

Pre-Delivery Resonon Test Report

Identification Data	
Date	May 21, 2015
Resonon SN	100114-1
Instrument Name	BS1
Andor Camera SN	CCD-17878

Configuration	
Filters Installed	
1. Filter on front face of front prism: See Fig. 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 μ m core fibers. See Fig. 2.	
Grating: Dec. 2014 batch. See Fig 3.	

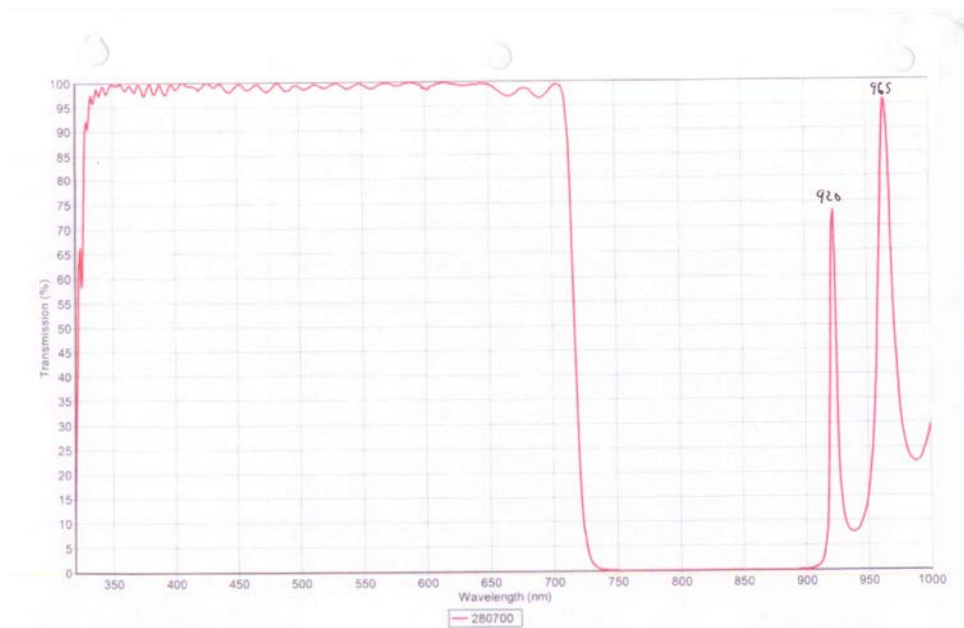
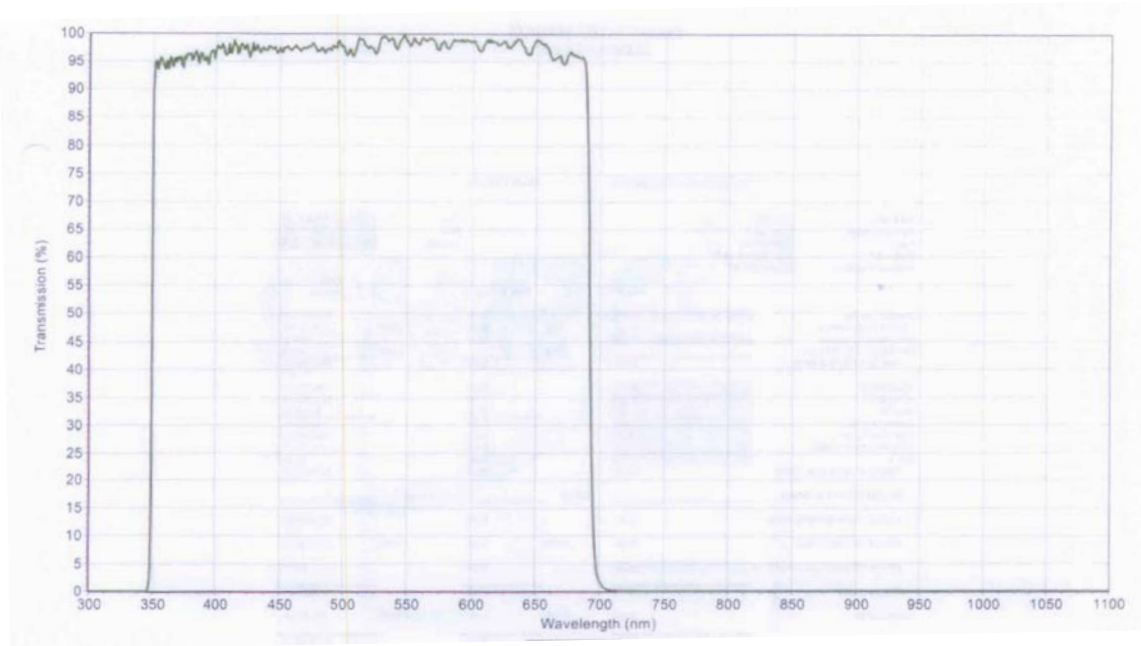


Figure 1a: Bandpass filter on front face of front prism



Figure

2b: Bandpass filter on rear tilted substrate

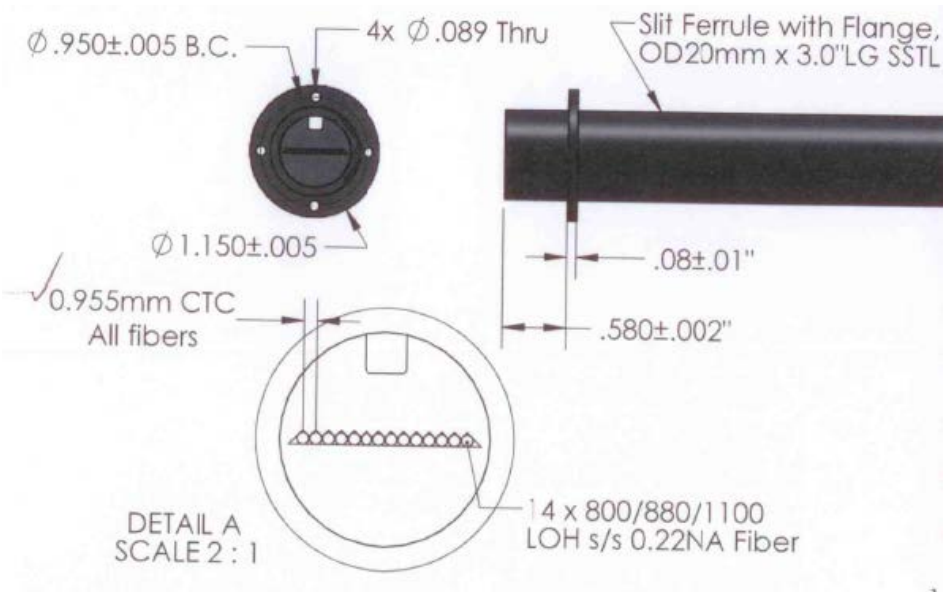


Figure 3: Leoni Fiber details

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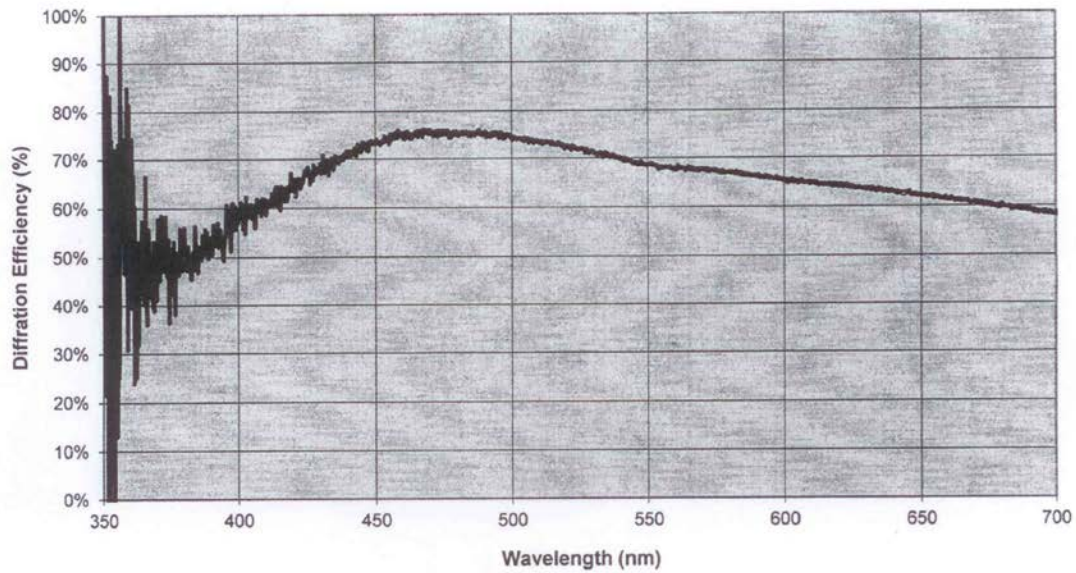


Figure 3: Grating efficiency.

Test Summary	
Smile (Peak to Trough)	
@ 388 nm	<0.6 pixels (Fig. 4)
@ 587 nm	<0.5 pixels (Fig. 5)
Keystone (Peak to Trough)	
Channel 1	1 pixel (Fig. 6)
Channel 7	1 pixel (Fig. 7)
Channel14	2 pixels (Fig. 8)
Spectral Resolution (FWHM)	
@ 388 nm	1.0 nm (Fig. 9)
@ 587 nm	1.1 nm (Fig. 9)
Stability ("shake" test)	
0.1 nm shift. See Table 2	

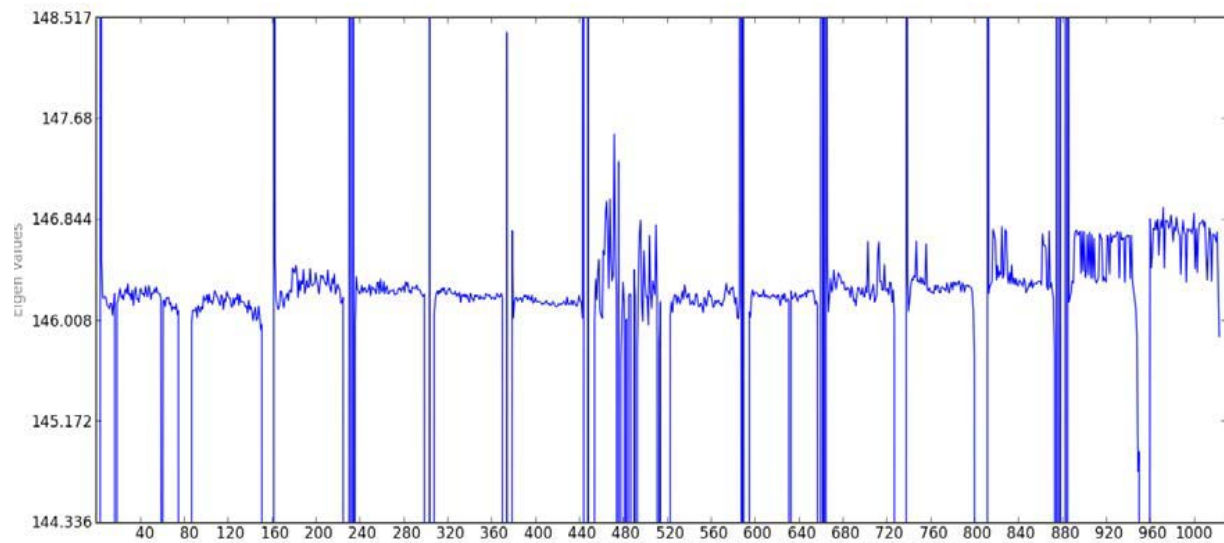


Figure 4: Smile at 388 nm. Horizontal axis is spatial channels and vertical axis is spectral.

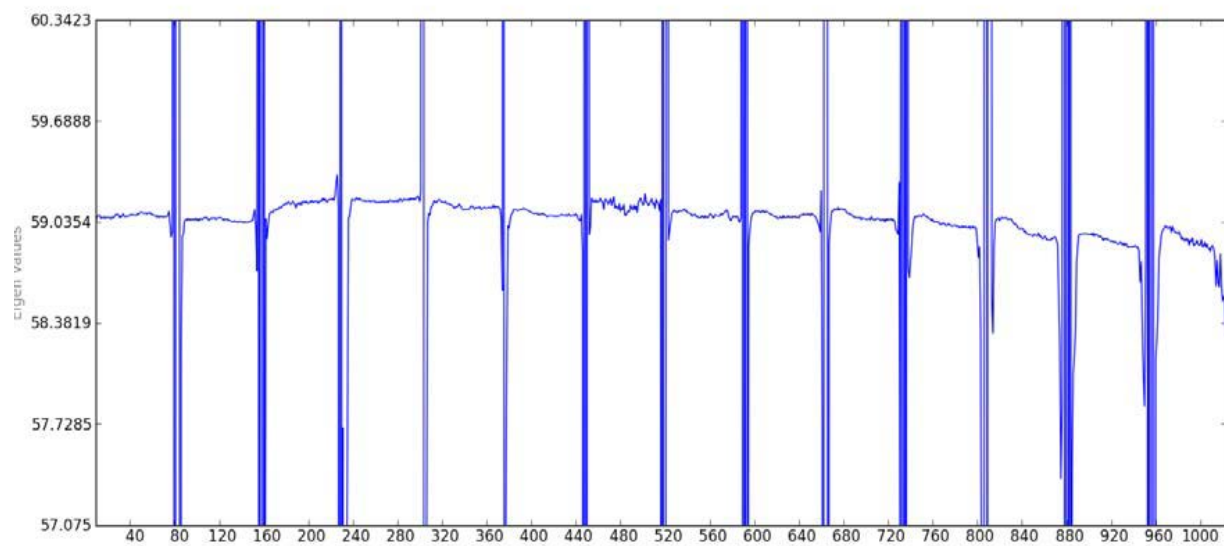


Figure 5: Smile at 667 nm.

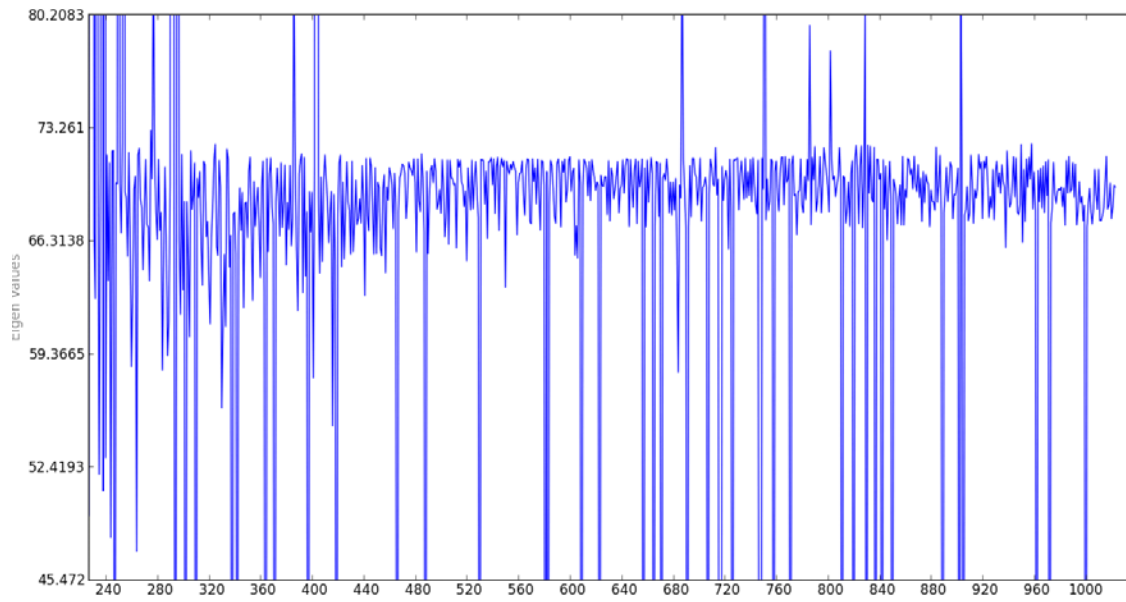


Figure 6: Channel 1 keystone. Horizontal axis is spectral channels and vertical axis is spatial.

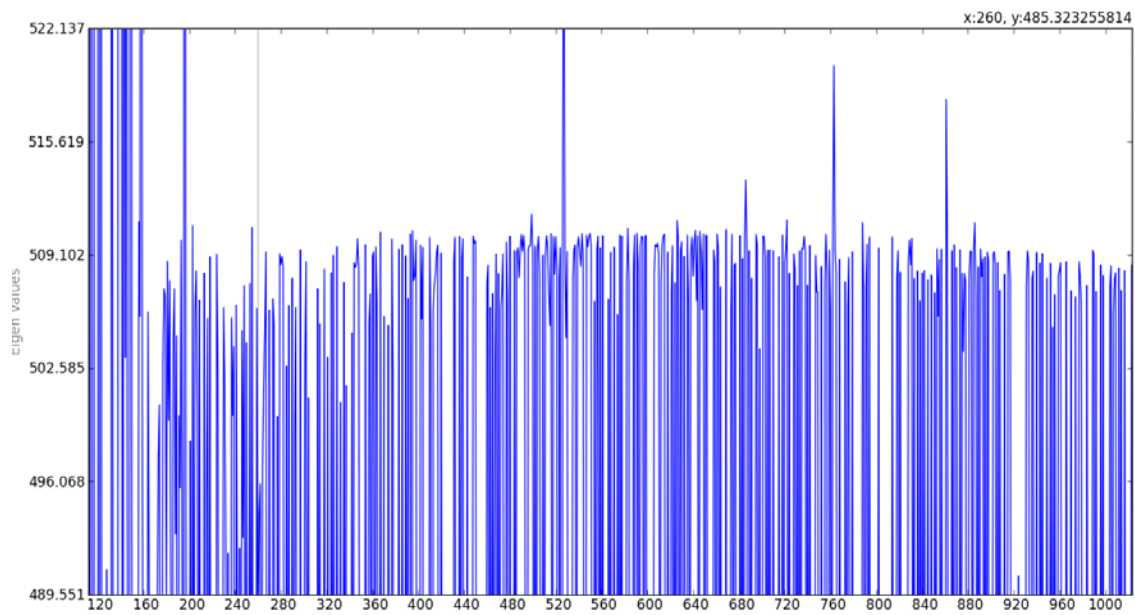


Figure 7: Channel 7 tilt

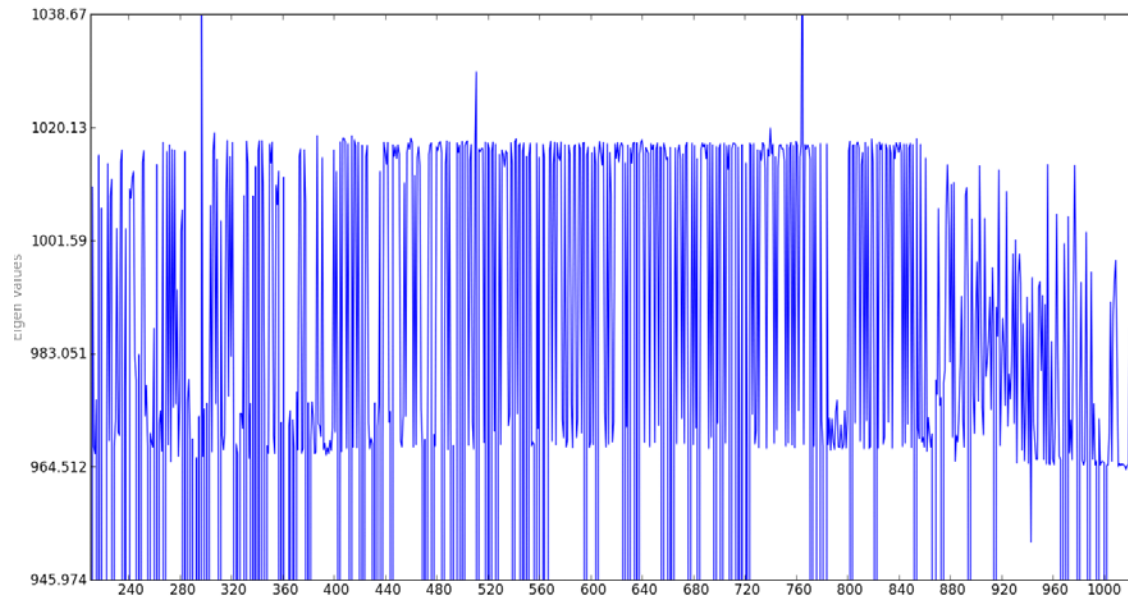


Figure 8: Channel 14 keystone.

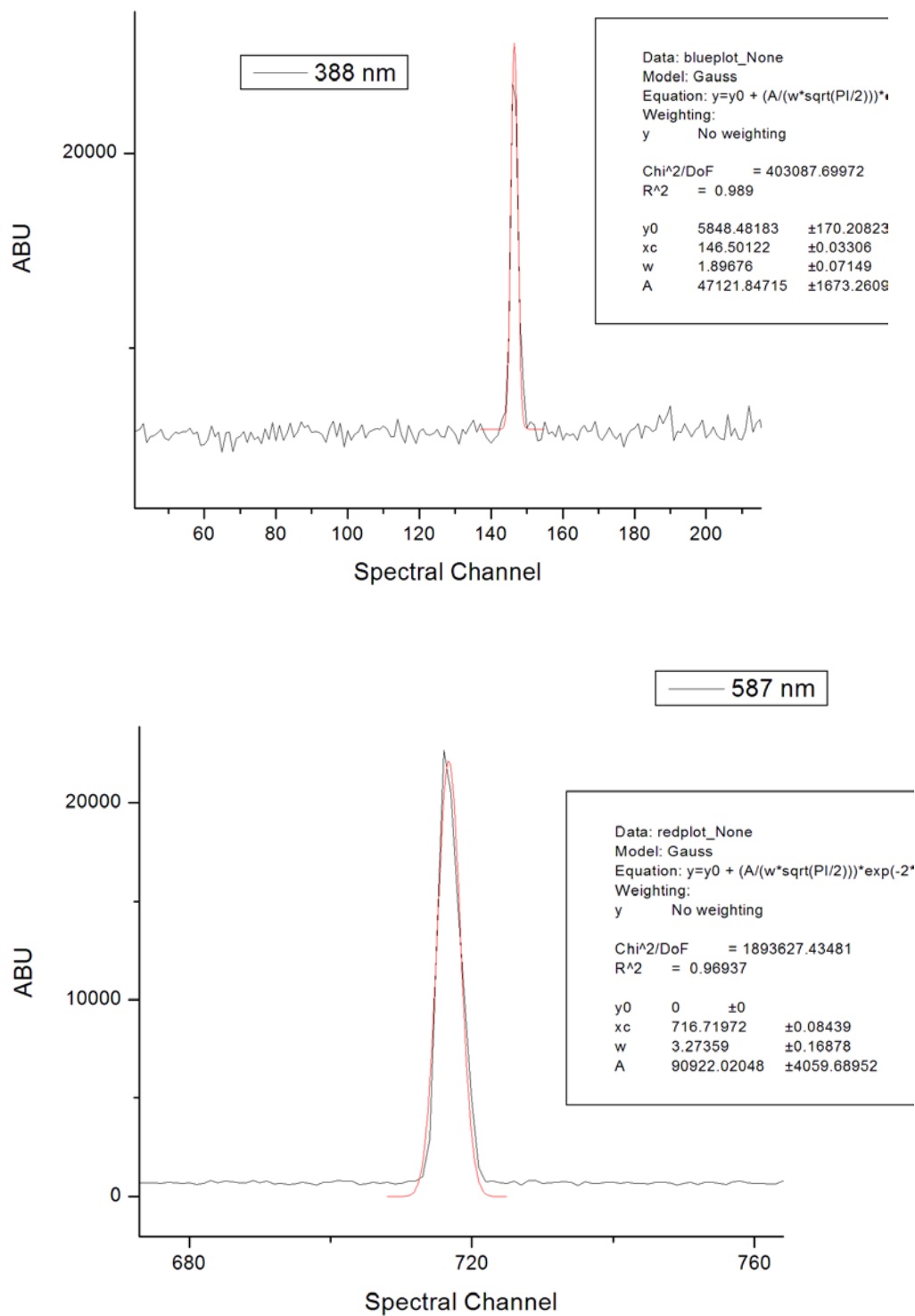


Figure 9: Spectral widths vs. spatial position

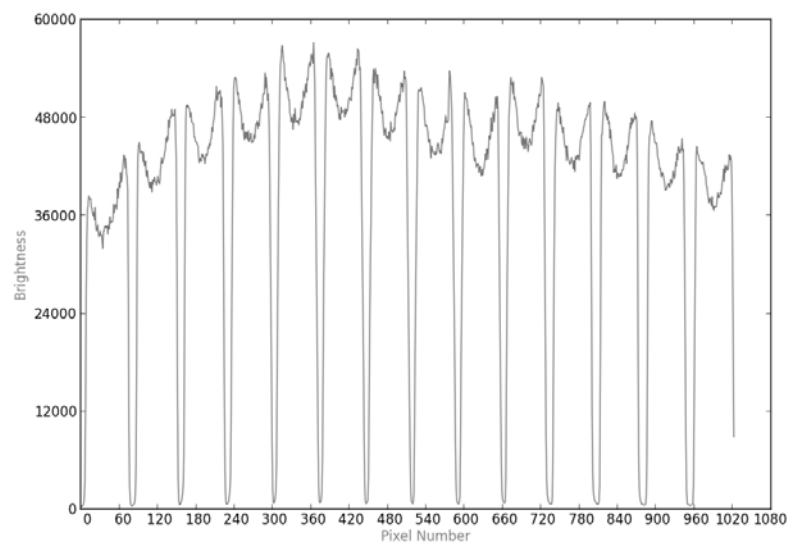


Figure 10: Cross section of fibers.

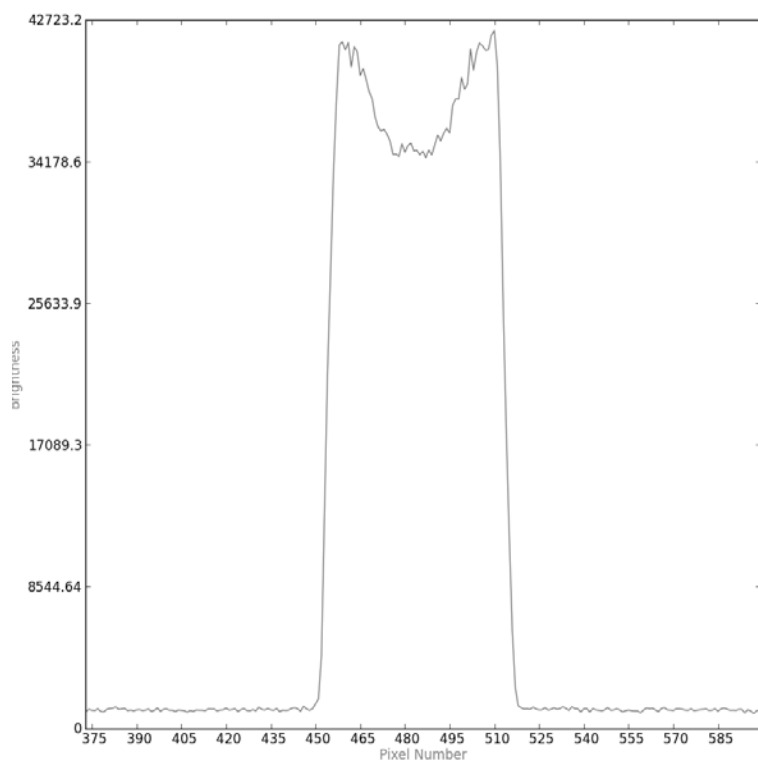


Figure 4: Cross section of channel 7.

Table 2: Results of shaker test before and after a four hour “shake” on the shaker table.						
	Pre Shake Pixel Position	Pre Shake FWHM	Post Shake Pixel Position	Post Shake FWHM	Change in Position	Change in FWHM
387 nm	146.3	1.0	146.4	1.0	0.1	0.0
587 nm	716.8	1.1	717.0	1.0	0.1	0.1