



ACIS Report

Update on Controlling the FP Temperature

ACIS Ops Team



Chandra X-Ray Observatory

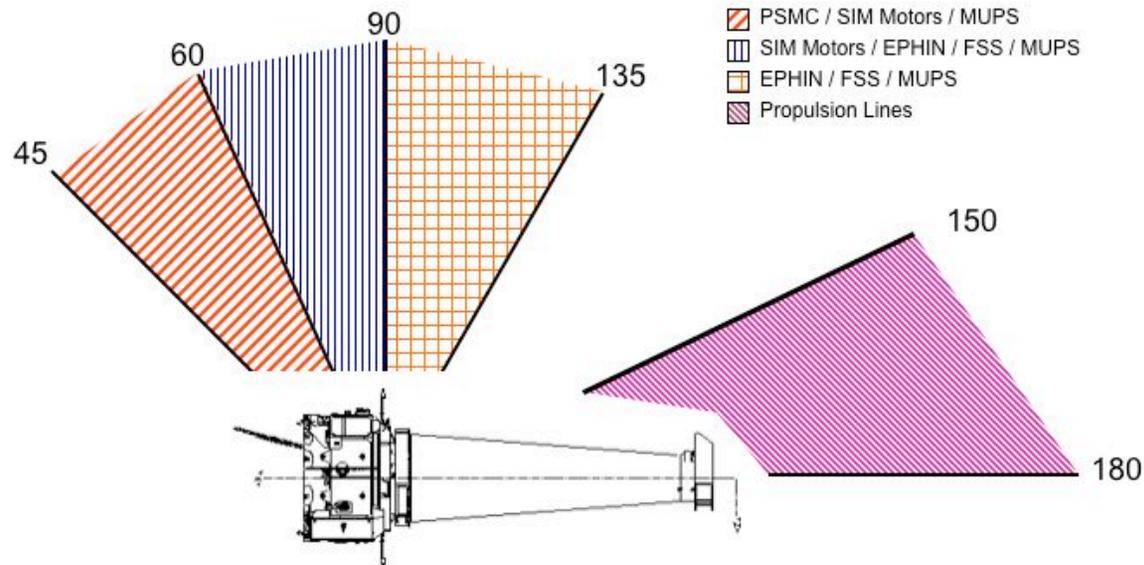
CXC

Why Does the ACIS FP Warm above -119.7 C ?

- I. Earth in the ACIS radiator FOV
- II. Sun on the backside of the SIM

Current Temperature Dependencies vs Sun Pitch

NORTHROP GRUMMAN
Space Technology



1

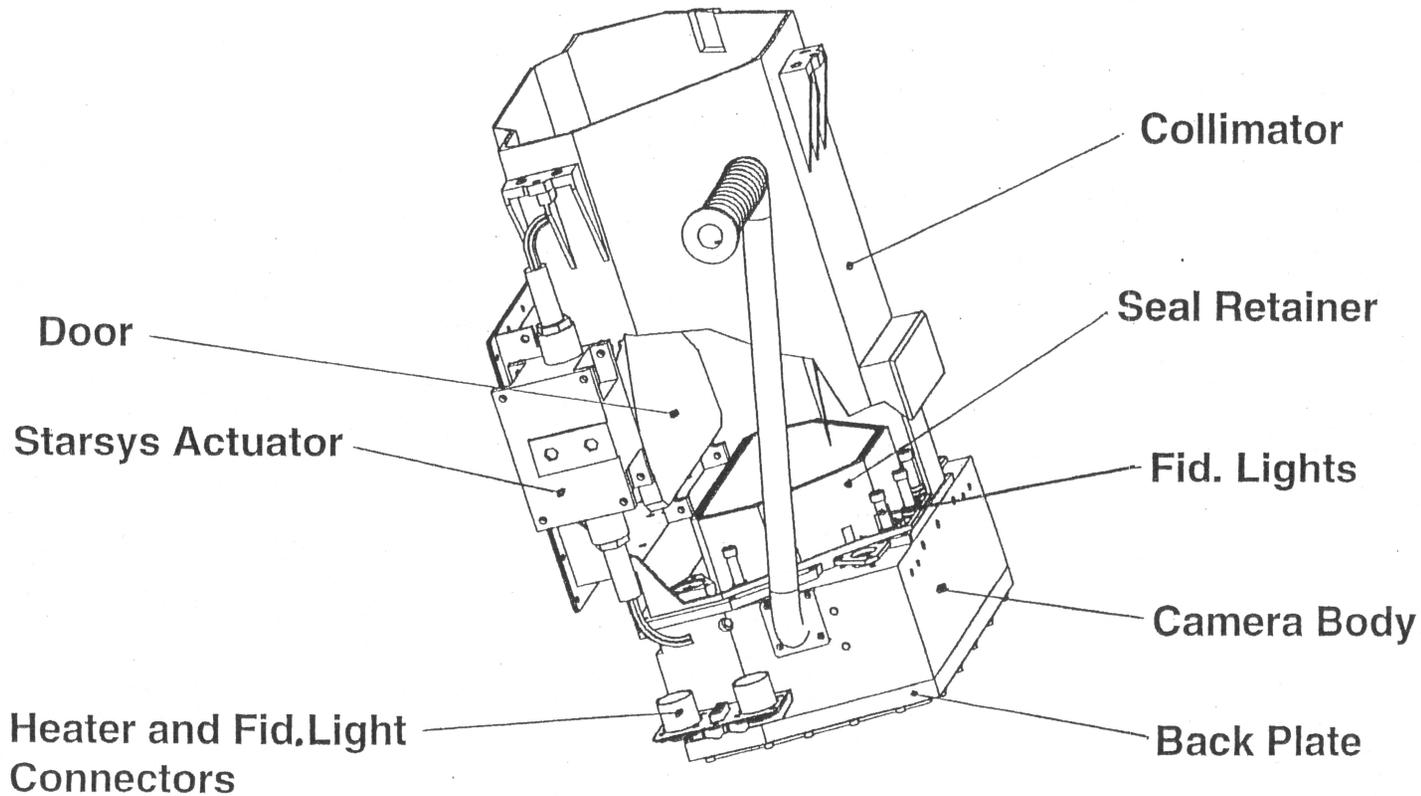
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ACIS Detector Housing Drawings



held to -60 C
 previously,
 fluctuates
 between -72
 and -65 C
 now

T 950524

5



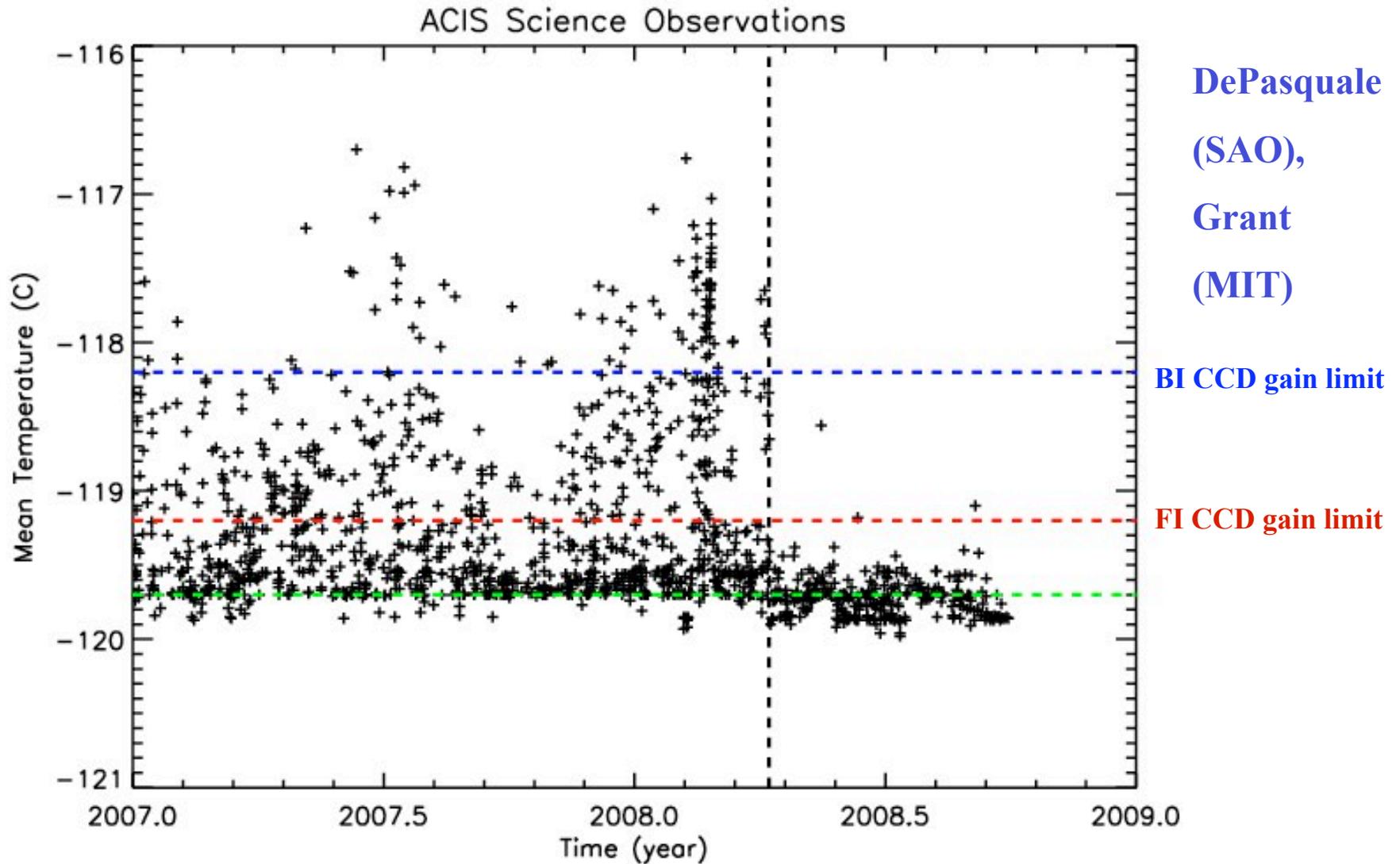
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ACIS DH Heater Turned off on 7 April 2008

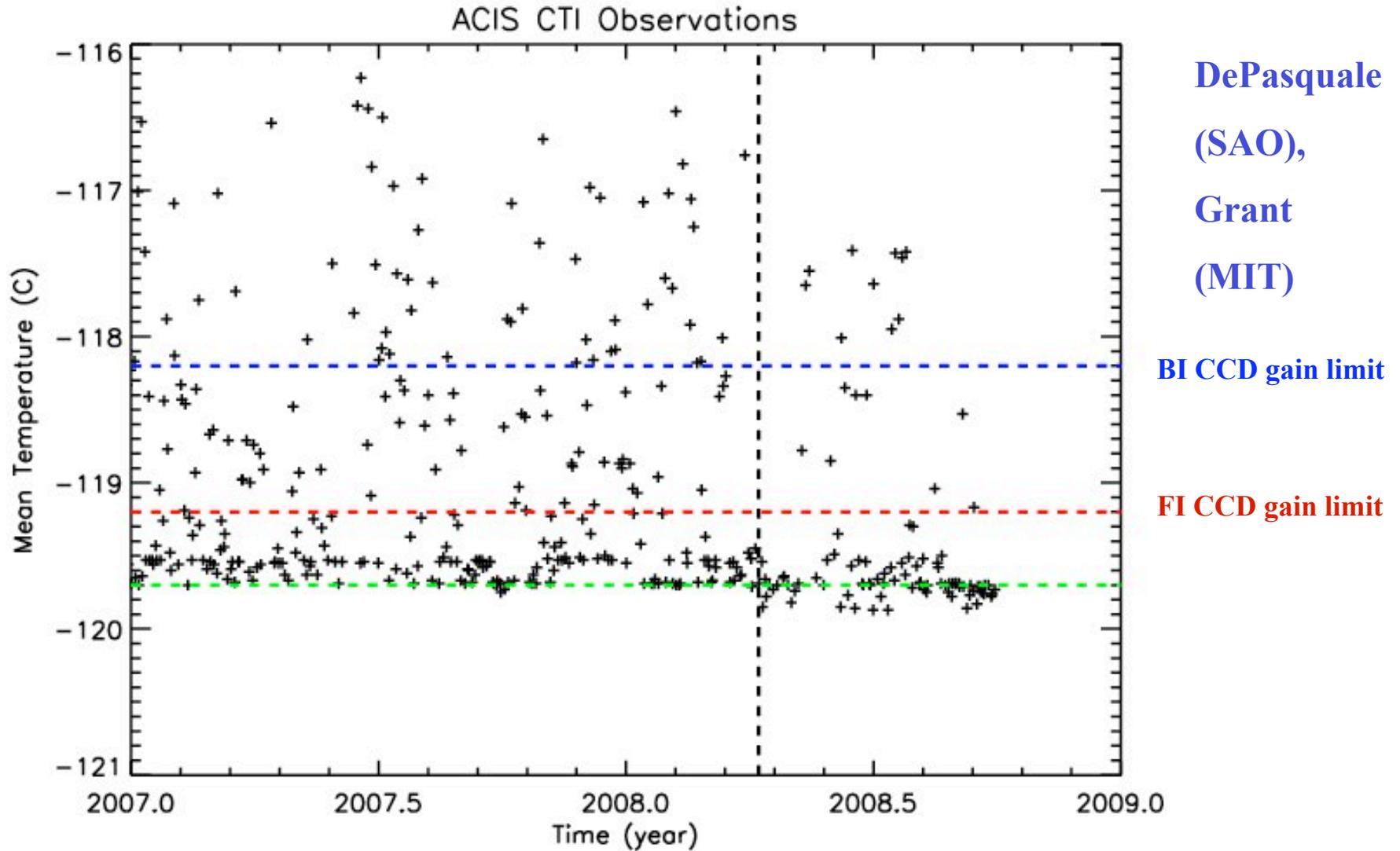




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ACIS DH Heater Turned off on 7 April 2008





Improvement Since the DH Heater was Turned Off

1) Year before DH heater was turned off 2007.3 – 2008.3

334/904 (37%) of science OBSIDs have FP temperature > -119.2 C

106/232 (46%) of CTI OBSIDs have FP temperature > -119.2 C

2) After the DH heater was turned off

3/316 (1%) of science OBSIDs have FP temperature > -119.2 C

18/95 (19%) of CTI OBSIDs have FP temperature > -119.2 C

One More Heater Which Might be Turned Off

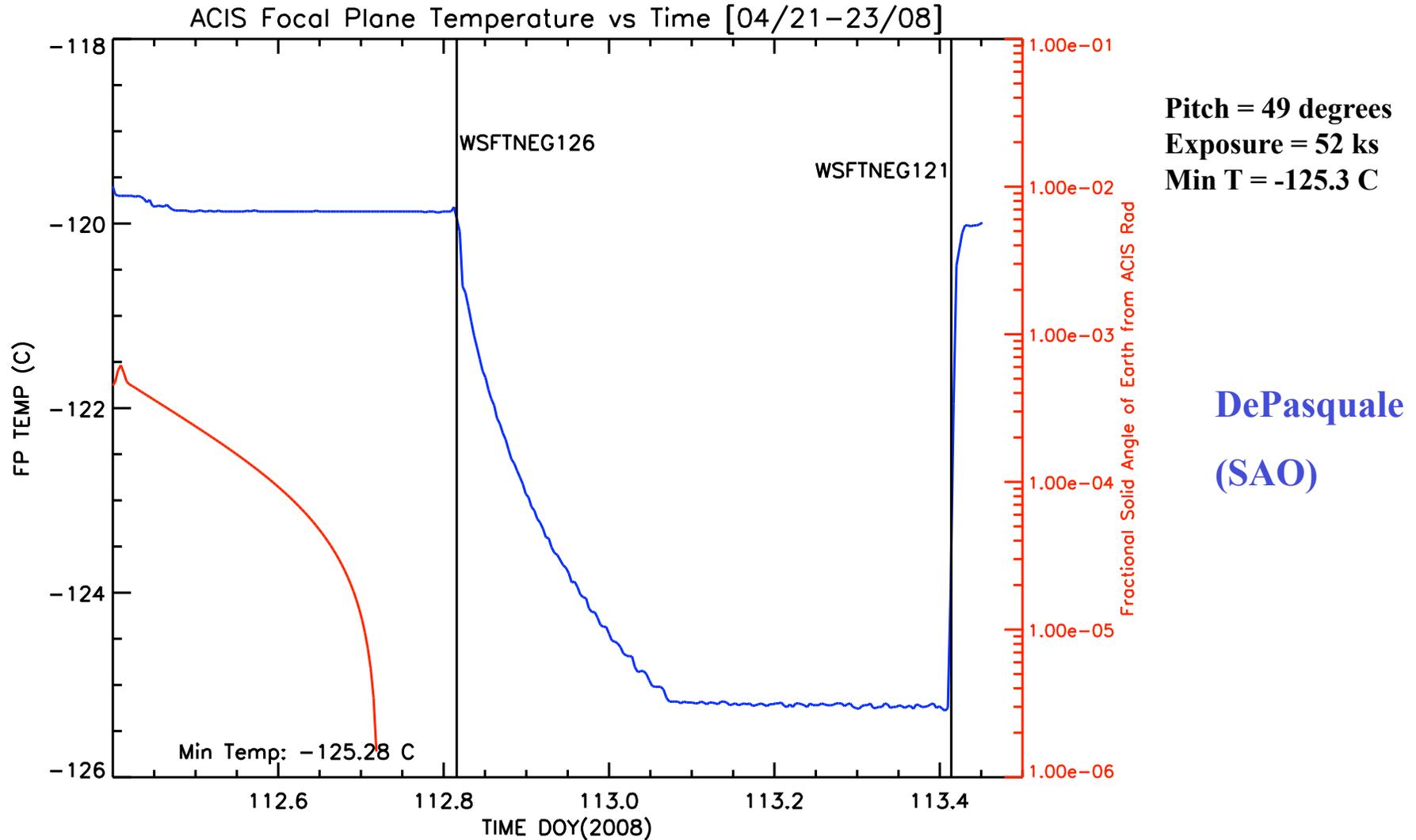
- pre-launch studies indicate that turning off a heater on the SIM Focus Assembly could provide more margin on the ACIS FP
- two tests conducted to date have been inconclusive since any benefit was swamped by Earth in the radiator FOV
- next test planned for 24 Nov 08 week during an long observation in which there will be no Earth in the radiator FOV



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What is the Current Margin on the FP Temperature ?





What is the Current Margin on the FP Temperature ?

