

## 1. Focal length and FOV

### 1.1. Method

Imaging spectrograph was mounted in 2-axis goniometer with pinhole-collimator setup. 50 frames were collected, averaged and dark frame subtracted at 41 tilt angle positions across the slit at each 21 field angle positions. Gaussian function was fitted to the measured data at each field angle to FOV calibration and 5th degree Butterworth function was fitted to the measured tilt data at each field angle for slit bending calibration. Center position was obtained from the fitted data in both directions. Geometrical and slit bending calibrations were calculated using 4th and 4th degree polynomial fits to the center positions respectively.

### 1.2. General Information

PARAMETER	VALUE
Measured by	KKE
File date	02-Dec-2020
Report date	02-Dec-2020
Sensor type	aisaFenix1K
Sensor serial no	360009
Objective sno	F1020-24
Objective type	OLEFenix1K
Project	NERC
Measurement phase	Delivery

### 1.3. Measurement result

PARAMETER	RESULT
Measured FOV total [deg]	39.82
Measured FOV [deg]	19.82, -20.00
Paraxial FOV [deg]	18.13, -18.22
Sensor IFOV [deg]	0.039
Sensor IFOV [mrad]	0.679
Lens focal length [mm]	37.398
Optical axis pos [pix]	511.1
Max distortion [mm]	3.5706
Max distortion [deg]	1.7771
Max distortion [%]	8.887
Collimator slit width [ $\mu\text{m}$ ]	3.740
Pixel size at slit [ $\mu\text{m}$ ]	24

### 1.4. Graphs

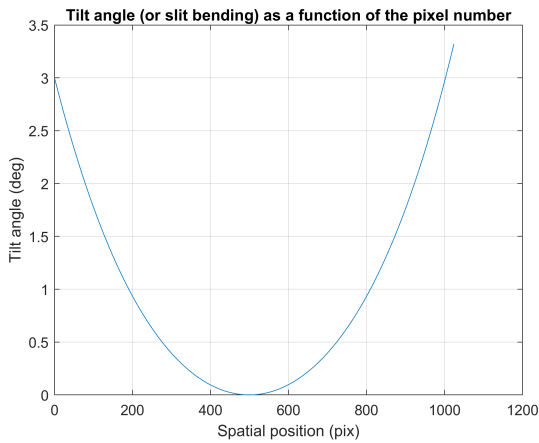


Figure 1.  
Slit bending.

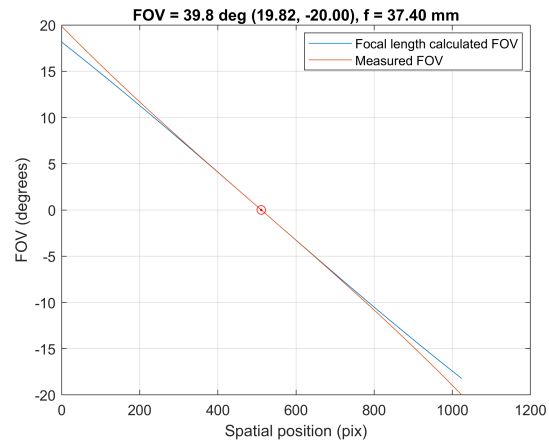


Figure 2.  
Focal length with FOV.