Resonon Test Report – Wedge Window Realign

Identification Data	
Date	August, 2019
Resonon SN	100114-5
Instrument Name	BS05
Andor Camera SN	CCD-20477

Configuration	
Filters Installed	
1. There is no filter on the PGP, only an AR coating. See Figure 1a 2. Filter on rear tilted substrate: See Fig. 1b.	
Sensors Installed	
1. 10K Ohm Thermister: Digikey part # 615-1010-ND; 3 units. 2. Humidity Sensor: Digikey part # 480-3294-1-ND	
Fiber bundle info: Leoni 800 µm core fibers. See Figure 2.	
Grating: Aug. 2016 batch.	

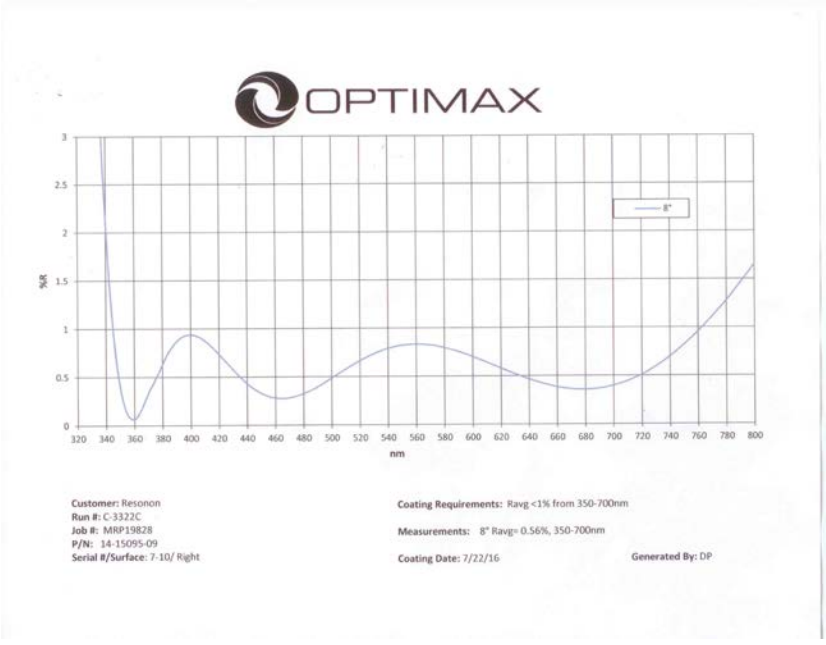

Figure 1a: AR coating on front face of 1st prism

Figure 2b: Bandpass filter on rear tilted substrate

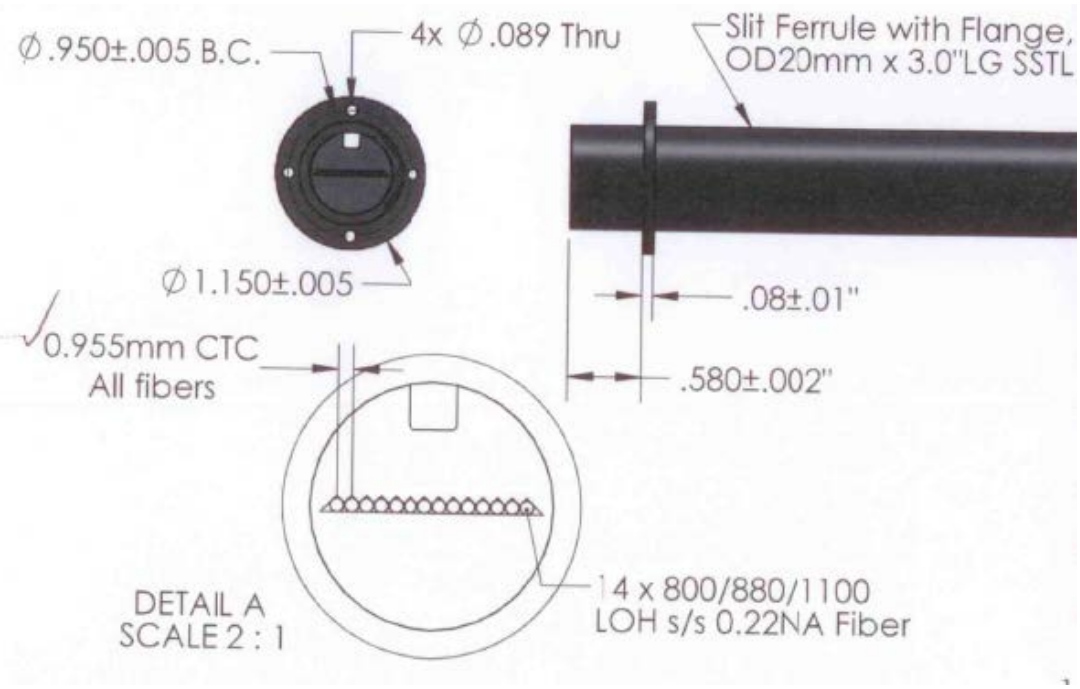

Figure 3: Leoni Fiber details

Test Summary	
Smile (Peak to Trough)	
@ 387 nm	1.0 pixel
@ 587 nm	0.6 pixel
Keystone (Peak to Trough)	
Channel 1	4.0 pixel
Channel 7	1.0 pixel
Channel 14	4.5 pixels

Spectral Resolution (FWHM)	
@ 587 nm	< 1.4 nm, See Figure 8
@ 387 nm	< 1.4 nm, See Figure 8

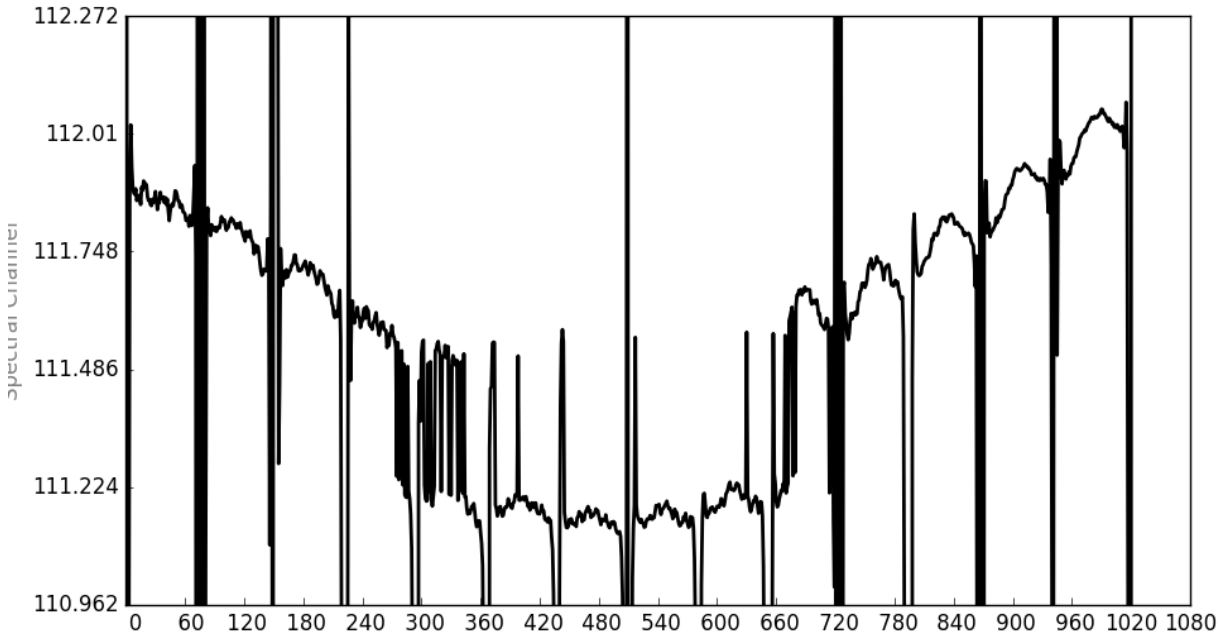

Figure 4: Smile at 387 nm. Horizontal axis is spatial channels and vertical axis is spectral.

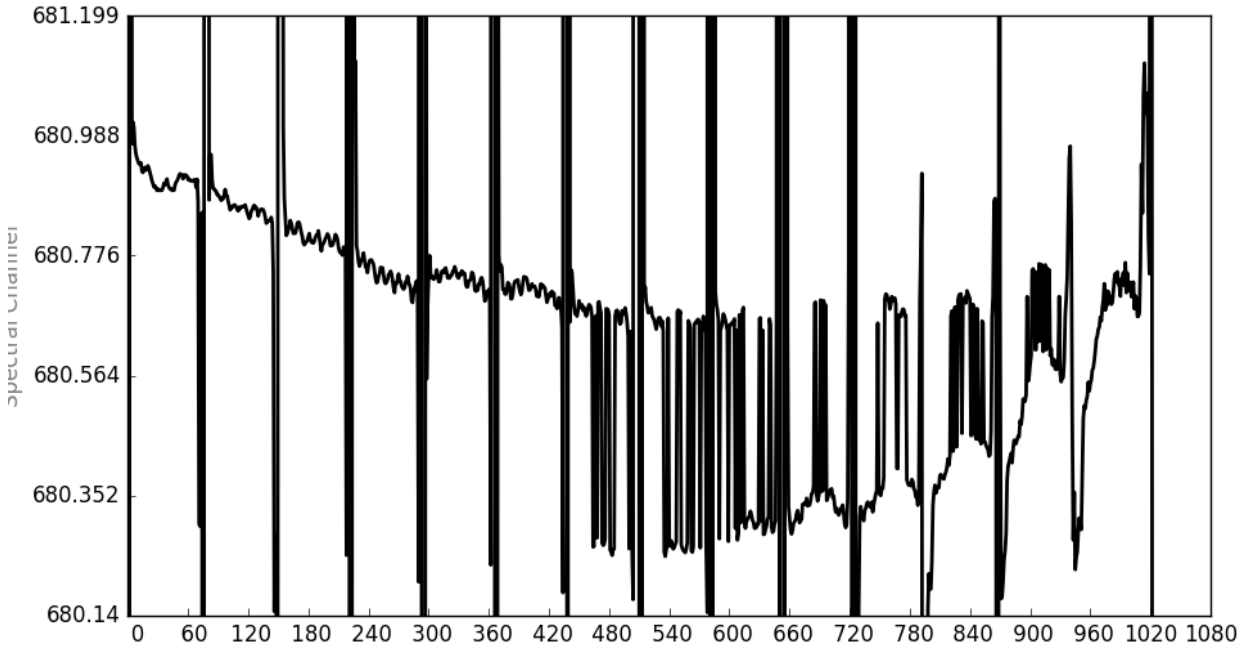

Figure 5: Smile at 587 nm.

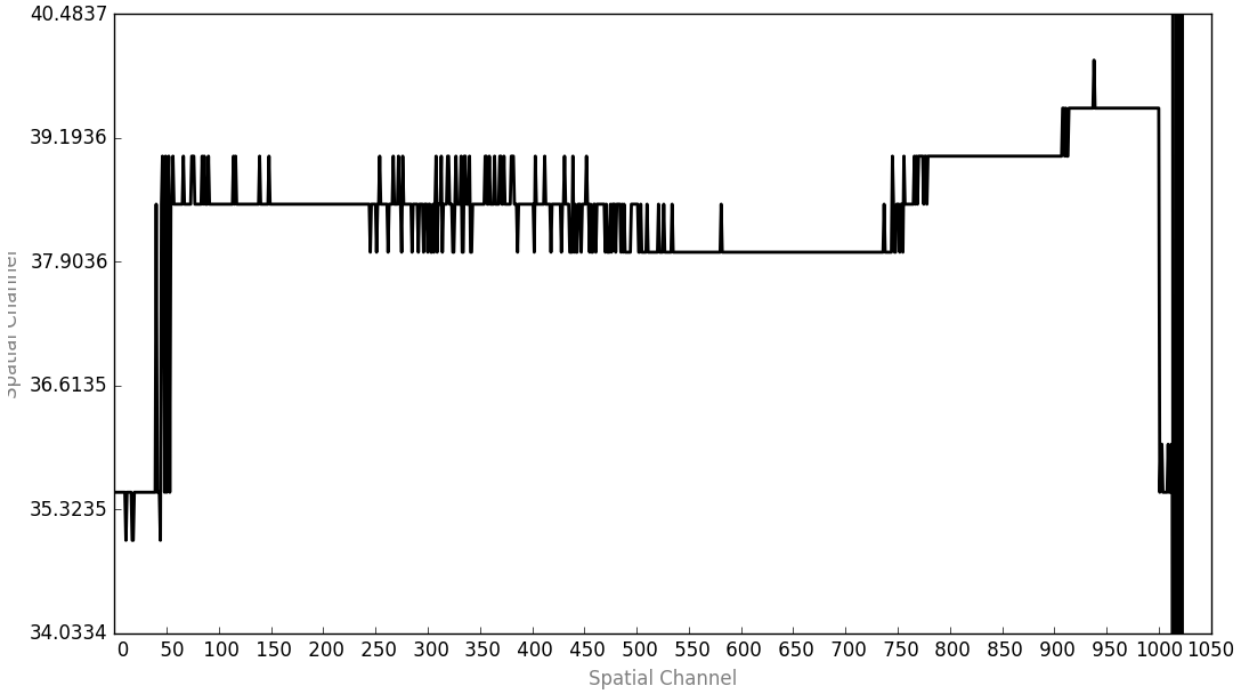

Figure 6: Channel 1 keystone. Horizontal axis is spectral channels and vertical axis is spatial.

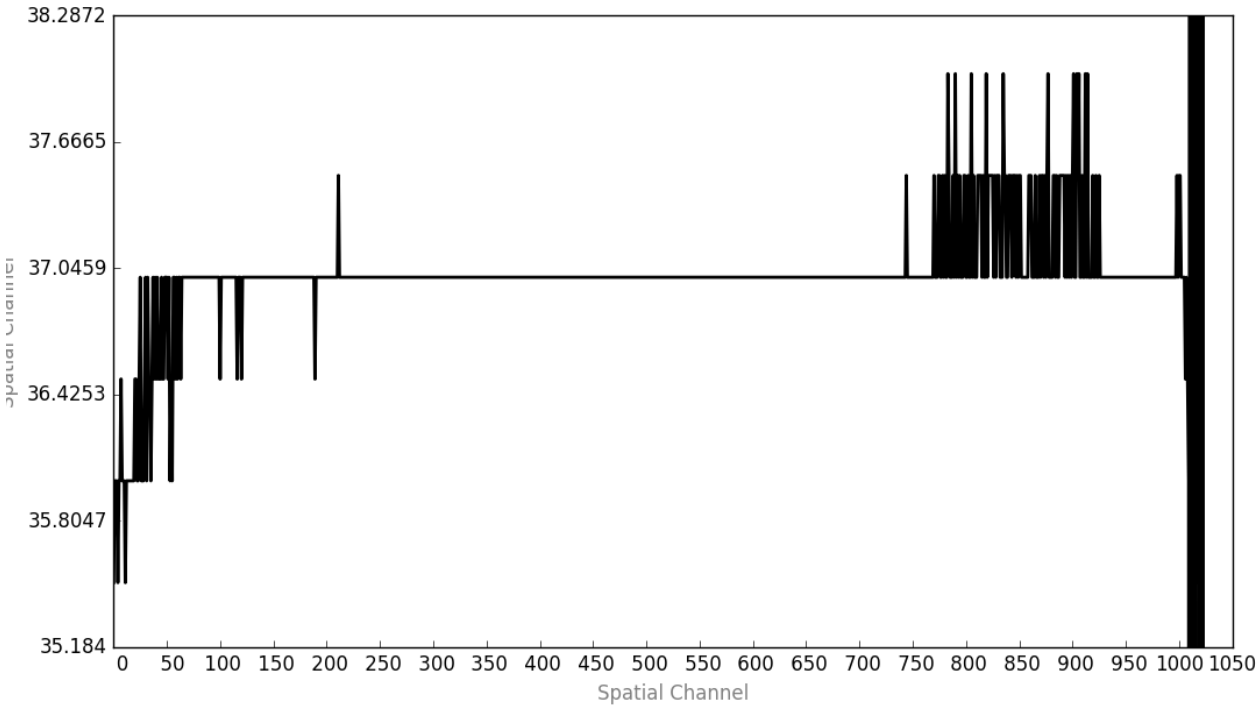

Figure 7: Channel 7 tilt/keystone

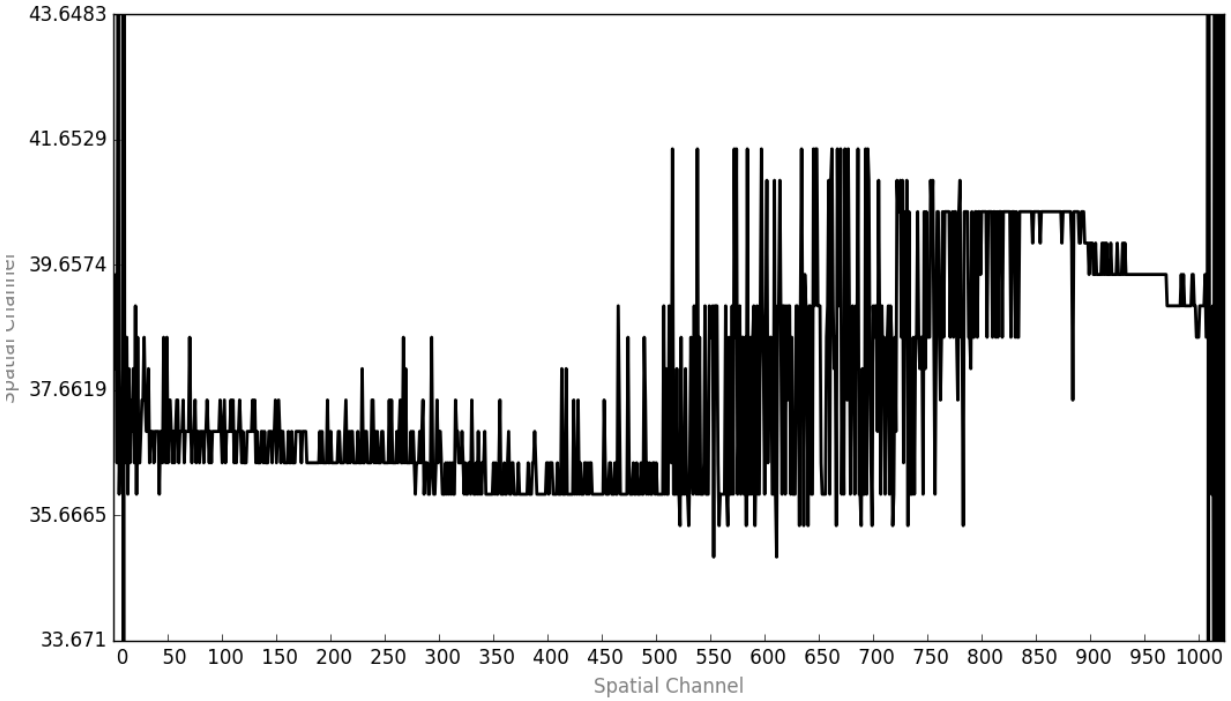

Figure 8: Channel 14 keystone.

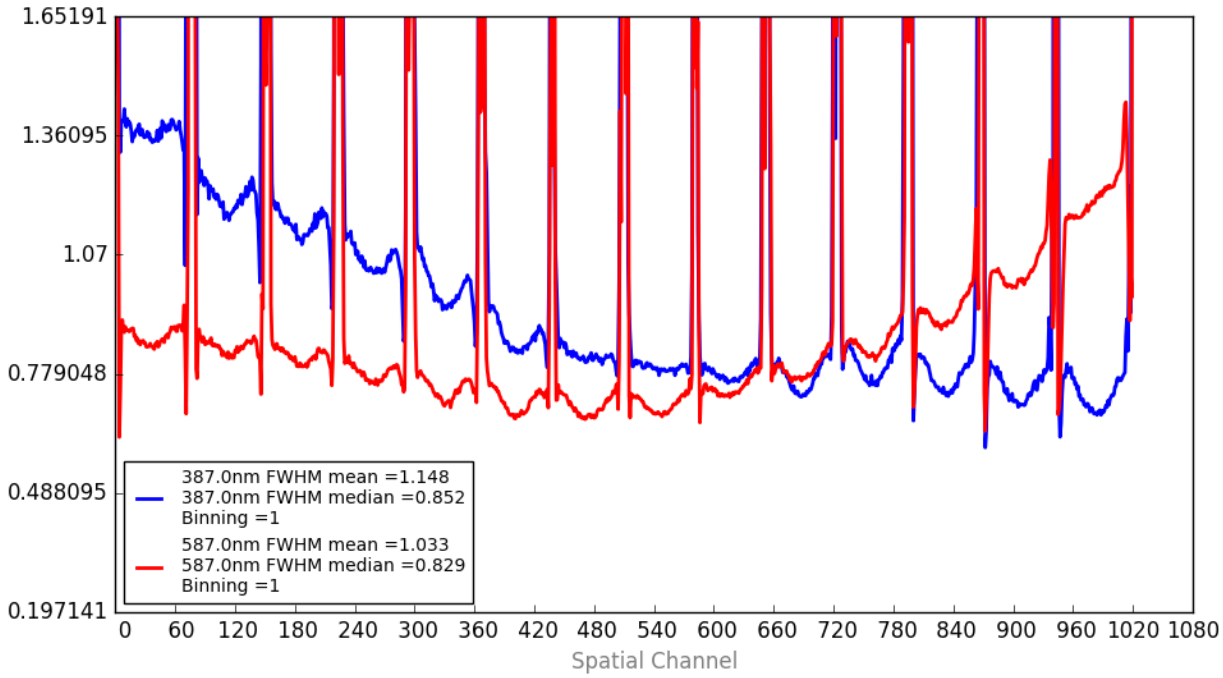

Figure 9: Spectral widths vs. spatial position

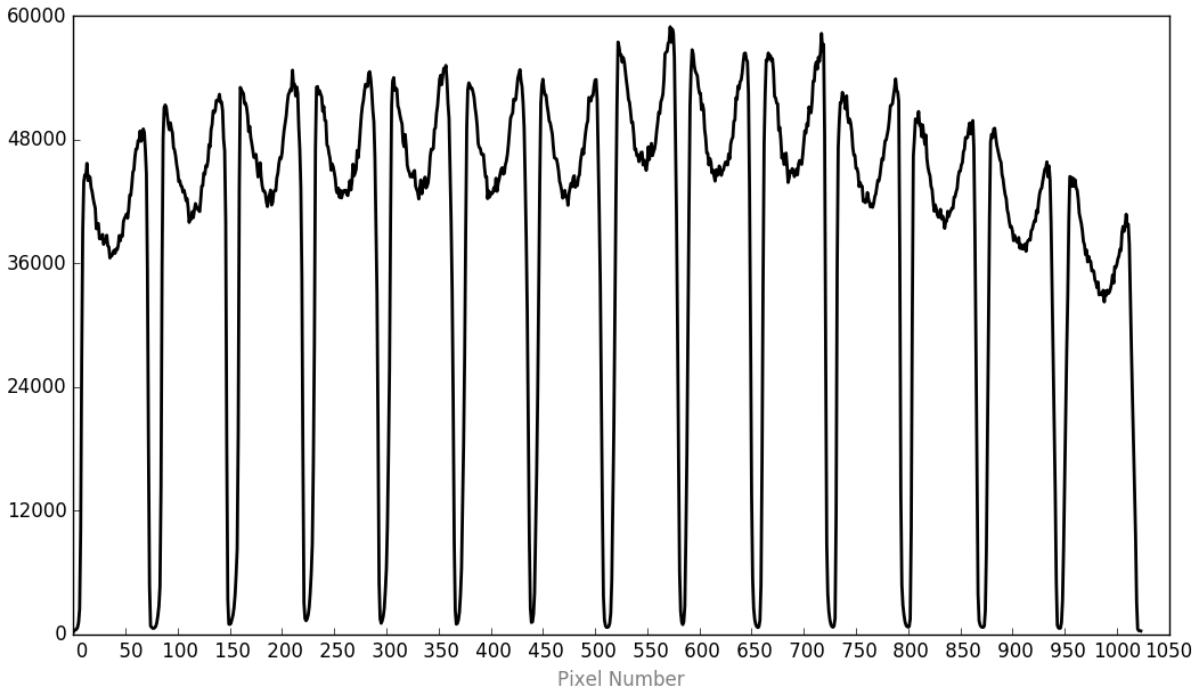

Figure 10: Cross section of fibers.

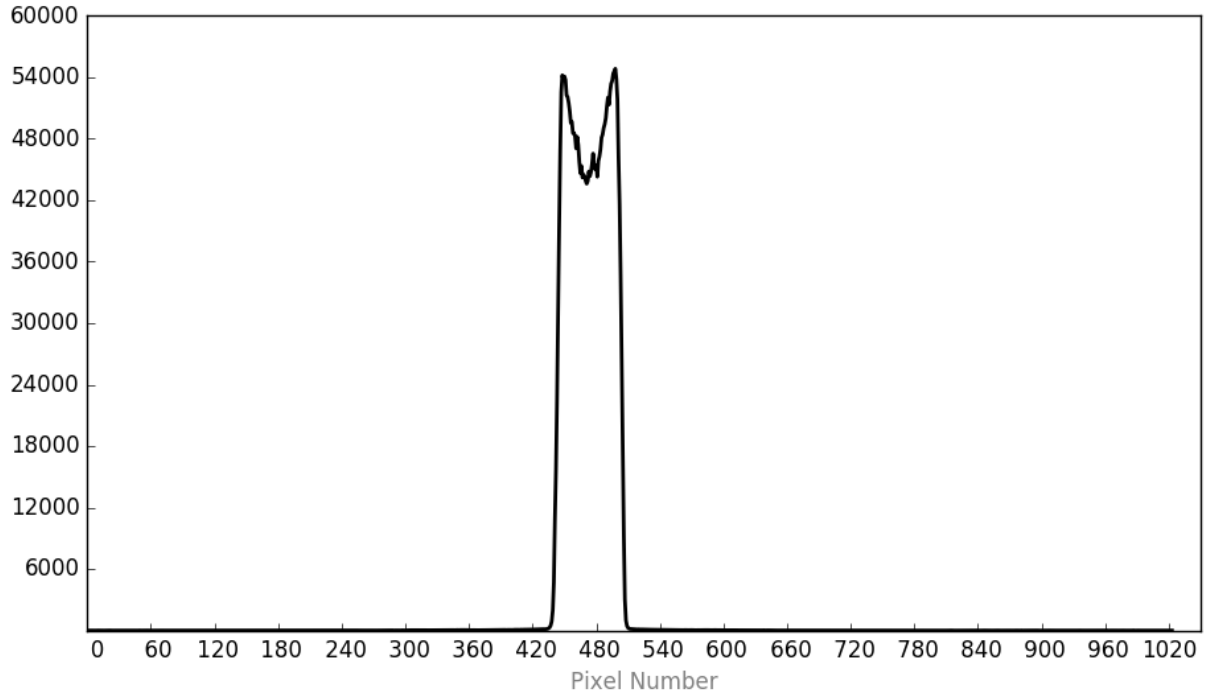

Figure 11: Cross section of channel 7.