URL: http://cxc.harvard.edu/ciao3.4/dictionary/qe.html
Last modified: 15 December 2008

Quantum Efficiency (QE)

The quantum efficiency (QE) is the fraction of incident photons registered by a detector. For an ideal detector, this is 100% (every incoming photon results in a single count). In reality, however, no detector is 100% efficient. If, for instance, the detector is 70% efficient, then every 100 photons would result in 70 counts. The QE is a strong, highly structured, function of energy for both Chandra detectors, ACIS and HRC.

HRMA chapter in the Proposers' Observatory Guide contains some plots which illustrate how QE affects the effective area of the detector.

In the Chandra calibration database (CALDB) the QE of the detectors is divided into a mean curve (vs. energy), the QE file, and a map of the deviations across the face of the detector, the quantum efficiency uniformity (QEU) file.

URL: http://cxc.harvard.edu/ciao3.4/dictionary/qe.html
Last modified: 15 December 2008