Software and Documentation

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Software Framework

- Multi-platform Suzaku FTOOLS, distributed as part of HEAsoft
- Other packages can be used in principle to perform certain steps but we do not actively support them
- Calibration information disseminated through the HEASARC Calibration DataBase (CALDB)
- Users receive calibrated data produced by the processing pipeline, but can (and often must) apply updated calibration information themselves
Software & CALDB

See also processing presentation

- Suzaku FTOOLS v7 includes both processing tools and analysis tools; CALDB includes files needed by both
- The users therefore have the tools necessary to perform their own reprocessing
- Key user tools include xisrmfgen and xissimarfgen
- The majority of the tools have been stable since v5
Analysis: Simplest Case

- Users start from screened event files (event_cl subdirectories under xis and hxd)
- Users specify an extraction region and/or other filtering criteria, and extract spectra, light curves, and images (non Suzaku specific)
- XIS: generate rmf and arf, or exposure maps
- HXD: obtain estimated background, and apply dead-time correction
- Light curve: barycentric correction, including the knowledge of Suzaku orbit
XIS Analysis Issues

• Xissimarfgren is extremely powerful, but is also extremely complicated and slow

• Default responses are large and hence spectral fitting can be very slow
  – A script that can handle many simple cases, xisresp (details hidden from the users)
  – “Medium” and “fast” options for smaller responses in xisresp
XIS Analysis Issues (cont’d)

• Poorer support of specialized modes (window, burst, timing, ...)
• How can we handle pile-up?
• Recent update of CTI/gain calibration means many users need to go back to unscreened data - however, only xispi (the last step in processing) and re-screening are required
HXD Issues

• V2 GSO background is yet to be released
  – HXD team expects initial delivery in Dec, 2007
  – Users will need to re-run hxdpi, due to a bug that was fixed in version 7

• Time delay between data processing and PIN background availability

• Background subtraction and deadtime correction involves several steps performed by hand

• Responses for extended objects...?
Alerting the Users

- E-mails to individual PIs, for critical updates that affect specific, proprietary sequences
- E-mails to the suzakunews exploder, for important updates that affect many users
- “Things to watch out for” page
- Other web pages and the ABC guide
ABC Guide Status

• Beta version of ABC Guide for Version 2 data were made available, upon request, in late October

• Update of this version under way
  – Corrections and clarifications
  – Update to correspond to Version 7 FTOOLS
  – Reprocessing of XIS data with new makepi files