CHANGE IN ACIS LOW-ENERGY QE

- Caveat posted on CXC web site on 03 April 2002
- The low-energy QE of the ACIS instrument appears to be decreasing with time
- The effect is energy dependent, $\approx 30\%$ at 0.67 keV over two years, negligible at 1 keV and up
- It appears that the reduction in sensitivity is due to a buildup of contamination on the filters and/or CCDs
- The characterization of this effect is complicated by changes in the CCD response over the life of the mission
- The chemical composition of the contamination is not well-determined, there appears to be a strong C absorption edge but no compelling evidence for other edges yet
- The interpretation of ACIS and ACIS/gratings observations do not give consistent results with regards to the thickness or the growth in time of the putative contamination layer
- New calibration observations are planned to better quantify the effect, to identify the chemical compostion of the contaminants, and to monitor the decrease more accurately
- the CXC calibration team expects that time-dependent QE products will be released once the effect has been properly characterized