

Week 3 Writeup

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1 Housing & Mounts

I finished and printed my first mounts over break. I spent this week revising my designs and I should be able to print everything monday of next week to finish assembly, since my tolerances were slightly off, and I had to rethink my camera mount.

2 Software

The rest of my weekend will be spent implementing calibration tools. This simply involves (1) determining a way to correlate pixel exposure to spectral energy intensity for my camera, (2) converting from pixel location to wavelength. These will all end up mathematically being a projection from the values in my buffers to the intensity/wavelength. Because of the nature of my data, this "projection" will be a very straightforward multiplication from pixel index to the desired unit value.

3 Timeline

I feel behind schedule on where I would have liked to have been. Construction of the housing and case has taken two weeks longer than I would have liked, due to some delays getting full access to the 3D printer and design difficulties with the scale of my webcam lens. As a result, next week will have to be very busy to compensate. The weather fortunately seems quite good, so I should be able to get the measurements I need.