Effective Area Working Group Summary
Presentations

- A. Read: Cross-cal of pn with MOS using 2XMM catalog
- M. Smith: XMM-Chandra cross-cal using blazars
- M. Guainazzi: Recal of XMM telescopes
- G. Schellenberger: XMM-Chandra cross-cal with HIFLUGCS
- C. Markwardt: XTE PCA propane layer +...
- J. Nevalainan: clusters & other telescopes
"The Main Result"

(Read, Guainazzi, & Sembay 2014)

Data have been adaptively binned to follow the statistics.
Mean Normalised Fluxes
What is the allowable error from these parameters?

- Density < 0.5% absolute (averaging ?)
- Roughness – 0.05nm rms (averaging ?)
- Dust 30% variation – max due to exposures?
- 30 μ rms within the baffle structure and 150 μ centring baffle to telescope
- Axis – 10 arcsec at calibration and 10 arcsec in orbit vignetting calibration method
- Sum the errors r.s.s. as 1 σ?
XMM Optics Recal

Systematic errors estimate

HLM — Effective Area

IACHEC — 2014
XMM Optics Recal

Impact on EPIC cross-calibration

![Graph showing the effective area of XMM telescopes over energy (keV)]
Stacked residuals ratio

(Schnellenberger presentation)

ACIS/PN

Big temperature differences

Energy in keV

ACIS/PN

ACIS-I/S consistent

ACIS-S

ACIS-I

Energy in keV

MOS1/PN

Temperature differences

Energy in keV

MOS2/PN

Real? Big effect?

Energy in keV

HLM — Effective Area

IACHEC — 2014
Stacked residuals ratio

(Schnellenberger presentation)
Calibration status of RXTE PCA
C. B. Markwardt (NASA/GSFC)
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K. Jahoda (NASA/GSFC)
RXTE PCA Team

Prospects of Using Propane Layer for Science

- Propane layer used as particle veto
- But: propane also sensitive to X-rays
  - At later times Xenon leaked into Propane layer

Xenon Background Models

- New super-VLE model

New Data & Software

- New tools for Standard data:
- New archive standard products
Summary

• Significant new results on XMM internal and XMM-Chandra cross-cal
• Blazars, clusters, 2XMM catalog ~ agree
• XMM optics physical model has room to adjust
• Time to change?
• XTE PCA archive updates will make data more usable