

Overview for test of USB4000 UV-VIS Spectrograph

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First Setup

The purpose of the first test is to determine the quality of a calibration of the spectrograph. This includes repeated measurements of a spectra over a long period of time, using two known light sources, one for calibration and another as the star being observed. Furthermore a test of how a simulated safe mode on the spectrograph influences the output.

Items needed

- Computer for taking data
- Two Calibration light sources
- USB4000-UV-VIS Spectrograph (The model we have)
- Optical Bench for setup

Second Setup

The second round of testing will be done to test how the spectrograph performs under different temperatures. If data is available the temperature change for a orbit will be simulated.

Items needed

- Same as first setup
- Temperature sensor (-10 to +50 degrees Celsius)
- Temperature controls (Heater, Peltier device?,Raspberry Pi/Arduino)

Third Setup

The third setup should test the output of the spectrograph when the light source is not stable.

Items needed

- Same as first setup
- Stepper motors for movement of light source