Spectrometer Assembly

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Spectroscope
Connect touchscreen to RPi

Ground (GND)  Power (5V)  SCL  SDA  Ground (GND)  Power (5V)
Connect touchscreen to RPi

Ground (GND)  Power (5V)

SCL  SDA
Screw camera to mount

- Screw thread is located on the camera
Connect camera to RPi

- Gently lift black tab to open connector
- Insert cable
- Blue strip faces black tab
- Gently press black tab to close
Operating the RPi

- Connect USB keyboard
- Plug USB power into RPI
Place camera at viewport
Operating your RPi Spectrometer

• Open terminal
Terminal commands

• Navigate to ictp folder
• Show contents
• Stream video for ‘n’ ms

```
cd /Desktop/ictp
ls
raspivid -t ’n’
```
Python script

```python
python picam_test.py
```

- Captures image after 2 seconds
- Converts image to RGB values
- Exports values as .csv file
- File name = HH:MM:SS
- Plots RGB values as function of pixel position
Thanks

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Python libraries

• pandas
• matplotlib
• gi-cairo
• sklearn