

ACIS Verification Summary Report

36-01515.098

Specification:	ACIS Contract End Item Specification
Requirement Number/Title:	3.2.5.5.4.1 Magnetic field Intensity (VRSD 3.2.5.5.4.1-1)
Requirement Statement: The instrument shall be designed for magnetic cleanliness, wiring control, and minimal dc magnetic fields.	
Verification Method:	EMC Test
Procedure Number:	ACIS -000-78-01 ACIS EMC Test Plan (Dwg #36-01310)
Configuration: As specified in test plan.	
Cycle Time:	
Verification Discussion/Results:	
<u>The magnetic field generated by the observatory equipment shall not exceed 0.8 gauss within the volume allocated to the FPSIs. The magnetic field from any SI shall not exceed 170 dBpT (3 Gauss) at the edge of the SI envelope.</u>	
<p>During EMI/EMC verification testing of the ACIS flight instrument at the Lockheed Martin EMC test facility the ACIS instrument passed the RS01 portion of the ACIS Instrument Electromagnetic Compatibility Test Procedure with no indication of susceptibility. The verification data can be found in the Verification Assessment Report # 36-01510.0150. The ACIS instrument also passed the RE01 portion of the ACIS Instrument Electromagnetic Compatibility Test Procedure and showed worse case levels that were 50dB below the test limits established for the ACIS instrument.</p> <p>The instrument was designed for magnetic cleanliness, wiring control, and minimal dc magnetic fields as a goal. EMI testing demonstrates that the magnetic field generated by the instrument does not degrade its performance below the performance requirements stated in the ACIS CEI Spec. and also demonstrates that the instrument complies with paragraph 3.5.4.1 of the Observatory to Science Instrument ICD.</p> <p>The RE01 portion of the ACIS Instrument Electromagnetic Compatibility Test Procedure will be repeated at MSFC after ACIS X-ray calibration at XRCF is completed. The results of the retest will be available after retesting.</p>	

Edward A. Boughman 5-23-97
ACIS Cognizant Engineer Date