Camera Calibration

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1 Camera Calibration

Cameras collect light and convert photon into electrical current. The major calibrate
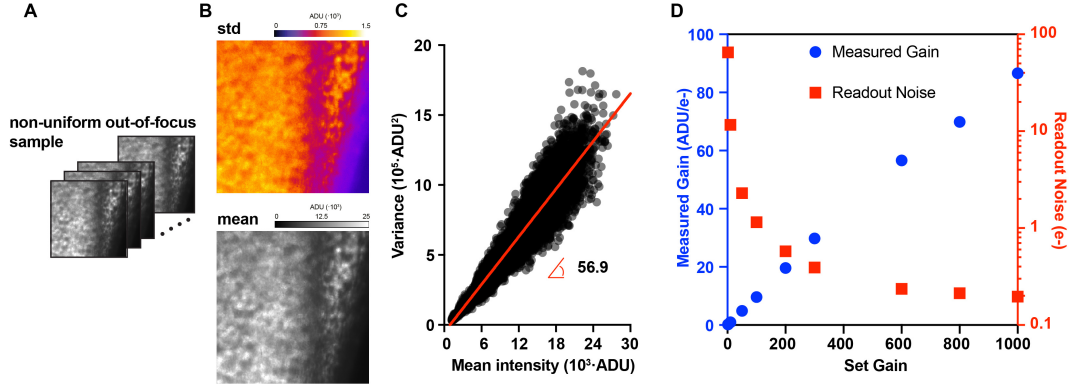
1.1 EMCCD

Figure 1: **Camera calibration for an EMCCD (A)** Example of a 500-frame series of a heterogeneously illuminated sample. **(B)** The resultant standard deviation image and the average image of the image-series. **(C)** Mean variance graph of the image-series showing a Gain-value of 56.9. **(D)** Effect of changing the setpoint of the gain on the actual measured gain and resultant read out noise.
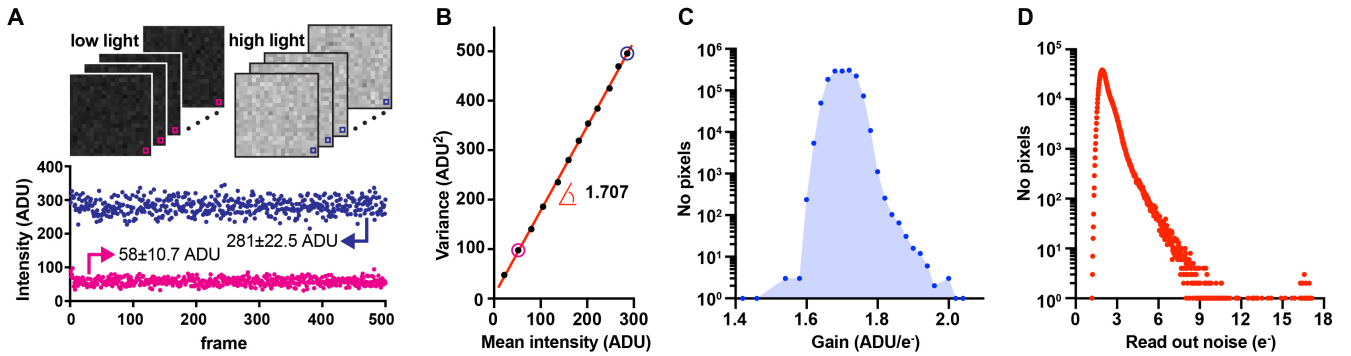
1.2 (s)CMOS

Figure 2: **Camera calibration for an sCMOS. (A)** Examples of two 500-frame series at two different signal levels and the data at a single pixel position. **(B)** Mean variance graph of the indicated pixel in (A) showing a Gain-value of 1.707. **(C)** Distribution of Gain-values for all the pixels on the chip. **(D)** Distribution of Read out noise-values for all the pixels on the chip.