

ACIS Verification Summary Report

Specification:	ACIS Contract End Item Specification
Requirement Number/Title:	3.1.3.2e Calibration and Diagnostic Modes (VRSD 3.1.3.2e-1)
Requirement Statement: All calibration and diagnostic modes shall function both when ACIS is at the HRMA focus and when ACIS is next in line.	
Verification Method:	Demonstration
Procedure Number:	
Configuration: XRCF flat field test, science runs 47,48,and 64 (raw modes), 60(histogram mode) and 1-4 and 10-20 and 17-20 (CCD reverse clocking mode)	
Cycle Time:	
Verification Discussion/Results:	
Telemetry processed through 'getPackets.psci and XRCF1 * Science.log" . Content of file shows that ACIS is insensitive to HRMA focus/next in line position during XRCF/HRMA tests, science run #32.	



ACIS Cognizant Engineer

6/5/57

Date

Element:
ACIS

Requirement Number:
3.1.3.2

Verification Item:
3.1.3.2a-1

AXAF-I Verification Requirement Compliance Data Submittal

Evaluators:
CHE, DMS, IN&C, SAO, SW

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

Requirement Title:
Calibration and Diagnostic Modes

Compliance Data/Location:
MA-250/36-01510.038/Rm 522 Bldg 4200 (Closure Report)
039

Verification Method
Test

Comments:
DMS - N/A; Sys Test
IN&C - N/A: Requires S/W review.
SAO/COJ- SOFTWARE
S/W - Disapprove. The referenced compliance data is incorrect. (R. Schrimsher)

See attached memo of 9/9/97.

William Mayer

Status
Open

Recommendation:
 Approve
 Disapprove
 Resubmittal
 Other (explain)

Action Required for Closure:
Provide correct compliance data.

MSFC Evaluator: Ken Reed Date: 7/18/97 Organization: EJ32 Phone Number: 4-8560

Disposition:
 Approve
 Disapprove
 Waiver
 Pending Action

Action Required for Closure:
First, the test data was not provided. More importantly, it is not clear that these modes work when the telemetry rate is set for HRC as prime, and therefore ACIS gets only 500 bits per sec. Show test data indicating the calibration and diagnostic mode results are in the next-in-line downlink.

Chief Engineer: Anthony R. Lavole Date: 8/18/97

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Memorandum

To: Tony Lavoie
From: W Mayer *Bill Mayer*
Date: September 9, 1997
Subject: VTR 36-01510.039

The test data requested is not available. ACIS has demonstrated the calibration and diagnostic modes in the "standard" 24 kbps mode (data submitted with the initial VTR) and we have demonstrated that we operate correctly in the 500 bps mode. However, we have not demonstrated the diagnostic/calibration mode at 500 bps.

In fact, this verification could be done by inspection of the design or architecture. The ACIS data rate is determined solely by the RCTU interface protocol. Whenever the RCTU asks for a science frame, we give it one. The ACIS instrument doesn't know or care what the data rate is. If the RCTU wants data at 500 bps, it asks for science frames very infrequently. If the RCTU wants data at 24 kbps, it asks for frames more frequently. In fact, if the RCTU asked for data at 100 kbps, we could accommodate the data requests.

It is up to the observers to set up the ACIS operation such that the rate of science frame generation is about equal to, but slightly less than, the rate at which the RCTU is programmed to request data. If the scientist oversubscribes the downlink rate, we simply drop whole science frames.

Tony,

11/5/97

We actually used the calibration mode, at 500 bps, at BASD in checking out the external cal source. (If you recall, HRC took ~ 6 hrs of 24 kbps data for an unscheduled check-out). Worked fine.

Bill Mayer