



XMM-Newton SAS Current Status I

- SAS, Version 7.1.0, Released July, 2007
 - Improvements:
 - General: 2XMM, XSA2, **simplified installation (one tarball, one script)**, Slew data processing, **RISA**.
 - EPIC: Source detection, PN Temp-dependent gain correction, master PN offset tables, soft proton screening/filtering, PN FIFO reset correction.
 - RGS: single-readout node, background correction/modeling, exporting of flux spectrum as model.
 - OM: Grism improvements, interactive photometry.
 - New tasks:
 - *espfilt, ebkgmap, rgsliccorr, rgsfluxmodel, omphotom.*



XMM SAS Current Status II

- SAS 7.1.0 Problems:
 - Causes:
 - ESAC software/hardware issues (firewall, NAG f95, Mac OS libs).
 - Reprocessing time constraints (LUX).
 - Testing/Validation (bugs (*eexpmap*), libraries).
 - Solutions:
 - Two Patches: **7.1.1** (Aug 2007), **7.1.2** (Feb 2008). **12 tasks.**
 - *Lccorr* dropped (for now).
 - **Rosetta allows cross-compiled SAS to work!**
 - **No need to compile on Intel Macs (for now).**



XMM SAS Future I

- **SAS 8.0.0 scheduled for 18 June 2008**
 - Release track from 9 May 2008.
 - Verification/Testing until 13 June 2008.
- **New Build machines at SOC:**
 - Ten machine *Blade* Rack system.
 - RHEL, Fedora, SuSE, Ubuntu, 2 x 64 Bit.
 - Intel and PPC Mac. Windows Virtual Machine.
 - NAG f95 for 64 Bit Linux machines.
 - Continued Solaris support.



XMM SAS Future II

- Replace *lccorr*.
 - *Epiclccorr*: background subtraction/exp correction.
- EPIC slew data analysis (*eslewchain*).
- PN point source extraction (*epschain*).
- PN fast mode CTI + gain correction (*epfast*).
- Improved OM source detection (for Catalogue):
 - *Omdetect*, *omsrclistcomb*, *omatt*, *ommosaic* upgrades.
- RGS tasks adapted for work on wavelength grid.



XMMGOF Support Activities

- Software support:
 - New Tasks (*espfilt*, *pTrend*).
 - Old Tasks: *orbit*, *hkauptplot*, *dts*.
 - Testing and verification of SAS.
 - Continuing Mac OSX Intel support and testing.
 - Identifying errors and creating reports to SOC (PN problem).
 - Installation/Build/Run Helpdesk (~2-3 per week).
 - Trend database and software.



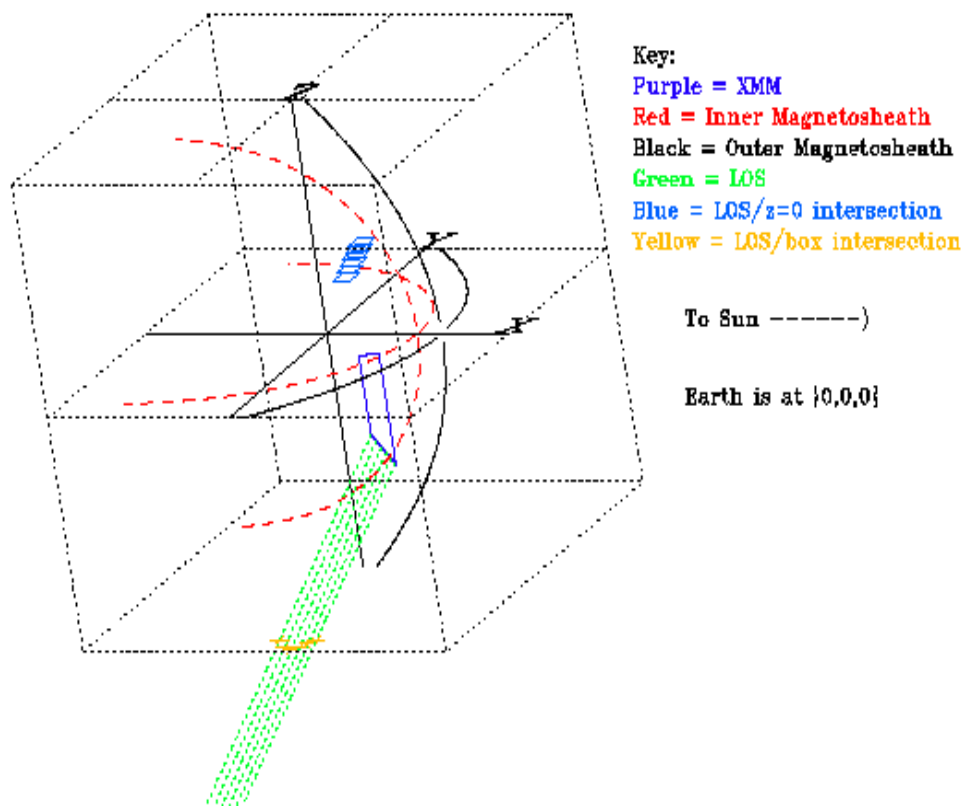
XMM Trend Database and Associated Software

- A database of parameters associated with XMM operation and observations, and other relevant geophysical data.
- Simplify correlations between these parameters.
- Diagnostic information from utility programs (SWCX, SP).
- One FITS file per revolution (orbit).
 - Data from XMM: Time, satellite position look direction, operational modes/filters, radiation monitor.
 - Data from ACE: Time, solar wind composition and flux, magnetic field.
- Plotting ability (IDL: *pTrend*, Ftools: *fplot*, SAS: *hkauxplot*) to create viewable products.



Trend Data plotter: *pTrend*

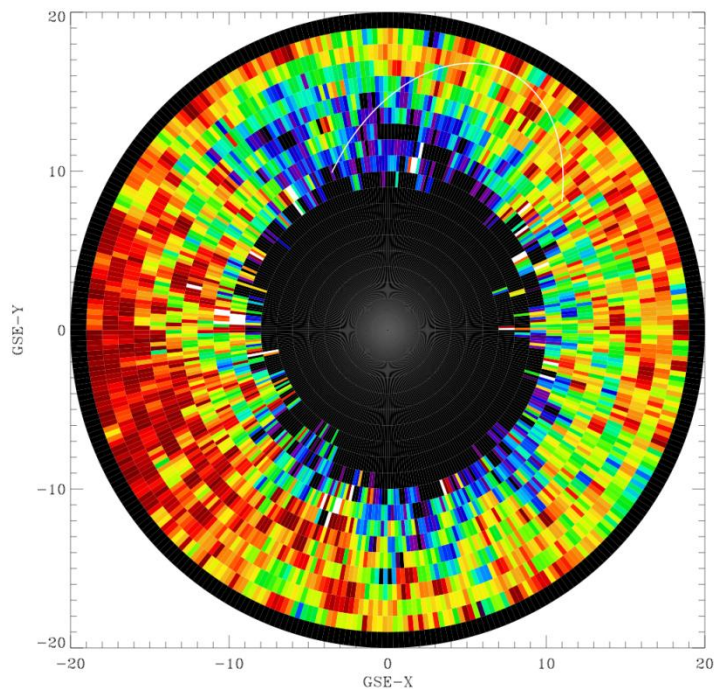
pTrend Output



- IDL (K. Kuntz). Modified by B. Perry (Spring 2008).
- To be release with Trend Data (Summer 2008).
- Reads Solar Wind Data (Density, Velocity) from ACE; XMM Orbit and Pointing data. Creates plot.



IrisPlot.pro



(Spacecraft orbit in white)

- IDL routine (K. Kuntz).
Convert to read Trend Data
(Summer 2008, BHP).
- Plots XMM orbit in relation to
Magnetosheath.
- Each bin shows GTI fraction
for a particular r and θ ,
where θ is the angle
between the spacecraft
position and the earth-sun line.
- Areas in the magnetosheath
seem to have the highest flare
fraction (blue/black/purple).