EPIC Monitoring

Michael Smith, ESAC
EPIC Cal Ops Meeting, ESAC, 12-13 April 2016
New bad pixel table in use from rev. 2871 onwards
MOS Background Maps

MOS1
- Full Frame
- Large Window
- Small Window

MOS2
- Full Frame
- Large Window
- Small Window

CCD1

CCD2

CCD3

CCD4

CCD5

CCD6

CCD7

Revolution number

Revolution number

Revolution number

Revolution number
PN Hot Pixels

Number of Hot Pixels (E >= 744 ADU)

- Misc. Events
- Solar Flares
- Eclipse Seasons
- BPT update (approx.)

Total in blue
Non-uploaded in red

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PN Offset Maps

- CCD 1
- CCD 2
- CCD 3
- CCD 4
- CCD 5
- CCD 6
- CCD 7
- CCD 8
- CCD 9
- CCD 10
- CCD 11
- CCD 12

Offset Map Median

- Misc. Events
- Solar Flares
- Eclipse Seasons
- BPT update (approx.)
PN Empirical Long-Term CTI Correction

Al-Kα Line Centre (ADU)

Mn-Kα Line Centre (ADU)
PN Energy Reconstruction (Singles)
PN Energy Reconstruction (Singles) @ B/S

**Al-Kα Quadrant 1 Line Centre (ADU)**

- $\chi^2_{\text{best}} = 63.477$ (578)

**Mn-Kα Quadrant 1 Line Centre (ADU)**

- $\chi^2_{\text{best}} = 5.800$ (380)

**Al-Kα Quadrant 1 Line Centre (ADU)**

- $\chi^2_{\text{best}} = 43.168$ (97)

**Mn-Kα Quadrant 1 Line Centre (ADU)**

- $\chi^2_{\text{best}} = 4.101$ (85)
Empirical Doubles-Singles Correction

Overcorrection at high E, however undercorrection at low E

Spatial dependency
Empirical Doubles-Singles Correction

Overcorrection at high E, however undercorrection at low E

Spatial dependency

Pattern distributions no longer valid
PN Energy Resolution

Intrinsic width:

- 0.15 ADU/Year
- 0.05 ADU/Year
PN Energy Resolution

After folding through time-dependent RMF