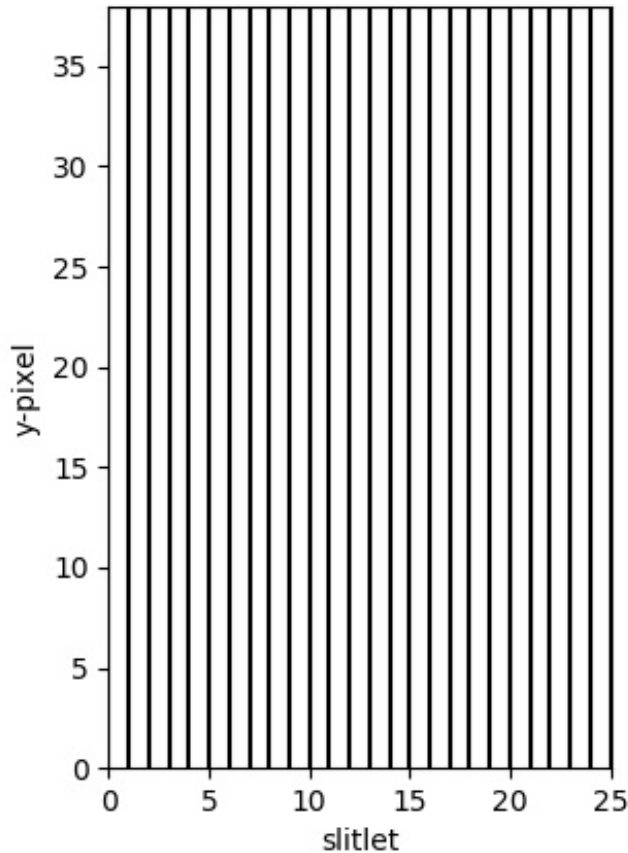
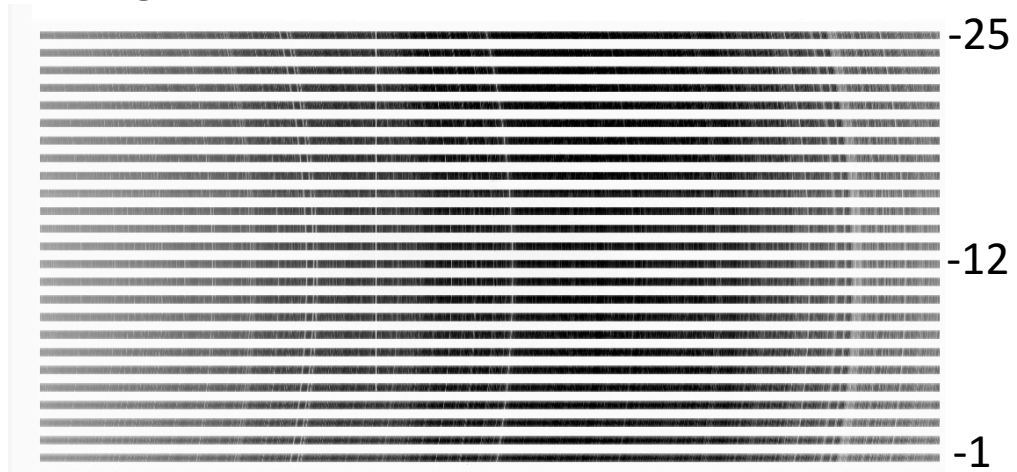


25 slitlets on sky, each is 38" long = 38 CCD pixels

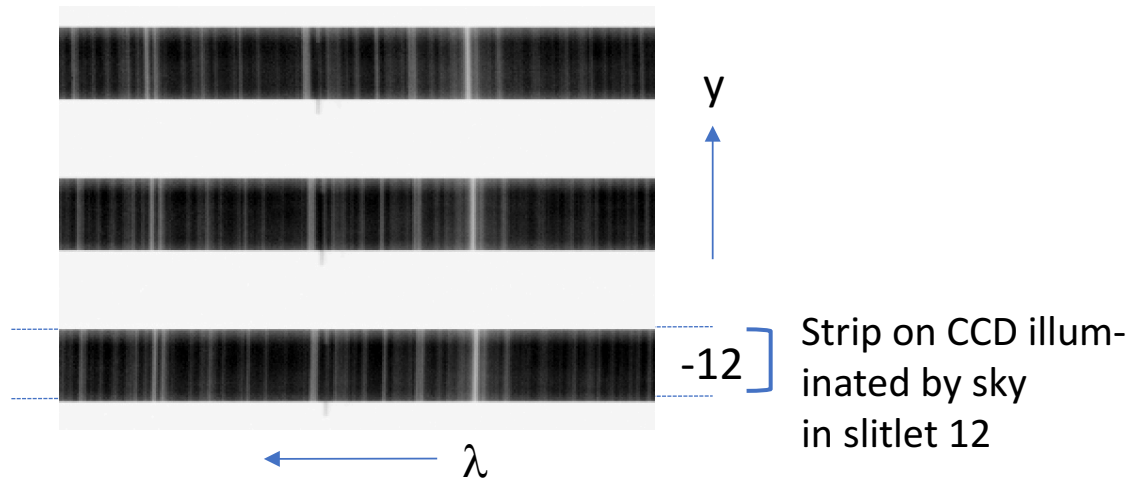


TWILIGHT FLAT

Image of slitlets on the CCD

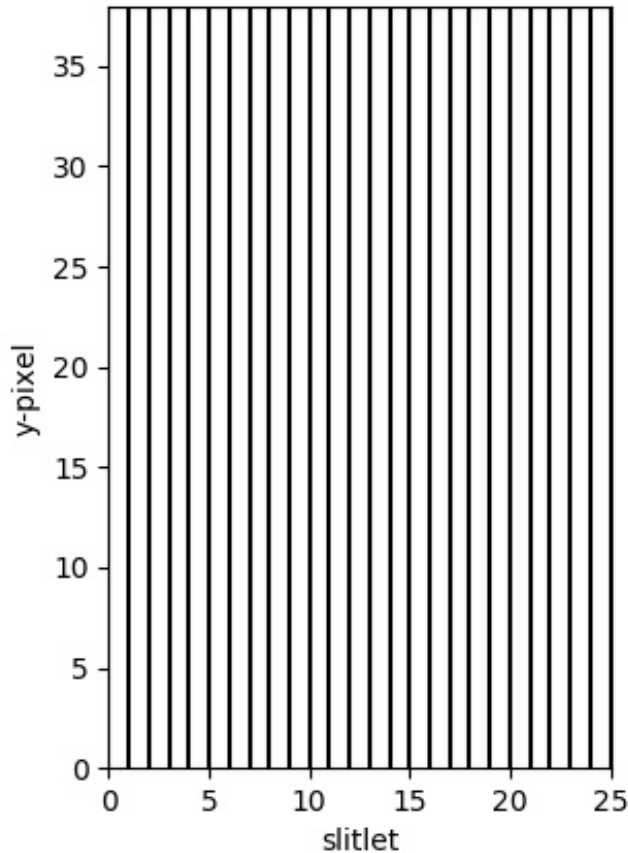


Twilight sky flatfield illuminates all slitlets. The y direction on the CCD is 1) the y direction on the sky within each slitlet, and 2) the x direction on the sky from one slitlet to the next.



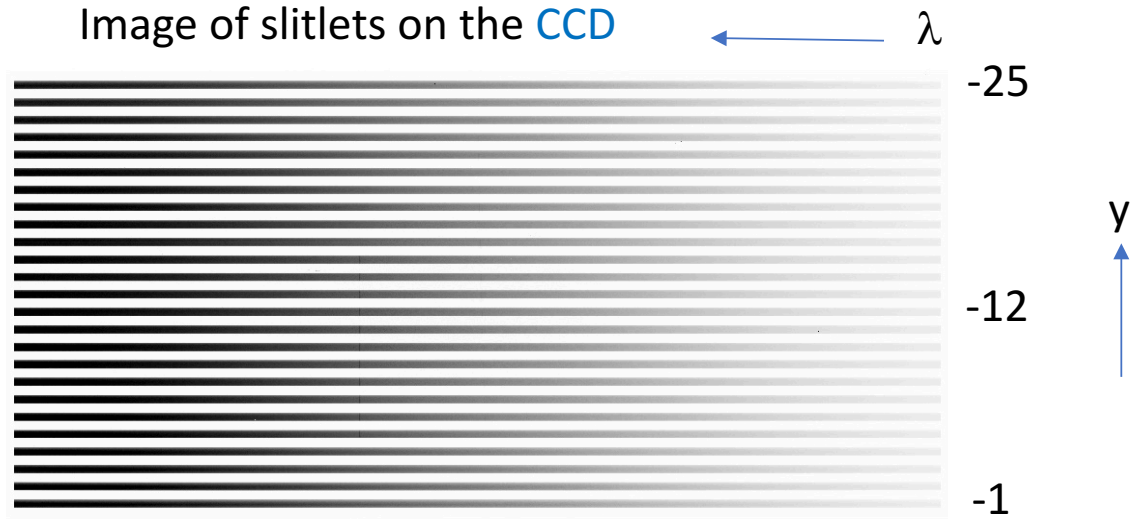
Magnified section of top image

25 slitlets on sky, each is 38" long = 38 CCD pixels

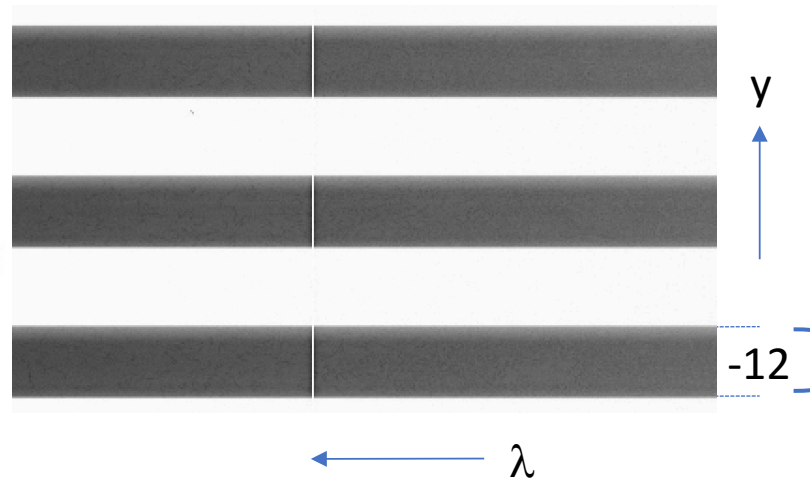


QI FLAT

Image of slitlets on the CCD



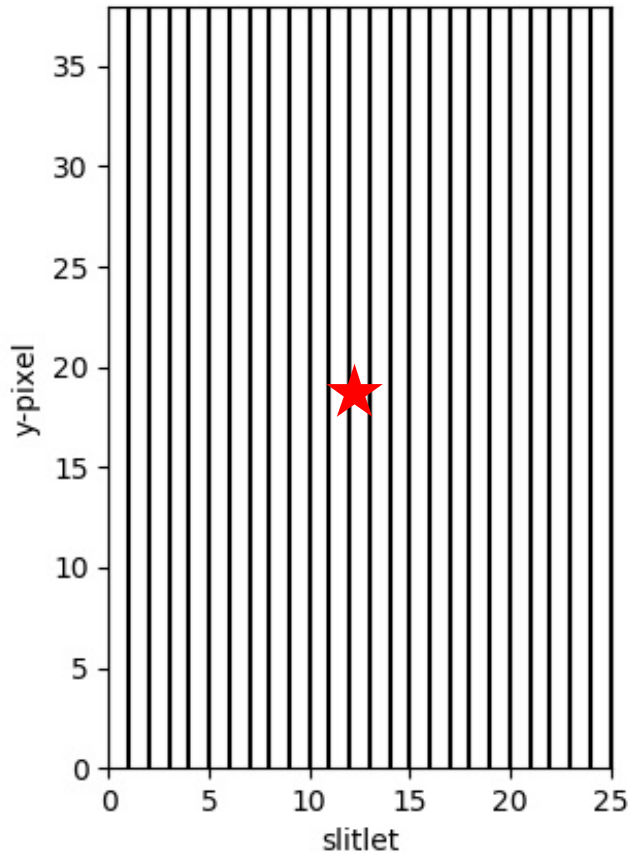
Quartz lamp flatfield: again illuminates all slitlets but the illumination is not uniform. Use only to remove pixel-to-pixel fluctuations in CCD response. Use sky flat to remove response variations along slit.



Strip on CCD illuminated by flat field in slitlet 12

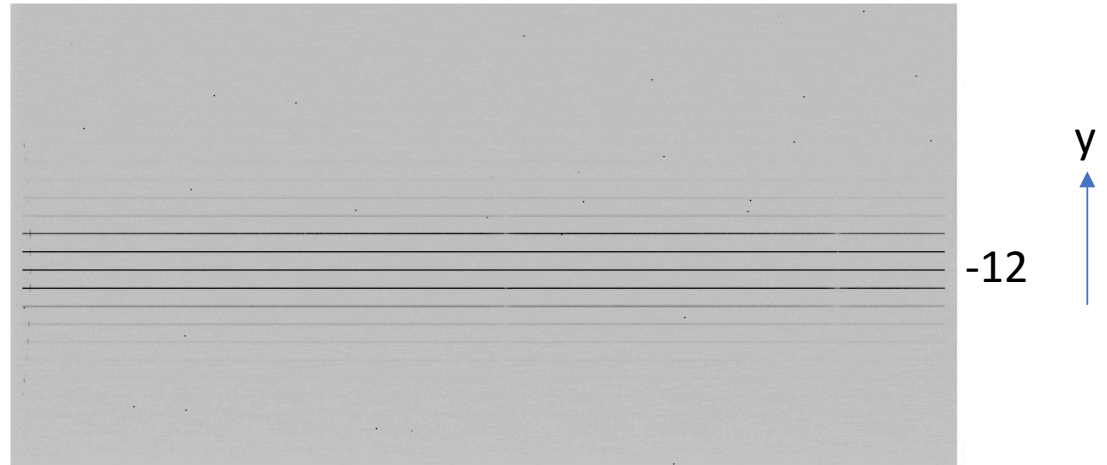
Magnified section of top image

25 slitlets on sky, each is 38" long = 38 CCD pixels

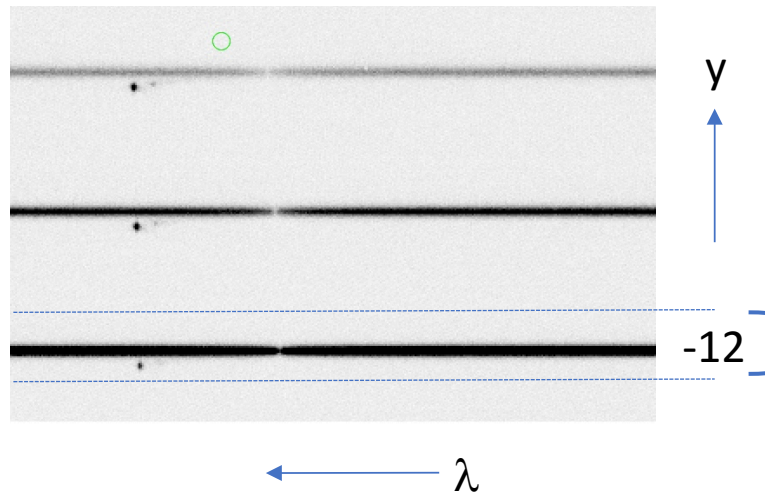


STAR

Image of slitlets on the CCD



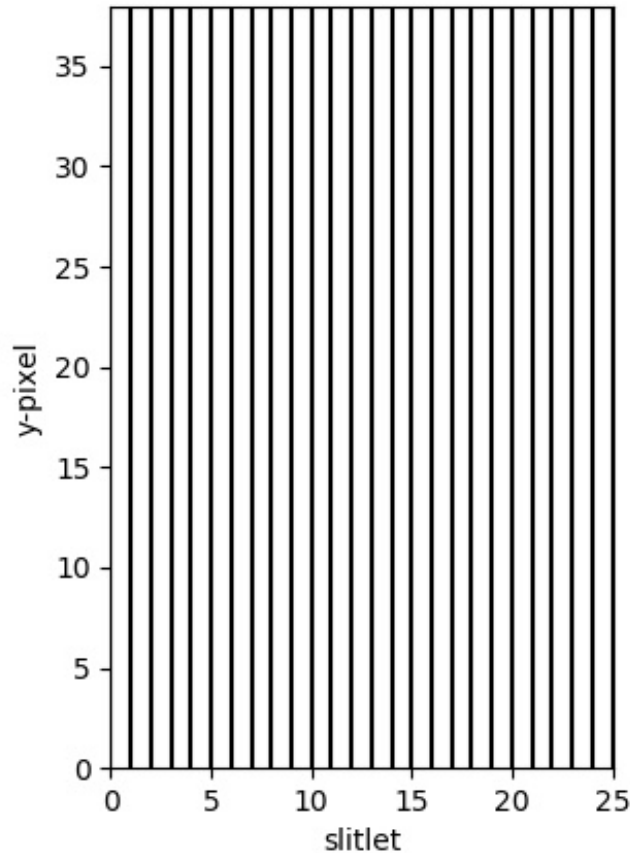
Star centered on slitlet 12, about half way along the slitlet, but illuminates several adjacent slitlets (bad seeing). On the CCD, it then lies about half way along the illuminated area in y for slitlet 12 on the CCD, but also appears in slitlets 8 -16.



Strip on CCD illuminated by sky and star in slitlet 12

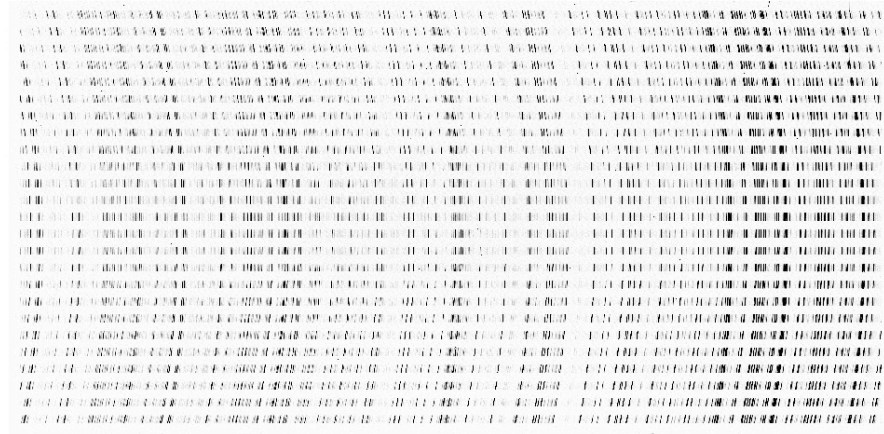
Magnified section of above image

25 slitlets on sky, each is 38" long = 38 CCD pixels

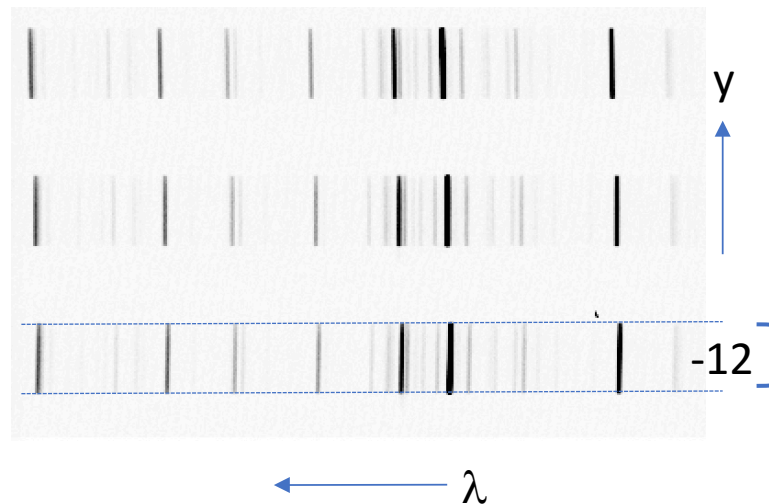


ARC

Image of slitlets on the CCD

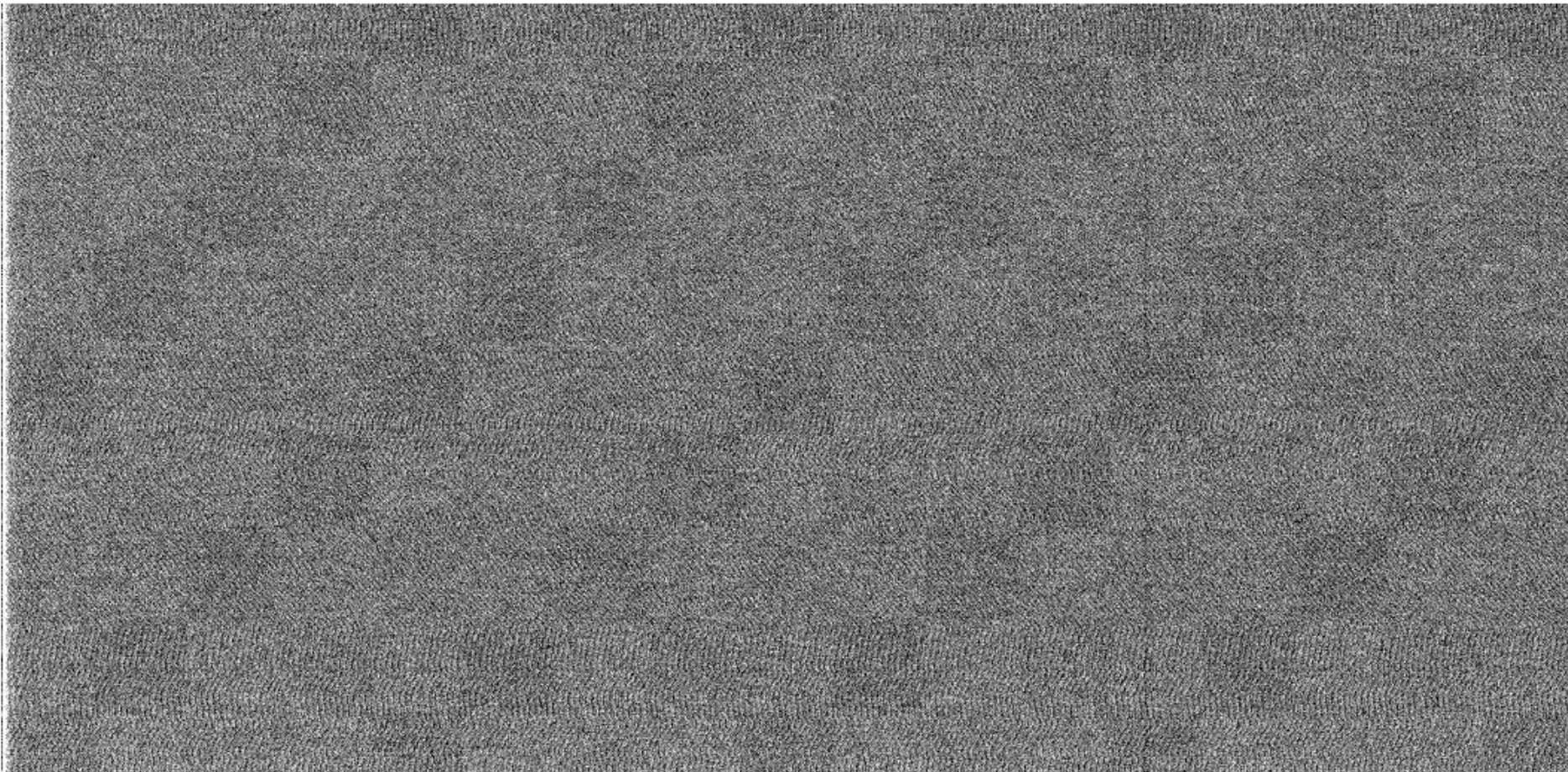


Arc illuminates all slitlets. Note the slit curvature. Must be precisely corrected.



Strip on CCD illuminated by sky and star in slitlet 12

Magnified section of above image



CCD bias image. The bias is an offset in the electronic. The bias exposure has no light, no slitlets, just the CCD. Bias level should be \sim constant (offset + readout noise) , but shows some systemic change in x,y over the CCD. WiFeS bias is set quite high, around 3700 adu.

BIAS