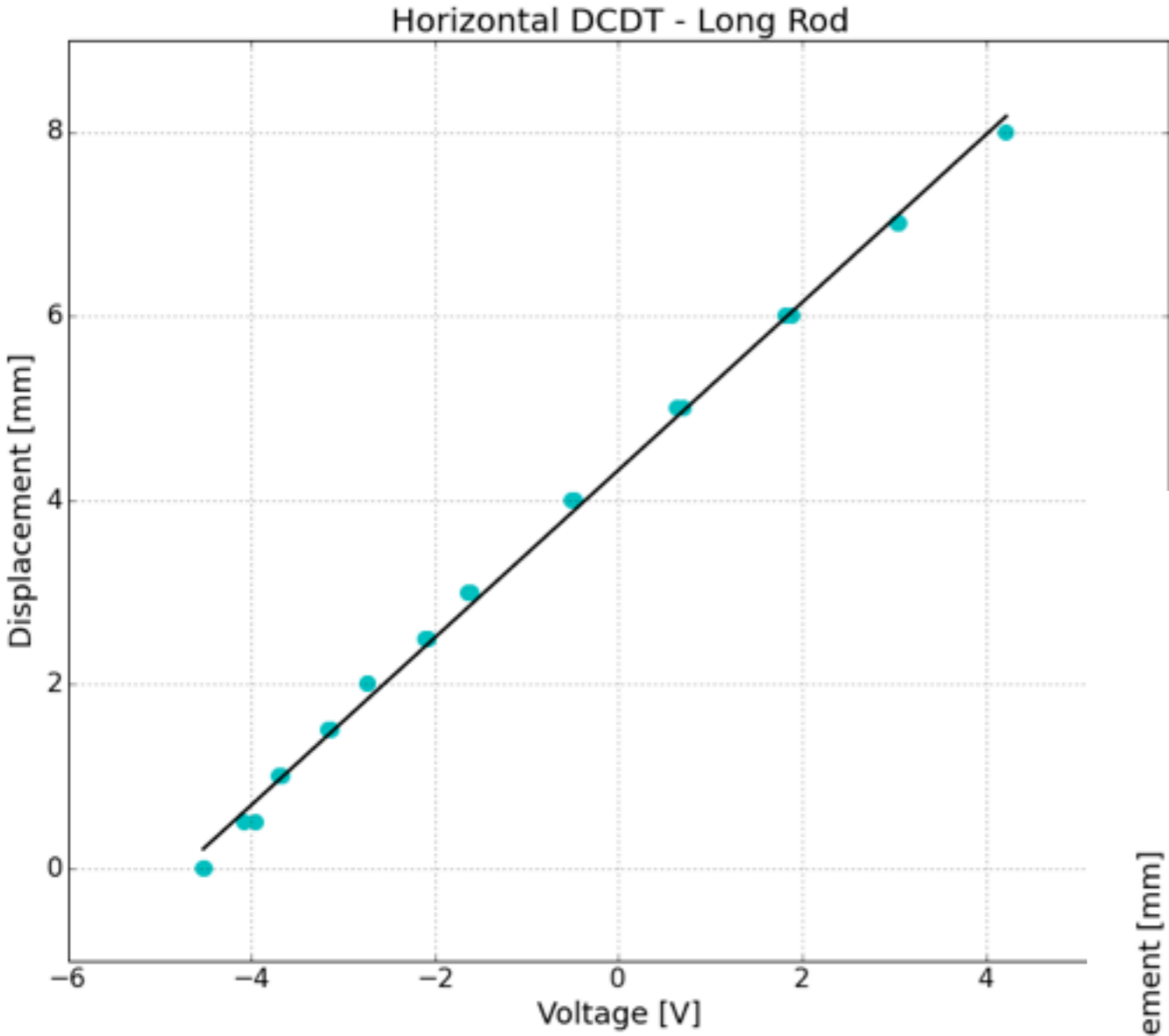


Image: Adafruit

Calibrations involve taking the transducer through a known set of values and recording its output



The output is then characterized by a fit/transfer function and accepted or rejected



Calibrations should be performed on a regular basis

CALIBRATION

I.D. NO. _____

BY _____ DATE _____

DUE _____

Institutes such as NIST maintain a set of standards that we calibrate against and they also have recommended procedures


Certificate of Calibration

This certifies that Fireflysci Premium Neutral Density Filters correspond or exceed requirements of NIST SRM 930e established by the National Institute of Standards & Technology (NIST)

Fireflysci Premium Neutral Density Calibration Filters Serial No. 415							
FFS Part No.	Optical Density Field	Passed QA Yes/No	Absorbance at the following wavelengths				
			440nm	465nm	546.3nm	590nm	635nm
HP-0.5	0.5	Yes	0.5690 ±0.0022	0.4769 ±0.0022	0.4642 ±0.0022	0.5008 ±0.0022	0.5071 ±0.0022
HP-0.7	0.7	Yes	0.7955 ±0.0022	0.7019 ±0.0022	0.6945 ±0.0022	0.7393 ±0.0022	0.7264 ±0.0022
HP-1	1	Yes	1.1055 ±0.0023	1.0054 ±0.0023	1.0094 ±0.0023	1.0549 ±0.0023	0.9900 ±0.0023

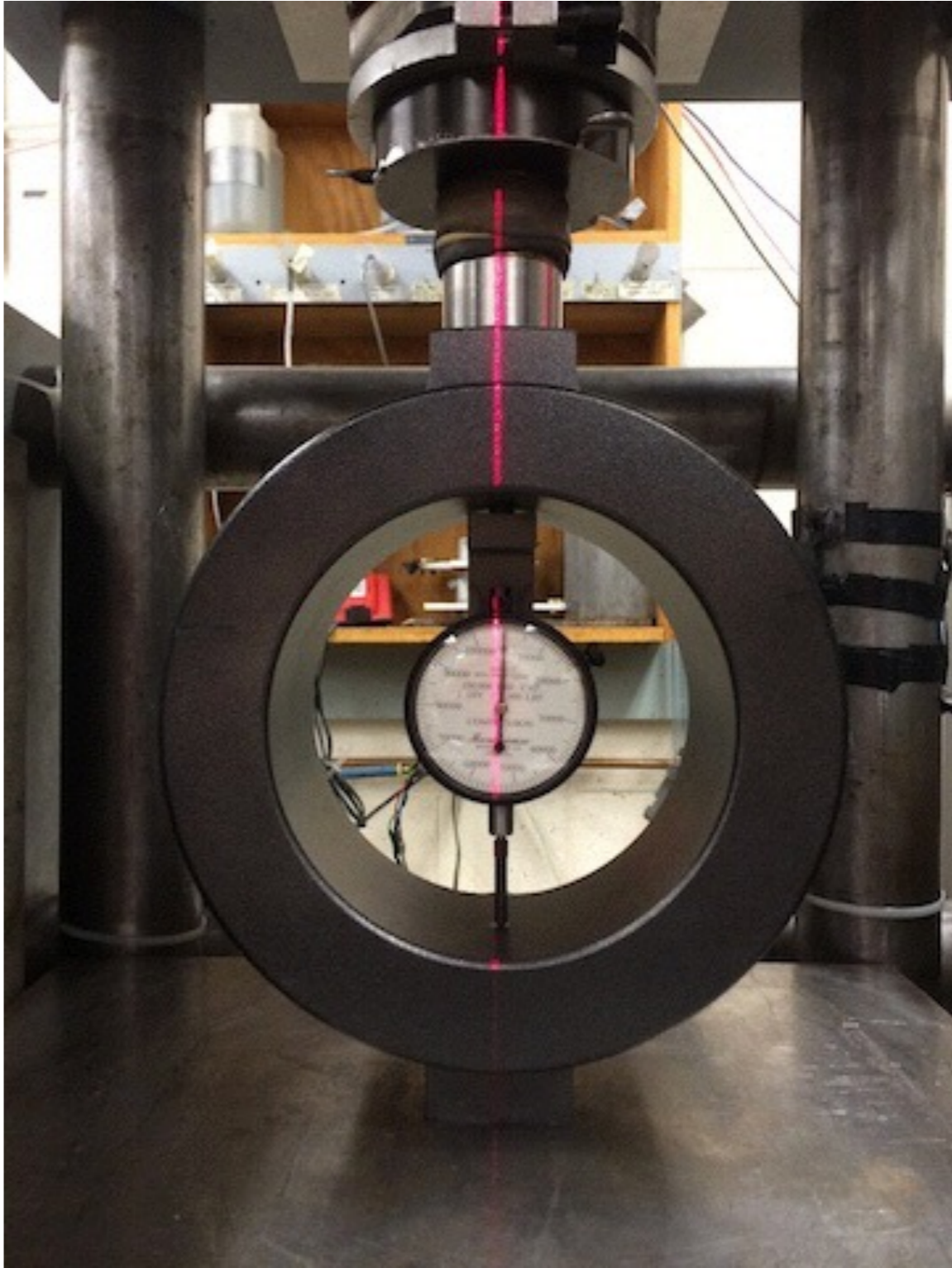
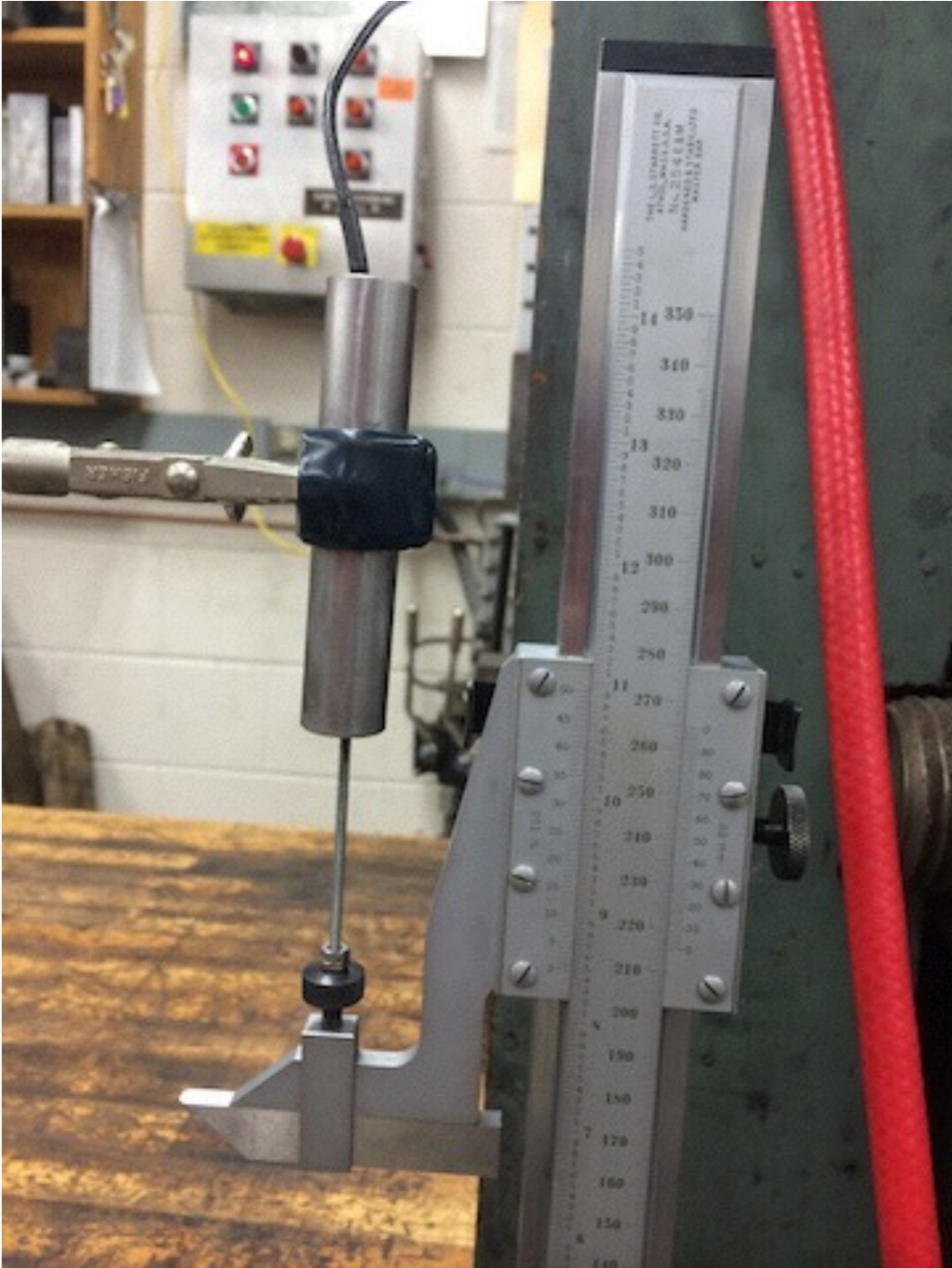
Note 1: These premium neutral density filters are designed to be also used outside NIST wavelengths
Note 2: Working wavelengths for part numbers HP-0.5, HP-0.7 and HP-1 is 400-700nm

FFS Part No.: NIST 930e
Certificate No.: 1319
Test Date: March 1 2015



Fireflysci Inc.
1014 East 21 Street
Brooklyn NY 11210
347-441-4277
www.fireflysci.com

A few standards



Images: J.R. Leeman

Activity: Complete a calibration



Due : 10/25

Reminder: Bring your strain gage object next class!



Due : 10/25