

EMVA 1288 Datasheet

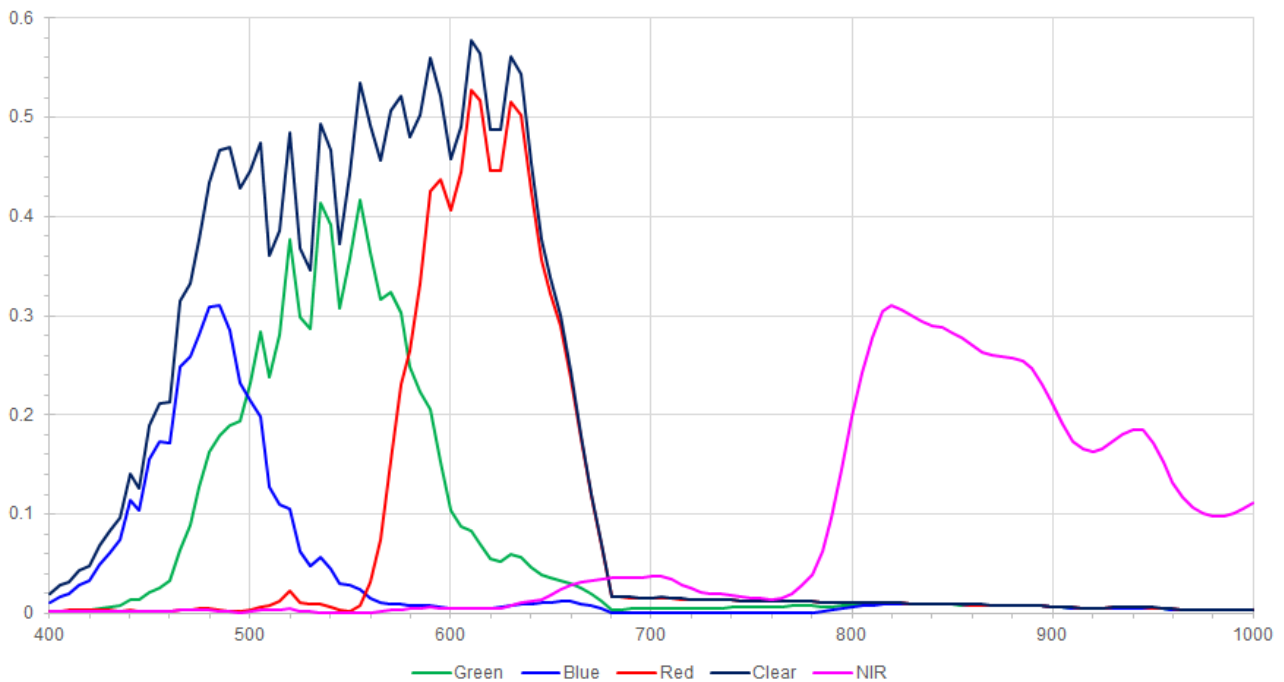
This datasheet describes the specification according to the standard 1288 Standard for Characterization and Presentation of Specification Data for Image Sensors and Cameras of European Machine Vision Association (EMVA) (See www.standard1288.org).

<i>Vendor</i>	Photolitics	<i>Dark current compensation</i>	no compensation
<i>Model</i>	LS2G-6k-LS2G-6k-UIR-0140-Row-20-red-filter	<i>Interface type</i>	PH dev board/Camera Link
<i>Data type</i>	-	<i>Light source</i>	PH Dome (RED Cree channel) 625 nm
<i>Sensor type</i>	LS2G-6k-UIR-0140	<i>Light source non uniformity</i>	-
<i>Diagonal</i>	-	<i>Irradiation calibration accuracy</i>	-
<i>Lens category</i>	no lens	<i>Irradiation measurement error</i>	-
<i>Resolution</i>	500 x 1 pixels	<i>Standard version</i>	3.1
<i>Pixel size</i>	49.0 μm^2		
<i>Maximum readout rate</i>	-		

Operation Point: Variable illumination, Constant exposure (Page 2)

Camera setting		<i>Analyzed RoI Y</i>	(0, 1, 1)
<i>Bit depth</i>	12 bits	<i>Analyzed RoI X</i>	(2000, 2500, 1)
Operation point parameters		<i>RoI format - python style</i>	(start, stop+1, step)
<i>Original image Y size</i>	32	<i>Experiment</i>	LS2G-6k-UIR-0140-7u-HCG-DAC-0000-0050-4050-CH-A
<i>Original image X size</i>	6400		

QE LS2G Total QE of color channels



Summary sheet for Operation Point: **Variable illumination, Constant exposure** (@ wavelength)

Camera setting		Analyzed RoI Y	(0, 1, 1)
Bit depth	12 bits	Analyzed RoI X	(2000, 2500, 1)
Operation point parameters		RoI format - python style	(start, stop+1, step)
Original image Y size	32	Experiment	LS2G-6k-UIR-0140-7u-HCG-DAC-0000-0050-4050-CH-A
Original image X size	6400		

Performance

Quantum efficiency

η	57.59 %
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System gain

K	0.365 DN/e ⁻
1/K	2.737 e ⁻ /DN

Temporal dark noise

σ_d	4.593 e ⁻
$\sigma_{y.dark}$	1.703 DN

Signal-to-Noise Ratio

SNR_{max}	98
	39.79 dB
	6.6 bit
SNR_{max}^{-1}	1.025 %

Absolute sensitivity threshold

$\mu_{p.min}$	8.960 p
$\mu_{p.min.area}$	0.183 p/ μm^2
$\mu_{e.min}$	5.160 e ⁻
$\mu_{e.min.area}$	0.105 e ⁻ / μm^2

Saturation Capacity p

$\mu_{p.sat}$	16541 p
$\mu_{p.sat.area}$	337.575 p/ μm^2
$\mu_{e.sat}$	9527 e ⁻
$\mu_{e.sat.area}$	194 e ⁻ / μm^2

Dynamic Range

DR	1846
	65.3 dB
	10.9 bit

Spatial Nonuniformities

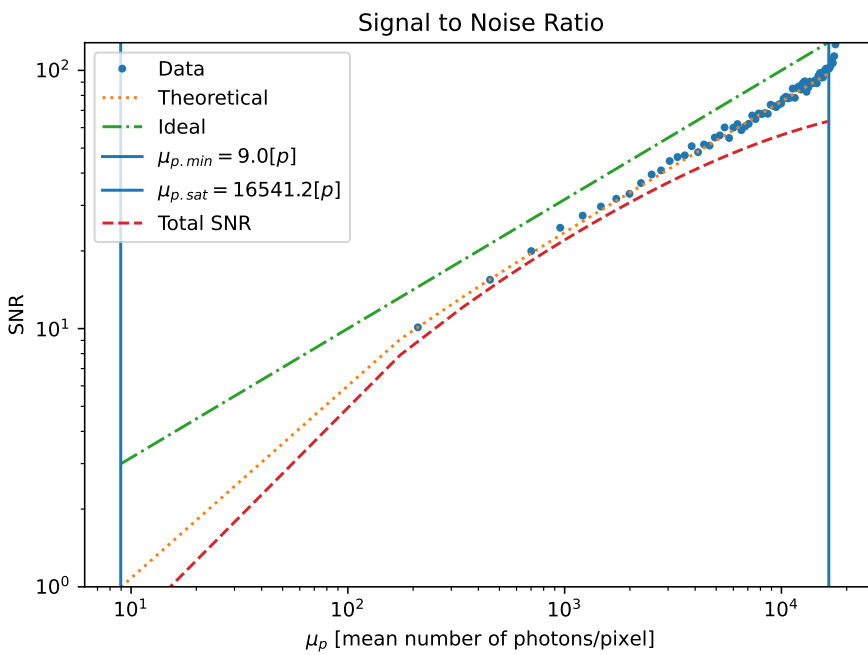
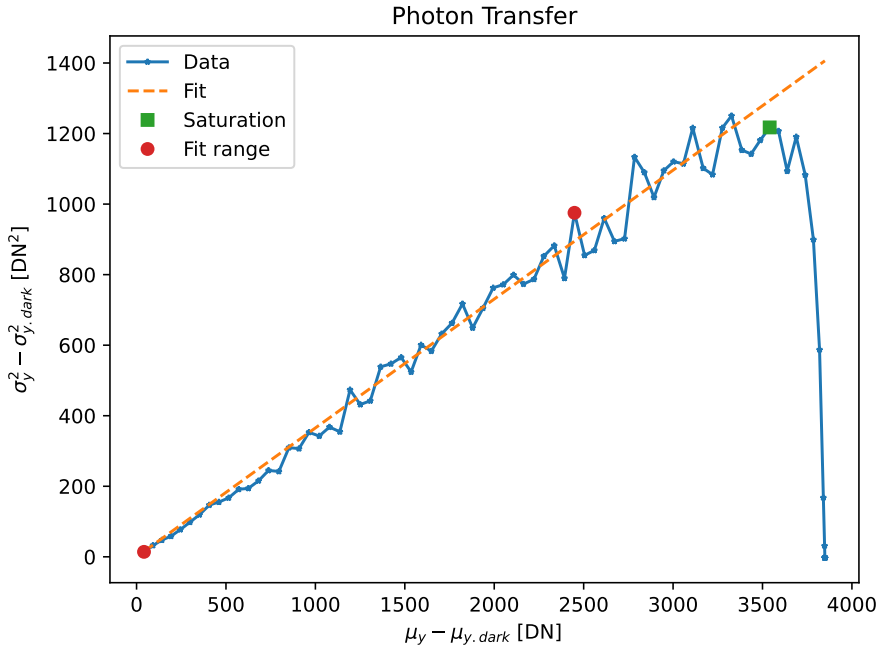
$DSNU_{1288}$	6.2 e ⁻
	2.3 DN
$PRNU_{1288}$	1.2 %

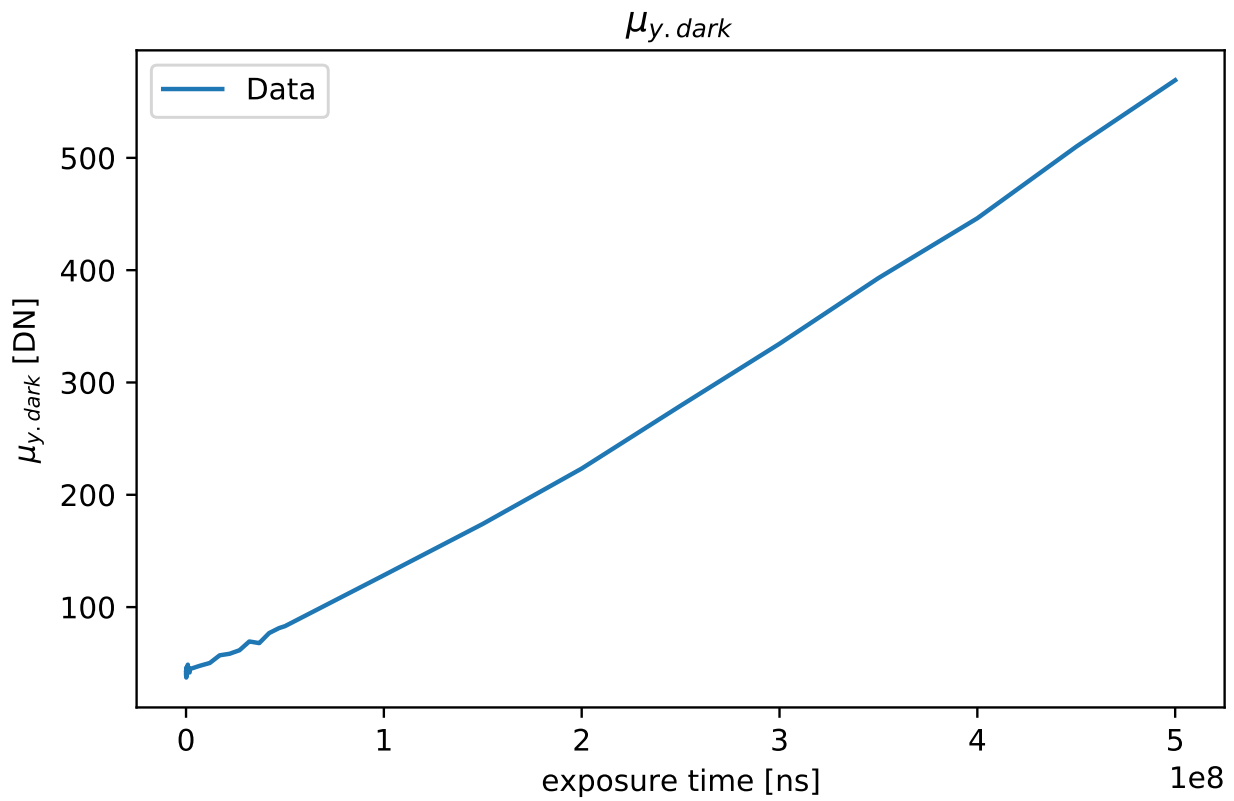
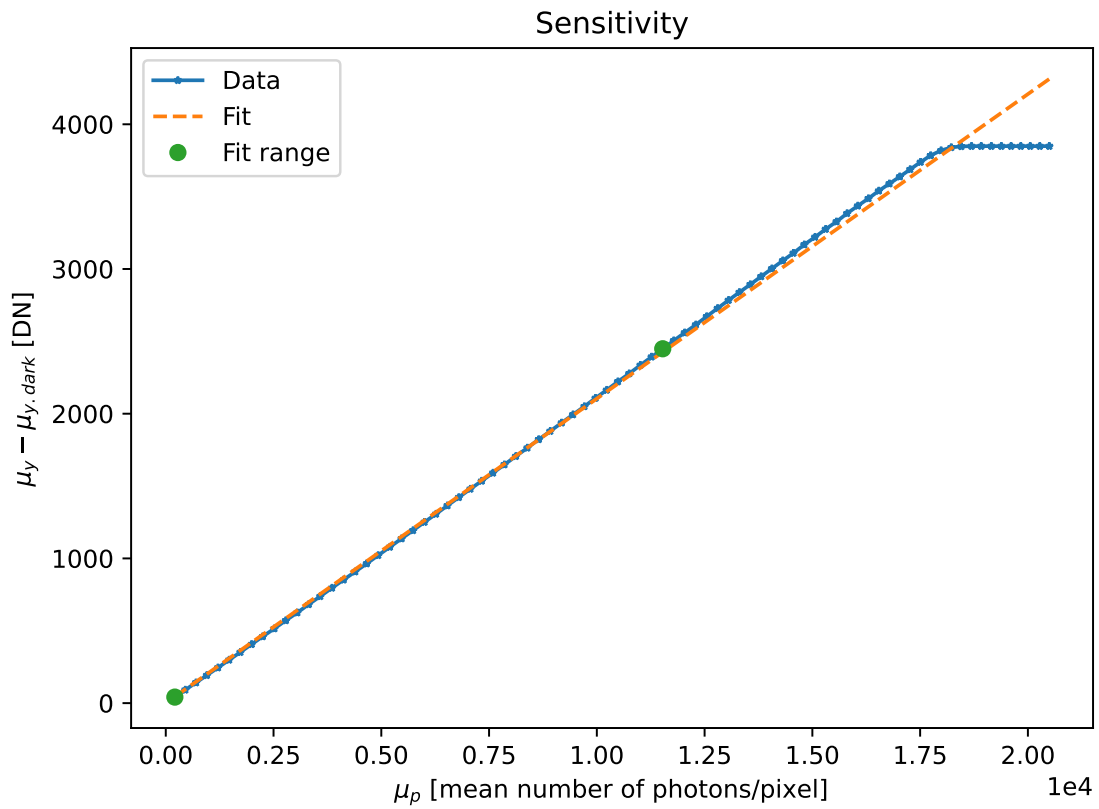
Linearity error

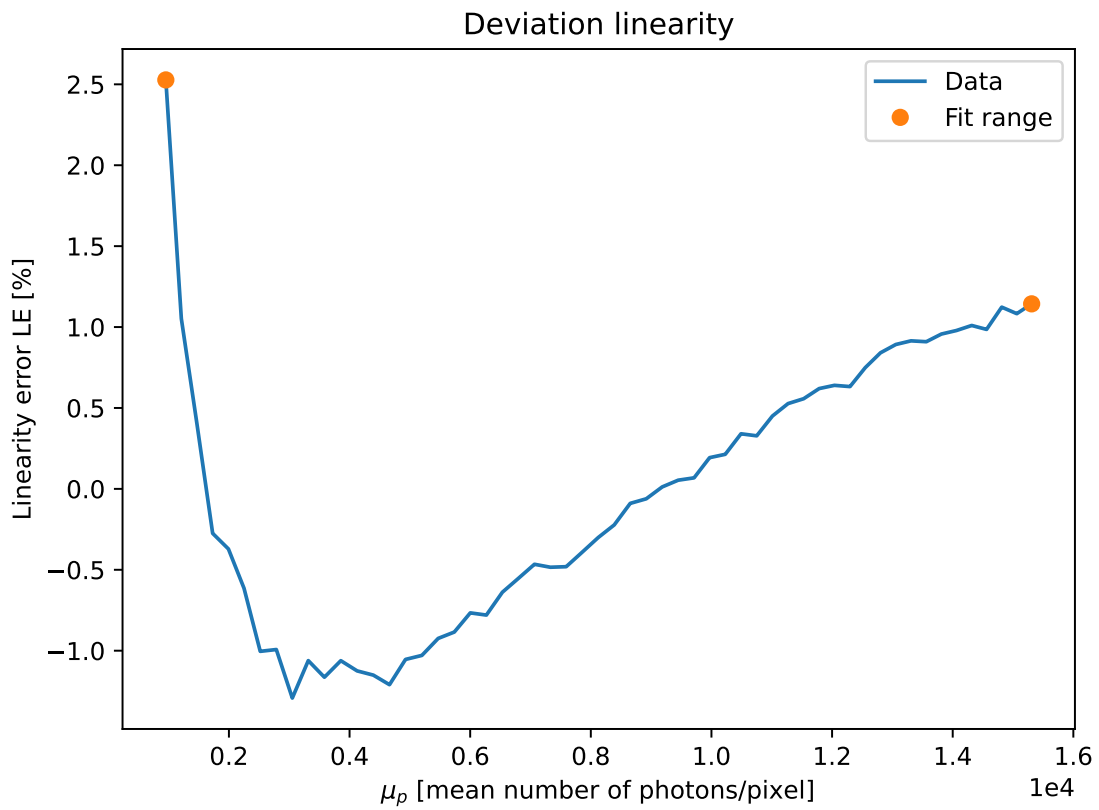
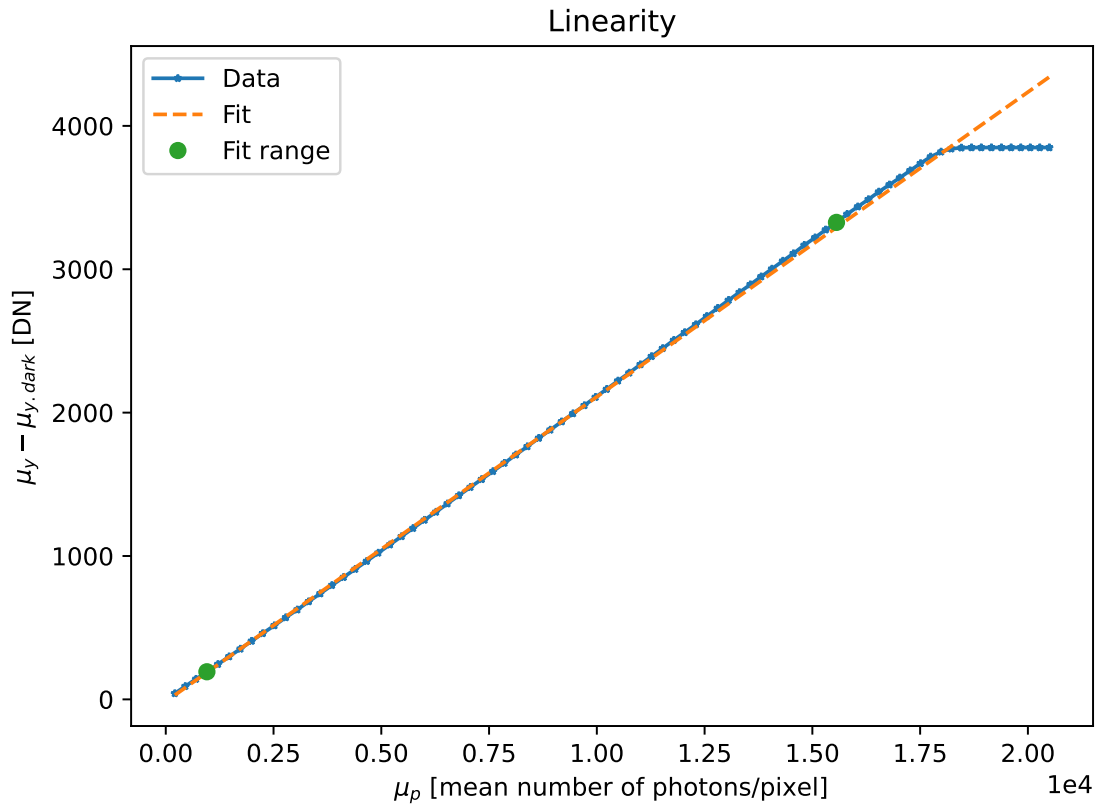
LE_{min}	-1.293 %
LE_{max}	2.527 %

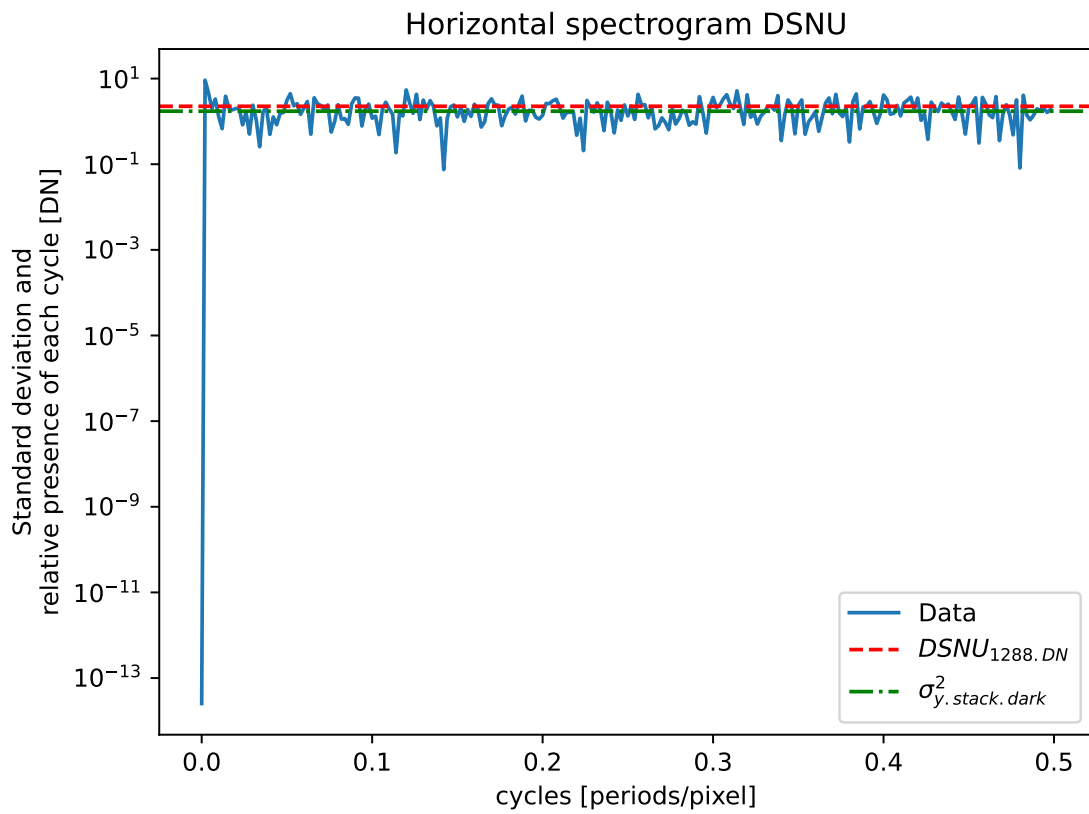
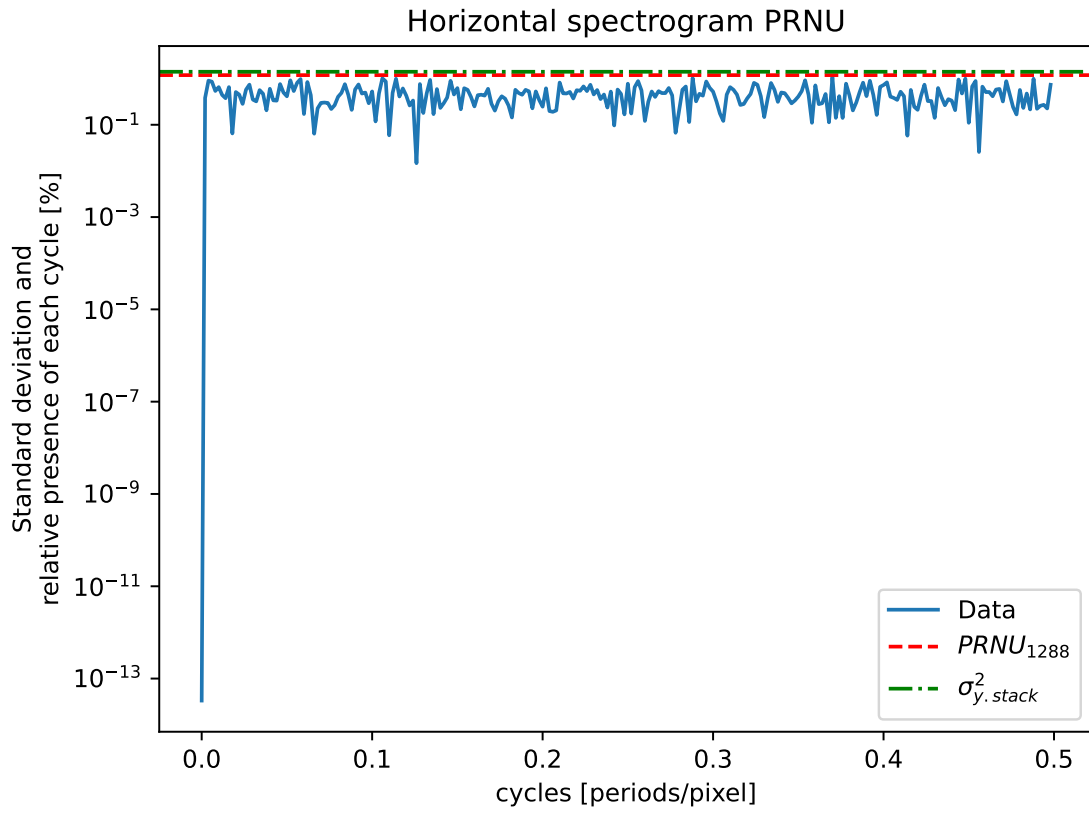
Dark current

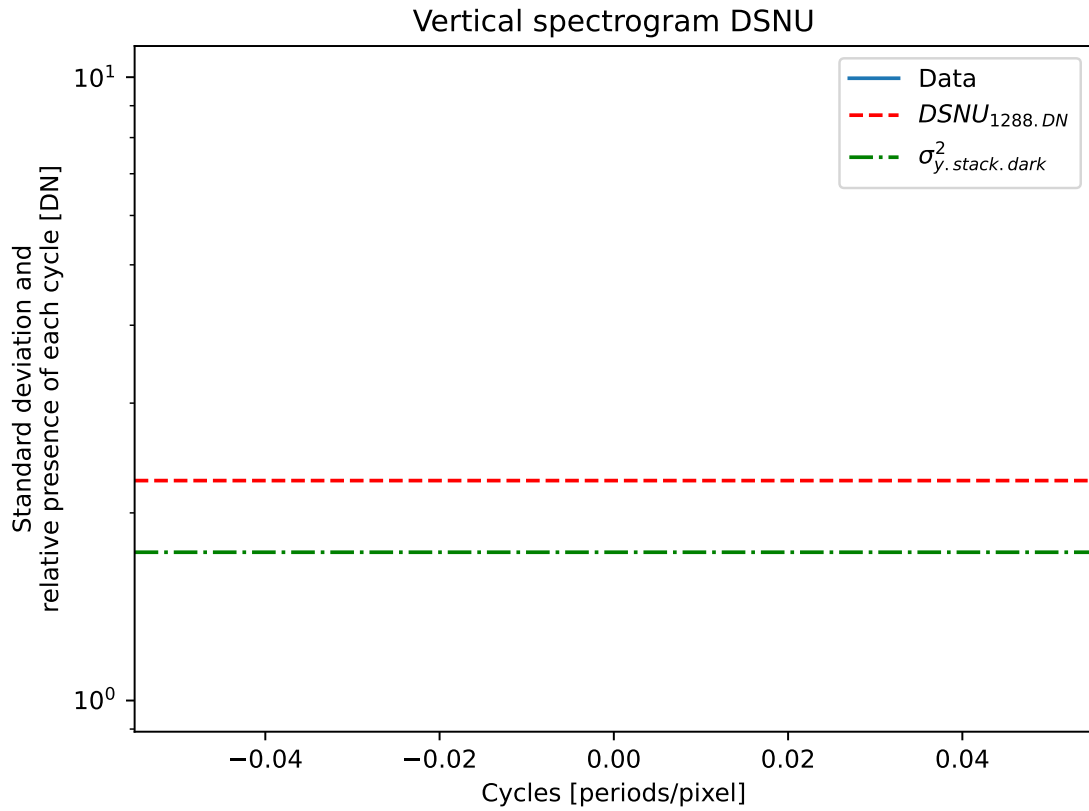
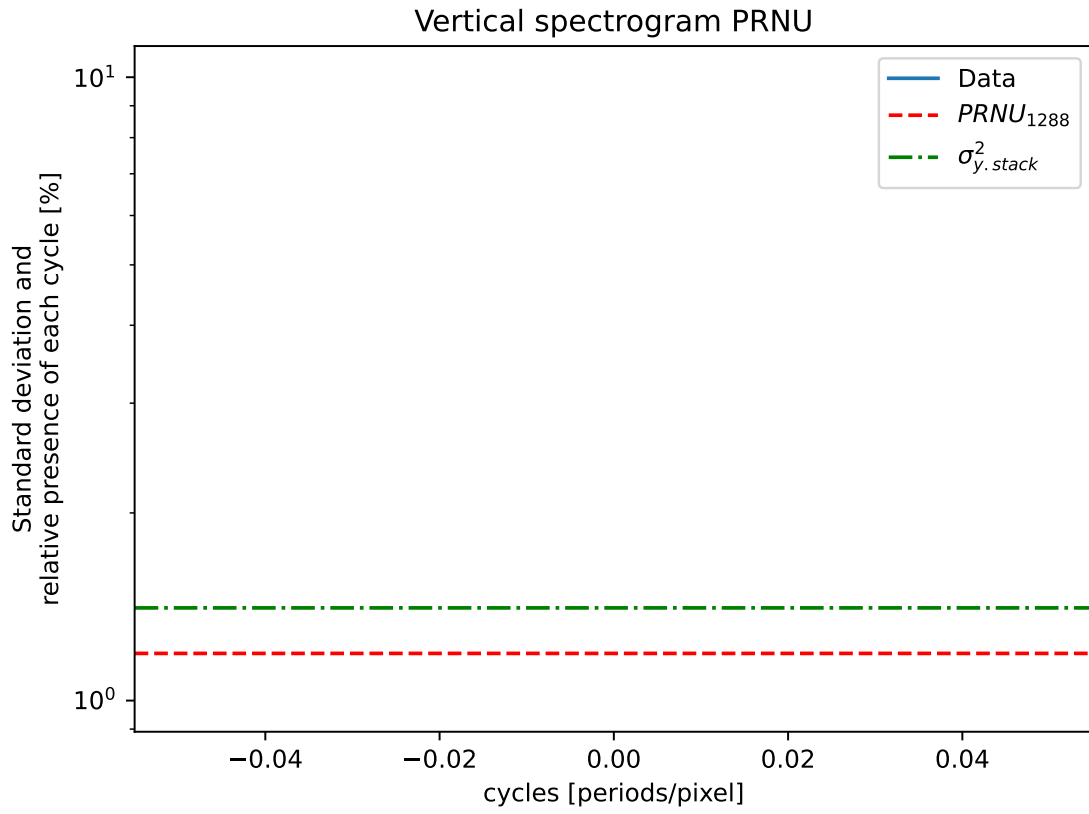
$\mu_{I.mean}$	1354.469 e ⁻ /s
	494.886 DN/s
$\mu_{I.var}$	1570.483 e ⁻ /s
	573.811 DN/s

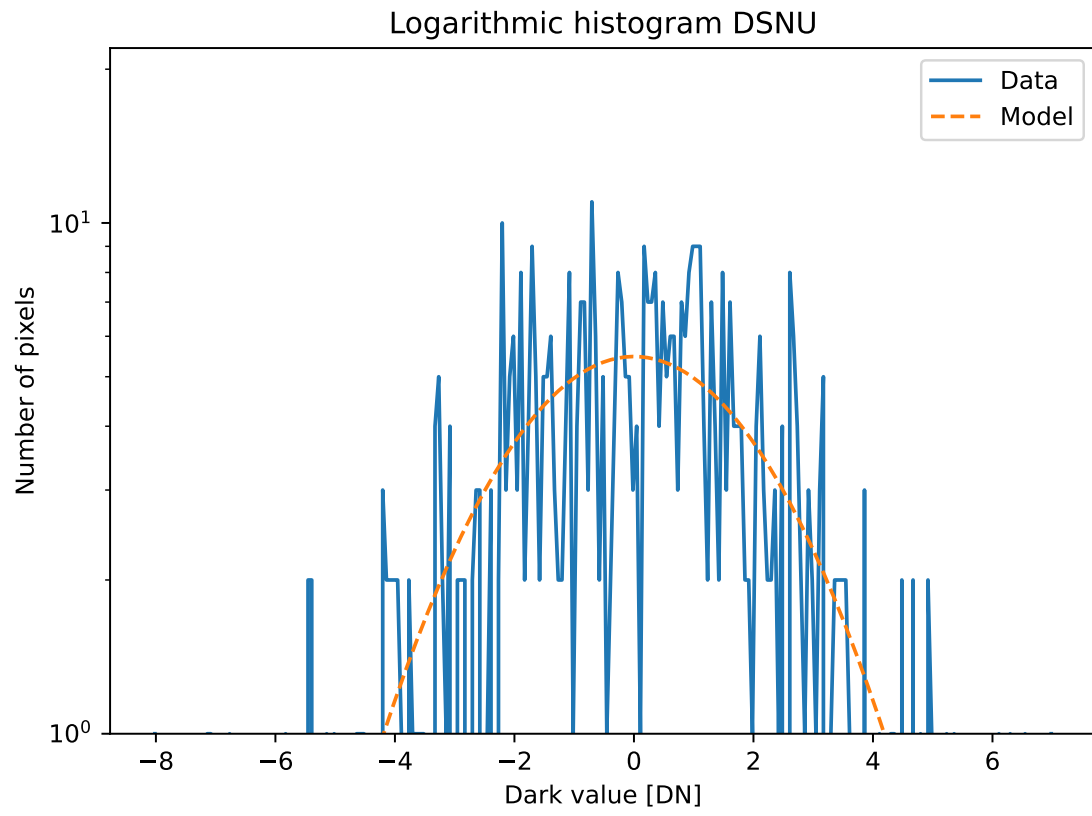


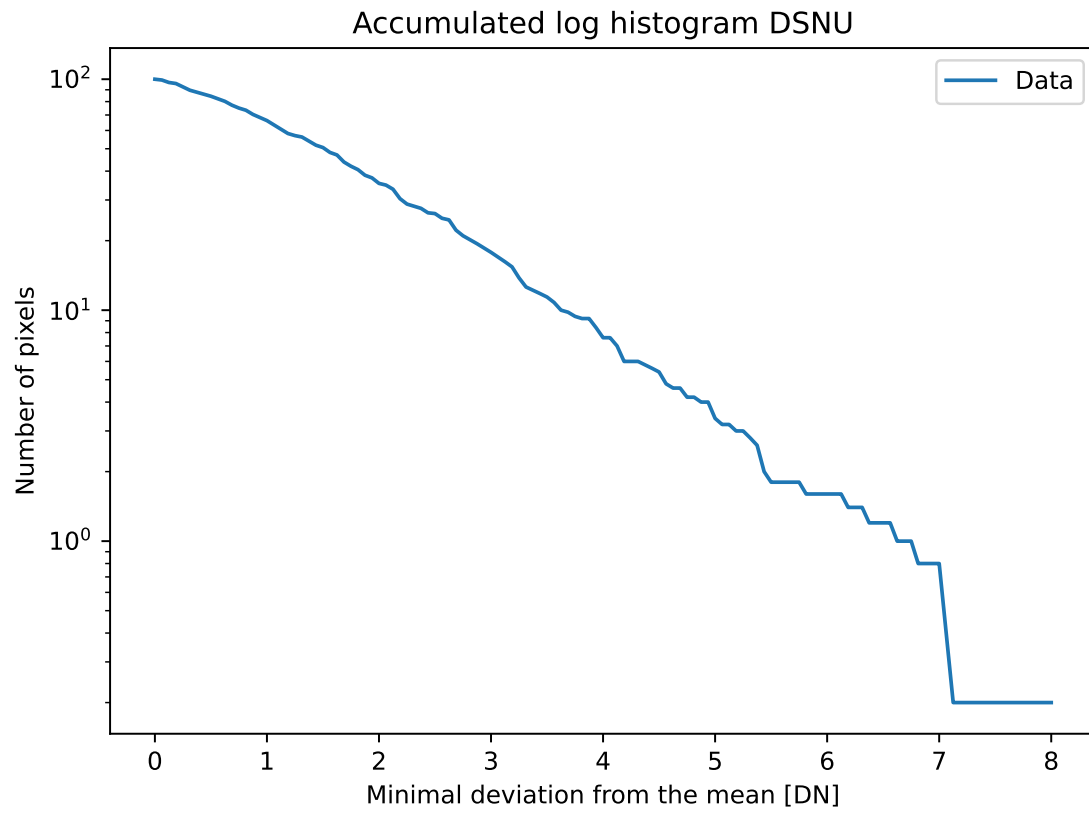




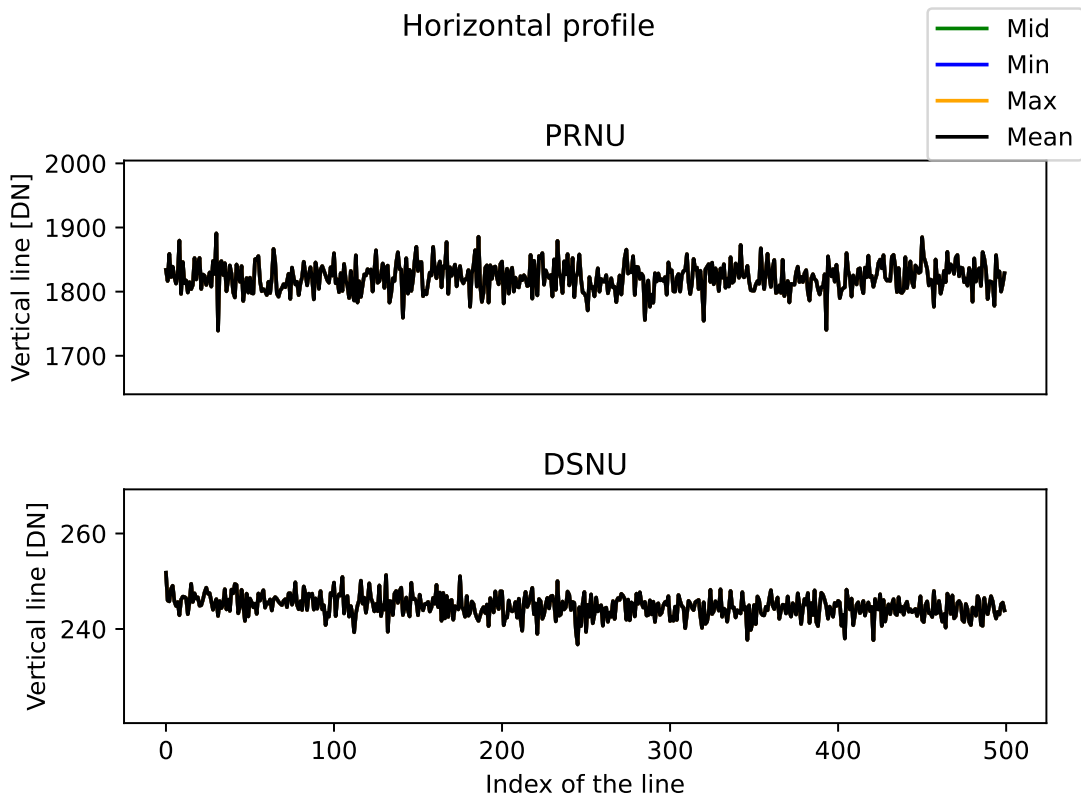








Horizontal profile



Vertical profile

