Gemini Integration Time Calculator
Flamingos2 - 2021A.1.1.1

[Click here for help with the results page.](#)
derived image size (FWHM) for a point source = 0.77 arcsec.

software aperture extent along slit = 1.07 arcsec
fraction of source flux in aperture = 0.66

Requested total integration time = 36000.00 secs, of which 36000.00 secs is on source.

The peak pixel signal + background is 177233 e- (39917 ADU). This is 114% of the full well depth of 155400 e-.
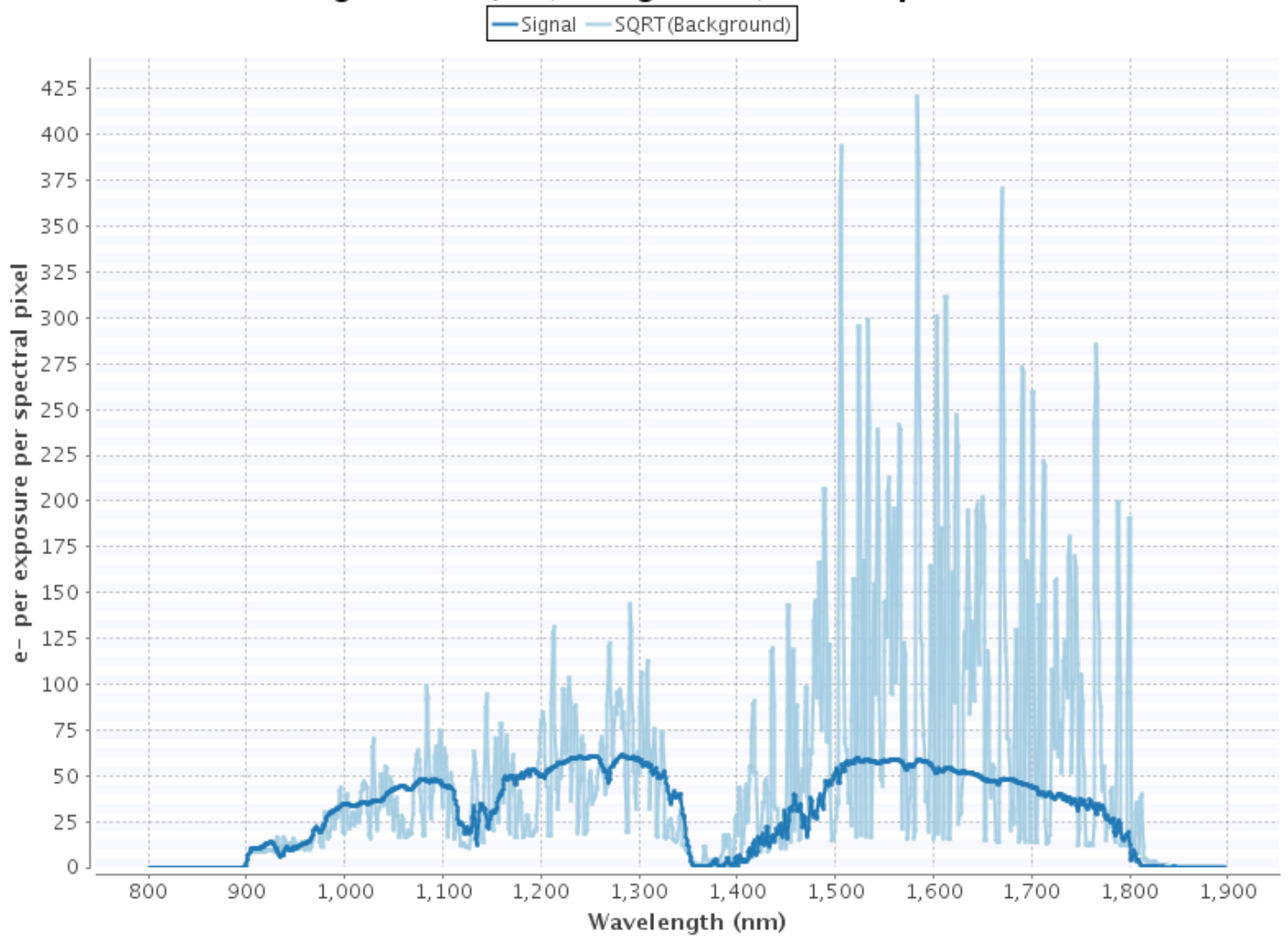Warning: Peak pixel count is 181% of the linearity limit of 97680 e-.
Warning: Peak pixel count is 114% of the well depth limit of 155400 e-.

Observation Overheads

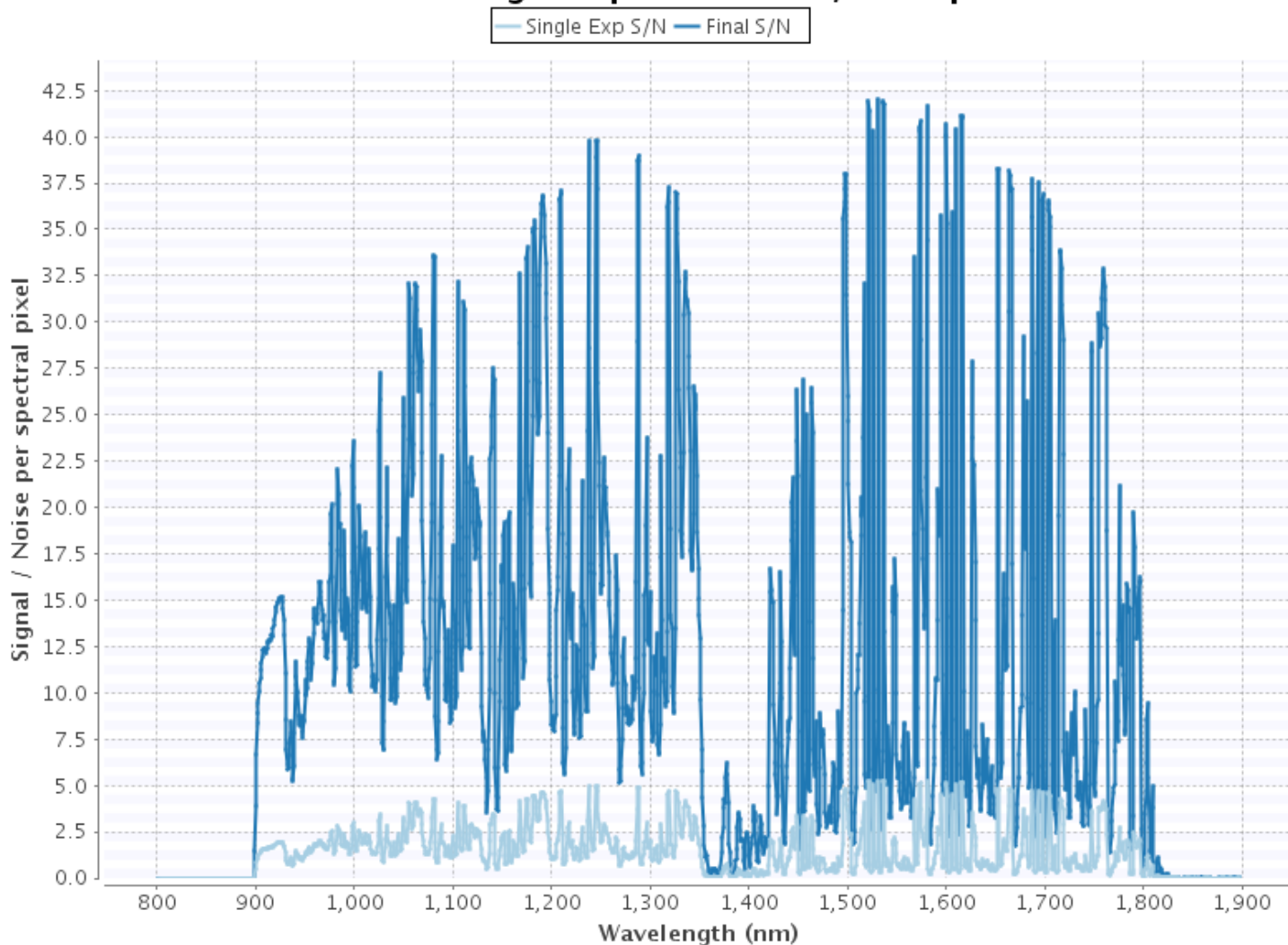|		
Setup	6 acq x 1200.0 s	
Telescope offset	60 x 7.1 s	assuming ABBA dithering pattern
Exposure	120 x 300.0 s	
Readout	120 x 20.0 s	
DHS Write	120 x 7.0 s	
Program time	**13 hours 1 min 4 secs**	

Signal & SQRT(Background) in one pixel

[Click here for ASCII signal spectrum.](#)
[Click here for ASCII background spectrum.](#)

Intermediate Single Exp and Final S/N in aperture

[Click here for Single Exposure S/N ASCII data.](#)
[Click here for Final S/N ASCII data.](#)

Input Parameters:
Instrument: Flamingos 2

Source spatial profile, brightness, and spectral distribution:
The $z = 0.00000$ point source is a power-law with an index of -1.0, and 1.0E-5 Jy in the J band.

Instrument configuration:
Optical Components:
- Filter: JH
- Fixed Optics
- Detector - 2048x2048 Hawaii-II (HgCdTe)
- Grism Optics: R1200JH
- Read Noise: lowNoise
- Focal Plane Mask: 4 pix slit

Pixel Size: 0.18

Telescope configuration:
- silver mirror coating.
- side looking port.

- wavefront sensor: oiwfs

Observing Conditions:
- Image Quality: 70.00%
- Sky Transparency (cloud cover): 50.00%
- Sky transparency (water vapour): 100.00%
- Sky background: 80.00%
- Airmass: 1.50

Likelihood of execution: 28.00%

Calculation and analysis methods:
- Mode: spectroscopy
- Calculation of S/N ratio with 120 exposures of 300.00 secs, and 100.00% of them on source.
- Analysis performed for aperture that gives 'optimum' S/N and a sky aperture that is 1.00 times the target aperture.

Output:
- Spectra autoscaled.