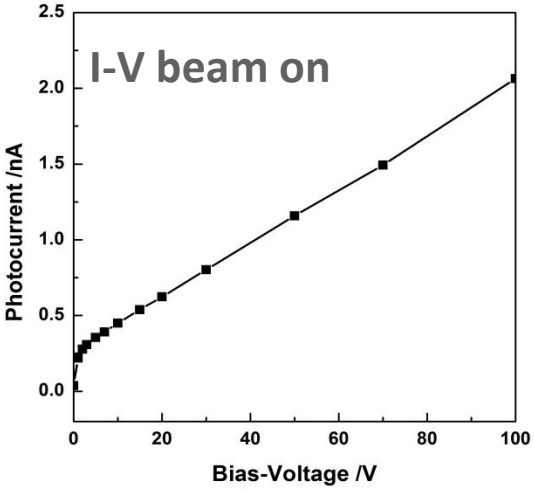
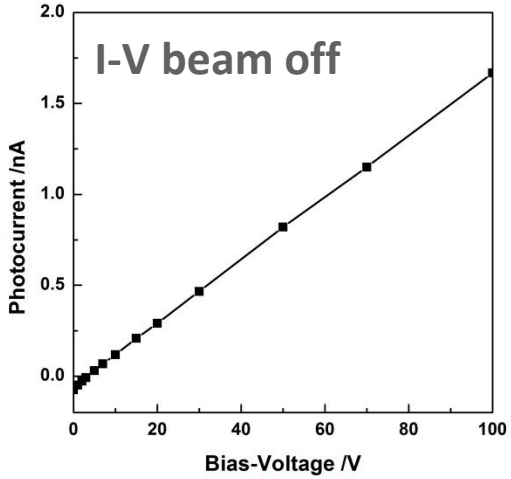
Argonne NATIONAL LABORATORY

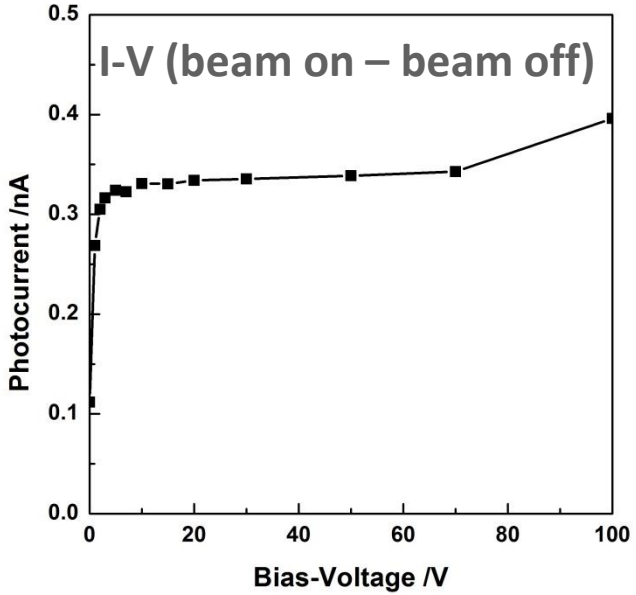
Tube #44 QE

U.S. DEPARTMENT OF ENERGY

I-V curve



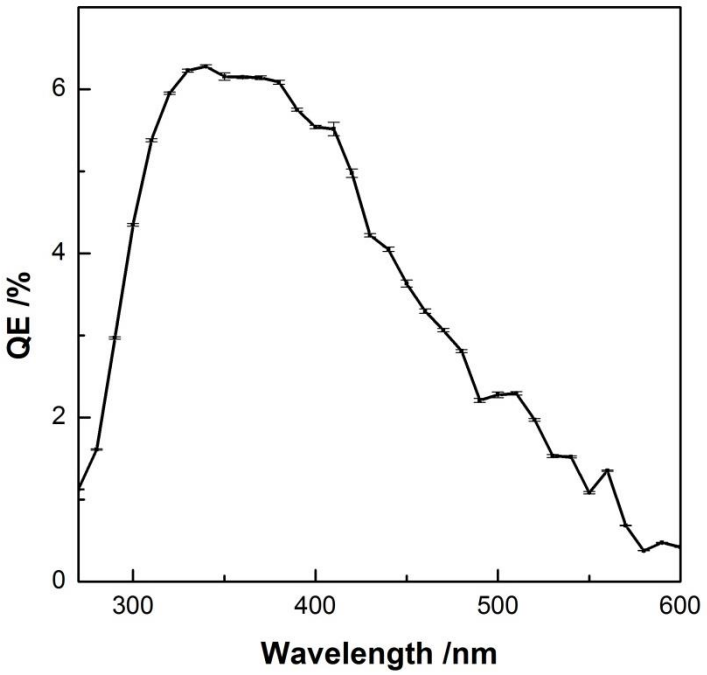


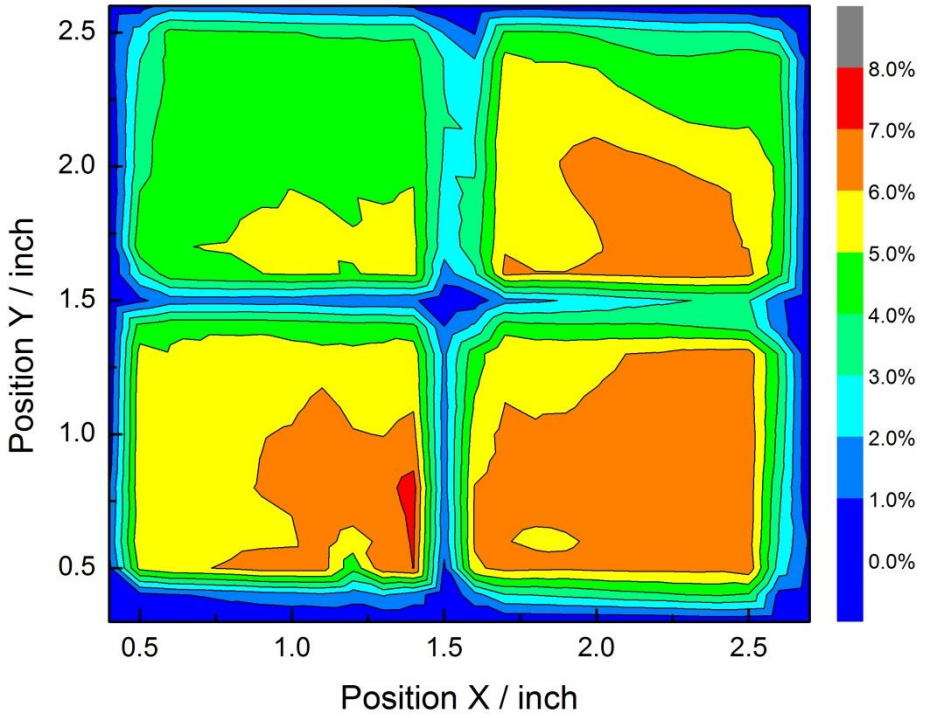


The spacer glass is not absolute $+\infty$ resistance,
Showing a resistance of $5X10^{10}\ \Omega$

Higher resistance glass??

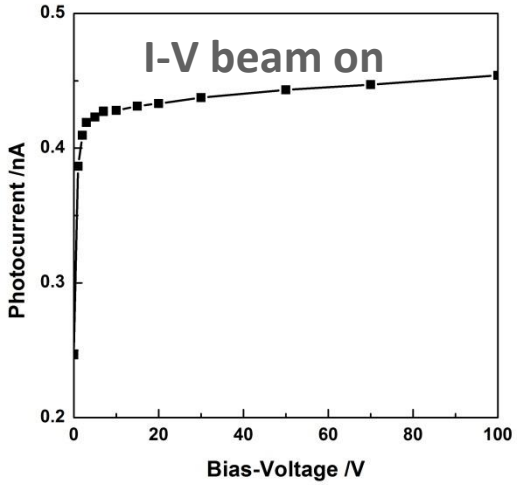
QE vs. wavelength and Map

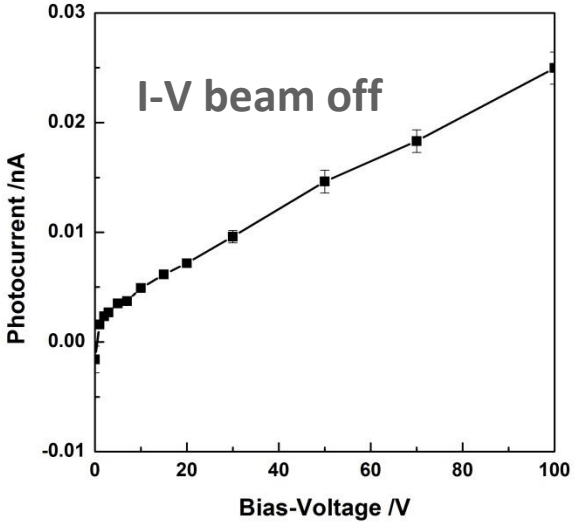


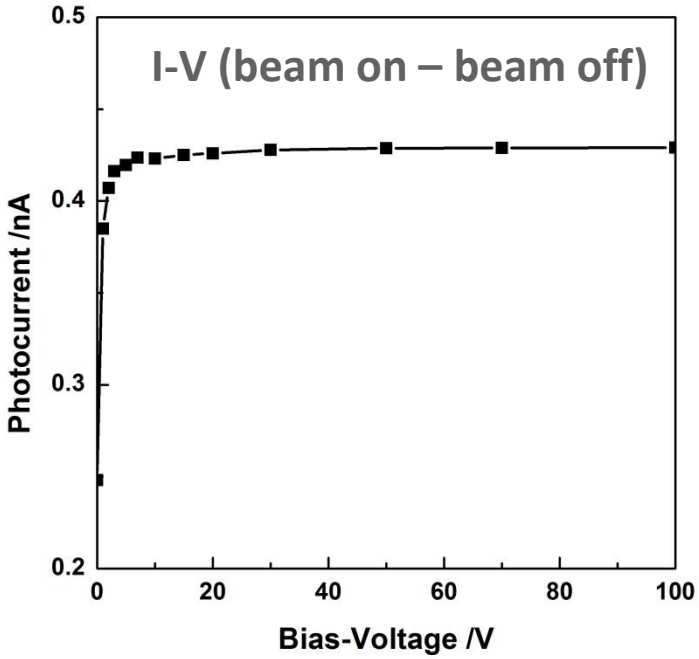


- Maximum QE ~7 %. Average 5-6 %.
- The Cs deposition does not go well this time. During Cs evaporation, the pressure inside chamber goes up to middle 10^{-7} torr, the photocurrent decreases as the Cs deposition proceeds, instead of increases. Cs deposition was terminated and the photocurrent already dropped to 1/3 of the value after K deposition.
- During photocathode growth, the base pressure is twice higher than previous growth condition, may due to the low leakage at load lock.
- Will need to check the Cs source, outgas the source at over 700 ^{o}C.

I-V curve - 2 weeks

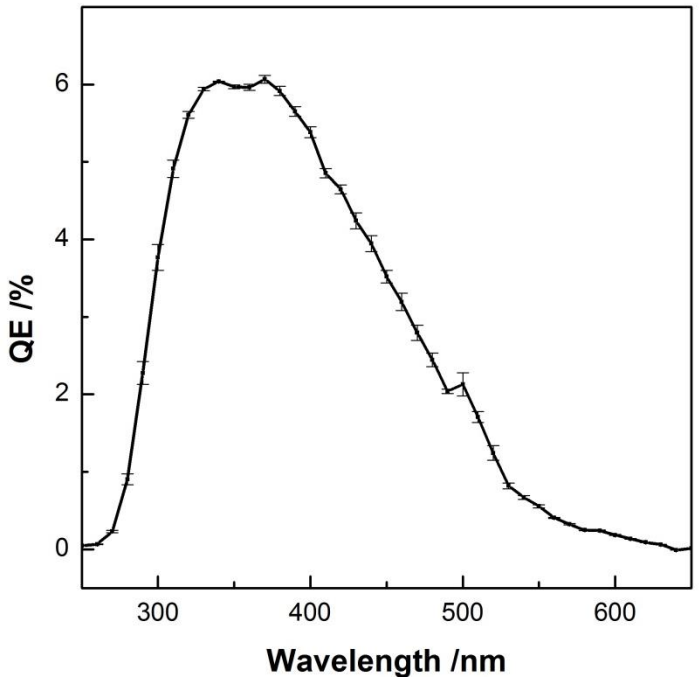


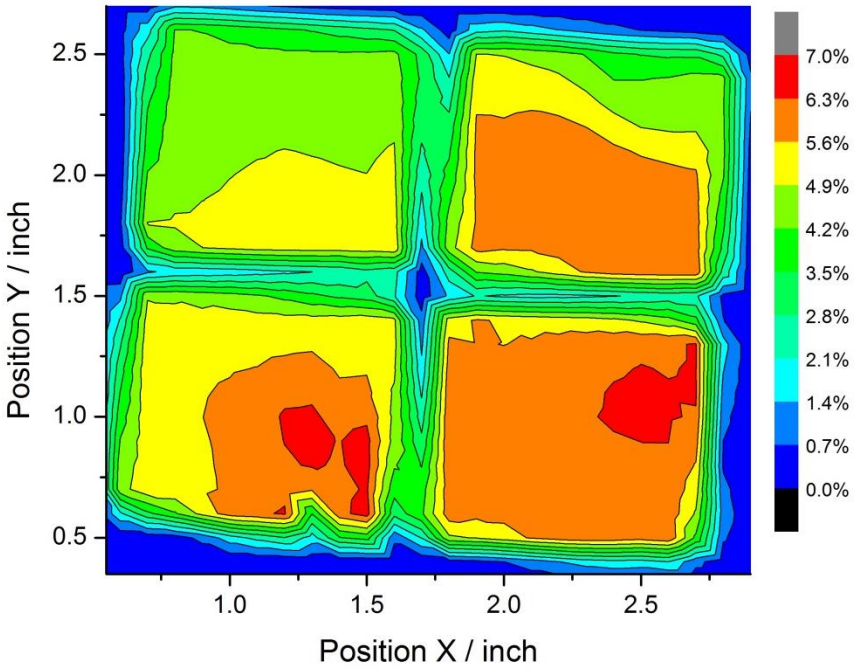




The spacer resistance increases from $5X10^{10}$ Ω to $5X10^{12}$ Ω after 2 weeks

QE vs. wavelength and Map





- QE almost has no change after 2 weeks.