Improvements

A similar analysis was presented at the 2003 CCW. Improvements since then include:

- Spectral fitting (using *Sherpa*) rather than region-of-interest–particularly important at long wavelengths where the pulse-height peaks of weak energy-orders merge with the shoulders of stronger adjacent peaks.
- Narrower spectrum slices at short wavelengths (where energy bands are relatively wide) to avoid energy-order overlap.
- Higher-order terms for pile-up corrections.
- Pileup parameters ($k_{grade-migration}$ and k_{pile}) are different for BI and FI chips.
- Use of updated ACIS-S3 and S1 QEs greatly improves agreement between + and - orders.
- Improved error estimates:
  - 10% error in pileup parameters k_g and k_p
  - 0.005 error in ACIS QEs
  - Counting-statistics errors increased by 30% to account for fitting errors.