

Resonon Test Report – Wedge Window Realign

Identification Data	
Date	September, 2019
Resonon SN	100114-1
Instrument Name	BS01
Andor Camera SN	CCD-17878

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. 2b.	
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.	

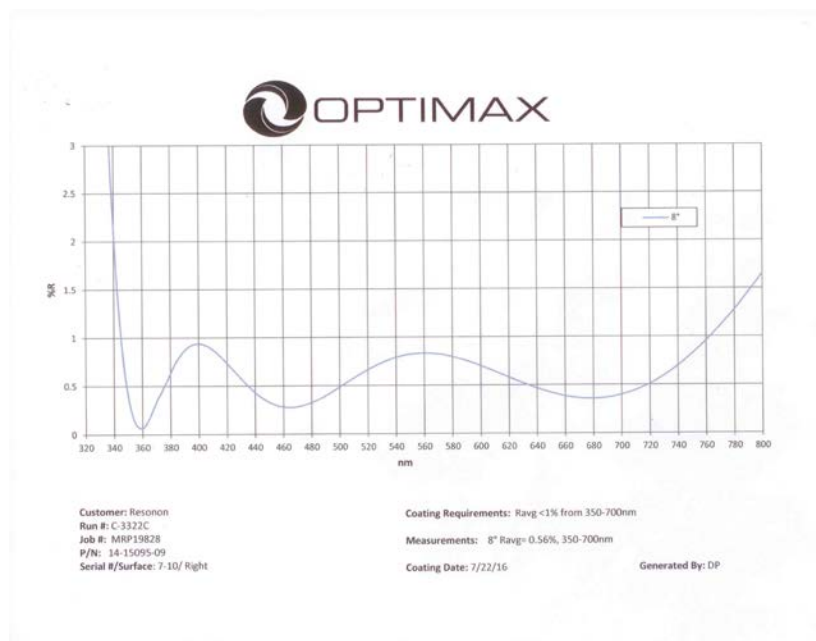


Figure 1a: AR coating on front face of 1st prism

Figure 2b: Bandpass filter on rear tilted substrate

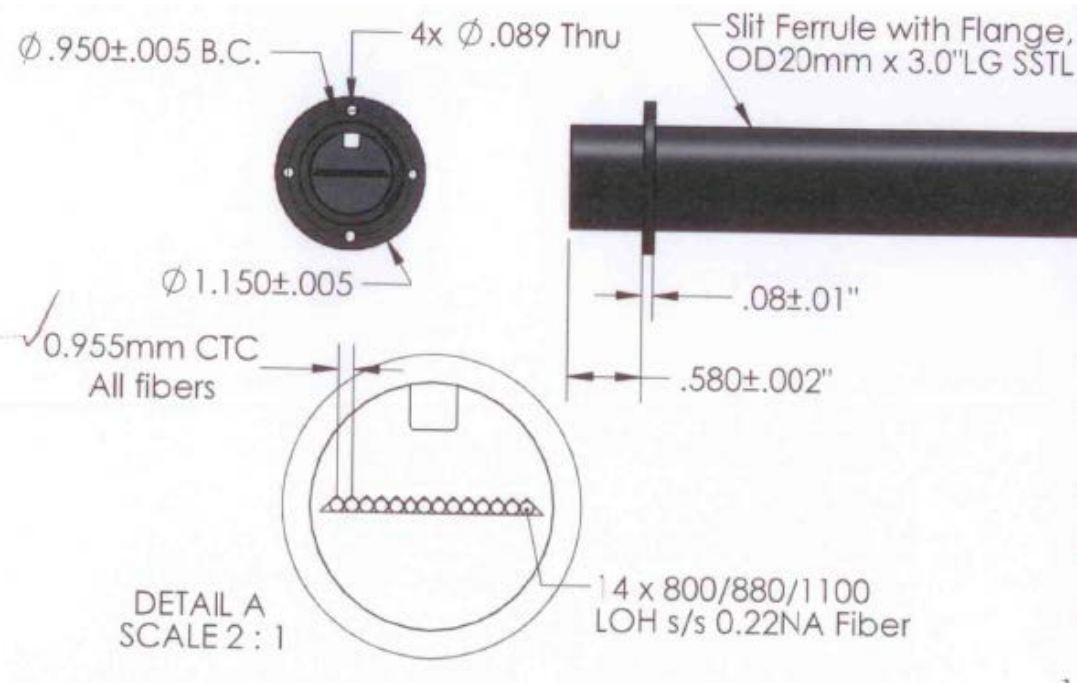


Figure 3: Leoni Fiber details

Test Summary	
Smile (Peak to Trough)	
@ 387 nm	< 1 pixel
@ 587 nm	0.2 pixel
Keystone (Peak to Trough)	
Channel 1	1.5 pixels
Channel 7	1.5 pixels
Channel 14	2 pixels

Spectral Resolution (FWHM)	
@ 587 nm	< 0.9 nm, See Figure 9
@ 387 nm	< 1.6 nm, See Figure 9

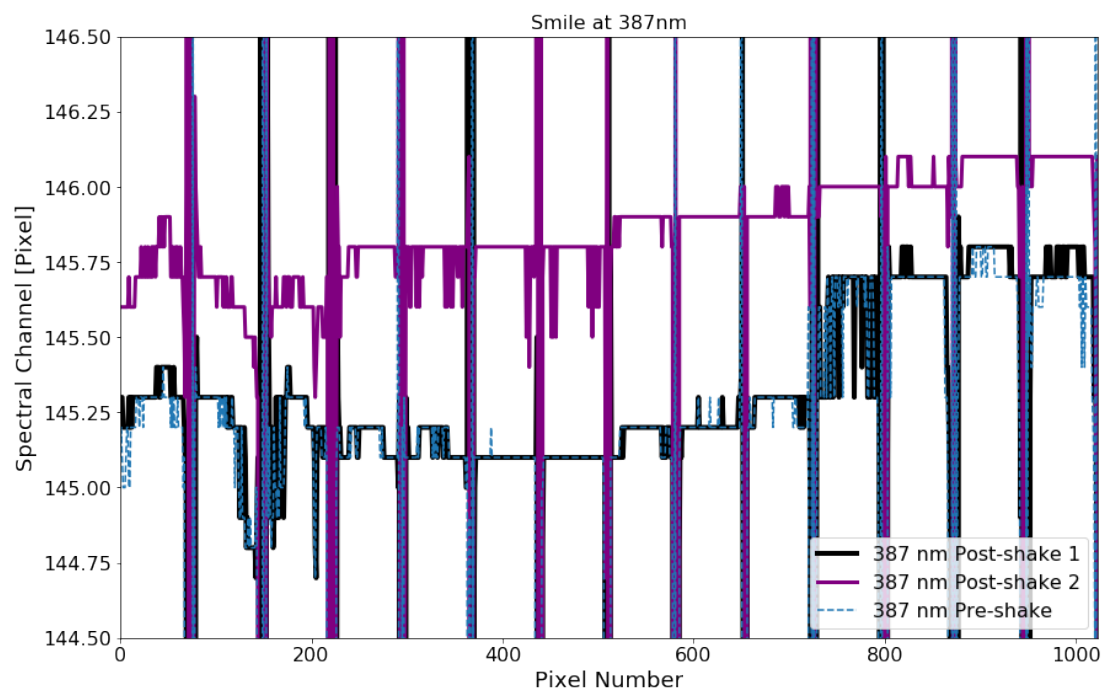


Figure 4: Smile at 387 nm. Horizontal axis is spatial channels and vertical axis is spectral.

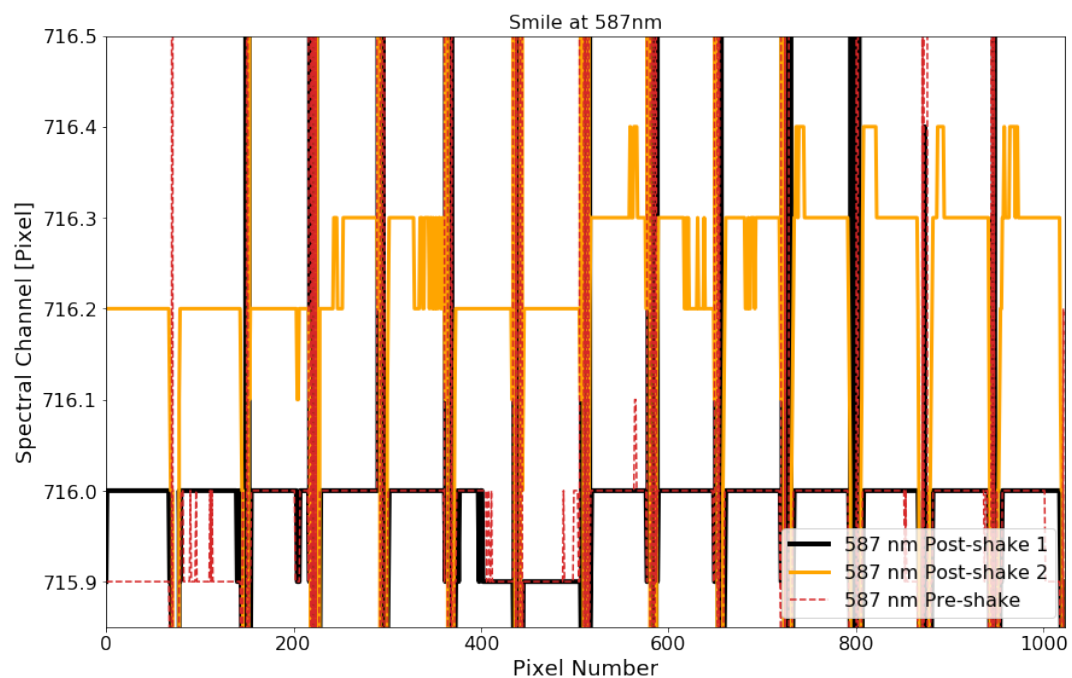


Figure 5: Smile at 587 nm.

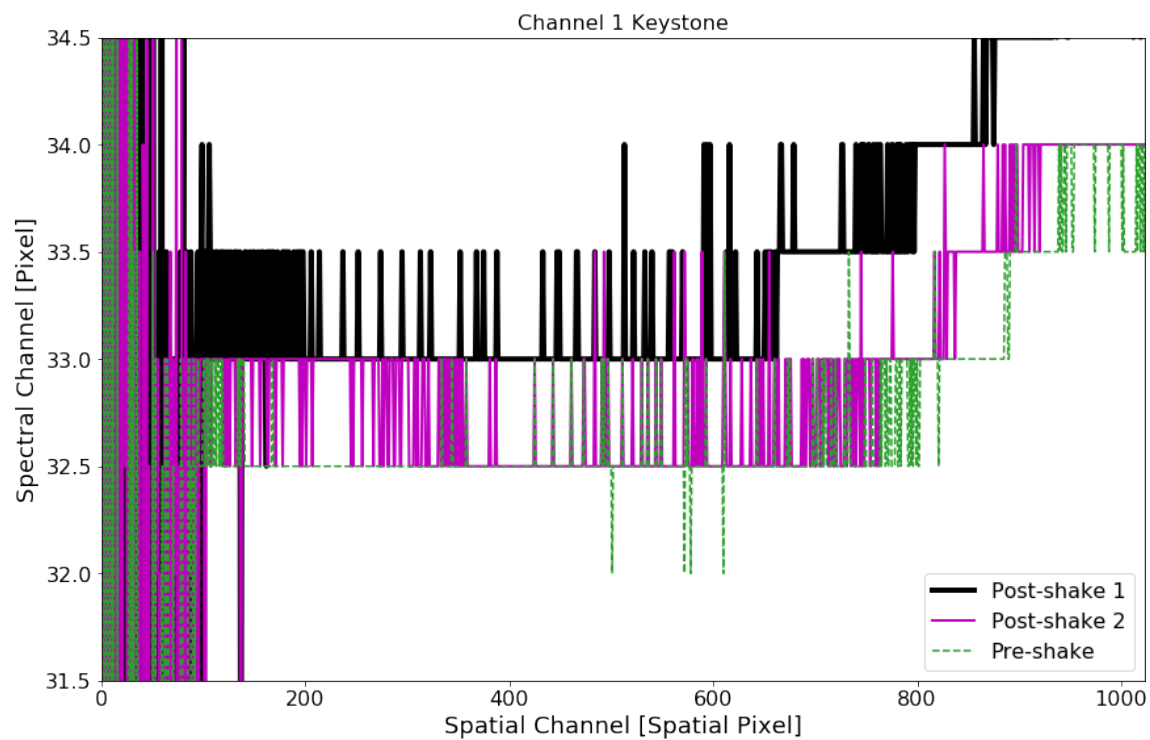


Figure 6: Channel 1 keystone. Horizontal axis is spectral channels and vertical axis is spatial.

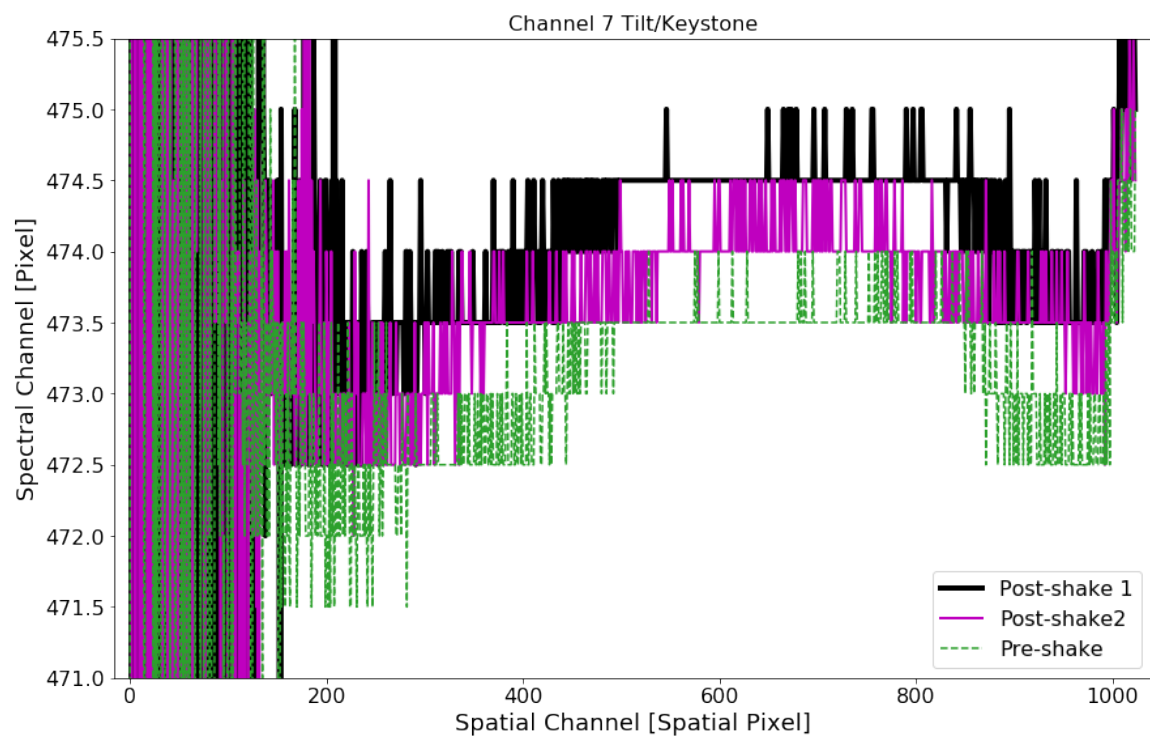


Figure 7: Channel 7 tilt/keystone

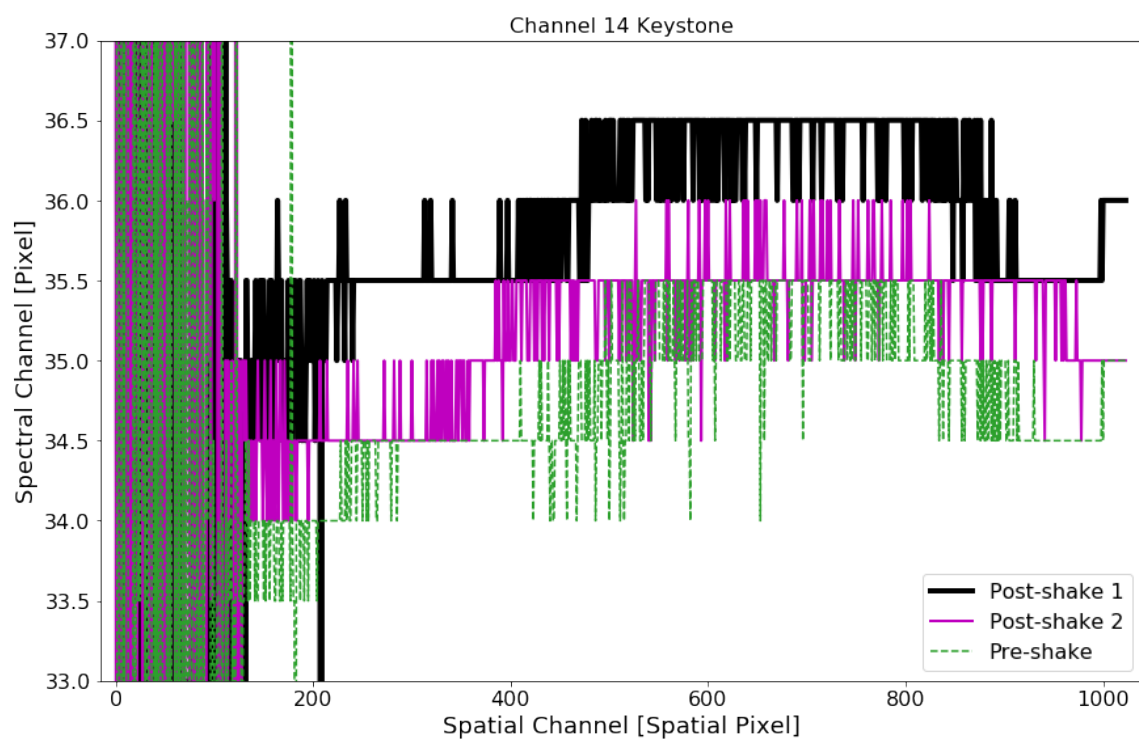


Figure 8: Channel 14 keystone.

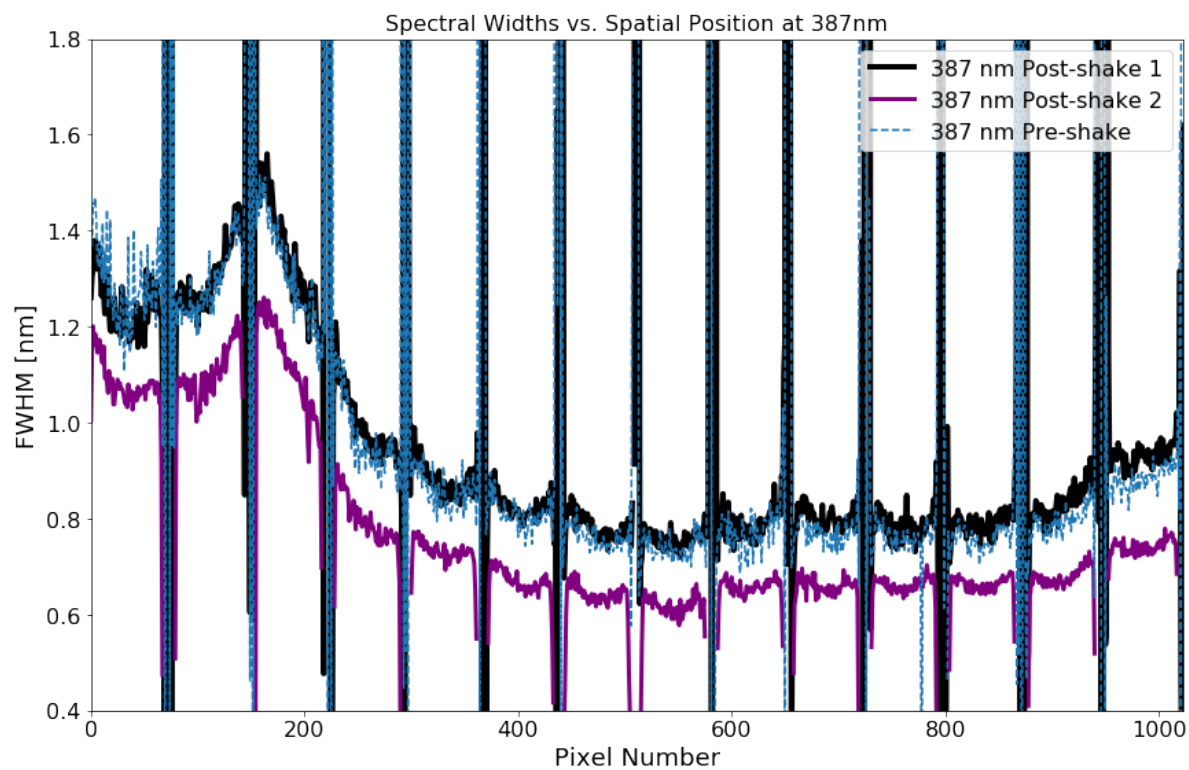


Figure 9a: Spectral width vs. spatial position at 387nm

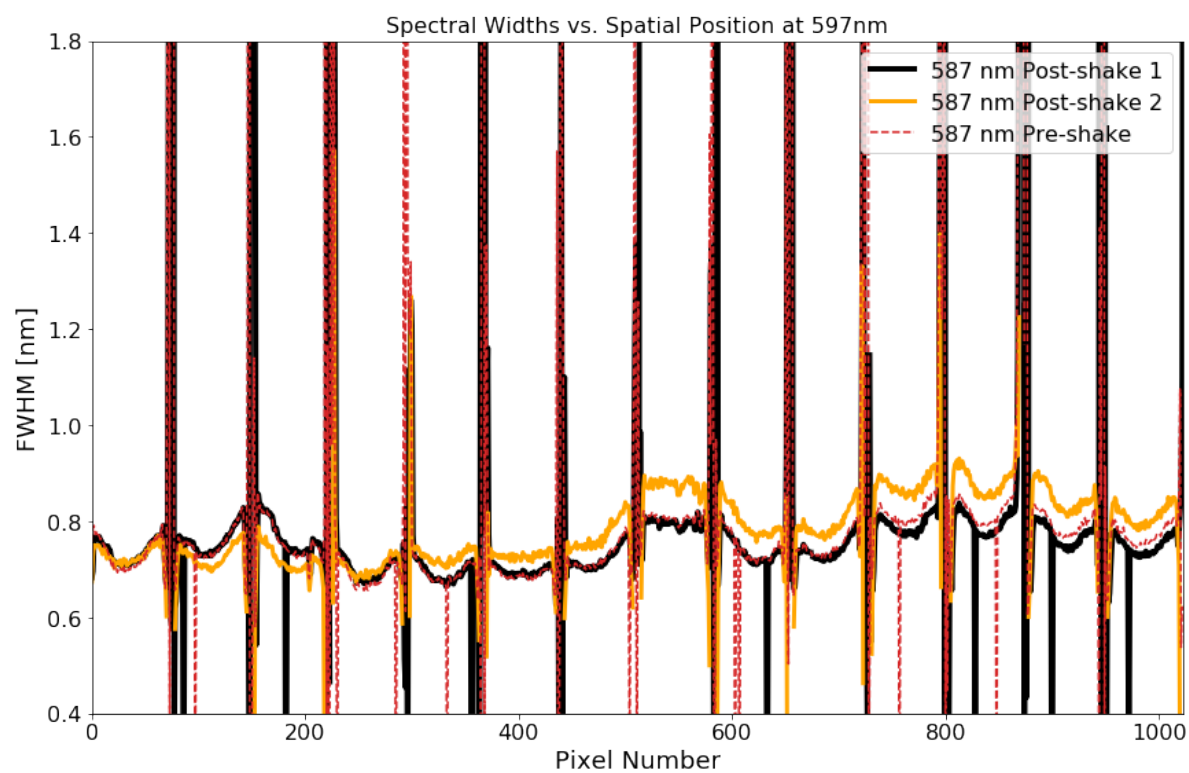


Figure 10b: Spectral width vs. spatial position at 587nm

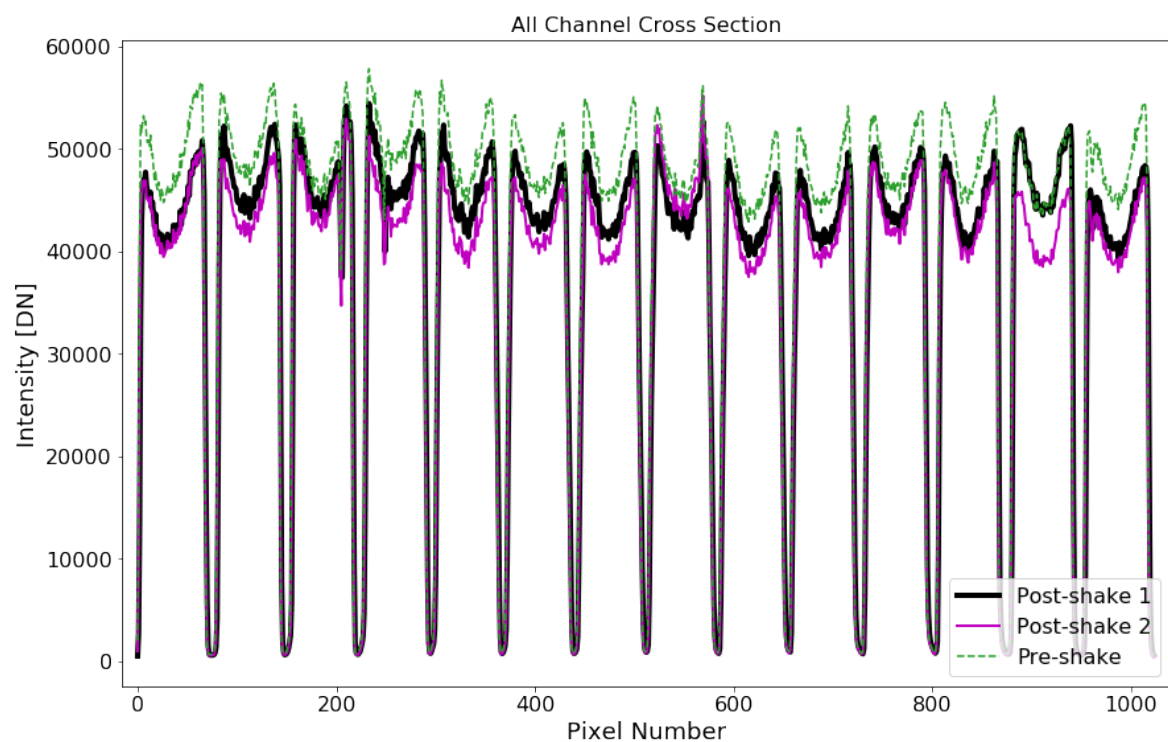


Figure 11: Cross section of fibers.

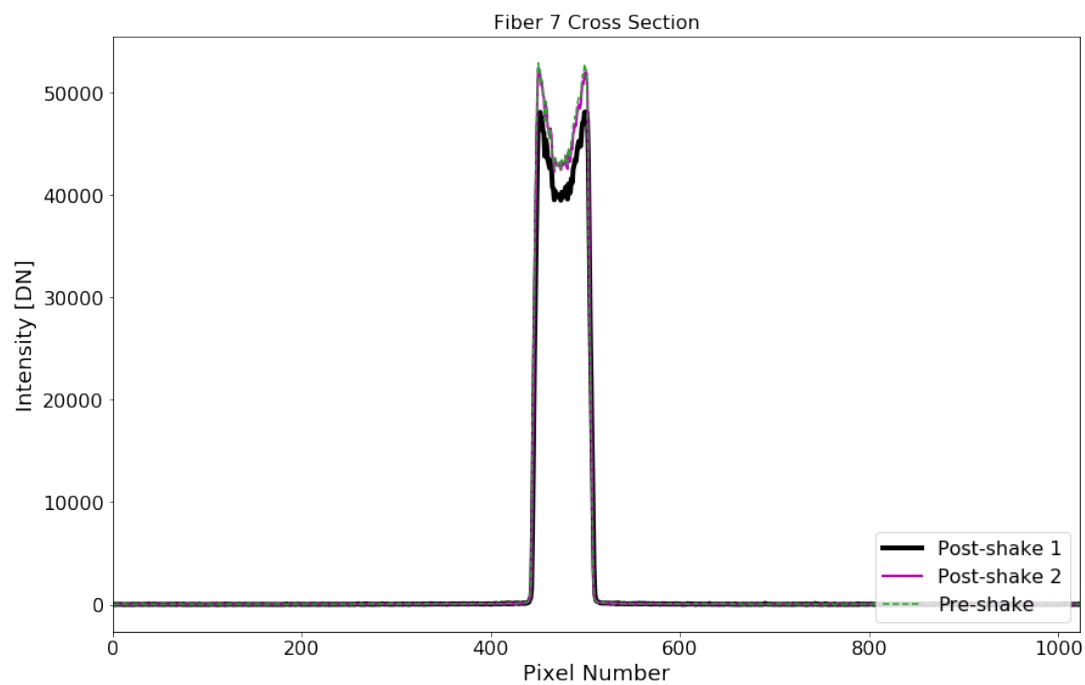


Figure 12: Cross section of channel 7.

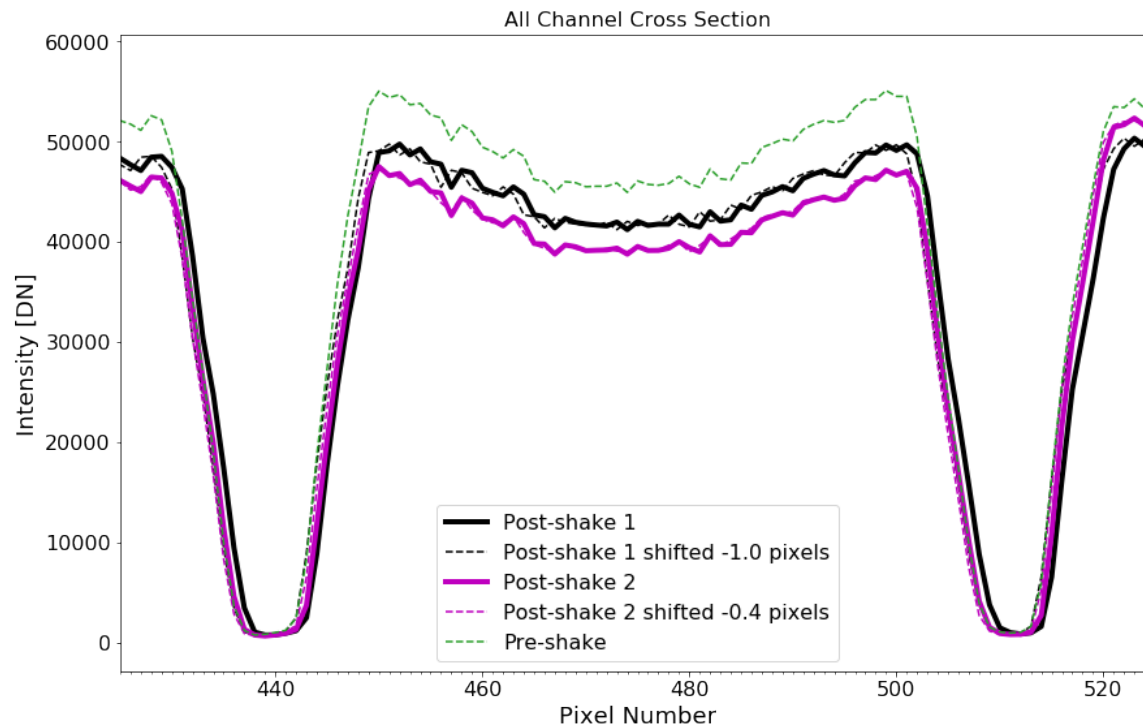


Figure 12: Cross section of fibers, spatial pixels 425-525.

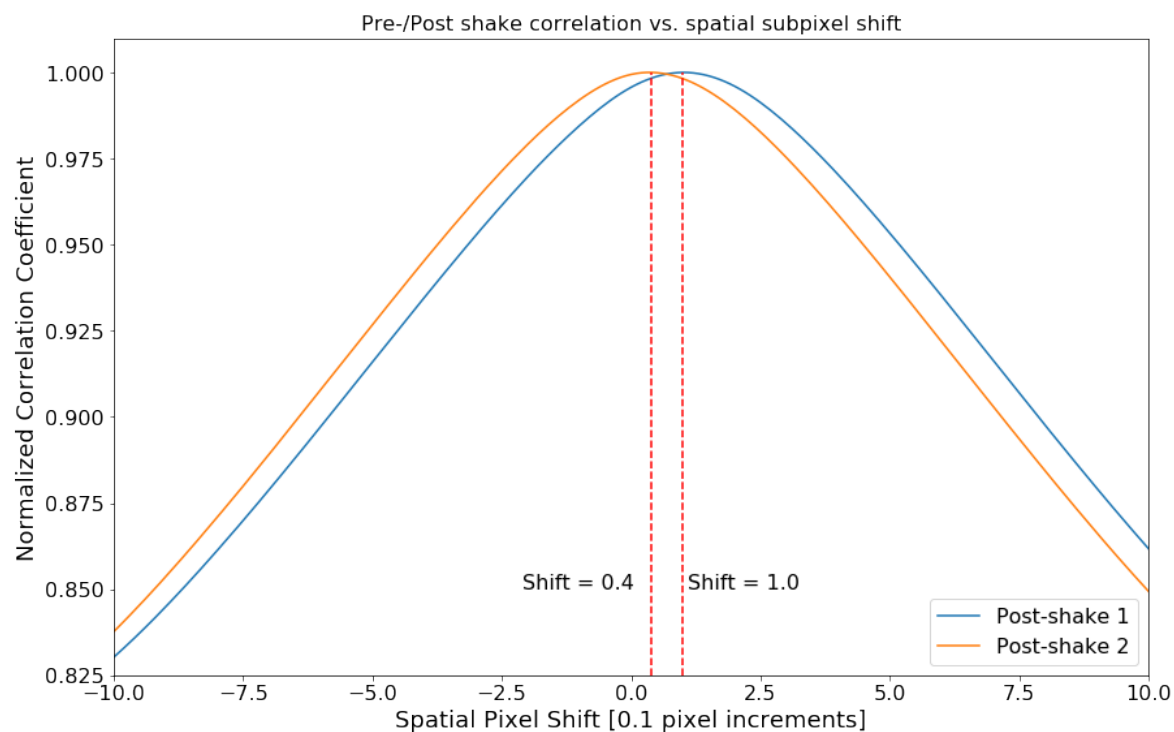


Figure 13: Sub-pixel correlation of post-shake all channel cross section to pre-shake all channel cross section showing.

