

schematic, not to scale

independent Poisson charge,  
independent Gaussian reads

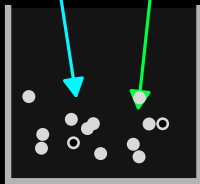
photoelectrons, quantum  
efficiency (QE)  $q = 0.5$

dark charge,  $d = 0.01$  e/s

planet light



background light



one of the 4  
aperture pixels

clock out: + clock-  
induced charge (CIC),  
 $c = 0.02$  e/frame

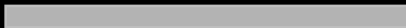
read: + read noise,  $\sigma_r = 2$  e RMS



one frame  
value



grows with live time



once per frame, at its read