

## Resonon Test Report – Wedge Window Realign

Identification Data	
Date	January, 2020
Resonon SN	100114-2
Instrument Name	BS02
Andor Camera SN	CCD-16345

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 $\mu\text{m}$ core fibers. See Figure 2.	
Grating: Aug. 2016 batch.	

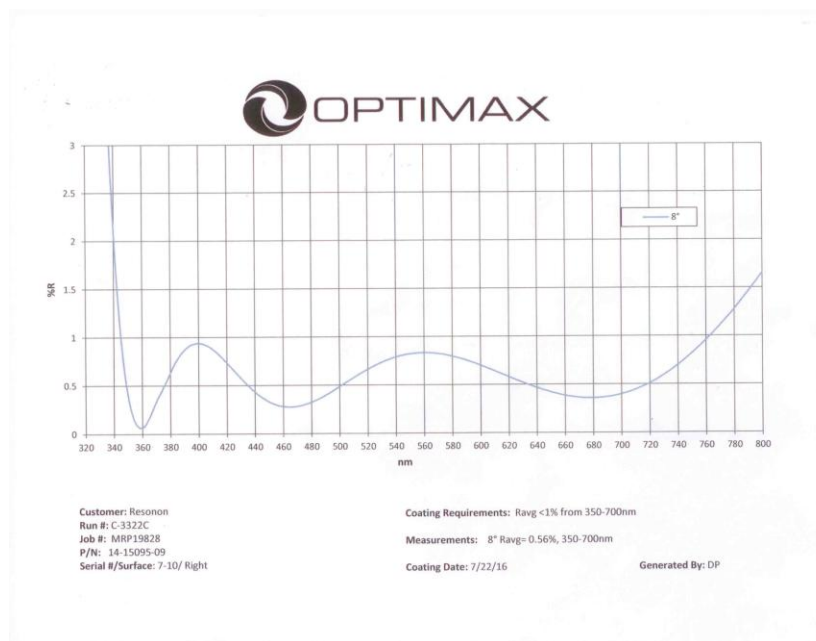
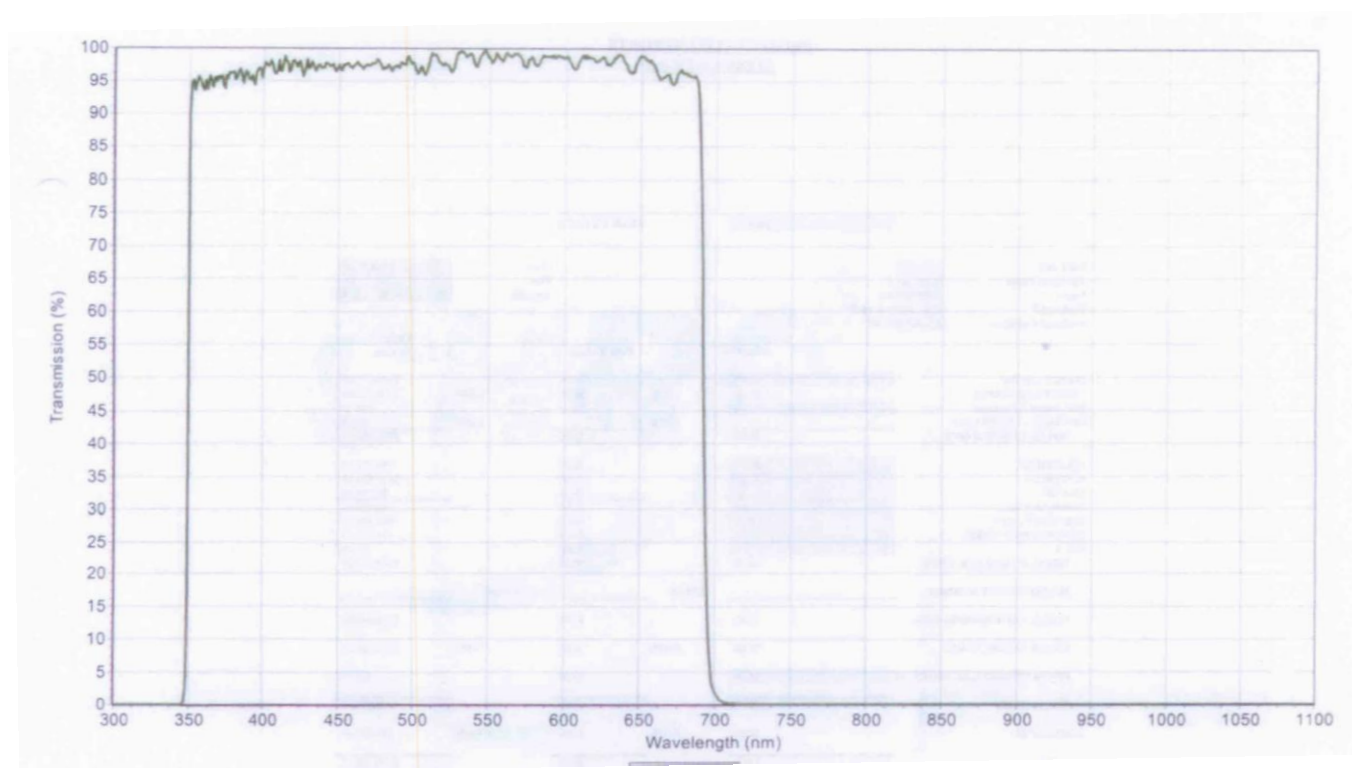


Figure 1a: AR coating on front face of 1<sup>st</sup> prism



*Figure 2b: Bandpass filter on rear tilted substrate*

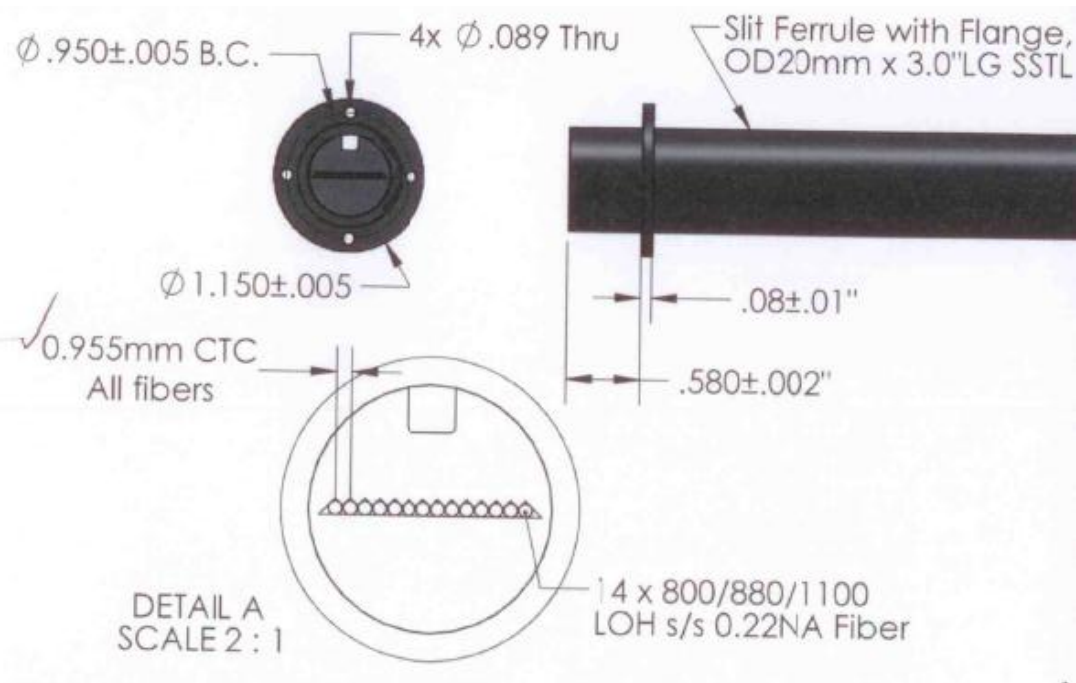


Figure 3: Leoni Fiber details

Test Summary	
Smile (Peak to Trough)	
@ 387 nm	1 pixel
@ 587 nm	< 1 pixel
Keystone (Peak to Trough)	
Channel 1	1.0 pixels
Channel 7	1.0 pixel
Channel 14	1.5 pixels

Spectral Resolution (FWHM)	
@ 587 nm	< 1.2 nm, See Figure 8
@ 387 nm	< 1.1 nm, See Figure 8

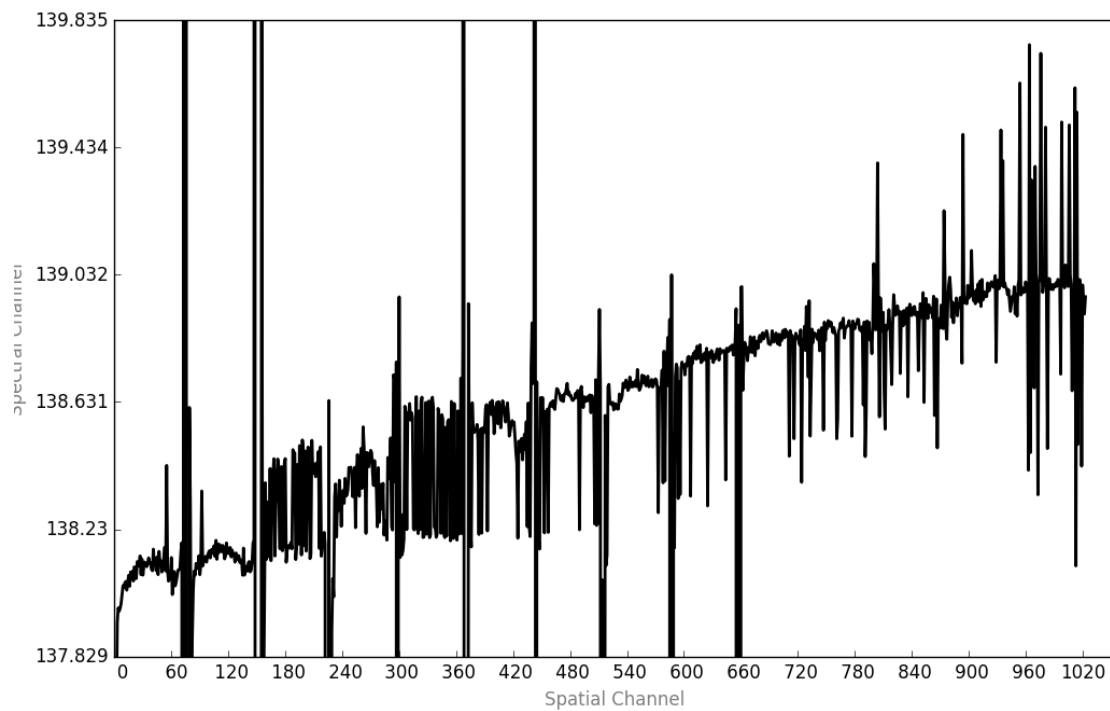


Figure 4: Smile at 387 nm. Horizontal axis is spatial channels and vertical axis is spectral.

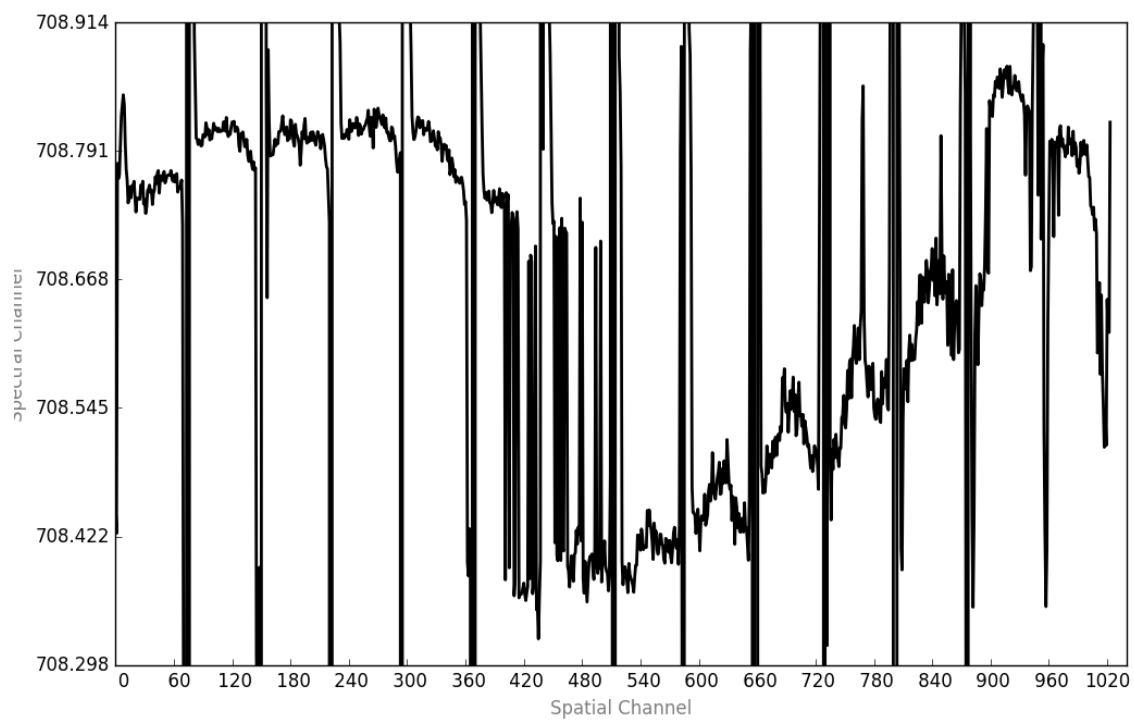


Figure 5: Smile at 587 nm.

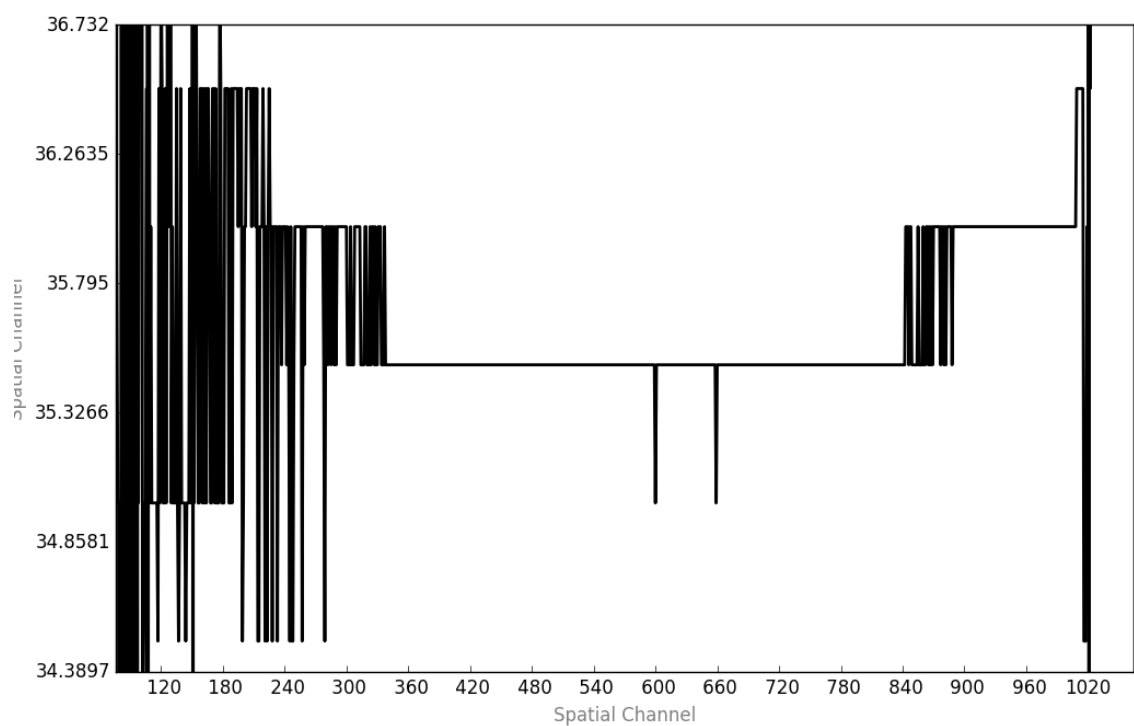


Figure 6: Channel 1 keystone. Horizontal axis is spectral channels and vertical axis is spatial.

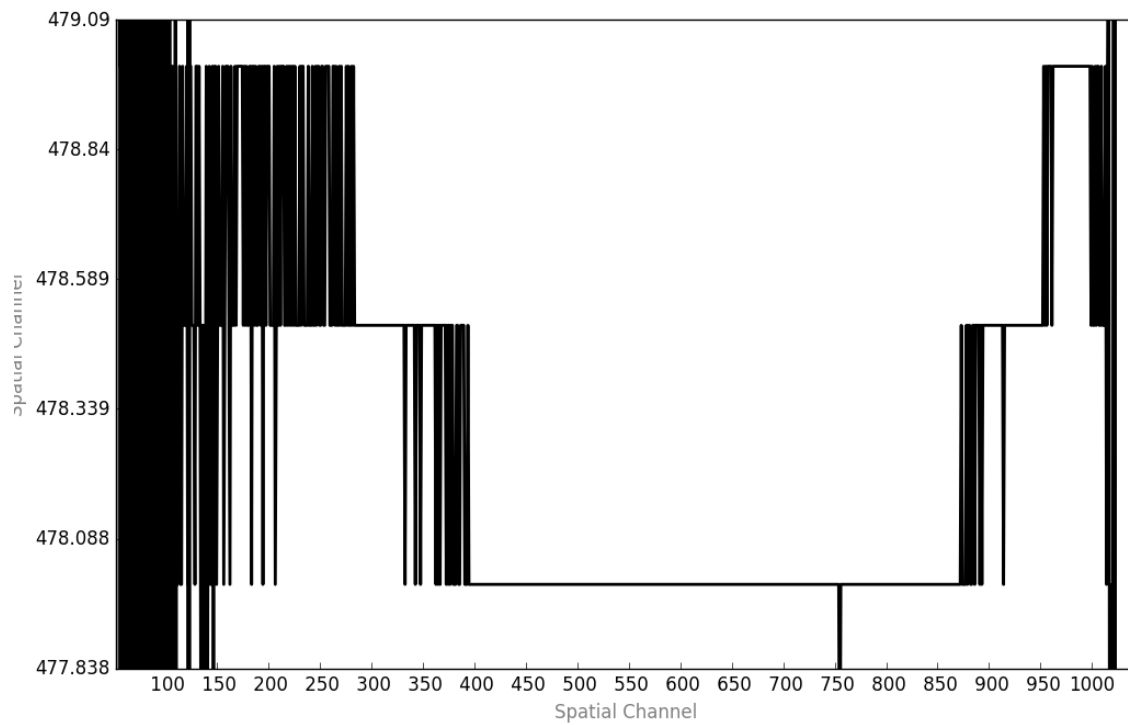


Figure 7: Channel 7 tilt/keystone

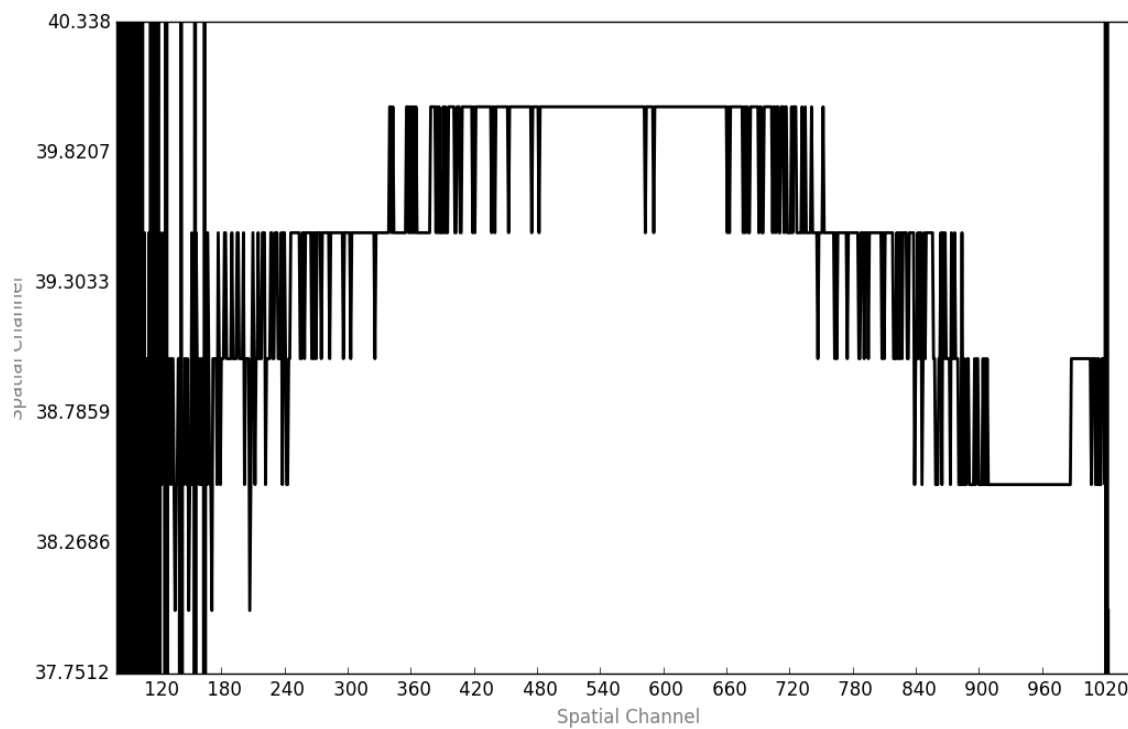


Figure 8: Channel 14 keystone.

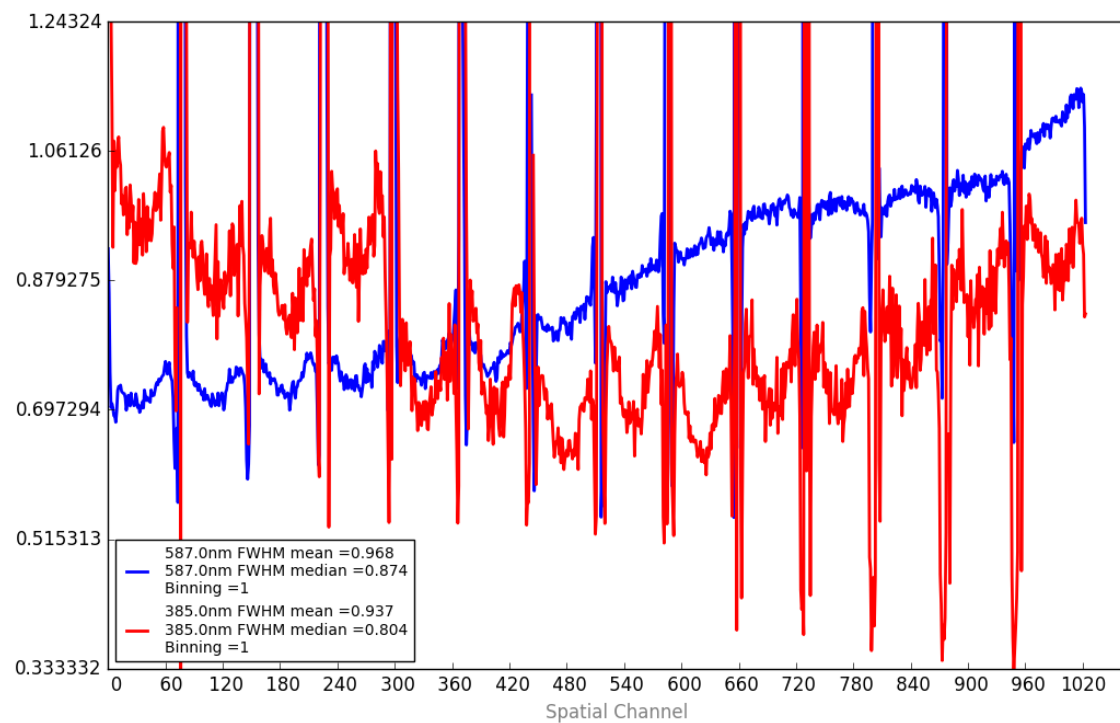


Figure 9: Spectral widths vs. spatial position

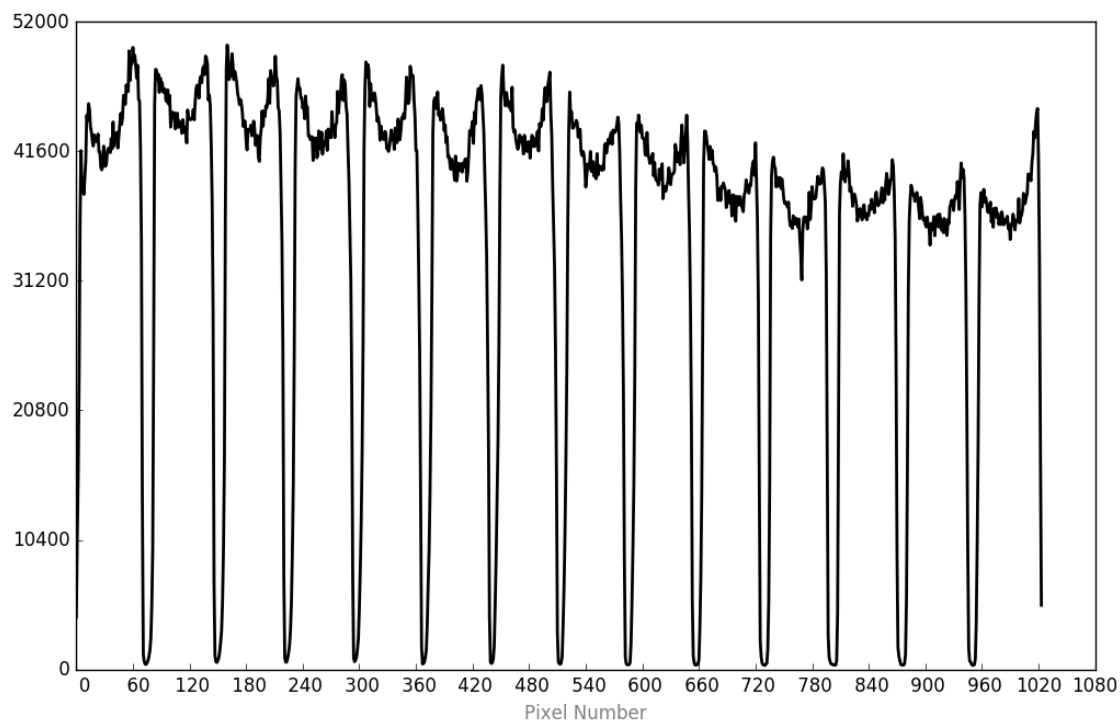
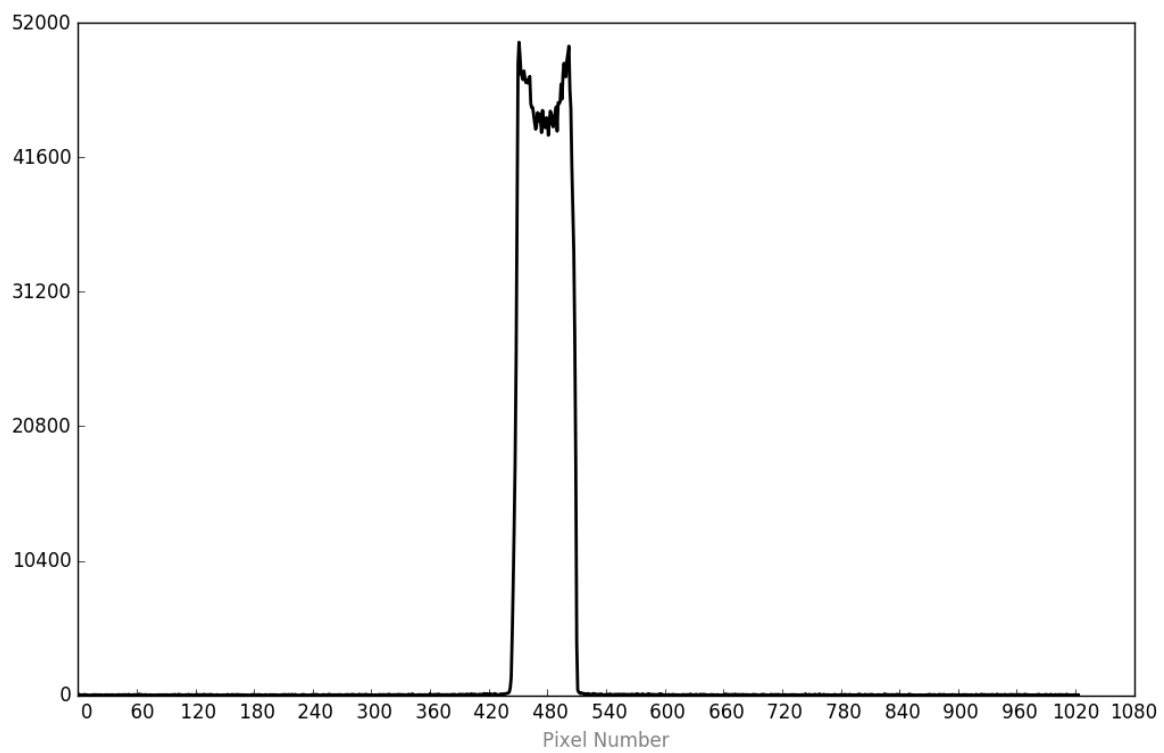


Figure 10: Cross section of fibers.



*Figure 11: Cross section of channel 7.*