Report 10974A
29 October 1998

Earth Obs :rving System (EOS)
Advanced Microwave Sounding Unit-A
(EOS/AMSU-A)
Firmware Test Report

Contract No: NAS5-32314
CDRL 217

Submitted to:

National Aeronautics and Space Administration
Goddard Space Flight Center
Greenbelt, Maryland 20771

Submitted by:

Aerojet
1100 West Hollyvale Street
Azusa, California 91702

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SECTION 1

INTRODUCTION

1.1 IDENTIFICATION

This is the *Firmware Test Report* for the firmware to be used in the Earth Observing System (EOS) Advanced Microwave Sounding Unit-A (AMSU-A) instrument. This document is submitted in response to Contract NAS 5-32314 as CDRL 217, Firmware Test Report. Refer to Figure 1 for the software documentation tree.

1.2 SCOPE

This document describes the firmware results of the Formal Qualification Test (FQT) / Demonstration conducted on 21 March 1997, 8 April 1998, and 14 July 1998 for the EOS/AMSU-A instrument.

1.3 PURPOSE AND OBJECTIVES

The purpose of the *Firmware Test Report* is to report on results of the functional, performance, and interface tests of the firmware.

1.4 DOCUMENT STATUS AND SCHEDULE

This is the final submittal of the EOS/AMSU-A *Firmware Test Report.* After firmware tests are performed as a part of the first AMSU-A instrument Comprehensive Performance Test (CPT), the CPT Test Report will constitute the basis for final acceptance of the EOS/AMSU firmware.

1.5 DOCUMENT ORGANIZATION

The EOS/AMSU-A Software Documentation Tree is as shown in Figure 1.

Document	Doc. No.	CDRL No.
Software Management Plan	**10339**	**008**
Acquisition Activities Plan	10341	508
Software Standards and Procedures	---	402
Software Assurance Plan	10428	309
Configuration Management Plan	9803	005
Software Product Specifications	—	**306**
Software Concept Document	10432	306-1a
Software Requirements Specification	10457	306-2a
Software Architectural Design	10464	306-3a
Software Detailed Design Document	10463	306-5a
Firmware Support Manual	10466	306-7
Version Description Document	10467	306-8a
User's Guide	10443	306-10a
Firmware Product Specification	—	**306**
Firmware Concept Document	10436	306-1b
Firmware Requirements	10458	306-2b
Firmware Architectural Design	10460	306-3b
Firmware Detail Design Document	10387	306-5b
Firmware Version Description	10976	306-8b
Software/Firmware Test Plan	**10369/10352**	**033**
Software Test Procedures	AE-26602	415
Software Test Report	10975	217
Firmware Test Procedures	AE-26600	415
Firmware Test Reports	10974	217

Figure 1. EOS/AMSU-A Software Documentation Tree

SECTION 2

RELATED DOCUMENTATION

2.1 PARENT DOCUMENTS

The firmware test plan is the parent document to this test report as indicated in Figure 1.

2.2 APPLICABLE DOCUMENTS

The following documents are referenced or applicable to this test report. Unless otherwise specified, the latest issue is in effect.

NATIONAL AERONAUTICS And SPACE ADMINISTRATION

NASA-DID-A200	Test Procedures Data Item Description
GSFC 422-10-04	Earth Observing System (EOS) Instrument Project Software Acquisition Management Plan
422-11-12-01	General Interface Requirements Document (GIRD)

(Copies of NASA documents should be obtained from the NASA Scientific and Technical Information Facility, P.O. Box 8757, BWI Airport, Baltimore, MD 21240.)

AEROJET DOCUMENTS

Report 10352	EOS/AMSU-A Firmware Test Plan
AE-26600	Earth Observing System/Advanced Microwave Sounding Unit-A (EOS/AMSU-A) Firmware Test Procedure

2.3 INFORMATION DOCUMENTS

Report 10345	EOS/AMSU-A Project Plan, Including Project Organization Chart, WBS Diagram, and Task Description

(Copies of Aerojet documents should be obtained from Aerojet, CAGE 70143, P.O. Box 296, Azusa, California 91702-0296.)

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SECTION 3

TEST IDENTIFICATION AND PREPARATION

3.1 FORMAL QUALIFICATION TEST (FQT)

The Formal Qualification Test (FQT) of the EOS/AMSU-A firmware was conducted in two parts: the initial FQT using breadboard hardware, and the final FQT performed as a part of the initial instrument Comprehensive Performance Test (CPT) to validate the firmware requirements which could not be validated using the breadboard hardware available for the initial test.

3.2 FIRMWARE PRODUCTS UNDER TEST

The firmware products tested were:

CSCI #	Firmware Description
N7	EOS/AMSU-A1 Instrument Control Firmware
N8	EOS/AMSU-A1 Command and Data Handling Firmware
N11	EOS/AMSU-A2 Instrument Control Firmware
N12	EOS/AMSU-A2 Command and Data Handling Firmware

3.3 DATE OF TEST

The initial test was conducted on 21 March 1997. The final test for the AMSU-A2 instrument was conducted on 8 April 1998, and the final test for the AMSU-A1 instrument was conducted on 14 July 1998.

3.4 TEST TEAM MEMBERS

The initial test was conducted by Al Perz and Dennis Luu-EOS/AMSU-A Electronic Design Engineers. The final AMSU-A2 test was conducted by Robert Schwantje-EOS/AMSU-A Software Engineer. The final AMSU-A1 test was conducted by Robert Platt-EOS/AMSU-A Systems Engineer.

3.5 TEST WITNESSES

The initial tests were witnessed by:

Robert Schwantje	Aerojet	Payam Zamani	JPL
A. R. Weller	Aerojet	Jan Gohlke	JPL
Linda Vance	DCMC	Geri Chaudhri	TRW
Barbara Scott	NASA		
Pete Pecori	NASA		

The final tests were witnessed by Aerojet Quality Control representatives.

3.6 ANOMALOUS CONDITIONS ENCOUNTERED AND RECOVERY PROCEDURES ATTEMPTED

The initial test was begun one hour late due to a broken wire and broken integrated circuit chip on the Engineering Model breadboard Command and Data Handling circuit board which was to be used for the tests. The hardware was repaired and the tests were conducted as planned.

A software error in the Special Test Equipment (STE) test software prevented a "FULL PRINT" data record from being obtained during the EOS/AMSU-A2 portion of the tests. This data is useful in the analysis of the test results but is not necessary so the tests were continued.

After the hardware was changed to permit testing of the EOS/AMSU-A1 firmware another hardware problem prevented resumption of testing. This was determined to be a transistor loose in its socket. This condition was corrected and the testing continued with no further anomalies.

No anomalies were encountered during the final tests.

SECTION 4

TEST STATUS AND SUMMARY OF RESULTS

4.1 CSCI's N8 AND N12

The tests demonstrated that the Command and Data Handling CSCI's N8 and N12 met all the requirements specified in the NASA General Interface Requirements Document (GIRD) together with the revised packetization requirements for the EOS/AMSU-A1 data. The functionality of the following requirements were demonstrated during the initial tests. The verification of these requirements took place during the initial instrument CPT for both AMSU-A2 and AMSU-A1.

GIRD Paragraph	Requirement
6.5.5.10	Instrument Timeout
6.5.5.11	Illegal Command Monitoring by Instrument RT
6.5.6.1	Packetization for Commands
6.5.6.2	Command Packet Length
6.5.6.5.1	Toggle Commands
6.5.6.5.3	Bit Encoded Commands
6.5.6.5.6	Command Execution Verification
6.5.7.1	Time Mark Transfer
6.5.7.2.1	Time Code Data and Format
6.5.7.2.2	Time Code Data Transfer
6.5.7.3	Missing Time Marks and Time Code Data (This requirement was waived but the test verified that only the Time Mark with data equal to "7" could not be missed.)
6.5.8.1	Definition of Instrument Engineering Data
6.5.8.2	Engineering Data Packetization
6.5.8.3.1	Content and Structure
6.5.8.3.2	Engineering Data Rate and Packet Size
6.5.8.4	Engineering Data Transfer
6.5.9.3	Low Rate Science Data Packetization
6.5.9.4	Packet Segmentation (Modified by NASA Direction)
6.5.9.5	Low Rate Science Data Transfer

4.2 CSCI's N7 AND N11

The initial tests demonstrated that the Instrument Control CSCI's N7 and N11 met all the requirements that could be demonstrated using the limited "breadboard" hardware test suite. The requirements as specified in the Firmware Requirements Specification, Aerojet Report 10458 that were demonstrated were:

Spec Paragraph	Requirement
5.1.1.2a	Output a Data Header Including Instrument Status
5.1.1.2b5	Read and Place Radiometer Data in FIFO Memory

All other requirements defining Sensor Mode Selection, Antenna Position Control, and Power and Redundancy Switching, together with those that could be demonstrated (as defined above), were verified during the initial instrument CPT.

4.3 ACCEPTANCE CRITERIA

The Software Acceptance Review (SWAR) will be conducted after the conclusion of the final FQT at CPT. The CPT Test Report together with this Test Report will be the basis for the acceptance of the Firmware CSCI's N7, N8, N11, and N12 at the SWAR.

4.4 TEST DATA SHEETS AND DATA PRINTOUTS

Appendix A contains copies of the Test Data Sheets obtained during the initial FQT. Appendix B contains copies of Data Printouts from AMSU-A1 initial FQT. Appendix C contains copies of Data Printouts from AMSU-A2 initial FQT. Appendix D contains copies of Test Data Sheets and Data Printouts from the AMSU-A1 final FQT portion of the instrument CPT. Appendix E contains copies of Test Data Sheets and Data Printouts from the AMSU-A2 final FQT portion of the instrument CPT.

SECTION 5

NOTES

5.1 CHANGES

The outside margins of this document have been marked to indicate where modifications, deletions, or additions have been made since the previous issue. This is done solely as a convenience to users, who are cautioned to evaluate the requirements of this document based on the entire content as written, regardless of the marginal notations and relationship to the previous issue.

APPENDIX A

TEST DATA SHEETS

The following pages contain copies of the Test Data Sheets completed during the AMSU-A1 and A2 initial FQT's.

TEST DATA SHEET 1

Test Case 1 (Paragraph 4.3)

Unit Tested (AMSU-A1 or AMSU-A2) AMSU-A1

STE Tape Loaded E1.EXE;3

Instrument Control Tape Loaded OFPN7-202-00-03

Control and Data Handling Tape Loaded OFPN8-202-00-03

Procedure Step	Requirement Description	Specification Reference	Requirement Satisfied ? yes or no	Hard Copy Test Data Attached ?	Test Data on Tape ?	Related Discrepany Reports	QC
4.3.2a	Reset C&DH	5.1.1.2b,d 5.1.3.1	YES	YES	NO	1. (See Below)	QC 224 3-21-97
4.3.2b	Cold Cal	5.1.1.2b,d 5.1.3.1	YES	YES	NO	1. (See Below)	QC 224 3-21-97
4.3.2c	Cold Cal Position 4	5.1.1.2b,d 5.1.3.1	YES	YES	NO	1. (See Below)	QC 224 3-21-97
4.3.2d	Cold Cal Position 3	5.1.1.2b,d 5.1.3.1	YES	YES	NO	1. (See Below)	QC 224 3-21-97
4.3.2e	Cold Cal Position 2	5.1.1.2b,d 5.1.3.1	YES	YES	NO	1. (See Below)	QC 224 3-21-97
4.3.2f	Cold Cal Position 1	5.1.1.2b,d 5.1.3.1	YES	YES	NO	1. (See Below)	QC 224 3-21-97
4.3.2g	Nadir	5.1.1.2b,d 5.1.3.1	YES	YES	NO	1. (See Below)	QC 224 3-21-97
4.3.2h	Warm Cal	5.1.1.2b,d 5.1.3.1	YES	YES	NO	1. (See Below)	QC 224 3-21-97
4.3.2i	Full Scan	5.1.1.2b,d 5.1.3.1	YES	YES	NO	1. (See Below)	QC 224 3-21-97

Comments: 1. See SDR EOS 001 and EOS 003, EOS 002 and EOS 004 QC 224 3-21-97

Authentication:

Aerojet System Test: A.F. Perz Date: 3-21-97

Aerojet Quality Assurance: A.R. Weller Date: 3-21-97

Customer Representative: _____ Date: _____

Other Witness (optional): _____ Date: _____

TEST DATA SHEET 2

Test Case 2 (Paragraph 4.4)

Unit Tested (AMSU-A1 or AMSU-A2) AMSU-A1

STE Tape Loaded E1.EXE;3

Instrument Control Tape Loaded OFPN7-202-00-03

Control and Data Handling Tape Loaded OFPN8-202-00-03

Procedure Step	Requirement Description	Specification Reference	Requirement Satisfied ? yes or no	Hard Copy Test Data Attached ?	Test Data on Tape ?	Related Discrepany Reports	QC
4.4.4a	Data Stream	5.1.1.2a, 5.1.3.4, 5.1.3.6	YES	YES	NO	See Below	QC 224 3-21-97
4.4.4c	Beam Position NN	5.1.1.2b5 5.1.3.7	YES	YES	NO	See Below	QC 224 3-21-97
4.4.4e	Channel NN	5.1.1.2b5 5.1.3.7	YES	YES	NO	See Below	QC 224 3-21-97
4.4.4g	Warm Calibrate	5.1.1.2b5 5.1.3.7	YES	YES	NO	See Below	QC 224 3-21-97
4.4.4i	Cold Calibrate	5.1.1.2b5 5.1.3.7	YES	YES	NO	See Below	QC 224 3-21-97
4.4.4k	Reflector Positions	5.1.1.2b4 5.1.3.7	YES	YES	NO	See Below	QC 224 3-21-97
4.4.5	Checksum sub-address	5.1.3.3, 5.1.3.9, 5.1.3.10	YES	YES	NO	See Below	QC 224 3-21-97
4.4.6	8-Sec Scan	5.1.3.2	YES	YES	NO	See Below	QC 224 3-21-97
4.4.7	Skip Time Mark		YES	YES	NO	See Below	QC 224 3-21-97
4.4.8	Invalid APID	5.2.3	YES	YES	NO	See Below	QC 224 3-21-97

Comments: EOS 001, 002, 003, 004 QC 224 3-21-97

Authentication:

Aerojet System Test: Dennis Luu Date: 3-21-97

Aerojet Quality Assurance: A.R. Weller Date: 3-21-97

Customer Representative: _____ Date: _____

Other Witness (optional): _____ Date: _____

TEST DATA SHEET 1

Test Case 1 (Paragraph 4.3)

Unit Tested (AMSU-A1 or AMSU-A2) AMSU-A2

STE Tape Loaded E2.EXE;3

Instrument Control Tape Loaded OFPN11-202-00-03

Control and Data Handling Tape Loaded OFPN12-202-00-03

Procedure Step	Requirement Description	Specification Reference	Requirement Satisfied ? yes or no	Hard Copy Test Data Attached ?	Test Data on Tape ?	Related Discrepany Reports	QC
4.3.2a	Reset C&DH	5.1.1.2b,d 5.1.3.1	YES	YES	NO	1. (See Below)	QC 224 3-21-97
4.3.2b	Cold Cal	5.1.1.2b,d 5.1.3.1	YES	YES	NO	1. (See Below)	QC 224 3-21-97
4.3.2c	Cold Cal Position 4	5.1.1.2b,d 5.1.3.1	YES	YES	NO	1. (See Below)	QC 224 3-21-97
4.3.2d	Cold Cal Position 3	5.1.1.2b,d 5.1.3.1	YES	YES	NO	1. (See Below)	QC 224 3-21-97
4.3.2e	Cold Cal Position 2	5.1.1.2b,d 5.1.3.1	YES	YES	NO	1. (See Below)	QC 224 3-21-97
4.3.2f	Cold Cal Position 1	5.1.1.2b,d 5.1.3.1	YES	YES	NO	1. (See Below)	QC 224 3-21-97
4.3.2g	Nadir	5.1.1.2b,d 5.1.3.1	YES	YES	NO	1. (See Below)	QC 224 3-21-97
4.3.2h	Warm Cal	5.1.1.2b,d 5.1.3.1	YES	YES	NO	1. (See Below)	QC 224 3-21-97
4.3.2i	Full Scan	5.1.1.2b,d 5.1.3.1	YES	YES	NO	1. (See Below)	QC 224 3-21-97

Comments: 1. See SDR EOS 001, 002, 003, 004 QC 224 3-21-97

Authentication:

Aerojet System Test: A.F. Perz Date: 3-21-97

Aerojet Quality Assurance: A.R. Weller Date: 3-21-97

Customer Representative: _____ Date: _____

Other Witness (optional): _____ Date: _____

TEST DATA SHEET 2

Test Case 2 (Paragraph 4.4)

Unit Tested (AMSU-A1 or AMSU-A2) AMSU-A2

STE Tape Loaded E2.EXE;3

Instrument Control Tape Loaded OFPN11-202-00-03

Control and Data Handling Tape Loaded OFPN12-202-00-03

Procedure Step	Requirement Description	Specification Reference	Requirement Satisfied ? yes or no	Hard Copy Test Data Attached ?	Test Data on Tape ?	Related Discrepany Reports	QC
4.4.4a	Data Stream	5.1.1.2a, 5.1.3.4, 5.1.3.6	YES	YES	NO	1. (See Below)	QC 224 3-21-97
4.4.4c	Beam Position NN	5.1.1.2b5 5.1.3.7	YES	YES	NO	1. (See Below)	QC 224 3-21-97
4.4.4e	Channel NN	5.1.1.2b5 5.1.3.7	YES	YES	NO	1. (See Below)	QC 224 3-21-97
4.4.4g	Warm Calibrate	5.1.1.2b5 5.1.3.7	YES	YES	NO	1. (See Below)	QC 224 3-21-97
4.4.4i	Cold Calibrate	5.1.1.2b5 5.1.3.7	YES	YES	NO	1. (See Below)	QC 224 3-21-97
4.4.4k	Reflector Positions	5.1.1.2b4 5.1.3.7	YES	YES	NO	1. (See Below)	QC 224 3-21-97
4.4.5	Checksum sub-address	5.1.3.3, 5.1.3.9, 5.1.3.10	YES	YES	NO	1. (See Below)	QC 224 3-21-97
4.4.6	8-Sec Scan	5.1.3.2	YES	YES	NO	1. (See Below)	QC 224 3-21-97
4.4.7	Skip Time Mark		YES	YES	NO	1. (See Below)	QC 224 3-21-97
4.4.8	Invalid APID	5.2.3	YES	YES	NO	1. (See Below)	QC 224 3-21-97

Comments: 1. See SDR EOS 001 and EOS 003, EOS 002 and EOS 004 QC 224 3-21-97

Authentication:

Aerojet System Test: A.F. Perz Date: 3-21-97

Aerojet Quality Assurance: A.R. Weller Date: 3-21-97

Customer Representative: _____ Date: _____

Other Witness (optional): _____ Date: _____

GENCORP AEROJET	SOFTWARE QUALITY ASSURANCE PROCEDURE (SQAP) No: 103_3 Revision: B Effective Date: 11/19/96 Supersedes: Page 1 of 1
SOFTWARE DISCREPANCY REPORT (SDR)	Approved by: A. R. Weller Sr. Software Quality Engineer

Section I SDR # EOS001

To: R. Schwantje Issue date: 3-18-97 Due Date 3-20-97

Project: EOS/AMSU-A Software: E1.EXE;3 E2.EXE;3 Rev: 0 Version: 3

SQA Activity: DRY RUN FQT Date: 3-18-97 Time: 09:30 Location:: 170

Control Document: Report 10458 Rev: A

Section II Discrepancy type: RQMT __ Design __ Code __ Test X Data ____ Doc. _____ Other ____

Description of Discrepancy:

1) The SQA basis for acceptance requires that Support Software be qualified prior to its use in formal qualification testing where the results will be used to determine acceptance of the unit under test. The test software has not been qualified.

2) Test software does not provide required functionally to demonstrate compliance to requirements defined in Report 10458, Firmware Requirements Specification.

Submitted by: Ray Weller Date: 3-18-97 Ext. 1492 Bldg 160 Dept. 7831

Section III Analysis and Corrective Action:

1) THE FLIGHT SOFTWARE IS REQUIRED TO QUALIFY THE TEST SOFTWARE THE TEST SOFTWARE IS REQUIRED TO QUALIFY THE FLIGHT SOFTWARE. THEREFORE UN QUALIFIED SUPPORT SOFTWARE(TEST SOFTWARE) MUST BE USED TO QUALIFY FLIGHT SOFTWARE.

2) ALL REQUIRED FUNCTIONALITY IS PROVIDED IN TEST SOFTWARE. CUSTOMER(NASA) APPROVED TEST PLANS AN PROCEDURES.

Program Engineer: R S Schwantje Assigned to Actionee: _____ Due Date: _____

Section IV Cross Reference SCR: _____

Corrective Action Approved ____ Disapproved ____

SQE _____ Date: _____

Customer: _____ Date: _____

GENCORP AEROJET	SOFTWARE QUALITY ASSURANCE PROCEDURE (SQAP) No: 103_3 Revision: B Effective Date: 11/19/96 Supersedes: Page 1 of 1
SOFTWARE DISCREPANCY REPORT (SDR)	Approved by: A. R. Weller Sr. Software Quality Engineer

Section I SDR # EOS002

To: R. Schwantje Issue date: 3-21-97 Due Date 3-27-97

Project: EOS/AMSU-A Software: E2.EXE, N9 Rev: 0 Version: 0

SQA Activity: EOS/AMSU-A FQT Date: 3-21-97 Time: 0900 Location:: 170

Control Document: AE26600 Rev: n/c

Section II Discrepancy type: RQMT ___ Design ___ Code ___ Test X Data ___ Doc. ___ Other ___

Description of Discrepancy:

A2 Step 5. Error Messages not displayed on Test System Display. Received "0 0"

Submitted by: Ray Weller Date: 3-21-97 Ext. 1492 Bldg 106 Dept. 7831

Section III Analysis and Corrective Action:

TEST SOFTWARE CORRECTED AND TEST RERUN 4/8/98 - DATA INCLUDED AS APPENDIX TO FLIGHT S/W TEST REPORT 10974

Program Engineer: R Schwantje Assigned to Actionee: _____ Due Date: _____

Section IV Cross Reference SCR: _____

Corrective Action Approved ___ Disapproved ___

SQE _____ Date: _____

Customer: _____ Date: _____

GENCORP AEROJET	SOFTWARE QUALITY ASSURANCE PROCEDURE (SQAP) No: 103_3 Revision: B Effective Date: 11/19/96 Supersedes: Page 1 of 1
SOFTWARE DISCREPANCY REPORT (SDR)	Approved by: A. R. Weller Sr. Software Quality Engineer

Section I SDR # EOS003

To: R. Schwantje Issue date: 3-21-97 Due Date 3-27-97

Project: EOS/AMSU-A Software: E1.EXE, N6 Rev: 0 Version: 0

SQA Activity: EOS/AMSU-A FQT Date: 3-21-97 Time: 0930 Location:: 170

Control Document: AE26600 Rev: n/c

Section II Discrepancy type: RQMT __ Design __ Code __ Test X Data ____ Doc. _____ Other ____

Description of Discrepancy:

STE Software could not get out of the Skip 7 command during A1 test.

Submitted by: Ray Weller Date: 3-21-97 Ext. 1492 Bldg 160 Dept. 7831

Section III Analysis and Corrective Action:

TEST SOFTWARE CORRECTED AND TEST RERUN 4/8/98.

Program Engineer: R Schwantje Assigned to Actionee: _____ Due Date: _____

Section IV Cross Reference SCR: _____

Corrective Action Approved ____ Disapproved ____

SQE _____ Date: _____

Customer: _____ Date: _____

GENCORP AEROJET	SOFTWARE QUALITY ASSURANCE PROCEDURE (SQAP) No: 103_3 Revision: B Effective Date: 11/19/96 Supersedes: Page 1 of 1
SOFTWARE DISCREPANCY REPORT (SDR)	Approved by: A. R. Weller Sr. Software Quality Engineer

Section I SDR # EOS004

To: R. Schwantje Issue date: 3-21-97 Due Date 3-27-97

Project: EOS/AMSU-A Software: E2.EXE, N9 Rev: 0 Version: 0

SQA Activity: EOS/AMSU-A FQT Date: 3-21-97 Time: 0930 Location:: 170

Control Document: AE26600 Rev: n/c

Section II Discrepancy type: RQMT __ Design __ Code __ Test X Data ____ Doc. ____ Other __

Description of Discrepancy:

A2 Test step 4.3. Full scan science data Menu. Systems fails when selecting full screen print.

Note: Indication is: not enough space allocated for data table/array.

Submitted by: Ray Weller Date: 3-21-97 Ext. 1492 Bldg 160 Dept. 7831

Section III Analysis and Corrective Action:

TEST SOFTWARE CORRECTED AND TEST RE RUN 4/8/98 - DATA INCLUDED IN APPENDIX TO FLIGHT SOFTWARE TEST REPORT 10974

Program Engineer: R Schwantje Assigned to Actionee: _____ Due Date: _____

Section IV Cross Reference SCR: _____

Corrective Action Approved ____ Disapproved ____

SQE _____ Date: _____

Customer: _____ Date: _____

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APPENDIX B

DATA PRINTOUTS FOR AMSU-A1

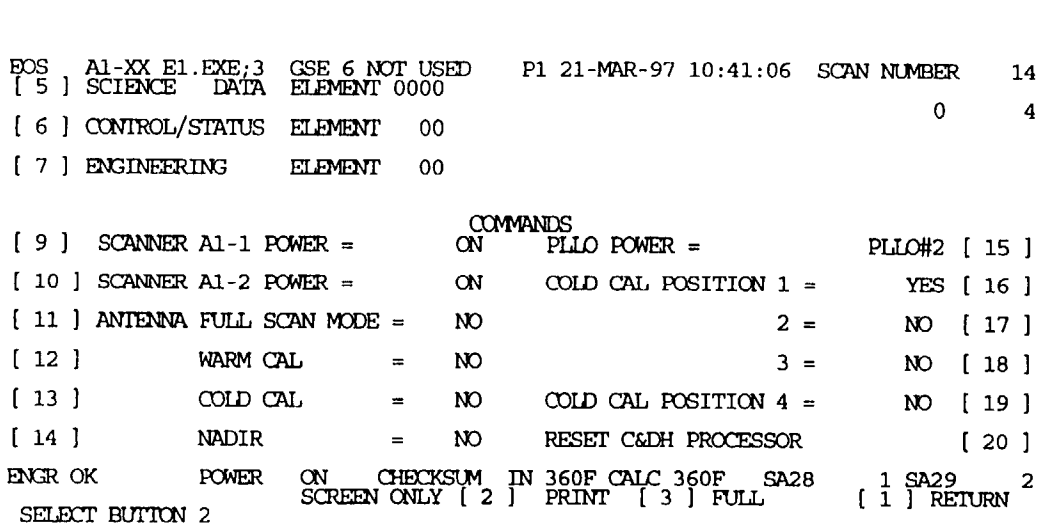
The following pages contain copies of the data printouts obtained during the AMSU-A1 initial FQT.

```
EOS   A1-XX E1.EXE;3   GSE 6 NOT USED      P1 21-MAR-97 10:39:56  SCAN NUMBER        5
[ 5 ] SCIENCE   DATA   ELEMENT 0000
[ 6 ] CONTROL/STATUS   ELEMENT    00                                         0       5
[ 7 ] ENGINEERING      ELEMENT    00

                                    COMMANDS
[ 9 ]  SCANNER A1-1 POWER =        ON     PLLO POWER =               PLLO#2 [ 15 ]
[ 10 ] SCANNER A1-2 POWER =        ON     COLD CAL POSITION 1 =         YES [ 16 ]
[ 11 ] ANTENNA FULL SCAN MODE =    NO                       2 =          NO [ 17 ]
[ 12 ]         WARM CAL       =    NO                       3 =          NO [ 18 ]
[ 13 ]         COLD CAL       =    NO     COLD CAL POSITION 4 =          NO [ 19 ]
[ 14 ]         NADIR          =    NO     RESET C&DH PROCESSOR              [ 20 ]
ENGR OK        POWER      ON    CHECKSUM  IN 36D7 CALC 36D7   SA28    15 SA29      29
                          SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL      [ 1 ] RETURN
 SELECT BUTTON 2
```

EOS/AMSU-A A1 FGT 3-21-97

QC 224


EOS A1-XX E1.EXE;3 GSE 6 NOT USED P1 21-MAR-97 10:41:06 SCAN NUMBER 14
[5] SCIENCE DATA ELEMENT 0000
0 4
[6] CONTROL/STATUS ELEMENT 00
[7] ENGINEERING ELEMENT 00
COMMANDS
[9] SCANNER A1-1 POWER = ON PLLO POWER = PLLO#2 [15]
[10] SCANNER A1-2 POWER = ON COLD CAL POSITION 1 = YES [16]
[11] ANTENNA FULL SCAN MODE = NO 2 = NO [17]
[12] WARM CAL = NO 3 = NO [18]
[13] COLD CAL = NO COLD CAL POSITION 4 = NO [19]
[14] NADIR = NO RESET C&DH PROCESSOR [20]
ENGR OK POWER ON CHECKSUM IN 360F CALC 360F SA28 1 SA29 2
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT BUTTON 2

QC 224
3-21-97

EOS A1-XX E1.EXE;3 GSE 6 NOT USED P1 21-MAR-97 10:41:41 SCAN NUMBER 18
[5] SCIENCE DATA ELEMENT 0000
[6] CONTROL/STATUS ELEMENT 00 0 7
[7] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	13	25	0	33	0	41	0	49	0	57	1
2	3	10	0	18	192	26	0	34	0	42	0	50	0	58	1
3	192	11	0	19	24	27	1	35	0	43	0	51	0	59	0
4	4	12	0	20	0	28	1	36	0	44	0	52	0	60	0
5	2	13	0	21	0	29	0	37	0	45	0	53	0	61	1
6	191	14	0	22	0	30	0	38	0	46	0	54	0	62	1
7	0	15	0	23	1	31	0	39	0	47	0	55	0	63	0
8	174	16	0	24	1	32	0	40	0	48	0	56	0	64	0

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 36C5 CALC 36C5 SA28 5 SA29 10
SELECT BUTTON 2 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

QC 224 3-21-97

```
EOS   A1-XX E1.EXE;3  COLD CAL MODE      P1 21-MAR-97 10:42:45  SCAN NUMBER     26
[ 5 ] SCIENCE   DATA  ELEMENT 0000                                        FFFF      4
[ 6 ] CONTROL/STATUS  ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00

                                        COMMANDS
[ 9 ]  SCANNER A1-1 POWER =        ON     PLLO POWER =                PLLO#2 [ 15 ]
[ 10 ] SCANNER A1-2 POWER =        ON     COLD CAL POSITION 1 =         YES [ 16 ]
[ 11 ] ANTENNA FULL SCAN MODE =    NO                       2 =        NO  [ 17 ]
[ 12 ]         WARM CAL        =   NO                       3 =        NO  [ 18 ]
[ 13 ]         COLD CAL        =   YES    COLD CAL POSITION 4 =        NO  [ 19 ]
[ 14 ]         NADIR           =   NO     RESET C&DH PROCESSOR              [ 20 ]
ENGR OK        POWER   ON    CHECKSUM  IN 361D CALC 361D   SA28    14 SA29    28
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL       [ 1 ] RETURN
 SELECT BUTTON 2
```

EOS A1-XX_E1.EXE;3 COLD CAL MODE P1 21-MAR-97 10:43:09 SCAN NUMBER 29
[5] SCIENCE DATA ELEMENT 0000
[6] CONTROL/STATUS ELEMENT 00 FFFF 0
[7] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	13	25	0	33	0	41	0	49	0	57	1
2	3	10	0	18	0	26	0	34	0	42	0	50	0	58	1
3	192	11	0	19	24	27	1	35	0	43	0	51	0	59	0
4	15	12	0	20	8	28	1	36	0	44	0	52	0	60	0
5	2	13	0	21	0	29	0	37	0	45	0	53	0	61	1
6	191	14	0	22	0	30	0	38	0	46	0	54	0	62	1
7	0	15	0	23	1	31	0	39	0	47	0	55	0	63	0
8	174	16	0	24	1	32	0	40	0	48	0	56	0	64	0

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 3623 CALC 3623 SA28 17 SA29 33
SELECT BUTTON 2 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

QC 224
3-21-97

```
EOS   A1-XX E1.EXE;3  COLD CAL MODE      P1 21-MAR-97 10:44:22  SCAN NUMBER     38
[ 5 ] SCIENCE   DATA  ELEMENT 0000                                          0      2
[ 6 ] CONTROL/STATUS  ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00

                                        COMMANDS
[ 9 ]  SCANNER A1-1 POWER =        ON     PLLO POWER =                PLLO#2 [ 15 ]
[ 10 ] SCANNER A1-2 POWER =        ON     COLD CAL POSITION 1 =         NO   [ 16 ]
[ 11 ] ANTENNA FULL SCAN MODE =    NO                       2 =         NO   [ 17 ]
[ 12 ]         WARM CAL        =   NO                       3 =         NO   [ 18 ]
[ 13 ]         COLD CAL        =   YES    COLD CAL POSITION 4 =         YES  [ 19 ]
[ 14 ]         NADIR           =   NO     RESET C&DH PROCESSOR                [ 20 ]
ENGR OK        POWER   ON    CHECKSUM  IN 3695 CALC 3695   SA28    26 SA29    51
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL       [ 1 ] RETURN
 SELECT BUTTON 2
```


```
EOS   A1-XX E1.EXE;3  COLD CAL MODE      P1 21-MAR-97 10:45:42  SCAN NUMBER     48
[ 5 ] SCIENCE   DATA  ELEMENT 0000                                              0      1
[ 6 ] CONTROL/STATUS  ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00

                                        COMMANDS
[ 9 ]  SCANNER A1-1 POWER =        ON     PLLO POWER =                PLLO#2 [ 15 ]
[ 10 ] SCANNER A1-2 POWER =        ON     COLD CAL POSITION 1 =         NO   [ 16 ]
[ 11 ] ANTENNA FULL SCAN MODE =    NO                       2 =         NO   [ 17 ]
[ 12 ]         WARM CAL       =    NO                       3 =         YES  [ 18 ]
[ 13 ]         COLD CAL       =    YES    COLD CAL POSITION 4 =         NO   [ 19 ]
[ 14 ]         NADIR          =    NO     RESET C&DH PROCESSOR                [ 20 ]
ENGR OK        POWER  ON    CHECKSUM  IN 3689 CALC 3689   SA28   36 SA29    71
 SELECT BUTTON 2          SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL    [ 1 ] RETURN
```

EOS A1-XX E1.EXE;3 COLD CAL MODE P1 21-MAR-97 10:44:47 SCAN NUMBER 41
[5] SCIENCE DATA ELEMENT 0000 0 0

[6] CONTROL/STATUS ELEMENT 00

[7] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	13	25	0	33	0	41	0	49	0	57	1
2	3	10	0	18	0	26	0	34	0	42	0	50	0	58	1
3	192	11	0	19	24	27	1	35	0	43	0	51	0	59	0
4	27	12	0	20	104	28	1	36	0	44	0	52	0	60	0
5	2	13	0	21	0	29	0	37	0	45	0	53	0	61	1
6	191	14	0	22	0	30	0	38	0	46	0	54	0	62	1
7	0	15	0	23	1	31	0	39	0	47	0	55	0	63	0
8	174	16	0	24	1	32	0	40	0	48	0	56	0	64	0

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 369B CALC 369B SA28 29 SA29 57
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT BUTTON 2

QC 22 3-21-97


```
EOS   A1-XX E1.EXE;3  COLD CAL MODE      P1 21-MAR-97 10:47:19  SCAN NUMBER     60
[ 5 ] SCIENCE   DATA  ELEMENT 0000                                              0      1
[ 6 ] CONTROL/STATUS  ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00

                                        COMMANDS
[ 9 ]  SCANNER A1-1 POWER =        ON     PLLO POWER =                PLLO#2 [ 15 ]
[ 10 ] SCANNER A1-2 POWER =        ON     COLD CAL POSITION 1 =         NO   [ 16 ]
[ 11 ] ANTENNA FULL SCAN MODE =    NO                       2 =         YES  [ 17 ]
[ 12 ]         WARM CAL        =   NO                       3 =         NO   [ 18 ]
[ 13 ]         COLD CAL        =   YES    COLD CAL POSITION 4 =         NO   [ 19 ]
[ 14 ]         NADIR           =   NO     RESET C&DH PROCESSOR                [ 20 ]
ENGR OK        POWER   ON    CHECKSUM  IN 3681 CALC 3681   SA28    48 SA29     95
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL       [ 1 ] RETURN
 SELECT BUTTON 2
```

EOS A1-XX E1.EXE;3 COLD CAL MODE P1 21-MAR-97 10:46:06 SCAN NUMBER 51
[5] SCIENCE DATA ELEMENT 0000

[6] CONTROL/STATUS ELEMENT 00 0 3

[7] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	13	25	0	33	0	41	0	49	0	57	1
2	3	10	0	18	0	26	0	34	0	42	0	50	0	58	1
3	192	11	0	19	24	27	1	35	0	43	0	51	0	59	0
4	37	12	0	20	72	28	1	36	0	44	0	52	0	60	0
5	2	13	0	21	0	29	0	37	0	45	0	53	0	61	1
6	191	14	0	22	0	30	0	38	0	46	0	54	0	62	1
7	0	15	0	23	1	31	0	39	0	47	0	55	0	63	0
8	174	16	0	24	1	32	0	40	0	48	0	56	0	64	0

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 368F CALC 368F SA28 39 SA29 77
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT BUTTON 2

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QC 224
3-21-97

EOS A1-XX E1.EXE;3 COLD CAL MODE P1 21-MAR-97 10:47:43 SCAN NUMBER 63
[5] SCIENCE DATA ELEMENT 0000
[6] CONTROL/STATUS ELEMENT 00 0 7
[7] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	13	25	0	33	0	41	0	49	0	57	1
2	3	10	0	18	0	26	0	34	0	42	0	50	0	58	1
3	192	11	0	19	24	27	1	35	0	43	0	51	0	59	0
4	49	12	0	20	40	28	1	36	0	44	0	52	0	60	0
5	2	13	0	21	0	29	0	37	0	45	0	53	0	61	1
6	191	14	0	22	0	30	0	38	0	46	0	54	0	62	1
7	0	15	0	23	1	31	0	39	0	47	0	55	0	63	0
8	174	16	0	24	1	32	0	40	0	48	0	56	0	64	0

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 3687 CALC 3687 SA28 50 SA29 100
SELECT BUTTON 2 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

```
EOS    A1-XX E1.EXE;3  COLD CAL MODE        P1 21-MAR-97 10:48:16  SCAN NUMBER     67
[ 5 ] SCIENCE   DATA   ELEMENT 0000                                          0       4

[ 6 ] CONTROL/STATUS   ELEMENT   00

[ 7 ] ENGINEERING      ELEMENT   00

                                    DATA STREAM   705  TO  768
 NO  DATA  NO  DATA  NO  DATA  NO  DATA  NO  DATA  NO  DATA  NO  DATA  NO  DATA
 705     9  713     0  721     1  729     0  737     0  745     0  753     0  761     0
 706     4  714     0  722     1  730     0  738     0  746     0  754     0  762     0
 707   192  715     0  723     0  731     0  739     0  747     0  755     1  763     0
 708    53  716     0  724     0  732     0  740     0  748     0  756     1  764     0
 709     1  717     0  725     1  733     0  741     0  749     0  757     0  765     0
 710   235  718     0  726     1  734     0  742     0  750     0  758     0  766     0
 711     0  719     0  727     0  735     0  743     0  751     0  759     1  767     0
 712   174  720     0  728     0  736     0  744     0  752     0  760     1  768     0
[ 21 ] UP                      [ 22 ] DOWN

ENGR OK          POWER   ON    CHECKSUM  IN 368F CALC 368F   SA28    55 SA29   110
                         SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL       [ 1 ] RETURN
 SELECT BUTTON 2
```

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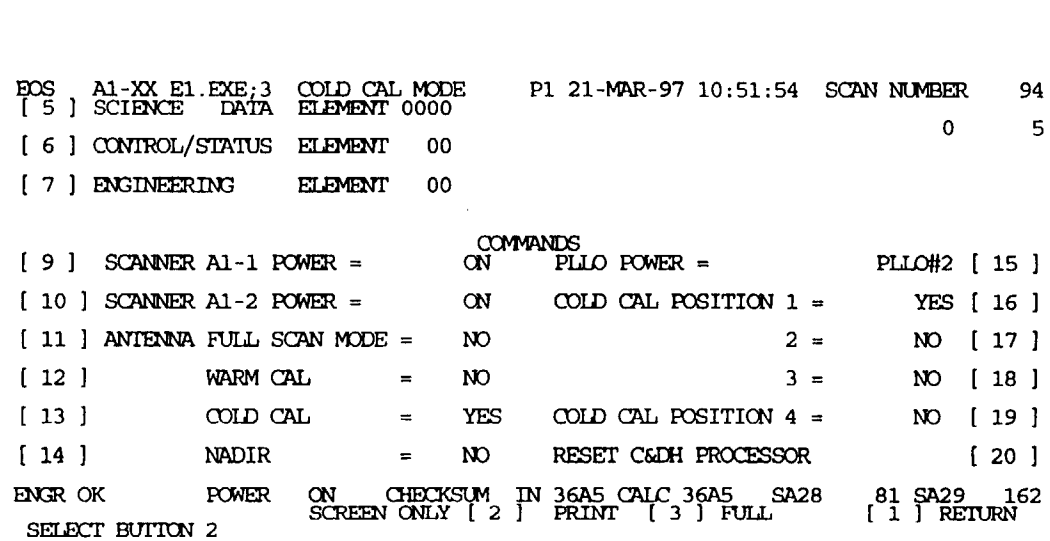
3-21-97


EOS A1-XX E1.EXE;3 COLD CAL MODE P1 21-MAR-97 10:51:54 SCAN NUMBER 94
[5] SCIENCE DATA ELEMENT 0000 0 5
[6] CONTROL/STATUS ELEMENT 00
[7] ENGINEERING ELEMENT 00
COMMANDS
[9] SCANNER A1-1 POWER = ON PLLO POWER = PLLO#2 [15]
[10] SCANNER A1-2 POWER = ON COLD CAL POSITION 1 = YES [16]
[11] ANTENNA FULL SCAN MODE = NO 2 = NO [17]
[12] WARM CAL = NO 3 = NO [18]
[13] COLD CAL = YES COLD CAL POSITION 4 = NO [19]
[14] NADIR = NO RESET C&DH PROCESSOR [20]
ENGR OK POWER ON CHECKSUM IN 36A5 CALC 36A5 SA28 81 SA29 162
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT BUTTON 2

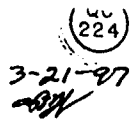
EOS A1-XX E1.EXE;3 COLD CAL MODE P1 21-MAR-97 10:52:11 SCAN NUMBER 96
[5] SCIENCE DATA ELEMENT 0000
[6] CONTROL/STATUS ELEMENT 00 0 1
[7] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	13	25	0	33	0	41	0	49	0	57	1
2	3	10	0	18	0	26	0	34	0	42	0	50	0	58	1
3	192	11	0	19	24	27	1	35	0	43	0	51	0	59	0
4	82	12	0	20	8	28	1	36	0	44	0	52	0	60	0
5	2	13	0	21	0	29	0	37	0	45	0	53	0	61	1
6	191	14	0	22	0	30	0	38	0	46	0	54	0	62	1
7	0	15	0	23	1	31	0	39	0	47	0	55	0	63	0
8	174	16	0	24	1	32	0	40	0	48	0	56	0	64	0

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 36A9 CALC 36A9 SA28 84 SA29 167
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT BUTTON 2




```
EOS   A1-XX E1.EXE;3  NADIR MODE                P1 21-MAR-97 10:53:22  SCAN NUMBER   105
[ 5 ] SCIENCE   DATA  ELEMENT 0000                                              0      1
[ 6 ] CONTROL/STATUS  ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00

                                    COMMANDS
[ 9 ]  SCANNER A1-1 POWER =         ON    PLLO POWER =                  PLLO#2 [ 15 ]
[ 10 ] SCANNER A1-2 POWER =         ON    COLD CAL POSITION 1 =           YES [ 16 ]
[ 11 ] ANTENNA FULL SCAN MODE =     NO                        2 =        NO  [ 17 ]
[ 12 ]         WARM CAL       =     NO                        3 =        NO  [ 18 ]
[ 13 ]         COLD CAL       =     NO    COLD CAL POSITION 4 =          NO  [ 19 ]
[ 14 ]         NADIR          =     YES   RESET C&DH PROCESSOR                [ 20 ]
ENGR OK        POWER  ON    CHECKSUM  IN 36C3 CALC 36C3   SA28   93 SA29   185
SELECT BUTTON 2          SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL   [ 1 ] RETURN
```

EOS A1-XX E1.EXE;3 NADIR MODE P1 21-MAR-97 10:53:47 SCAN NUMBER 108
[5] SCIENCE DATA ELEMENT 0000 0 0
[6] CONTROL/STATUS ELEMENT 00
[7] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	13	25	0	33	0	41	0	49	0	57	1
2	3	10	0	18	0	26	0	34	0	42	0	50	0	58	1
3	192	11	0	19	24	27	1	35	0	43	0	51	0	59	0
4	94	12	0	20	16	28	1	36	0	44	0	52	0	60	0
5	2	13	0	21	0	29	0	37	0	45	0	53	0	61	1
6	191	14	0	22	0	30	0	38	0	46	0	54	0	62	1
7	0	15	0	23	1	31	0	39	0	47	0	55	0	63	0
8	174	16	0	24	1	32	0	40	0	48	0	56	0	64	0

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 36C9 CALC 36C9 SA28 96 SA29 191
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT BUTTON 2


```
BOS  A1-XX_E1.EXE;3  WARM CAL MODE      P1 21-MAR-97 10:54:43  SCAN NUMBER   115
[ 5 ] SCIENCE   DATA  ELEMENT 0000                                          0      3
[ 6 ] CONTROL/STATUS  ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00

                                   COMMANDS
[ 9 ]  SCANNER A1-1 POWER =        ON     PLLO POWER =              PLLO#2 [ 15 ]
[ 10 ] SCANNER A1-2 POWER =        ON     COLD CAL POSITION 1 =       YES [ 16 ]
[ 11 ] ANTENNA FULL SCAN MODE =    NO                       2 =       NO [ 17 ]
[ 12 ]         WARM CAL       =    YES                      3 =       NO [ 18 ]
[ 13 ]         COLD CAL       =    NO     COLD CAL POSITION 4 =       NO [ 19 ]
[ 14 ]         NADIR          =    NO     RESET C&DH PROCESSOR            [ 20 ]
ENGR OK        POWER  ON    CHECKSUM  IN 36CB CALC 36CB   SA28   103 SA29   205
 SELECT BUTTON 2          SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL    [ 1 ] RETURN
```

EOS A1-XX E1.EXE;3 WARM CAL MODE P1 21-MAR-97 10:55:24 SCAN NUMBER 120
[5] SCIENCE DATA ELEMENT 0000
[6] CONTROL/STATUS ELEMENT 00 0 7
[7] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	13	25	0	33	0	41	0	49	0	57	1
2	3	10	0	18	0	26	0	34	0	42	0	50	0	58	1
3	192	11	0	19	24	27	1	35	0	43	0	51	0	59	0
4	106	12	0	20	4	28	1	36	0	44	0	52	0	60	0
5	2	13	0	21	0	29	0	37	0	45	0	53	0	61	1
6	191	14	0	22	0	30	0	38	0	46	0	54	0	62	1
7	0	15	0	23	1	31	0	39	0	47	0	55	0	63	0
8	174	16	0	24	1	32	0	40	0	48	0	56	0	64	0

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 36D5 CALC 36D5 SA28 107 SA29 214
SELECT BUTTON 2 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

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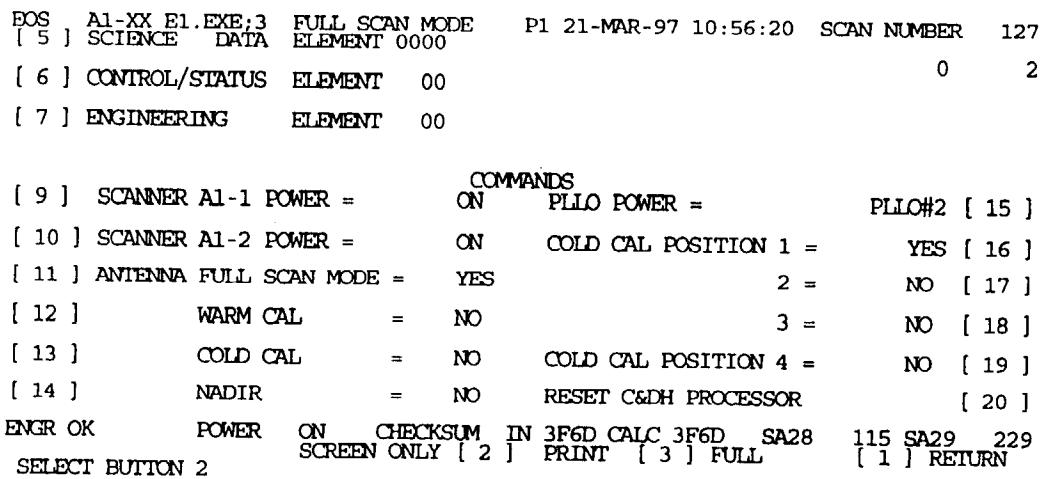
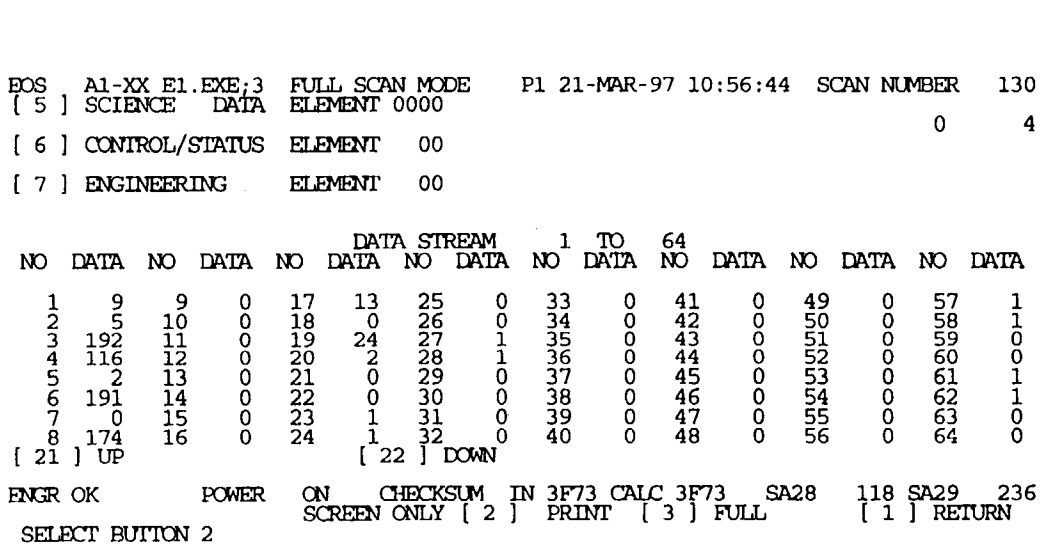
3-21-97


BOS A1-XX E1.EXE;3 FULL SCAN MODE P1 21-MAR-97 10:56:20 SCAN NUMBER 127
[5] SCIENCE DATA ELEMENT 0000 0 2
[6] CONTROL/STATUS ELEMENT 00
[7] ENGINEERING ELEMENT 00
COMMANDS
[9] SCANNER A1-1 POWER = ON PLLO POWER = PLLO#2 [15]
[10] SCANNER A1-2 POWER = ON COLD CAL POSITION 1 = YES [16]
[11] ANTENNA FULL SCAN MODE = YES 2 = NO [17]
[12] WARM CAL = NO 3 = NO [18]
[13] COLD CAL = NO COLD CAL POSITION 4 = NO [19]
[14] NADIR = NO RESET C&DH PROCESSOR [20]
ENGR OK POWER ON CHECKSUM IN 3F6D CALC 3F6D SA28 115 SA29 229
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT BUTTON 2



```
EOS   A1-XX E1.EXE;3  FULL SCAN MODE     P1 21-MAR-97 10:56:44  SCAN NUMBER   130
[ 5 ] SCIENCE   DATA  ELEMENT 0000                                          0      4
[ 6 ] CONTROL/STATUS  ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00

                                  DATA STREAM    1  TO   64
 NO  DATA  NO  DATA  NO  DATA  NO  DATA  NO  DATA  NO  DATA  NO  DATA  NO  DATA
  1    9    9    0   17   13   25    0   33    0   41    0   49    0   57    1
  2    5   10    0   18    0   26    0   34    0   42    0   50    0   58    1
  3  192   11    0   19   24   27    1   35    0   43    0   51    0   59    0
  4  116   12    0   20    2   28    1   36    0   44    0   52    0   60    0
  5    2   13    0   21    0   29    0   37    0   45    0   53    0   61    1
  6  191   14    0   22    0   30    0   38    0   46    0   54    0   62    1
  7    0   15    0   23    1   31    0   39    0   47    0   55    0   63    0
  8  174   16    0   24    1   32    0   40    0   48    0   56    0   64    0
[ 21 ] UP                   [ 22 ] DOWN

ENGR OK        POWER   ON     CHECKSUM  IN 3F73 CALC 3F73   SA28   118 SA29   236
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL       [ 1 ] RETURN
 SELECT BUTTON 2
```

EOS A1-XX E1.EXE;3 FULL SCAN MODE P1 21-MAR-97 11:05:09 SCAN NUMBER 11
[5] SCIENCE DATA ELEMENT 0000
[6] CONTROL/STATUS ELEMENT 00 0 7
[7] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	13	25	0	33	0	41	0	49	0	57	1
2	5	10	0	18	0	26	0	34	0	42	0	50	0	58	1
3	192	11	0	19	24	27	1	35	0	43	0	51	0	59	0
4	179	12	0	20	2	28	1	36	0	44	0	52	0	60	0
5	2	13	0	21	0	29	0	37	0	45	0	53	0	61	1
6	191	14	0	22	0	30	0	38	0	46	0	54	0	62	1
7	0	15	0	23	1	31	0	39	0	47	0	55	0	63	0
8	174	16	0	24	1	32	0	40	0	48	0	56	0	64	0

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 3FF1 CALC 3FF1 SA28 180 SA29 360
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT BUTTON 3

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EOS A1_XX E1.EXE;3 SCIENCE DATA 21-MAR-97 11:05:16 PAGE 1
FULL SCAN MODE

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	PACKET ID	00000000	572	SCENE DATA BP 17 CH 8	0
2		00000000	574	CH 9	0
3	PACKET LENGTH	00000000	576	CH 10	0
4		00000000	578	CH 11	0
5	UNIT SERIAL NUMBER	00001101	580	CH 12	0
6		00000000	582	CH 13	0
7	INSTRUMENT MODE/STATUS	00011000	584	CH 14	0
8		00000010	586	CH 15	0
10	REFLECTOR 1 POSITION 1	0E	588	REFLECTOR 1 POSITION 18	0E
12	REFLECTOR 2 POSITION 1	128	590	REFLECTOR 2 POSITION 18	128
14	REFL 1 POS 1 2ND LOOK	0E	592	REFL 1 POS 18 2ND LOOK	0E
16	REFL 2 POS 1 2ND LOOK	128	594	REFL 2 POS 18 2ND LOOK	128
18	SCENE DATA BP 1 CH 3	0	596	SCENE DATA BP 18 CH 3	0
20	CH 4	0	598	CH 4	0
22	CH 5	0	600	CH 5	0
24	CH 6	0	602	CH 6	0
26	CH 7	0	604	CH 7	0
28	CH 8	0	606	CH 8	0
30	CH 9	0	608	CH 9	0
32	CH 10	0	610	CH 10	0
34	CH 11	0	612	CH 11	0
36	CH 12	0	614	CH 12	0
38	CH 13	0	616	CH 13	0
40	CH 14	0	618	CH 14	0
42	CH 15	0	620	CH 15	0
44	REFLECTOR 1 POSITION 2	0E	622	REFLECTOR 1 POSITION 19	0E
46	REFLECTOR 2 POSITION 2	128	624	REFLECTOR 2 POSITION 19	128
48	REFL 1 POS 2 2ND LOOK	0E	626	REFL 1 POS 19 2ND LOOK	0E
50	REFL 2 POS 2 2ND LOOK	128	628	REFL 2 POS 19 2ND LOOK	128
52	SCENE DATA BP 2 CH 3	0	630	SCENE DATA BP 19 CH 3	0
54	CH 4	0	632	CH 4	0
56	CH 5	0	634	CH 5	0
58	CH 6	0	636	CH 6	0
60	CH 7	0	638	CH 7	0
62	CH 8	0	640	CH 8	0
64	CH 9	0	642	CH 9	0
66	CH 10	0	644	CH 10	0
68	CH 11	0	646	CH 11	0
70	CH 12	0	648	CH 12	0
72	CH 13	0	650	CH 13	0
74	CH 14	0	652	CH 14	0
76	CH 15	0	654	CH 15	0
78	REFLECTOR 1 POSITION 3	0E	656	REFLECTOR 1 POSITION 20	0E
80	REFLECTOR 2 POSITION 3	128	658	REFLECTOR 2 POSITION 20	128
82	REFL 1 POS 3 2ND LOOK	0E	660	REFL 1 POS 20 2ND LOOK	0E
84	REFL 2 POS 3 2ND LOOK	128	662	REFL 2 POS 20 2ND LOOK	128
86	SCENE DATA BP 3 CH 3	0	664	SCENE DATA BP 20 CH 3	0
88	CH 4	0	666	CH 4	0
90	CH 5	0	668	CH 5	0
92	CH 6	0	670	CH 6	0

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FULL SCAN MODE

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH 7	0	672	CH 7	0
96	CH 8	0	674	CH 8	0
98	CH 9	0	676	CH 9	0
100	CH 10	0	678	CH 10	0
102	CH 11	0	680	CH 11	0
104	CH 12	0	682	CH 12	0
106	CH 13	0	684	CH 13	0
108	CH 14	0	686	CH 14	0
110	CH 15	0	688	CH 15	0
112	REFLECTOR 1 POSITION 4	0E	690	REFLECTOR 1 POSITION 21	0E
114	REFLECTOR 2 POSITION 4	128	692	REFLECTOR 2 POSITION 21	128
116	REFL 1 POS 4 2ND LOOK	0E	694	REFL 1 POS 21 2ND LOOK	0E
118	REFL 2 POS 4 2ND LOOK	128	696	REFL 2 POS 21 2ND LOOK	128
120	SCENE DATA BP 4 CH 3	0	698	SCENE DATA BP 21 CH 3	0
122	CH 4	0	700	CH 4	0
124	CH 5	0	702	CH 5	0
126	CH 6	0	704	CH 6	0
128	CH 7	0	706	CH 7	0
130	CH 8	0	708	CH 8	0
132	CH 9	0	710	CH 9	0
134	CH 10	0	712	CH 10	0
136	CH 11	0	714	CH 11	0
138	CH 12	0	716	CH 12	0
140	CH 13	0	718	CH 13	0
142	CH 14	0	720	CH 14	0
144	CH 15	0	722	CH 15	0
146	REFLECTOR 1 POSITION 5	0E	724	REFLECTOR 1 POSITION 22	0E
148	REFLECTOR 2 POSITION 5	128	726	REFLECTOR 2 POSITION 22	128
150	REFL 1 POS 5 2ND LOOK	0E	728	REFL 1 POS 22 2ND LOOK	0E
152	REFL 2 POS 5 2ND LOOK	128	730	REFL 2 POS 22 2ND LOOK	128
154	SCENE DATA BP 5 CH 3	0	732	SCENE DATA BP 22 CH 3	0
156	CH 4	0	734	CH 4	0
158	CH 5	0	736	CH 5	0
160	CH 6	0	738	CH 6	0
162	CH 7	0	740	CH 7	0
164	CH 8	0	742	CH 8	0
166	CH 9	0	744	CH 9	0
168	CH 10	0	746	CH 10	0
170	CH 11	0	748	CH 11	0
172	CH 12	0	750	CH 12	0
174	CH 13	0	752	CH 13	0
176	CH 14	0	754	CH 14	0
178	CH 15	0	756	CH 15	0
180	REFLECTOR 1 POSITION 6	0E	758	REFLECTOR 1 POSITION 23	0E
182	REFLECTOR 2 POSITION 6	128	760	REFLECTOR 2 POSITION 23	128
184	REFL 1 POS 6 2ND LOOK	0E	762	REFL 1 POS 23 2ND LOOK	0E
186	REFL 2 POS 6 2ND LOOK	128	764	REFL 2 POS 23 2ND LOOK	128
188	SCENE DATA BP 6 CH 3	0	766	SCENE DATA BP 23 CH 3	0
190	CH 4	0	768	CH 4	0
192	CH 5	0	770	CH 5	0

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH 6	0	772	CH 6	0
196	CH 7	0	774	CH 7	0
198	CH 8	0	776	CH 8	0
200	CH 9	0	778	CH 9	0
202	CH 10	0	780	CH 10	0
204	CH 11	0	782	CH 11	0
206	CH 12	0	784	CH 12	0
208	CH 13	0	786	CH 13	0
210	CH 14	0	788	CH 14	0
212	CH 15	0	790	CH 15	0
214	REFLECTOR 1 POSITION 7	0E	792	REFLECTOR 1 POSITION 24	0E
216	REFLECTOR 2 POSITION 7	128	794	REFLECTOR 2 POSITION 24	128
218	REFL 1 POS 7 2ND LOOK	0E	796	REFL 1 POS 24 2ND LOOK	0E
220	REFL 2 POS 7 2ND LOOK	128	798	REFL 2 POS 24 2ND LOOK	128
222	SCENE DATA BP 7 CH 3	0	800	SCENE DATA BP 24 CH 3	0
224	CH 4	0	802	CH 4	0
226	CH 5	0	804	CH 5	0
228	CH 6	0	806	CH 6	0
230	CH 7	0	808	CH 7	0
232	CH 8	0	810	CH 8	0
234	CH 9	0	812	CH 9	0
236	CH 10	0	814	CH 10	0
238	CH 11	0	816	CH 11	0
240	CH 12	0	818	CH 12	0
242	CH 13	0	820	CH 13	0
244	CH 14	0	822	CH 14	0
246	CH 15	0	824	CH 15	0
248	REFLECTOR 1 POSITION 8	0E	826	REFLECTOR 1 POSITION 25	0E
250	REFLECTOR 2 POSITION 8	128	828	REFLECTOR 2 POSITION 25	128
252	REFL 1 POS 8 2ND LOOK	0E	830	REFL 1 POS 25 2ND LOOK	0E
254	REFL 2 POS 8 2ND LOOK	128	832	REFL 2 POS 25 2ND LOOK	128
256	SCENE DATA BP 8 CH 3	0	834	SCENE DATA BP 25 CH 3	0
258	CH 4	0	836	CH 4	0
260	CH 5	0	838	CH 5	0
262	CH 6	0	840	CH 6	0
264	CH 7	0	842	CH 7	0
266	CH 8	0	844	CH 8	0
268	CH 9	0	846	CH 9	0
270	CH 10	0	848	CH 10	0
272	CH 11	0	850	CH 11	0
274	CH 12	0	852	CH 12	0
276	CH 13	0	854	CH 13	0
278	CH 14	0	856	CH 14	0
280	CH 15	0	858	CH 15	0
282	REFLECTOR 1 POSITION 9	0E	860	REFLECTOR 1 POSITION 26	0E
284	REFLECTOR 2 POSITION 9	128	862	REFLECTOR 2 POSITION 26	128
286	REFL 1 POS 9 2ND LOOK	0E	864	REFL 1 POS 26 2ND LOOK	0E
288	REFL 2 POS 9 2ND LOOK	128	866	REFL 2 POS 26 2ND LOOK	128
290	SCENE DATA BP 9 CH 3	0	868	SCENE DATA BP 26 CH 3	0
292	CH 4	0	870	CH 4	0

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ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	0	872	CH 5	0
296	CH 6	0	874	CH 6	0
298	CH 7	0	876	CH 7	0
300	CH 8	0	878	CH 8	0
302	CH 9	0	880	CH 9	0
304	CH 10	0	882	CH 10	0
306	CH 11	0	884	CH 11	0
308	CH 12	0	886	CH 12	0
310	CH 13	0	888	CH 13	0
312	CH 14	0	890	CH 14	0
314	CH 15	0	892	CH 15	0
316	REFLECTOR 1 POSITION 10	0E	894	REFLECTOR 1 POSITION 27	0E
318	REFLECTOR 2 POSITION 10	128	896	REFLECTOR 2 POSITION 27	128
320	REFL 1 POS 10 2ND LOOK	0E	898	REFL 1 POS 27 2ND LOOK	0E
322	REFL 2 POS 10 2ND LOOK	128	900	REFL 2 POS 27 2ND LOOK	128
324	SCENE DATA BP 10 CH 3	0	902	SCENE DATA BP 27 CH 3	0
326	CH 4	0	904	CH 4	0
328	CH 5	0	906	CH 5	0
330	CH 6	0	908	CH 6	0
332	CH 7	0	910	CH 7	0
334	CH 8	0	912	CH 8	0
336	CH 9	0	914	CH 9	0
338	CH 10	0	916	CH 10	0
340	CH 11	0	918	CH 11	0
342	CH 12	0	920	CH 12	0
344	CH 13	0	922	CH 13	0
346	CH 14	0	924	CH 14	0
348	CH 15	0	926	CH 15	0
350	REFLECTOR 1 POSITION 11	0E	928	REFLECTOR 1 POSITION 28	0E
352	REFLECTOR 2 POSITION 11	128	930	REFLECTOR 2 POSITION 28	128
354	REFL 1 POS 11 2ND LOOK	0E	932	REFL 1 POS 28 2ND LOOK	0E
356	REFL 2 POS 11 2ND LOOK	128	934	REFL 2 POS 28 2ND LOOK	128
358	SCENE DATA BP 11 CH 3	0	936	SCENE DATA BP 28 CH 3	0
360	CH 4	0	938	CH 4	0
362	CH 5	0	940	CH 5	0
364	CH 6	0	942	CH 6	0
366	CH 7	0	944	CH 7	0
368	CH 8	0	946	CH 8	0
370	CH 9	0	948	CH 9	0
372	CH 10	0	950	CH 10	0
374	CH 11	0	952	CH 11	0
376	CH 12	0	954	CH 12	0
378	CH 13	0	956	CH 13	0
380	CH 14	0	958	CH 14	0
382	CH 15	0	960	CH 15	0
384	REFLECTOR 1 POSITION 12	0E	962	REFLECTOR 1 POSITION 29	0E
386	REFLECTOR 2 POSITION 12	128	964	REFLECTOR 2 POSITION 29	128
388	REFL 1 POS 12 2ND LOOK	0E	966	REFL 1 POS 29 2ND LOOK	0E
390	REFL 2 POS 12 2ND LOOK	128	968	REFL 2 POS 29 2ND LOOK	128
392	SCENE DATA BP 12 CH 3	0	970	SCENE DATA BP 29 CH 3	0

ELEMENT	DESCRIPTION		VALUE	ELEMENT	DESCRIPTION		VALUE
394		CH 4	0	972		CH 4	0
396		CH 5	0	974		CH 5	0
398		CH 6	0	976		CH 6	0
400		CH 7	0	978		CH 7	0
402		CH 8	0	980		CH 8	0
404		CH 9	0	982		CH 9	0
406		CH 10	0	984		CH 10	0
408		CH 11	0	986		CH 11	0
410		CH 12	0	988		CH 12	0
412		CH 13	0	990		CH 13	0
414		CH 14	0	992		CH 14	0
416		CH 15	0	994		CH 15	0
418	REFLECTOR 1 POSITION 13		0E	996	REFLECTOR 1 POSITION 30		0E
420	REFLECTOR 2 POSITION 13		128	998	REFLECTOR 2 POSITION 30		128
422	REFL 1 POS 13 2ND LOOK		0E	1000	REFL 1 POS 30 2ND LOOK		0E
424	REFL 2 POS 13 2ND LOOK		128	1002	REFL 2 POS 30 2ND LOOK		128
426	SCENE DATA BP 13	CH 3	0	1004	SCENE DATA BP 30	CH 3	0
428		CH 4	0	1006		CH 4	0
430		CH 5	0	1008		CH 5	0
432		CH 6	0	1010		CH 6	0
434		CH 7	0	1012		CH 7	0
436		CH 8	0	1014		CH 8	0
438		CH 9	0	1016		CH 9	0
440		CH 10	0	1018		CH 10	0
442		CH 11	0	1020		CH 11	0
444		CH 12	0	1022		CH 12	0
446		CH 13	0	1024		CH 13	0
448		CH 14	0	1026		CH 14	0
450		CH 15	0	1028		CH 15	0
452	REFLECTOR 1 POSITION 14		0E	1030	REFLECTOR 1 COLD CAL POS		0E
454	REFLECTOR 2 POSITION 14		128	1032	REFLECTOR 2 COLD CAL POS		128
456	REFL 1 POS 14 2ND LOOK		0E	1034	REFL 1 COLD CAL 2ND LOOK		0E
458	REFL 2 POS 14 2ND LOOK		128	1036	REFL 2 COLD CAL 2ND LOOK		128
460	SCENE DATA BP 14	CH 3	0	1038	COLD CAL DATA 1	CH 3	0
462		CH 4	0	1040		CH 4	0
464		CH 5	0	1042		CH 5	0
466		CH 6	0	1044		CH 6	0
468		CH 7	0	1046		CH 7	0
470		CH 8	0	1048		CH 8	0
472		CH 9	0	1050		CH 9	0
474		CH 10	0	1052		CH 10	0
476		CH 11	0	1054		CH 11	0
478		CH 12	0	1056		CH 12	0
480		CH 13	0	1058		CH 13	0
482		CH 14	0	1060		CH 14	0
484		CH 15	0	1062		CH 15	0
486	REFLECTOR 1 POSITION 15		0E	1064	COLD CAL DATA 2	CH 3	0
488	REFLECTOR 2 POSITION 15		128	1066		CH 4	0
490	REFL 1 POS 15 2ND LOOK		0E	1068		CH 5	0
492	REFL 2 POS 15 2ND LOOK		128	1070		CH 6	0

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FULL SCAN MODE

ELEMENT	DESCRIPTION		VALUE	ELEMENT	DESCRIPTION		VALUE
494	SCENE DATA BP 15	CH 3	0	1072		CH 7	0
496		CH 4	0	1074		CH 8	0
498		CH 5	0	1076		CH 9	0
500		CH 6	0	1078		CH 10	0
502		CH 7	0	1080		CH 11	0
504		CH 8	0	1082		CH 12	0
506		CH 9	0	1084		CH 13	0
508		CH 10	0	1086		CH 14	0
510		CH 11	0	1088		CH 15	0
512		CH 12	0	1182	REFLECTOR 1 WARM CAL POS		0E
514		CH 13	0	1184	REFLECTOR 2 WARM CAL POS		128
516		CH 14	0	1186	REFL 1 WARM CAL 2ND LOOK		0E
518		CH 15	0	1188	REFL 2 WARM CAL 2ND LOOK		128
520	REFLECTOR 1 POSITION 16		0E	1190	WARM CAL DATA 1	CH 3	0
522	REFLECTOR 2 POSITION 16		128	1192		CH 4	0
524	REFL 1 POS 16 2ND LOOK		0E	1194		CH 5	0
526	REFL 2 POS 16 2ND LOOK		128	1196		CH 6	0
528	SCENE DATA BP 16	CH 3	0	1198		CH 7	0
530		CH 4	0	1200		CH 8	0
532		CH 5	0	1202		CH 9	0
534		CH 6	0	1204		CH 10	0
536		CH 7	0	1206		CH 11	0
538		CH 8	0	1208		CH 12	0
540		CH 9	0	1210		CH 13	0
542		CH 10	0	1212		CH 14	0
544		CH 11	0	1214		CH 15	0
546		CH 12	0	1216	WARM CAL DATA 2	CH 3	0
548		CH 13	0	1218		CH 4	0
550		CH 14	0	1220		CH 5	0
552		CH 15	0	1222		CH 6	0
554	REFLECTOR 1 POSITION 17		0E	1224		CH 7	0
556	REFLECTOR 2 POSITION 17		128	1226		CH 8	0
558	REFL 1 POS 17 2ND LOOK		0E	1228		CH 9	0
560	REFL 2 POS 17 2ND LOOK		128	1230		CH 10	0
562	SCENE DATA BP 17	CH 3	0	1232		CH 11	0
564		CH 4	0	1234		CH 12	0
566		CH 5	0	1236		CH 13	0
568		CH 6	0	1238		CH 14	0
570		CH 7	0	1240		CH 15	0

ELEMENT	DESCRIPTION	VALUE	TEMPERATURE DEG C
1090	SCAN MOTOR A1-1	0	0.00
1092	SCAN MOTOR A1-2	0	-9.96
1094	SIGNAL PROCESSOR	0	-10.11
1096	RADIATOR PANEL	0	-10.20
1098	RF MUX A1-1	0	-10.11
1100	RF MUX A1-2	0	-10.10
1102	LOCAL OSCILLATOR CHANNEL 3	0	-10.13
1104	LOCAL OSCILLATOR CHANNEL 4	0	-10.07
1106	LOCAL OSCILLATOR CHANNEL 5	0	-10.30
1108	LOCAL OSCILLATOR CHANNEL 6	0	-9.98
1110	LOCAL OSCILLATOR CHANNEL 7	0	-10.22
1112	LOCAL OSCILLATOR CHANNEL 8	0	-10.09
1114	PLL LO #1	0	-10.27
1116	PLL LO #2	0	-10.13
1118	PLL LO REFERENCE OSCILLATOR	0	-10.19
1120	LOCAL OSCILLATOR CHANNEL 15	0	-10.12
1122	MIXER/IF AMPLIFIER CHANNEL 3	0	-10.04
1124	MIXER/IF AMPLIFIER CHANNEL 4	0	-10.10
1126	MIXER/IF AMPLIFIER CHANNEL 5	0	-10.16
1128	MIXER/IF AMPLIFIER CHANNEL 6	0	-10.07
1130	MIXER/IF AMPLIFIER CHANNEL 7	0	-10.21
1132	MIXER/IF AMPLIFIER CHANNEL 8	0	-10.02
1134	MIXER/IF AMPLIFIER CH 9 THRU 14	0	-10.04
1136	MIXER/IF AMPLIFIER CHANNEL 15	0	-10.14
1138	IF AMPLIFIER CHANNEL 11 THRU 14	0	-10.03
1140	IF AMPLIFIER CHANNEL 9	0	-10.14
1142	IF AMPLIFIER CHANNEL 10	0	-10.23
1144	IF AMPLIFIER CHANNEL 11	0	-10.18
1146	IF AMPLIFIER CHANNEL 12	0	-9.63
1148	IF AMPLIFIER CHANNEL 13	0	-10.16
1150	IF AMPLIFIER CHANNEL 14	0	-10.14
1152	DC/DC CONVERTER	0	-10.06
1154	RF SHELF A1-1	0	-10.17
1156	RF SHELF A1-2	0	-9.95
1158	DETECTOR/PREAMPLIFIER ASSEMBLY	0	-10.09
1160	A1-1 WARM LOAD 1	0	-246.34
1162	A1-1 WARM LOAD 2	0	-246.15
1164	A1-1 WARM LOAD 3	0	-246.23
1166	A1-1 WARM LOAD 4	0	-246.33
1168	A1-1 WARM LOAD CENTER	0	-246.32
1170	A1-2 WARM LOAD 1	0	-246.30
1172	A1-2 WARM LOAD 2	0	-246.27
1174	A1-2 WARM LOAD 3	0	-246.34
1176	A1-2 WARM LOAD 4	0	-246.67
1178	A1-2 WARM LOAD CENTER	0	-246.49
1180	TEMP SENSOR REFERENCE VOLTAGE	0	

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FULL SCAN MODE

DESCRIPTION	STATUS
ANTENNA IN FULL SCAN MODE	YES
ANTENNA IN WARM CAL MODE	NO
ANTENNA IN COLD CAL MODE	NO
ANTENNA IN NADIR MODE	NO
COLD CAL. POSITION LSB	ZERO
COLD CAL. POSITION MSB	ZERO
PLO REDUNDANCY	PLLO # 2
SCANNER A1-1 POWER	ON
SCANNER A1-2 POWER	ON
PLLO #1 LOCK	NO
PLLO #2 LOCK	NO
ADC LATCHUP FLAG	ZERO

ENGINEERING DATA

DESCRIPTION	VALUE	DEG C
A1-1 SCANNER MOTOR TEMPERATURE		
A1-2 SCANNER MOTOR TEMPERATURE		
A1-1 RF SHELF		
A1-2 RF SHELF		
A1-1 WARM LOAD TEMPERATURE		
A1-2 WARM LOAD TEMPERATURE		

DESCRIPTION		VALUE	AMPS/VOLTS
SIGNAL PROCESSOR	+5 VDC	0	0.00
	+15 VDC	0	0.00
	-15 VDC	0	0.00
SCAN DRIVE	+5 VDC	0	0.00
	+15 VDC	0	0.00
	-15 VDC	0	0.00
PLO	+15 VDC	0	0.00
	-15 VDC	0	0.00
RECEIVER	+8 VDC	0	0.00
MIXER/IF AMPLIFIER A1-1	+10 VDC	0	0.00
A1-2	+10 VDC	0	0.00
LO CHANNEL 6	+10 VDC	0	0.00
7	+10 VDC	0	0.00
15	+10 VDC	0	0.00
3	+10 VDC	0	0.00
4	+10 VDC	0	0.00
5	+10 VDC	0	0.00
8	+10 VDC	0	0.00
15	+15 VDC	0	0.00
QUIET BUS CURRENT		0	0.00
A1-1 NOISY POWER BUS CURRENT		0	0.00
A1-2 NOISY POWER BUS CURRENT		0	0.00

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PRT TEMPERATURES	A1-1 NO.	A1-1 DEG K	A1-2 NO.	A1-2 DEG K
VARIABLE TARGET	615	42.00	601	14.00
	616	43.00	602	15.00
	617	44.00	603	16.00
	618	45.00	604	17.00
	619	46.00	605	18.00
	620	47.00	606	19.00
	621	48.00	607	20.00
FIXED TARGET	622	49.00	608	21.00
	623	50.00	609	22.00
	624	51.00	610	23.00
	625	52.00	611	24.00
	626	53.00	612	25.00
	627	67.00	613	69.00
	628	68.00	614	70.00
BASEPLATE	629	71.00	630	72.00
	631	26.00	632	27.00

THERMOCOUPLE TEMPERATURES	A1-1 NO.	A1-1 DEG K	A1-2 NO.	A1-2 DEG K
FIXED TARGET SHROUD	558	5.00	537	34.00
	559	6.00	538	35.00
VARIABLE TARGET SHROUD	550	7.00	524	36.00
	551	8.00	525	37.00
FIXED TARGET N2	506	57.00	502	30.00
	507	58.00	503	31.00
VARIABLE TARGET N2	516	59.00	511	32.00
	517	60.00	512	33.00
HEATER N2	514	1.00	509	38.00
	515	2.00	510	39.00
FIXED TARGET FLOW METER	508	63.00	504	61.00
VARIABLE TARGET FLOW METER	518	64.00	513	62.00
BASEPLATE HEATER N2	519	3.00	520	4.00
BASEPLATE N2	521	9.00	522	10.00
BASEPLATE FLOW METER	523	65.00		
ADJUNCT RADIATORS	575	73.00	577	74.00
	579	75.00	581	76.00

N2 CONTROL FUNCTIONS	A1-1 NO.	A1-1 VALUE	A1-2 NO.	A1-2 VALUE
FIXED TARGET N2 PRESSURE PSI	402	11.00	401	40.00
FIXED TARGET N2 FLOW LB/HR	703	28.00	701	55.00
VARIABLE TARGET N2 PRESSURE PSI	404	12.00	403	41.00
VARIABLE TARGET N2 FLOW LB/HR	704	29.00	702	56.00
BASEPLATE N2 PRESSURE PSI	405	13.00		
BASEPLATE N2 FLOW LB/HR	705	54.00		
FIXED TARGET BYPASS RELAY	105	CLOSED	104	CLOSED
VARIABLE TARGET LN2 RELAY	110	CLOSED	108	CLOSED
VARIABLE TARGET GN2 RELAY	109	CLOSED	107	CLOSED
TARGET LN2 SUPPLY RELAY	102	CLOSED		
ADJUNCT RADIATOR LN2 SUPPLY RELAY	114	CLOSED	116	CLOSED
	118	CLOSED	120	CLOSED
BASEPLATE GN2 SUPPLY RELAY	111	CLOSED		
HOT GN2 PURGE RELAY	103	CLOSED		

QC 224
3-21-97

```
EOS   A1-XX E1.EXE;3  FULL SCAN MODE     P1 21-MAR-97 11:08:53  SCAN NUMBER    39
[ 5 ] SCIENCE   DATA  ELEMENT 0000                                          0      1
[ 6 ] CONTROL/STATUS  ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00

                              RADIOMETRIC DATA

                                   BEAM POSITION  1

                              CH  DATA  CH  DATA  CH  DATA

                               3     0   8     0  13     0
                               4     0   9     0  14     0
                               5     0  10     0  15     0
                               6     0  11     0
                               7     0  12     0

[ 21 ] UP                          [ 22 ] DOWN

ENGR OK          POWER   ON    CHECKSUM  IN 4029 CALC 4029   SA28   209 SA29   417
 SELECT BUTTON 2          SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL       [ 1 ] RETURN
```


EOS A1-XX E1.EXE;3 GSE 6 NOT USED P1 21-MAR-97 11:18:30 SCAN NUMBER 97
[5] SCIENCE DATA ELEMENT 0000
0 2
[6] CONTROL/STATUS ELEMENT 00
[7] ENGINEERING ELEMENT 00
RADIOMETRIC DATA
BEAM POSITION 1
CH DATA CH DATA CH DATA
3 29909 8 4391 13 7478
4 30429 9 8193 14 10836
5 31158 10 11393 15 14453
6 31739 11 0
7 0 12 3871
[21] UP
[22] DOWN
ENGR OK POWER ON CHECKSUM IN 838B CALC 838B SA28 14 SA29 26
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT BUTTON 2

QC 224
3-21-97

EOS A1-XX E1.EXE;3 GSE 6 NOT USED P1 21-MAR-97 11:20:54 SCAN NUMBER 115
[5] SCIENCE DATA ELEMENT 0000
[6] CONTROL/STATUS ELEMENT 00 0 0
[7] ENGINEERING ELEMENT 00

RADIOMETRIC DATA
CHANNEL 3

BP	DATA	BP	DATA	BP	DATA	BP	DATA
1	0	9	0	17	0	25	0
2	0	10	0	18	0	26	0
3	0	11	0	19	0	27	0
4	0	12	0	20	0	28	0
5	0	13	0	21	0	29	0
6	0	14	0	22	0	30	0
7	0	15	0	23	0	CC	27308
8	0	16	0	24	0	WC	3171

Unit in wrong configuration

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 664F CALC 664F SA28 32 SA29 62
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT BUTTON 2

QC 224
3-21-97

QC 224

3-21-97 aqw

```
EOS   A1-XX E1.EXE;3  GSE 6 NOT USED     P1 21-MAR-97 11:21:50  SCAN NUMBER   122
[ 5 ] SCIENCE   DATA  ELEMENT 0000                                          0      6
[ 6 ] CONTROL/STATUS  ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00

                              RADIOMETRIC DATA
                                   CHANNEL   3
                BP  DATA  BP  DATA  BP  DATA  BP  DATA

                 1  29954  9  29956 17  29958 25  29957
                 2  29954 10  29956 18  29957 26  29957
                 3  29955 11  29956 19  29956 27  29958
                 4  29955 12  29955 20  29958 28  29958
                 5  29954 13  29956 21  29957 29  29959
                 6  29955 14  29956 22  29957 30  29958
                 7  29955 15  29957 23  29957 CC  27275
                 8  29955 16  29957 24  29957 WC  16868
[ 21 ] UP                [ 22 ] DOWN

ENGR OK        POWER   ON    CHECKSUM  IN 5703 CALC 5703   SA28    38 SA29    75
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL       [ 1 ] RETURN
 SELECT BUTTON 2
```

unit in wrong configuration.
aqw 3-21-97

QC 224 3-21-97

EOS A1-XX E1.EXE;3 FULL SCAN MODE P1 21-MAR-97 11:26:08 SCAN NUMBER 154
[5] SCIENCE DATA ELEMENT 0000 FFFF 0

[6] CONTROL/STATUS ELEMENT 00

[7] ENGINEERING ELEMENT 00

RADIOMETRIC DATA
CHANNEL 3

BP	DATA	BP	DATA	BP	DATA	BP	DATA
1	0	9	0	17	0	25	0
2	0	10	0	18	0	26	0
3	0	11	0	19	0	27	0
4	0	12	0	20	0	28	0
5	0	13	0	21	0	29	0
6	0	14	0	22	0	30	0
7	0	15	0	23	0	CC	0
8	0	16	0	24	0	WC	0

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN D825 CALC D825 SA28 71 SA29 140
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT BUTTON 2

QC 224
3-21-97

EOS A1-XX E1.EXE;3 FULL SCAN MODE P1 21-MAR-97 11:26:40 SCAN NUMBER 158
[5] SCIENCE DATA ELEMENT 0000 FFFF 1
[6] CONTROL/STATUS ELEMENT 00
[7] ENGINEERING ELEMENT 00

RADIOMETRIC DATA
CHANNEL 3

BP	DATA	BP	DATA	BP	DATA	BP	DATA
1	29984	9	29984	17	29983	25	29982
2	29985	10	29983	18	29981	26	29982
3	29984	11	29983	19	29982	27	29982
4	29984	12	29982	20	29982	28	29982
5	29984	13	29983	21	29982	29	29982
6	29984	14	29982	22	29982	30	29981
7	29983	15	29982	23	29982	CC	29981
8	29983	16	29982	24	29982	WC	29981

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN E205 CALC E205 SA28 75 SA29 148
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT BUTTON 2

QC 224
3-21-97

EOS A1-XX E1.EXE;3 FULL SCAN MODE P1 21-MAR-97 11:27:44 SCAN NUMBER 166
[5] SCIENCE DATA ELEMENT 0000 FFFF 6
[6] CONTROL/STATUS ELEMENT 00
[7] ENGINEERING ELEMENT 00

WARM CALIBRATE

CH	DATA	CH	DATA	CH	DATA	CH	DATA
3	0	7	0	10	9491	13	6230
3	0	7	0	10	9144	13	6189
4	3237	8	3409	11	0	14	8961
4	3150	8	3235	11	0	14	8719
5	6601	9	6723	12	3158	15	12309
5	6369	9	6421	12	3242	15	12032
6	9224						
6	9079						

ENGR OK POWER ON CHECKSUM IN EBDF CALC EBDF SA28 82 SA29 163
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT BUTTON 2

```
EOS   A1-XX E1.EXE;3  FULL SCAN MODE     P1 21-MAR-97 11:28:00  SCAN NUMBER   168
[ 5 ] SCIENCE   DATA  ELEMENT 0000                                      FFFF      2
[ 6 ] CONTROL/STATUS  ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00

                              WARM CALIBRATE
                    CH  DATA  CH  DATA  CH  DATA  CH  DATA

                     3  29982  7     0 10  10146 13   6566
                     3  29983  7     0 10   9345 13   6066
                     4  30541  8  3706 11      0 14   9419
                     4  30598  8  3274 11      0 14   8613
                     5  31366  9  7246 12   3517 15  12796
                     5  31418  9  6587 12   3162 15  11759
                     6  31842
                     6  31772

ENGR OK        POWER   ON    CHECKSUM  IN 8E2D CALC 8E2D   SA28    85 SA29   168
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL       [ 1 ] RETURN
 SELECT BUTTON 2
```

QC 224
3-21-97
ABH

QC 224
3-21-97

```
EOS    A1-XX E1.EXE;3  FULL SCAN MODE     P1 21-MAR-97 11:28:56  SCAN NUMBER   175
[ 5 ] SCIENCE   DATA   ELEMENT 0000
                                                                   FFFF          1
[ 6 ] CONTROL/STATUS   ELEMENT   00

[ 7 ] ENGINEERING      ELEMENT   00
```

COLD CALIBRATE

CH	DATA	CH	DATA	CH	DATA	CH	DATA
3	0	7	0	10	9211	13	6428
3	0	7	0	10	9084	13	6293
4	2338	8	3312	11	0	14	9083
4	2197	8	3146	11	0	14	8963
5	5730	9	6529	12	3265	15	12310
5	5640	9	6383	12	3152	15	12117
6	8459						
6	8314						

```
ENGR OK       POWER    ON    CHECKSUM  IN  28D CALC  28D   SA28     92 SA29   182
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL        [ 1 ] RETURN
 SELECT BUTTON 2
```

EOS A1-XX E1.EXE;3 FULL SCAN MODE P1 21-MAR-97 11:29:20 SCAN NUMBER 178
[5] SCIENCE DATA ELEMENT 0000 FFFF 2
[6] CONTROL/STATUS ELEMENT 00
[7] ENGINEERING ELEMENT 00

COLD CALIBRATE

CH	DATA	CH	DATA	CH	DATA	CH	DATA
3	29983	7	0	10	9176	13	6384
3	29983	7	0	10	9465	13	6185
4	30322	8	3255	11	0	14	9226
4	30641	8	3354	11	0	14	8884
5	30987	9	6408	12	3386	15	13076
5	31592	9	6699	12	3321	15	12277
6	31301						
6	31963						

ENGR OK POWER ON CHECKSUM IN 385B CALC 385B SA28 95 SA29 188
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT BUTTON 2

QC 224
3-21-97

A1 Test Data
3-21-97
QC 224
3-21-97

```
EOS   A1-XX E1.EXE;3  FULL SCAN MODE      P1 21-MAR-97 11:30:48  SCAN NUMBER   189
[ 5 ] SCIENCE   DATA  ELEMENT 0000                                      FFFF      0
[ 6 ] CONTROL/STATUS  ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00

                                REFLECTOR POSITIONS   1
BP  LOOK 1  LOOK 2  BP  LOOK 1  LOOK 2  BP  LOOK 1  LOOK 2  BP  LOOK 1  LOOK 2
 1      0E      0E   9      0E      0E  17      0E      0E  25      0E      0E
 2      0E      0E  10      0E      0E  18      0E      0E  26      0E      0E
 3      0E      0E  11      0E      0E  19      0E      0E  27      0E      0E
 4      0E      0E  12      0E      0E  20      0E      0E  28      0E      0E
 5      0E      0E  13      0E      0E  21      0E      0E  29      0E      0E
 6      0E      0E  14      0E      0E  22      0E      0E  30      0E      0E
 7      0E      0E  15      0E      0E  23      0E      0E  CC      0E      0E
 8      0E      0E  16      0E      0E  24      0E      0E  WC      0E      0E
[ 21 ] UP                  [ 22 ] DOWN

ENGR OK        POWER   ON    CHECKSUM  IN A0AB CALC A0AB   SA28   106 SA29   210
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL       [ 1 ] RETURN
 SELECT BUTTON 2
```

APPENDIX C

DATA PRINTOUTS FOR AMSU-A2

The following pages contain copies of the data printouts obtained during the AMSU-A2 initial FQT.

1 of 1

QC 224
3-21-97

```
EOS  A2-XX  E2.EXE;3  GSE MODE 6          21-MAR-97  09:10:142 SCAN NUMBER     7
[ 5 ] SCIENCE DATA    ELEMENT 0000                                    0    2
[ 6 ] CONTOL/STATUS   ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00

                                  COMMANDS
[ 9 ]  SCANNER A2 POWER =          ON     COLD CAL POSITION 1 =      YES [ 14 ]
[ 10 ] ANTENNA IN FULL SCAN MODE = NO     COLD CAL POSITION 2 =      NO  [ 15 ]
[ 11 ] ANTENNA IN WARM CAL POSIT = NO     COLD CAL POSITION 3 =      NO  [ 16 ]
[ 12 ] ANTENNA IN COLD CAL POSIT = NO     COLD CAL POSITION 4 =      NO  [ 17 ]
[ 13 ] ANTENNA IN NADIR POSITION = NO     RESET C&DH PROCESSOR =         [ 18 ]

ENGR OK   POWER       ON    CHECKSUM  IN 49A2 CALC 49A2   SA28    49 SA29    49
 SELECT BUTTON 2      SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL      [ 1 ] RETURN
```

```
EOS  A2-XX  E2.EXE;3  GSE MODE 6          21-MAR-97  09:11:582 SCAN NUMBER     20
[ 5 ] SCIENCE DATA    ELEMENT 0000                                          0     1
[ 6 ] CONTOL/STATUS   ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00

                                    COMMANDS
[ 9 ]  SCANNER A2 POWER =          ON     COLD CAL POSITION 1 =       YES [ 14 ]
[ 10 ] ANTENNA IN FULL SCAN MODE = NO     COLD CAL POSITION 2 =       NO  [ 15 ]
[ 11 ] ANTENNA IN WARM CAL POSIT = NO     COLD CAL POSITION 3 =       NO  [ 16 ]
[ 12 ] ANTENNA IN COLD CAL POSIT = NO     COLD CAL POSITION 4 =       NO  [ 17 ]
[ 13 ] ANTENNA IN NADIR POSITION = NO     RESET C&DH PROCESSOR =          [ 18 ]

ENGR OK   POWER        ON    CHECKSUM  IN DDDA CALC DDDA   SA28     1 SA29     1
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL       [ 1 ] RETURN
 SELECT BUTTON 2
```

QC 224
3-21-97
aqw

EOS A2-XX E2.EXE;3 GSE MODE 6 21-MAR-97 09:12:452 SCAN NUMBER 26
[5] SCIENCE DATA ELEMENT 0000
[6] CONTOL/STATUS ELEMENT 00 0 0
[7] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	14	25	0	33	0	41	0	49	0	57	0
2	33	10	0	18	192	26	0	34	0	42	0	50	0	58	0
3	192	11	0	19	136	27	0	35	0	43	0	51	0	59	0
4	6	12	0	20	0	28	0	36	0	44	0	52	0	60	0
5	1	13	0	21	72	29	72	37	72	45	72	53	72	61	72
6	63	14	0	22	65	30	65	38	65	46	65	54	65	62	65
7	0	15	0	23	72	31	72	39	72	47	72	55	72	63	72
8	174	16	0	24	65	32	65	40	65	48	65	56	65	64	65

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN D5A6 CALC D5A6 SA28 7 SA29 7
SELECT BUTTON 2 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

QC 224
3-21-97

```
EOS  A2-XX  E2.EXE;3  COLD CAL MODE      21-MAR-97  09:13:582 SCAN NUMBER    35
[ 5 ] SCIENCE DATA    ELEMENT 0000                                 FFFF    2
[ 6 ] CONTOL/STATUS   ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00

                                   COMMANDS
[ 9 ]  SCANNER A2 POWER =          ON     COLD CAL POSITION 1 =      YES [ 14 ]
[ 10 ] ANTENNA IN FULL SCAN MODE = NO     COLD CAL POSITION 2 =      NO  [ 15 ]
[ 11 ] ANTENNA IN WARM CAL POSIT = NO     COLD CAL POSITION 3 =      NO  [ 16 ]
[ 12 ] ANTENNA IN COLD CAL POSIT = YES    COLD CAL POSITION 4 =      NO  [ 17 ]
[ 13 ] ANTENNA IN NADIR POSITION = NO     RESET C&DH PROCESSOR =         [ 18 ]

ENGR OK   POWER        ON    CHECKSUM  IN CFEB CALC CFEB   SA28    16 SA29    16
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL       [ 1 ] RETURN
 SELECT BUTTON 2
```

QC 224
3-21-97
abh

QC 224
3-21-97

EOS A2-XX E2.EXE;3 COLD CAL MODE 21-MAR-97 09:14:382 SCAN NUMBER 40
[5] SCIENCE DATA ELEMENT 0000
[6] CONTOL/STATUS ELEMENT 00 FFFF 4
[7] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	14	25	0	33	0	41	0	49	0	57	0
2	33	10	0	18	0	26	0	34	0	42	0	50	0	58	0
3	192	11	0	19	136	27	0	35	0	43	0	51	0	59	0
4	20	12	0	20	8	28	0	36	0	44	0	52	0	60	0
5	1	13	0	21	72	29	72	37	72	45	72	53	72	61	72
6	63	14	0	22	65	30	65	38	65	46	65	54	65	62	65
7	0	15	0	23	72	31	72	39	72	47	72	55	72	63	72
8	174	16	0	24	65	32	65	40	65	48	65	56	65	64	65

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN CE56 CALC CE56 SA28 21 SA29 21
SELECT BUTTON 2 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

```
EOS  A2-XX  E2.EXE;3  COLD CAL MODE          21-MAR-97  09:15:432 SCAN NUMBER    48
[ 5 ] SCIENCE DATA    ELEMENT 0000                                      0     5
[ 6 ] CONTOL/STATUS   ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00

                                   COMMANDS
[ 9 ]  SCANNER A2 POWER =          ON    COLD CAL POSITION 1 =      NO  [ 14 ]
[ 10 ] ANTENNA IN FULL SCAN MODE = NO    COLD CAL POSITION 2 =      NO  [ 15 ]
[ 11 ] ANTENNA IN WARM CAL POSIT = NO    COLD CAL POSITION 3 =      NO  [ 16 ]
[ 12 ] ANTENNA IN COLD CAL POSIT = YES   COLD CAL POSITION 4 =      YES [ 17 ]
[ 13 ] ANTENNA IN NADIR POSITION = NO    RESET C&DH PROCESSOR =         [ 18 ]

ENGR OK   POWER       ON    CHECKSUM  IN CFAC CALC CFAC   SA28   29 SA29    29
SELECT BUTTON 2       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL      [ 1 ] RETURN
```

QC 224
3-21-97

EOS A2-XX E2.EXE;3 COLD CAL MODE 21-MAR-97 09:16:312 SCAN NUMBER 54
[5] SCIENCE DATA ELEMENT 0000
[6] CONTOL/STATUS ELEMENT 00 0 0
[7] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	14	25	0	33	0	41	0	49	0	57	0
2	33	10	0	18	0	26	0	34	0	42	0	50	0	58	0
3	192	11	0	19	136	27	0	35	0	43	0	51	0	59	0
4	34	12	0	20	104	28	0	36	0	44	0	52	0	60	0
5	1	13	0	21	72	29	72	37	72	45	72	53	72	61	72
6	63	14	0	22	65	30	65	38	65	46	65	54	65	62	65
7	0	15	0	23	72	31	72	39	72	47	72	55	72	63	72
8	174	16	0	24	65	32	65	40	65	48	65	56	65	64	65

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN CE12 CALC CE12 SA28 35 SA29 35
SELECT BUTTON 2 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

QC 224
3-21-97

```
EOS  A2-XX  E2.EXE;3  COLD CAL MODE          21-MAR-97  09:17:522 SCAN NUMBER     64
[ 5 ] SCIENCE DATA    ELEMENT 0000                                                0    6
[ 6 ] CONTOL/STATUS   ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00

                                  COMMANDS
[ 9 ]  SCANNER A2 POWER =          ON     COLD CAL POSITION 1 =       NO  [ 14 ]
[ 10 ] ANTENNA IN FULL SCAN MODE = NO     COLD CAL POSITION 2 =       NO  [ 15 ]
[ 11 ] ANTENNA IN WARM CAL POSIT = NO     COLD CAL POSITION 3 =       YES [ 16 ]
[ 12 ] ANTENNA IN COLD CAL POSIT = YES    COLD CAL POSITION 4 =       NO  [ 17 ]
[ 13 ] ANTENNA IN NADIR POSITION = NO     RESET C&DH PROCESSOR =          [ 18 ]

ENGR OK   POWER      ON    CHECKSUM  IN D266 CALC D266   SA28   46 SA29    46
 SELECT BUTTON 2          SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL      [ 1 ] RETURN
```

QC 224
3-21-97

QC 224
3-21-97

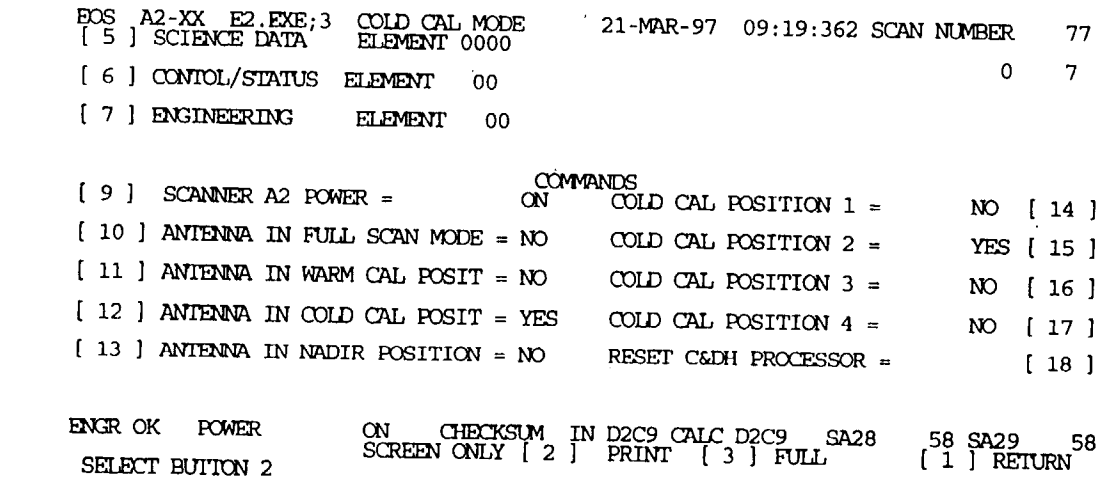
EOS A2-XX E2.EXE;3 COLD CAL MODE 21-MAR-97 09:18:322 SCAN NUMBER 69
[5] SCIENCE DATA ELEMENT 0000
[6] CONTOL/STATUS ELEMENT 00 0 0
[7] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	14	25	0	33	0	41	0	49	0	57	0
2	33	10	0	18	0	26	0	34	0	42	0	50	0	58	0
3	192	11	0	19	136	27	0	35	0	43	0	51	0	59	0
4	49	12	0	20	72	28	0	36	0	44	0	52	0	60	0
5	1	13	0	21	72	29	72	37	72	45	72	53	72	61	72
6	63	14	0	22	65	30	65	38	65	46	65	54	65	62	65
7	0	15	0	23	72	31	72	39	72	47	72	55	72	63	72
8	174	16	0	24	65	32	65	40	65	48	65	56	65	64	65

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN D481 CALC D481 SA28 50 SA29 50
SELECT BUTTON 2 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN


EOS A2-XX E2.EXE;3 COLD CAL MODE 21-MAR-97 09:19:362 SCAN NUMBER 77
[5] SCIENCE DATA ELEMENT 0000
[6] CONTOL/STATUS ELEMENT 00 0 7
[7] ENGINEERING ELEMENT 00
COMMANDS
[9] SCANNER A2 POWER = ON COLD CAL POSITION 1 = NO [14]
[10] ANTENNA IN FULL SCAN MODE = NO COLD CAL POSITION 2 = YES [15]
[11] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION 3 = NO [16]
[12] ANTENNA IN COLD CAL POSIT = YES COLD CAL POSITION 4 = NO [17]
[13] ANTENNA IN NADIR POSITION = NO RESET C&DH PROCESSOR = [18]
ENGR OK POWER ON CHECKSUM IN D2C9 CALC D2C9 SA28 58 SA29 58
SELECT BUTTON 2 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

QC 224
3-21-97

EOS A2-XX E2.EXE;3 COLD CAL MODE 21-MAR-97 09:20:002 SCAN NUMBER 80
[5] SCIENCE DATA ELEMENT 0000
[6] CONTOL/STATUS ELEMENT 00 0 0
[7] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	14	25	0	33	0	41	0	49	0	57	0
2	33	10	0	18	0	26	0	34	0	42	0	50	0	58	0
3	192	11	0	19	136	27	0	35	0	43	0	51	0	59	0
4	60	12	0	20	40	28	0	36	0	44	0	52	0	60	0
5	1	13	0	21	72	29	72	37	72	45	72	53	72	61	72
6	63	14	0	22	65	30	65	38	65	46	65	54	65	62	65
7	0	15	0	23	72	31	72	39	72	47	72	55	72	63	72
8	174	16	0	24	65	32	65	40	65	48	65	56	65	64	65

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN D4A8 CALC D4A8 SA28 61 SA29 61
SELECT BUTTON 2 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

QC 224
3-21-97

```
EOS  A2-XX  E2.EXE;3  COLD CAL MODE          21-MAR-97  09:20:572 SCAN NUMBER     87
[ 5 ] SCIENCE DATA    ELEMENT 0000                                        0     3
[ 6 ] CONTOL/STATUS   ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00

                                   COMMANDS
[ 9 ]  SCANNER A2 POWER =          ON     COLD CAL POSITION 1 =      YES [ 14 ]
[ 10 ] ANTENNA IN FULL SCAN MODE = NO     COLD CAL POSITION 2 =      NO  [ 15 ]
[ 11 ] ANTENNA IN WARM CAL POSIT = NO     COLD CAL POSITION 3 =      NO  [ 16 ]
[ 12 ] ANTENNA IN COLD CAL POSIT = YES    COLD CAL POSITION 4 =      NO  [ 17 ]
[ 13 ] ANTENNA IN NADIR POSITION = NO     RESET C&DH PROCESSOR =           [ 18 ]

ENGR OK   POWER       ON    CHECKSUM  IN D5B3 CALC D5B3   SA28    68 SA29    68
SELECT BUTTON 2             SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL      [ 1 ] RETURN
```

QC 224
3-21-97

EOS A2-XX E2.EXE;3 COLD CAL MODE 21-MAR-97 09:21:302 SCAN NUMBER 91
[5] SCIENCE DATA ELEMENT 0000
[6] CONTOL/STATUS ELEMENT 00 0 4
[7] ENGINEERING ELEMENT 00

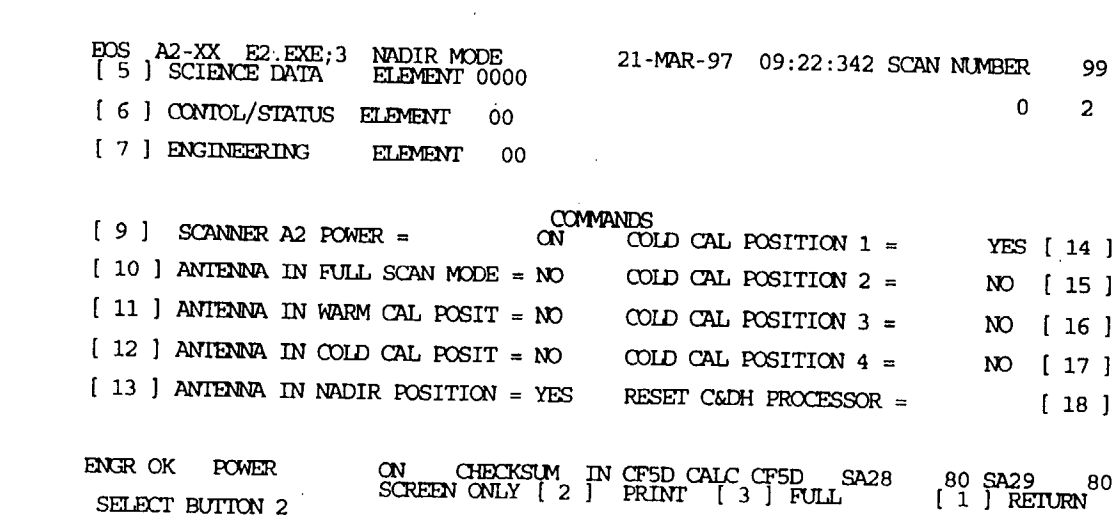
DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	14	25	0	33	0	41	0	49	0	57	0
2	33	10	0	18	0	26	0	34	0	42	0	50	0	58	0
3	192	11	0	19	136	27	0	35	0	43	0	51	0	59	0
4	71	12	0	20	8	28	0	36	0	44	0	52	0	60	0
5	1	13	0	21	72	29	72	37	72	45	72	53	72	61	72
6	63	14	0	22	65	30	65	38	65	46	65	54	65	62	65
7	0	15	0	23	72	31	72	39	72	47	72	55	72	63	72
8	174	16	0	24	65	32	65	40	65	48	65	56	65	64	65

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 3739 CALC 3739 SA28 72 SA29 72
SELECT BUTTON 2 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

QC 224
3-21-97


EOS A2-XX E2.EXE;3 NADIR MODE 21-MAR-97 09:22:342 SCAN NUMBER 99
[5] SCIENCE DATA ELEMENT 0000
[6] CONTOL/STATUS ELEMENT 00 0 2
[7] ENGINEERING ELEMENT 00
COMMANDS
[9] SCANNER A2 POWER = ON COLD CAL POSITION 1 = YES [14]
[10] ANTENNA IN FULL SCAN MODE = NO COLD CAL POSITION 2 = NO [15]
[11] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION 3 = NO [16]
[12] ANTENNA IN COLD CAL POSIT = NO COLD CAL POSITION 4 = NO [17]
[13] ANTENNA IN NADIR POSITION = YES RESET C&DH PROCESSOR = [18]
ENGR OK POWER ON CHECKSUM IN CF5D CALC CF5D SA28 80 SA29 80
SELECT BUTTON 2 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

QC 224
3-21-97

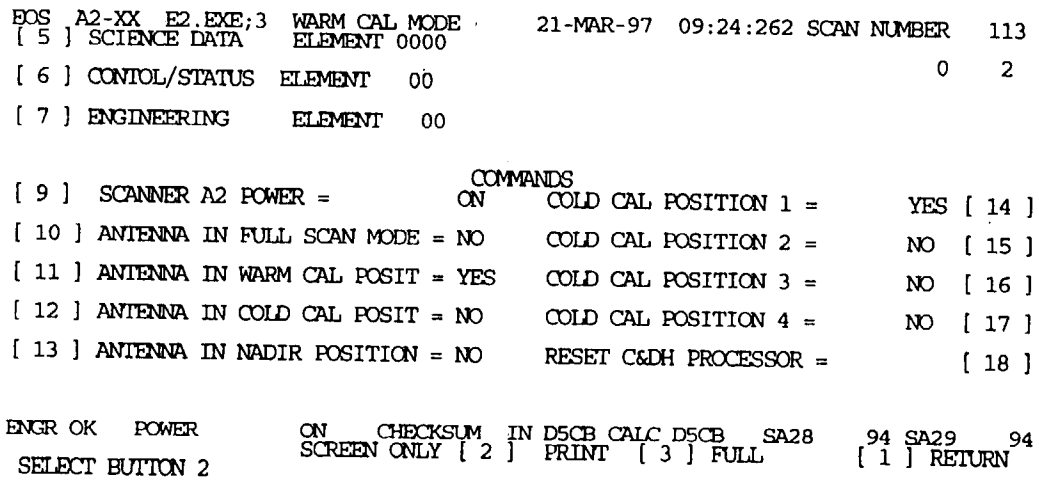
EOS A2-XX E2.EXE;3 NADIR MODE 21-MAR-97 09:23:052 SCAN NUMBER 103
[5] SCIENCE DATA ELEMENT 0000
[6] CONTOL/STATUS ELEMENT 00 0 1
[7] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	14	25	0	33	0	41	0	49	0	57	0
2	33	10	0	18	0	26	0	34	0	42	0	50	0	58	0
3	192	11	0	19	136	27	0	35	0	43	0	51	0	59	0
4	83	12	0	20	16	28	0	36	0	44	0	52	0	60	0
5	1	13	0	21	72	29	72	37	72	45	72	53	72	61	72
6	63	14	0	22	65	30	65	38	65	46	65	54	65	62	65
7	0	15	0	23	72	31	72	39	72	47	72	55	72	63	72
8	174	16	0	24	65	32	65	40	65	48	65	56	65	64	65

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN D7F3 CALC D7F3 SA28 84 SA29 84
SELECT BUTTON 2 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN


EOS A2-XX E2.EXE;3 WARM CAL MODE 21-MAR-97 09:24:262 SCAN NUMBER 113
[5] SCIENCE DATA ELEMENT 0000
[6] CONTOL/STATUS ELEMENT 00 0 2
[7] ENGINEERING ELEMENT 00
COMMANDS
[9] SCANNER A2 POWER = ON COLD CAL POSITION 1 = YES [14]
[10] ANTENNA IN FULL SCAN MODE = NO COLD CAL POSITION 2 = NO [15]
[11] ANTENNA IN WARM CAL POSIT = YES COLD CAL POSITION 3 = NO [16]
[12] ANTENNA IN COLD CAL POSIT = NO COLD CAL POSITION 4 = NO [17]
[13] ANTENNA IN NADIR POSITION = NO RESET C&DH PROCESSOR = [18]
ENGR OK POWER ON CHECKSUM IN D5CB CALC D5CB SA28 94 SA29 94
SELECT BUTTON 2 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

QC 224
3-21-97

EOS A2-XX E2.EXE;3 WARM CAL MODE 21-MAR-97 09:25:152 SCAN NUMBER 119
[5] SCIENCE DATA ELEMENT 0000
[6] CONTOL/STATUS ELEMENT 00 0 1
[7] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	14	25	0	33	0	41	0	49	0	57	0
2	33	10	0	18	0	26	0	34	0	42	0	50	0	58	0
3	192	11	0	19	136	27	0	35	0	43	0	51	0	59	0
4	99	12	0	20	4	28	0	36	0	44	0	52	0	60	0
5	1	13	0	21	72	29	72	37	72	45	72	53	72	61	72
6	63	14	0	22	65	30	65	38	65	46	65	54	65	62	65
7	0	15	0	23	72	31	72	39	72	47	72	55	72	63	72
8	174	16	0	24	65	32	65	40	65	48	65	56	65	64	65

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN F14F CALC F14F SA28 100 SA29 100
SELECT BUTTON 2 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

```
EOS  A2-XX  E2.EXE;3  FULL SCAN MODE      21-MAR-97  09:27:421 SCAN NUMBER     6
[ 5 ] SCIENCE DATA    ELEMENT 0000                                    0    5
[ 6 ] CONTOL/STATUS   ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00

                                COMMANDS
[ 9 ]  SCANNER A2 POWER =          ON     COLD CAL POSITION 1 =      YES [ 14 ]
[ 10 ] ANTENNA IN FULL SCAN MODE = YES    COLD CAL POSITION 2 =      NO  [ 15 ]
[ 11 ] ANTENNA IN WARM CAL POSIT = NO     COLD CAL POSITION 3 =      NO  [ 16 ]
[ 12 ] ANTENNA IN COLD CAL POSIT = NO     COLD CAL POSITION 4 =      NO  [ 17 ]
[ 13 ] ANTENNA IN NADIR POSITION = NO     RESET C&DH PROCESSOR =         [ 18 ]

ENGR OK   POWER        ON    CHECKSUM  IN B148 CALC B148   SA28   118 SA29   118
SELECT BUTTON 2        SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL       [ 1 ] RETURN
```

QC 224
3-21-97

QC 224
3-21-97

EOS A2-XX E2.EXE;3 FULL SCAN MODE 21-MAR-97 09:28:141 SCAN NUMBER 10
[5] SCIENCE DATA ELEMENT 0000
[6] CONTOL/STATUS ELEMENT 00 0 7
[7] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	14	25	0	33	0	41	0	49	0	57	0
2	34	10	0	18	0	26	0	34	0	42	0	50	0	58	0
3	192	11	0	19	136	27	0	35	0	43	0	51	0	59	0
4	121	12	0	20	2	28	0	36	0	44	0	52	0	60	0
5	1	13	0	21	72	29	72	37	72	45	72	53	72	61	72
6	87	14	0	22	65	30	65	38	65	46	65	54	65	62	65
7	0	15	0	23	72	31	72	39	72	47	72	55	72	63	72
8	174	16	0	24	65	32	65	40	65	48	65	56	65	64	65

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN B0A2 CALC B0A2 SA28 123 SA29 123
SELECT BUTTON 2 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

EOS A2-XX E2.EXE;3 FULL SCAN MODE 21-MAR-97 09:41:234 SCAN NUMBER 4
[5] SCIENCE DATA ELEMENT 0000 0 2
[6] CONTOL/STATUS ELEMENT 00
[7] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	14	25	0	33	0	41	0	49	0	57	0
2	34	10	0	18	0	26	0	34	0	42	0	50	0	58	0
3	192	11	0	19	136	27	0	35	0	43	0	51	0	59	0
4	211	12	0	20	2	28	0	36	0	44	0	52	0	60	0
5	1	13	0	21	72	29	72	37	72	45	72	53	72	61	72
6	87	14	0	22	65	30	65	38	65	46	65	54	65	62	65
7	0	15	0	23	72	31	72	39	72	47	72	55	72	63	72
8	174	16	0	24	65	32	65	40	65	48	65	56	65	64	65

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN F60 CALC F60 SA28 212 SA29 212
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT BUTTON 2

QC 224 3-21-97

QC 224
3-21-97

```
EOS  A2-XX  E2.EXE;3  FULL SCAN MODE      21-MAR-97  09:46:284 SCAN NUMBER    42
[ 5 ] SCIENCE DATA    ELEMENT 0000                                    0     3
[ 6 ] CONTOL/STATUS   ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00

                          RADIOMETRIC DATA

                      BEAM POSITION  1

                          CH  DATA
                           1     0
                           2     0


[ 21 ] UP                 [ 22 ] DOWN

ENGR OK   POWER      ON    CHECKSUM  IN B40E CALC B40E   SA28   250 SA29   250
 SELECT BUTTON 2     SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL       [ 1 ] RETURN
```

QC 224

3-21-97

EOS A2-XX E2.EXE;3 FULL SCAN MODE 21-MAR-97 09:47:324 SCAN NUMBER 50
[5] SCIENCE DATA ELEMENT 0000

[6] CONTOL/STATUS ELEMENT 00 0 5

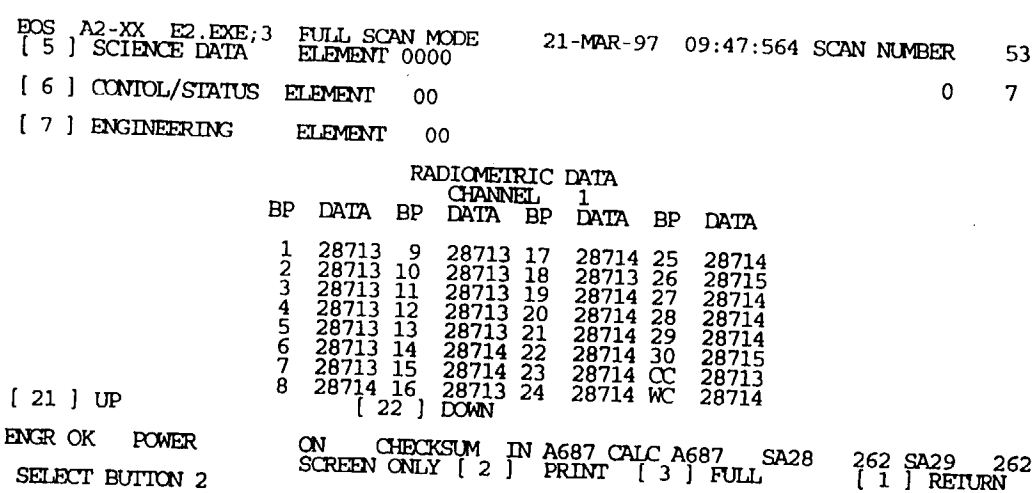
[7] ENGINEERING ELEMENT 00

RADIOMETRIC DATA
CHANNEL 1

BP	DATA	BP	DATA	BP	DATA	BP	DATA
1	0	9	0	17	0	25	0
2	0	10	0	18	0	26	0
3	0	11	0	19	0	27	0
4	0	12	0	20	0	28	0
5	0	13	0	21	0	29	0
6	0	14	0	22	0	30	0
7	0	15	0	23	0	CC	0
8	0	16	0	24	0	WC	0

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN B618 CALC B618 SA28 258 SA29 258
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT BUTTON 2


EOS A2-XX E2.EXE;3 FULL SCAN MODE 21-MAR-97 09:47:564 SCAN NUMBER 53
[5] SCIENCE DATA ELEMENT 0000
[6] CONTOL/STATUS ELEMENT 00 0 7
[7] ENGINEERING ELEMENT 00
RADIOMETRIC DATA
CHANNEL 1
BP DATA BP DATA BP DATA BP DATA
1 28713 9 28713 17 28714 25 28714
2 28713 10 28713 18 28713 26 28715
3 28713 11 28713 19 28714 27 28714
4 28713 12 28713 20 28714 28 28714
5 28713 13 28713 21 28714 29 28714
6 28713 14 28714 22 28714 30 28715
7 28713 15 28714 23 28714 CC 28713
8 28714 16 28713 24 28714 WC 28714
[21] UP
[22] DOWN
ENGR OK POWER ON CHECKSUM IN A687 CALC A687 SA28 262 SA29 262
SELECT BUTTON 2
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

QC 224
3-21-97

EOS A2-XX E2.EXE;3 FULL SCAN MODE 21-MAR-97 09:48:364 SCAN NUMBER 58
[5] SCIENCE DATA ELEMENT 0000

[6] CONTOL/STATUS ELEMENT 00 0 2

[7] ENGINEERING ELEMENT 00

QC 224
3-21-97

WARM CALIBRATE

CH	DATA
1	0
1	0
2	0
2	0

ENGR OK POWER ON CHECKSUM IN B7B6 CALC B7B6 SA28 266 SA29 266
SELECT BUTTON 2 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

QC 224
3-21-97

EOS A2-XX E2.EXE;3 FULL SCAN MODE 21-MAR-97 09:49:004 SCAN NUMBER 61
[5] SCIENCE DATA ELEMENT 0000
[6] CONTOL/STATUS ELEMENT 00 0 2
[7] ENGINEERING ELEMENT 00

WARM CALIBRATE

CH	DATA
1	28709
1	28708
2	0
2	0

ENGR OK POWER ON CHECKSUM IN 6FD5 CALC 6FD5 SA28 269 SA29 269
SELECT BUTTON 2 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

QC 224
3-21-97

```
EOS  A2-XX  E2.EXE;3  FULL SCAN MODE      21-MAR-97  09:49:324 SCAN NUMBER     65
[ 5 ] SCIENCE DATA    ELEMENT 0000                                          0    6
[ 6 ] CONTOL/STATUS   ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00

                          COLD CALIBRATE

                           CH  DATA
                            1     0
                            1     0
                            2     0
                            2     0


ENGR OK   POWER      ON    CHECKSUM  IN B919 CALC B919   SA28   273 SA29   273
                     SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL      [ 1 ] RETURN
 SELECT BUTTON 2
```

QC 224
7-21-97

```
EOS  A2-XX  E2.EXE;3  FULL SCAN MODE      21-MAR-97  09:49:564 SCAN NUMBER    68
[ 5 ] SCIENCE DATA    ELEMENT 0000                                    0    0
[ 6 ] CONTOL/STATUS   ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00

                        COLD CALIBRATE

                        CH  DATA
                         1  28701
                         1  28702
                         2      0
                         2      0

ENGR OK   POWER       ON    CHECKSUM  IN 6530 CALC 6530   SA28   276 SA29   276
 SELECT BUTTON 2      SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL        [ 1 ] RETURN
```

E2, A2
Test Data
A=26600 3-21-9

QC 224

EOS A2-XX E2.EXE;3 FULL SCAN MODE 21-MAR-97 09:51:004 SCAN NUMBER 76
[5] SCIENCE DATA ELEMENT 0000
[6] CONTOL/STATUS ELEMENT 00 0 2
[7] ENGINEERING ELEMENT 00

REFLECTOR POSITIONS

BP	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2
1	9248	9248	9	9248	9248	17	9248	9248	25	9248	9248
2	9248	9248	10	9248	9248	18	9248	9248	26	9248	9248
3	9248	9248	11	9248	9248	19	9248	9248	27	9248	9248
4	9248	9248	12	9248	9248	20	9248	9248	28	9248	9248
5	9248	9248	13	9248	9248	21	9248	9248	29	9248	9248
6	9248	9248	14	9248	9248	22	9248	9248	30	9248	9248
7	9248	9248	15	9248	9248	23	9248	9248	CC	9248	9248
8	9248	9248	16	9248	9248	24	9248	9248	WC	9248	9248

ENGR OK POWER ON CHECKSUM IN B69A CALC B69A SA28 284 SA29 284
SELECT BUTTON 2 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

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APPENDIX D

TEST DATA SHEETS AND DATA PRINTOUTS FOR AMSU-A1

The following pages contain copies of the Test Data Sheets and Data Printouts obtained during the AMSU-A1 final FQT (Initial CPT).

AE-26156/ PARAGRAPH 3.3.5.1
P/N 1356008-1-IT S/N 202 S6# 29856

AE-26600B
23 June 1998

TEST DATA SHEET 1
Test Case 1 (Paragraph 4.3)

Unit Tested (AMSU-A1 or AMSU-A2) EOS/AMSU-A1

STE Tape Loaded E1.EXE;35 E1X.EXE;31

Instrument Control Tape Loaded NONE - FLIGHT PROMS

Control and Data Handling Tape Loaded NONE - FLIGHT PROMS

Procedure Step	Requirement Description	Specification Reference	Requirement Satisfied ? yes or no	HardCopy Test Data Attached ?	Test Data on Tape ?	Related Discrepany Reports
4.3.2a	Reset C&DH	5.1.1.2b,d 5.1.3.1	YES	YES	No	N/A
4.3.2b	Cold Cal	5.1.1.2b,d 5.1.3.1	YES	YES	NO	N/A
4.3.2c	Cold Cal Position 4	5.1.1.2b,d 5.1.3.1	YES	YES	NO	N/A
4.3.2d	Cold Cal Position 3	5.1.1.2b,d 5.1.3.1	YES	YES	NO	N/A
4.3.2e	Cold Cal Position 2	5.1.1.2b,d 5.1.3.1	YES	YES	No	N/A
4.3.2f	Cold Cal Position 1	5.1.1.2b,d 5.1.3.1	YES	YES	NO	N/A
4.3.2g	Nadir	5.1.1.2b,d 5.1.3.1	YES	YES	NO	N/A
4.3.2h	Warm Cal	5.1.1.2b,d 5.1.3.1	YES	YES	NO	N/A
4.3.2i	Full Scan	5.1.1.2b,d 5.1.3.1	YES	YES	No	N/A

Comments:

Authentication:

Aerojet System Test: Robert H Platt Date: 7/14/98

Aerojet Quality Assurance: Date: JUL 14 '98

Customer Representative: Date: JUL 22 '98

Other Witness (optional): Date:

TEST DATA SHEET 2
Test Case 2 (Paragraph 4.4)

Unit Tested (AMSU-A1 or AMSU-A2) EOS/AMSU-A1

STE Tape Loaded E1.EXE;35 E1X.EXE;31

Instrument Control Tape Loaded NONE - FLIGHT PROMS

Control and Data Handling Tape Loaded NONE - FLIGHT PROMS

Procedure Step	Requirement Description	Specification Reference	Requirement Satisfied ? yes or no	HardCopy Test Data Attached ?	Test Data on Tape ?	Related Discrepany Reports
4.4.4a	Data Stream	5.1.1.2a, 5.1.3.4,5.1.3.6	YES	YES	NO	N/A
4.4.4c	Beam Position NN	5.1.1.2b5 5.1.3.7	YES	YES	NO	N/A
4.4.4e	Channel NN	5.1.1.2b5 5.1.3.7	YES	YES	NO	N/A
4.4.4g	Warm Calibrate	5.1.1.2b5 5.1.3.7	YES	YES	NO	N/A
4.4.4i	Cold Calibrate	5.1.1.2b5 5.1.3.7	YES	YES	NO	N/A
4.4.4k	Reflector Positions	5.1.1.2b4 5.1.3.7	YES	YES	NO	N/A
4.4.5	Checksum sub-address	5.1.3.3,5.1.3.9 5.1.3.10	YES	YES	NO	N/A
4.4.6	8 Sec Scan	5.1.3.2	YES	SEE BELOW	NO	N/A
4.4.7	Skip Time Mark	No Req't	YES	NO	NO	N/A
4.4.8	Invalid APID	5.2.3	YES	NO	NO	N/A

Comments: PARAGRAPH 4.4.6 START SCAN 366 START TIME 20:08:
END SCAN 441 STOP TIME 20:18:
75 SCANS PER 600 SECONDS
1 SCAN/8 SECS

Authentication:

Aerojet System Test: R H Platt Date: 7/14/98

Aerojet Quality Assurance: _____ Date: JUL 15 98

Customer Representative: _____ Date: JUL 22 98

Other Witness (optional): _____ Date: _____

```
EOS   A1-C  E1.EXE;35 FULL SCAN MODE     P1 14-JUL-98 .:09:13  SCAN NUMBER     13
[ 5 ] SCIENCE   DATA  ELEMENT 0000
[ 6 ] CONTROL/STATUS  ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00

                              COMMANDS          PLLO POWER =              PLLO#1 [ 15 ]
[ 9 ]  SCANNER A1-1 POWER =          ON         COLD CAL POSITION 1 =        YES [ 16 ]
[ 10 ] SCANNER A1-2 POWER =          ON                           2 =        NO  [ 17 ]
[ 11 ] ANTENNA FULL SCAN MODE =      YES                          3 =        NO  [ 18 ]
[ 12 ]         WARM CAL      =       NO         COLD CAL POSITION 4 =        NO  [ 19 ]
[ 13 ]         COLD CAL      =       NO         RESET C&DH PROCESSOR              [ 20 ]
[ 14 ]         NADIR         =       NO         GSE MODE                          [ 21 ]
ENGR OK        POWER   ON    CHECKSUM  IN A71F CALC A71F   SA28   368 SA29   590
 SELECT BUTTON 2          SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL    [ 1 ] RETURN
```

AE-26600 PARAGRAPH 4.3.1

```
EOS   A1-6  E1.EXE;35 FULL SCAN MODE     P1 14-JUL-98  :14:00  SCAN NUMBER     49
[ 5 ] SCIENCE   DATA  ELEMENT 0000
[ 6 ] CONTROL/STATUS  ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00

                              COMMANDS          PLLO POWER =              PLLO#1 [ 15 ]
[ 9 ]  SCANNER A1-1 POWER =          ON         COLD CAL POSITION 1 =        YES [ 16 ]
[ 10 ] SCANNER A1-2 POWER =          ON                           2 =        NO [ 17 ]
[ 11 ] ANTENNA FULL SCAN MODE =      YES                          3 =        NO [ 18 ]
[ 12 ]         WARM CAL      =       NO         COLD CAL POSITION 4 =        NO [ 19 ]
[ 13 ]         COLD CAL      =       NO         RESET C&DH PROCESSOR             [ 20 ]
[ 14 ]         NADIR         =       NO         GSE MODE                         [ 21 ]
ENGR OK        POWER   ON    CHECKSUM  IN B49D CALC B49D   SA28     0 SA29      0
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL       [ 1 ] RETURN
 SELECT BUTTON 2
```

AE-26600 PARAGRAPH 4.3.2.a

EOS A1-C E1.EXE;35 FULL SCAN MODE P1 14-JUL-98 ?:14:33 SCAN NUMBER 51
[5] SCIENCE DATA ELEMENT 0000

[6] CONTROL/STATUS ELEMENT 00

[7] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	3	25	113	33	64	41	64	49	63	57	111
2	5	10	0	18	0	26	115	34	240	42	106	50	105	58	233
3	192	11	0	19	154	27	110	35	65	43	64	51	65	59	114
4	1	12	0	20	2	28	179	36	240	44	64	52	55	60	159
5	2	13	0	21	113	29	62	37	62	45	63	53	63	61	111
6	191	14	0	22	115	30	1	38	50	46	16	54	96	62	225
7	0	15	0	23	110	31	63	39	64	47	64	55	114	63	62
8	174	16	0	24	179	32	186	40	228	48	67	56	171	64	17

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN A795 CALC A795 SA28 2 SA29 4
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT BUTTON 2

AE 26600 PARAGRAPH 4.3.2.a

```
EOS   A1-C  E1.EXE;35 COLD CAL MODE      P1 14-JUL-98 .:17:29  SCAN NUMBER    73
[ 5 ] SCIENCE   DATA  ELEMENT 0000
[ 6 ] CONTROL/STATUS  ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00
                              COMMANDS          PLLO POWER =              PLLO#1 [ 15 ]
[ 9 ]  SCANNER A1-1 POWER =          OFF        COLD CAL POSITION 1 =        YES [ 16 ]
[ 10 ] SCANNER A1-2 POWER =          OFF                          2 =        NO  [ 17 ]
[ 11 ] ANTENNA FULL SCAN MODE =      NO                           3 =        NO  [ 18 ]
[ 12 ]         WARM CAL      =       NO        COLD CAL POSITION 4 =        NO  [ 19 ]
[ 13 ]         COLD CAL      =       YES       RESET C&DH PROCESSOR               [ 20 ]
[ 14 ]         NADIR         =       NO        GSE MODE                           [ 21 ]
ENGR OK        POWER   ON    CHECKSUM  IN B15F CALC B15F   SA28    25 SA29    49
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL       [ 1 ] RETURN
 SELECT BUTTON 2
```

AE-26600 PARAGRAPH 4.3.2.b

```
EOS   A1-C   E1.EXE;35 COLD CAL MODE      P1 14-JUL-98 .:17:46  SCAN NUMBER     75
[ 5 ] SCIENCE    DATA  ELEMENT 0000

[ 6 ] CONTROL/STATUS   ELEMENT    00

[ 7 ] ENGINEERING      ELEMENT    00
```

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	3	25	69	33	64	41	64	49	63	57	65
2	3	10	0	18	0	26	128	34	229	42	104	50	107	58	24
3	192	11	0	19	130	27	65	35	65	43	64	51	65	59	69
4	25	12	0	20	8	28	24	36	245	44	73	52	65	60	128
5	2	13	0	21	69	29	62	37	62	45	63	53	63	61	65
6	191	14	0	22	128	30	10	38	50	46	19	54	100	62	24
7	0	15	0	23	65	31	63	39	64	47	64	55	69	63	62
8	174	16	0	24	24	32	175	40	227	48	66	56	128	64	9

```
[ 21 ] UP                    [ 22 ] DOWN

ENGR OK          POWER   ON    CHECKSUM  IN 7BDD CALC 7BDD   SA28    27 SA29    53
                         SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL        [ 1 ] RETURN
 SELECT BUTTON 2
```

AE-26600 PARAGRAPH 4.3.2.b

```
EOS   A1-C  E1.EXE;35 COLD CAL MODE      P1 14-JUL-98 .J:19:29  SCAN NUMBER    88
[ 5 ] SCIENCE   DATA  ELEMENT 0000
[ 6 ] CONTROL/STATUS  ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00
                              COMMANDS          PLLO POWER =              PLLO#1  [ 15 ]
[ 9 ]  SCANNER A1-1 POWER =          OFF        COLD CAL POSITION 1 =       NO   [ 16 ]
[ 10 ] SCANNER A1-2 POWER =          OFF                          2 =       NO   [ 17 ]
[ 11 ] ANTENNA FULL SCAN MODE =      NO                           3 =       NO   [ 18 ]
[ 12 ]         WARM CAL      =      NO         COLD CAL POSITION 4 =       YES  [ 19 ]
[ 13 ]         COLD CAL      =      YES        RESET C&DH PROCESSOR              [ 20 ]
[ 14 ]         NADIR         =      NO         GSE MODE                          [ 21 ]
ENGR OK        POWER   ON    CHECKSUM  IN 6CDD CALC 6CDD   SA28    39 SA29    78
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL       [ 1 ] RETURN
 SELECT BUTTON 2
```

AE-26600 - PARAGRAPH 4.3.2.C

```
EOS    A1-6   E1.EXE;35 COLD CAL MODE      P1 14-JUL-98 .,:20:01  SCAN NUMBER      2
[ 5 ] SCIENCE    DATA  ELEMENT 0000
[ 6 ] CONTROL/STATUS   ELEMENT    00
[ 7 ] ENGINEERING      ELEMENT    00

                                  DATA STREAM      1  TO   64
 NO   DATA   NO   DATA   NO   DATA   NO   DATA   NO   DATA   NO   DATA   NO   DATA   NO   DATA
   1      9    9      0   17      3   25     69   33     64   41     64   49     63   57     65
   2      3   10      0   18      0   26    128   34    228   42    103   50    103   58     24
   3    192   11      0   19    130   27     65   35     65   43     64   51     65   59     69
   4     42   12      0   20    104   28     24   36    239   44     73   52     50   60    128
   5      2   13      0   21     69   29     62   37     62   45     63   53     63   61     65
   6    191   14      0   22    128   30      8   38     53   46     22   54    100   62     24
   7      0   15      0   23     65   31     63   39     64   47     64   55     69   63     62
   8    174   16      0   24     24   32    176   40    227   48     59   56    128   64      9
[ 21 ] UP                        [ 22 ] DOWN

ENGR OK          POWER    ON     CHECKSUM  IN 6DDD CALC 6DDD    SA28     43 SA29     86
                          SCREEN ONLY [ 2 ]  PRINT   [ 3 ] FULL          [ 1 ] RETURN
 SELECT BUTTON 2
```

AE-26600 PARAGRAPH 4.3.2.c

```
EOS   A1-C   E1.EXE;35 COLD CAL MODE      P1 14-JUL-98 09:21:29  SCAN NUMBER    13
[ 5 ] SCIENCE   DATA  ELEMENT 0000
[ 6 ] CONTROL/STATUS  ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00

                              COMMANDS          PLLO POWER =              PLLO#1 [ 15 ]
[ 9 ]  SCANNER A1-1 POWER =          OFF        COLD CAL POSITION 1 =        NO  [ 16 ]
[ 10 ] SCANNER A1-2 POWER =          OFF                          2 =        NO  [ 17 ]
[ 11 ] ANTENNA FULL SCAN MODE =      NO                           3 =        YES [ 18 ]
[ 12 ]         WARM CAL       =      NO        COLD CAL POSITION 4 =        NO  [ 19 ]
[ 13 ]         COLD CAL       =      YES       RESET C&DH PROCESSOR               [ 20 ]
[ 14 ]         NADIR          =      NO        GSE MODE                           [ 21 ]
ENGR OK        POWER   ON    CHECKSUM  IN 6E45 CALC 6E45   SA28   54 SA29   108
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL      [ 1 ] RETURN
 SELECT BUTTON 2
```

AE-26600 PARAGRAPH 4.3.2.d

EOS A1-C E1.EXE;35 COLD CAL MODE P1 14-JUL-98):21:46 SCAN NUMBER 15
[5] SCIENCE DATA ELEMENT 0000

[6] CONTROL/STATUS ELEMENT 00

[7] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	3	25	69	33	64	41	64	49	63	57	65
2	3	10	0	18	0	26	128	34	227	42	101	50	100	58	24
3	192	11	0	19	130	27	65	35	65	43	64	51	65	59	69
4	55	12	0	20	72	28	24	36	241	44	74	52	66	60	128
5	2	13	0	21	69	29	62	37	62	45	63	53	63	61	65
6	191	14	0	22	128	30	8	38	55	46	19	54	99	62	24
7	0	15	0	23	65	31	63	39	64	47	64	55	69	63	62
8	174	16	0	24	24	32	175	40	227	48	57	56	128	64	10

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 6D7D CALC 6D7D SA28 56 SA29 112
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT BUTTON 2

AE-26600 PARAGRAPH 4.3.2.0

```
EOS   A1-C  E1.EXE;35 COLD CAL MODE      P1 14-JUL-98 .:24:49  SCAN NUMBER    38
[ 5 ] SCIENCE   DATA  ELEMENT 0000
[ 6 ] CONTROL/STATUS  ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00
                              COMMANDS          PLLO POWER =              PLLO#1 [ 15 ]
[ 9 ]  SCANNER A1-1 POWER =          OFF        COLD CAL POSITION 1 =        NO  [ 16 ]
[ 10 ] SCANNER A1-2 POWER =          OFF                          2 =        YES [ 17 ]
[ 11 ] ANTENNA FULL SCAN MODE =      NO                           3 =        NO  [ 18 ]
[ 12 ]         WARM CAL      =       NO        COLD CAL POSITION 4 =        NO  [ 19 ]
[ 13 ]         COLD CAL      =       YES       RESET C&DH PROCESSOR               [ 20 ]
[ 14 ]         NADIR         =       NO        GSE MODE                           [ 21 ]
ENGR OK        POWER   ON    CHECKSUM  IN 7193 CALC 7193   SA28    79 SA29   158
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL       [ 1 ] RETURN
 SELECT BUTTON 2
```

AE-26600 PARAGRAPH 4.3.2.e

EOS A1-C E1.EXE;35 COLD CAL MODE P1 14-JUL-98 J:24:58 SCAN NUMBER 39
[5] SCIENCE DATA ELEMENT 0000

[6] CONTROL/STATUS ELEMENT 00

[7] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	3	25	69	33	64	41	64	49	63	57	65
2	3	10	0	18	0	26	128	34	227	42	98	50	98	58	24
3	192	11	0	19	130	27	65	35	65	43	64	51	65	59	69
4	79	12	0	20	40	28	24	36	247	44	67	52	48	60	128
5	2	13	0	21	69	29	62	37	62	45	63	53	63	61	65
6	191	14	0	22	128	30	8	38	50	46	12	54	97	62	24
7	0	15	0	23	65	31	63	39	64	47	64	55	69	63	62
8	174	16	0	24	24	32	173	40	226	48	63	56	128	64	6

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 711D CALC 711D SA28 81 SA29 161
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT BUTTON 2

AE-26600 PARAGRAP 4.3.2.C

```
EOS   A1-C   E1.EXE;35 COLD CAL MODE      P1 14-JUL-98  J:26:10  SCAN NUMBER     48
[ 5 ] SCIENCE    DATA  ELEMENT 0000
[ 6 ] CONTROL/STATUS   ELEMENT    00
[ 7 ] ENGINEERING      ELEMENT    00
                              COMMANDS          PLLO POWER =                PLLO#1 [ 15 ]
[ 9 ]  SCANNER A1-1 POWER =          OFF     COLD CAL POSITION 1 =      YES [ 16 ]
[ 10 ] SCANNER A1-2 POWER =          OFF                       2 =      NO  [ 17 ]
[ 11 ] ANTENNA FULL SCAN MODE =      NO                        3 =      NO  [ 18 ]
[ 12 ]         WARM CAL      =       NO     COLD CAL POSITION 4 =      NO  [ 19 ]
[ 13 ]         COLD CAL      =       YES    RESET C&DH PROCESSOR             [ 20 ]
[ 14 ]         NADIR         =       NO     GSE MODE                         [ 21 ]
ENGR OK        POWER   ON     CHECKSUM  IN 716F CALC 716F   SA28    90 SA29   179
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL       [ 1 ] RETURN
 SELECT BUTTON 2
```

AE-26600 PARAGRAPH 4.3.2.f

EOS A1-C E1.EXE;35 COLD CAL MODE P1 14-JUL-98 J:26:26 SCAN NUMBER 50
[5] SCIENCE DATA ELEMENT 0000

[6] CONTROL/STATUS ELEMENT 00

[7] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	3	25	69	33	64	41	64	49	63	57	65
2	3	10	0	18	0	26	128	34	226	42	100	50	104	58	24
3	192	11	0	19	130	27	65	35	65	43	64	51	65	59	69
4	90	12	0	20	8	28	24	36	243	44	68	52	51	60	128
5	2	13	0	21	69	29	62	37	62	45	63	53	63	61	65
6	191	14	0	22	128	30	5	38	52	46	19	54	99	62	24
7	0	15	0	23	65	31	63	39	64	47	64	55	69	63	62
8	174	16	0	24	24	32	173	40	229	48	65	56	128	64	9

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 70DF CALC 70DF SA28 91 SA29 182
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT BUTTON 2

AE-26600 PARAGRAPH 4.3.2.f

```
EOS   A1-C   E1.EXE;35 NADIR MODE          P1 14-JUL-98  9:28:02  SCAN NUMBER     62
[ 5 ] SCIENCE   DATA  ELEMENT 0000
[ 6 ] CONTROL/STATUS  ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00
                              COMMANDS          PLLO POWER =              PLLO#1 [ 15 ]
[ 9 ]  SCANNER A1-1 POWER =          OFF        COLD CAL POSITION 1 =        YES [ 16 ]
[ 10 ] SCANNER A1-2 POWER =          OFF                          2 =        NO [ 17 ]
[ 11 ] ANTENNA FULL SCAN MODE =      NO                           3 =        NO [ 18 ]
[ 12 ]         WARM CAL       =      NO        COLD CAL POSITION 4 =        NO [ 19 ]
[ 13 ]         COLD CAL       =      NO        RESET C&DH PROCESSOR             [ 20 ]
[ 14 ]         NADIR          =      YES       GSE MODE                         [ 21 ]
ENGR OK        POWER   ON     CHECKSUM  IN 725B CALC 725B   SA28   103 SA29   206
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL       [ 1 ] RETURN
 SELECT BUTTON 2
```

AE-26600 PARAGRAPH 4.3.2.9

EOS A1-C E1.EXE;35 NADIR MODE P1 14-JUL-98):28:10 SCAN NUMBER 63
[5] SCIENCE DATA ELEMENT 0000

[6] CONTROL/STATUS ELEMENT 00

[7] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	3	25	69	33	64	41	64	49	63	57	65
2	3	10	0	18	0	26	128	34	226	42	100	50	95	58	24
3	192	11	0	19	130	27	65	35	65	43	64	51	65	59	69
4	103	12	0	20	16	28	24	36	242	44	72	52	69	60	128
5	2	13	0	21	69	29	62	37	62	45	63	53	63	61	65
6	191	14	0	22	128	30	7	38	50	46	16	54	101	62	24
7	0	15	0	23	65	31	63	39	64	47	64	55	69	63	62
8	174	16	0	24	24	32	172	40	224	48	57	56	128	64	8

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 737B CALC 737B SA28 105 SA29 209
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT BUTTON 2

AE 26600 PARAGRAPH 4.3.2.9

```
EOS    A1-C   E1.EXE;35 WARM CAL MODE      P1 14-JUL-98  J:30:42  SCAN NUMBER     82
[ 5 ] SCIENCE   DATA  ELEMENT 0000
[ 6 ] CONTROL/STATUS  ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00
                              COMMANDS          PLLO POWER =              PLLO#1 [ 15 ]
[ 9 ]  SCANNER A1-1 POWER =          OFF        COLD CAL POSITION 1 =        YES [ 16 ]
[ 10 ] SCANNER A1-2 POWER =          OFF                          2 =        NO  [ 17 ]
[ 11 ] ANTENNA FULL SCAN MODE =      NO                           3 =        NO  [ 18 ]
[ 12 ]         WARM CAL       =      YES        COLD CAL POSITION 4 =        NO  [ 19 ]
[ 13 ]         COLD CAL       =      NO         RESET C&DH PROCESSOR              [ 20 ]
[ 14 ]         NADIR          =      NO         GSE MODE                          [ 21 ]
ENGR OK        POWER   ON    CHECKSUM  IN 722B CALC 722B   SA28   124 SA29   247
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL        [ 1 ] RETURN
 SELECT BUTTON 2
```

AE-26660 PARAGRAPH 4.3.2.h

EOS A1-C E1.EXE;35 WARM CAL MODE P1 14-JUL-98 J:30:57 SCAN NUMBER 84
[5] SCIENCE DATA ELEMENT 0000

[6] CONTROL/STATUS ELEMENT 00

[7] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	3	25	69	33	64	41	64	49	63	57	65
2	3	10	0	18	0	26	128	34	223	42	105	50	103	58	24
3	192	11	0	19	130	27	65	35	65	43	64	51	65	59	69
4	124	12	0	20	4	28	24	36	245	44	72	52	43	60	128
5	2	13	0	21	69	29	62	37	62	45	63	53	63	61	65
6	191	14	0	22	128	30	7	38	53	46	11	54	98	62	24
7	0	15	0	23	65	31	63	39	64	47	64	55	69	63	62
8	174	16	0	24	24	32	176	40	226	48	55	56	128	64	11

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 7329 CALC 7329 SA28 126 SA29 251
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT BUTTON 2

AE-26600 PARAGRAPH 4.3.2.h

```
EOS   A1-1   E1.EXE;35 FULL SCAN MODE     P1 14-JUL-98  J:32:58  SCAN NUMBER     99
[ 5 ] SCIENCE   DATA  ELEMENT 0000
[ 6 ] CONTROL/STATUS  ELEMENT   00
[ 7 ] ENGINEERING     ELEMENT   00
                              COMMANDS          PLLO POWER =              PLLO#1 [ 15 ]
[ 9 ]  SCANNER A1-1 POWER =          OFF        COLD CAL POSITION 1 =        YES [ 16 ]
[ 10 ] SCANNER A1-2 POWER =          OFF                          2 =        NO  [ 17 ]
[ 11 ] ANTENNA FULL SCAN MODE =      YES                          3 =        NO  [ 18 ]
[ 12 ]         WARM CAL      =       NO        COLD CAL POSITION 4 =        NO  [ 19 ]
[ 13 ]         COLD CAL      =       NO        RESET C&DH PROCESSOR              [ 20 ]
[ 14 ]         NADIR         =       NO        GSE MODE                          [ 21 ]
ENGR OK        POWER   ON    CHECKSUM  IN A5E5 CALC A5E5   SA28   140 SA29   280
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL       [ 1 ] RETURN
 SELECT BUTTON 2
```

AE-26600 PARAGRAPH 4.3.2.i

EOS A1-\ E1.EXE;35 FULL SCAN MODE P1 14-JUL-98):33:23 SCAN NUMBER 102
[5] SCIENCE DATA ELEMENT 0000

[6] CONTROL/STATUS ELEMENT 00

[7] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

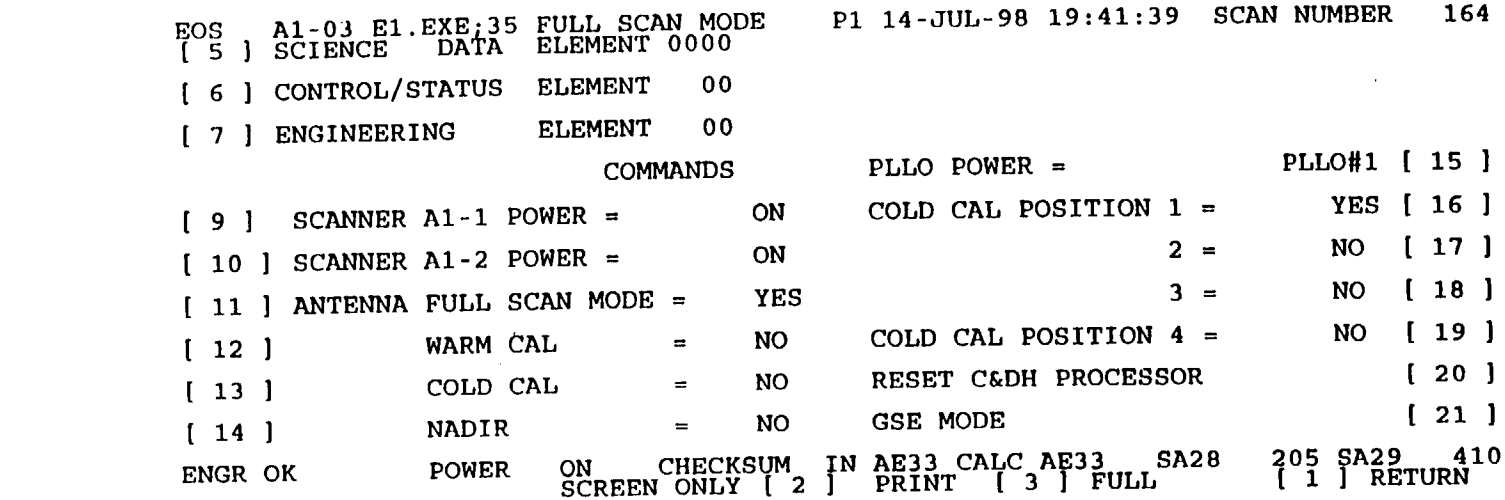
NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	3	25	69	33	64	41	64	49	63	57	65
2	5	10	0	18	0	26	128	34	228	42	102	50	82	58	24
3	192	11	0	19	130	27	65	35	65	43	64	51	65	59	69
4	142	12	0	20	2	28	24	36	244	44	69	52	68	60	128
5	2	13	0	21	69	29	62	37	62	45	63	53	63	61	65
6	191	14	0	22	128	30	11	38	53	46	16	54	98	62	24
7	0	15	0	23	65	31	63	39	64	47	64	55	69	63	62
8	174	16	0	24	24	32	176	40	228	48	56	56	128	64	7

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN A759 CALC A759 SA28 144 SA29 287
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

SELECT BUTTON 2

AE-26600 PARAGRAPH 4.3.2.1



AE 26600 PARAGRAPH 4.4.3

EOS A1_03 E1.EXE;35 SCIENCE DATA 14-JUL-98 19:41:42 PAGE 1
FULL SCAN MODE

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	PACKET ID	00001001	572	SCENE DATA BP 17 CH 8	16637
2		00000101	574	CH 9	16511
3	PACKET LENGTH	00000010	576	CH 10	16487
4		10111111	578	CH 11	16169
5	UNIT SERIAL NUMBER	00000011	580	CH 12	16455
6		00000000	582	CH 13	16220
7	INSTRUMENT MODE/STATUS	10011010	584	CH 14	16705
8		00000010	586	CH 15	16244
10	REFLECTOR 1 POSITION 1	14521	588	REFLECTOR 1 POSITION 18	720
12	REFLECTOR 2 POSITION 1	14169	590	REFLECTOR 2 POSITION 18	368
14	REFL 1 POS 1 2ND LOOK	14521	592	REFL 1 POS 18 2ND LOOK	714
16	REFL 2 POS 1 2ND LOOK	14170	594	REFL 2 POS 18 2ND LOOK	361
18	SCENE DATA BP 1 CH 3	15868	596	SCENE DATA BP 18 CH 3	15887
20	CH 4	16309	598	CH 4	16334
22	CH 5	16623	600	CH 5	16678
24	CH 6	16877	602	CH 6	16922
26	CH 7	15913	604	CH 7	15947
28	CH 8	16611	606	CH 8	16635
30	CH 9	16484	608	CH 9	16497
32	CH 10	16447	610	CH 10	16463
34	CH 11	16139	612	CH 11	16154
36	CH 12	16434	614	CH 12	16465
38	CH 13	16215	616	CH 13	16255
40	CH 14	16697	618	CH 14	16701
42	CH 15	16223	620	CH 15	16252
44	REFLECTOR 1 POSITION 2	14678	622	REFLECTOR 1 POSITION 19	874
46	REFLECTOR 2 POSITION 2	14324	624	REFLECTOR 2 POSITION 19	518
48	REFL 1 POS 2 2ND LOOK	14671	626	REFL 1 POS 19 2ND LOOK	865
50	REFL 2 POS 2 2ND LOOK	14320	628	REFL 2 POS 19 2ND LOOK	513
52	SCENE DATA BP 2 CH 3	15880	630	SCENE DATA BP 19 CH 3	15881
54	CH 4	16302	632	CH 4	16299
56	CH 5	16619	634	CH 5	16602
58	CH 6	16876	636	CH 6	16882
60	CH 7	15922	638	CH 7	15921
62	CH 8	16610	640	CH 8	16601
64	CH 9	16485	642	CH 9	16483
66	CH 10	16448	644	CH 10	16446
68	CH 11	16135	646	CH 11	16142
70	CH 12	16435	648	CH 12	16429
72	CH 13	16216	650	CH 13	16219
74	CH 14	16690	652	CH 14	16685
76	CH 15	16222	654	CH 15	16222
78	REFLECTOR 1 POSITION 3	14831	656	REFLECTOR 1 POSITION 20	1023
80	REFLECTOR 2 POSITION 3	14475	658	REFLECTOR 2 POSITION 20	670
82	REFL 1 POS 3 2ND LOOK	14823	660	REFL 1 POS 20 2ND LOOK	1017
84	REFL 2 POS 3 2ND LOOK	14470	662	REFL 2 POS 20 2ND LOOK	665
86	SCENE DATA BP 3 CH 3	15885	664	SCENE DATA BP 20 CH 3	15891
88	CH 4	16296	666	CH 4	16297
90	CH 5	16609	668	CH 5	16615
92	CH 6	16894	670	CH 6	16883

FULL SCAN MODE

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH 7	15925	672	CH 7	15919
96	CH 8	16602	674	CH 8	16600
98	CH 9	16493	676	CH 9	16487
100	CH 10	16461	678	CH 10	16447
102	CH 11	16146	680	CH 11	16132
104	CH 12	16443	682	CH 12	16434
106	CH 13	16220	684	CH 13	16223
108	CH 14	16706	686	CH 14	16687
110	CH 15	16228	688	CH 15	16224
112	REFLECTOR 1 POSITION 4	14986	690	REFLECTOR 1 POSITION 21	1178
114	REFLECTOR 2 POSITION 4	14625	692	REFLECTOR 2 POSITION 21	821
116	REFL 1 POS 4 2ND LOOK	14974	694	REFL 1 POS 21 2ND LOOK	1169
118	REFL 2 POS 4 2ND LOOK	14621	696	REFL 2 POS 21 2ND LOOK	816
120	SCENE DATA BP 4 CH 3	15882	698	SCENE DATA BP 21 CH 3	15873
122	CH 4	16295	700	CH 4	16296
124	CH 5	16607	702	CH 5	16605
126	CH 6	16911	704	CH 6	16882
128	CH 7	15932	706	CH 7	15918
130	CH 8	16602	708	CH 8	16599
132	CH 9	16504	710	CH 9	16483
134	CH 10	16476	712	CH 10	16447
136	CH 11	16160	714	CH 11	16128
138	CH 12	16442	716	CH 12	16432
140	CH 13	16210	718	CH 13	16214
142	CH 14	16664	720	CH 14	16684
144	CH 15	16236	722	CH 15	16222
146	REFLECTOR 1 POSITION 5	15134	724	REFLECTOR 1 POSITION 22	1331
148	REFLECTOR 2 POSITION 5	14775	726	REFLECTOR 2 POSITION 22	972
150	REFL 1 POS 5 2ND LOOK	15127	728	REFL 1 POS 22 2ND LOOK	1321
152	REFL 2 POS 5 2ND LOOK	14773	730	REFL 2 POS 22 2ND LOOK	967
154	SCENE DATA BP 5 CH 3	15865	732	SCENE DATA BP 22 CH 3	15878
156	CH 4	16296	734	CH 4	16299
158	CH 5	16603	736	CH 5	16603
160	CH 6	16902	738	CH 6	16879
162	CH 7	15937	740	CH 7	15916
164	CH 8	16605	742	CH 8	16607
166	CH 9	16504	744	CH 9	16480
168	CH 10	16476	746	CH 10	16442
170	CH 11	16149	748	CH 11	16136
172	CH 12	16446	750	CH 12	16432
174	CH 13	16227	752	CH 13	16204
176	CH 14	16698	754	CH 14	16691
178	CH 15	16237	756	CH 15	16221
180	REFLECTOR 1 POSITION 6	15286	758	REFLECTOR 1 POSITION 23	1480
182	REFLECTOR 2 POSITION 6	14930	760	REFLECTOR 2 POSITION 23	1121
184	REFL 1 POS 6 2ND LOOK	15279	762	REFL 1 POS 23 2ND LOOK	1473
186	REFL 2 POS 6 2ND LOOK	14926	764	REFL 2 POS 23 2ND LOOK	1119
188	SCENE DATA BP 6 CH 3	15879	766	SCENE DATA BP 23 CH 3	15881
190	CH 4	16299	768	CH 4	16299
192	CH 5	16604	770	CH 5	16599

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FULL SCAN MODE

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH 6	16907	772	CH 6	16878
196	CH 7	15942	774	CH 7	15916
198	CH 8	16604	776	CH 8	16598
200	CH 9	16508	778	CH 9	16481
202	CH 10	16464	780	CH 10	16452
204	CH 11	16155	782	CH 11	16131
206	CH 12	16449	784	CH 12	16436
208	CH 13	16223	786	CH 13	16214
210	CH 14	16678	788	CH 14	16691
212	CH 15	16241	790	CH 15	16220
214	REFLECTOR 1 POSITION 7	15440	792	REFLECTOR 1 POSITION 24	1631
216	REFLECTOR 2 POSITION 7	15082	794	REFLECTOR 2 POSITION 24	1276
218	REFL 1 POS 7 2ND LOOK	15430	796	REFL 1 POS 24 2ND LOOK	1626
220	REFL 2 POS 7 2ND LOOK	15077	798	REFL 2 POS 24 2ND LOOK	1272
222	SCENE DATA BP 7 CH 3	15879	800	SCENE DATA BP 24 CH 3	15880
224	CH 4	16296	802	CH 4	16297
226	CH 5	16599	804	CH 5	16605
228	CH 6	16879	806	CH 6	16878
230	CH 7	15917	808	CH 7	15921
232	CH 8	16602	810	CH 8	16604
234	CH 9	16486	812	CH 9	16478
236	CH 10	16452	814	CH 10	16446
238	CH 11	16138	816	CH 11	16130
240	CH 12	16434	818	CH 12	16431
242	CH 13	16228	820	CH 13	16211
244	CH 14	16683	822	CH 14	16691
246	CH 15	16223	824	CH 15	16219
248	REFLECTOR 1 POSITION 8	15591	826	REFLECTOR 1 POSITION 25	1785
250	REFLECTOR 2 POSITION 8	15232	828	REFLECTOR 2 POSITION 25	1428
252	REFL 1 POS 8 2ND LOOK	15582	830	REFL 1 POS 25 2ND LOOK	1775
254	REFL 2 POS 8 2ND LOOK	15230	832	REFL 2 POS 25 2ND LOOK	1422
256	SCENE DATA BP 8 CH 3	15887	834	SCENE DATA BP 25 CH 3	15877
258	CH 4	16297	836	CH 4	16300
260	CH 5	16609	838	CH 5	16605
262	CH 6	16880	840	CH 6	16878
264	CH 7	15921	842	CH 7	15921
266	CH 8	16599	844	CH 8	16601
268	CH 9	16484	846	CH 9	16483
270	CH 10	16453	848	CH 10	16444
272	CH 11	16132	850	CH 11	16132
274	CH 12	16440	852	CH 12	16420
276	CH 13	16228	854	CH 13	16212
278	CH 14	16712	856	CH 14	16678
280	CH 15	16223	858	CH 15	16221
282	REFLECTOR 1 POSITION 9	15739	860	REFLECTOR 1 POSITION 26	1937
284	REFLECTOR 2 POSITION 9	15385	862	REFLECTOR 2 POSITION 26	1578
286	REFL 1 POS 9 2ND LOOK	15733	864	REFL 1 POS 26 2ND LOOK	1927
288	REFL 2 POS 9 2ND LOOK	15380	866	REFL 2 POS 26 2ND LOOK	1575
290	SCENE DATA BP 9 CH 3	15885	868	SCENE DATA BP 26 CH 3	15878
292	CH 4	16303	870	CH 4	16305

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	16635	872	CH 5	16606
296	CH 6	16878	874	CH 6	16881
298	CH 7	15915	876	CH 7	15916
300	CH 8	16605	878	CH 8	16607
302	CH 9	16483	880	CH 9	16479
304	CH 10	16449	882	CH 10	16450
306	CH 11	16136	884	CH 11	16135
308	CH 12	16423	886	CH 12	16435
310	CH 13	16215	888	CH 13	16218
312	CH 14	16688	890	CH 14	16685
314	CH 15	16220	892	CH 15	16221
316	REFLECTOR 1 POSITION 10	15893	894	REFLECTOR 1 POSITION 27	2085
318	REFLECTOR 2 POSITION 10	15538	896	REFLECTOR 2 POSITION 27	1731
320	REFL 1 POS 10 2ND LOOK	15884	898	REFL 1 POS 27 2ND LOOK	2079
322	REFL 2 POS 10 2ND LOOK	15533	900	REFL 2 POS 27 2ND LOOK	1726
324	SCENE DATA BP 10 CH 3	15885	902	SCENE DATA BP 27 CH 3	15902
326	CH 4	16298	904	CH 4	16315
328	CH 5	16611	906	CH 5	16596
330	CH 6	16881	908	CH 6	16875
332	CH 7	15916	910	CH 7	15915
334	CH 8	16605	912	CH 8	16616
336	CH 9	16481	914	CH 9	16482
338	CH 10	16453	916	CH 10	16450
340	CH 11	16135	918	CH 11	16132
342	CH 12	16437	920	CH 12	16436
344	CH 13	16207	922	CH 13	16206
346	CH 14	16686	924	CH 14	16692
348	CH 15	16221	926	CH 15	16222
350	REFLECTOR 1 POSITION 11	16043	928	REFLECTOR 1 POSITION 28	2239
352	REFLECTOR 2 POSITION 11	15689	930	REFLECTOR 2 POSITION 28	1884
354	REFL 1 POS 11 2ND LOOK	16036	932	REFL 1 POS 28 2ND LOOK	2230
356	REFL 2 POS 11 2ND LOOK	15684	934	REFL 2 POS 28 2ND LOOK	1878
358	SCENE DATA BP 11 CH 3	15892	936	SCENE DATA BP 28 CH 3	15905
360	CH 4	16298	938	CH 4	16323
362	CH 5	16598	940	CH 5	16608
364	CH 6	16880	942	CH 6	16882
366	CH 7	15921	944	CH 7	15913
368	CH 8	16603	946	CH 8	16621
370	CH 9	16484	948	CH 9	16483
372	CH 10	16449	950	CH 10	16446
374	CH 11	16137	952	CH 11	16132
376	CH 12	16431	954	CH 12	16431
378	CH 13	16212	956	CH 13	16209
380	CH 14	16692	958	CH 14	16699
382	CH 15	16223	960	CH 15	16222
384	REFLECTOR 1 POSITION 12	16197	962	REFLECTOR 1 POSITION 29	2388
386	REFLECTOR 2 POSITION 12	15840	964	REFLECTOR 2 POSITION 29	2034
388	REFL 1 POS 12 2ND LOOK	16189	966	REFL 1 POS 29 2ND LOOK	2382
390	REFL 2 POS 12 2ND LOOK	15835	968	REFL 2 POS 29 2ND LOOK	2029
392	SCENE DATA BP 12 CH 3	15879	970	SCENE DATA BP 29 CH 3	15949

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FULL SCAN MODE

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH 4	16298	972	CH 4	16377
396	CH 5	16609	974	CH 5	16683
398	CH 6	16882	976	CH 6	16880
400	CH 7	15919	978	CH 7	15917
402	CH 8	16601	980	CH 8	16684
404	CH 9	16479	982	CH 9	16481
406	CH 10	16453	984	CH 10	16444
408	CH 11	16133	986	CH 11	16133
410	CH 12	16443	988	CH 12	16438
412	CH 13	16207	990	CH 13	16215
414	CH 14	16688	992	CH 14	16689
416	CH 15	16222	994	CH 15	16221
418	REFLECTOR 1 POSITION 13	16350	996	REFLECTOR 1 POSITION 30	2542
420	REFLECTOR 2 POSITION 13	15991	998	REFLECTOR 2 POSITION 30	2185
422	REFL 1 POS 13 2ND LOOK	16340	1000	REFL 1 POS 30 2ND LOOK	2534
424	REFL 2 POS 13 2ND LOOK	15987	1002	REFL 2 POS 30 2ND LOOK	2181
426	SCENE DATA BP 13 CH 3	15888	1004	SCENE DATA BP 30 CH 3	15906
428	CH 4	16334	1006	CH 4	16317
430	CH 5	16644	1008	CH 5	16622
432	CH 6	16910	1010	CH 6	16872
434	CH 7	15958	1012	CH 7	15919
436	CH 8	16627	1014	CH 8	16620
438	CH 9	16514	1016	CH 9	16479
440	CH 10	16472	1018	CH 10	16449
442	CH 11	16166	1020	CH 11	16141
444	CH 12	16474	1022	CH 12	16431
446	CH 13	16260	1024	CH 13	16215
448	CH 14	16731	1026	CH 14	16689
450	CH 15	16254	1028	CH 15	16221
452	REFLECTOR 1 POSITION 14	115	1030	REFLECTOR 1 COLD CAL POS	4132
454	REFLECTOR 2 POSITION 14	16139	1032	REFLECTOR 2 COLD CAL POS	3778
456	REFL 1 POS 14 2ND LOOK	108	1034	REFL 1 COLD CAL 2ND LOOK	4132
458	REFL 2 POS 14 2ND LOOK	16139	1036	REFL 2 COLD CAL 2ND LOOK	3779
460	SCENE DATA BP 14 CH 3	15887	1038	COLD CAL DATA 1 CH 3	15924
462	CH 4	16317	1040	CH 4	16318
464	CH 5	16608	1042	CH 5	16647
466	CH 6	16917	1044	CH 6	16879
468	CH 7	15951	1046	CH 7	15920
470	CH 8	16641	1048	CH 8	16618
472	CH 9	16514	1050	CH 9	16482
474	CH 10	16478	1052	CH 10	16444
476	CH 11	16187	1054	CH 11	16138
478	CH 12	16461	1056	CH 12	16426
480	CH 13	16243	1058	CH 13	16202
482	CH 14	16703	1060	CH 14	16677
484	CH 15	16246	1062	CH 15	16221
486	REFLECTOR 1 POSITION 15	265	1064	COLD CAL DATA 2 CH 3	15926
488	REFLECTOR 2 POSITION 15	16294	1066	CH 4	16319
490	REFL 1 POS 15 2ND LOOK	260	1068	CH 5	16647
492	REFL 2 POS 15 2ND LOOK	16291	1070	CH 6	16876

ELEMENT	DESCRIPTION		VALUE	ELEMENT	DESCRIPTION		VALUE
494	SCENE DATA BP 15	CH 3	15889	1072		CH 7	15920
496		CH 4	16329	1074		CH 8	16619
498		CH 5	16635	1076		CH 9	16480
500		CH 6	16920	1078		CH 10	16452
502		CH 7	15949	1080		CH 11	16143
504		CH 8	16638	1082		CH 12	16429
506		CH 9	16511	1084		CH 13	16216
508		CH 10	16491	1086		CH 14	16676
510		CH 11	16166	1088		CH 15	16222
512		CH 12	16448	1182	REFLECTOR 1 WARM CAL POS		8527
514		CH 13	16221	1184	REFLECTOR 2 WARM CAL POS		8178
516		CH 14	16694	1186	REFL 1 WARM CAL 2ND LOOK		8527
518		CH 15	16240	1188	REFL 2 WARM CAL 2ND LOOK		8178
520	REFLECTOR 1 POSITION 16		422	1190	WARM CAL DATA 1	CH 3	15888
522	REFLECTOR 2 POSITION 16		62	1192		CH 4	16301
524	REFL 1 POS 16 2ND LOOK		410	1194		CH 5	16608
526	REFL 2 POS 16 2ND LOOK		58	1196		CH 6	16884
528	SCENE DATA BP 16	CH 3	15877	1198		CH 7	15923
530		CH 4	16334	1200		CH 8	16609
532		CH 5	16614	1202		CH 9	16487
534		CH 6	16911	1204		CH 10	16450
536		CH 7	15951	1206		CH 11	16137
538		CH 8	16645	1208		CH 12	16437
540		CH 9	16515	1210		CH 13	16211
542		CH 10	16484	1212		CH 14	16681
544		CH 11	16150	1214		CH 15	16225
546		CH 12	16443	1216	WARM CAL DATA 2	CH 3	15882
548		CH 13	16220	1218		CH 4	16304
550		CH 14	16702	1220		CH 5	16614
552		CH 15	16235	1222		CH 6	16883
554	REFLECTOR 1 POSITION 17		573	1224		CH 7	15919
556	REFLECTOR 2 POSITION 17		212	1226		CH 8	16607
558	REFL 1 POS 17 2ND LOOK		563	1228		CH 9	16489
560	REFL 2 POS 17 2ND LOOK		210	1230		CH 10	16452
562	SCENE DATA BP 17	CH 3	15868	1232		CH 11	16139
564		CH 4	16318	1234		CH 12	16443
566		CH 5	16647	1236		CH 13	16226
568		CH 6	16908	1238		CH 14	16704
570		CH 7	15937	1240		CH 15	16226

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FULL SCAN MODE

ELEMENT	DESCRIPTION	VALUE	TEMPERATURE DEG C
1090	SCAN MOTOR A1-1	18717	24.28
1092	SCAN MOTOR A1-2	19329	24.75
1094	FEED HORN A1-1	20667	28.35
1096	FEED HORN A1-2	21400	29.80
1098	RF MUX A1-1	22618	31.95
1100	RF MUX A1-2	23719	34.20
1102	LOCAL OSCILLATOR CHANNEL 3	24890	36.69
1104	LOCAL OSCILLATOR CHANNEL 4	25324	36.86
1106	LOCAL OSCILLATOR CHANNEL 5	23838	34.61
1108	LOCAL OSCILLATOR CHANNEL 6	22951	31.96
1110	LOCAL OSCILLATOR CHANNEL 7	23276	33.32
1112	LOCAL OSCILLATOR CHANNEL 8	24701	36.12
1114	LOCAL OSCILLATOR CHANNEL 15	24162	34.64
1116	PLLO #2	22450	31.65
1118	PLLO #1	25299	37.22
1120	1553 INTERFACE	18594	37.20
1122	MIXER/IF AMPLIFIER CHANNEL 3	24016	34.76
1124	MIXER/IF AMPLIFIER CHANNEL 4	24197	34.57
1126	MIXER/IF AMPLIFIER CHANNEL 5	23744	34.11
1128	MIXER/IF AMPLIFIER CHANNEL 6	22914	32.51
1130	MIXER/IF AMPLIFIER CHANNEL 7	22906	33.06
1132	MIXER/IF AMPLIFIER CHANNEL 8	24170	34.88
1134	MIXER/IF AMPLIFIER CH 9 THRU 14	22376	31.70
1136	MIXER/IF AMPLIFIER CHANNEL 15	24114	35.07
1138	IF AMPLIFIER CHANNEL 11 THRU 14	23793	34.24
1140	IF AMPLIFIER CHANNEL 9	23953	34.46
1142	IF AMPLIFIER CHANNEL 10	23812	34.45
1144	IF AMPLIFIER CHANNEL 11	23039	32.10
1146	DC/DC CONVERTER	24623	35.30
1148	IF AMPLIFIER CHANNEL 13	22604	31.38
1150	IF AMPLIFIER CHANNEL 14	22978	32.55
1152	IF AMPLIFIER CHANNEL 12	22793	31.98
1154	RF SHELF A1-1	23191	33.03
1156	RF SHELF A1-2	23826	33.64
1158	DETECTOR/PREAMPLIFIER ASSEMBLY	21259	29.33
1160	A1-1 WARM LOAD 1	24233	25.45
1162	A1-1 WARM LOAD 2	24728	25.56
1164	A1-1 WARM LOAD 3	24228	25.59
1166	A1-1 WARM LOAD 4	24305	25.55
1168	A1-1 WARM LOAD CENTER	24513	25.59
1170	A1-2 WARM LOAD 1	24879	26.19
1172	A1-2 WARM LOAD 2	24939	26.21
1174	A1-2 WARM LOAD 3	24962	26.23
1176	A1-2 WARM LOAD 4	24949	26.11
1178	A1-2 WARM LOAD CENTER	24955	26.21
1180	TEMP SENSOR REFERENCE VOLTAGE	25269	

FULL SCAN MODE

DESCRIPTION	STATUS
ANTENNA IN FULL SCAN MODE	YES
ANTENNA IN WARM CAL MODE	NO
ANTENNA IN COLD CAL MODE	NO
ANTENNA IN NADIR MODE	NO
COLD CAL. POSITION LSB	ZERO
COLD CAL. POSITION MSB	ZERO
PLO REDUNDANCY	PLLO # 1
SCANNER A1-1 POWER	ON
SCANNER A1-2 POWER	ON
PLLO #1 LOCK	YES
PLLO #2 LOCK	OFF
ADC LATCHUP FLAG	ONE

ENGINEERING DATA

DESCRIPTION	DEG C
A1-1 SCANNER MOTOR TEMPERATURE	0.0
A1-1 RF SHELF TEMPERATURE #1	0.0
A1-1 WARM LOAD TEMPERATURE	0.0
A1-2 SCANNER MOTOR TEMPERATURE	0.0
A1-2 RF SHELF TEMPERATURE #1	0.0
A1-2 WARM LOAD TEMPERATURE	0.0
A1-1 RF SHELF TEMPERATURE #2	0.0
A1-2 RF SHELF TEMPERATURE #2	0.0

DESCRIPTION			VALUE	AMPS/VOLTS
SIGNAL PROCESSOR		+5 VDC	22068	0.0
		+15 VDC	21836	0.0
		-15 VDC	21802	0.0
SCAN DRIVE		+5 VDC	22185	0.0
		+15 VDC	22219	0.0
		-15 VDC	21878	0.0
PLO		+15 VDC	22486	0.0
		-15 VDC	22073	0.0
RECEIVER		+8 VDC	21814	0.0
MIXER/IF AMPLIFIER	A1-1	+10 VDC	21420	0.0
	A1-2	+10 VDC	21437	0.0
LO CHANNEL	6	+10 VDC	21396	0.0
	7	+10 VDC	21467	0.0
SPARE			32767	0.0
LO CHANNEL	3	+10 VDC	21268	0.0
	4	+10 VDC	21202	0.0
	5	+10 VDC	21361	0.0
	8	+10 VDC	21323	0.0
	15	+15 VDC	22035	0.0
QUIET BUS CURRENT			16509	0.0
A1-1 NOISY POWER BUS CURRENT			18036	0.0
A1-2 NOISY POWER BUS CURRENT			15062	0.0

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FULL SCAN MODE

PRT TEMPERATURES	A1-1 NO.	A1-1 DEG K	A1-2 NO.	A1-2 DEG K
VARIABLE TARGET	615	42.00	601	14.00
	616	43.00	602	15.00
	617	44.00	603	16.00
	618	45.00	604	17.00
	619	46.00	605	18.00
	620	47.00	606	19.00
	621	48.00	607	20.00
FIXED TARGET	622	49.00	608	21.00
	623	50.00	609	22.00
	624	51.00	610	23.00
	625	52.00	611	24.00
	626	53.00	612	25.00
	627	67.00	613	69.00
	628	68.00	614	70.00
BASEPLATE	629	71.00	630	72.00
	631	26.00	632	27.00

THERMOCOUPLE TEMPERATURES	A1-1 NO.	A1-1 DEG K	A1-2 NO.	A1-2 DEG K
FIXED TARGET SHROUD	558	5.00	537	34.00
	559	6.00	538	35.00
VARIABLE TARGET SHROUD	550	7.00	524	36.00
	551	8.00	525	37.00
FIXED TARGET N2	506	57.00	502	30.00
	507	58.00	503	31.00
VARIABLE TARGET N2	516	59.00	511	32.00
	517	60.00	512	33.00
HEATER N2	514	1.00	509	38.00
	515	2.00	510	39.00
FIXED TARGET FLOW METER	508	63.00	504	61.00
VARIABLE TARGET FLOW METER	518	64.00	513	62.00
BASEPLATE HEATER N2	519	3.00	520	4.00
BASEPLATE N2	521	9.00	522	10.00
BASEPLATE FLOW METER	523	65.00		
ADJUNCT RADIATORS	575	73.00	577	74.00
	579	75.00	581	76.00

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EOS   A1-03 E1.EXE;35 FULL SCAN MODE     P1 14-JUL-98 19:44:27  SCAN NUMBER   185
[ 5 ] SCIENCE   DATA  ELEMENT 0000

[ 6 ] CONTROL/STATUS  ELEMENT   00

[ 7 ] ENGINEERING     ELEMENT   00

                                  DATA STREAM     1  TO   64
 NO  DATA  NO  DATA  NO  DATA  NO  DATA  NO  DATA  NO  DATA  NO  DATA  NO  DATA
  1     9   9     0  17     3  25   113  33    64  41    64  49    63  57   111
  2     5  10     0  18     0  26   115  34   238  42    97  50    85  58   235
  3   192  11     0  19   154  27   110  35    65  43    64  51    65  59   114
  4   225  12     0  20     2  28   179  36   242  44    65  52    18  60   159
  5     2  13     0  21   113  29    61  37    62  45    63  53    63  61   111
  6   191  14     0  22   115  30   255  38    47  46     5  54    93  62   225
  7     0  15     0  23   110  31    63  39    64  47    64  55   114  63    62
  8   174  16     0  24   179  32   179  40   229  48    52  56   171  64     5
[ 21 ] UP                    [ 22 ] DOWN

ENGR OK          POWER   ON    CHECKSUM  IN BFF7 CALC BFF7   SA28   227 SA29   453
                         SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL       [ 1 ] RETURN
 SELECT BUTTON 2
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AE-26600 PARAGRAPH 4.4.4 a & b

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EOS   A1-03 E1.EXE;35 FULL SCAN MODE     P1 14-JUL-98 19:46:03  SCAN NUMBER   197
[ 5 ] SCIENCE   DATA  ELEMENT 0000

[ 6 ] CONTROL/STATUS  ELEMENT   00

[ 7 ] ENGINEERING     ELEMENT   00

                          RADIOMETRIC DATA

                       BEAM POSITION  1

                    CH  DATA   CH  DATA   CH  DATA

                     3 15871    8 16614  13 16199
                     4 16308    9 16480  14 16673
                     5 16621   10 16447  15 16221
                     6 16880   11 16132
                     7 15917   12 16432

[ 21 ] UP                        [ 22 ] DOWN

ENGR OK          POWER   ON    CHECKSUM  IN C149 CALC C149   SA28   239 SA29   477
                         SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL        [ 1 ] RETURN
 SELECT BUTTON 2
```

AE-26600 PARAGRAPH 4.4.4.c & d

```
EOS   A1-03 E1.EXE;35 FULL SCAN MODE     P1 14-JUL-98 19:48:27  SCAN NUMBER    215
[ 5 ] SCIENCE   DATA  ELEMENT 0000

[ 6 ] CONTROL/STATUS  ELEMENT   00

[ 7 ] ENGINEERING     ELEMENT   00

                          RADIOMETRIC DATA
                              CHANNEL   3
                BP  DATA  BP  DATA  BP  DATA  BP  DATA

                 1  15872  9  15888 17  15864 25  15875
                 2  15873 10  15880 18  15890 26  15874
                 3  15884 11  15891 19  15885 27  15902
                 4  15877 12  15878 20  15888 28  15900
                 5  15863 13  15882 21  15877 29  15947
                 6  15878 14  15885 22  15874 30  15909
                 7  15880 15  15888 23  15885 CC  15922
                 8  15883 16  15874 24  15882 WC  15882
[ 21 ] UP              [ 22 ] DOWN

ENGR OK        POWER   ON    CHECKSUM  IN C38D CALC C38D   SA28   257 SA29   513
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL        [ 1 ] RETURN
 SELECT BUTTON 2
```

AE-26600 PARAGRAPH 4.4.4.e & f

```
EOS   A1-03 E1.EXE;35 FULL SCAN MODE     P1 14-JUL-98 19:49:32  SCAN NUMBER   223
[ 5 ] SCIENCE   DATA  ELEMENT 0000

[ 6 ] CONTROL/STATUS  ELEMENT   00

[ 7 ] ENGINEERING     ELEMENT   00

                              WARM CALIBRATE
                    CH  DATA  CH  DATA  CH  DATA  CH  DATA

                     3  15884  7  15923 10  16448 13  16218
                     3  15879  7  15921 10  16452 13  16232
                     4  16307  8  16610 11  16130 14  16687
                     4  16304  8  16607 11  16133 14  16687
                     5  16606  9  16488 12  16433 15  16224
                     5  16613  9  16485 12  16431 15  16225
                     6  16886
                     6  16889

ENGR OK        POWER   ON     CHECKSUM  IN C52F CALC C52F   SA28   265 SA29   529
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL        [ 1 ] RETURN
 SELECT BUTTON 2
```

AE-26600 PARAGRAPH 4.4.4.g & h

```
EOS   A1-03 E1.EXE;35 FULL SCAN MODE     P1 14-JUL-98 19:50:35  SCAN NUMBER   231
[ 5 ] SCIENCE   DATA  ELEMENT 0000

[ 6 ] CONTROL/STATUS  ELEMENT   00

[ 7 ] ENGINEERING     ELEMENT   00
```

COLD CALIBRATE

CH	DATA	CH	DATA	CH	DATA	CH	DATA
3	15926	7	15921	10	16449	13	16202
3	15925	7	15925	10	16452	13	16212
4	16320	8	16617	11	16134	14	16684
4	16323	8	16621	11	16137	14	16675
5	16646	9	16483	12	16433	15	16222
5	16646	9	16488	12	16424	15	16224
6	16884						
6	16878						

```
ENGR OK          POWER    ON     CHECKSUM  IN C477 CALC C477    SA28    272 SA29    544
                          SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL          [ 1 ] RETURN
 SELECT BUTTON 2
```

AE-26600 PARAGRAPH 4.4.4. c & j

```
EOS   A1-03 E1.EXE;35 FULL SCAN MODE     P1 14-JUL-98 19:56:19  SCAN NUMBER   274
[ 5 ] SCIENCE   DATA  ELEMENT 0000

[ 6 ] CONTROL/STATUS  ELEMENT   00

[ 7 ] ENGINEERING     ELEMENT   00

                                REFLECTOR POSITIONS   1
BP  LOOK 1  LOOK 2  BP  LOOK 1  LOOK 2  BP  LOOK 1  LOOK 2  BP  LOOK 1  LOOK 2

 1  14521   14521    9  15740   15734  17    572     562   25  1784     1775
 2  14677   14671   10  15894   15884  18    720     714   26  1936     1927
 3  14831   14823   11  16043   16036  19    874     865   27  2085     2079
 4  14986   14974   12  16197   16189  20   1023    1017   28  2239     2230
 5  15135   15127   13  16350   16340  21   1177    1169   29  2388     2382
 6  15286   15279   14    115     108  22   1331    1322   30  2542     2534
 7  15439   15430   15    265     260  23   1480    1473   CC  4131     4131
 8  15591   15581   16    422     410  24   1632    1625   WC  8526     8526
[ 21 ] UP                    [ 22 ] DOWN

ENGR OK        POWER   ON    CHECKSUM  IN 1119 CALC 1119   SA28   315 SA29   630
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL        [ 1 ] RETURN
 SELECT BUTTON 2
```

AE 26600 PARAGRAPH 4.4.4.k & l

```
EOS   A1-03 E1.EXE;35 FULL SCAN MODE     P1 14-JUL-98 19:56:19  SCAN NUMBER   274
[ 5 ] SCIENCE   DATA  ELEMENT 0000

[ 6 ] CONTROL/STATUS  ELEMENT   00

[ 7 ] ENGINEERING     ELEMENT   00

                                REFLECTOR POSITIONS   2
BP  LOOK 1  LOOK 2  BP  LOOK 1  LOOK 2  BP  LOOK 1  LOOK 2  BP  LOOK 1  LOOK 2

 1  14169   14170    9  15384   15381  17    213     210   25  1428    1422
 2  14324   14320   10  15539   15533  18    366     362   26  1578    1575
 3  14473   14470   11  15689   15684  19    518     513   27  1731    1727
 4  14628   14622   12  15840   15835  20    670     665   28  1884    1879
 5  14776   14773   13  15992   15986  21    820     816   29  2035    2030
 6  14930   14926   14  16139   16138  22    973     967   30  2184    2181
 7  15082   15077   15  16294   16291  23   1121    1119   CC  3780    3780
 8  15235   15232   16     63      58  24   1275    1272   WC  8178    8178
[ 21 ] UP                  [ 22 ] DOWN

ENGR OK        POWER   ON    CHECKSUM  IN 1119 CALC 1119   SA28   316 SA29   631
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL        [ 1 ] RETURN
 SELECT BUTTON 2
```

AE-26600 PARAGRAPH 4.4.4.K & L

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APPENDIX E

TEST DATA SHEETS AND DATA PRINTOUTS FOR AMSU-A2

The following pages contain copies of the Test Data Sheets and Data Printouts obtained during the AMSU-A2 final FQT (Initial CPT).

AE-26156/10 TP 3.3.5.1

P/N 1256006-1-IT S/N 202 S/O # 323737

TEST DATA SHEET 1
Test Case 1 (Paragraph 4.3)

Unit Tested (AMSU-A1 or AMSU-A2) EOS/AMSU-A2

STE Tape Loaded E2.EXE;18 E2X.EXE;2

Instrument Control Tape Loaded NONE - FLIGHT PROMS

Control and Data Handling Tape Loaded NONE - FLIGHT PROMS

Procedure Step	Requirement Description	Specification Reference	Requirement Satisfied ? yes or no	HardCopy Test Data Attached ?	Test Data on Tape ?	Related Discrepany Reports
4.3.2a	Reset C&DH	5.1.1.2b,d 5.1.3.1	YES	YES	No	
4.3.2b	Cold Cal	5.1.1.2b,d 5.1.3.1	YES	YES	No	
4.3.2c	Cold Cal Position 4	5.1.1.2b,d 5.1.3.1	YES	YES	No	
4.3.2d	Cold Cal Position 3	5.1.1.2b,d 5.1.3.1	YES	YES	No	
4.3.2e	Cold Cal Position 2	5.1.1.2b,d 5.1.3.1	YES	YES	No	
4.3.2f	Cold Cal Position 1	5.1.1.2b,d 5.1.3.1	YES	YES	No	
4.3.2g	Nadir	5.1.1.2b,d 5.1.3.1	YES	YES	No	
4.3.2h	Warm Cal	5.1.1.2b,d 5.1.3.1	YES	YES	No	
4.3.2i	Full Scan	5.1.1.2b,d 5.1.3.1	YES	YES	No	

Comments:

Authentication:

Aerojet System Test: Robert Schwartz Date: 4/8/98

Aerojet Quality Assurance: (7A 228) Ray Ng Date: 4-9-98

Customer Representative: _____ Date: _____

Other Witness (optional): _____ Date: _____

TEST DATA SHEET 2
Test Case 2 (Paragraph 4.4)

Unit Tested (AMSU-A1 or AMSU-A2) EOS/Amsu-A2

STE Tape Loaded E2.EXE;18 E2X.EXE;2

Instrument Control Tape Loaded NONE - FLIGHT PROMS

Control and Data Handling Tape Loaded NONE - FLIGHT PROMS

Procedure Step	Requirement Description	Specification Reference	Requirement Satisfied ? yes or no	HardCopy Test Data Attached ?	Test Data on Tape ?	Related Discrepany Reports
4.4.4a	Data Stream	5.1.1.2a, 5.1.3.4,5.1.3.6	YES	YES	No	
4.4.4c	Beam Position NN	5.1.1.2b5 5.1.3.7	YES	YES	No	
4.4.4e	Channel NN	5.1.1.2b5 5.1.3.7	YES	YES	No	
4.4.4g	Warm Calibrate	5.1.1.2b5 5.1.3.7	YES	YES	No	
4.4.4i	Cold Calibrate	5.1.1.2b5 5.1.3.7	YES	YES	No	
4.4.4k	Reflector Positions	5.1.1.2b4 5.1.3.7	YES	YES	No	
4.4.5	Checksum sub-address	5.1.3.3,5.1.3.9 5.1.3.10	YES	YES	No	
4.4.6	8 Sec Scan	5.1.3.2	YES	SEE BELOW	No	
4.4.7	Skip Time Mark	No Req't	YES	No	No	
4.4.8	Invalid APID	5.2.3	YES	No	No	

Comments: @ 4.4.6 START SCAN 1737 START TIME 8:50:02

END SCAN 1812 END TIME 9:00:02

75 SCANS 10 MIN $\frac{600}{75} = 8.00$ SEC

Authentication:

Aerojet System Test: Robert Schwartz Date: 4/8/98

Aerojet Quality Assurance: [signature] Date: 4-9-98

Customer Representative: _____ Date: _____

Other Witness (optional): _____ Date: _____

```
EOS A2-04  E2.EXE;18 NADIR MODE          8-APR-98  08:36:232 SCAN NUMBER  1636
[ 5 ] SCIENCE DATA     ELEMENT 0000

[ 6 ] CONTROL/STATUS   ELEMENT   00

[ . ] ENGINEERING      ELEMENT   00


                                   COMMANDS
[ 9 ]  SCANNER A2 POWER =          ON     COLD CAL POSITION 1 =       YES [ 14

[ 10 ] ANTENNA IN FULL SCAN MODE = NO     COLD CAL POSITION 2 =       NO  [ 15

[ 11 ] ANTENNA IN WARM CAL POSIT = NO     COLD CAL POSITION 3 =       NO  [ 16

[ 12 ] ANTENNA IN COLD CAL POSIT = NO     COLD CAL POSITION 4 =       NO  [ 17

[ 13 ] ANTENNA IN NADIR POSITION = YES    RESET C&DH PROCESSOR            [ 18

                                          GSE MODE                        [ 19

ENGR OK   POWER          ON    CHECKSUM  IN 9FE8 CALC 9FE8   SA28  1523 SA29  152
                         SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL       [ 1 ] RETURN
 SELECT BUTTON 2
```

AE 26620 ¶ 4.3.1

```
EOS  A?-04   E2.EXE;18 NADIR MODE          8-APR-98  08:36:562 SCAN NUMBER  1640
[ 5 ] SCIENCE DATA     ELEMENT 0000

[ 6 ] CONTROL/STATUS   ELEMENT   00

[ . ] ENGINEERING      ELEMENT   00

                                        COMMANDS
[ 9 ]  SCANNER A2 POWER =          ON    COLD CAL POSITION 1 =       YES [ 14

[ 10 ] ANTENNA IN FULL SCAN MODE = NO    COLD CAL POSITION 2 =       NO  [ 15

[ 11 ] ANTENNA IN WARM CAL POSIT = NO    COLD CAL POSITION 3 =       NO  [ 16

[ 12 ] ANTENNA IN COLD CAL POSIT = NO    COLD CAL POSITION 4 =       NO  [ 17

[ 13 ] ANTENNA IN NADIR POSITION = YES   RESET C&DH PROCESSOR            [ 18

                                         GSE MODE                       [ 19

ENGR OK   POWER          ON    CHECKSUM  IN A062 CALC A062   SA28    0 SA29
                         SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL       [ 1 ] RETURN
 SELECT BUTTON 2
```

AE26600 ¶ 4.3.2.a

EOS A2-04 E2.EXE;18 NADIR MODE 8-APR-98 08:37:272 SCAN NUMBER 1643
[5] SCIENCE DATA ELEMENT 0000

[6] CONTROL/STATUS ELEMENT 00

[,] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	4	25	66	33	66	41	66	49	66	57	66
2	33	10	0	18	0	26	182	34	196	42	188	50	192	58	190
3	192	11	0	19	136	27	66	35	66	43	66	51	66	59	66
4	2	12	0	20	16	28	241	36	248	44	244	52	252	60	246
5	1	13	0	21	45	29	45	37	45	45	45	53	45	61	45
6	69	14	0	22	151	30	151	38	151	46	151	54	151	62	151
7	0	15	0	23	45	31	45	39	45	47	45	55	45	63	45
8	174	16	0	24	151	32	151	40	151	48	151	56	151	64	151

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 998E CALC 998E SA28 3 SA29 3
SELECT BUTTON 2 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

AE 26600 4 4.3.2.a

```
EOS A2-04  E2.EXE;18 COLD CAL MODE          8-APR-98  08:38:072 SCAN NUMBER  1648
[ 5 ] SCIENCE DATA    ELEMENT 0000

[ 6 ] CONTROL/STATUS  ELEMENT   00

[ 7 ] ENGINEERING     ELEMENT   00

                                   COMMANDS
[ 9 ]  SCANNER A2 POWER =          ON     COLD CAL POSITION 1 =      YES [ 14 ]

[ 10 ] ANTENNA IN FULL SCAN MODE = NO     COLD CAL POSITION 2 =      NO  [ 15 ]

[ 11 ] ANTENNA IN WARM CAL POSIT = NO     COLD CAL POSITION 3 =      NO  [ 16 ]

[ 12 ] ANTENNA IN COLD CAL POSIT = YES    COLD CAL POSITION 4 =      NO  [ 17 ]

[ 13 ] ANTENNA IN NADIR POSITION = NO     RESET C&DH PROCESSOR          [ 18 ]

                                          GSE MODE                      [ 19 ]

ENGR OK   POWER          ON    CHECKSUM  IN 5291 CALC 5291   SA28    8 SA29
                         SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL      [ 1 ] RETURN
 SELECT BUTTON 2
```

AE 26600 ¶ 4.3.2.b

EOS A2-04 E2.EXE;18 COLD CAL MODE 8-APR-98 08:38:302 SCAN NUMBER 1651
[5] SCIENCE DATA ELEMENT 0000

[6] CONTROL/STATUS ELEMENT 00

[.] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	4	25	66	33	66	41	66	49	66	57	66
2	33	10	0	18	0	26	190	34	196	42	195	50	199	58	192
3	192	11	0	19	128	27	66	35	66	43	66	51	66	59	66
4	10	12	0	20	8	28	216	36	221	44	218	52	222	60	215
5	1	13	0	21	44	29	44	37	44	45	44	53	44	61	44
6	69	14	0	22	254	30	254	38	254	46	254	54	254	62	254
7	0	15	0	23	44	31	44	39	44	47	44	55	44	63	44
8	174	16	0	24	254	32	254	40	254	48	254	56	254	64	254

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 4AA0 CALC 4AA0 SA28 11 SA29 1
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT BUTTON 2

AE 26600 # 4.3.2.b

```
EOS  A2-04  E2.EXE;18 COLD CAL MODE          8-APR-98  08:39:272 SCAN NUMBER  1658
[ 5 ] SCIENCE DATA    ELEMENT 0000

[ 6 ] CONTROL/STATUS  ELEMENT   00

[   ] ENGINEERING     ELEMENT   00


                                        COMMANDS
[ 9 ]  SCANNER A2 POWER =          OFF  COLD CAL POSITION 1 =      NO  [ 14 ]

[ 10 ] ANTENNA IN FULL SCAN MODE = NO   COLD CAL POSITION 2 =      NO  [ 15 ]

[ 11 ] ANTENNA IN WARM CAL POSIT = NO   COLD CAL POSITION 3 =      NO  [ 16 ]

[ 12 ] ANTENNA IN COLD CAL POSIT = YES  COLD CAL POSITION 4 =      YES [ 17 ]

[ 13 ] ANTENNA IN NADIR POSITION = NO   RESET C&DH PROCESSOR           [ 18 ]

                                        GSE MODE                       [ 19 ]

ENGR OK   POWER       ON    CHECKSUM  IN 4927 CALC 4927   SA28    18 SA29    1
                      SCREEN ONLY [ 2 ] PRINT  [ 3 ] FULL       [ 1 ] RETURN
 SELECT BUTTON 2
```

AE 26600 ¶ 4.3.2.c

EOS A2-04 E2.EXE;18 COLD CAL MODE 8-APR-98 08:39:512 SCAN NUMBER 1661
[5] SCIENCE DATA ELEMENT 0000

[6] CONTROL/STATUS ELEMENT 00

[.] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	4	25	66	33	66	41	66	49	66	57	66
2	33	10	0	18	0	26	182	34	194	42	196	50	194	58	197
3	192	11	0	19	128	27	66	35	66	43	66	51	66	59	66
4	20	12	0	20	104	28	211	36	213	44	221	52	222	60	221
5	1	13	0	21	44	29	44	37	44	45	44	53	44	61	44
6	69	14	0	22	254	30	254	38	254	46	254	54	254	62	254
7	0	15	0	23	44	31	44	39	44	47	44	55	44	63	44
8	174	16	0	24	254	32	254	40	254	48	254	56	254	64	254

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 4BAE CALC 4BAE SA28 21 SA29 2
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

SELECT BUTTON 2

AE 26600 ¶ 4.3.2.c

```
EOL  A2-04  E2.EXE;18 COLD CAL MODE        8-APR-98  08:40:472 SCAN NUMBER  1668
[ 5 ] SCIENCE DATA    ELEMENT 0000

[ 6 ] CONTROL/STATUS  ELEMENT   00

[ , ] ENGINEERING     ELEMENT   00

                                   COMMANDS
[ 9 ]  SCANNER A2 POWER =          OFF    COLD CAL POSITION 1 =      NO  [ 14
[ 10 ] ANTENNA IN FULL SCAN MODE = NO     COLD CAL POSITION 2 =      NO  [ 15
[ 11 ] ANTENNA IN WARM CAL POSIT = NO     COLD CAL POSITION 3 =      YES [ 16
[ 12 ] ANTENNA IN COLD CAL POSIT = YES    COLD CAL POSITION 4 =      NO  [ 17
[ 13 ] ANTENNA IN NADIR POSITION = NO     RESET C&DH PROCESSOR          [ 18
                                          GSE MODE                      [ 19

ENGR OK   POWER       ON    CHECKSUM  IN 4A2D CALC 4A2D   SA28   28 SA29   2
                      SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL      [ 1 ] RETURN
 SELECT BUTTON 2
```

AE 26600 ¶ 4.3.2.d

EOS A2-04 E2.EXE;18 COLD CAL MODE 8-APR-98 08:41:112 SCAN NUMBER 167
[5] SCIENCE DATA ELEMENT 0000

[6] CONTROL/STATUS ELEMENT 00

[ ] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DAT
1	9	9	0	17	4	25	66	33	66	41	66	49	66	57	6
2	33	10	0	18	0	26	189	34	197	42	195	50	197	58	19
3	192	11	0	19	128	27	66	35	66	43	66	51	66	59	6
4	30	12	0	20	72	28	221	36	218	44	219	52	225	60	21
5	1	13	0	21	44	29	44	37	44	45	44	53	44	61	4
6	69	14	0	22	254	30	254	38	254	46	254	54	254	62	25
7	0	15	0	23	44	31	44	39	44	47	44	55	44	63	4
8	174	16	0	24	254	32	254	40	254	48	254	56	254	64	25

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 48F2 CALC 48F2 SA28 31 SA29
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

SELECT BUTTON 2

AE26600 # 4.3.2.d

```
EOS  A2-04  E2.EXE;18 COLD CAL MODE          8-APR-98  08:42:072 SCAN NUMBER  1678
[ 5 ] SCIENCE DATA     ELEMENT 0000

[ 6 ] CONTROL/STATUS   ELEMENT   00

[ . ] ENGINEERING      ELEMENT   00

                                   COMMANDS
[ 9 ]  SCANNER A2 POWER =          OFF    COLD CAL POSITION 1 =      NO  [ 14
[ 10 ] ANTENNA IN FULL SCAN MODE = NO     COLD CAL POSITION 2 =      YES [ 15
[ 11 ] ANTENNA IN WARM CAL POSIT = NO     COLD CAL POSITION 3 =      NO  [ 16
[ 12 ] ANTENNA IN COLD CAL POSIT = YES    COLD CAL POSITION 4 =      NO  [ 17
[ 13 ] ANTENNA IN NADIR POSITION = NO     RESET C&DH PROCESSOR           [ 18
                                          GSE MODE                       [ 19

ENGR OK   POWER        ON    CHECKSUM  IN 49DB CALC 49DB   SA28   38 SA29   3
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL      [ 1 ] RETURN
 SELECT BUTTON 2
```

AE 2600 ¶ 4.3.2.e

EOS A2-04 E2.EXE;18 COLD CAL MODE 8-APR-98 08:42:232 SCAN NUMBER 1680
[5] SCIENCE DATA ELEMENT 0000

[6] CONTROL/STATUS ELEMENT 00

[.] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	4	25	66	33	66	41	66	49	66	57	66
2	33	10	0	18	0	26	188	34	192	42	198	50	195	58	197
3	192	11	0	19	128	27	66	35	66	43	66	51	66	59	66
4	39	12	0	20	40	28	223	36	212	44	217	52	221	60	210
5	1	13	0	21	44	29	44	37	44	45	44	53	44	61	44
6	69	14	0	22	254	30	254	38	254	46	254	54	254	62	254
7	0	15	0	23	44	31	44	39	44	47	44	55	44	63	44
8	174	16	0	24	254	32	254	40	254	48	254	56	254	64	254

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 4C17 CALC 4C17 SA28 40 SA29 4(
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

SELECT BUTTON 2

AE 26600 ℍ 4.3.2.e

```
EOS  A2-04   E2.EXE;18 COLD CAL MODE          8-APR-98  08:43:112 SCAN NUMBER  1686
[ 5 ] SCIENCE DATA     ELEMENT 0000

[ 6 ] CONTROL/STATUS   ELEMENT   00

[ . ] ENGINEERING      ELEMENT   00

                                    COMMANDS
[ 9 ]  SCANNER A2 POWER =          OFF    COLD CAL POSITION 1 =       YES [ 14 ]

[ 10 ] ANTENNA IN FULL SCAN MODE = NO     COLD CAL POSITION 2 =       NO  [ 15 ]

[ 11 ] ANTENNA IN WARM CAL POSIT = NO     COLD CAL POSITION 3 =       NO  [ 16 ]

[ 12 ] ANTENNA IN COLD CAL POSIT = YES    COLD CAL POSITION 4 =       NO  [ 17 ]

[ 13 ] ANTENNA IN NADIR POSITION = NO     RESET C&DH PROCESSOR            [ 18 ]

                                          GSE MODE                        [ 19 ]

ENGR OK   POWER          ON    CHECKSUM  IN 4DB7 CALC 4DB7   SA28   46 SA29   4
                         SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL      [ 1 ] RETURN
 SELECT BUTTON 2
```

AE 26600 Ft 4.3.2.f

EOS A2-04 E2.EXE;18 COLD CAL MODE 8-APR-98 08:43:272 SCAN NUMBER 168
[5] SCIENCE DATA ELEMENT 0000

[6] CONTROL/STATUS ELEMENT 00

[.] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	4	25	66	33	66	41	66	49	66	57	66
2	33	10	0	18	0	26	195	34	198	42	198	50	200	58	198
3	192	11	0	19	128	27	66	35	66	43	66	51	66	59	66
4	47	12	0	20	8	28	214	36	221	44	227	52	219	60	224
5	1	13	0	21	44	29	44	37	44	45	44	53	44	61	44
6	69	14	0	22	254	30	254	38	254	46	254	54	254	62	254
7	0	15	0	23	44	31	44	39	44	47	44	55	44	63	44
8	174	16	0	24	254	32	254	40	254	48	254	56	254	64	254

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 4D19 CALC 4D19 SA28 48 SA29 4
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

SELECT BUTTON 2

AE 26600 ¶ 4.3.2.f

```
EOS  A2-04  E2.EXE;18 NADIR MODE          8-APR-98  08:44:162 SCAN NUMBER  1694
[ 5 ] SCIENCE DATA     ELEMENT 0000

[ 6 ] CONTROL/STATUS   ELEMENT   00

[ , ] ENGINEERING      ELEMENT   00

                                        COMMANDS
[ 9 ]  SCANNER A2 POWER =          OFF   COLD CAL POSITION 1 =        YES [ 14
[ 10 ] ANTENNA IN FULL SCAN MODE = NO    COLD CAL POSITION 2 =        NO  [ 15
[ 11 ] ANTENNA IN WARM CAL POSIT = NO    COLD CAL POSITION 3 =        NO  [ 16
[ 12 ] ANTENNA IN COLD CAL POSIT = NO    COLD CAL POSITION 4 =        NO  [ 17
[ 13 ] ANTENNA IN NADIR POSITION = YES   RESET C&DH PROCESSOR             [ 18
                                         GSE MODE                        [ 19

ENGR OK   POWER        ON    CHECKSUM  IN 4AE5 CALC 4AE5   SA28    54 SA29    5
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL       [ 1 ] RETURN
 SELECT BUTTON 2
```

AE 26600 ¶ 4.3.2.g

EOS A2-04 E2.EXE;18 NADIR MODE 8-APR-98 08:44:392 SCAN NUMBER 1697
[5] SCIENCE DATA ELEMENT 0000

[6] CONTROL/STATUS ELEMENT 00

[.] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	4	25	66	33	66	41	66	49	66	57	66
2	33	10	0	18	0	26	186	34	195	42	197	50	194	58	196
3	192	11	0	19	128	27	66	35	66	43	66	51	66	59	66
4	56	12	0	20	16	28	220	36	226	44	221	52	226	60	222
5	1	13	0	21	44	29	44	37	44	45	44	53	44	61	44
6	69	14	0	22	254	30	254	38	254	46	254	54	254	62	254
7	0	15	0	23	44	31	44	39	44	47	44	55	44	63	44
8	174	16	0	24	254	32	254	40	254	48	254	56	254	64	254

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 4A36 CALC 4A36 SA28 57 SA29 5
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

SELECT BUTTON 2

AE 26600 # 4.3.2.9

```
EOS  A2-04  E2.EXE;18 WARM CAL MODE          8-APR-98  08:45:442 SCAN NUMBER  1705
[ 5 ] SCIENCE DATA     ELEMENT 0000

[ 6 ] CONTROL/STATUS   ELEMENT   00

[ . ] ENGINEERING      ELEMENT   00

                                    COMMANDS
[ 9 ]  SCANNER A2 POWER =          OFF    COLD CAL POSITION 1 =        YES [ 14

[ 10 ] ANTENNA IN FULL SCAN MODE = NO     COLD CAL POSITION 2 =        NO  [ 15

[ 11 ] ANTENNA IN WARM CAL POSIT = YES    COLD CAL POSITION 3 =        NO  [ 16

[ 12 ] ANTENNA IN COLD CAL POSIT = NO     COLD CAL POSITION 4 =        NO  [ 17

[ 13 ] ANTENNA IN NADIR POSITION = NO     RESET C&DH PROCESSOR             [ 18

                                          GSE MODE                         [ 19

ENGR OK   POWER        ON    CHECKSUM  IN 4C0C CALC 4C0C   SA28    66 SA29    6
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL       [ 1 ] RETURN

 SELECT BUTTON 2
```

AE26600 F 4.3.2.h

EOS A2-04 E2.EXE;18 WARM CAL MODE 8-APR-98 08:46:172 SCAN NUMBER 1709
[5] SCIENCE DATA ELEMENT 0000

[6] CONTROL/STATUS ELEMENT 00

[ ] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	4	25	66	33	66	41	66	49	66	57	66
2	33	10	0	18	0	26	187	34	197	42	195	50	191	58	190
3	192	11	0	19	128	27	66	35	66	43	66	51	66	59	66
4	68	12	0	20	4	28	220	36	221	44	219	52	221	60	219
5	1	13	0	21	44	29	44	37	44	45	44	53	44	61	44
6	69	14	0	22	254	30	254	38	254	46	254	54	254	62	254
7	0	15	0	23	44	31	44	39	44	47	44	55	44	63	44
8	174	16	0	24	254	32	254	40	254	48	254	56	254	64	254

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 4BC2 CALC 4BC2 SA28 69 SA29 6
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

SELECT BUTTON 2

AE26600 ¶ 4.3.2.h

```
EOS  A2-04  E2.EXE;18 FULL SCAN MODE      8-APR-98  08:47:222 SCAN NUMBER  1717
[ 5 ] SCIENCE DATA    ELEMENT 0000

[ 6 ] CONTROL/STATUS  ELEMENT   00

[   ] ENGINEERING     ELEMENT   00


                                        COMMANDS
[ 9 ]  SCANNER A2 POWER =          ON    COLD CAL POSITION 1 =       YES [ 14

[ 10 ] ANTENNA IN FULL SCAN MODE = YES   COLD CAL POSITION 2 =       NO  [ 15

[ 11 ] ANTENNA IN WARM CAL POSIT = NO    COLD CAL POSITION 3 =       NO  [ 16

[ 12 ] ANTENNA IN COLD CAL POSIT = NO    COLD CAL POSITION 4 =       NO  [ 17

[ 13 ] ANTENNA IN NADIR POSITION = NO    RESET C&DH PROCESSOR            [ 18

                                         GSE MODE                        [ 19

ENGR OK   POWER        ON    CHECKSUM  IN 23DD CALC 23DD   SA28   77 SA29    7
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL      [ 1 ] RETURN
 SELECT BUTTON 2
```

AE 26600 ¶ 4.3.2.i

EOS A2-04 E2.EXE;18 FULL SCAN MODE 8-APR-98 08:47:382 SCAN NUMBER 1719
[5] SCIENCE DATA ELEMENT 0000

[6] CONTROL/STATUS ELEMENT 00

[.] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	4	25	66	33	66	41	66	49	66	57	66
2	34	10	0	18	0	26	196	34	196	42	198	50	194	58	197
3	192	11	0	19	136	27	66	35	66	43	66	51	66	59	66
4	78	12	0	20	2	28	212	36	214	44	214	52	211	60	204
5	1	13	0	21	62	29	61	37	60	45	59	53	58	61	56
6	93	14	0	22	195	30	147	38	99	46	55	54	7	62	215
7	0	15	0	23	62	31	61	39	60	47	59	55	58	63	56
8	174	16	0	24	195	32	149	40	101	48	57	56	7	64	217

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 3B8D CALC 3B8D SA28 79 SA29 7
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

SELECT BUTTON 2

AE 26600 ¶ 4.3.2.i

```
EOS A2-04  E2.EXE;18 FULL SCAN MODE      8-APR-98  09:08:275 SCAN NUMBER    25
[ 5 ] SCIENCE DATA    ELEMENT 0000

[ 6 ] CONTROL/STATUS  ELEMENT   00

[ / ] ENGINEERING     ELEMENT   00


                                        COMMANDS
[ 9 ]  SCANNER A2 POWER =          ON    COLD CAL POSITION 1 =       YES [ 14
[ 10 ] ANTENNA IN FULL SCAN MODE = YES   COLD CAL POSITION 2 =       NO  [ 15
[ 11 ] ANTENNA IN WARM CAL POSIT = NO    COLD CAL POSITION 3 =       NO  [ 16
[ 12 ] ANTENNA IN COLD CAL POSIT = NO    COLD CAL POSITION 4 =       NO  [ 17
[ 13 ] ANTENNA IN NADIR POSITION = NO    RESET C&DH PROCESSOR            [ 18
                                         GSE MODE                        [ 19

ENGR OK   POWER        ON    CHECKSUM  IN 473F CALC 473F   SA28   225 SA29   22
                       SCREEN ONLY [ 2 ]  PRINT  [ 3 ] FULL       [ 1 ] RETURN
 SELECT BUTTON 3
```

AE 26600 ¶ 4.4.3

EOS A2_04 E2.EXE;18 SCIENCE DATA 8-APR-98 09:08:34 PAGE 1

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	PACKET ID	00001001	138	REFLECTOR POSITION 17	5605
2		00100010	140	REFL POS 17 2ND LOOK	5609
3	PACKET LENGTH	00000001	142	SCENE DATA BP 17 CH 1	17091
4		01011101	144	CH 2	17101
5	UNIT SERIAL NUMBER	00000100	146	REFLECTOR POSITION 18	5452
6		00000000	148	REFL POS 18 2ND LOOK	5455
7	INSTRUMENT MODE/STATUS	10001000	150	SCENE DATA BP 18 CH 1	17088
8		00000010	152	CH 2	17106
10	REFLECTOR POSITION 1	8033	154	REFLECTOR POSITION 19	5301
12	REFL POS 1 2ND LOOK	8033	156	REFL POS 19 2ND LOOK	5304
14	SCENE DATA BP 1 CH 1	17084	158	SCENE DATA BP 19 CH 1	17084
16	CH 2	17105	160	CH 2	17099
18	REFLECTOR POSITION 2	7882	162	REFLECTOR POSITION 20	5152
20	REFL POS 2 2ND LOOK	7882	164	REFL POS 20 2ND LOOK	5153
22	SCENE DATA BP 2 CH 1	17085	166	SCENE DATA BP 20 CH 1	17090
24	CH 2	17103	168	CH 2	17106
26	REFLECTOR POSITION 3	7729	170	REFLECTOR POSITION 21	5000
28	REFL POS 3 2ND LOOK	7730	172	REFL POS 21 2ND LOOK	5002
30	SCENE DATA BP 3 CH 1	17089	174	SCENE DATA BP 21 CH 1	17087
32	CH 2	17105	176	CH 2	17105
34	REFLECTOR POSITION 4	7579	178	REFLECTOR POSITION 22	4849
36	REFL POS 4 2ND LOOK	7581	180	REFL POS 22 2ND LOOK	4851
38	SCENE DATA BP 4 CH 1	17087	182	SCENE DATA BP 22 CH 1	17088
40	CH 2	17102	184	CH 2	17102
42	REFLECTOR POSITION 5	7427	186	REFLECTOR POSITION 23	4697
	REFL POS 5 2ND LOOK	7428	188	REFL POS 23 2ND LOOK	4699
46	SCENE DATA BP 5 CH 1	17083	190	SCENE DATA BP 23 CH 1	17087
48	CH 2	17092	192	CH 2	17100
50	REFLECTOR POSITION 6	7274	194	REFLECTOR POSITION 24	4545
52	REFL POS 6 2ND LOOK	7275	196	REFL POS 24 2ND LOOK	4547
54	SCENE DATA BP 6 CH 1	17089	198	SCENE DATA BP 24 CH 1	17090
56	CH 2	17098	200	CH 2	17105
58	REFLECTOR POSITION 7	7124	202	REFLECTOR POSITION 25	4394
60	REFL POS 7 2ND LOOK	7125	204	REFL POS 25 2ND LOOK	4394
62	SCENE DATA BP 7 CH 1	17090	206	SCENE DATA BP 25 CH 1	17090
64	CH 2	17097	208	CH 2	17096
66	REFLECTOR POSITION 8	6969	210	REFLECTOR POSITION 26	4239
68	REFL POS 8 2ND LOOK	6973	212	REFL POS 26 2ND LOOK	4243
70	SCENE DATA BP 8 CH 1	17094	214	SCENE DATA BP 26 CH 1	17089
72	CH 2	17098	216	CH 2	17099
74	REFLECTOR POSITION 9	6816	218	REFLECTOR POSITION 27	4089
76	REFL POS 9 2ND LOOK	6821	220	REFL POS 27 2ND LOOK	4091
78	SCENE DATA BP 9 CH 1	17090	222	SCENE DATA BP 27 CH 1	17087
80	CH 2	17101	224	CH 2	17105
82	REFLECTOR POSITION 10	6666	226	REFLECTOR POSITION 28	3937
84	REFL POS 10 2ND LOOK	6669	228	REFL POS 28 2ND LOOK	3939
86	SCENE DATA BP 10 CH 1	17088	230	SCENE DATA BP 28 CH 1	17083
88	CH 2	17102	232	CH 2	17096
90	REFLECTOR POSITION 11	6517	234	REFLECTOR POSITION 29	3787
92	REFL POS 11 2ND LOOK	6518	236	REFL POS 29 2ND LOOK	3788

EOS_A2_04 E2.EXE;18 SCIENCE DATA 8-APR-98 09:08:34 PAGE 2

ELEMENT	DESCRIPTION		VALUE
94	SCENE DATA BP 11	CH 1	17091
96		CH 2	17096
98	REFLECTOR POSITION 12		6364
100	REFL POS 12 2ND LOOK		6367
102	SCENE DATA BP 12	CH 1	17089
104		CH 2	17100
106	REFLECTOR POSITION 13		6213
108	REFL POS 13 2ND LOOK		6216
110	SCENE DATA BP 13	CH 1	17090
112		CH 2	17103
114	REFLECTOR POSITION 14		6062
116	REFL POS 14 2ND LOOK		6065
118	SCENE DATA BP 14	CH 1	17092
120		CH 2	17106
122	REFLECTOR POSITION 15		5909
124	REFL POS 15 2ND LOOK		5912
126	SCENE DATA BP 15	CH 1	17085
128		CH 2	17129
130	REFLECTOR POSITION 16		5758
132	REFL POS 16 2ND LOOK		5760
134	SCENE DATA BP 16	CH 1	17083
136		CH 2	17110

ELEMENT	DESCRIPTION		VALUE
238	SCENE DATA BP 29	CH 1	17087
240		CH 2	17101
242	REFLECTOR POSITION 30		3635
244	REFL POS 30 2ND LOOK		3637
246	SCENE DATA BP 30	CH 1	17089
248		CH 2	17099
250	REFLECTOR COLD CAL POS		2041
252	REFL COLD CAL 2ND LOOK		2042
254	COLD CAL DATA 1	CH 1	17088
256		CH 2	17102
258	COLD CAL DATA 2	CH 1	17086
260		CH 2	17103
302	REFLECTOR WARM CAL POS		14028
304	REFL WARM CAL 2ND LOOK		14027
306	WARM CAL DATA 1	CH 1	17070
308		CH 2	17097
310	WARM CAL DATA 2	CH 1	17070
312		CH 2	17096

ELEMENT	DESCRIPTION	VALUE	TEMPERATURE DEG C
262	SCAN MOTOR	18545	23.21
264	FEED HORN	18279	23.92
266	RF MUX	18811	25.00
268	MIXER/IF AMPLIFIER CHANNEL 1	19299	25.84
270	MIXER/IF AMPLIFIER CHANNEL 2	19525	25.97
272	LOCAL OSCILLATOR CHANNEL 1	19026	25.53
274	LOCAL OSCILLATOR CHANNEL 2	19636	26.21
276	I553 INTERFACE	0	44.72
278	SUB REFLECTOR	17931	23.07
280	DC/DC CONVERTER	20481	28.42
282	RF SHELF	19044	24.69
284	DETECTOR/PREAMP ASSEMBLY	19438	25.09
286	WARM LOAD CENTER	23148	23.74
288	WARM LOAD 2	23687	23.64
290	WARM LOAD 3	23293	23.67
292	WARM LOAD 4	23175	23.74
294	WARM LOAD 5	23160	23.73
296	WARM LOAD 6	23652	23.71
298	WARM LOAD 1	23509	23.68
300	TEMP SENSOR REFERENCE VOLTAGE	25090	

DESCRIPTION	
ANTENNA IN FULL SCAN MODE	YES
ANTENNA IN WARM CAL MODE	NO
ANTENNA IN COLD CAL MODE	NO
ANTENNA IN NADIR MODE	NO
COLD CAL POSITION LSB	ZERO
COLD CAL POSITION MSB	ZERO
A2 SCANNER POWER	ON
ADC LATCHUP FLAG	ONE

ENGINEERING DATA

DESCRIPTION	DEG C
SCAN MOTOR TEMPERATURE	22.7
RF SHELF TEMPERATURE #1	24.1
WARM LOAD TEMPERATURE	23.1
RF SHELF TEMPERATURE #2	24.3

DESCRIPTION		VALUE	MA / VOLTS
SIGNAL PROCESSOR	+5 VDC	22223	4.91
	+15 VDC	21892	15.04
	-15 VDC	21871	-15.07
ANTENNA DRIVE	+5 VDC	22098	4.94
	+15 VDC	22063	14.98
	-15 VDC	21883	-15.07
MIXER/IF AMPLIFIER	+10 VDC	21723	9.93
LO CHANNEL 1	+10 VDC	21318	10.05
LO CHANNEL 2	+10 VDC	21433	10.01
QUIET BUS CURRENT		13665	615.90
NOISY BUS CURRENT		17954	114.86

EOS_A2_04 E2.EXE;18 AZONIX DATA 8-APR-98 09:08:34 PAGE 4

PRT TEMPERATURES

	NO.	DEG K	NO.	DEG K
VARIABLE TARGET	601	14.00	607	20.00
	602	15.00	608	21.00
	603	16.00	609	22.00
	604	17.00	610	23.00
	605	18.00	611	24.00
	606	19.00		
FIXED TARGET	612	39.00	618	45.00
	613	40.00	619	46.00
	614	41.00	620	47.00
	615	42.00	621	48.00
	616	43.00	622	49.00
	617	44.00		
BASEPLATE	623	25.00	625	50.00
	624	26.00	626	27.00

THERMOCOUPLE TEMPERATURES

	NO.	DEG K	NO.	DEG K
FIXED TARGET SHROUD	532	32.00	533	33.00
VARIABLE TARGET SHROUD	515	7.00	516	8.00
FIXED TARGET N2	502	30.00	503	31.00
VARIABLE TARGET N2	507	5.00	508	6.00
HEATER N2	505	1.00	506	2.00
FIXED TARGET FLOW METER	504	34.00		
VARIABLE TARGET FLOW METER	509	9.00		
BASEPLATE HEATER N2	510	3.00	511	4.00
BASEPLATE N2	512	36.00	513	37.00
BASEPLATE FLOW METER	514	35.00		
ADJUNCT RADIATORS	549	38.00	554	55.00
	542	10.00	556	57.00

N2 CONTROL FUNCTIONS

	NO.	VALUE	NO.	VALUE
FIXED TARGET N2 PRESSURE PSI	401	11.00		
FIXED TARGET N2 FLOW LB/HR	701	28.00		
VARIABLE TARGET N2 PRESSURE PSI	402	12.00		
VARIABLE TARGET N2 FLOW LB/HR	702	29.00		
BASEPLATE N2 PRESSURE PSI	403	13.00		
BASEPLATE N2 FLOW LB/HR	703	54.00		
FIXED TARGET BYPASS RELAY	104	CLOSED		
VARIABLE TARGET LN2 RELAY	105	CLOSED		
VARIABLE TARGET GN2 RELAY	108	CLOSED		
TARGET LN2 SUPPLY RELAY	102	CLOSED		
BASEPLATE GN2 SUPPLY RELAY	109	CLOSED		
HOT GN2 PURGE RELAY	103	CLOSED		
VARIABLE TARGET LN2 BYPASS RELAY	106	CLOSED		
BASEPLATE GN2 BYPASS RELAY	110	CLOSED		
ADJUNCT RADIATOR LN2 SUPPLY RELAY	114	CLOSED	116	CLOSED

EOS A2-04 E2.EXE;18 FULL SCAN MODE 8-APR-98 08:48:422 SCAN NUMBER 1727
[5] SCIENCE DATA ELEMENT 0000

[6] CONTROL/STATUS ELEMENT 00

[/] ENGINEERING ELEMENT 00

DATA STREAM 1 TO 64

NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA	NO	DATA
1	9	9	0	17	4	25	66	33	66	41	66	49	66	57	66
2	34	10	0	18	0	26	193	34	196	42	203	50	198	58	196
3	192	11	0	19	136	27	66	35	66	43	66	51	66	59	66
4	86	12	0	20	2	28	215	36	211	44	213	52	211	60	205
5	1	13	0	21	62	29	61	37	60	45	59	53	58	61	56
6	93	14	0	22	195	30	149	38	101	46	57	54	5	62	215
7	0	15	0	23	62	31	61	39	60	47	59	55	58	63	56
8	174	16	0	24	195	32	147	40	103	48	59	56	9	64	217

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 43A9 CALC 43A9 SA28 87 SA29 8
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

SELECT BUTTON 2

AE 26600 # 4.4.4 a/b

EOS A2-04 E2.EXE;18 FULL SCAN MODE 8-APR-98 09:51:078 SCAN NUMBER 131
[5] SCIENCE DATA ELEMENT 0000

[6] CONTROL/STATUS ELEMENT 00

[,] ENGINEERING ELEMENT 9 LOCAL OSCILLATOR-CH 1 +10 VDC 10.04

RADIOMETRIC DATA

BEAM POSITION 1

CH	DATA
1	17073
2	17104

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 31AB CALC 31AB SA28 543 SA29 543
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

SELECT BUTTON 2

AE 26600 # 4.4.4 c/d

EOS..A2-04 E2.EXE;18 FULL SCAN MODE 8-APR-98 09:51:238 SCAN NUMBER 13.
[5] SCIENCE DATA ELEMENT 0000

[6] CONTROL/STATUS ELEMENT 00

[,] ENGINEERING ELEMENT 9 LOCAL OSCILLATOR-CH 1 +10 VDC 10.04

RADIOMETRIC DATA
CHANNEL 1

BP	DATA	BP	DATA	BP	DATA	BP	DATA
1	17078	9	17084	17	17086	25	17083
2	17082	10	17077	18	17081	26	17080
3	17082	11	17079	19	17085	27	17079
4	17078	12	17085	20	17083	28	17079
5	17082	13	17081	21	17081	29	17082
6	17079	14	17076	22	17079	30	17080
7	17083	15	17077	23	17081	CC	17080
8	17083	16	17082	24	17081	WC	17067

[21] UP [22] DOWN

ENGR OK POWER ON CHECKSUM IN 4937 CALC 4937 SA28 545 SA29 5
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

SELECT BUTTON 2

AE26600 ¶ 4.4.4 e/f

EOS -A2-04 E2.EXE;18 FULL SCAN MODE 8-APR-98 09:51:318 SCAN NUMBER 134
[5] SCIENCE DATA ELEMENT 0000

[6] CONTROL/STATUS ELEMENT 00

[/] ENGINEERING ELEMENT 9 LOCAL OSCILLATOR-CH 1 +10 VDC 10.04

WARM CALIBRATE

CH	DATA
1	17065
1	17064
2	17100
2	17100

ENGR OK POWER ON CHECKSUM IN 4E24 CALC 4E24 SA28 546 SA29 54
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

SELECT BUTTON 2

AE26600 PH 4.4.4 g/h

EOS A?-04 E2.EXE;18 FULL SCAN MODE 8-APR-98 09:51:478 SCAN NUMBER 136
[5] SCIENCE DATA ELEMENT 0000

[6] CONTROL/STATUS ELEMENT 00

[,] ENGINEERING ELEMENT 9 LOCAL OSCILLATOR-CH 1 +10 VDC 10.04

COLD CALIBRATE

CH	DATA
1	17082
1	17085
2	17092
2	17098

ENGR OK POWER ON CHECKSUM IN 5030 CALC 5030 SA28 548 SA29 54
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT BUTTON 2

AE 26600 ¶ 4.4.4 i/j

EOS A2-04 E2.EXE;18 FULL SCAN MODE 8-APR-98 09:52:038 SCAN NUMBER 138
[5] SCIENCE DATA ELEMENT 0000

[6] CONTROL/STATUS ELEMENT 00

[.] ENGINEERING ELEMENT 9 LOCAL OSCILLATOR-CH 1 +10 VDC 10.04

REFLECTOR POSITIONS

BP	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2
1	8033	8033	9	6817	6821	17	5605	5609	25	4394	4394
2	7881	7881	10	6665	6670	18	5452	5456	26	4238	4243
3	7730	7730	11	6518	6519	19	5301	5304	27	4089	4092
4	7579	7581	12	6365	6367	20	5152	5153	28	3936	3939
5	7427	7427	13	6213	6217	21	5000	5002	29	3787	3789
6	7276	7276	14	6062	6064	22	4848	4851	30	3635	3637
7	7123	7125	15	5910	5912	23	4698	4699	CC	2041	2043
8	6970	6973	16	5758	5760	24	4545	4547	WC	14028	14028

ENGR OK POWER ON CHECKSUM IN 50BA CALC 50BA SA28 550 SA29 55
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

SELECT BUTTON 2

AE 26600 # 4.4.4 K/Q

EOS-A?-04 E2.EXE;18 FULL SCAN MODE 8-APR-98 09:52:198 SCAN NUMBER 140
[5] SCIENCE DATA ELEMENT 0000

[6] CONTROL/STATUS ELEMENT 00

[/] ENGINEERING ELEMENT 9 LOCAL OSCILLATOR-CH 1 +10 VDC 10.04

SCIENCE TEMPERATURES

NO		DATA	TEMP C	NO		DATA	TEMP C
1	SCAN MOTOR	18640	23.39	11	RF SHELF	19114	24.82
2	FEED HORN	18324	24.01	12	DET/PREAMP	19511	25.23
3	RF DIPLEXER	18875	25.12	13	WARM LOAD CNTR	23227	23.89
4	MIXER IF CH 1	19370	25.98	14	WARM LOAD 2	23760	23.78
5	MIXER IF CH 2	19592	26.18	15	WARM LOAD 3	23371	23.82
6	LO CHANNEL 1	19098	25.66	16	WARM LOAD 4	23248	23.88
7	LO CHANNEL 2	19712	26.36	17	WARM LOAD 5	23231	23.87
8	1553 INTERFACE	0	44.72	18	WARM LOAD 6	23729	23.86
9	SUBREFLECTOR	17997	23.20	19	WARM LOAD 1	23589	23.84
10	DC/DC CONVERTER	20559	28.57		THERMAL REFERENCE	25090	

ENGR OK POWER ON CHECKSUM IN 4F78 CALC 4F78 SA28 552 SA29 55
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NASA
National Aeronautics and Space Administration

Report Documentation Page

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
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4. Title and Subtitle
Integrated Advanced Microwave Sounding Unit-A (AMSU-A), EOS Firmware Test Report

5. Report Date
29 October 1998

6. Performing Organization Code
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7. Author(s)
R. Schwantje

8. Performing Organization Report No.
10974A

10. Work Unit No.
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9. Performing Organization Name and Address
Aerojet
1100 W. Hollyvale
Azusa, CA 91702

11. Contract or Grant No.
NAS 5-32314

12. Sponsoring Agency Name and Address
NASA
Goddard Space Flight Center
Greenbelt, Maryland 20771

13. Type of Report and Period Covered
Final

14. Sponsoring Agency Code
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15. Supplementary Notes
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16. ABSTRACT (*Maximum 200 words*)

This is the EOS Firmware Test Report, for the Integrated Advanced Microwave Sounding Unit-A (AMSU-A).

17. Key Words (Suggested by Author(s))	18. Distribution Statement
EOS Microwave System	Unclassified --- Unlimited

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of pages	22. Price
Unclassified	Unclassified		---

NASA FORM 1626 OCT 86

PREPARATION OF THE REPORT DOCUMENTATION PAGE

The last page of a report facing the third cover is the Report Documentation Page, RDP. Information presented on this page is used in announcing and cataloging reports as well as preparing the cover and title page. Thus, it is important that the information be correct. Instructions for filing in each block of the form are as follows:

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Block 5. Report Date. Approximate month and year the report will be published.

Block 6. Performing Organization Code . Leave blank.

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Block 8. Performing Organization Report No. NASA installation report control number and, if desired, the non-NASA performing organization report control number.

Block 9. Performing Organization Name and Address. Provide affiliation (NASA program office, NASA installation, or contractor name) of authors.

Block 10. Work Unit No. Provide Research and Technology Objectives and Plants (RTOP) number.

Block 11. Contract or Grant No. Provide when applicable.

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REPORT DOCUMENTATION PAGE

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1. AGENCY USE ONLY (*Leave blank*)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED

4. TITLE AND SUBTITLE

Integrated Advanced Microwave Sounding Unit-A (AMSU-A), EOS Firmware Test Report

5. FUNDING NUMBERS

NAS 5-32314

6. AUTHOR(S)

R. Schwantje

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

Aerojet
1100 W. Hollyvale
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8. PERFORMING ORGANIZATION REPORT NUMBER

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29 October 1998

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)

NASA
Goddard Space Flight Center
Greenbelt, Maryland 20771

10. SPONSORING/MONITORING AGENCY REPORT NUMBER

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11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION/AVAILABILITY STATEMENT

12b. DISTRIBUTION CODE

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13. ABSTRACT (*Maximum 200 words*)

This is the EOS Firmware Test Report, for the Integrated Advanced Microwave Sounding Unit-A (AMSU-A).

14. SUBJECT TERMS

EOS
Microwave System

15. NUMBER OF PAGES

16. PRICE CODE

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17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
Unclassified	Unclassified	Unclassified	SAR

NSN 7540-01-280-5500

Standard Form 298 (Rev. 2-89)
Prescried by ANSI Std 239-18
298-102

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G	-	Grant	TA	-	Task
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AEROJET

TITLE	DOCUMENT NO.
EOS Firmware Test Report	Report 10974A 29 October 1998

INPUT FROM: DATE	CDRL:	SPECIFICATION ENGINEER: DATE
R. Schwantje 10/27/98	217	J. Grime 10-27-98
CHECKED BY: DATE		**JOB NUMBER: DATE**
98-10-27		N/A

APPROVED SIGNATURES	DEPT. NO.	DATE
Specifications Engineer (J. Grime)	8631	10-27-98
Product Team Leader (A. Nieto)	8341	10/29/98
Systems Engineer (R. Platt)	8311	11/2/98
Design Assurance (E. Lorenz)	8331	10/29/98
Quality Assurance (M. Santos)	7831	11/5/98
Technical Director/PMO (R. Hauerwaas)	4001	11/11/98
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REPORT DOCUMENTATION PAGE

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OMB No. 0704-0188

1. AGENCY USE ONLY *(Leave blank)*	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	October 1998	Contractor Report

4. TITLE AND SUBTITLE
Earth Observing System (EOS) Advanced Microwave Sounding Unit-A (EOS/AMSU-A) Firmware Test Report

5. FUNDING NUMBERS
NAS5-32314

6. AUTHOR(S)
R. Schwantje

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS (ES)
Aerojet
1100 Hollyvale St.
Azusa, CA 91702

8. PEFORMING ORGANIZATION REPORT NUMBER
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9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS (ES)
National Aeronautics and Space Administration
Washington, DC 20546-0001

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CR–209223

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION / AVAILABILITY STATEMENT
Unclassified–Unlimited
Subject Category: 60
Report available from the NASA Center for AeroSpace Information,
7121 Standard Drive, Hanover, MD 21076-1320. (301) 621-0390.

12b. DISTRIBUTION CODE

13. ABSTRACT *(Maximum 200 words)*

This document is the Firmware Test Report for the firmware to be used in the Earth Observing System (EOS) Advanced Microwave Sounding Unit-A (AMSU-A) instrument. It describes the firmware results of the Formal Qualification Test (FQT)/Demonstrations conducted on Mar. 21, 1997, Apr. 8, 1998, and July 14, 1998, for the EOS/AMSU-A instrument.

14. SUBJECT TERMS
EOS; microwave system.

15. NUMBER OF PAGES
160

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
Unclassified	Unclassified	Unclassified	UL