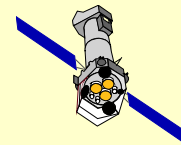


# Status of EPICs Operations

Stéphane RIVES

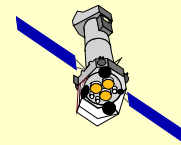
4th of May 2006



*XMM-Newton*

# Introduction

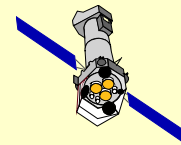
- 1) MOS/PN related issue
- 2) MOS specific
- 3) SCOS2000



# MOS-PN Bit Rate reallocation

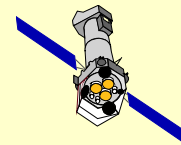
Experience showed that some bandwidth could be reallocated from MOS to PN

- Improve PN science production without affecting MOS science quality
- The following table is now used by default:
  - OM = 1000 kb/s
  - RGS1 = 1500 kb/s
  - RGS2 = 1500 kb/s
  - MOS1 = **12000** kb/s (16000 before)
  - MOS2 = **12000** kb/s (16000 before)
  - PN = **23888** kb/s (15888 before)



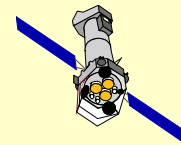
# Substitution heater LCL Trip-on

- Rev. 1114, 7<sup>th</sup> of January 2006, spurious switch-on of the nominal substitution heater, within one exposure:
  - PN:  $-92.46 \text{ degC} < T < -86.24 \text{ degC}$
  - MOS1:  $-118.04 \text{ degC} < T < -120.04 \text{ degC}$
  - MOS2:  $-117.69 \text{ degC} < T < -120.37 \text{ degC}$
- Recovered by the corresponding contingency procedure
- Explanation: SEU
  - 14<sup>th</sup> LCL trip off/on since the BOL
  - 11 occurrences in the last 2 years



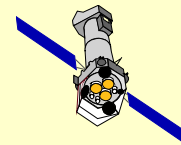
# Redundancies documents

- One document per instrument has been produced to analyze the redundancy cases:
  - Electronic boxes
  - Filter wheel
  - Thermal subsystem
  
- Baseline in case of future failures, and possible further tests



## MOS specific – new fixed offset tables

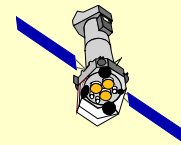
- In order to compensate the long term drift in the MOS background, the overall fixed offsets has been lowered by 1 ADU for:
  - MOS1 CCDs 2, 4 and 7
  - MOS2 CCDs 3, 4, 5 and 7
- Change available with the new database release as of the 27<sup>th</sup> of April, rev. 1169 for manual commanding, ~ 1 month later for timeline commanding



## MOS 1 total loss of telemetry

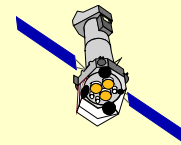
In rev. 1140, on the 28<sup>th</sup> of February:

- @ 20:46z, MOS1 stopped sending Telemetry
- Instrument in IDLE mode, FW closed
- SW cold reset did not work
- A hard reset was finally executed @22:23z
- After the reset, the functioning of the instrument was fully nominal



## Explanations

- EMDH crash followed by a failure of the RBI
- RBI stuck in INIT mode after the EMDH crash
- No explanation other than the SEU one proposed so far
- NCR#118 raised to trace the problem





# SCOS 2000

- SCOS 2000 is now validated and used as our new control system
- Still one release to come to be in line with the “maintainable” version for the infrastructure

