

ACIS Verification Summary Report

Specification:	AXAF Observatory to Science Instrument ICD (IF1-20)
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Requirement Number/Title:	3.3.1.1.1.4.4 ACIS Telescope Shade and Sun Shade Thermal Interfaces for On-Orbit Operation (VRSD 3.3.1.1.1.4.4)
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Requirement Statement: For on-orbit operating hot and cold case telescope shade thermal analysis, the SIM translation table at the telescope shade interface shall be assumed to be $\leq 16^{\circ}\text{C}$ and $\geq -80^{\circ}\text{C}$, with ACIS in the viewing position.

Verification Method:	Analysis
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Procedure Number: Verification Report LMA Report # ACIS-500-77-01VR

Configuration:

ACIS Instrument Installed in ISIM

Cycle Time: N/A

Verification Discussion/Results:

The current predictions for the Telescope Shade Interface is $\leq -25^{\circ}\text{C}$ and $\geq -72^{\circ}\text{C}$ for hot and cold case conditions according to Dave Dooley at BASD (Re: 5/28/97 telecon). Therefore the temperature requirements in this paragraph must be obsolete. However, just to verify this requirement, the full range of operating temperature with margin (-85°C to $+21^{\circ}\text{C}$) was input as the boundary condition for the Telescope Shade mounting interfaces. Positive margins are still shown on focal plane and detector housing temperatures. Therefore, the requirements of paragraph 3.3.1.1.1.4.4 have been satisfied with a conservative analysis. Additional verification of this requirement will occur during ISIM thermal vacuum testing.

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5/29/97
Date