Properties of the dark current

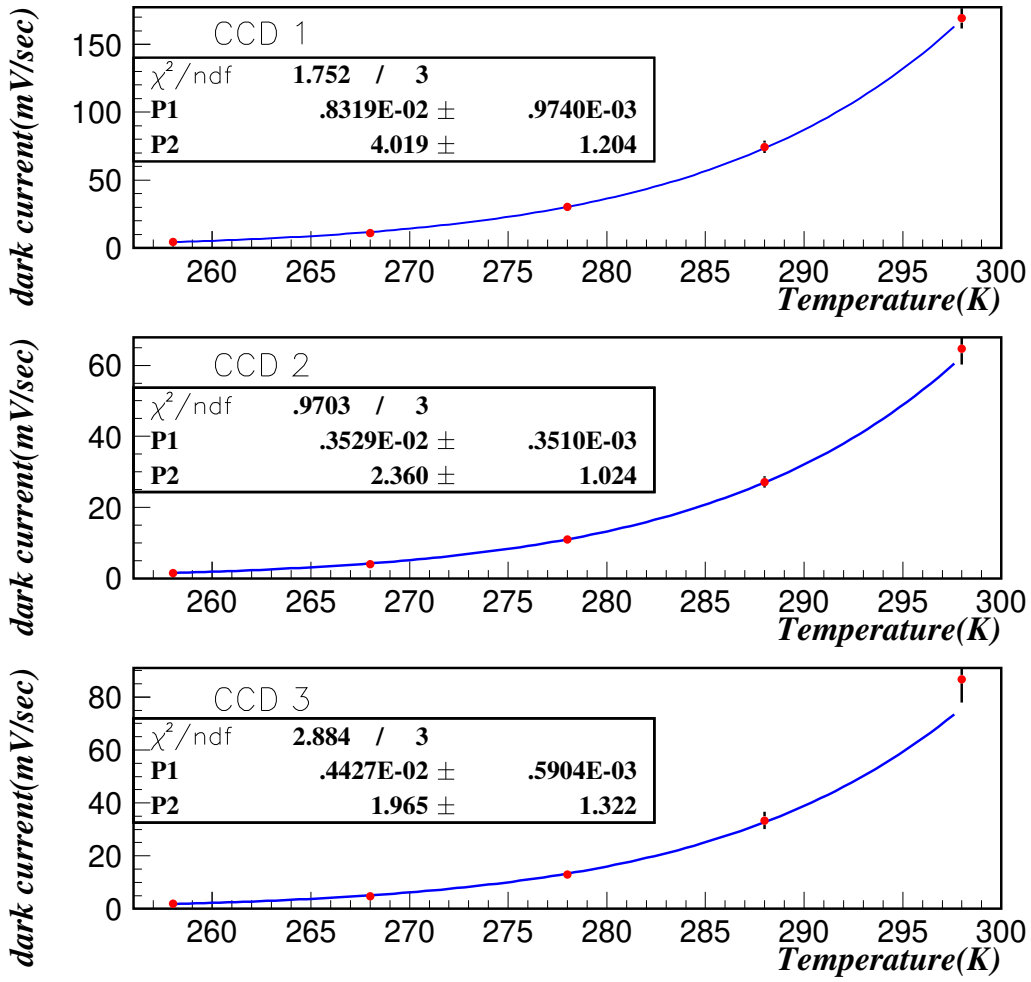
Thermal excitation of electrons → dark current

Its temperature dependence is given by

$$Dark \propto T^2 \times exp\left(-\frac{\varepsilon_g}{2k_B T}\right)$$

where $\varepsilon_g = 1.16 - \frac{7.02\times10^{-4}T^{3/2}}{T+1108}(eV)$

2 parameter fit: *normalization*, $T \rightarrow T + \delta T$



Fits very well to the formula

- **actual T might be $T + (2.8 \pm 0.7)K$**