



ACIS Report

- 1. Overall Status of the Instrument**
- 2. Update on the Use of Optional CCDs**
- 3. Change to Default Aimpoints (Tom Aldcroft, Aspect Team)**

ACIS Ops Team



1. Overall Status of the Instrument

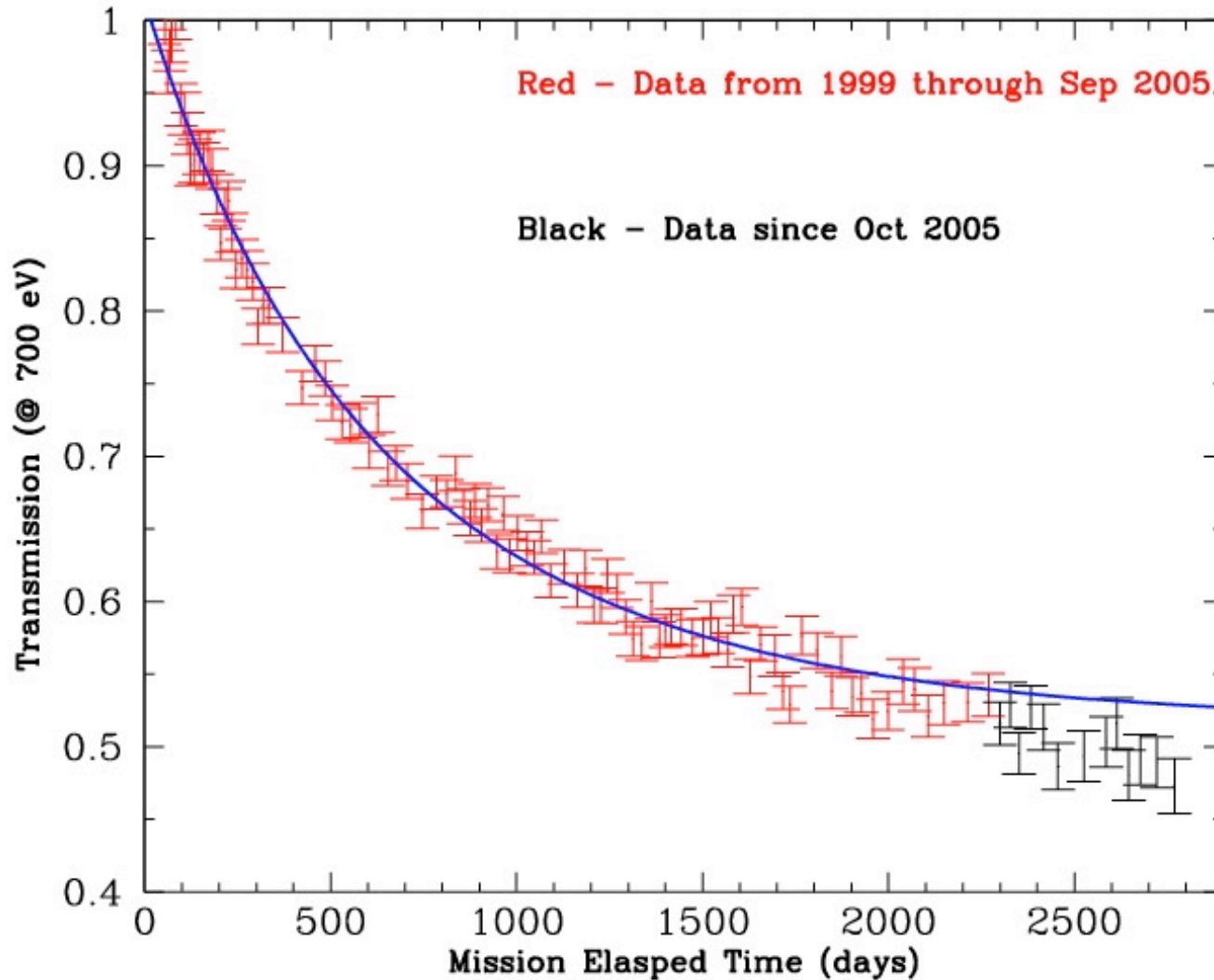
- Instrument continues to work well, no failures to report, no new degradations to report
- Two minor anomalies which the operations team is investigating:
 - reboot of ACIS BEP processor during a radiation event
 - reset of 3 FEPs during a science observation
- CTI increasing consistent with expectations, FI CCDs 2.3%/yr, BI CCDs 1.0%/yr
- Contaminant continues to accumulate slowly, CXC will need to revise the temporal and spectral models for the contaminant
- Thermal issues are the most challenging, observations with pitch angles between 45-60 are limited in duration and/or have reduced numbers of CCDs and pitch angle between 135-180 lead to heating of the ACIS detector housing and hence the focal plane



Chandra X-Ray Observatory

CXC

Update on Contaminant Buildup

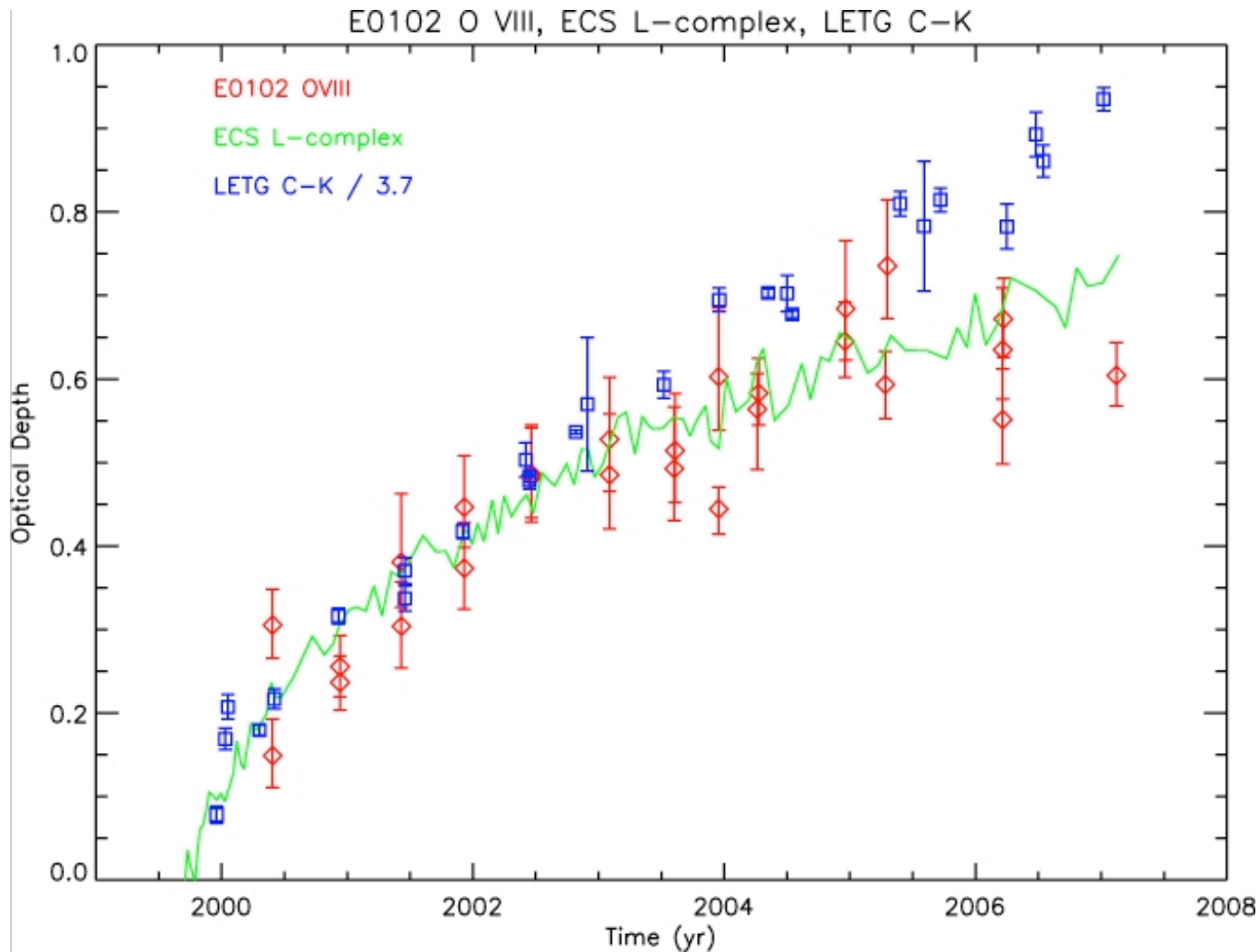


Data for all
Of S3:
Grant (MIT)

Model:
O'Dell &
Tennant
(MSFC)
For middle of
S3
Vikhlinin
(SAO)



Optical Depth Comparison



C-K Marshall (MIT)
inferred optical
depth at 700 eV

ECS Grant (MIT)
Mn L

**E0102 DePasquale
(SAO) OVIII Ly-a**



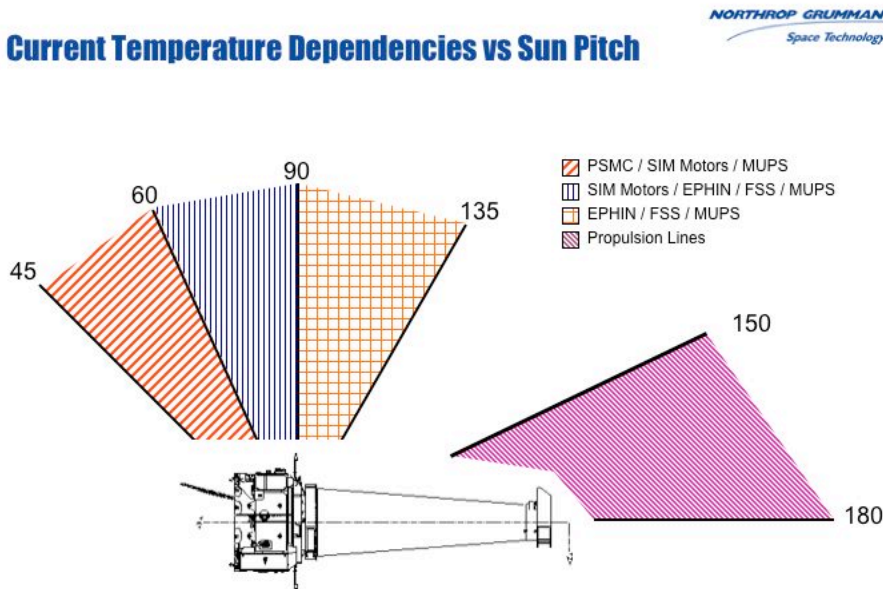
Chandra X-Ray Observatory

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Future Issues: Focal Plane Operating Temperature

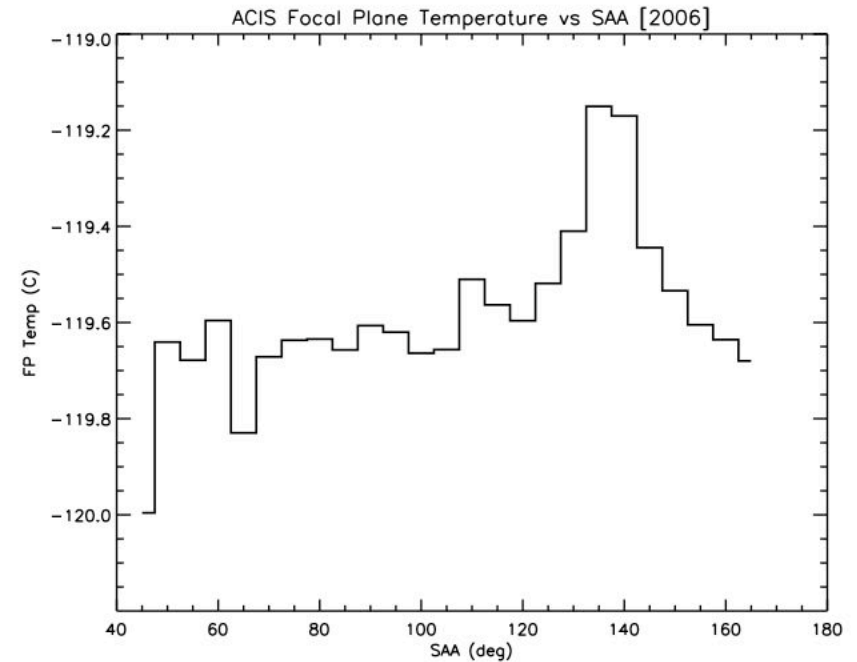
- current operating temperature is -119.7 C
- as the mission has progressed, the frequency and magnitude of deviations from the desired temperature have increased
- it might become necessary to operate at a higher temperature, significant impact for the FI CCDs
- first we will attempt to reduce the heat load on the ACIS detector housing

Current Temperature Dependencies vs Sun Pitch



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NORTHROP GRUMMAN
Space Technology



5



2. Update on Use of Optional CCDs

- **New in AO8, observations with pitch angles between 45-60 degrees will either be limited in duration, have fewer than 6 CCDs operating, and/or be split into shorter pieces**
- **CXC SOT MP has been attempting to schedule observations which utilize 6 CCDs and are relatively long at pitch angles larger than 60 degrees**
- **CXC FOT MP now includes a prediction of the ACIS PSMC temperature in the scheduling process and can adjust the order and/or durations of observations to ensure that the ACIS PSMC temperature does not exceed its limits**
- **Since adopting this strategy in November 2006, there have been two observations which have had one optional CCD turned off (from 6 CCDs to 5 CCDs)**