Calibration of the *Chandra* Optics

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Completed Work

- Generated long term plan for Optics group. The "executive summary" was circulated to CUC.
- Wings memo released
- Enclosed Count Fractions using circular and elliptical apertures released

Work in Progress

Reduction in CXC Optics software development staff has required us to focus more on software infrastructure.

- Linux port:
  - Mostly infrastructure
  - 80% of infrastructure development complete.
  - Porting of individual packages is ongoing.
  - Estimate completion for most important packages by Fall.
- Implementation of new scattering algorithm developed by P. Zhao.
  - Ongoing; delayed by Linux port
- Improvements to accommodate dither
  - delayed by Linux port
- HRMA User's Guide
  - In final stages
- Ir M_V Edge discrepancy

  We plan to produce an *ad hoc* correction based upon an enlarged set of HETG data. Progress has been slow due to reallocation of resources towards analysis of the ACIS contaminant.
- HRMA Vignetting
  - Incorporation of more calibration data; e.g. A1795

Future Optics Work

The CUC has asked for detailed scientific justifications for future Optics work. To accommodate this request, we require the following additional capabilities.

- Modeling of telescope motions (e.g. dither). Planned.
- Improved model of astronomical sources. Planned.
- Improved model of ACIS event detection.
    We plan to integrate a physics based model of photon interaction with the CCD with our existing implementation of the ACIS hardware event detection. This will provide better modeling of pileup and sub-pixel structure.
- Identification of important scientific programs which would be improved by a better knowledge of the Chandra PSF.
    - We can identify some challenges based upon our knowledge of the characteristics of the PSF, such as point source separation, deconvolution of point sources, etc.
    - In order to get a more representative sample of programs deemed important by the community as a whole, guidance from the CUC would be useful.