EPIC real-time monitoring

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EPIC real-time QLA monitoring

- INSCON duties:
  - live QLA exposure accumulation of MOSs & PN
  - print-outs of:
    - PN image
    - MOS image (noise diagnostics diagnose)
  - Count rate plots dropped since new EPIC derived parameters introduced (indicators of soft-protons)
  - Reports in the ODV for every EPIC exposure:
    - “performed time” versus “scheduled time”
    - count rate, CCD noise, and exposure comments (internal web only)
EPIC r/t information: ODV

- **ODV**: Observation Database Browser (ODV)
  - Real-time information is immediately available on the Web:
    - http://xmm.vilspa.esa.es/xmmobs/
  - More information available on the internal Web
  - Complete and filled systematically since rev 170.
  - Reduced search capabilities

- **Information also to be dumped into summary tables**:
  - http://xmm.vilspa.esa.es/~xmmdoc/realtime/
  - But at longer timescales (internal web)

- **Paper print-outs**
  - All EPIC exposures since the start of the mission in the operations room.
EPIC radiation monitoring

• **INSCON monitors:**
  - the 2 RGS CCD9D above threshold counters
  - PN discarded line counters
  - the 2 MOS CCD2-7 event counters

• An alarm of any of the above parameters trigger safing of the MOS’s and PN

• Very safe and successful approach: reduced MOS CTI slope since last Nov. 2000 flare

• Very quite “soft-proton” activity November July.
EPIC radiation monitoring

Time lost due to radiations (MOS1)

- July 2000 1st solar flare
- 2nd solar flare
- Nov. 2000 solar flare
- 4th solar flare

Time (s) vs. revolution #

- Belt radiation
- Solar flares

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