

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).

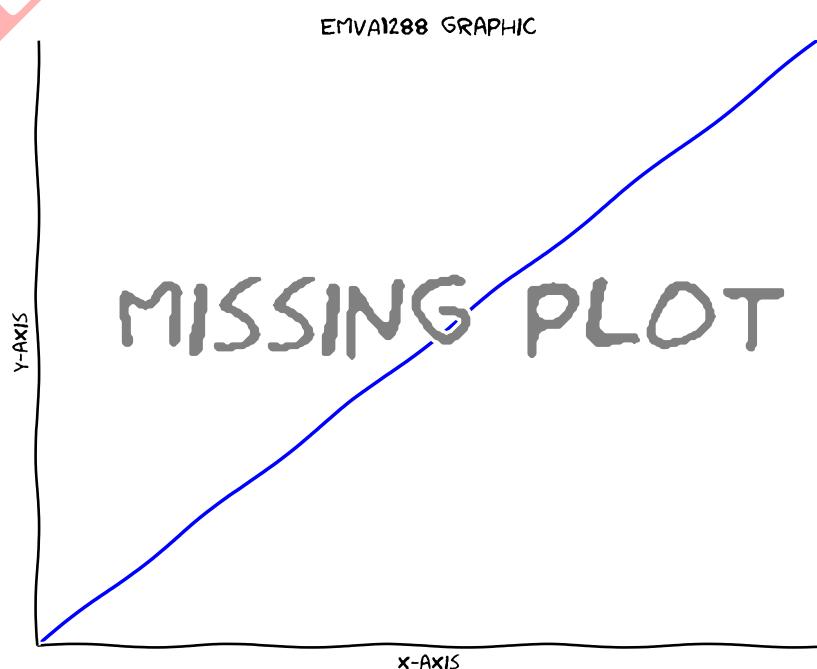
<i>Vendor</i>	Simulation	<i>Dark current compensation</i>	-
<i>Model</i>	Simulated camera	<i>Interface type</i>	-
<i>Data type</i>	Single	<i>Light source</i>	-
<i>Sensor type</i>	simulated sensor	<i>Light source non uniformity</i>	-
<i>Diagonal</i>	-	<i>Irradiation calibration accuracy</i>	-
<i>Lens category</i>	-	<i>Irradiation measurement error</i>	-
<i>Resolution</i>	640x480 pixels	<i>Standard version</i>	3.1
<i>Pixel size</i>	- μm	<i>Light source</i>	Integrating sphere
<i>Maximum readout rate</i>	-		

Operation Point: OP1 (Page 2)

Camera setting

<i>Gain</i>	0.1	<i>Illumination</i>	Variable with constant exposure time
<i>Black level</i>	29.4	<i>Irradiation steps</i>	50
<i>Bit depth</i>	12 bits		

Operation point parameters



Summary sheet for Operation Point: **OP1** (@ wavelength)

Camera setting

Gain	0.1
Black level	29.4
Bit depth	12 bits

Operation point parameters

Illumination	Variable with constant exposure time
Irradiation steps	50

Performance

Quantum efficiency
 η 50.37 %

System gain
K 0.098 DN/e^-
1/K 10.219 e^-/DN

Temporal dark noise
 σ_d 30.647 e^-
 $\sigma_{y,dark}$ 3.013 DN

Signal-to-Noise Ratio
 SNR_{max} 202
46.12 dB
7.7 bit
 SNR_{max}^{-1} 0.494 %

Absolute sensitivity threshold
 $\mu_{p,min}$ 62.120 p
 $\mu_{p,min,area}$ - $p/\mu\text{m}^2$
 $\mu_{e,min}$ 31.289 e^-
 $\mu_{e,min,area}$ - $e^-/\mu\text{m}^2$

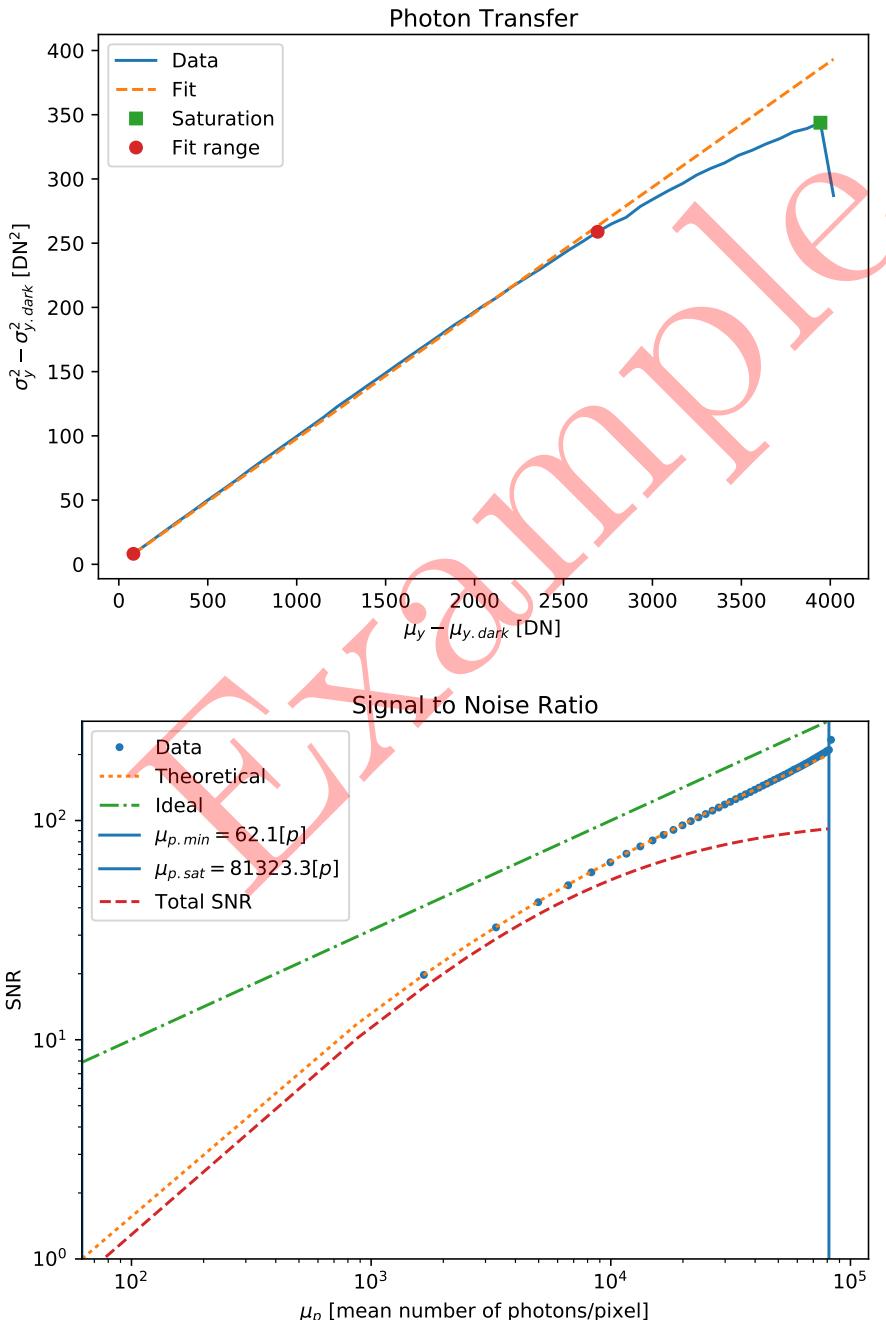
Saturation Capacity
 $\mu_{p,sat}$ 81323 p
 $\mu_{p,sat,area}$ - $p/\mu\text{m}^2$
 $\mu_{e,sat}$ 40961 e^-
 $\mu_{e,sat,area}$ - $e^-/\mu\text{m}^2$

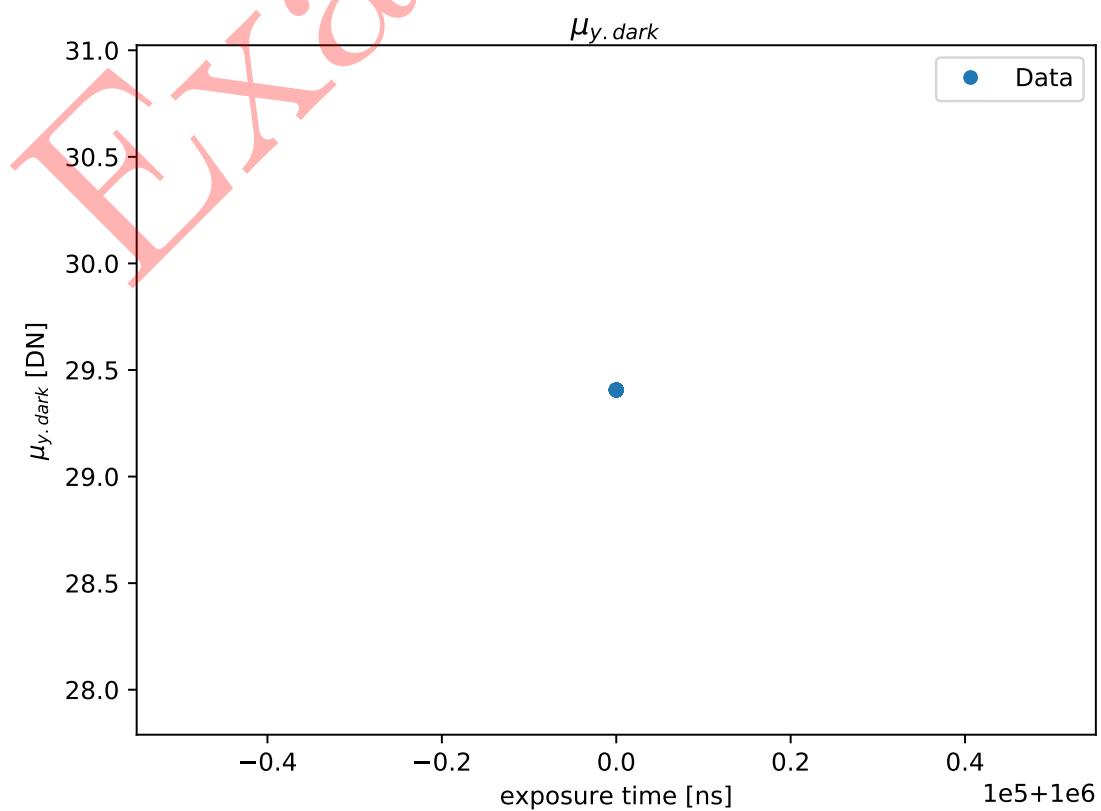
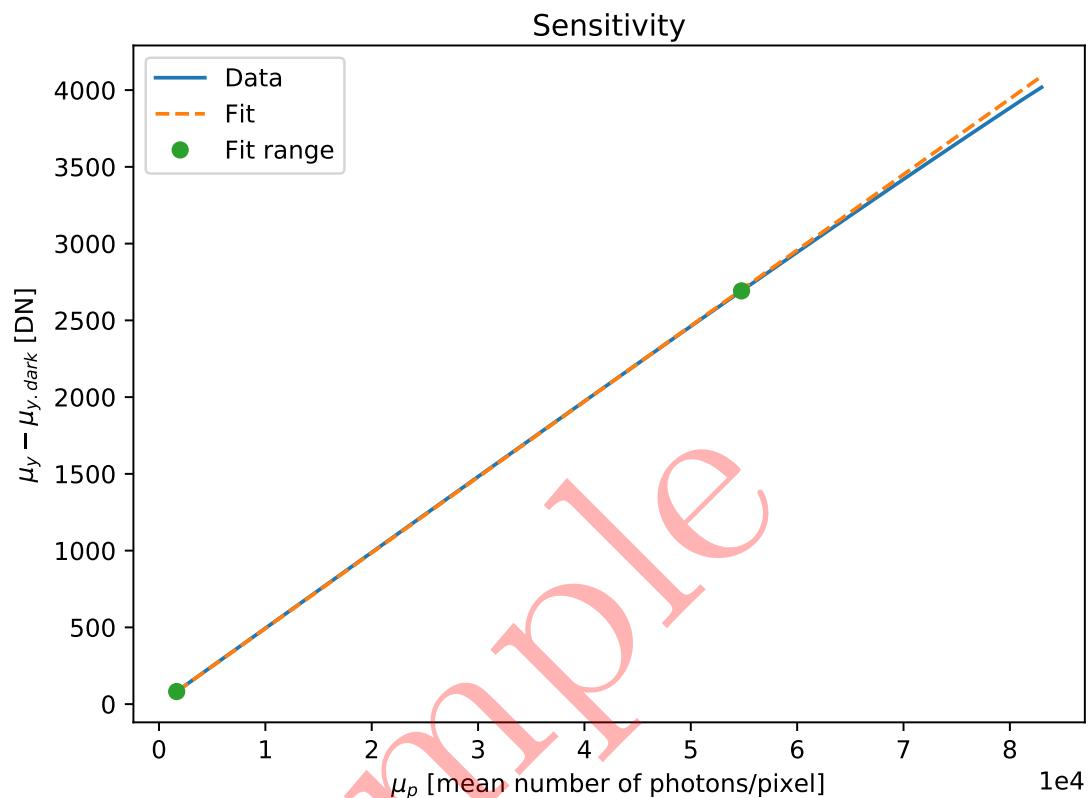
Dynamic Range
DR 1309
62.3 dB
10.4 bit

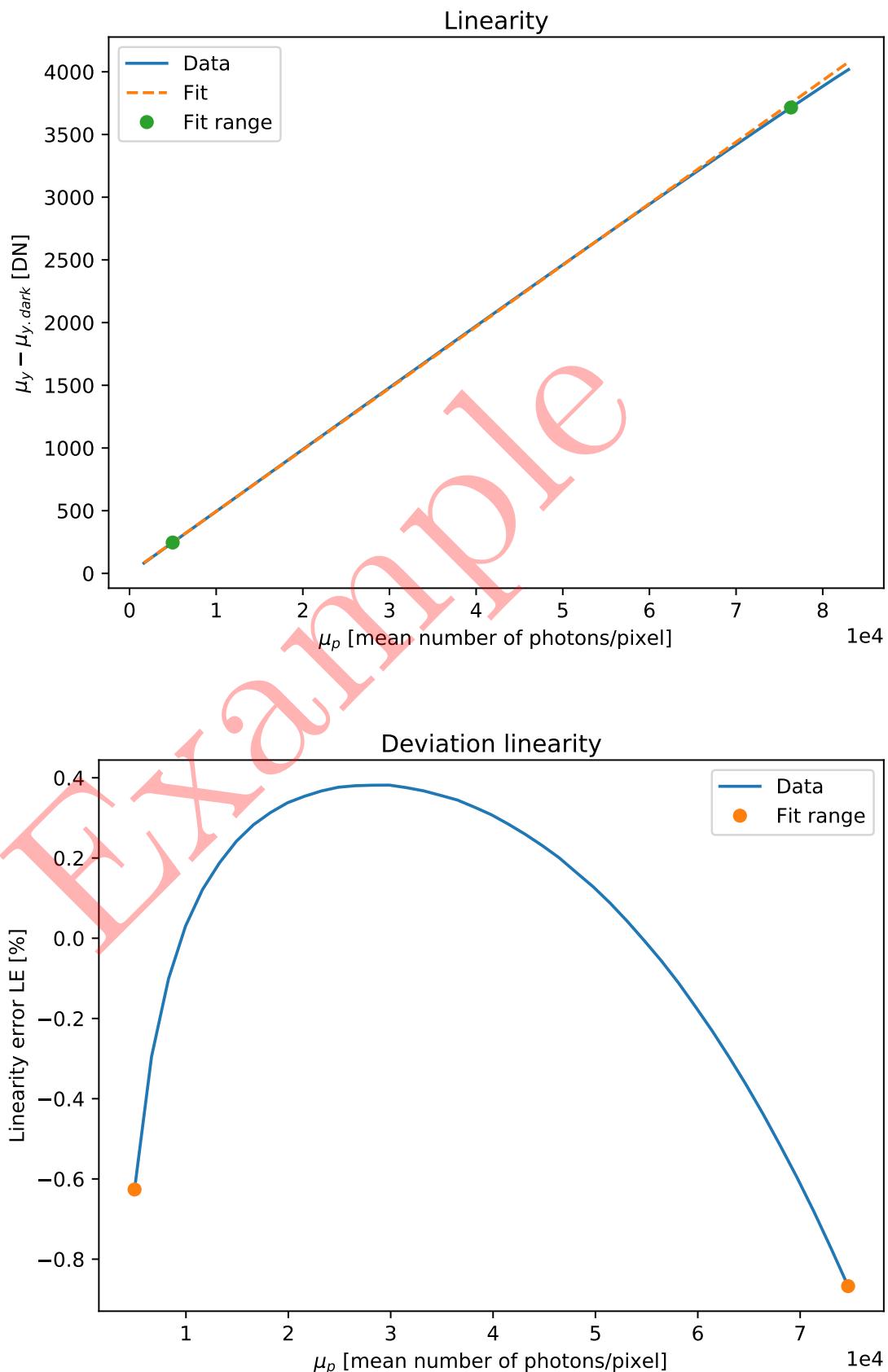
Spatial Nonuniformities
 $DSNU_{1288}$ 21.7 e^-
2.1 DN
 $PRNU_{1288}$ 1.0 %

Linearity error
 LE_{min} -0.966 %
 LE_{max} 0.382 %

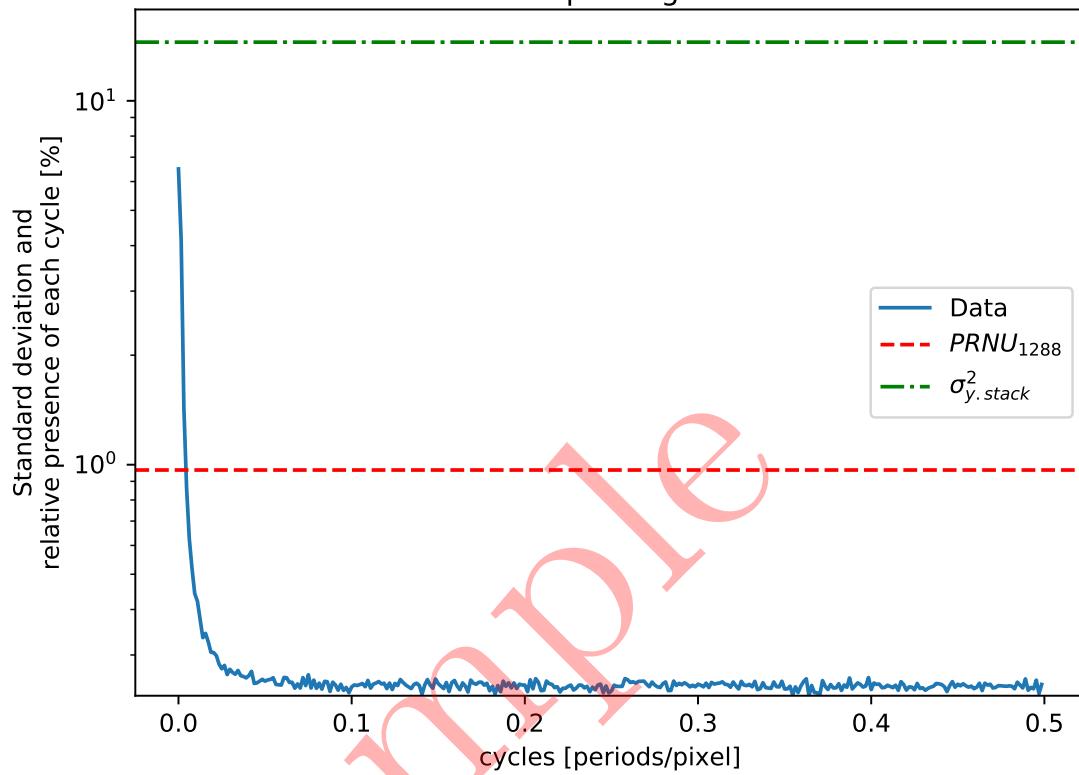
Dark current
 $\mu_{I,mean}$ - e^-/s
- DN/s
 $\mu_{I,var}$ - e^-/s
- DN/s



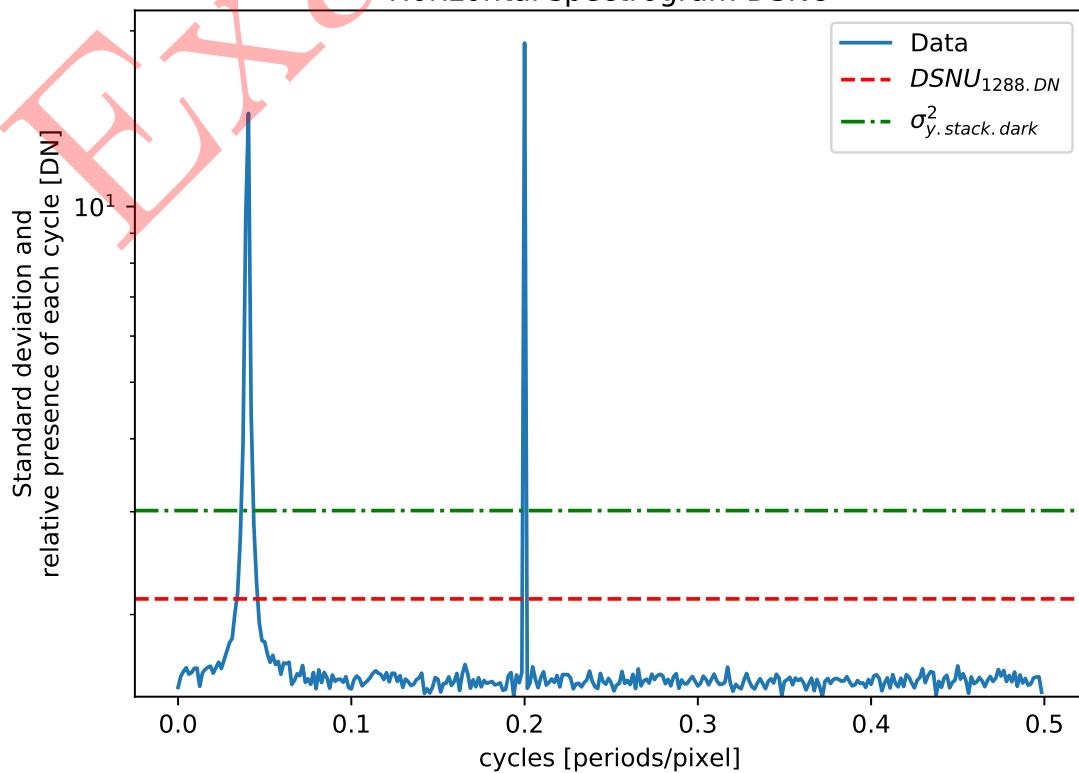




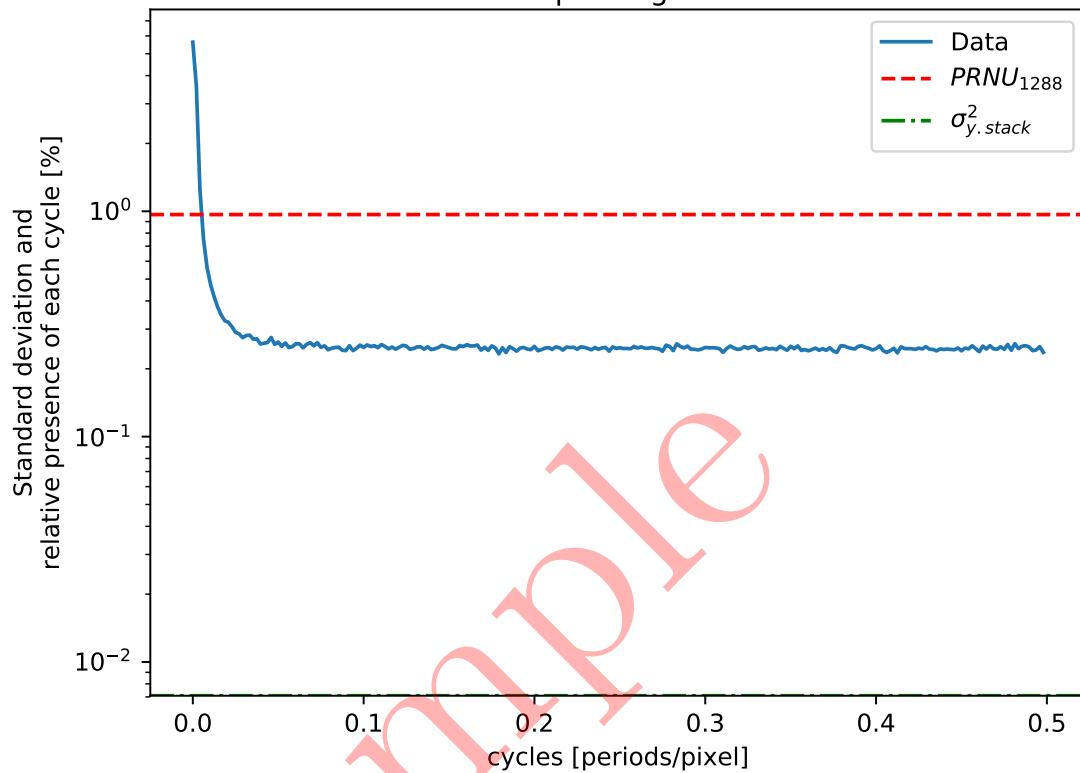
Horizontal spectrogram PRNU



Horizontal spectrogram DSNU



Vertical spectrogram PRNU



Vertical spectrogram DSNU

