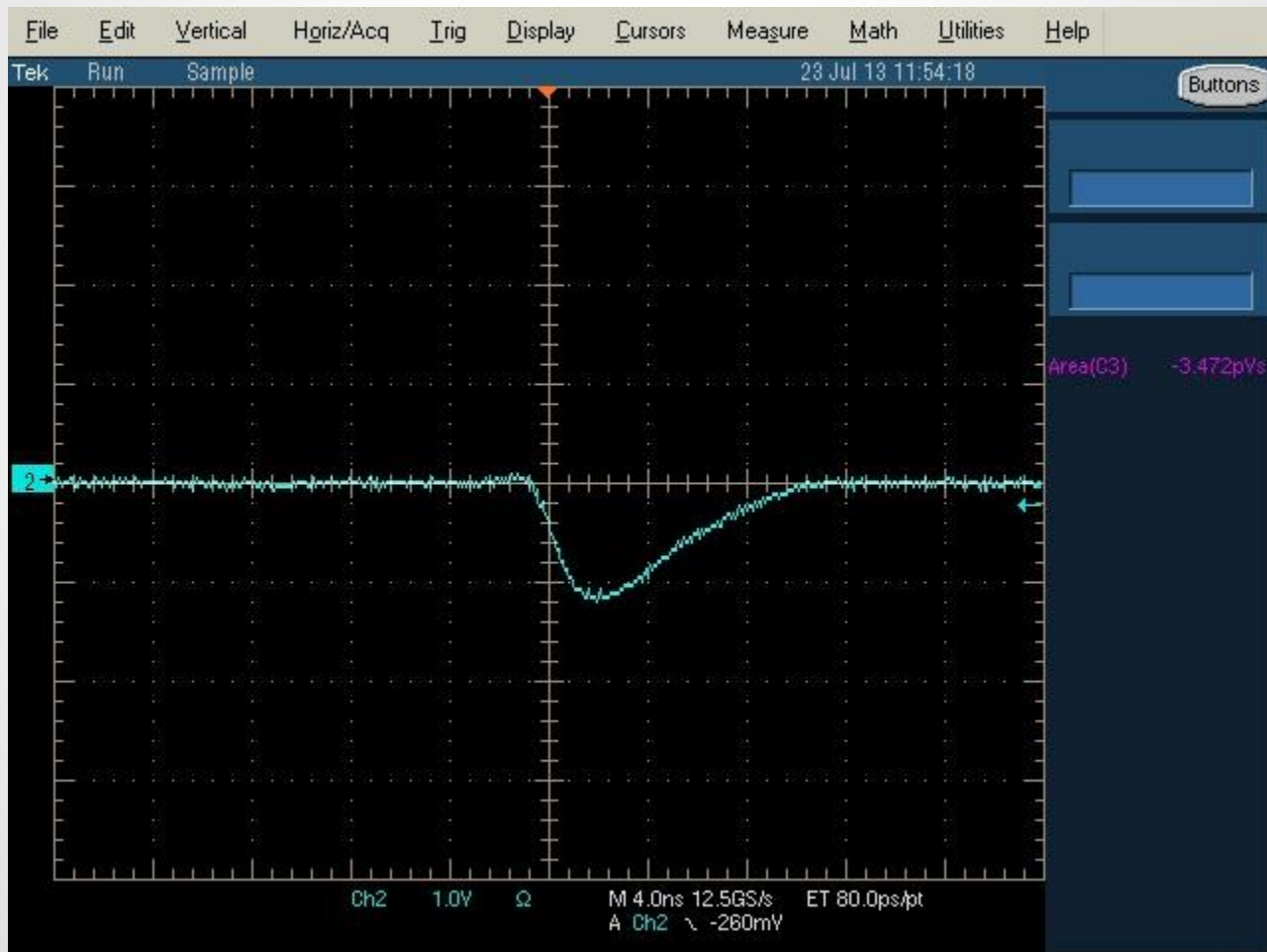# The Effect of Radiation on Phaseolus vulgaris

Stephanie Durham and Derek Boylan

Model 417 Nim Pocket Pulsar by Phillips Scientific

2 Inch PMT LED Test
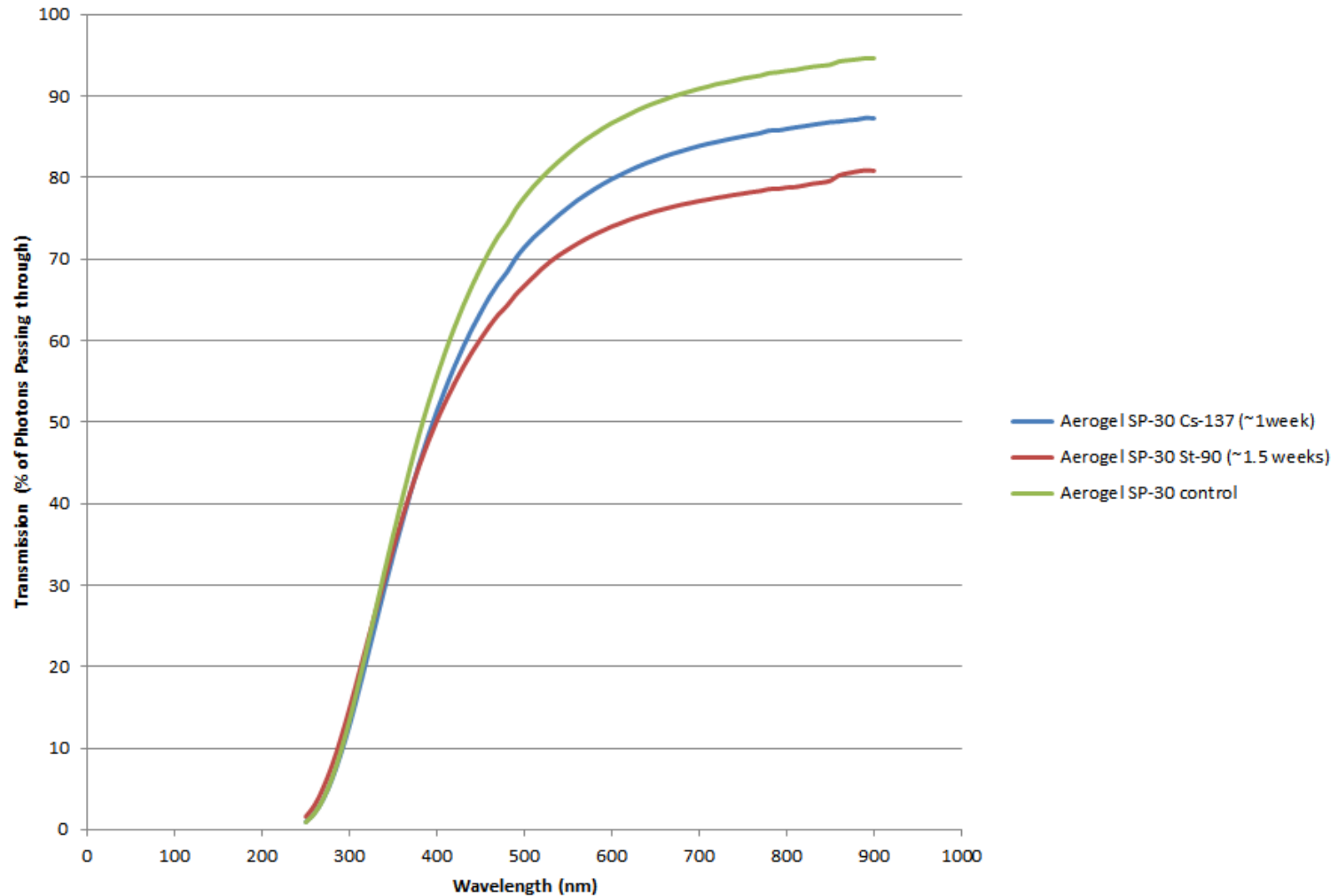

- Glued scintillator to this PMT

Cosmic Ray Detector

- Computer cannot count as quickly as the module, it has a dead time
- The module counts noise (i.e. changes in light, motors, etc)

Future Tests:
- Trigger efficiency test (3rd paddle)
- Test with two paddles that are twice as thick
  - Two new scintillators have been sanded and polished

Effect of Wavelength on Transmission of Three Aerogel Tiles

Legend:
- Aerogel SP-30 Cs-137 (~1 week)
- Aerogel SP-30 St-90 (~1.5 weeks)
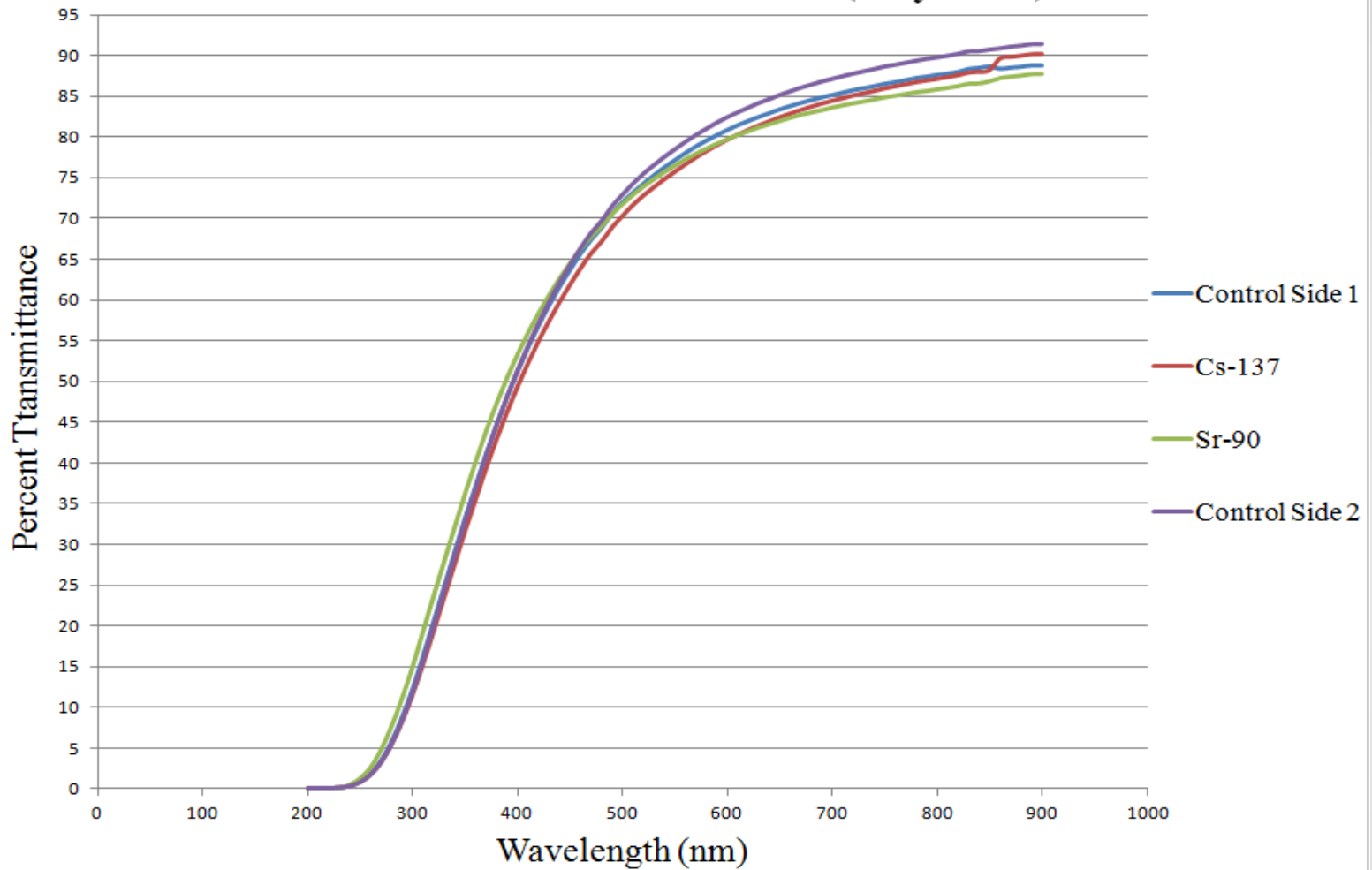- Aerogel SP-30 control

Exposure time at this point:

Sr-90 = 192 hours

Cs-137 = 72 hours

- No visible difference
- The tiles exposed to radiation have some dust on them

Second Transmitance Test (July 24th)

Exposure time at this point:
Sr-90 = 336 hours
Cs-137 = 192 hours
- No visible difference
- After having cleaned the two tiles exposed to radiation with a makeup brush (may have caused small scratches)

Radiation's Effect on Bean Plants

- The larger pots have been exposed to radiation four times, while the smaller pots have been exposed to radiation three time
    - No noticeable differences in the plant's growth has been seen
    - Creating graphs
- Continuing to prepare plants for the stages of development experiment (three different stages so far)