

ACIS Verification Summary Report

Specification:	AXAF Observatory to Science Instrument ICD (IF1-20)
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Requirement Number/Title:	3.9.3.1.1 Interface Testing at SI Facility (VRSD 3.9.3.1.1-1)
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Requirement Statement: SI to AXAF electrical and data communication I/Fs shall be tested at SI (or SI contractor) facilities using a TRW provided CTUE and RCTU.

Verification Method:	DEMONSTRATION
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Procedure Number: 36-01301.02 AS PART OF 36-01310

Configuration: FLIGHT PSMC, DEA, DPA CONFIGURED AT LMA FOR EMI TESTING. TRW-SUPPLIED ENGINEERING UNIT RCTU & CTUE

Cycle Time:

Verification Discussion/Results:

A FUNCTIONAL VERIFICATION OF THE INTERFACES WAS PERFORMED SUBJECT TO CERTAIN LIMITATIONS:

- a) THE RCTU PROVIDED WAS LIMITED TO ONE NON-REDUNDANT SIDE; THE ALTERNATE FUNCTIONALITY HAS NEVER BEEN VERIFIED.
- b) THE TRW-PROVIDED INTERFACE CABLING HAD TO BE MODIFIED BEFORE USE TO AGREE WITH THE ICD.
- c) THE RCTU HAD TO BE POWERED OFF DURING EMI TESTING SINCE ITS EMISSIONS WERE INCOMPATIBLE WITH THE TESTS AT HAND. THIS MEANS THAT EMI EMISSIONS TESTING WAS DONE COMPLETELY IN THE ABSENCE OF COMMANDS & DATA.
- d) THE DATA FORMATS PROVIDED WITH THE CTUE WERE NOT CONTROLLED. THEIR RELATIONSHIP TO THE FLIGHT FORMATS IS UNKNOWN.


ACIS Cognizant Engineer

5/27/97
Date

Element:
ICD/ACIS

Requirement Number:
3.9.3.1.1-1

Verification Item:
3.9.3.1.1-1

Requirement Title:
Interface Testing at SI Facility

AXAF-I Verification Requirement Compliance Data Submittal

Evaluators:
CHE

Type of Review:
 Verification Item Closure
 Multiple Verifications Req'd
 Requirement Closure

Compliance Data/Location:
MA-160/36-01520.097/Rm 522 Bldg 4200 (MIT Closure Report)

Verification Method:
Test

Comments:

OPTIONAL FORM 89 (7-90)

FAX TRANSMITTAL

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To: <i>Bill Mayer</i>	From: <i>Tony Lavoie</i>
Dept./Agency	Phone #
Fax #	Fax #

NSN 7540-01-317-7388 5099-101 GENERAL SERVICES ADMINISTRATION

S/W - Defer recommendation until completion of the ACIS/SIM interface compatibility testing. (R. Schrimsher)

EDI TOPS COMMENTS: APPROVE

EPS TOPS COMMENTS:
NOT APPLICABLE TO POWR. POWER DISTRIBUTION COVERED BY EDI.

Copy of "As-run" test procedure at BASD is attached given to MSFC. William Mayer.

Status

Open 5/30/97 due 6/27/97

Recommendation:

Action Required for Closure:

- Approve
- Disapprove
- Resubmittal
- Other (explain)

Pending verification at BASD during ACIS/SIM interface compatibility testing.

Testing completed on 8/2/97.

MSFC Evaluator:

Date:

Organization:

Phone Number:

Ken Reed

7/14/97

EJ32

4-8580

Disposition:

Action Required for Closure:

- Approve
- Disapprove
- Resubmittal
- Other (explain)

Presently, they are doing the setup for the testing at Ball. We will hold until complete and we get a response back from ACIS on its acceptability from their viewpoint. MSFC will also review from the systems perspective.

Chief Engineer:

Date:

Anthony R. Lavoie

7/24/97

Element:
ICD/ACIS

Requirement Number:
3.9.1.8.8

Verification Item:
3.9.1.8.8

Requirement Title:
Spacecraft Charging Effects

AXAF-I Verification Requirement Compliance Data Submittal

Evaluators:
CHE

Type of Review:
 Verification Item Closure
 Multiple Verifications Req'd
 Requirement Closure

Compliance Data/Location:
MA-119/36-01520.083/Rm 522 Bldg 4200 (MIT Closure Report)

Verification Method:
Analysis

Comments:
NOT APPLICABLE TO POWR.

APPROVE ed12/hammer 8/23/97 (4-1430)

Approved MECH 8/25/97

Disposition changed to "Approve" and "Other" on 8/4/97 by Tony Lavoie, Bill Mayer

Status

Open 5/30/97 due 6/27/97

Recommendation:	Action Required for Closure:
<input checked="" type="checkbox"/> Approve <input type="checkbox"/> Disapprove <input type="checkbox"/> Resubmittal <input type="checkbox"/> Other (explain)	Note: Verification of this requirements validated that ACIS will work while the Observatory discharges. ACIS must also show compliance with TRW SE18 requirements for Spacecraft charging mitigation.

MSFC Evaluator: John Mcdaugal	Date: 7/14/97	Organization: EJ33	Phone Number: 4-1352
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Disposition:	Action Required for Closure:
<input checked="" type="checkbox"/> Approve <input checked="" type="checkbox"/> Disapprove <input checked="" type="checkbox"/> Resubmittal <input checked="" type="checkbox"/> Other (explain)	ACIS reported not being satisfied with charging response. At the Acceptance Review, ACIS took the action to scope out and then perform additional testing to examine in more detail the effects of spacecraft charging upon ACIS. This will be held until ACIS is satisfied with the subject.

Chief Engineer: Anthony R. Lavole	Date: 7/24/97
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