

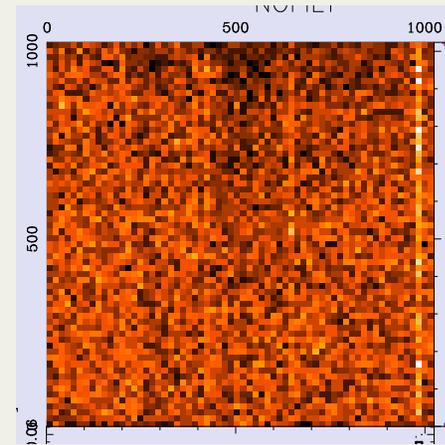
CCD Working Group

Activities at IACHEC 2013

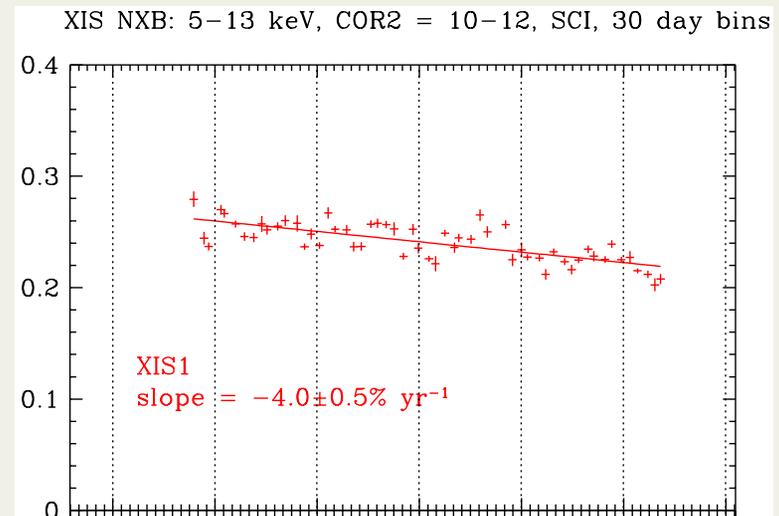
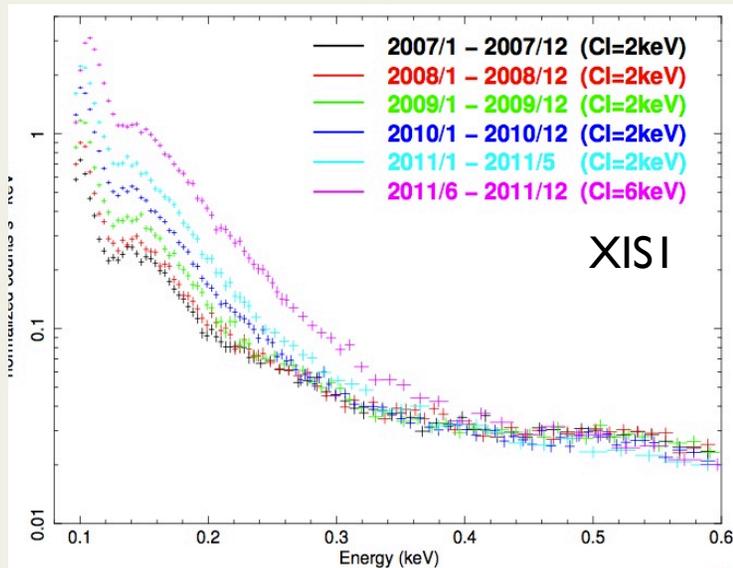
Particle background characterization

Terry Gaetz & Eric Miller

- ACIS spatial non-uniformity
- XIS spectral evolution
 - XIS1 <0.4 keV increasing
 - XIS1 high energy decreasing



ACIS-I3
G02346
0.3-0.7 keV



- Missions should provide bkg models/templates?

Energy Scale in EPIC-pn Timing Mode

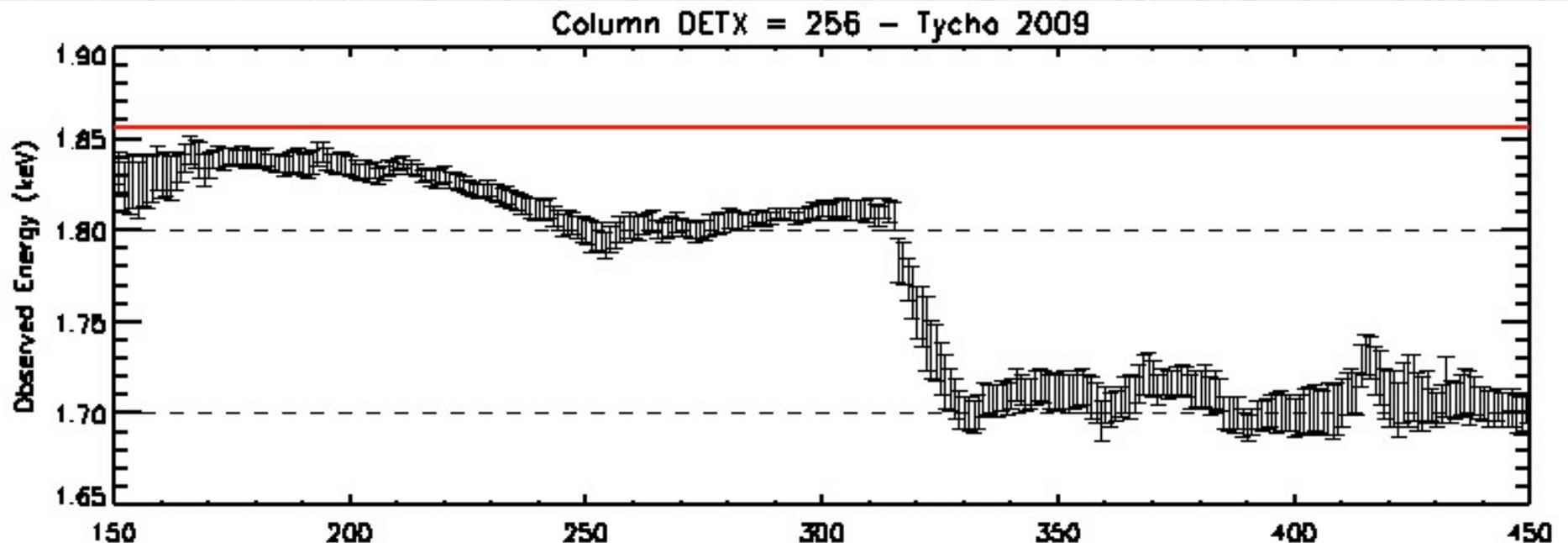
Matteo Guainazzi

- Energy scale is rate dependent (2008)
- 2009 (re)discovery of X-ray loading
 - Bright source seen in offset map (bias map)
 - Opposite effect of rate dependence
- SAS13 contains XRL correction and recalibration of rate-dependent energy scale
- Proposed coordinated observation of obscured X-ray binary with XRT/WT and ACIS/CC to understand redistribution

Swift-XRT charge traps

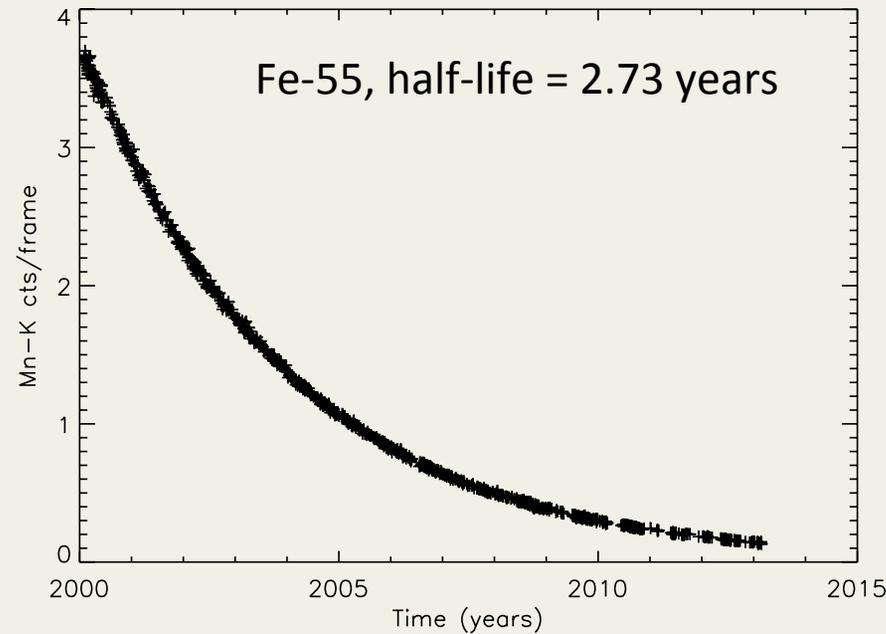
Claudio Pagani

- Charge trap mapping and characterization
- Many deep (10-100 eV) traps
 - Varied properties (energy-, temperature-dependence)
- Lab irradiation tests with 10 MeV protons and 14 MeV neutrons
 - Flight example more consistent with neutrons?



Decaying calibration sources

Group Discussion



- Use instrumental features/background lines?
 - Only if they interact like X-rays
- Astro-H Modulated X-ray Source
 - Multiple spectral lines, no radioactive decay