Report 10300-67
April 1999

GenCorp
Aerojet

Integrated Advanced Microwave Sounding Unit-A (AMSU-A) Monthly Report for March 1999

Contract No: NAS5-32314
CDRL 529: (Including CDRL 004, 203, 204, and 503)

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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TABLE OF CONTENTS

Section 1

INTRODUCTION

This is the 75th Monthly Report for the Advanced Microwave Sounding Unit-A (EOS/AMSU-A), Contract NAS5-32314, and covers the period from 01 March through 31 March 1999.

Included in this report are Combined Program Delivery Schedules and Reports (Section 2); a report from the Product Team Leaders on the status of all major program elements (Section 3); Contract Data Requirements List (CDRL) 503, the Weight and Power Budgets (Section 5); CDRL 204, reporting on the activities of Performance Assurance (Section 6); CDRL 203, the Configuration Management Status Report (Section 7); and the Documentation/Data Management Status Report (Section 8).

Section 2

The AMSU-A and Combined Program 90 Day Window Schedule is presented as Appendix A.

Section 3

STATUS REPORTS

Section 3.1

PROGRAM OVERVIEW

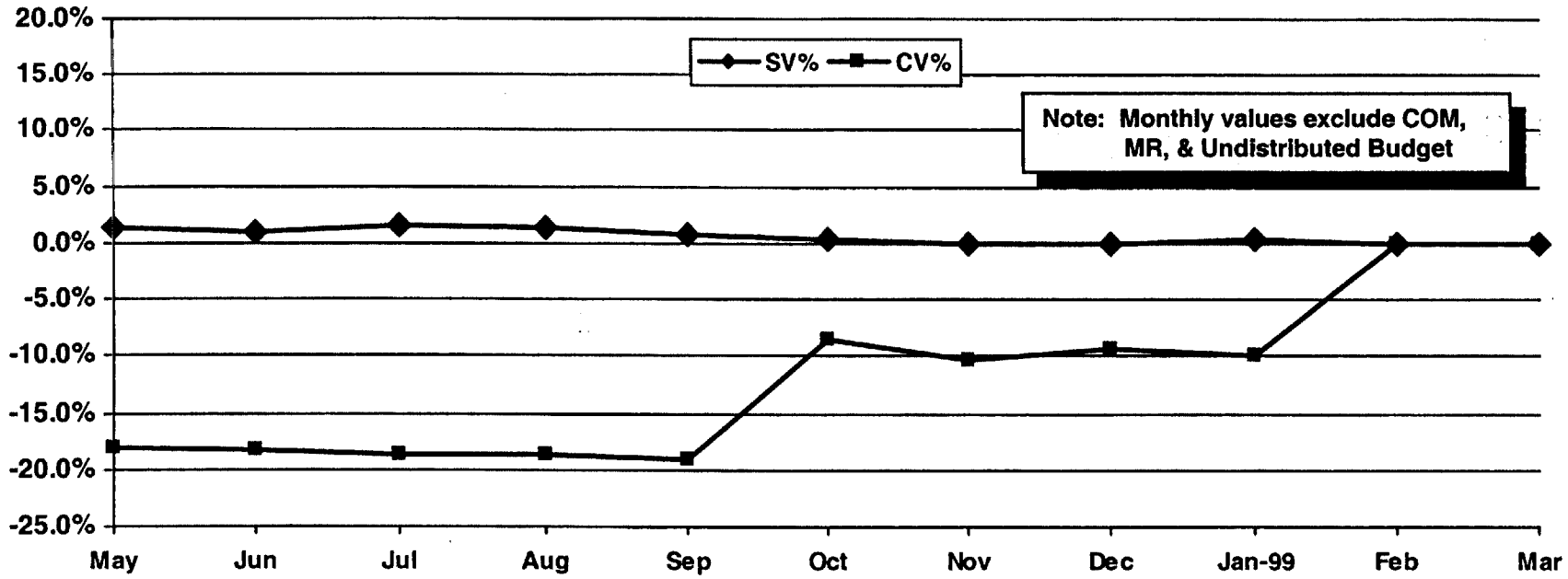
5

Program Status Summary

GENCORP AEROJET

Integrated AMSU-A
Earned Value/SPI/CPI Summary

EWSS

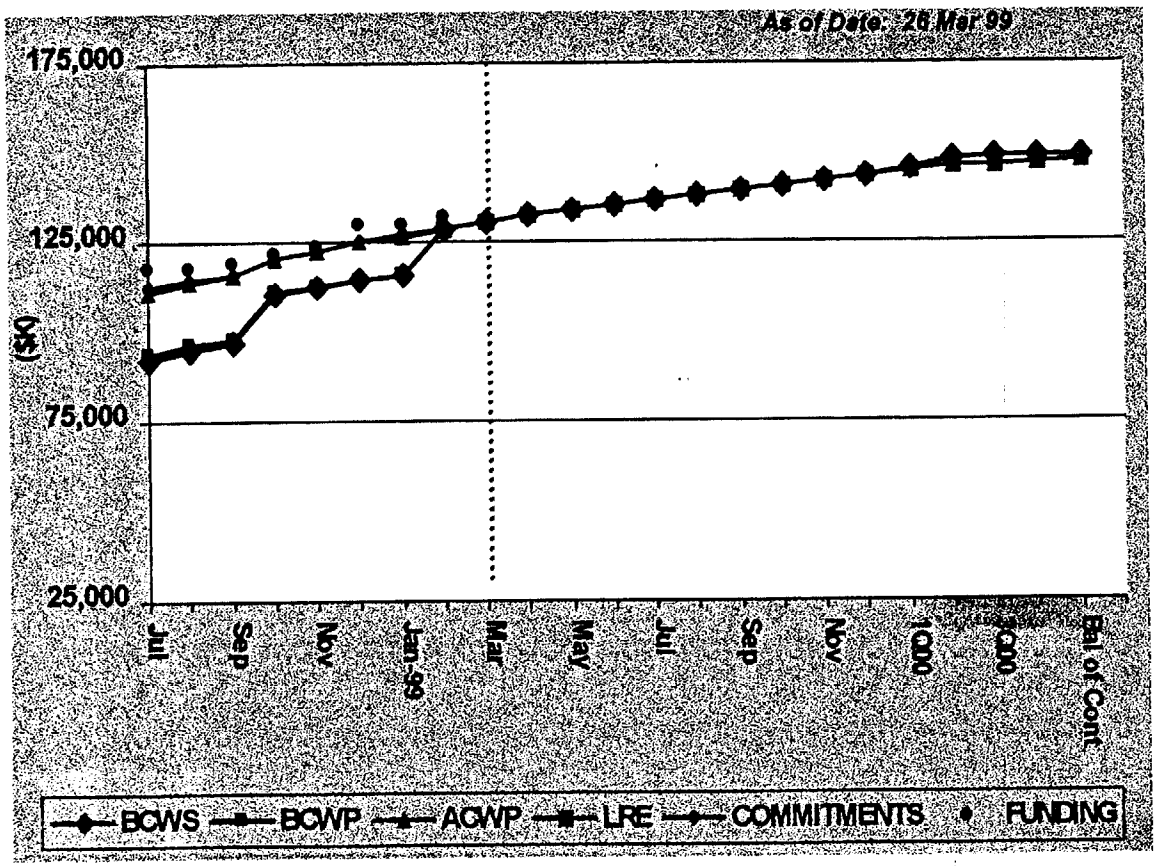


	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	At Completion NASA	At Completion AES
BCWS	87.5	89.9	92.1	94.4	96.5	108.1	112.0	114.2	115.6	128.6	130.4	149.4	149.4
BCWP	88.6	90.8	96.5	95.6	97.1	108.5	112.0	114.0	115.2	128.6	130.5	149.4	149.4
ACWP	104.6	107.4	110.9	113.6	115.6	118.2	122.6	124.7	126.7	128.6	130.2	149.4	149.4
SV $	1.1	0.9	1.4	1.2	0.6	0.4	0.0	0.0	-0.4	0.0	0.1		
CV $	-15.9	-16.6	-17.4	-18.0	-18.4	-9.7	-10.6	-10.6	-11.5	0.0	0.3	2.1	2.1

GENCORP AEROJET

Integrated AMSU-A Funding Status

EWSS



	PRIOR	CURRENT
Contract Type:	CPAF	CPAF
Contract Value:	$151,349	$151,515
Negotiated Cost:	$148,918	$149,084
Negotiated COM:	$2,431	$2,431
Negotiated Base Fee:	$2,531	$2,531
Negotiated Fee %:	1.5%	1.5%
Authorized, Not Negotiated:	** 63	165 **
EAC (Excludes COM):	$148,982	$149,425
Estimated Fee (Inc. COM):	$4,962	$4,966
Percent Complete:	86.3%	87.6%
Authorized, Not Neg Fee: (Including COM)	$3	$4
PTA:	N/A	N/A
Ceiling:	N/A	N/A
Management Reserve (BAC):	$758	$1,344
Management Reserve (EAC):	$758	$1,344
Undistributed Budget (BAC):	$1,796	$1,770
Undistributed Budget (EAC):	$1,796	$1,770
Capital Expenditures*	$4,100	$4,100

Preliminary Data

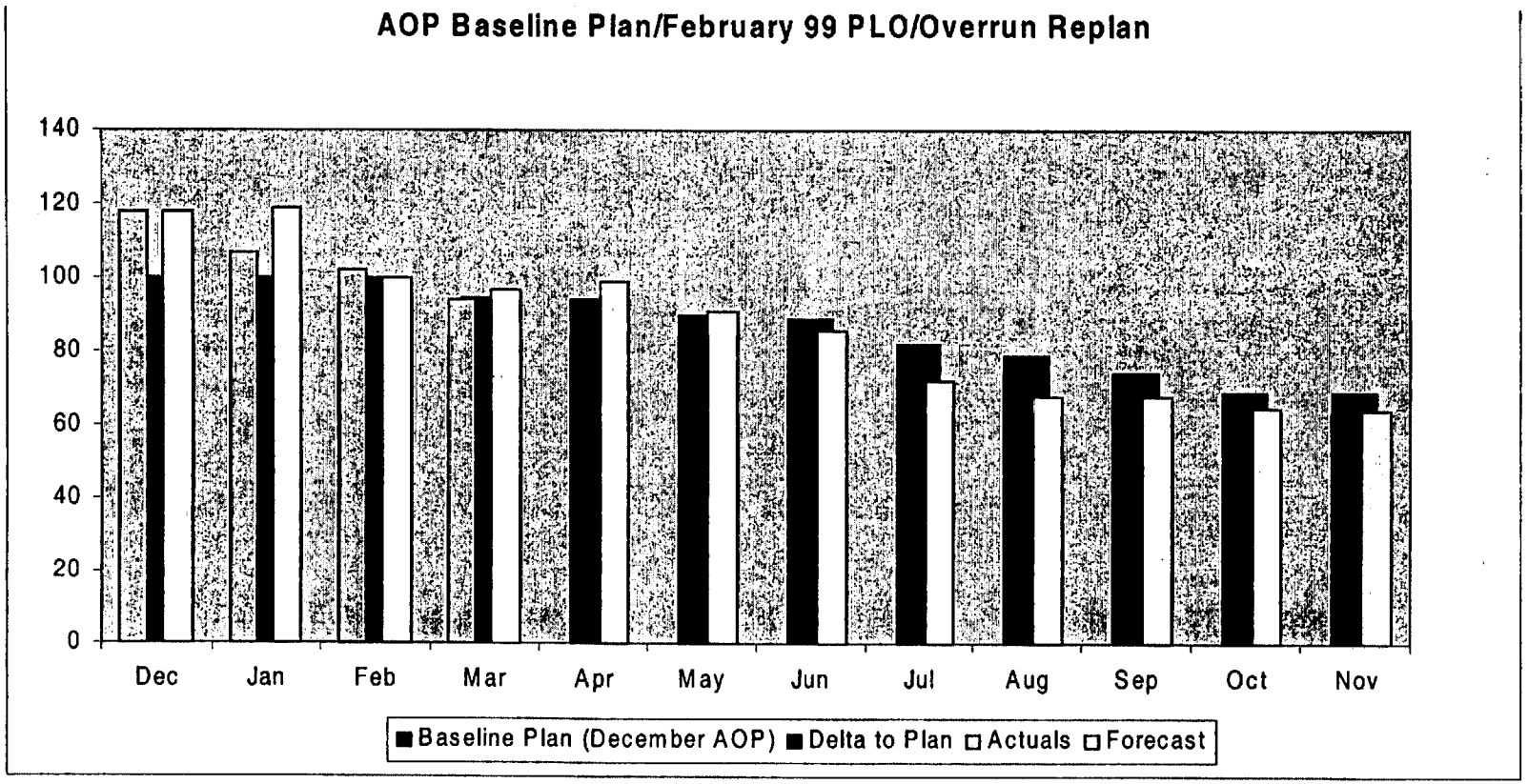
	Budget BCWS	Earnings BCWP	Actuals ACWP	Schedule Variance	Cost Variance	Budget At Completion	Estimate At Completion	Variance At Completion
Feb	$128,613	$128,613	$128,613	$0	$0	$151,413	$151,413	$0
Mar	$130,428	$130,462	$130,226	$34	$236	$151,515	$149,425	$2,090

**1. PEER #2 Review @ ($22K.)
2. EOS S/C I&T @ $68K.
3. SIIS Support @ $17K.
4. PLO Integ @ $102K.

GENCORP AEROJET

AMSU-A Staffing FY 99 Plan/Actuals/Forecast Chart

EWSS



	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Baseline Plan (December AOP)	100	93	94	85	85	76	75	70	67	69	61	58
Delta to Plan	0	7	6	10	9	14	14	12	12	5	8	11
Actuals	118	107	102	94								
Forecast	118	119	100	97	99	91	86	72	68	68	65	64

Template 50

GENCORP AEROJET

Integrated AMSU-A Staffing Plan/Actuals

EWSS

[redacted] ← FORECAST →

Organization	Data	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99
CONTRACTS	Actuals	0.3	0.6						
	Forecast	0.4	0.7	0.5	0.5	0.5	0.5	0.5	0.5
CONTROLLER	Actuals	4.3	4.5						
	Forecast	4.2	4.4	4.1	4.2	4.1	3.8	3.6	3.5
ELEC & WEAPONS SYS	Actuals	3.3	3.1						
	Forecast	3.5	3.2	3.0	3.6	3.6	3.5	3.5	3.4
ELECT ENGR	Actuals	16.1	13.9						
	Forecast	16.1	14.0	15.1	15.0	14.6	10.5	7.8	7.4
INTEG PLANNING	Actuals	6.8	7.4						
	Forecast	6.6	7.7	5.8	4.9	4.6	3.6	3.1	3.2
MANUFACTURING	Actuals	25.1	23.8						
	Forecast	25.0	24.1	26.9	21.4	20.2	16.0	13.8	14.6
MATERIEL	Actuals	2.6	2.2						
	Forecast	2.5	2.2	1.9	2.0	1.4	0.4	0.4	0.4
MECHANICAL ENG	Actuals	8.4	8.6						
	Forecast	8.2	8.9	7.1	5.5	4.8	3.7	3.6	3.4
PRODUCT ASSURANCE /TEST OPERATIONS	Actuals	23.9	18.5						
	Forecast	21.7	19.4	22.2	21.7	20.6	20.3	20.7	19.9
SOFTWARE ENGR	Actuals	1.1	1.0						
	Forecast	1.1	1.1	1.7	2.0	1.6	1.0	1.0	1.0
SYSTEMS ENG	Actuals	10.3	10.7						
	Forecast	10.5	10.8	10.9	9.7	10.1	8.5	10.1	10.9
Total Actuals		102.4	94.3						
Total Forecast		99.8	96.5	99.2	90.5	86.1	71.8	68.1	68.2

	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99
AOP	94.0	85.0	85.0	76.0	75.0	70.0	67.0	69.0
Manpower Forecast	99.8	96.5	99.2	90.5	86.1	71.8	68.1	68.2
Delta	-5.8	-11.5	-14.2	-14.5	-11.1	-1.8	-1.1	0.8

Rev. Date: 22 Apr 98

GENCORP AEROJET

Award Fee/Customer Delight Requirements/Criteria for Current Period

EWSS

- Current Period 1 Jan 99 - 30 Jun 99

- Current Milestones

Milestone	*Award Fee Date*	*Status*
Complete All PLO Assemblies	31 Mar 99	TBD
Complete 107 A1 & A2 Baseline CPT & PER	31 May 99	Complete 4/6
Complete All Receiver Assemblies	31 May 99	TBD
Complete All Antenna Assemblies	30 Jun 99	May

- Critical Item
  - METSAT 1 (105) In Shipping Containers Prior To Contract Delivery Date, PSR Scheduled For 28 Apr Meets Technical Requirements
  - METSAT 2 (106) Working To Expedite And Have In Shipping Container By June, Currently In Next Period Jul - Dec 99

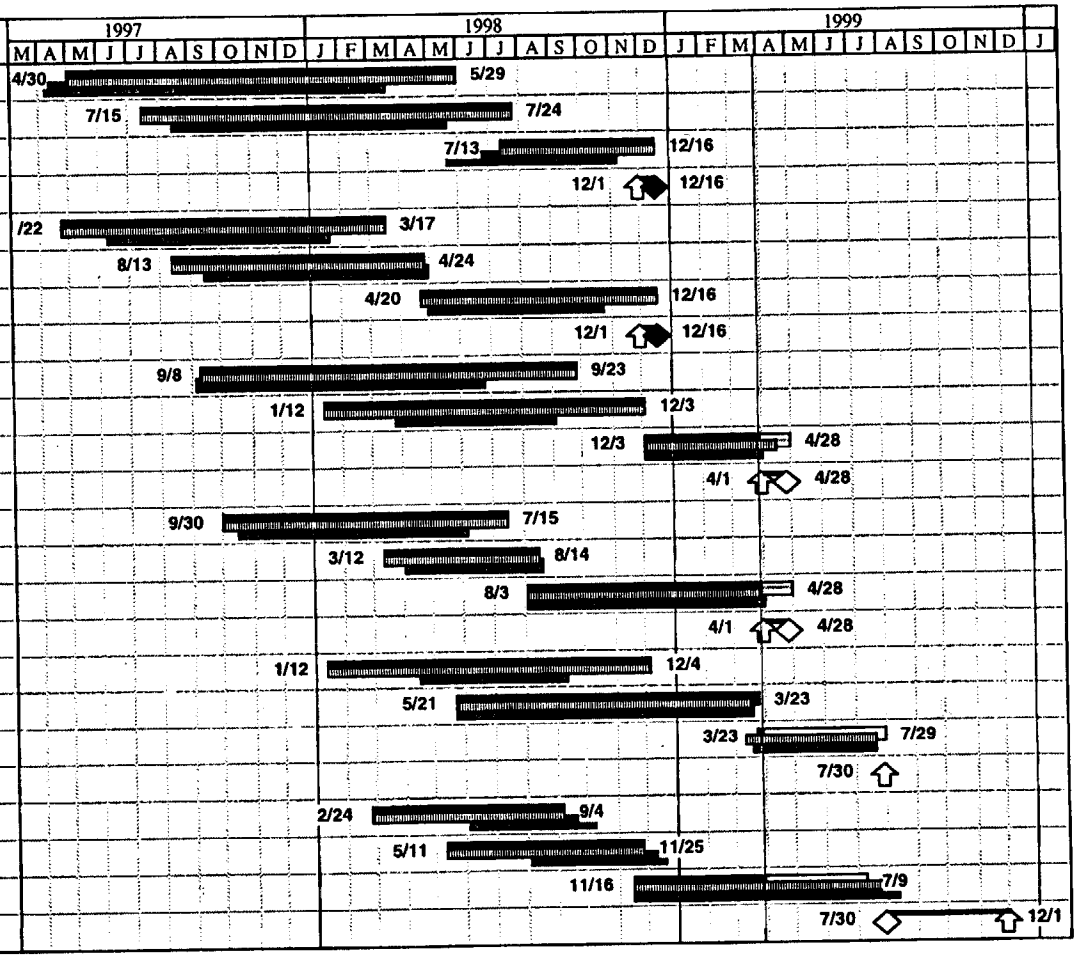
- Cost
  - NASA Expressed Concerns Over Feb Management Reserve Utilization Have Met With Program Office and Cost/Business, Have Resolved Concerns

GENCORP AEROJET

AMSU-A INTEGRATED MASTER SCHEDULE

EWSS

ID	Name
2583	S/N 202 A1 Major Subsystem Completions
2590	S/N 202 A1 Top Assembly - Integration & Test
2716	S/N 202 A1 Environmental Test & Shipping Config
2807	S/N 202 A1 Shipping Date (Contract Date 12/1/98)
3007	S/N 202 A2 Major Subsystem Completions
3014	S/N 202 A2 Top Assembly - Integration & Test
3081	S/N 202 A2 Environmental Test & Shipping Config
3183	S/N 202 A2 Shipping Date (Contract Date 12/1/98)
3667	S/N 105 A1 Major Subsystem Completions
3674	S/N 105 A1 Top Assembly - Integration & Test
3722	S/N 105 A1 Environmental Test & Shipping Config
3773	S/N 105 A1 Shipping Date (Contract Date 4/1/99)
3961	S/N 105 A2 Major Subsystem Completions
3968	S/N 105 A2 Top Assembly - Integration & Test
4013	S/N 105 A2 Environmental Test & Shipping Config
4078	S/N 105 A2 Shipping Date (Contract Date 4/1/99)
4305	S/N 106 A1 Major Subsystem Completions
4312	S/N 106 A1 Top Assembly - Integration & Test
4349	S/N 106 A1 Environmental Test & Shipping Config
4390	S/N 106 A1 Shipping Date (Contract Date 8/1/99)
4512	S/N 106 A2 Major Subsystem Completions
4519	S/N 106 A2 Top Assembly - Integration & Test
4559	S/N 106 A2 Environmental Test & Shipping Config
4602	S/N 106 A2 Shipping Date (Contract Date 8/1/99)



B/L Task
Task
Current Summary
% Task Progress
Summary Progress
Previous Week
Critical Path Task
Critical Path Summary
Planned M/S
Completed M/S
Early Projected M/S
Early M/S Complete
Late Projected M/S
Late M/S Complete

Temp #: 1

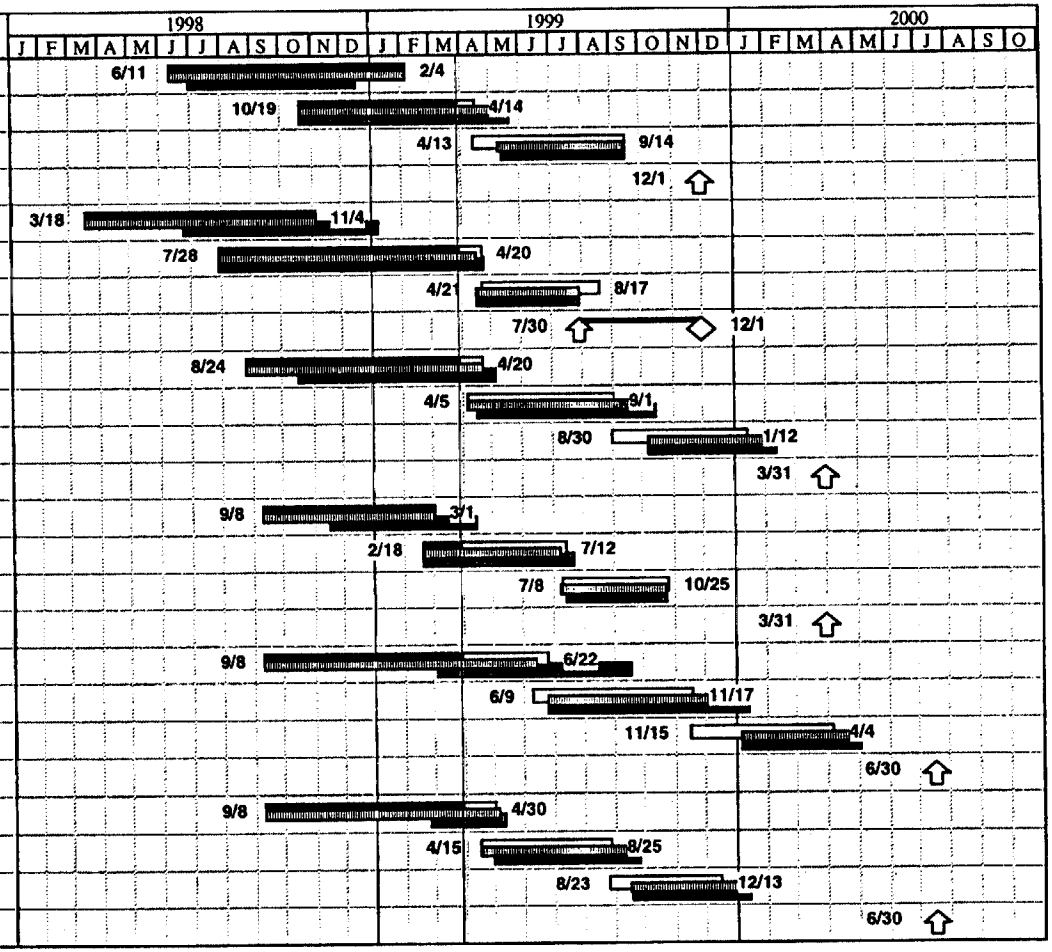
C. Neves/Integrated AMSU-A

GENCORP AEROJET

AMSU-A INTEGRATED MASTER SCHEDULE

EWSS

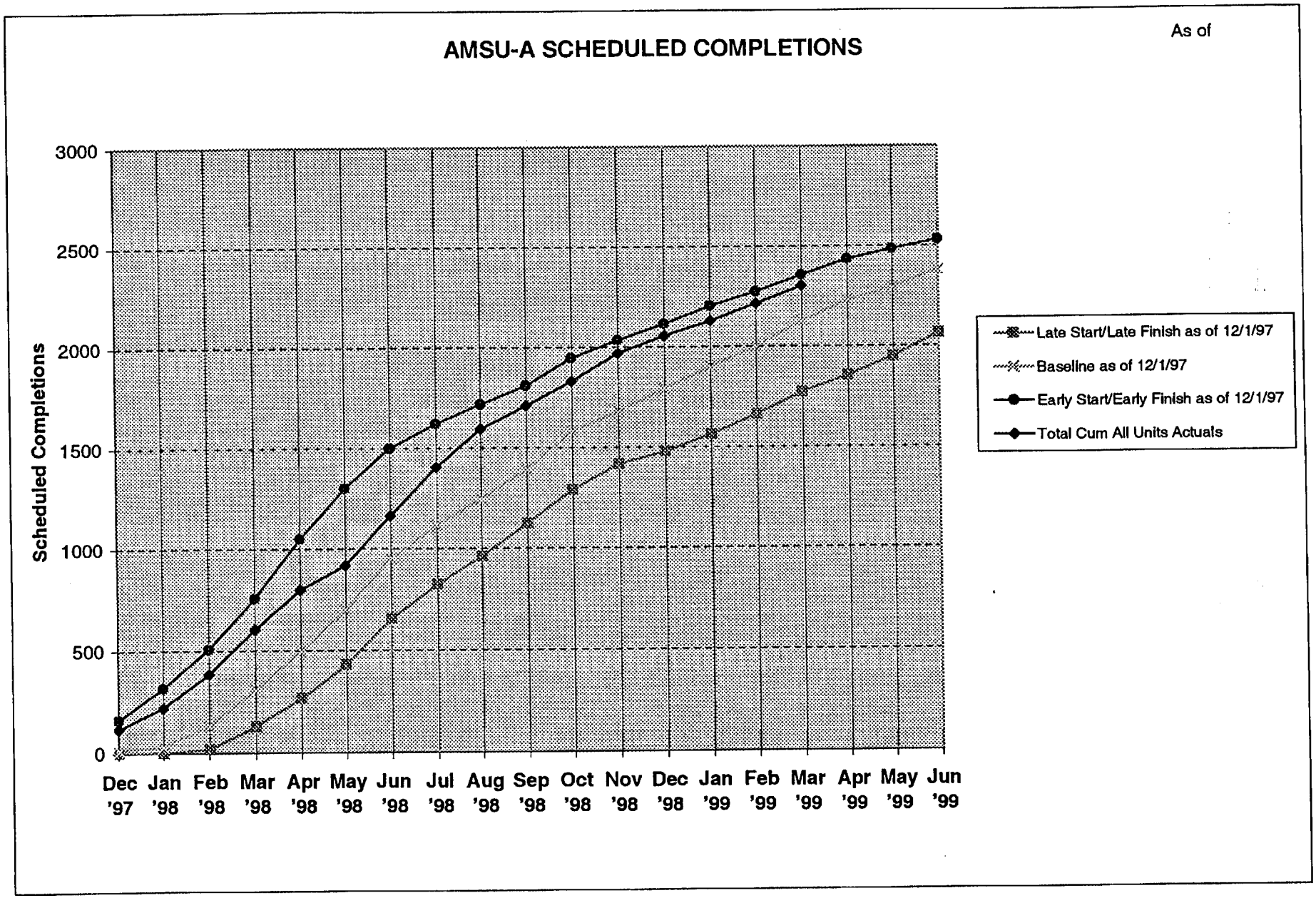
ID	Name
4859	S/N 107 A1 Major Subsystem Completions
4880	S/N 107 A1 Top Assembly - Integration & Test
4917	S/N 107 A1 Environmental Test & Shipping Config
4955	S/N 107 A1 Shipping Date (Contract Date 12/1/99)
5073	S/N 107 A2 Major Subsystem Completions
5094	S/N 107 A2 Top Assembly - Integration & Test
5129	S/N 107 A2 Environmental Test & Shipping Config
5166	S/N 107 A2 Shipping Date (Contract Date 12/1/99)
5515	S/N 108 A1 Major Subsystem Completions
5536	S/N 108 A1 Top Assembly - Integration & Test
5573	S/N 108 A1 Environmental Test & Shipping Config
5609	S/N 108 A1 Shipping Date (Contract Date 4/1/00)
5745	S/N 108 A2 Major Subsystem Completions
5766	S/N 108 A2 Top Assembly - Integration & Test
5802	S/N 108 A2 Environmental Test & Shipping Config
5837	S/N 108 A2 Shipping Date (Contract Date 4/1/00)
6210	S/N 109 A1 Major Subsystem Completions
6231	S/N 109 A1 Top Assembly - Integration & Test
6272	S/N 109 A1 Environmental Test & Shipping Config
6308	S/N 109 A1 Shipping Date (Contract Date 7/1/00)
6479	S/N 109 A2 Major Subsystems Assembly
6500	S/N 109 A2 Top Assembly - Integration & Test
6536	S/N 109 A2 Environmental Test & Shipping Config
6571	S/N 109 A2 Shipping Date (Contract Date 7/1/00)

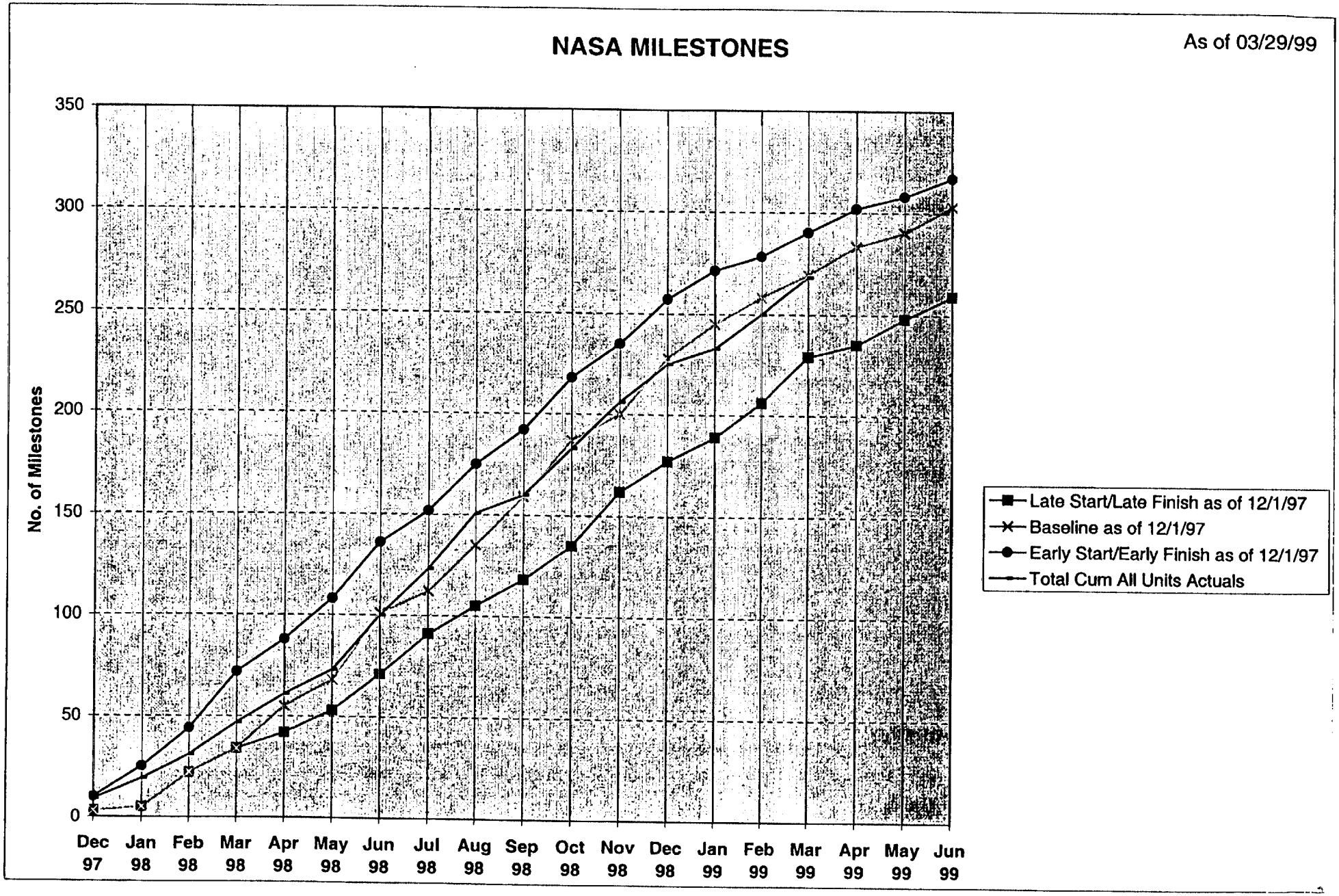


B/L Task
Task
Current Summary
% Task Progress
Summary Progress
Previous Week
Critical Path Task
Critical Path Summary
Planned M/S
Completed M/S
Early Projected M/S
Early M/S Complete
Late Projected M/S
Late M/S Complete

Temp #: 1

C. Neves/Integrated AMSU-A


AMSU-A SCHEDULED COMPLETIONS
As of
Scheduled Completions
3000
2500
2000
1500
1000
500
0
Dec '97
Jan '98
Feb '98
Mar '98
Apr '98
May '98
Jun '98
Jul '98
Aug '98
Sep '98
Oct '98
Nov '98
Dec '98
Jan '99
Feb '99
Mar '99
Apr '99
May '99
Jun '99
Late Start/Late Finish as of 12/1/97
Baseline as of 12/1/97
Early Start/Early Finish as of 12/1/97
Total Cum All Units Actuals


NASA MILESTONES
As of 03/29/99
No. of Milestones
350
300
250
200
150
100
50
0
Dec 97
Jan 98
Feb 98
Mar 98
Apr 98
May 98
Jun 98
Jul 98
Aug 98
Sep 98
Oct 98
Nov 98
Dec 98
Jan 99
Feb 99
Mar 99
Apr 99
May 99
Jun 99
Late Start/Late Finish as of 12/1/97
Baseline as of 12/1/97
Early Start/Early Finish as of 12/1/97
Total Cum All Units Actuals

GenCorp

AMUS-A FLOAT ANALYSIS BY INSTRUMENT

4/6/99

INSTRUMENT	CONTRACT DATE	JAN ME FLOAT	OCT ME FLOAT	NOV ME FLOAT	DEC ME FLOAT	JAN ME FLOAT	FEB ME FLOAT	MAR ME FLOAT
A1 202	12/1/98	11	-18	-16	-16	-16	-16	-16
A2 202	12/16/98(A)	35	0	0	-16	-16	-16	-16
A1 105	4/1/99	25	-53	-54	-63	-36	-14	-27
A2 105	4/28/99(S)	61	0	-11	-15	-13	6	-27
A1 106	8/1/99	79	5	-5	-10	-15	11	0
A2 106	7/30/99	82	93	75	73	46	1	20
A1 107	12/1/99	86	72	84	84	78	76	74
A2 107	SEP ' 99	142	142	142	129	109	109	101
A1 108	3/30/00	93	93	93	90	50	50	78
A2 108	JAN ' 00	159	163	156	153	147	148	147
A1 109	8/1/00	91	61	61	60	60	60	85
A2 109	APR ' 00	194	172	172	171	171	169	190
PROGRAM FLOAT		1057	730	697	639	566	586	611

3.1.1 Program Review Status

Program Quarterly Review scheduled for 27 April 1999.

3.1.2 Program Priority List for the Month of March

1. Complete calibration of 105 A1 and 105 A2 instruments.

2. Maintain support for in-house production (integration and test) activities with highest priority given to A1-106 and A2-106.

3. Continue integration and testing of METSAT 107 A1 and 107 A2.

4. Maintain support and oversight of remaining vendors (FEI and Filtronics).

3.1.3 Integrated AMSU-A Action Items

INTEGRATED AMSU-A
NASA ACTION ITEMS

LINE	A1#	SOURCE	STATUS	ACTION ITEM	LEAD	ORIGINAL DUE DATE	CURRENT DUE DATE
1	1/26/99-1	Qtrly Rev	C	Identify Repair Kits for Aerojet PLO	Pines	2/26/99	
2	2/1/99-1	Telecon		Include K comparisons data on future PSR charts	Patel	PSR	
3	2/1/99-2	Telecon		L.O./Mixer-IF Operational Power Matrix	Pines	3/12/99	
4	2/17/99-1	Telecon		Plating material of Leech Relays	Taylor	3/12/99	
5	3/1/99-1	Telecon		Provide final METOP thermal model inputs	NASA	TBD	
6	3/1/99-2	Telecon		AMSU-A1 & A2 T/V & T/C chamber EMI conflict	L.Paliwoda & A. Nieto	TBD	
7	3/3/99-1	PER		Add to the environmental test flow plan the engineering eval thermal cycle test	Aerojet		
8	3/3/99-2	PER		Determine which instrument will be measured for Task Order 10 METOP EMI requirements	Aerojet		
9	3/3/99-3	PER		Determine KLM taping changes required and status implementation plan	Aerojet		
10	3/3/99-4	PER		Check pulse load bus power for all instruments wrt data using new CPT measurement method. Look at possible thermal model impact.	Aerojet		
11	3/3/99-5	PER		CCR to UIISS for turn on transient data actual METSAT waveforms	Aerojet		
12	3/3/99-6	PER		Number future PER and PSR presentation package pages	Aerojet		

C = Complete
HP = High Priority

INTEGRATED AMSU-A
NASA ACTION ITEMS

						ORIGINAL	CURRENT
						DUE	DUE
LINE	A1#	SOURCE	STATUS	ACTION ITEM	LEAD	DATE	DATE
1	2/1/99-1	Telecon		Include K comparisons data on future PSR charts	Patel	PSR	
2	2/1/99-2	Telecon	C	L.O./Mixer-IF Operational Power Matrix	Pines	3/12/99	
3	2/17/99-1	Telecon	C	Plating material of Leech Relays	Taylor	3/12/99	
4	3/1/99-1	Telecon		Provide final METOP thermal model inputs	NASA	4/5/99	
5	3/3/99-1	PER		Add to the environmental test flow plan the engineering eval thermal cycle test	Aerojet	PSR A1 106	
6	3/3/99-2	PER	C (107)	Determine which instrument will be measured for Task Order 10 METOP EMI requirements	Aerojet	3/12/99	
7	3/3/99-3	PER		Determine KLM taping changes required and status implementation plan	Alvarez	(See 11) TBD	
8	3/3/99-4	PER		Check pulse load bus power for all instruments wrt data using new CPT measurement method. Look at possible thermal model impact.	Aerojet	3/26/99	
9	3/3/99-5	PER	C	CCR to UIIS for turn on transient data actual METSAT waveforms	Patel	3/12/99	
10	3/3/99-6	PER		Number future PER and PSR presentation package pages	Platt	PSR 105	
11	3/8/99-1	Telecon		Provide corrected Lockheed Martin KLM thermal model data	NASA	4/1/99	

C = Complete

INTEGRATED AMSU-A
NASA ACTION ITEMS

LINE	A1#	SOURCE	STATUS	ACTION ITEM	LEAD	ORIGINAL DUE DATE	CURRENT DUE DATE
1	2/1/99-1	Telecon		Include K comparisons data on future PSR charts	Patel	PSR	
2	3/1/99-1	Telecon		Provide final METOP thermal model inputs	NASA	4/5/99	
3	3/3/99-1	PER		Add to the environmental test flow plan the engineering eval thermal cycle test	Aerojet	PSR A1 106	
4	3/3/99-3	PER		Determine KLM taping changes required and status implementation plan	Alvarez	(See 7) TBD	
5	3/3/99-4	PER	C	Check pulse load bus power for all instruments wrt data using new CPT measurement method. Look at possible thermal model impact.	Aerojet	3/26/99	
6	3/3/99-6	PER		Number future PER and PSR presentation package pages	Platt	PSR 105	
7	3/8/99-1	Telecon		Provide corrected Lockheed Martin KLM thermal model data	NASA	4/1/99	

C = Complete
HP = High Priority

INTEGRATED AMSU-A
NASA ACTION ITEMS

LINE	A1#	SOURCE	STATUS	ACTION ITEM	LEAD	ORIGINAL DUE DATE	CURRENT DUE DATE
1	2/1/99-1	Telecon	C	Include K comparisons data on future PSR charts	Patel	PSR	
2	3/1/99-1	Telecon		Provide final METOP thermal model inputs	NASA	4/5/99	
3	3/3/99-1	PER		Add to the environmental test flow plan the engineering eval thermal cycle test	Aerojet	PSR A1 106	
4	3/3/99-3	PER		Determine KLM taping changes required and status implementation plan	Alvarez	(See 7) TBD	
5	3/3/99-6	PER	C	Number future PER and PSR presentation package pages	Platt	PER 105	
6	3/8/99-1	Telecon		Provide corrected Lockheed Martin KLM thermal model data	NASA	4/1/99	

C = Complete
HP = High Priority

3.2 Weekly Reports

3.2.1 Mechanical/Thermal/Antenna Subsystem - Following are the Mechanical/Thermal/Antenna Subsystem Weekly Reports.

MECHANICAL/THERMAL/ANTENNA TEAM
WEEKLY REPORT FOR WEEK ENDING 3/03/99

Accomplishments Last Week:

1. ANTENNA MACHINED SUBASSEMBLIES

A1 Antenna Subassy-Machined (S/N 109) - In process. This is the Last Unit.
The unit is being machined. The baseline schedule due date for this unit is 4/13/99.

2. ANTENNA ASSEMBLIES

S/N 108 A1 Antenna Assembly - In Process
Troubleshooting of beampointing problem is complete. Feedhorn spacers were misaligned. Spacers have been corrected.

S/N 108 A2 Antenna Assembly - COMPLETE
The S/N 108 A2 Antenna Assembly is complete and has been turned over to Systems Integration.

S/N 109 A2 Antenna Assembly - In Process
The kit for the assembly is pulled and the assembly is started. Optical alignment of the feedhorn/secondary reflector is in process.

KLM A1 Thermal Analysis
Temperature predictions for 02 January 1999 match in orbit data within 2°C. Improvement of 1°C can be achieved by adding 10 mil silvered Teflon tape to exposed aluminum areas on connector panel.

KLM A2 Thermal Analysis
Correlation to the flight temperatures is not within ± 3°C. Temperature predictions for 19 June 1998 are 7°C cooler than the flight data. Temperature predictions for 02 January 1999 are 14°C cooler than the flight data. Work is underway to improve the correlation.

The correlation problem may be caused by uncertainty in the geometric model of the spacecraft. Aerojet requests that Lockheed-Martin review the geometric model used by Aerojet of the spacecraft surrounding the A2 instrument. In addition, Aerojet needs the range of solar array positions and solar array positions and solar array position for maximum heat load.

The KLM thermal analysis is on hold until the Lockheed-Martin information is received. The Lockheed-Martin information will be available 01 April 1999 per NASA.

METSAT A1 & A2 Model Correlation
The thermal balance correlation work is continuing.

EOS Reduced Models
The reduced thermal models will not be updated until the METSAT A1/A2 and the new L & M model work is complete. This will be started in early May.

Concerns
The A2 – K unit is running at higher temperatures then model predictions. Correlation will continue when spacecraft information is received. However, the AMSU A1/A2 correlation developed from flight data should not be used for METOP or EOS thermal models. This will eliminate the possibility of correlating the model to accommodate spacecraft (TIROS) model errors.

F/AR Status

3. **F/AR 160, METSAT/AMSU-A2, P/N 1331200-2, S/N 105 (J. Alvarez' Team)**
   F/AR signed and submitted to NASA.
   The shift in resonant frequency was caused by cracks in bonded reflector joints. After repair of reflector S/N 003, it was reinstalled on AMSU-A2, S/N 105.

4. **F/AR 161, A1 Antenna Assembly, P/N 1331400-2, S/N F03. (J. Alvarez' Team)**
   Follow-up FRB meeting conducted to discuss latest test anomaly and review/approve troubleshooting plan. The original beamwith anomaly was eliminated after replacement of the feedhorn. However after disassembly, to allow alodyning of the new feedhorn, and reassembly, the pattern testing was restarted and the beam pointing angles again failed to meet specification.

   The FRB approved the following plan.

- Remove feedhorn/shroud assembly and rotate 180 degrees and replace in assembly. Repeat pattern checks.
- If feedhorn rotation does not help pointing angles, remove feedhorn/shroud assembly from unit and realign spacers at throat of horn. Reassemble and repeat pattern checks. Realign and reassemble as required.

If the above steps do not solve the problem, reconvene the FRB

Item	Part Number	Quantity Required	Quantity Complete	Quantity In Process
A1 Warm Load	1331381-1	12	12	0
A1 Calibration Source	1331380-1	12	12	0
A2 Warm Load	1331236-1	6	6	0
A2 Calibration Source	1331235-1	6	6	0
A1 Drive Housing Subassembly	1333998-1	13	13	0
A1 Rotating Assembly	1333647-1	13	13	0
A1 Drive Assembly	1333640-1	13	12	1
A2 Drive Housing Subassembly	1333999-1	7	7	0
A2 Rotating Assembly	1333651-1	7	7	0
A2 Drive Assembly	1333650-1	7	6	1
A2 compensator Assembly	1333660-1	6	5	1
A1 Reflector Assembly	1355777-1	12	12	0
A2 Reflector Assembly	1355835-1	7	7	0
A1 Antenna Assembly- EOS	1356403-1	1	1-S/N 202	0
A2 Antenna Assembly- EOS	1331210-2	1	1-S/N 202	
A1 Antenna Assembly- METSAT/METOP	1331400-2	5	1-S/N 105 1-S/N 106 1-S/N 107 1-S/N 108	1-S/N 109
A2 Antenna Assembly- METSAT/METOP	1331210-3*	5	1-S/N 105 1-S/N 106 1-S/N 107 1-S/N 108	1-S/N 109
A2 Compensator Engineering Model Replacement	1333660-1	1	1	0

All dates for completion of the assemblies listed above can be found in the monthly schedule delivered to NASA.

VENDOR STATUS

VENDOR	ITEM	EXPECTED COMPLETION
Barden Corporation	**Bearing Evaluation** **P/N 1338265-1** **Bearing Rework** **6 ea. Bearing Sets** **P/N 1338266-1** **Bearing Rebuild** **3 ea. Bearing Sets** **P/N 1338266-2**	**Complete- In Review** **Complete** **Complete – SDAR in process for Improper marking.**
Ball Aerospace	**Bearing Lubrication** **6 ea. Bearing Sets** **P/N 1338266-1** **3 ea. Bearing Sets** **P/N 1338266-2**	**9 April 1999** **9 April1999**
Axsys	**Motor Evaluation** **1 ea. A1 Drive Motor** **P/N 1331392**	**Complete**

MOTOR STATUS

DRIVE	INSTRUMENT	STATUS
A1	S/N 202	Complete
	S/N 105 – 109	Complete
	SPARE	On TAR for out of spec commutation spikes. Evaluation at vendor complete. No problem found. Motor being returned to Aerojet.
A2	S/N 202	Complete
	S/N 105 – 108	Complete
	S/N 109	Vibration response out of family But did not fail. Electrical tests passed. Effect of shaft nut torque on vibe response being investigated.
	Spare	During pre-vibe electrical tests it was discovered that the motor winding is open (probable break in wire). Removal of motor from drive assembly is in process in preparation for returning motor to vendor (Axsys) for rework/repair.
Compensator	S/N 105 – 109	Complete
	Spare	Bearings would not fit on shaft. Measurement indicates bearing ID is too small. New bearings in process at Barden/Ball will be checked for fit to shaft.

MECHANICAL/THERMAL/ANTENNA TEAM

WEEKLY REPORT FOR WEEK ENDING 3/03/99

Accomplishments Last Week:

1. ANTENNA MACHINED SUBASSEMBLIES

A1 Antenna Subassy-Machined (S/N 109) - In process. This is the Last Unit.
The unit is being machined. The baseline schedule due date for this unit is 4/13/99.

2. ANTENNA SSEMBLIES

S/N 108 A1 Antenna Assembly - In Process
Troubleshooting of beampointing problem is complete. Feedhorn spacers were misaligned. Spacers have been corrected. Beam efficiency patterns in process.

S/N 108 A2 Antenna Assembly - COMPLETE
The S/N 108 A2 Antenna Assembly is complete and has been turned over to Systems Integration.

S/N 109 A2 Antenna Assembly - In Process
The kit for the assembly is pulled and the assembly is started. Optical alignment of the feedhorn/secondary reflector is in process.

KLM A2 Thermal Analysis
Shipping configuration 1338394-1 of April 1994 shows aluminized edge tape was used on A2. New heat rate runs are in process with this tape.

METSAT A1 & A2 Model Correlation
The thermal balance correlation work is complete. Reports are in process.

EOS Reduced Models
The reduced thermal models will not be updated until the METSAT A1/A2 and the new L & M model work is complete. This will be started in early May.

Concerns
The A2 – K unit is running at higher temperatures than model predictions. Correlation will continue when spacecraft information is received. However, the AMSU A1/A2 correlation developed from flight data should not be used for METOP or EOS thermal models. This will eliminate the possibility of correlating the model to accommodate spacecraft (TIROS) model errors.

F/AR Status

3. **F/AR 171, METSAT/AMSU-A1, P/N 1331720-2, S/N 105** (J. Alvarez's Team)
Final draft routed for review/comment.

Post Random Low Level Sine had shown a resonance at ~120 Hz that was not readily apparent at Pre Random Low Level Sine. All of the accelerometers at various locations on the instrument indicated similar results. The pre Random Vibration Low Level Sine Sweep showed a natural frequency at 138 Hz. The post vibration still had a peak at ~130 Hz, in addition to the new peak at ~120 Hz.

The test anomaly was verified at several locations on the unit including the instrument Top Panel, the upper & lower Reflector and the upper & lower motor. The pre Random Vibration Low Level Sine Sweep showed a natural frequency at 129 Hz while the post vibration data still had a peak at ~130 Hz, in addition to the new peak at ~120 Hz.

An extensive troubleshooting plan was carried out with the following significant results.

(1) Review of the KLM and the finite element vibration model showed a predicted resonant frequency of ~120 Hz as seen in the actual vibration data.

(2) The pre-load torque value for all externally mounted screws without bonded heads was verified and a close detailed inspection of the instrument revealed no obvious visible anomalies.

(3) X-Axis Acceptance level vibration testing was performed.

(4) Responses before and after the X-Axis vibration in the pre and post sine displays were nearly identical confirming the Instrument was stable with no "settling in."

(5) A Limited Performance Test (LPT) was performed following vibration with the Instrument passing test with no discrepancies noted.

The A1 instrument is considered to have satisfied the Qualification Level Vibration tests having passed the LPTs after Z and X-Axis vibration testing and the more involved Comprehensive Performance Test (CPT) after the Y-Axis Vibration testing.

3. **F/AR 179, METSAT/AMSU-A2, P/N 1331200-2, S/N 106** (J. Alvarez's Team)
Follow-up FRB meetings were held on 3/4 and 3/9. This F/AR addresses the shift in first natural frequency experienced after Z-axis random vibration test of METSAT/AMSU-A2, P/N 1331200-2, S/N 106.

The action approved on 2/15/99 was to reassemble the 106 AMSU-A2 instrument and perform a Z-axis, ¼ G sine sweep. The sine sweep indicated that the unit had a first natural frequency of 111 Hz, which is higher than the previous sine sweep but lower than the first natural frequency of about 122 Hz that was seen before the Z-axis vibration test.

FRB Meeting on 3/4/99
The FRB recommendations included on the attached FRB summary were discussed at length and the following was decided:

1) At this time, we will continue with the 106-A2 instrument as the qualification unit.

2) The 107-A2 instrument will continue on its normal path of integration and test.

3) The Electronics Team will develop a detailed plan for troubleshooting the 106-A2 motor and drive electronics. Consideration will be given to the NASA recommendation to remove the motor and reflector, install on the engineering model and attempt to adjust (i.e. obtain step response, overshoot and gain margin within specification).

4) The FRB will reconvene to review/approve the troubleshooting plan.

FRB Meeting on 3/9/99

The following troubleshooting plan was approved.

1) Substitute a W3 Cable and Scan Drive Transistor/Diode Assembly from stock with the cable assembly currently in the unit. This can be done external to the unit without removing the original cable. With the new cable, perform scan drive Select-At-Test resistor changes using engineering CCAs to attempt to pass step response and gain margin. If the system passes, the cable will be permanently changed and the removed cable subjected to further fault isolation after FRB.

2) In parallel with (1) above, send FO8 motor to the antenna range to determine a detent digital word so that an engineering EPROM can be burned. If (1) above fails, temporarily install the FO8 motor in 106A2 without removing the motor cable completely. With the new motor, perform scan drive Select-At-Test resistor changes using engineering CCAs to attempt to pass step response and gain margin. If the system passes call for FRB and consider assigning FO8 motor to 106A2. If the system doesn't pass, propose new troubleshooting plan through FRB.

4. **F/AR 186, A2, Drive Assembly, P/N 1333650-1, S/N F05** (J. Alvarez's Team)
Follow-up FRB meetings were held on 3/5 and 3/9. This F/AR addresses the motor turn-on failure. Troubleshooting determined that the motor winding were okay (not open).

FRB Meeting on 3/5/99

The FRB approved the following plan.

- Remove motor from Drive Assembly housing. *Completed 3/5/99.*
- Check shaft torque of Rotating Assembly. *Completed 3/5/99* measured 0.9 to 1.0 in-lbs., in spec.
- Reinstall motor. *Completed 3/5/99.*
- Check torque required to rotate shaft and compare to other motors. *Not measured.*
- Wire connector and run preliminary electrical check of motor. If ok close FAR and continue assembly. If not ok reconvene FRB. *Completed 3/5/99.* Results were the same as previous measurements, slow speed and high current. Did not meet spec.

FRB Meeting on 3/9/99

The FRB approved the following plan.

- Obtain program office and NASA permission to use a KLM spare motor, P/N 1333648-1.
- Temporarily install KLM motor in S/N F05 Drive Assembly and perform commutation and no-load speed test.
- If the Drive Assembly passes the specification requirements, upgrade motor from "B" revision to current minimum mandatory "F" revision.
- Reassemble S/N F05 Drive Assembly with KLM motor and continue acceptance testing.

Item	Part Number	Quantity Required	Quantity Complete	Quantity In Process
A1 Warm Load	1331381-1	12	12	0
A1 Calibration Source	1331380-1	12	12	0
A2 Warm Load	1331236-1	6	6	0
A2 Calibration Source	1331235-1	6	6	0
A1 Drive Housing Subassembly	1333998-1	13	13	0
A1 Rotating Assembly	1333647-1	13	13	0
A1 Drive Assembly	1333640-1	13	12	1
A2 Drive Housing Subassembly	1333999-1	7	7	0
A2 Rotating Assembly	1333651-1	7	7	0
A2 Drive Assembly	1333650-1	7	6	1
A2 compensator Assembly	1333660-1	6	5	1
A1 Reflector Assembly	1355777-1	12	12	0
A2 Reflector Assembly	1355835-1	7	7	0
A1 Antenna Assembly- EOS	1356403-1	1	1-S/N 202	0
A2 Antenna Assembly- EOS	1331210-2	1	1-S/N 202	
A1 Antenna Assembly- METSAT/METOP	1331400-2	5	1-S/N 105 1-S/N 106 1-S/N 107 1-S/N 108	1-S/N 109
A2 Antenna Assembly- METSAT/METOP	1331210-3*	5	1-S/N 105 1-S/N 106 1-S/N 107 1-S/N 108	1-S/N 109
A2 Compensator Engineering Model Replacement	1333660-1	1	1	0

All dates for completion of the assemblies listed above can be found in the monthly schedule delivered to NASA.

VENDOR STATUS

VENDOR	ITEM	EXPECTED COMPLETION
Barden Corporation	**Bearing Evaluation** **P/N 1338265-1** **Bearing Rework** **6 ea. Bearing Sets** **P/N 1338266-1** **Bearing Rebuild** **3 ea. Bearing Sets** **P/N 1338266-2**	**Complete- In Review** **Complete** **Complete – SDAR in process for Improper marking.**
Ball Aerospace	**Bearing Lubrication** **6 ea. Bearing Sets** **P/N 1338266-1** **3 ea. Bearing Sets** **P/N 1338266-2**	**9 April 1999** **9 April1999**
Axsys	**Motor Evaluation** **1 ea. A1 Drive Motor** **P/N 1331392**	**Complete**

MOTOR STATUS

DRIVE	INSTRUMENT	STATUS
A1	S/N 202	Complete
	S/N 105 – 109	Complete
	SPARE	On TAR for out of spec commutation spikes. Evaluation at vendor complete. No problem found. Motor being returned to Aerojet.
A2	S/N 202	Complete
	S/N 105 – 108	Complete
	S/N 109	Vibration response out of family But did not fail. Electrical tests passed. Effect of shaft nut torque on vibe response being investigated.
	Spare	Motor was retested and is slow and over current. Spare KLM motor is being installed for check out.
Compensator	S/N 105 – 109	Complete
	Spare	Bearings would not fit on shaft. Measurement indicates bearing ID is too small. New bearings in process at Barden/Ball will be checked for fit to shaft.

MECHANICAL/THERMAL/ANTENNA TEAM

WEEKLY REPORT FOR WEEK ENDING 3/17/99

Accomplishments Last Week:

1. ANTENNA MACHINED SUBASSEMBLIES

A1 Antenna Subassy-Machined (S/N 109) - In process. This is the Last Unit.
The unit is being machined. The baseline schedule due date for this unit is 4/13/99.

2. ANTENNA SSEMBLIES

S/N 108 A1 Antenna Assembly - In Process
Antenna pattern tests are in process.

S/N 109 A2 Antenna Assembly - In Process
The kit for the assembly is pulled and the assembly is started. Optical alignment of the feedhorn/secondary reflector has been completed. L Assembly of the A2 Drive Assembly using the KLM spare motor is in process.

KLM A2 Thermal Analysis
Shipping configuration 1338394-1 of April 1994 shows aluminized edge tape was used on A2. New heat rate runs are in process with this tape.

METSAT A1 & A2 Model Correlation
The thermal balance correlation work is complete. Reports are in process.

METSAT A1 & A2 Orbital Predictions
METSAT A1 & A2 orbital predictions are underway with the correlated thermal models.

Concerns
The A2 – K unit is running at higher temperatures than model predictions. Correlation will continue when spacecraft information is received. However, the AMSU A1/A2 correlation developed from flight data should not be used for METOP or EOS thermal models. This will eliminate the possibility of correlating the model to accommodate spacecraft (TIROS) model errors.

F/AR Status

3. **F/AR 107, Antenna Subassembly, A1-1, P/N 1331400-2, S/N F03** (J.Alvarez' Team)
   Final F/AR completed, signed and submitted to NASA Corrective Actions were as follows:

(1) The discrepant A1-1 Feedhorn Assembly S/N 03 was replaced with a new Feedhorn Assembly S/N 07.
(2) The A1-1 Antenna Subassembly S/N F03 was retested with the new Feedhorn Assembly S/N 07 and passed all testing at the Antenna Range.
(3) The discrepant A1-1 Feedhorn Assembly S/N 03 was reworked (including deburring and removal of debris) to conform to the drawing specifications.
(4) The reworked A1-1 Feedhorn Assembly S/N 03 was installed and tested on the A1-1 Antenna Subassembly 1331400-2 S/N F04. With the reworked Feedhorn Assembly installed the 89 GHz Crosstrack Beamwidth and Beampointing measured within specification limits verifying the functionality of the Feedhorn Assembly.

The action to prevent recurrence is to disassemble all remaining feedhorns and inspect for burrs and debris, and rework as necessary.

4. **F/AR 171, METSAT/AMSU-A1, P/N 1331720-2, S/N 105** (J. Alvarez' Team)
   Final F/AR signed and submitted to NASA.

   Post Random Low Level Sine had shown a resonance at ~120 Hz that was not readily apparent at Pre Random Low Level Sine. All of the accelerometers at various locations on the instrument indicated similar results. The pre Random Vibration Low Level Sine Sweep showed a natural frequency at 138 Hz. The post vibration still had a peak at ~130 Hz, in addition to the new peak at ~120 Hz.

   The test anomaly was verified at several locations on the unit including the instrument Top Panel, the upper & lower Reflector and the upper & lower motor. The pre Random Vibration Low Level Sine Sweep showed a natural frequency at 129 Hz while the post vibration data still had a peak at ~130 Hz, in addition to the new peak at ~120 Hz.

   An extensive troubleshooting plan was carried out with the following significant results.

(1) Review of the KLM and the finite element vibration model showed a predicted resonant frequency of ~120 Hz as seen in the actual vibration data.

(2) The pre-load torque value for all externally mounted screws without bonded heads was verified and a close detailed inspection of the instrument revealed no obvious visible anomalies.

(3) X-Axis Acceptance level vibration testing was performed.

(4) Responses before and after the X-Axis vibration in the pre and post sine displays were nearly identical confirming the Instrument was stable with no "settling in."

(5) A Limited Performance Test (LPT) was performed following vibration with the Instrument passing test with no discrepancies noted.

The A1 instrument is considered to have satisfied the Qualification Level Vibration tests having passed the LPTs after Z and X-Axis vibration testing and the more involved Comprehensive Performance Test (CPT) after the Y-Axis Vibration testing.

Item	Part Number	Quantity Required	Quantity Complete	Quantity In Process
A1 Warm Load	1331381-1	12	12	0
A1 Calibration Source	1331380-1	12	12	0
A2 Warm Load	1331236-1	6	6	0
A2 Calibration Source	1331235-1	6	6	0
A1 Drive Housing Subassembly	1333998-1	13	13	0
A1 Rotating Assembly	1333647-1	13	13	0
A1 Drive Assembly	1333640-1	13	12	1
A2 Drive Housing Subassembly	1333999-1	7	7	0
A2 Rotating Assembly	1333651-1	7	7	0
A2 Drive Assembly	1333650-1	7	6	1
A2 compensator Assembly	1333660-1	6	5	1
A1 Reflector Assembly	1355777-1	12	12	0
A2 Reflector Assembly	1355835-1	7	7	0
A1 Antenna Assembly- EOS	1356403-1	1	1-S/N 202	0
A2 Antenna Assembly- EOS	1331210-2	1	1-S/N 202	
A1 Antenna Assembly- METSAT/METOP	1331400-2	5	1-S/N 105 1-S/N 106 1-S/N 107	1-S/N 109 1-S/N 108
A2 Antenna Assembly- METSAT/METOP	1331210-3*	5	1-S/N 105 1-S/N 106 1-S/N 107 1-S/N 108	1-S/N 109
A2 Compensator Engineering Model Replacement	1333660-1	1	1	0

All dates for completion of the assemblies listed above can be found in the Monthly schedule delivered to NASA.

VENDOR STATUS

VENDOR	ITEM	EXPECTED COMPLETION
Barden Corporation	**Bearing Evaluation** **P/N 1338265-1** **Bearing Rework** **6 ea. Bearing Sets** **P/N 1338266-1** **Bearing Rebuild** **3 ea. Bearing Sets** **P/N 1338266-2**	**Complete- In Review** **Complete** **Complete – SDAR Complete.** **All bearings sent to Ball for lubrication.**
Ball Aerospace	**Bearing Lubrication** **6 ea. Bearing Sets** **P/N 1338266-1** **3 ea. Bearing Sets** **P/N 1338266-2**	**30 April 1999** **30 April1999**
Axsys	**Motor Evaluation** **1 ea. A1 Drive Motor** **P/N 1331392**	**Complete**

MOTOR STATUS

DRIVE	INSTRUMENT	STATUS
A1	S/N 202	Complete
	S/N 105 – 109	Complete
	SPARE	On TAR for out of spec commutation spikes. Evaluation at vendor complete. No problem found. Motor has been returned to Aerojet. This motor and the spare A2 motor will be investigated by a joint Aerojet and Axsys team in April.
A2	S/N 202	Complete
	S/N 105 – 108	Complete
	S/N 109	Vibration response out of family But did not fail. Electrical tests passed. Effect of shaft nut torque on vibe response being investigated.
	Spare	Motor was retested and is slow and over current. Spare KLM motor is being installed for check out. This motor and the spare A1 motor will be investigated by a joint Aerojet and Axsys team in April.
Compensator	S/N 105 – 109	Complete
	Spare	Bearings would not fit on shaft. Measurement indicates bearing ID is too small. New bearings in process at Barden/Ball will be checked for fit to shaft.

MECHANICAL/THERMAL/ANTENNA TEAM

WEEKLY REPORT FOR WEEK ENDING 3/24/99

Accomplishments Last Week:

1. **ANTENNA MACHINED SUBASSEMBLIES**

A1 Antenna Subassy-Machined (S/N 109) - In process. This is the Last Unit.
The unit is being machined and continues to be on schedule. The baseline schedule due date for this unit is 4/13/99.

2. **ANTENNA ASSEMBLIES**

S/N 108 A1 Antenna Assembly - In Process
Antenna pattern tests are in process. Testing is continuing as planned.

S/N 109 A2 Antenna Assembly - In Process
The kit for the assembly is pulled and the assembly is started. Optical alignment of the feedhorn/secondary reflector has been completed. Assembly of the A2 Drive Assembly using the KLM spare motor is in process. The FO8 motor will be used in this assembly.

KLM A2 Thermal Analysis
Shipping configuration 1338394-1 of April 1994 shows aluminized edge tape was used on A2. New heat rate runs are in process with this tape.

Aerojet is awaiting input from NASA/Lockheed for the spacecraft thermal models. Additional work on the models will not take place until the spacecraft thermal models have been reviewed by NASA/Swales/Lockheed. (See concerns section within this weekly report).

METSAT A1 & A2 Model Correlation
The thermal balance correlation work is complete. Reports will be complete before the end of March.

METSAT A1 & A2 Orbital Predictions
METSAT A1 & A2 orbital predictions are underway with the correlated thermal models.

Concerns
The A2 – K unit is running at higher temperatures than model predictions. Correlation will continue when spacecraft information is received. However, the AMSU A1/A2 correlation developed from flight data should not be used for METOP or EOS thermal models. This will eliminate the possibility of correlating the model to accommodate spacecraft (TIROS) model errors.

F/AR Status

3. **F/AR 072, Compensator, P/N 1333660-1, S/N F06** (J. Alvarez's Team)
   F/AR approved by NASA

4. **F/AR 081, A2 Reflector Assembly, P/N 1355835, S/N 008, 009** (J. Alvarez's Team)
   F/AR approved by NASA

5. **F/AR 086, A2 Antenna Assembly, P/N 1331210-3, S/N F03** (J. Alvarez's Team)
   F/AR approved by NASA

6. **F/AR 096, Secondary Reflector Housing (braze joint cracks), P/N 1333382-1,** (J. Alvarez's Team)
   F/AR approved by NASA

7. **F/AR 100, Compensator (Thermistor Assy. Miswiring), P/N 1333660-1, S/N F09** (J. Alvarez's Team)
   F/AR approved by NASA

8. **F/AR 107, A1-1 Antenna Subassembly (Feedhorn burrs and debris), P/N 1331400-2, S/N F03** (J. Alvarez's Team)
   F/AR approved by NASA.

9. **F/AR 171, METSAT/AMSU-A1(New resonance – post X-axis vibe), P/N 1331720-2, S/N 105** (J. Alvarez's Team)
   F/AR approved by NASA

10. **F/AR 181, METSAT/AMSU-A1(Feedhorn PRT readings), P/N 1331720-2, S/N 105** (J. Alvarez's Team)
    F/AR approved by NASA

Item	Part Number	Quantity Required	Quantity Complete	Quantity In Process
A1 Warm Load	1331381-1	12	12	0
A1 Calibration Source	1331380-1	12	12	0
A2 Warm Load	1331236-1	6	6	0
A2 Calibration Source	1331235-1	6	6	0
A1 Drive Housing Subassembly	1333998-1	13	13	0
A1 Rotating Assembly	1333647-1	13	13	0
A1 Drive Assembly	1333640-1	13	12	1
A2 Drive Housing Subassembly	1333999-1	7	7	0
A2 Rotating Assembly	1333651-1	7	7	0
A2 Drive Assembly	1333650-1	7	6	1
A2 compensator Assembly	1333660-1	6	5	1
A1 Reflector Assembly	1355777-1	12	12	0
A2 Reflector Assembly	1355835-1	7	7	0
A1 Antenna Assembly- EOS	1356403-1	1	1-S/N 202	0
A2 Antenna Assembly- EOS	1331210-2	1	1-S/N 202	
A1 Antenna Assembly- METSAT/METOP	1331400-2	5	1-S/N 105 1-S/N 106 1-S/N 107	1-S/N 109 1-S/N 108
A2 Antenna Assembly- METSAT/METOP	1331210-3*	5	1-S/N 105 1-S/N 106 1-S/N 107 1-S/N 108	1-S/N 109
A2 Compensator Engineering Model Replacement	1333660-1	1	1	0

All dates for completion of the assemblies listed above can be found in the Monthly schedule delivered to NASA.

VENDOR STATUS

VENDOR	ITEM	EXPECTED COMPLETION
Barden Corporation	**Bearing Evaluation** **P/N 1338265-1**	**Complete- In Review**
	Bearing Rework **6 ea. Bearing Sets** **P/N 1338266-1**	**Complete**
	Bearing Rebuild **3 ea. Bearing Sets** **P/N 1338266-2**	**Complete – SDAR Complete.** **All bearings sent to Ball for lubrication.**
Ball Aerospace	**Bearing Lubrication** **6 ea. Bearing Sets** **P/N 1338266-1**	**30 April 1999**
	3 ea. Bearing Sets **P/N 1338266-2**	**30 April1999**
Axsys	**Motor Evaluation** **1 ea. A1 Drive Motor** **P/N 1331392**	**Complete**

MOTOR STATUS

DRIVE	INSTRUMENT	STATUS
A1	S/N 202	Complete
	S/N 105 – 109	Complete
	SPARE	On TAR for out of spec commutation spikes. Evaluation at vendor complete. No problem found. Motor has been returned to Aerojet. This motor and the spare A2 motor will be investigated by a joint Aerojet and Axsys team in April.
A2	S/N 202	Complete
	S/N 105 – 108	Complete
	S/N 109	Complete
	Spare	Motor was retested and is slow and over current. Spare KLM motor is being installed for check out. This motor and the spare A1 motor will be investigated by a joint Aerojet and Axsys team in April.
Compensator	S/N 105 – 109	Complete
	Spare	Bearings would not fit on shaft. Measurement indicates bearing ID is too small. New bearings in process at Barden/Ball will be checked for fit to shaft.

3.2.2 Receiver Subsystem - Following are the Receiver Subsystem Weekly Reports.

AMSU-A RECEIVER TEAM WEEKLY REPORT
FOR WEEK ENDING 3/03/99

Accomplishments Last Week:

1. **S/N 108 A1-2** is in ATP. S/N 108 A1-1 is ready for temperature test. S/N 109 A1-1 is in assembly. S/N 109 A1-2 is in assembly. S/N 109 A2 is in pre-test (hold for other priorities).

2. **Filtronic Hardware**
   CH 8 DRO (1), "Intermittent output power" (S/N 79080): Current plan is to retest unit over temperature. They have not been able to repeat the anomaly. CH & 'DRO (2), "Low power at cold" (S/N 79074): Implementation of rework plan to occur Monday 3/1/99. Trip to Filtronic revealed Tripler Module Interface problem.CH 7 DRO (1) Revised quote anticipated to be received on 3/1. A change order to be issued by 3/9 to authorize repair. Two weeks from authorization. A matrix is in process to compare what DROs have capacitors installed.

3. KIT STATUS

RECEIVER	ITEMS MISSING	ECD
S/N 108 A1-2		3/10/99
S/N 108 A1-1		3/26/99
S/N 109 A2		3/19/99
S/N 109 A1-2	DRO (1), See Above	
S/N 109 A1-1		

4. OUTSTANDING HARDWARE DELIVERIES

COMPONENT	SUPPLIER	ECD
Spare GDO being rebuilt	Militech	4/23
Spare A1-2 Multiplexer	MEC	3/3
Spare –8 DRO being reworked	Filtronic	TBD
-8 DRO for S/N 109	Filtronic	3/26

AMSU-A RECEIVER TEAM WEEKLY REPORT
FOR WEEK ENDING 3/10/99

Accomplishments Last Week:

1. S/N 108 A1-2 ATP is completed and unit is in Final Assembly. S/N 108 A1-1 is in temperature test. S/N 109 A1-1 is in assembly. S/N 109 A1-2 is in assembly. S/N 109 A2 has started pre-test.

2. Filtronic Hardware

   CH 8 DRO (1), "Intermittent output power"(S/N 79080): Unit has been shipped back to Aerojet. Current plan is to retest unit over temperature and try to repeat the anomaly.
   CH 8 DRO (2), "Low power at cold"(S/N 79074): Filtronic has narrowed the problem to a mechanical alignment with faceplate flange. Aerojet expects an ATP plan this week.
   CH 7 DRO (1) Filtronic will be turned on next week.

3. KIT STATUS:

RECEIVER	ITEMS MISSING	ECD
S/N 108 A1-2		3/12/99
S/N 108 A1-1		3/26/99
S/N 109 A2		3/26/99
S/N 109 A1-2	DRO(1), see above	
S/N 109 A1-1		

4. **OUTSTANDING HARDWARE DELIVERIES**

COMPONENT	SUPPLIER	ECD
Spare -7 DRO being retested	Filtronic	4/9
Spare GDO being rebuilt	Millitech	4/23
Spare A1-2 Multiplexer	MEC	3/19
Spare -8 DRO being reworked	Filtronic	3/26
-8 DRO for S/N 109	Filtronic	Received, not repaired

AMSU-A RECEIVER TEAM WEEKLY REPORT FOR WEEK ENDING 3/17/99

Accomplishments Last Week:

1. S/N 108 A1-2 is completed and unit is in stock. S/N 108 A1-1 is in temperature test. S/N 109 A1-1 is in assembly. S/N 109 A1-2 is in assembly. S/N 109 A2 has started pre-test. Implementation started for PLO (-3) on S/N 109 A1-1.

2. Filtronic Hardware

   CH 8 DRO (1), "Intermittent output power"(S/N 79080): Unit has been shipped back to Aerojet. Current plan is to retest unit over temperature and try to repeat the anomaly.
   CH 8 DRO (2), "Low power at cold"(S/N 79074): Filtronic has reworked the problem and will provide a failure analysis this week. Aerojet received the ATP plan and is reviewing it.
   CH 7 DRO (1) Filtronic will be turned on next week.

3. KIT STATUS:

RECEIVER	ITEMS MISSING	ECD
S/N 108 A1-2		3/12/99
S/N 108 A1-1		3/26/99
S/N 109 A2		3/26/99
S/N 109 A1-2	-8 DRO(2), see above	TBD
S/N 109 A1-1	PLO (F12 or F14)	TBD

4. **OUTSTANDING HARDWARE DELIVERIES**

COMPONENT	SUPPLIER	ECD
Spare -7 DRO being retested	Filtronic	4/9
Spare GDO being rebuilt	Millitech	4/23
Spare A1-2 Multiplexer	MEC	3/19
-8 DRO (2) for S/N 109	Filtronic	3/26
Spare -8 DRO (1)	Filtronic	Received, (under evaluation)

AMSU-A RECEIVER TEAM WEEKLY REPORT
FOR WEEK ENDING 3/24/99

Accomplishments Last Week:

1. S/N 108 A1-1 Replaced PLO and Ch 7 DRO. Repeating pre-test for these channels before returning to temperature test. S/N 109 A1-1 is in assembly. S/N 109 A1-2 is in assembly (short Ch 8). S/N 109 A2 has started pre-test.

2. Filtronic Hardware

   CH 8 DRO (1), "Intermittent output power"(S/N 79080): Unit has been shipped back to Aerojet. Current plan is to retest unit over temperature and try to repeat the anomaly.
   CH 8 DRO (2), "Low power at cold"(S/N 79074): Filtronic has reworked the problem and will provide a failure analysis this week. ATP to start after completion of CH 7 DRO.
   CH 7 DRO (1) Filtronic will finish ATP by 4/2.

3. KIT STATUS:

RECEIVER	ITEMS MISSING	ECD
S/N 108 A1-1		4/19/99
S/N 109 A2		4/20/99
S/N 109 A1-2	CH 8 DRO(2), see above	5/19/99
S/N 109 A1-1	CH 7 DRO (1), PLO	6/17/99

4. **OUTSTANDING HARDWARE DELIVERIES**

COMPONENT	SUPPLIER	ECD
Spare A1-2 Multiplexer	MEC	4/2
-7 DRO (1) being retested	Filtronic	4/9
Spare GDO being rebuilt	Millitech	4/23
-8 DRO (2) being reworked	Filtronic	4/21
Spare -8 DRO (1)	Filtronic	under evaluation at Aerojet
Spare-7 DRO (2)	Filtronic	TBD

F/AR Status

5. **F/AR 073, Mixer-Amplifier, P/N 1331562-16, S/N 7A16** (G. Lambert's Team)
   F/AR approved by NASA

6. **F/AR 090, A2 Receiver, (Channel 1 Mixer-Amplifier Noise Figure) P/N 1356441-1, S/N F02** (G. Lambert's Team)
   F/AR approved by NASA

7. **F/AR 136, A1-1 Receiver, P/N 1356429-1, S/N F02** (G. Lambert's Team)
   F/AR approved by NASA

8. **F/AR 178, Channel 8 DRO, P/N 1336610-7, S/N 85074** (G. Lambert's Team)

   A follow-up FRB meeting was conducted to discuss Filtronic's analysis of the Channel 8 DRO (S/N 85074) removed from METSAT/AMSU-A1 (S/N 105), and to review their proposed test plan for the unit.

   Filtronic had completed rework and re-assembly of the DRO, conducted passive thermal cycling, and tested the unit to verify proper operation.

   NASA representative, Bob Lambeck, indicated the plan is acceptable to NASA because it includes both temperature testing and vibration testing in all 3 axes.

   The FRB requested submittal of a written report from Filtronic that details the rework of the DRO and the post-assembly testing. Aerojet will review the report before final approval of the test plan is granted.

9. **F/AR 192, Receiver, P/N 1356429-1, S/N F05** (G. Lambert's Team)
   A follow-up FRB meeting was conducted to review/approve proposal to replace the suspect S/N F05 PLO, removed from Receiver Shelf S/N F05, with the
   S/N F11 PLO, which is currently on Receiver Shelf S/N F06. Replacement of the PLO was approved.

10. F/AR 193, Receiver, P/N 1356429-1, S/N F05 (G. Lambert's Team)

A FRB meeting was conducted to review the IF Power decrease exhibited during temperature testing of the subject A1-1 Receiver Shelf.

During temperature testing of the receiver, the Channel 7 IF power exhibited a gradual decrease from ~-27dBM to ~-35dBm while the temperature decreased from room ambient to –20°C.

The receiver was subjected to a second cycle from room ambient to –20°C and the problem was verified (i.e. the IF power decreased)

The FRB approved the following plan:

1. Remove the chamber cover and visually inspect the test set-up, including the test cable and test connector.
2. Check/sniff the frequency of the Channel 7 DRO in a fixed feedhorn position at both ambient (for reference) and cold temperature (–20°C).
3. If there is no DRO frequency or the output is low, remove the DRO and perform test/checkout of the DRO at cold temperature.
4. If the DRO frequency and output are okay, perform test/checkout of the test cable and attenuator.

NOTE: If the DRO does appear to be the source of the anomaly, the FRB has approved removal of the Channel 7 DRO from Receiver Shelf S/N F06 for checkout at cold temperature, and as a possible replacement for the subject Channel 7 DRO (currently installed on Receiver shelf F05).

3.2.3 PLO Subsystem - Following are the PLO Subsystem Weekly Reports.

AMSU-A PLO TEAM WEEKLY REPORT FOR WEEK ENDING 3/03/99

ACCOMPLISHMENTS LAST WEEK

EOS

1. EOS PLOs (F01 and F02) are complete.

METSAT 1

2. METSAT 1 PLOs (F03, F04) are complete.

METSAT 2

3. METSAT 2 PLOs are complete (F07, F08).

METSAT 3

4. PLO Assemblies (F09, F10)
   a. METSAT 3 PLOs are complete.
   b. PLO test report is complete.

METSAT 4

5. PLO Assy (F05, F06)
   a. PLO F05: Completed
   b. PLO F06: Completed
   c. PLO Test Report is in progress (ECD 3/12/99).

METSAT 5 and Spares

6. PLO Assy (F11, F14)
   a. F11: Complete 2/18/99
   b. PLO F14: Performing tuning test over temperature.

7. PLOs F12 and F13
   a. F13: VCGDO has been shipped back to Filtronic.
   b. PLO F12: Installed VCGDO. Tuning test to follow.

8. PLL/TCXO Assy F14 has been bought off.

Vendor Status

9. Filtronic: VCGDO 79038 has been shipped to Filtronic.

F/AR Status

10. F/AR 178, METSAT/AMSU-A1, P/N 1331720-2, S/N 105. (D. Pines' Team)
A follow-up FRB meeting was conducted to review/approve Filtronic's troubleshooting plan for the suspect Channel 8 DRO (S/N 85074) removed from METSAT/AMSU-A1 (S/N 105).

Initial troubleshooting at Filtronic isolated the problem to a mismatch between the DRO and the tripler.

The FRB approved a DRO rework plan submitted by Filtronic. In short, they will go through a select and test process for the dielectric resonator inside the tripler until a proper match is achieved.

Then they will close the unit and test the power (Po), frequency (Fo) and current (I_T) at 22°C to verify proper operation.

If the above is successful, Filtronic will submit a DRO retest plan for FRB review and approval.

METSAT 5 PLUS SPARES

ITEM	PART NUMBER	QUANTITY REQUIRED	QUANTITY IN PROCESS	QUANTITY COMPLETE	QUANTITY IN REWORK
I. PLO ASSEMBLY	1348360-1	4	3	1	
A. PLL/TCXO ASSEMBLY	1358332-1	4	0	4	
1. PLL ASSEMBLY	1348500-1	4	0	4	
a. PLL CCA	1357976-1	4	0	4	
b. LOOP AMP CCA	1357970-1	4	0	4	
2. TCXO (**)	1348325-1	4	0	4	
B. DRO ASSEMBLY	1348400-1	4	0	4	
1. DRO CCA	1357973-1	4	0	4	
2. LOOP AMP CCA	1357970-1	4	0	4	
3. 573 MHZ CCA	1357982-1	4	0	4	
C. VOLTAGE REG ASSY	1357979-1	4	0	4	
D. 6.87 FILTER ASSEMBLY	1357729-1	4	0	4	
E. VCGDO (**)	1348351-1	4	0	3	1
F. PLO CABLES (**)	1348430-1,-2,-3 1348435-1,-2,-3 1357793-1,-3,-4	36	0	36	

** Outside Build

PLO Subcontract Flight Delivery

INSTRUMENT			EOS	105	106	107	108	109	SPARE
PLOs	Completed	N/A	~~8/31/97~~ ~~9/12/97~~ ~~9/30/97~~ ~~10/10/97~~ ~~***10/31/97~~ ~~11/26/97~~ 12/22/97 Complete	~~11/3/97~~ ~~1/6/98~~ 4/27/98 Complete	~~1/29/98~~ ~~3/6/98~~ ~~6/29/98~~ ~~7/17/98~~ ~~8/27/98~~ ~~9/14/98~~ 9/21/98 F07. F08 Complete	~~3/19/98~~ ~~5/6/98~~ ~~8/1/98~~ ~~8/27/98~~ F06 ~~9/30/98~~ 10/6/98 Complete F10 11/12/98 Complete	~~7/29/98~~ ~~7/6/98~~ ~~10/13/98~~ F09 11/19/98 Complete F05 ~~11/30/98~~ ~~12/21/98~~ 1/20/99 Complete	~~10/28/98~~ ~~9/28/98~~ ~~12/15/98~~ ~~12/5/98~~ ~~12/21/98~~ ~~2/19/99~~ 3/12/99 F11 Complete F14 ~~3/12/99~~ 3/31/99	~~12/16/98~~ ~~4/4/99~~ ~~2/15/99~~ ~~2/9/99~~ ~~3/19/99~~ F12 3/31/99 F13 TBD
	Original Need Date			5/12/98	7/29/98	9/15/98	10/22/98	12/16/98	N/A

☐ Reflects any change since last weekly .

AMSU-A PLO TEAM WEEKLY REPORT FOR WEEK ENDING 3/10/99

ACCOMPLISHMENTS LAST WEEK

EOS

1. EOS PLOs (F01 and F02) are complete.

METSAT 1

2. METSAT 1 PLOs (F03, F04) are complete.

METSAT 2

3. METSAT 2 PLOs are complete (F07, F08).

METSAT 3

4. PLO Assemblies (F09, F10)
   a. METSAT 3 PLOs are complete.
   b. PLO test report is complete.

METSAT 4

5. PLO Assy (F05, F06)
   a. PLO F05: Completed
   b. PLO F06: Completed
   c. PLO Test Report is in review.

METSAT 5 and Spares

6. PLO Assy (F11, F14)
   a. F11: Complete 2/18/99
   b. PLO F14: Unit is in Inspection.

7. PLOs F12 and F13
   a. F13: VCGDO has been shipped back to Filtronic.
   b. PLO F12: Installed VCGDO. Performing Tuning Test.

Vendor Status

8. Filtronic: VCGDO 79038 (TBD).

METSAT 5 PLUS SPARES

ITEM	PART NUMBER	QUANTITY REQUIRED	QUANTITY IN PROCESS	QUANTITY COMPLETE	QUANTITY IN REWORK
I. PLO ASSEMBLY	1348360-1	4	3	1	
A. PLL/TCXO ASSEMBLY	1358332-1	4	0	4	
1. PLL ASSEMBLY	1348500-1	4	0	4	
a. PLL CCA	1357976-1	4	0	4	
b. LOOP AMP CCA	1357970-1	4	0	4	
2. TCXO (**)	1348325-1	4	0	4	
B. DRO ASSEMBLY	1348400-1	4	0	4	
1. DRO CCA	1357973-1	4	0	4	
2. LOOP AMP CCA	1357970-1	4	0	4	
3. 573 MHZ CCA	1357982-1	4	0	4	
C. VOLTAGE REG ASSY	1357979-1	4	0	4	
D. 6.87 FILTER ASSEMBLY	1357729-1	4	0	4	
E. VCGDO (**)	1348351-1	4	0	3	1
F. PLO CABLES (**)	1348430-1,-2,-3 1348435-1,-2,-3 1357793-1,-3,-4	36	0	36	

** **Outside Build**

PLO Subcontract Flight Delivery

INSTRUMENT			EOS	105	106	107	108	109	SPARE
PLOs	Completed	N/A	~~8/31/97~~ ~~9/12/97~~ ~~9/30/97~~ ~~10/10/97~~ ~~***10/31/97~~ ~~11/26/97~~ 12/22/97 Complete	~~11/3/97~~ ~~1/6/98~~ 4/27/98 Complete	~~1/29/98~~ ~~3/6/98~~ ~~6/29/98~~ ~~7/17/98~~ ~~8/27/98~~ ~~9/14/98~~ 9/21/98 F07. F08 Complete	~~3/19/98~~ ~~5/6/98~~ ~~8/1/98~~ ~~8/27/98~~ F06 ~~9/30/98~~ 10/6/98 Complete F10 11/12/98 Complete	~~7/29/98~~ ~~7/6/98~~ ~~10/13/98~~ F09 11/19/98 Complete F05 ~~11/30/98~~ ~~12/21/98~~ 1/20/99 Complete	~~10/28/98~~ ~~9/28/98~~ ~~12/15/98~~ ~~12/5/98~~ ~~12/21/98~~ ~~2/19/99~~ 3/12/99 F11 Complete F14 ~~3/12/99~~ 3/31/99	~~12/16/98~~ ~~4/4/99~~ ~~2/15/99~~ ~~2/9/99~~ ~~3/19/99~~ F12 3/31/99 F13 TBD
	Original Need Date			5/12/98	7/29/98	9/15/98	10/22/98	12/16/98	N/A

☐ Reflects any change since last weekly .

AMSU-A PLO TEAM WEEKLY REPORT FOR WEEK ENDING 3/17/99

ACCOMPLISHMENTS LAST WEEK

EOS

1. EOS PLOs (F01 and F02) are complete.

METSAT 1

2. METSAT 1 PLOs (F03, F04) are complete.

METSAT 2

3. METSAT 2 PLOs are complete (F07, F08).

METSAT 3

4. PLO Assemblies (F09, F10)
   a. METSAT 3 PLOs are complete.
   b. PLO test report is complete.

METSAT 4

5. PLO Assy (F11, F06)
   a. PLO F11: Completed
   b. PLO F06: Completed
   c. PLO Test Report is in review.

METSAT 5 and Spares

6. PLO Assy (F12, F14)
   a. PLO F12: CPT & 3dB Test.
   b. PLO F14: CPT & 3dB Test.

7. PLOs F05 and F13
   a. F13: VCGDO has been shipped back to Filtronic.
   b. F05: Under evaluation.

Vendor Status

8. Filtronic: VCGDO 79038 (TBD).

F/AR Status

9. **F/AR 192, Receiver, P/N 1356429-1, S/N F05 (G. Lambert's Team)**
F/AR initiated to cover PLO, S/N F05 which failed to lock at +5°C during test of subject Receiver.

During Bandpass characterization and noise figure testing of the A1-1 Receiver Shelf at +5.5°C, the PLO lost lock (the PLO lock detect voltage changed from +14.5V to +2.3V). This problem occurred during the first temperature cycle. A second cycle was run and the unit did not fail (PLO maintained lock). At the start of a third cycle at +22°C, the PLO again would not lock.

Preliminary troubleshooting included the following:

1. Remove door and perform visual inspection of test setup.	Results: No test set up problems found.
2. Check out grounding, perform measurement.	Result: Grounding okay.
3. Turn on with test box (20 times approx.)	Result: PLO exhibited intermittent failures (loss of lock)
4. Checkout with DC-DC Eng model and relay	Result: PLO never locked.

The FRB approved the following continuation plan:

1) Remove PLO from receiver shelf.
2) Evaluate PLO Separately on bench with DC-DC Eng model.
3) Re-tune as necessary (R1 & R2).
4) Test over operating temperature range.
5) Investigate DC-DC turn on vs. PLO lock range.

METSAT 5 PLUS SPARES

ITEM	PART NUMBER	QUANTITY REQUIRED	QUANTITY IN PROCESS	QUANTITY COMPLETE	QUANTITY IN REWORK
I. PLO ASSEMBLY	1348360-1	4	3	1	
A. PLL/TCXO ASSEMBLY	1358332-1	4	0	4	
1. PLL ASSEMBLY	1348500-1	4	0	4	
a. PLL CCA	1357976-1	4	0	4	
b. LOOP AMP CCA	1357970-1	4	0	4	
2. TCXO (**)	1348325-1	4	0	4	
B. DRO ASSEMBLY	1348400-1	4	0	4	
1. DRO CCA	1357973-1	4	0	4	
2. LOOP AMP CCA	1357970-1	4	0	4	
3. 573 MHZ CCA	1357982-1	4	0	4	
C. VOLTAGE REG ASSY	1357979-1	4	0	4	
D. 6.87 FILTER ASSEMBLY	1357729-1	4	0	4	
E. VCGDO (**)	1348351-1	4	0	3	1
F. PLO CABLES (**)	1348430-1,-2,-3 1348435-1,-2,-3 1357793-1,-3,-4	36	0	36	

** **Outside Build**

PLO Subcontract Flight Delivery

INSTRUMENT			EOS	105	106	107	108	109	SPARE
PLOs	Completed	N/A	~~8/31/97~~ ~~9/12/97~~ ~~9/30/97~~ ~~10/10/97~~ ~~***10/31/97~~ ~~11/26/97~~ 12/22/97 Complete	~~11/3/97~~ ~~1/6/98~~ 4/27/98 Complete	~~1/29/98~~ ~~3/6/98~~ ~~6/29/98~~ ~~7/17/98~~ ~~8/27/98~~ ~~9/14/98~~ 9/21/98 F07. F08 Complete	~~3/19/98~~ ~~5/6/98~~ ~~8/1/98~~ ~~8/27/98~~ F09 11/19/98 Complete F10 11/12/98 Complete	~~7/29/98~~ ~~7/6/98~~ ~~10/13/98~~ F06 ~~9/30/98~~ 10/6/98 Complete F11 Complete ~~12/21/98~~	PLO (-3) Complete F14 Or F12 3/31/99	 F13 TBD F05 TBD
	Original Need Date			5/12/98	7/29/98	9/15/98	10/22/98	12/16/98	N/A

☐ Reflects any change since last weekly .

AMSU-A PLO TEAM WEEKLY REPORT FOR WEEK ENDING 3/24/99

ACCOMPLISHMENTS LAST WEEK

EOS

1. EOS PLOs (F01 and F02) are complete.

METSAT 1

2. METSAT 1 PLOs (F03, F04) are complete.

METSAT 2

3. METSAT 2 PLOs are complete (F07, F08).

METSAT 3

4. PLO Assemblies (F09, F10)
   a. METSAT 3 PLOs are complete.
   b. PLO test report is complete.

METSAT 4

5. PLO Assy (F11, F06)
   a. PLO F11: Completed
   b. PLO F06: Completed
   c. PLO Test Report is in review.

METSAT 5 and Spares

6. PLO Assy (F12, F14)
   a. PLO F12: In Final Assembly.
   b. PLO F14: In Final Assembly.

7. PLOs F05 and F13
   a. F13: VCGDO has been shipped back to Filtronic.
   b. F05: Under evaluation.

Vendor Status

8. Filtronic: VCGDO 79038 (TBD).

METSAT 5 PLUS SPARES

ITEM	PART NUMBER	QUANTITY REQUIRED	QUANTITY IN PROCESS	QUANTITY COMPLETE	QUANTITY IN REWORK
I. PLO ASSEMBLY	1348360-1	4	3	1	
A. PLL/TCXO ASSEMBLY	1358332-1	4	0	4	
1. PLL ASSEMBLY	1348500-1	4	0	4	
a. PLL CCA	1357976-1	4	0	4	
b. LOOP AMP CCA	1357970-1	4	0	4	
2. TCXO (**)	1348325-1	4	0	4	
B. DRO ASSEMBLY	1348400-1	4	0	4	
1. DRO CCA	1357973-1	4	0	4	
2. LOOP AMP CCA	1357970-1	4	0	4	
3. 573 MHZ CCA	1357982-1	4	0	4	
C. VOLTAGE REG ASSY	1357979-1	4	0	4	
D. 6.87 FILTER ASSEMBLY	1357729-1	4	0	4	
E. VCGDO (**)	1348351-1	4	0	3	1
F. PLO CABLES (**)	1348430-1,-2,-3 1348435-1,-2,-3 1357793-1,-3,-4	36	0	36	

** **Outside Build**

PLO Subcontract Flight Delivery

INSTRUMENT			EOS	105	106	107	108	109	SPARE
PLOs	Completed	N/A	~~8/31/97~~ ~~9/12/97~~ ~~9/30/97~~ ~~10/10/97~~ ~~***10/31/97~~ ~~11/26/97~~ 12/22/97 Complete	~~11/3/97~~ ~~1/6/98~~ 4/27/98 Complete	~~1/29/98~~ ~~3/6/98~~ ~~6/29/98~~ ~~7/17/98~~ ~~8/27/98~~ ~~9/14/98~~ 9/21/98 F07. F08 Complete	~~3/19/98~~ ~~5/6/98~~ ~~8/1/98~~ ~~8/27/98~~ F09 11/19/98 Complete F10 11/12/98 Complete	~~7/29/98~~ ~~7/6/98~~ ~~10/13/98~~ F06 ~~9/30/98~~ 10/6/98 Complete F11 Complete ~~12/21/98~~	PLO (-3) Complete F14 Or F12	 F13 TBD F05 TBD
	Original Need Date			5/12/98	7/29/98	9/15/98	10/22/98	12/16/98	N/A

☐ Reflects any change since last weekly .

3.2.4 Electronics Subsystem - Following are the Electronics Subsystem Weekly Reports.

AMSU-A ELECTRONICS TEAM WEEKLY REPORT
FOR WEEK ENDING 3/3/99

1. CCAs (301 total) - Complete

2. EOS Cable Assemblies (13 total) - Complete

3. METSAT Cable Assemblies (65 total) - Complete

4. EOS Signal Processor Assemblies (2 total) - Complete

5. METSAT Signal Processor Assemblies (10 total) - Complete

    - 109 A1 Signal Processor awaiting test

6. Detector PreAmp Assemblies (12 total) - Complete

7. Power Assemblies (12 total) - Complete

8. DC-DC Status:

202 A1&A2	Installed
105 A1&A2	Installed
106 A1&A2	Installed
107 A1&A2	Installed
108 A1&A2	In Stock
109 A1	In Stock
109 A2	In rework at FEI

At FEI:

FM 13(spare)	In ATP, ship in Apr
FM 14(spare)	In Final assembly, ship in May
Spare Kit	Ship in June

AMSU-A ELECTRONICS TEAM WEEKLY REPORT
FOR WEEK ENDING 3/10/99

1. CCAs (301 total) - Complete

2. EOS Cable Assemblies (13 total) - Complete

3. METSAT Cable Assemblies (65 total) - Complete

    - 107 A1 Pwr and Video CCAs to SAR & Coating

4. EOS Signal Processor Assemblies (2 total) - Complete

5. METSAT Signal Processor Assemblies (10 total) - Complete

    - 109 A1 Signal Processor in test

6. Detector PreAmp Assemblies (12 total) - Complete

7. Power Assemblies (12 total) - Complete

8. DC-DC Status:

202 A1&A2	Installed
105 A1&A2	Installed
106 A1&A2	Installed
107 A1&A2	Installed
108 A1&A2	In Stock
109 A1	In Stock
109 A2	In retest at FEI

At FEI:

FM 13(spare)	In ATP, ship in Apr
FM 14(spare)	In Final assembly, ship in May
Spare Kit	Ship in June

AMSU-A ELECTRONICS TEAM WEEKLY REPORT
FOR WEEK ENDING 3/17/99

1. CCAs (301 total) - Complete

2. EOS Cable Assemblies (13 total) - Complete

3. METSAT Cable Assemblies (65 total) - Complete

   - Completed 107 A1 Pwr and Video CCAs Coating

4. EOS Signal Processor Assemblies (2 total) - Complete

5. METSAT Signal Processor Assemblies (10 total) - Complete

   - 109 A1 Signal Processor in test

6. Detector PreAmp Assemblies (12 total) - Complete

7. Power Assemblies (12 total) - Complete

8. DC-DC Status:

202 A1&A2	Installed
105 A1&A2	Installed
106 A1&A2	Installed
107 A1&A2	Installed
108 A1&A2	In Stock
109 A1	In Stock
109 A2	In Buy Off after repair at FEI

At FEI:

FM 13(spare)	In ATP, ship in Apr
FM 14(spare)	In Final assembly, ship in May
Spare Kit	Ship in June

AMSU-A ELECTRONICS TEAM WEEKLY REPORT
FOR WEEK ENDING 3/24/99

1. CCAs (301 total) - Complete

2. EOS Cable Assemblies (13 total) - Complete

3. METSAT Cable Assemblies (65 total) - Complete

4. EOS Signal Processor Assemblies (2 total) - Complete

5. METSAT Signal Processor Assemblies (10 total) - Complete

   - 109 A1 Signal Processor in test (as resources available)

6. Detector PreAmp Assemblies (12 total) - Complete

7. Power Assemblies (12 total) - Complete

8. DC-DC Status:

202 A1&A2	Installed
105 A1&A2	Installed
106 A1&A2	Installed
107 A1&A2	Installed
108 A1&A2	In Stock
109 A1	In Stock
109 A2	Ship 31 Mar

At FEI:

FM 13(spare)	In ATP, ship in Apr
FM 14(spare)	In Final assembly, ship in May
Spare Kit	Ship in June

3.2.5 System Engineering Integration and Test (SEIT) Subsystem Following are the SEIT Subsystem Weekly Reports.

AMSU-A SYSTEM ENGINEERING INTEGRATION AND TEST (SEIT) TEAM WEEKLY REPORT FOR WEEK ENDING 3/3/99

1. **AMSU-A1 (S/N 105)**

   - Calibration thermal vacuum Subcycle 6 and 3 completed (-2C instrument), Subcycle 1 (38C instrument) half complete.
   - Special METOP grounding interface testing continuing.

2. **AMSU-A2 (S/N 105)**

   - Calibration Completed
   - Final CPT in process, Momentum Compensation Test is next

3. **AMSU-A1 (S/N 106)**

   - Eng Thermal Cycle Test in process. Following temp cycle, unit will enter baseline CPT testing.
   - PER 3 Mar 1999, completed.

4. **AMSU-A2 (S/N106)**

   - Low level Z-axis vib test for resolution of 20Hz/motor nut torque anomaly completed. FRB planned for 3/5.

5. **AMSU-A1 (S/N 107)**

   - Continuing Systems Integration Testing. PRT calibration started.

6. **AMSU-A2 (S/N 107)**

   - Receiver shelf reinstalled following PRT rework.
   - Systems Integration Test completed
   - Preparing to start Eng CPT

7. **GSE**

   - Five shipping containers ready for source inspection at zero.

8. Status of Integration Subassemblies and Subsystems For (S/N 108)

	A1	A2
ANTENNA SUBSYSTEM	In Work	In Work
UPPER CARD CAGE (A1 ONLY)	In stock	N/A
POWER RELAY ASSY	In stock	In stock
CABLE HARNESS ASSEMBLIES	In stock	In stock
SIGNAL PROCESSOR	In stock	In stock
DC/DC CONVERTER	In stock	In stock
DET PREAMP	In stock	In stock
RECEIVER	In Test	In Stock

9. Status of Integration Subassemblies and Subsystems For (S/N 109)

	A1	A2
ANTENNA SUBSYSTEM	In Machine Shop	In Assembly
UPPER CARD CAGE (A1 ONLY)	In stock	N/A
POWER RELAY ASSY	In stock	In stock
CABLE HARNESS ASSEMBLIES	In stock	In stock
SIGNAL PROCESSOR	In Rework	In stock
DC/DC CONVERTER	In Stock	Rtn To Vendor
DET PREAMP	In stock	In stock
RECEIVER	In Assembly	In Test

F/AR Status

10. F/AR 184, METSAT/AMSU-A1, P/N 1331720-2, S/N 106 (A. Nieto's Team)

A follow-up FRB meeting was conducted to discuss the results of troubleshooting conducted at FEI on DC/DC Converter, S/N FM7, and review/approve plans for rework and retest, as well as those for part level failure analysis.

Initial troubleshooting at FEI isolated the problem to an out-of-spec. inrush resistor (R600) which measured ~35Ω, S/B 5.11Ω.

The FRB approved the following plan for analysis of the suspect R600 resistor.

1) Obtain 10 resistor samples from the same DLC as the suspect part. Measure resistance on each part to verify it is within tolerance.
2) Submit the suspect resistor and one of the good units (i.e. resistance meets spec.) from Step 1. to Hi-Rel Labs. The suspect resistor shall be failure analyzed to isolate the cause of its out-of-limit resistance. The good unit will be analyzed as required for comparison. The AS8070 DPA Planning Sheet used for wire wound resistors provides a list of the types of examinations/procedures that will be part of the failure analysis.

The FRB approved the following plan for rework and retest of the DC/DC Converter.

1) The DC/DC Converter will be reworked (i.e. replacement of R600) in accordance with the FEI Customer Return Repair Traveler (CRRT).
2) After the R600 resistor is replaced, proper function will be verified by performing a Post Rework Checkout as shown on FEI's Plan.
3) The DC/DC Converter will then be subjected to ATP Retest. It will consist of two cycles. In the first cycle the unit will be on and simply cycled from +25°C to –10°C to +50°C and back to +25°C. In the second cycle it will be cycled through the same temperatures, but will also be subjected to the electrical tests listed on FEI's Plan.

11. F/AR 189, METSAT/AMSU-A1, P/N 1331720-2, S/N 106 (A. Nieto's Team)

An F/AR was initiated for the subject instrument. During Full Print test, Channel 12 counts were in the 9000 range, S/B 16000-17000. Approval was received from NASA to remove the panel and inspect for any loose connections. A metal sliver was found to be shorting at semi-rigid connector (short to center pin) connected to J552. The sliver was removed and the instrument passed Full Print test. It's believed the metal sliver came from one of the threads of the screw-on connector during installation.

AMSU-A SYSTEM ENGINEERING INTEGRATION AND TEST (SEIT) TEAM WEEKLY REPORT FOR WEEK ENDING 3/10/99

1. **AMSU-A1 (S/N 105)**

   - Calibration Completed. Rechecking several data points prior to ending test. Weight & CG will be next, followed by Momentum Compensation and the Final CPT.

   - Special METOP grounding interface testing completed. Data being evaluated.

2. **AMSU-A2 (S/N 105)**

   - Final CPT Completed
   - Momentum Compensation Test Completed.
   - Weight & CG Completed.
   - Completed Measurement of Isolation Pads and Cleaning of Shipping Container
   - Plan to be "In The Box" by 2/15.
   - PSR planned 1 Apr.

3. **AMSU-A1 (S/N 106)**

   - Eng Thermal Cycle Test successfully completed.
   - In Prep to start Baseline CPT

4. **AMSU-A2 (S/N106)**

   - FRB held 3/9. Troubleshooting plan approved to substitute W3 Cable assembly first, and then FO8 motor if necessary to properly SAT the unit Scan Drive Subsystem.

5. **AMSU-A1 (S/N 107)**

   - Completed Systems Integration
   - In Prep for Engineering CPT

6. **AMSU-A2 (S/N 107)**

   - Started Engineering CPT

7. **AMSU-A2 (S/N 108)**

   - Installed Receiver, Cable Assembly installation next.

8. GSE

- Five shipping containers shipped to Aerojet 3/9.
- METOP Cal Targets "In The Box" awaiting Buy off
- The containers for shipment of the STE and Blackbody Monitor cabinets are on order due end of month.
- METOP Spacecraft connectors being sent out for DPA.
- Fourth STE now functional, awaiting C/O with engineering model instrument.

9. Status of Integration Subassemblies and Subsystems For (S/N 108)

	A1	A2
ANTENNA SUBSYSTEM	In Work	Complete To Systems
UPPER CARD CAGE (A1 ONLY)	In stock	
POWER RELAY ASSY	In stock	
CABLE HARNESS ASSEMBLIES	In stock	
SIGNAL PROCESSOR	In stock	
DC/DC CONVERTER	In stock	
DET PREAMP	In stock	
RECEIVER	In Test	

10. Status of Integration Subassemblies and Subsystems For (S/N 109)

	A1	A2
ANTENNA SUBSYSTEM	In Machine Shop	In Assembly
UPPER CARD CAGE (A1 ONLY)	In stock	N/A
POWER RELAY ASSY	In stock	In stock
CABLE HARNESS ASSEMBLIES	In stock	In stock
SIGNAL PROCESSOR	In Test	In stock
DC/DC CONVERTER	In Stock	Rtn To Vendor
DET PREAMP	In stock	In stock
RECEIVER	In Assembly	In Test

F/AR Status

11. **F/AR 190, METSAT/AMSU-A1, P/N 1331720-2, S/N 105. (L. Paliwoda's Team)**
F/AR initiated for subject instrument, which exhibited out-of-spec calculated linearity on Channels 6, 7 and 9 thru 14.

A waiver request is being prepared.

Similar situation (Ref. F/AR 157) existed on EOS/AMSU-A1 (202) and waiver CCR No. 8125 was approved which revised linearity requirements for the EOS A1 instrument.

12. **F/AR 191, METSAT/AMSU-A1, P/N 1331720-2, S/N 105 (L. Paliwoda's Team)**
F/AR initiated for subject instrument.

During engineering evaluation to determine effects of METOP ground on AMSU-A calibration (Task #12), the count difference between samples 1 and 2 in both the warm calibration position and cold calibration position was 10-15 counts at ~38°C, expected difference is 6-7 counts.

The out-of-family count difference is not an out-of-specification condition. It could not be repeated with METOP or METSAT grounding.

AMSU-A SYSTEM ENGINEERING INTEGRATION AND TEST (SEIT) TEAM WEEKLY REPORT FOR WEEK ENDING 3/17/99

1. **AMSU-A1 (S/N 105)**

   - Completed Momentum Compensation Test
   - Completed Weight & CG Measurement
   - Completed Final CPT
   - Final unit prep & cleaning underway for installation in shipping container
   - Ready for PSR 1 Apr

2. **AMSU-A2 (S/N 105)**

   - Instrument installed in shipping container
   - Ready for PSR 1 Apr.

3. **AMSU-A1 (S/N 106)**

   - In Baseline CPT

4. **AMSU-A2 (S/N106)**

   - Troubleshooting continued with substitution of W3 Cable assembly. No repeatable data confirmed any problem with the cable assembly.
   - Temporarily installed FO8 motor to see if we can be properly SAT the unit Scan Drive Subsystem. Testing underway.

5. **AMSU-A1 (S/N 107)**

   - Completed rework of Ch 3 DRO "capacitor"
   - Ready to start Engineering CPT

6. **AMSU-A2 (S/N 107)**

   - In Engineering CPT

7. **AMSU-A2 (S/N 108)**

   - Completed Receiver installation
   - Cable Assembly installation underway.

8. **Engineering Models**

   - Started reassembly of A1Cable Assembly installation underway.
   - A2 awaiting troubleshooting of power supply.

9. GSE

- Received Five shipping containers.
- METOP Cal Targets "Bought Off"
- Received 8ea METOP Spacecraft connectors, conditionally accepted pending DPA.
- Drafted SOW for refurbishment of 6ea KLM shipping containers.

10. Status of Integration Subassemblies and Subsystems For (S/N 108)

	A1	A2
ANTENNA SUBSYSTEM	In Work	Complete To Systems
UPPER CARD CAGE (A1 ONLY)	In stock	
POWER RELAY ASSY	In stock	
CABLE HARNESS ASSEMBLIES	In stock	
SIGNAL PROCESSOR	In stock	
DC/DC CONVERTER	In stock	
DET PREAMP	In stock	
RECEIVER	In Test	

11. Status of Integration Subassemblies and Subsystems For (S/N 109)

	A1	A2
ANTENNA SUBSYSTEM	In Machine Shop	In Assembly
UPPER CARD CAGE (A1 ONLY)	In stock	N/A
POWER RELAY ASSY	In stock	In stock
CABLE HARNESS ASSEMBLIES	In stock	In stock
SIGNAL PROCESSOR	In Test	In stock
DC/DC CONVERTER	In Stock	Rtn To Vendor
DET PREAMP	In stock	In stock
RECEIVER	In Assembly	In Test

F/AR Status

12. **F/AR 181, METSAT/AMSU-A1, P/N 1331720-2, S/N 105** (A. Nieto's Team)
Final F/AR completed, signed and submitted to NASA

An apparent temperature difference between the A1-1 and A1-2 Feedhorn PRTs observed during temperature transition of the AMSU-A1 Instrument during Temperature Cycling could not be isolated to any fault/defect associated with the PRTs.

NOTE: Prior to the Thermal Cycling, a Full Scan Mode test was performed and a review of the test results indicated no test anomaly.

Failure diagnosis was initiated with the removal of the top Panel of the Instrument to perform an inspection and electrical continuity measurements. The internal visual examination revealed no anomalous conditions in the bonding of the PRT or in the device itself, related circuitry or adjoining areas.

The mechanical connection (connector) to the PRT was verified as well. Electrical measurements of the temperature sensors with power applied and with an ohmmeter indicated the device did not have an open condition and appeared to be functional.

The connector was cleaned with isopropyl alcohol. The test panel was re-installed and Full Scan Mode was performed.

Thermal Specialist Robert Krylo commented that it is not uncommon for the PRT readings between the A1-1 and A1-2 Feedhorns to vary widely during temperature transition within the vacuum chamber and room ambient thermal cycling due to the changing conditions and the temperature gradient.

The Thermal Balance Test of the AMSU-A1 S/N 105 Instrument in Thermal Vacuum determined that the A1-1 PRT and the A1-2 PRT corresponded to within two degrees of each other indicating the functionality of the temperature sensors (PRTs)

13. **F/AR 190, METSAT/AMSU-A1, P/N 1331720-2, S/N 105.** (L. Paliwoda's Team)
Final F/AR completed, signed, and submitted to NASA.
During offline data analysis, the data showed out-of-specification calculated linearity on Channels 6, 7, and 9 thru 14.

After reviewing all collected data, it was determined that the linearity values are above specification on Channels 6, 7, and 9 thru 14. It was also found that the nonlinearity is very stable and repeatable.

This same above-specification linearity was experienced on EOS/AMSU-A1, S/N 202 (Reference F/AR 157). At that time a fault tree approach was used to analyze the nonlinearity anomaly by

identifying all possible causes, qualitatively evaluating the probability of each cause, and assessing the feasibility of corrective action.

For EOS/AMSU-A1, S/N 202, it was found that none of the causes identified as "Probable" are easily correctable. However, it was verified that the nonlinearities on all channels are correctable by using simple algorithms provided for KLM. This subject was addressed at the AMSU-A Quarterly Review held on 27 October 1998.

At that time graphs were presented for each channel showing polynomial corrections of the linear fit. Likewise, it has been verified for METSAT/AMSU-A1, S/N 105, that the nonlinearities on all channels are correctable by using the simple algorithms provided for KLM. Consequently, as was done for the EOS A1 instrument, a waiver (POES CCR No. 8127) has been submitted requesting acceptance of the out-of-specification linearity measurements and approval of correction by using KLM algorithms (NOTE: The waiver approved for EOS A1 was POES Configuration Change Request No. 8125).

14. **F/AR 191, METSAT/AMSU-A1, P/N 1331720-2, S/N 105. (L. Paliwoda's Team)**

Final F/AR completed, signed and submitted to NASA.

During engineering evaluation to determine effects of METOP ground on AMSU-A calibration (Task # 12), the count difference between samples 1 and 2 in both the warm calibration position and cold calibration position was 10-15 counts at ~38°C, expected difference is 6-7 counts

With the AMSU-A1 instrument still at approximately +38°C, the METOP grounding was disconnected and the METSAT grounding was connected, however the breakout box and the METOP grounding test cable adapter were still part of the test setup. The out-of-family count difference still existed. The breakout box and the METOP grounding test cable adapter were removed. Using the METSAT grounding, the AMSU-A1 instrument was cycled twice more to +38°C and then back to ambient. The out-of-family count difference could not be repeated. Then the breakout box and the METOP grounding test cable adapter were reinserted and again the out-of-family count difference could not be repeated. An analysis of data and the environmental conditions during test revealed no abnormalities, which would explain the observed count difference. It's possible that because the METOP grounding test cable adapter is not shielded, it could have picked up noise, which affected the count difference.

No corrective action was required. The out-of-family count difference is not an out-of-specification condition.

AMSU-A SYSTEM ENGINEERING INTEGRATION AND TEST (SEIT) TEAM WEEKLY REPORT FOR WEEK ENDING 3/24/99

1. **AMSU-A1 (S/N 105)**

   - Final unit cleaning completed and unit installed in shipping container
   - PSR data delivered

2. **AMSU-A2 (S/N 105)**

   - PSR data delivered
   - Awaiting PSR

3. **AMSU-A1 (S/N 106)**

   - Completed Baseline CPT
   - Started EMI testing

4. **AMSU-A2 (S/N106)**

   - Completed troubleshooting of vibration anomaly
   - FRB held and unit in reassembly for retest

5. **AMSU-A1 (S/N 107)**

   - Started Engineering CPT

6. **AMSU-A2 (S/N 107)**

   - Completed Engineering CPT
   - PER data in prep

7. **AMSU-A2 (S/N 108)**

   - Completed Cable Assembly installation
   - Ready to start Systems Integration testing

8. **Engineering Models**

   - Reassembly of A1-1 Receiver underway.
   - A2 awaiting troubleshooting of power supply.

9. **GSE**

   - DPA of METOP Spacecraft connectors to be completed by 3/29

10. Status of Integration Subassemblies and Subsystems For (S/N 108)

	A1	A2
ANTENNA SUBSYSTEM	In Work	Complete To Systems
UPPER CARD CAGE (A1 ONLY)	In stock	
POWER RELAY ASSY	In stock	
CABLE HARNESS ASSEMBLIES	In stock	
SIGNAL PROCESSOR	In stock	
DC/DC CONVERTER	In stock	
DET PREAMP	In stock	
RECEIVER	In Test	

11. Status of Integration Subassemblies and Subsystems For (S/N 109)

	A1	A2
ANTENNA SUBSYSTEM	In Machine Shop	In Assembly
UPPER CARD CAGE (A1 ONLY)	In stock	N/A
POWER RELAY ASSY	In stock	In stock
CABLE HARNESS ASSEMBLIES	In stock	In stock
SIGNAL PROCESSOR	In Test	In stock
DC/DC CONVERTER	In Stock	Rtn To Vendor
DET PREAMP	In stock	In stock
RECEIVER	In Assembly	In Test

F/AR Status

12. **F/AR 105, METSAT/AMSU-A2 (Missing Backplane Wires), P/N 1331200-2, S/N 105** (A. Nieto's Team)
    F/AR approved by NASA
13. **F/AR 138, METSAT/AMSU-A2 (REO2 special frequencies), P/N 1331200-2-EMI, S/N 105** (L. Paliwoda's Team)
    F/AR approved by NASA
14. **F/AR 141, METSAT/AMSU-A2 (Channel 4 Noise problem), P/N 1331200-2, S/N 105** (A. Nieto's Team)
    F/AR approved by NASA
15. **F/AR 154, METSAT/AMSU-A1 (Channel 7 Noise problem), P/N 1331720-2, S/N 105** (A. Nieto's Team)
    F/AR approved by NASA
16. **F/AR 191, METSAT/AMSU-A1(METOP Grounding – Task #12), P/N 1331720-2, S/N 105** (L. Paliwoda's Team)
    F/AR approved by NASA

5.0 Weight and Power Budgets (CDRL 503)

GENCORP
AEROJET

AMSU-A WEIGHT

SUBASSEMBLY	AMSU - A1 (lbs.)		AMSU - A2 (lbs.)	
	METSAT	EOS	METSAT	EOS
ANTENNA SUBSYSTEM	58.7	51.3	77.7	63.5
RECEIVER SUBSYSTEM	31.7	31.7	7.1	7.1
SIGNAL PROCESSOR	26.7	24.7	20.7	21.4
MISCELLANEOUS	4.4	4.4	3.4	3.4
ESTIMATED TOTAL	121.5	112.1	108.9	95.4
SPECIFICATION (MAX.)	119.5	131	110	110
MEASURED		108*	109.5 **	93**

* Without Velcro and blankets

** With test blankets

AMSU-A POWER

	AMSU-A1 (WATTS)								AMSU-A2 (WATTS)							
	METSAT				EOS				METSAT				EOS			
	Main Load Bus		Pulse Load Bus		Quiet Bus		Noisy Bus		Main Load Bus		Pulse Load Bus		Quiet Bus		Noisy Bus	
	Nom	Max	Nom	Max	Nom	Max	Nom	Max	Nom	Max	Nom	Max	Nom	Max	Nom	Max
	63.3	82.0	3.5	6.0	67.9	88.0	3.6	6.0	18.9	25.0	6.4	12.0	18.9	25.0	3.6	6.0
Specification (Max)	82.0		6.0						25.0		12.0					
	88.0				94.0				37.0				31.0			
Measured Total	66.8				71.5				25.3				22.5			

Section 6

PERFORMANCE ASSURANCE (CDRL 204)

This section consists of a compilation of the Weekly Reports from Quality Assurance.

6.1 Quality Assurance - Following are the Quality Assurance Weekly Reports.

AMSU-A QUALITY ASSURANCE WEEKLY REPORT FOR WEEK ENDING 3-3-99

Accomplishments Last Week

1. Continuing to play phone-tag with Leach Company representatives regarding concerns on the use of tin plating. Meanwhile we've requisitioned a relay from stock and will be sending it to the Design Assurance lab for analysis.

2. Traveled to Filtronic (Litton) as part of the on-going diagnostic/reworking of DRO units.

3. Source Inspection on the Zero Containers moved to Thursday, 4 March (was 3 March.)

4. Continuing to conduct weekly shipping/DD250 coordination, meetings on the 105 Units.

Critical Issues

None

AMSU-A INSTRUMENT STATUS

INSTRUMENT	S/N 202	S/N 105	S/N 106	S/N 107	S/N 108	S/N 109
A1						
Machine Subassy						In assembly
Antenna Subassy					Antenna range	
System Integration			Eng CPT	Instrument Integration and test		
PER						
Completed Env. Test & Calibraton Tasks						
Scheduled Env. Test & Calibraton Tasks		In Thermal/Vac Calibration				
Final CPT						
PSR						
Shipping Configuration	Shipped					

AMSU-A INSTRUMENT STATUS

INSTRUMENT	S/N 202	S/N 105	S/N 106	S/N 107	S/N 108	S/N 109
A2						
Machine Subassy						
Antenna Subassy						Antenna Assy Integration
System Integration				Integration testing	Initial Assembly	
PER						
Completed Env. Test & Calibraton Tasks			EMI, Thermal Cycling, Qual Level Vib. (failed)			
Scheduled Env. Test & Calibraton Tasks			Vibration anomaly (reflector / antenna drive) investigaton			
Final CPT		In Test				
PSR						
Shipping Configuration	Shipped					

AMSU-A

STATUS OF OPEN F/ARs

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
105	7/20/98	METSAT/AMSU-A2 (Floating bits)	1331200-2	105	One or more bits in the Digital B Data Byte 2 reading "1" (S/B "0"). These bits are not used (floating). Wires added to jumper unused inputs to ground.	Final draft routed for review/signature	Nieto
138	8/19/98	METSAT/AMSU-A2 (RE02 emissions for special frequencies above spec)	1331200-2	105	RE02 emissions exceeded limits for special frequencies in range of 120 MHz to 123 MHz, except center frequency of 121.5 MHz. Additional shielding used to lower emissions.	Awaiting NASA approval	Paliwoda
141	8/26/98	METSAT/AMSU-A2 (Channel 4 bandpass had spurious noise at 26 MHz)	1331200-2	105	Channel 4 bandpass exhibited spurious noise (i.e. approximately +5dB, S/B ±1dB) at 26 MHz. Corrected by grounding W7 cable and wrapping Channel 4 Mixer/IF Amplifier joint with wire mesh tape.	Awaiting NASA approval	Nieto
160	10/27/98	METSAT/AMSU-A2 (Resonant frequency change in reflector/motor assy)	1331200-2	105	Post-vibration Bode plot for reflector/motor assy. showed a new peak at about 122 HZ and the original resonant frequency peak had shifted from 223.34 HZ to 204.87 HZ. Cracks in bonded reflector joints.	Awaiting NASA approval	Alvarez
164	11/9/98	METSAT/AMSU-A2 (Faulty PRT)	1331200-2	106	RF Mux PRT read 52.25 C, S/B 25+/-5 C. Cause isolated to faulty PRT.	Troubleshooting/analysis underway	Nieto
179	12/22/98	METSAT/AMSU-A2 (Reflector's main resonace shifted)	1331200-2	106	Post Z-axis vibe sine sweep showed 20 Hz shift in first natural frequency. Reflector's main resonance response has changed from 223Hz to 214Hz. R-D converter replaced / SAT resistors changed (as risk mitigation with no evidence of failure).	Troubleshooting/analysis underway	Alvarez
188	2/22/99	METSAT/AMSU-A2 (Open PRT)	1331200-2	107	PRT 3 (RF Diplexer) open. Dig A Temp reading was 32767, S/B ~18660.	Troubleshooting/analysis underway	A. Nieto
154	9/24/98	METSAT/AMSU-A1 (Channel 7 bandpass had spurious noise at 12 MHz)	1331720-2	105	Channel 4 bandpass exhibited spurious noise (i.e. approximately +3dB peak) at 12MHz. Corrected by adding EMI mesh around Channel 7 mixer to IF amplifier joint.	Awaiting NASA approval	Nieto
171	12/5/98	METSAT/AMSU-A1	1331720-2	105	Post X-axis vibration low level sine sweep showed resonance at ~120Hz that was not seen at pre-vibe.	Troubleshooting/analysis underway	Alvarez
181	1/11/99	METSAT/AMSU-A1	1331720-2	105	PRT #4 on A1-2 feedhorn reading temperature 8-10 C higher than A1-1 feedhorn.	Troubleshooting/analysis underway	Nieto

E. Lorenz
3/4/99

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
182	1/21/99	METSAT/AMSU-A1	1331720-2	106	Measurement from TB3-E1 to TB3-E2 for PRT RT3 read open.	Troubleshooting/analysis underway	Nieto
189	3/1/99	METSAT/AMSU-A1 (Short at connector)	1331720-2	106	Full Print Ch. 12 counts ~9000, S/B 16000-17000. Metal sliver shorting at semi-rigid connector connected to J552.	Troubleshooting/analysis underway	A. Nieto
170	11/25/98	METSAT/AMSU-A1 (CCA connectors inserted upside down)	1331720-2	107	During integration, +5V and -15V scan drive power supplies went into current limit. Found J403 and J404 connectors for motor driver CCAs installed upside down in upper card cage.	Troubleshooting/analysis underway	Nieto
187	2/19/99	METSAT/AMSU-A1 (Missing capacitor in DRO)	1331720-2	107	Ch. 5 IF output power was -34.38 dBm (S/B -27+/- 1 dBm). Capacitor C5 missing in DRO voltage shutdown circuit.	Troubleshooting/analysis underway	D. Pines
096	6/18/98	Secondary Reflector Housing (Cracked)	1333382	N/A	Cracks in corner braze joints observed on secondary reflector housing of the EOS/AMSU-A2 (S/N 202). Housing redesigned.	Awaiting NASA approval	Alvarez
081	4/27/98	Reflector (Full vacuum not maintained during T/V test)	1355835	008, 009	During T/V test, full vacuum level not maintained at various times during cycling. Cooling system was leaking nitrogen into chamber each time it cycled. Use-As-Is. (COI)	Awaiting NASA approval	Alvarez
094	6/25/98	DC-DC Converter (Lost regulation; SAT resistor value too low).	1356010	FM5	During thermal vacuum at +60°C, the Module 4 outputs lost regulation. Current limiting SAT resistor value too low. High temperature, max load condition not seen in actual operation. FRB approved "Use As Is". (FEI)	Need final draft	Nieto
184	2/2/99	METSAT/AMSU-A1 (Resistor out-of-spec.)	1331720-2	106	Turn-on inrush current for main load bus (1st current spike) below normal. DC-DC Converter(FM7) replaced. R600 resistor was out-of-spec.	Troubleshooting/analysis underway at FEI	Nieto
086	5/27/98	A2 Antenna Assembly	1331210-3	F03	Computed means for down track angle on beam positions 1 & 15 slightly above spec. Reflector(P/N 1355835-1, S/N 6) replaced with S/N 7. Alignment measurements within spec.	Awaiting NASA approval	Alvarez

E. Lorenz
3/4/99

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
107	7/21/98	A1 Antenna Assembly (Burrs/debris inside feedhorn)	1331400-2	F03	Channel 15 beampointing much different from Channels 3-14. Burrs/debris found inside feedhorn. Feedhorn replaced.	Awaiting rework/retest.	Alvarez
161	10/29/98	A1 Antenna Assembly (Burrs/debris inside feedhorn)	1331400-2	F03	Beamwidth at Beam Position 15 (crosstrack) for Channel 15 was 3.73 degrees, S/B 2.97 to 3.63 degrees. Feedhorn replaced.	Troubleshooting/analysis underway	Alvarez
098	6/30/98	Mixer-Amplifier (Out-of-spec condition)	1331562-11	7A31	N.F. was 3.6dB, S/B 3.5dB max. LO to RF isolation was 25.4dB, S/B 30dB min. Unit retuned at Spacek. Now meets all requirements. Range expanded for setting L.O. power	Awaiting NASA approval	Pines
119	6/30/98	Mixer-Amplifier (Out-of-spec condition)	1331562-12	7A32	1) Noise Figure measured 3.3dB (S/B 3.2dB max) at L.O. power setting of +11.5dBm. 2) Overall gain measured 66.59dB, S/B 65±1.0dB. SDARs approved: Use-As-Is.	Awaiting NASA approval.	Pines
144	8/27/98 9/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-13	7A43	1) Mixer LO to RF isolation was 27.2dB, S/B 30db min. 2) Overall Gain was 66.47dB, S/B 65 +/- 1.0dB. No system impact. Use-As-Is.	Awaiting NASA approval	Pines
112	6/30/98	Mixer-Amplifier (Out-of-spec condition)	1331562-14	7A24	Gain sensitivity measured 1.50dB, S/B 1.4dB max. No longer a requirement at this level. SDAR withdrawn.	Awaiting NASA approval.	Pines
120	6/30/98	Mixer-Amplifier (Out-of-spec condition)	1331562-14	7A34	1) Gain Flatness was 0.55dB peak-to-peak, S/B 0.05 dB max. 2) Mixer LO to RF isolation was 25.5dB, S/B 30db min. 3) N.F. was 3.3dB (S/B 3.2dB max) at L.O. power setting of +11.5dBm. 4) Overall gain was 66.32dB, S/B 65±1.0dB. Use-As-Is.	Awaiting NASA approval.	Pines
145	8/27/98 8/31/98 9/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-14	7A44	1) N.F. was 3.85dB (S/B 3.8dB max) at L.O. power setting of +11.5dBm. 2) Mixer LO to RF isolation was 28.5dB, S/B 30db min. 3) Gain Flatness was 0.52dB peak-to-peak, S/B 0.5 dB max. 4) Overall Gain was 66.41dB, S/B 65 +/- 1.0dB. Unit retuned.	Awaiting NASA approval	Pines

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
172	12/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-14	7A54	Gain Flatness was 0.52 dB peak-to-peak, S/B 0.5 dB max. No system impact. "Use-As-Is".	Awaiting NASA approval	Pines
073	4/14/98	Mixer/Amplifier (Output low)	1331562-16	7A16	During noise figure test of a suspect DRO, mixer output was below -30dBM (S/B -27dBm +/- 1dBm).	Awaiting NASA approval	Pines
148	8/27/98 9/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-17	7A47	1) Mixer LO to RF isolation was 26.5dB, S/B 30db min. 2) Overall Gain was 66.40dB, S/B 65 +/- 1.0dB. No system impact. Use-As-Is.	Awaiting NASA approval	Pines
173	12/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-18	7A58	Gain Flatness was 0.58 dB peak-to-peak, S/B 0.5 dB max. No system impact. "Use-As-Is".	Awaiting NASA approval	Pines
176	12/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-18	7A68	Gain Flatness was 0.62 dB peak-to-peak, S/B 0.5 dB max. No system impact. "Use-As-Is".	Awaiting NASA approval	Pines
177	12/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-19	7A69	1. LO to RF isolation measured 25.3 dB with +8.5 dBm LO power, S/B 27.5 dB min. 2. During input voltage and current test, current measured 51.1 mA @ +21 C, 50.9 mA @ -30 C and 51.0 mA @ +60 C, S/B 45 mA max. 3. Gain Flatness was 0.68 dB peak-to-peak, S/B 0.5 dB max. No system impact. "Use-As-Is".	Awaiting NASA approval	Pines
174	12/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-19	7A59	1. During input voltage and current test, current measured 50.8 mA @ +21 C, 50.6 mA @ -30 C and 51.0 mA @ +60 C, S/B 45 mA max. 2. Gain Flatness was 0.54 dB peak-to-peak, S/B 0.5 dB max. 3. Total Delta Gain measures 1.49 dB , S/B 1.4 dB max. No system impact. "Use-As-Is".	Awaiting NASA approval	Pines
125	6/30/98	Mixer-Amplifier (Out-of-spec condition)	1331562-20	7A40	1) Gain Flatness was between 1.1 and 1.5dB, S/B 1.0dB peak-to-peak. 2) Gain Flatness was 1.38dB peak-to-peak, S/B 1.00dB max. 3) Mixer LO to RF isolation was 22.5dB, S/B 30db min. 4) N.F. was 3.96dB (S/B 3.8dB max). Use-As-Is.	Awaiting NASA approval.	Pines
175	12/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-20	7A60	Gain Flatness was 1.15 dB peak-to-peak, S/B 1.0 dB max. No system impact. "Use-As-Is".	Awaiting NASA approval	Pines

E. Lorenz
3/4/99

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
072	4/10/98	Compensator (Drive assembly supply current above spec.)	1333660-1	F06	Drive assembly supply current above spec. at -10 C. Measured 51mADC (S/B 50 mADC max). No system impact. Use As Is.	Awaiting NASA approval	Alvarez
100	7/7/98	Compensator (Thermistor out-of-spec; connector miswired)	1333660-1	F09	Thermistor read 28 VDC, S/B 3.91 to 4.77 VDC. Connector leads to pins #15 and #21 were miswired.	Awaiting NASA approval	Alvarez
101	7/14/98	Stable Oscillator (Output power stability out-of-spec)	1336610-3	85096	Output power stability variation of 1.2 dB plus .5 dB allowance for aging exceeds spec of +/- 1.5 dB. (Litton)	Need final draft	Pines
095	6/29/98	Stable Oscillator (Low output)	1336610-5	85033	During post-rework confidence test, oscillator exhibited reduced output of 10 dBM. Previously measured 11.8 dBM. (Litton)	Troubleshooting/analysis underway	Pines
178	12/26/98	DRO, Channel 8	1336610-7	85074 (Removed from A1-105)	During the transition from +25C to -12C (T/C # 1), the Channel 8 radiometric counts decreased from ~ 16,000 to ~ 8000. Cause isolated to CH 8 DRO.	Troubleshooting/analysis underway	Pines
078	4/17/98	DRO, Channel 7 (Channel 6 N.F. and Channel 7 NEdeltaT anomalies)	1336610	85022 (Removed from A1-202)	Channel 7 NEdeltaT was between .45K and .65K (S/B .25 max)	Awaiting NASA approval	Pines
106	7/21/98	Stable Oscillator (Faulty Gunn Diode)	1336610-10	FM2 (Removed from A1-202)	During CS02 EMI testing, channel 15 counts dropped from 16200 to 11200. Cause isolated to faulty GDO. Gunn diode shorted.	Awaiting NASA approval.	Pines
133	8/5/98	DRO, Channel 7 (Channel 7 NEdeltaT degraded)	1336610	85022 (Removed from A1-202)	After X-axis vibe, Channel 7 NEdeltaT was 0.447, S/B<0.25. Metal shavings in waveguide.	Awaiting NASA approval	Pines
152	9/16/98	Bearing Assembly	1338266-1 1333666-1	Removed from A2 (105)	Barden examination of bearings removed from A2 drive assembly(F02) revealed contamination. Post vibration sine sweep anomaly caused by cracks in reflector bond area (See F/AR 160), not drive assy/bearings.	Analysis of removed bearings in progress.	Alvarez
075	4/11/98	57 GHz VCGDO (Gunn diode replaced)	1348351-1	79032	V(tune) changed by more than 5V+/-1V. (Litton)	Awaiting NASA approval	Pines

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
104	7/18/98	VCGDO (Foreign material in waveguide)	1348351-1	79039	Foreign material observed inside waveguide.	Troubleshooting/analysis underway	Pines
092	6/15/98	PLO Assembly (Lost lock at +60 C: EMI/RFI filter shorted)	1348360-1	F05	During T/C, broke lock at +60 C. +15V supply dropped to +5V. Isolated cause to shorted EMI/RFI filter. During T/C, exhibited random spurs about main carrier signal. VCGDO and faceplate EMI filters replaced. Problem still exists.	Troubleshooting/analysis underway	Pines
093	6/16/98	PLO Assembly (Lost lock between 32 C & 34.5 C)	1348360-1	F06	PLO lost lock when baseplate temperature was between 32 C and 34.5 C. Unit retuned (R1, R2 reselected). Deadband resolved.	Awaiting NASA approval	Pines
139	8/20/98	PLO Assembly (Spurs in main carrier signal)	1348360-1	F07, F08	During T/C, multiple spurs in main carrier signal. After both units were temperature cycled (before and after retuning) carrier signals showed no spurs.	Awaiting NASA approval	Pines
158	10/20/98	PLO Assembly (Loose screw on DRO cover)	1348360-1	F09	DRO sweep frequency center was 6.899 GHz, S/B 6.8748 GHz. DRO signal would not lock. Loose screw found on DRO cover.	Awaiting NASA approval	Pines
159	10/26/98	PLO Assembly (Resonator puck bond failure)	1348360-1	F10	PLO carrier lock signal was missing and the DRO sweep signal shifted. DRO opened and resonator puck found loose from DRO CCA.	Awaiting NASA approval	Pines
183	2/2/99	PLO Assembly (Test setup current limit set low)	1348360-1	F11	During LPT, after Z-axis vibe, did not lock. Current limit in test setup for -15V inadvertently set to 80mA, S/B 100 mA. No failure of flight hardware.	Awaiting NASA approval	Pines
185	2/9/99	PLO Assembly	1348360-1	F12	PLO ouput power dropped at high temp (+44C).	Troubleshooting/analysis underway	Pines
163	11/2/98	DRO Assembly (DRO cover reversed)	1348400-1	F10	DRO signal shifted 10 MHz to right of center frequency. DRO cover found reversed 180 degrees.	Awaiting NASA approval	Pines
061	3/19/98	PLL Assembly (Faulty U2)	1348500-1	F06	Low resistance across C22. Cause isolated to faulty U2. Analysis indicated ESD damage.	Awaiting NASA approval: Pending calibration completion	Pines

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
087	5/28/98	PLL Assembly (Faulty U2)	1348500-1	F10	During continuity test of C21, resistance was 7.5 kohms (S/B>1Mohm). Isolated to faulty U2; base-emitter shorted; inadequate emitter well coverage.	Awaiting NASA approval	Pines
103	7/15/98	PLL Assembly (Faulty U2)	1348500-1	F13	During continuity test, resistance across C21, C22 and C24 measured 3.94Kohms, 260 ohms and 2.8 Kohms (S/B >1Mohm, >500 ohms, >1Mohm). U2 found defective; base-emitter shorted; inadequate emitter well coverage.	Awaiting NASA approval	Pines
180	1/7/99	PLL Assembly (Vd of U1 out-of-limit)	1348500-1	F14	Output voltage of MMIC Amplifier (U1) measured 4.78 V, S/B 4 +/- 0.5V. Spec. for Vd changed to 3.5V to 5.5V.	Awaiting NASA approval	Pines
134	8/8/98	A1-2 Receiver (PRT RT19 open; PRT RT22 shorted)	1356409-1	F02	PRT RT19 reads open; PRT RT22 is shorted.	Troubleshooting/analysis underway	Nieto
153	9/17/98	A1-2 Receiver (Noise power stability above spec.)	1356409-1	F03	Channels 3, 5 and 8 failed Noise Power Stability (NPS). The readings were .23, .107 and .108, S/B .12, .08 and .08 maximum.	Pre-ATP test incorporated: Need final draft	Pines
168	11/19/98	A1-2 Receiver (Ch.8 N.F. anomaly)	1356409-1	F03	Channel 8 noise figure failed at +44 C. Could not be repeated. DRO replaced.	Troubleshooting/analysis underway	Pines
070	4/1/98	A1-1 Receiver	1356429-1	F01	Channel 6 noise figure was 5.96 dB (S/B 5.2 dB max). Fault isolated to DRO. After DRO replacement, NF passed.	Awaiting NASA approval	Pines
136	8/14/98	A1-1 Receiver (Noise power stability above spec.)	1356429-1	F02	Channel 6 Noise Power Stability was 0.146 (S/B 0.08 max). LO output power to mixer reduced by adjusting waveguide attenuator. NPS reduced to .03.	Awaiting NASA approval	Pines
140	8/25/98	A1-1 Receiver (PLO lock detect below spec. C8 reverse-biased)	1356429-1	F02	During ATP, PLO lock detect was +11V, S/B +14V min. Cause isolated to reverse-biasing of C8 on Loop-Amp CCA. Design changes implemented.	Awaiting NASA approval	Pines
166	11/17/98	A1-1 Receiver (PLO loses lock)	1356429-1	F04	During receiver level adjustment of PLO power, PLO S/N F06 lost lock after 10 to 15 minutes .	Troubleshooting/analysis underway	Pines

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
090	6/3/98	A2 Receiver (Channel 1 noise above spec.)	1356441-1	F02	Channel 1 noise figure read 4.6 dB (S/B 4.5 dB max). Corrected by increasing power to mixer: Reduced N.F. to 4.26 dB. No impact at receiver level.	Awaiting NASA approval	Pines
130	7/27/98	A2 Receiver (Faulty PRT)	1356441-1	F03	Resistance of PRT (RT17) measured 2.586kohm, S/B 2.2kohm +/-100ohm.	Troubleshooting/analysis underway	Pines
131	7/28/98	A2 Receiver	1356441-1	F03	During N.F. test of Ch 2, IF power increased 8dB. No change in output (warm load to cold load).	Troubleshooting/analysis underway	Pines
129	7/27/98	Power Relay and Housekeeping CCA (Wrong value resistor[R37)	1356969-1	C/N 002	Voltage Monitor Signal No. 9 measured 4.08V, S/B 2.85 to 3.15V. Value of R37 was incorrect (measured 14.964kohm, S/B 10kohm).	Need final draft	Nieto
097	7/2/98	V-Band PLO (TRW) (EMI test anomalies)	857270-001	002	Emission levels exceeded spec during RE02 narrowband and CE03 narrowband. No system impact. TRW to add conductive epoxy around worst leakage areas. (TRW)	Awaiting NASA approval	Pines

AMSU-A QUALITY ASSURANCE WEEKLY REPORT FOR WEEK ENDING 3-10-99

Accomplishments Last Week

1. Spent two days on-site at Zero Manufacturing inspecting and assembling documentation in support of the delivery of last four shipping containers. All units were accepted but it took our time to coordinate and assemble the shipping documentation. Another company purchased Zero and the QA Manager hasn't been replaced leaving a void in problem resolution.

2. Supported the TRR's on the A2-105 Momentum Compensation, Weight and C.G. Testing.

3. Supported FRB's including in-house sessions on the A2 106 testing anomalies.

4. Received a memo from Leach International, stating their relays are Electroless Nickel plated. Copies of the memo were sent to W. Daney, D. Crosby, and S. Krimchansky. Aerojet will not perform analysis on parts in inventory per the Weekly Telecon of 3/8/99.

Critical Issues

None

AMSU-A INSTRUMENT STATUS

INSTRUMENT	S/N 202	S/N 105	S/N 106	S/N 107	S/N 108	S/N 109
A1						
Machine Subassy						In assembly
Antenna Subassy					Antenna range	
System Integration				Eng CPT		
PER						
Completed Env. Test & Calibraton Tasks			Baseline CPT			
Scheduled Env. Test & Calibraton Tasks		In Thermal/Vac Calibration				
Final CPT						
PSR						
Shipping Configuration	Shipped					

AMSU-A INSTRUMENT STATUS

INSTRUMENT	S/N 202	S/N 105	S/N 106	S/N 107	S/N 108	S/N 109
A2						
Machine Subassy	↓	↓	↓	↓	↓	↓
Antenna Subassy	↓	↓	↓	↓	↓	Antenna Assy Integration
System Integration	↓	↓	↓	Eng CPT	Initial Assembly	↓
PER	↓	↓	↓	↓	↓	↓
Completed Env. Test & Calibraton Tasks	↓	↓	EMI, Thermal Cycling, Qual Level Vib. (failed)	↓	↓	↓
Scheduled Env. Test & Calibraton Tasks	↓	↓	Vibration anomaly (reflector / antenna drive) investigaton	↓	↓	↓
Final CPT	↓	↓	↓	↓	↓	↓
PSR	↓	PreShip	↓	↓	↓	↓
Shipping Configuration	Shipped	↓	↓	↓	↓	↓

AMSU-A

STATUS OF OPEN F/ARs

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
105	7/20/98	METSAT/AMSU-A2 (Floating bits)	1331200-2	105	One or more bits in the Digital B Data Byte 2 reading "1" (S/B "0"). These bits are not used (floating). Wires added to jumper unused inputs to ground.	Awaiting NASA approval	Nieto
138	8/19/98	METSAT/AMSU-A2 (RE02 emissions for special frequencies above spec)	1331200-2	105	RE02 emissions exceeded limits for special frequencies in range of 120 MHz to 123 MHz, except center frequency of 121.5 MHz. Additional shielding used to lower emissions.	Awaiting NASA approval	Paliwoda
160	10/27/98	METSAT/AMSU-A2 (Resonant frequency change in reflector/motor assy)	1331200-2	105	Post-vibration Bode plot for reflector/motor assy. showed a new peak at about 122 HZ and the original resonant frequency peak had shifted from 223.34 HZ to 204.87 HZ. Cracks in bonded reflector joints.	Awaiting NASA approval	Alvarez
164	11/9/98	METSAT/AMSU-A2 (Faulty PRT)	1331200-2	106	RF Mux PRT read 52.25 C, S/B 25+/-5 C. Cause isolated to faulty PRT.	Troubleshooting/analysis underway	Nieto
179	12/22/98	METSAT/AMSU-A2 (Reflector's main resonance shifted)	1331200-2	106	Post Z-axis vibe sine sweep showed 20 Hz shift in first natural frequency. Reflector's main resonance response has changed from 223Hz to 214Hz. R-D converter replaced / SAT resistors changed (as risk mitigation with no evidence of failure).	Troubleshooting/analysis underway	Alvarez
188	2/22/99	METSAT/AMSU-A2 (Open PRT)	1331200-2	107	PRT 3 (RF Diplexer) open. Dig A Temp reading was 32767, S/B ~18660.	Troubleshooting/analysis underway	A. Nieto
141	8/26/98	METSAT/AMSU-A1 (Channel 4 bandpass had spurious noise at 26 MHz)	1331720-2	105	Channel 4 bandpass exhibited spurious noise (i.e. approximately +5dB, S/B ±1dB) at 26 MHz. Corrected by grounding W7 cable and wrapping Channel 4 Mixer/IF Amplifier joint with wire mesh tape.	Awaiting NASA approval	Nieto
154	9/24/98	METSAT/AMSU-A1 (Channel 7 bandpass had spurious noise at 12 MHz)	1331720-2	105	Channel 4 bandpass exhibited spurious noise (i.e. approximately +3dB peak) at 12MHz. Corrected by adding EMI mesh around Channel 7 mixer to IF amplifier joint.	Awaiting NASA approval	Nieto
171	12/5/98	METSAT/AMSU-A1	1331720-2	105	Post X-axis vibration low level sine sweep showed resonance at ~120Hz that was not seen at pre-vibe.	Final draft routed for review/signature	Alvarez
181	1/11/99	METSAT/AMSU-A1	1331720-2	105	PRT #4 on A1-2 feedhorn reading temperature 8-10 C higher than A1-1 feedhorn.	Final draft in preparation	Nieto

E. Lorenz
3/11/99

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
190	2/17/99	METSAT/AMSU-A1 (Out-of-spec linearity)	1331720-2	105	Out-of-spec calculated linearity on Channels 6, 7, 9 thru 14.	Final draft in preparation	Paliwoda
191	2/23/99	METSAT/AMSU-A1 (High count delta using METOP gnd)	1331720-2	105	When using METOP gnd (Task 12) to determine effect on AMSU-A calib., count difference between samples 1 and 2 was 10-15, expected is 6-7.	Final draft in preparation	Paliwoda
182	1/21/99	METSAT/AMSU-A1	1331720-2	106	Measurement from TB3-E1 to TB3-E2 for PRT RT3 read open.	Troubleshooting/analysis underway	Nieto
184	2/2/99	METSAT/AMSU-A1 (Resistor out-of-spec.)	1331720-2	106	Turn-on inrush current for main load bus (1st current spike) below normal. DC-DC Converter(FM7) replaced. R600 resistor was out-of-spec.	Troubleshooting/analysis underway at FEI	Nieto
189	3/1/99	METSAT/AMSU-A1 (Short at connector)	1331720-2	106	Full Print Ch. 12 counts ~9000, S/B 16000-17000. Metal sliver shorting at semi-rigid connector connected to J552.	Troubleshooting/analysis underway	A. Nieto
170	11/25/98	METSAT/AMSU-A1 (CCA connectors inserted upside down)	1331720-2	107	During integration, +5V and -15V scan drive power supplies went into current limit. Found J403 and J404 connectors for motor driver CCAs installed upside down in upper card cage.	Troubleshooting/analysis underway	Nieto
187	2/19/99	METSAT/AMSU-A1 (Missing capacitor in DRO)	1331720-2	107	Ch. 5 IF output power was -34.38 dBm (S/B -27+/-1 dBm). Capacitor C5 missing in DRO voltage shutdown circuit.	Troubleshooting/analysis underway	D. Pines
096	6/18/98	Secondary Reflector Housing (Cracked)	1333382	N/A	Cracks in corner braze joints observed on secondary reflector housing of the EOS/AMSU-A2 (S/N 202). Housing redesigned.	Awaiting NASA approval	Alvarez
081	4/27/98	Reflector (Full vacuum not maintained during T/V test)	1355835	008, 009	During T/V test, full vacuum level not maintained at various times during cycling. Cooling system was leaking nitrogen into chamber each time it cycled. Use-As-Is. (COI)	Awaiting NASA approval	Alvarez
094	6/25/98	DC-DC Converter (Lost regulation; SAT resistor value too low).	1356010	FM5	During thermal vacuum at +60°C, the Module 4 outputs lost regulation. Current limiting SAT resistor value too low. High temperature, max load condition not seen in actual operation. FRB approved "Use As Is". (FEI)	Need final draft	Nieto

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
086	5/27/98	A2 Antenna Assembly	1331210-3	F03	Computed means for down track angle on beam positions 1 & 15 slightly above spec. Reflector(P/N 1355835-1, S/N 6) replaced with S/N 7. Alignment measurements within spec.	Awaiting NASA approval	Alvarez
107	7/21/98	A1 Antenna Assembly (Burrs/debris inside feedhorn)	1331400-2	F03	Channel 15 beampointing much different from Channels 3-14. Burrs/debris found inside feedhorn. Feedhorn replaced.	Awaiting rework/retest.	Alvarez
161	10/29/98	A1 Antenna Assembly (Burrs/debris inside feedhorn)	1331400-2	F03	Beamwidth at Beam Position 15 (crosstrack) for Channel 15 was 3.73 degrees, S/B 2.97 to 3.63 degrees. Feedhorn replaced.	Troubleshooting/analysis underway	Alvarez
098	6/30/98	Mixer-Amplifier (Out-of-spec condition)	1331562-11	7A31	N.F. was 3.6dB, S/B 3.5dB max. LO to RF isolation was 25.4dB, S/B 30dB min. Unit retuned at Spacek. Now meets all requirements. Range expanded for setting L.O. power	Awaiting NASA approval	Pines
119	6/30/98	Mixer-Amplifier (Out-of-spec condition)	1331562-12	7A32	1) Noise Figure measured 3.3dB (S/B 3.2dB max) at L.O. power setting of +11.5dBm. 2) Overall gain measured 66.59dB, S/B 65±1.0dB. SDARs approved: Use-As-Is.	Awaiting NASA approval.	Pines
144	8/27/98 9/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-13	7A43	1) Mixer LO to RF isolation was 27.2dB, S/B 30db min. 2) Overall Gain was 66.47dB, S/B 65 +/- 1.0dB. No system impact. Use-As-Is.	Awaiting NASA approval	Pines
112	6/30/98	Mixer-Amplifier (Out-of-spec condition)	1331562-14	7A24	Gain sensitivity measured 1.50dB, S/B 1.4dB max. No longer a requirement at this level. SDAR withdrawn.	Awaiting NASA approval.	Pines
120	6/30/98	Mixer-Amplifier (Out-of-spec condition)	1331562-14	7A34	1) Gain Flatness was 0.55dB peak-to-peak, S/B 0.05 dB max. 2) Mixer LO to RF isolation was 25.5dB, S/B 30db min. 3) N.F. was 3.3dB (S/B 3.2dB max) at L.O. power setting of +11.5dBm. 4) Overall gain was 66.32dB, S/B 65±1.0dB. Use-As-Is.	Awaiting NASA approval.	Pines

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
145	8/27/98 8/31/98 9/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-14	7A44	1) N.F. was 3.85dB (S/B 3.8dB max) at L.O. power setting of +11.5dBm. 2) Mixer LO to RF isolation was 28.5dB, S/B 30db min. 3) Gain Flatness was 0.52dB peak-to-peak, S/B 0.5 dB max. 4) Overall Gain was 66.41dB, S/B 65 +/- 1.0dB. Unit retuned.	Awaiting NASA approval	Pines
172	12/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-14	7A54	Gain Flatness was 0.52 dB peak-to-peak, S/B 0.5 dB max. No system impact. "Use-As-Is".	Awaiting NASA approval	Pines
073	4/14/98	Mixer/Amplifier (Output low)	1331562-16	7A16	During noise figure test of a suspect DRO, mixer output was below -30dBM (S/B -27dBm +/- 1dBm).	Awaiting NASA approval	Pines
148	8/27/98 9/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-17	7A47	1) Mixer LO to RF isolation was 26.5dB, S/B 30db min. 2) Overall Gain was 66.40dB, S/B 65 +/- 1.0dB. No system impact. Use-As-Is.	Awaiting NASA approval	Pines
173	12/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-18	7A58	Gain Flatness was 0.58 dB peak-to-peak, S/B 0.5 dB max. No system impact. "Use-As-Is".	Awaiting NASA approval	Pines
176	12/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-18	7A68	Gain Flatness was 0.62 dB peak-to-peak, S/B 0.5 dB max. No system impact. "Use-As-Is".	Awaiting NASA approval	Pines
177	12/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-19	7A69	1. LO to RF isolation measured 25.3 dB with +8.5 dBm LO power, S/B 27.5 dB min. 2. During input voltage and current test, current measured 51.1 mA @ +21 C, 50.9 mA @ -30 C and 51.0 mA @ +60 C, S/B 45 mA max. 3. Gain Flatness was 0.68 dB peak-to-peak, S/B 0.5 dB max. No system impact. "Use-As-Is".	Awaiting NASA approval	Pines
174	12/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-19	7A59	1. During input voltage and current test, current measured 50.8 mA @ +21 C, 50.6 mA @ -30 C and 51.0 mA @ +60 C, S/B 45 mA max. 2. Gain Flatness was 0.54 dB peak-to-peak, S/B 0.5 dB max. 3. Total Delta Gain measures 1.49 dB , S/B 1.4 dB max. No system impact. "Use-As-Is".	Awaiting NASA approval	Pines

E. Lorenz
3/11/99

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
125	6/30/98	Mixer-Amplifier (Out-of-spec condition)	1331562-20	7A40	1) Gain Flatness was between 1.1 and 1.5dB, S/B 1.0dB peak-to-peak. 2) Gain Flatness was 1.38dB peak-to-peak, S/B 1.00dB max. 3) Mixer LO to RF Isolation was 22.5dB, S/B 30db min. 4) N.F. was 3.96dB (S/B 3.8dB max). Use-As-Is.	Awaiting NASA approval.	Pines
175	12/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-20	7A60	Gain Flatness was 1.15 dB peak-to-peak, S/B 1.0 dB max. No system impact. "Use-As-Is".	Awaiting NASA approval	Pines
151	8/27/98 8/31/98 9/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-20	7A50	1) RF return loss was 11.0dB @ 87.45GHz, 13.5dB @ 89.00GHz, 11.4dB @ 90.55GHz (S/B 14dB min). 2) Gain Flatness was 1.42dB peak-to-peak, S/B 1.0 dB max. 3) Overall Gain was 55.34dB, S/B 53 +/-1.0dB. No system impact. Use-As-Is.	Awaiting NASA approval	Pines
156	9/30/98	A1 METSAT Signal Processor (Shorted wire on backplane)	1331670-2	F04	Display on AASPTF was "FAIL 000", S/B "PASS". Wire from J310-64 to J301-21 shorted to post on J304-43.	Awaiting rework/retest.	Nieto
162	10/29/98	A1 Signal Processor (Faulty resistors)	1331670-2	F04	Digital A Temperature No. 15 readout was 32767, S/B 28259 to 32513. Digital A Temperature No. 33 readout was 24858, S/B 28259 to 32513. R34 on F33 and R35 on F28 found suspect.	Troubleshooting/analysis underway	Nieto
155	9/29/98	A1 Signal Processor (Cable and CCA plugged in wrong way)	1331670-2	F05	5V supply dropped to 2.7V. P1 of Scan Drive Interface cable and Motor Driver CCA plugged in the wrong way.	Rework/retest completed: Need final F/AR	Nieto
169	11/19/98	A1 Drive Assembly	1333640-1	F14	Current waveform commutation spikes above-limits.	Troubleshooting/analysis underway	Alvarez
048	12/1/97	A1 Rotating Assemblies (Inadequate lube on bearings)	1333647-1	F11, F12	Two of four units failed starting torque test at -10 C. Inadequate bearing lubrication due to repeated rinsing. Plan developed at Ball for lubrication of new bearing sets and relube of those removed from systems.	Awaiting NASA approval	Alvarez
077	4/15/98	A2 Drive Assembly	1333650-1	F05	Motor supply current exceeded spec. at both start-up and 500mVDC. Measured 51mADC and 52 mADC (S/B 50 mADC max). Motor returned to Vernitron.	Troubleshooting/analysis underway	Alvarez

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
186	2/15/99	A2 Drive Assembly	1333650-1	F05	Motor would not turn on. Did not rotate in CW or CCW directions.	Troubleshooting/analysis underway	Alvarez
167	11/19/98	A2 Drive Assembly (Motor clicking noise)	1333650-1	F08	Soft clicking noise heard as motor rotated.	Troubleshooting/analysis underway	Alvarez
067	3/26/98	Compensator (Motor would not rotate)	1333660-1	F05	Motor would not rotate. Hall-Effect devices found broken off of motor board. MAI revised.	Awaiting NASA approval	Alvarez
072	4/10/98	Compensator (Drive assembly supply current above spec.)	1333660-1	F06	Drive assembly supply current above spec. at -10 C. Measured 51mADC (S/B 50 mADC max). No system impact. Use As Is.	Awaiting NASA approval	Alvarez
100	7/7/98	Compensator (Thermistor out-of-spec; connector miswired)	1333660-1	F09	Thermistor read 28 VDC, S/B 3.91 to 4.77 VDC. Connector leads to pins #15 and #21 were miswired.	Awaiting NASA approval	Alvarez
101	7/14/98	Stable Oscillator (Output power stability out-of-spec)	1336610-3	85096	Output power stability variation of 1.2 dB plus .5 dB allowance for aging exceeds spec of +/- 1.5 dB. (Litton)	Need final draft	Pines
095	6/29/98	Stable Oscillator (Low output)	1336610-5	85033	During post-rework confidence test, oscillator exhibited reduced output of 10 dBM. Previously measured 11.8 dBM. (Litton)	Troubleshooting/analysis underway	Pines
178	12/26/98	DRO, Channel 8	1336610-7	85074 (Removed from A1-105)	During the transition from +25C to -12C (T/C # 1), the Channel 8 radiometric counts decreased from ~ 16,000 to ~ 8000. Cause isolated to CH 8 DRO.	Troubleshooting/analysis underway	Pines
078	4/17/98	DRO, Channel 7 (Channel 6 N.F. and Channel 7 NEdeltaT anomalies)	1336610	85022 (Removed from A1-202)	Channel 7 NEdeltaT was between .45K and .65K (S/B .25 max)	Awaiting NASA approval	Pines
106	7/21/98	Stable Oscillator (Faulty Gunn Diode)	1336610-10	FM2 (Removed from A1-202)	During CS02 EMI testing, channel 15 counts dropped from 16200 to 11200. Cause isolated to faulty GDO. Gunn diode shorted.	Awaiting NASA approval.	Pines
133	8/5/98	DRO, Channel 7 (Channel 7 NEdeltaT degraded)	1336610	85022 (Removed from A1-202)	After X-axis vibe, Channel 7 NEdeltaT was 0.447, S/B<0.25. Metal shavings in waveguide.	Awaiting NASA approval	Pines

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
152	9/16/98	Bearing Assembly	1338266-1 1333666-1	Removed from A2 (105)	Barden examination of bearings removed from A2 drive assembly(F02) revealed contamination. Post vibration sine sweep anomaly caused by cracks in reflector bond area (See F/AR 160), not drive assy/bearings.	Analysis of removed bearings in progress.	Alvarez
075	4/11/98	57 GHz VCGDO (Gunn diode replaced)	1348351-1	79032	V(tune) changed by more than 5V+/-1V. (Litton)	Awaiting NASA approval	Pines
104	7/18/98	VCGDO (Foreign material in waveguide)	1348351-1	79039	Foreign material observed inside waveguide.	Troubleshooting/analysis underway	Pines
092	6/15/98	PLO Assembly (Lost lock at +60 C: EMI/RFI filter shorted)	1348360-1	F05	During T/C, broke lock at +60 C. +15V supply dropped to +5V. Isolated cause to shorted EMI/RFI filter. During T/C, exhibited random spurs about main carrier signal. VCGDO and faceplate EMI filters replaced. Problem still exists.	Troubleshooting/analysis underway	Pines
093	6/16/98	PLO Assembly (Lost lock between 32 C & 34.5 C)	1348360-1	F06	PLO lost lock when baseplate temperature was between 32 C and 34.5 C. Unit retuned (R1, R2 reselected). Deadband resolved.	Awaiting NASA approval	Pines
139	8/20/98	PLO Assembly (Spurs in main carrier signal)	1348360-1	F07, F08	During T/C, multiple spurs in main carrier signal. After both units were temperature cycled (before and after retuning) carrier signals showed no spurs.	Awaiting NASA approval	Pines
158	10/20/98	PLO Assembly (Loose screw on DRO cover)	1348360-1	F09	DRO sweep frequency center was 6.899 GHz, S/B 6.8748 GHz. DRO signal would not lock. Loose screw found on DRO cover.	Awaiting NASA approval	Pines
159	10/26/98	PLO Assembly (Resonator puck bond failure)	1348360-1	F10	PLO carrier lock signal was missing and the DRO sweep signal shifted. DRO opened and resonator puck found loose from DRO CCA.	Awaiting NASA approval	Pines
183	2/2/99	PLO Assembly (Test setup current limit set low)	1348360-1	F11	During LPT, after Z-axis vibe, did not lock. Current limit in test setup for -15V inadvertently set to 80mA, S/B 100 mA. No failure of flight hardware.	Awaiting NASA approval	Pines
185	2/9/99	PLO Assembly	1348360-1	F12	PLO ouput power dropped at high temp (+44C).	Troubleshooting/analysis underway	Pines

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
163	11/2/98	DRO Assembly (DRO cover reversed)	1348400-1	F10	DRO signal shifted 10 MHz to right of center frequency. DRO cover found reversed 180 degrees.	Awaiting NASA approval	Pines
061	3/19/98	PLL Assembly (Faulty U2)	1348500-1	F06	Low resistance across C22. Cause isolated to faulty U2. Analysis indicated ESD damage.	Awaiting NASA approval: Pending calibration completion	Pines
087	5/28/98	PLL Assembly (Faulty U2)	1348500-1	F10	During continuity test of C21, resistance was 7.5 kohms (S/B>1Mohm). Isolated to faulty U2; base-emitter shorted; inadequate emitter well coverage.	Awaiting NASA approval	Pines
103	7/15/98	PLL Assembly (Faulty U2)	1348500-1	F13	During continuity test, resistance across C21, C22 and C24 measured 3.94Kohms, 260 ohms and 2.8 Kohms (S/B >1Mohm, >500 ohms, >1Mohm). U2 found defective; base-emitter shorted; inadequate emitter well coverage.	Awaiting NASA approval	Pines
180	1/7/99	PLL Assembly (Vd of U1 out-of-limit)	1348500-1	F14	Output voltage of MMIC Amplifier (U1) measured 4.78 V, S/B 4 +/- 0.5V. Spec. for Vd changed to 3.5V to 5.5V.	Awaiting NASA approval	Pines
134	8/8/98	A1-2 Receiver (PRT RT19 open; PRT RT22 shorted)	1356409-1	F02	PRT RT19 reads open; PRT RT22 is shorted.	Need final draft	Nieto
153	9/17/98	A1-2 Receiver (Noise power stability above spec.)	1356409-1	F03	Channels 3, 5 and 8 failed Noise Power Stability (NPS). The readings were .23, .107 and .108, S/B .12, .08 and .08 maximum.	Pre-ATP test incorporated: Need final draft	Pines
168	11/19/98	A1-2 Receiver (Ch.8 N.F. anomaly)	1356409-1	F03	Channel 8 noise figure failed at +44 C. Could not be repeated. DRO replaced.	Troubleshooting/analysis underway	Pines
070	4/1/98	A1-1 Receiver	1356429-1	F01	Channel 6 noise figure was 5.96 dB (S/B 5.2 dB max). Fault isolated to DRO. After DRO replacement, NF passed.	Awaiting NASA approval	Pines
136	8/14/98	A1-1 Receiver (Noise power stability above spec.)	1356429-1	F02	Channel 6 Noise Power Stability was 0.146 (S/B 0.08 max). LO output power to mixer reduced by adjusting waveguide attenuator. NPS reduced to .03.	Awaiting NASA approval	Pines
140	8/25/98	A1-1 Receiver (PLO lock detect below spec. C8 reverse-biased)	1356429-1	F02	During ATP, PLO lock detect was +11V, S/B +14V min. Cause isolated to reverse-biasing of C8 on Loop-Amp CCA. Design changes implemented.	Awaiting NASA approval	Pines

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
166	11/17/98	A1-1 Receiver (PLO loses lock)	1356429-1	F04	During receiver level adjustment of PLO power, PLO S/N F06 lost lock after 10 to 15 minutes .	Troubleshooting/analysis underway	Pines
090	6/3/98	A2 Receiver (Channel 1 noise above spec.)	1356441-1	F02	Channel 1 noise figure read 4.6 dB (S/B 4.5 dB max). Corrected by increasing power to mixer: Reduced N.F. to 4.26 dB. No impact at receiver level.	Awaiting NASA approval	Pines
130	7/27/98	A2 Receiver (Faulty PRT)	1356441-1	F03	Resistance of PRT (RT17) measured 2.586kohm, S/B 2.2kohm +/-100ohm.	Troubleshooting/analysis underway	Pines
131	7/28/98	A2 Receiver	1356441-1	F03	During N.F. test of Ch 2, IF power increased 8dB. No change in output (warm load to cold load).	Troubleshooting/analysis underway	Pines
129	7/27/98	Power Relay and Housekeeping CCA (Wrong value resistor[R37)	1356969-1	C/N 002	Voltage Monitor Signal No. 9 measured 4.08V, S/B 2.85 to 3.15V. Value of R37 was incorrect (measured 14.964kohm, S/B 10kohm).	Need final draft	Nieto
097	7/2/98	V-Band PLO (TRW) (EMI test anomalies)	857270-001	002	Emission levels exceeded spec during RE02 narrowband and CE03 narrowband. No system impact. TRW to add conductive epoxy around worst leakage areas. (TRW)	Awaiting NASA approval	Pines

AMSU-A QUALITY ASSURANCE WEEKLY REPORT FOR WEEK ENDING 3-10-99

Accomplishments Last Week

1. Continuing to support shipping coordination meetings for the A1 and A2 106 Units.

2. Supported the TRR's and FRB's as scheduled.

Critical Issues

None

AMSU-A INSTRUMENT STATUS

INSTRUMENT	S/N 202	S/N 105	S/N 106	S/N 107	S/N 108	S/N 109
A1						
Machine Subassy						In assembly
Antenna Subassy					Antenna range	
System Integration				Eng CPT		
PER						
Completed Env. Test & Calibraton Tasks			Baseline CPT			
Scheduled Env. Test & Calibraton Tasks						
Final CPT						
PSR		Pre Ship				
Shipping Configuration	Shipped					

AMSU-A INSTRUMENT STATUS

INSTRUMENT	S/N 202	S/N 105	S/N 106	S/N 107	S/N 108	S/N 109
A2						
Machine Subassy	↓	↓	↓	↓	↓	↓
Antenna Subassy	↓	↓	↓	↓	↓	Antenna Assy Integration
System Integration	↓	↓	↓	Eng CPT	Initial Assembly	↓
PER	↓	↓	↓	↓	↓	↓
Completed Env. Test & Calibraton Tasks	↓	↓	EMI, Thermal Cycling, Qual Level Vib. (failed)	↓	↓	↓
Scheduled Env. Test & Calibraton Tasks	↓	↓	Vibration anomaly (reflector / antenna drive) investigaton	↓	↓	↓
Final CPT	↓	↓	↓	↓	↓	↓
PSR	↓	PreShip	↓	↓	↓	↓
Shipping Configuration	Shipped	↓	↓	↓	↓	↓

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
160	10/27/98	METSAT/AMSU-A2 (Resonant frequency change in reflector/motor assy)	1331200-2	105	Post-vibration Bode plot for reflector/motor assy. showed a new peak at about 122 HZ and the original resonant frequency peak had shifted from 223.34 HZ to 204.87 HZ. Cracks in bonded reflector joints.	Awaiting NASA approval	Alvarez
164	11/9/98	METSAT/AMSU-A2 (Faulty PRT)	1331200-2	106	RF Mux PRT read 52.25 C, S/B 25+/-5 C. Cause isolated to faulty PRT.	Troubleshooting/analysis underway	Nieto
179	12/22/98	METSAT/AMSU-A2 (Reflector's main resonance shifted)	1331200-2	106	Post Z-axis vibe sine sweep showed 20 Hz shift in first natural frequency. Reflector's main resonance response has changed from 223Hz to 214Hz. R-D converter replaced / SAT resistors changed (as risk mitigation with no evidence of failure).	Troubleshooting/analysis underway	Alvarez
188	2/22/99	METSAT/AMSU-A2 (Open PRT)	1331200-2	107	PRT 3 (RF Diplexer) open. Dig A Temp reading was 32767, S/B ~18660.	Troubleshooting/analysis underway	Nieto
171	12/5/98	METSAT/AMSU-A1 (New resonance at ~120 Hz)	1331720-2	105	Post X-axis vibration low level sine sweep showed resonance at ~120Hz that was not seen at pre-vibe. Finite element vibration model predicted this resonant frequency.	Awaiting NASA approval	Alvarez
190	2/17/99	METSAT/AMSU-A1 (Out-of-spec linearity)	1331720-2	105	Out-of-spec calculated linearity on Channels 6, 7, 9 thru 14. Waiver request (CCR 8127) submitted.	Awaiting NASA approval	Paliwoda
182	1/21/99	METSAT/AMSU-A1	1331720-2	106	Measurement from TB3-E1 to TB3-E2 for PRT RT3 read open.	Troubleshooting/analysis underway	Nieto
184	2/2/99	METSAT/AMSU-A1 (Resistor out-of-spec.)	1331720-2	106	Turn-on inrush current for main load bus (1st current spike) below normal. DC-DC Converter(FM7) replaced. R600 resistor was out-of-spec.	Troubleshooting/analysis underway at FEI	Nieto
189	3/1/99	METSAT/AMSU-A1 (Short at connector)	1331720-2	106	Full Print Ch. 12 counts ~9000, S/B 16000-17000. Metal sliver shorting at semi-rigid connector connected to J552.	Troubleshooting/analysis underway	Nieto
170	11/25/98	METSAT/AMSU-A1 (CCA connectors inserted upside down)	1331720-2	107	During integration, +5V and -15V scan drive power supplies went into current limit. Found J403 and J404 connectors for motor driver CCAs installed upside down in upper card cage.	Troubleshooting/analysis underway	Nieto
187	2/19/99	METSAT/AMSU-A1 (Missing capacitor in DRO)	1331720-2	107	Ch. 5 IF output power was -34.38 dBm (S/B -27+/-1 dBm). Capacitor C5 missing in DRO voltage shutdown circuit.	Troubleshooting/analysis underway	Lambert

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
096	6/18/98	Secondary Reflector Housing (Cracked)	1333382	N/A	Cracks in corner braze joints observed on secondary reflector housing of the EOS/AMSU-A2 (S/N 202). Housing redesigned.	Awaiting NASA approval	Alvarez
094	6/25/98	DC-DC Converter (Lost regulation; SAT resistor value too low).	1356010	FM5	During thermal vacuum at +60°C, the Module 4 outputs lost regulation. Current limiting SAT resistor value too low. High temperature, max load condition not seen in actual operation. FRB approved "Use As Is". (FEI)	Need final draft	Nieto
086	5/27/98	A2 Antenna Assembly	1331210-3	F03	Computed means for down track angle on beam positions 1 & 15 slightly above spec. Reflector(P/N 1355835-1, S/N 6) replaced with S/N 7. Alignment measurements within spec.	Awaiting NASA approval	Alvarez
161	10/29/98	A1 Antenna Assembly (Burrs/debris inside feedhorn)	1331400-2	F03	Beamwidth at Beam Position 15 (crosstrack) for Channel 15 was 3.73 degrees, S/B 2.97 to 3.63 degrees. Feedhorn replaced.	Troubleshooting/analysis underway	Alvarez
098	6/30/98	Mixer-Amplifier (Out-of-spec condition)	1331562-11	7A31	N.F. was 3.6dB, S/B 3.5dB max. LO to RF isolation was 25.4dB, S/B 30dB min. Unit retuned at Spacek. Now meets all requirements. Range expanded for setting L.O. power	Awaiting NASA approval	Lambert
119	6/30/98	Mixer-Amplifier (Out-of-spec condition)	1331562-12	7A32	1) Noise Figure measured 3.3dB (S/B 3.2dB max) at L.O. power setting of +11.5dBm. 2) Overall gain measured 66.59dB, S/B 65±1.0dB. SDARs approved: Use-As-Is.	Awaiting NASA approval.	Lambert
144	8/27/98 9/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-13	7A43	1) Mixer LO to RF Isolation was 27.2dB, S/B 30db min. 2) Overall Gain was 66.47dB, S/B 65 +/- 1.0dB. No system impact. Use-As-Is.	Awaiting NASA approval	Lambert
112	6/30/98	Mixer-Amplifier (Out-of-spec condition)	1331562-14	7A24	Gain sensitivity measured 1.50dB, S/B 1.4dB max. No longer a requirement at this level. SDAR withdrawn.	Awaiting NASA approval.	Lambert

E. Lorenz
3/18/99

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
120	6/30/98	Mixer-Amplifier (Out-of-spec condition)	1331562-14	7A34	1) Gain Flatness was 0.55dB peak-to-peak, S/B 0.05 dB max. 2) Mixer LO to RF isolation was 25.5dB, S/B 30db min. 3) N.F. was 3.3dB (S/B 3.2dB max) at L.O. power setting of +11.5dBm. 4) Overall gain was 66.32dB, S/B 65±1.0dB. Use-As-Is.	Awaiting NASA approval.	Lambert
145	8/27/98 8/31/98 9/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-14	7A44	1) N.F. was 3.85dB (S/B 3.8dB max) at L.O. power setting of +11.5dBm. 2) Mixer LO to RF isolation was 28.5dB, S/B 30db min. 3) Gain Flatness was 0.52dB peak-to-peak, S/B 0.5 dB max. 4) Overall Gain was 66.41dB, S/B 65 +/- 1.0dB. Unit retuned.	Awaiting NASA approval	Lambert
172	12/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-14	7A54	Gain Flatness was 0.52 dB peak-to-peak, S/B 0.5 dB max. No system impact. "Use-As-Is".	Awaiting NASA approval	Lambert
073	4/14/98	Mixer/Amplifier (Output low)	1331562-16	7A16	During noise figure test of a suspect DRO, mixer output was below -30dBM (S/B -27dBm +/- 1dBm).	Awaiting NASA approval	Lambert
148	8/27/98 9/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-17	7A47	1) Mixer LO to RF isolation was 26.5dB, S/B 30db min. 2) Overall Gain was 66.40dB, S/B 65 +/- 1.0dB. No system impact. Use-As-Is.	Awaiting NASA approval	Lambert
173	12/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-18	7A58	Gain Flatness was 0.58 dB peak-to-peak, S/B 0.5 dB max. No system impact. "Use-As-Is".	Awaiting NASA approval	Lambert
176	12/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-18	7A68	Gain Flatness was 0.62 dB peak-to-peak, S/B 0.5 dB max. No system impact. "Use-As-Is".	Awaiting NASA approval	Lambert
177	12/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-19	7A69	1. LO to RF isolation measured 25.3 dB with +8.5 dBm LO power, S/B 27.5 dB min. 2. During input voltage and current test, current measured 51.1 mA @ +21□C, 50.9 mA @ -30□C and 51.0 mA @ +60□C, S/B 45 mA max. 3. Gain Flatness was 0.68 dB peak-to-peak, S/B 0.5 dB max. No system impact. "Use-As-Is".	Awaiting NASA approval	Lambert
174	12/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-19	7A59	1. During input voltage and current test, current measured 50.8 mA @ +21□C, 50.6 mA @ -30□C and 51.0 mA @ +60□C, S/B 45 mA max. 2. Gain Flatness was 0.54 dB peak-to-peak, S/B 0.5 dB max. 3. Total Delta Gain measures 1.49 dB , S/B 1.4 dB max. No system impact. "Use-As-Is".	Awaiting NASA approval	Lambert

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
125	6/30/98	Mixer-Amplifier (Out-of-spec condition)	1331562-20	7A40	1) Gain Flatness was between 1.1 and 1.5dB, S/B 1.0dB peak-to-peak. 2) Gain Flatness was 1.38dB peak-to-peak, S/B 1.00dB max. 3) Mixer LO to RF isolation was 22.5dB, S/B 30db min. 4) N.F. was 3.96dB (S/B 3.8dB max). Use-As-Is.	Awaiting NASA approval.	Lambert
175	12/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-20	7A60	Gain Flatness was 1.15 dB peak-to-peak, S/B 1.0 dB max. No system impact. "Use-As-Is".	Awaiting NASA approval	Lambert
151	8/27/98 8/31/98 9/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-20	7A50	1) RF return loss was 11.0dB @ 87.45GHz, 13.5dB @ 89.00GHz, 11.4dB @ 90.55GHz (S/B 14dB min). 2) Gain Flatness was 1.42dB peak-to-peak, S/B 1.0 dB max. 3) Overall Gain was 55.34dB, S/B 53 +/-1.0dB. No system impact. Use-As-Is.	Awaiting NASA approval	Lambert
156	9/30/98	A1 METSAT Signal Processor (Shorted wire on backplane)	1331670-2	F04	Display on AASPTF was "FAIL 000", S/B "PASS". Wire from J310-64 to J301-21 shorted to post on J304-43.	Awaiting rework/retest.	Nieto
162	10/29/98	A1 Signal Processor (Faulty resistors)	1331670-2	F04	Digital A Temperature No. 15 readout was 32767, S/B 28259 to 32513. Digital A Temperature No. 33 readout was 24858, S/B 28259 to 32513. R34 on F33 and R35 on F28 found suspect.	Troubleshooting/analysis underway	Nieto
155	9/29/98	A1 Signal Processor (Cable and CCA plugged in wrong way)	1331670-2	F05	5V supply dropped to 2.7V. P1 of Scan Drive Interface cable and Motor Driver CCA plugged in the wrong way.	Rework/retest completed: Need final F/AR	Nieto
169	11/19/98	A1 Drive Assembly	1333640-1	F14	Current waveform commutation spikes above-limits.	Troubleshooting/analysis underway	Alvarez
048	12/1/97	A1 Rotating Assemblies (Inadequate lube on bearings)	1333647-1	F11, F12	Two of four units failed starting torque test at -10 C. Inadequate bearing lubrication due to repeated rinsing. Plan developed at Ball for lubrication of new bearing sets and relube of those removed from systems.	Awaiting NASA approval	Alvarez
077	4/15/98	A2 Drive Assembly	1333650-1	F05	Motor supply current exceeded spec. at both start-up and 500mVDC. Measured 51mADC and 52 mADC (S/B 50 mADC max). Motor returned to Vernitron.	Troubleshooting/analysis underway	Alvarez
186	2/15/99	A2 Drive Assembly	1333650-1	F05	Motor would not turn on. Did not rotate in CW or CCW directions.	Troubleshooting/analysis underway	Alvarez

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
167	11/19/98	A2 Drive Assembly (Motor clicking noise)	1333650-1	F08	Soft clicking noise heard as motor rotated.	Troubleshooting/analysis underway	Alvarez
067	3/26/98	Compensator (Motor would not rotate)	1333660-1	F05	Motor would not rotate. Hall-Effect devices found broken off of motor board. MAI revised.	Awaiting NASA approval	Alvarez
072	4/10/98	Compensator (Drive assembly supply current above spec.)	1333660-1	F06	Drive assembly supply current above spec. at -10 C. Measured 51mADC (S/B 50 mADC max). No system impact. Use As Is.	Awaiting NASA approval	Alvarez
101	7/14/98	Stable Oscillator (Output power stability out-of-spec)	1336610-3	85096	Output power stability variation of 1.2 dB plus .5 dB allowance for aging exceeds spec of +/- 1.5 dB. (Litton)	Need final draft	Lambert
095	6/29/98	Stable Oscillator (Low output)	1336610-5	85033	During post-rework confidence test, oscillator exhibited reduced output of 10 dBM. Previously measured 11.8 dBM. (Litton)	Troubleshooting/analysis underway	Lambert
178	12/26/98	DRO, Channel 8	1336610-7	85074 (Removed from A1-105)	During the transition from +25C to -12C (T/C # 1), the Channel 8 radiometric counts decreased from ~ 16,000 to ~ 8000. Cause isolated to CH 8 DRO.	Troubleshooting/analysis underway	Lambert
078	4/17/98	DRO, Channel 7 (Channel 6 N.F. and Channel 7 NEdeltaT anomalies)	1336610	85022 (Removed from A1-202)	Channel 7 NEdeltaT was between .45K and .65K (S/B .25 max)	Awaiting NASA approval	Lambert
106	7/21/98	Stable Oscillator (Faulty Gunn Diode)	1336610-10	FM2 (Removed from A1-202)	During CS02 EMI testing, channel 15 counts dropped from 16200 to 11200. Cause isolated to faulty GDO. Gunn diode shorted.	Awaiting NASA approval.	Lambert
133	8/5/98	DRO, Channel 7 (Channel 7 NEdeltaT degraded)	1336610	85022 (Removed from A1-202)	After X-axis vibe, Channel 7 NEdeltaT was 0.447, S/B<0.25. Metal shavings in waveguide.	Awaiting NASA approval	Lambert
152	9/16/98	Bearing Assembly	1338266-1 1333666-1	Removed from A2 (105)	Barden examination of bearings removed from A2 drive assembly(F02) revealed contamination. Post vibration sine sweep anomaly caused by cracks in reflector bond area (See F/AR 160), not drive assy/bearings.	Analysis of removed bearings in progress.	Alvarez
075	4/11/98	57 GHz VCGDO (Gunn diode replaced)	1348351-1	79032	V(tune) changed by more than 5V+/-1V. (Litton)	Awaiting NASA approval	Lambert

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
104	7/18/98	VCGDO (Foreign material in waveguide)	1348351-1	79039	Foreign material observed inside waveguide.	Troubleshooting/analysis underway	Lambert
092	6/15/98	PLO Assembly (Lost lock at +60 C: EMI/RFI filter shorted)	1348360-1	F05	During T/C, broke lock at +60 C. +15V supply dropped to +5V. Isolated cause to shorted EMI/RFI filter. During T/C, exhibited random spurs about main carrier signal. VCGDO and faceplate EMI filters replaced. Problem still exists.	Troubleshooting/analysis underway	Lambert
093	6/16/98	PLO Assembly (Lost lock between 32 C & 34.5 C)	1348360-1	F06	PLO lost lock when baseplate temperature was between 32 C and 34.5 C. Unit retuned (R1, R2 reselected). Deadband resolved.	Awaiting NASA approval	Lambert
139	8/20/98	PLO Assembly (Spurs in main carrier signal)	1348360-1	F07, F08	During T/C, multiple spurs in main carrier signal. After both units were temperature cycled (before and after retuning) carrier signals showed no spurs.	Awaiting NASA approval	Lambert
158	10/20/98	PLO Assembly (Loose screw on DRO cover)	1348360-1	F09	DRO sweep frequency center was 6.899 GHz, S/B 6.8748 GHz. DRO signal would not lock. Loose screw found on DRO cover.	Awaiting NASA approval	Lambert
159	10/26/98	PLO Assembly (Resonator puck bond failure)	1348360-1	F10	PLO carrier lock signal was missing and the DRO sweep signal shifted. DRO opened and resonator puck found loose from DRO CCA.	Awaiting NASA approval	Lambert
183	2/2/99	PLO Assembly (Test setup current limit set low)	1348360-1	F11	During LPT, after Z-axis vibe, did not lock. Current limit in test setup for -15V inadvertently set to 80mA, S/B 100 mA. No failure of flight hardware.	Awaiting NASA approval	Lambert
185	2/9/99	PLO Assembly	1348360-1	F12	PLO ouput power dropped at high temp (+44C).	Troubleshooting/analysis underway	Lambert
163	11/2/98	DRO Assembly (DRO cover reversed)	1348400-1	F10	DRO signal shifted 10 MHz to right of center frequency. DRO cover found reversed 180 degrees.	Awaiting NASA approval	Lambert
061	3/19/98	PLL Assembly (Faulty U2)	1348500-1	F06	Low resistance across C22. Cause isolated to faulty U2. Analysis indicated ESD damage.	Awaiting NASA approval: Pending calibration completion	Lambert
087	5/28/98	PLL Assembly (Faulty U2)	1348500-1	F10	During continuity test of C21, resistance was 7.5 kohms (S/B>1Mohm). Isolated to faulty U2; base-emitter shorted; inadequate emitter well coverage.	Awaiting NASA approval	Lambert

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
103	7/15/98	PLL Assembly (Faulty U2)	1348500-1	F13	During continuity test, resistance across C21, C22 and C24 measured 3.94Kohms, 260 ohms and 2.8 Kohms (S/B >1Mohm, >500 ohms, >1Mohm). U2 found defective; base-emitter shorted; inadequate emitter well coverage.	Awaiting NASA approval	Lambert
180	1/7/99	PLL Assembly (Vd of U1 out-of-limit)	1348500-1	F14	Output voltage of MMIC Amplifier (U1) measured 4.78 V, S/B 4 +/- 0.5V. Spec. for Vd changed to 3.5V to 5.5V.	Awaiting NASA approval	Lambert
134	8/8/98	A1-2 Receiver (PRT RT19 open; PRT RT22 shorted)	1356409-1	F02	PRT RT19 reads open; PRT RT22 is shorted. Both PRTs replaced.	Need final draft	Nieto
153	9/17/98	A1-2 Receiver (Noise power stability above spec.)	1356409-1	F03	Channels 3, 5 and 8 failed Noise Power Stability (NPS). The readings were .23, .107 and .108, S/B .12, .08 and .08 maximum.	Pre-ATP test incorporated: Need final draft	Lambert
168	11/19/98	A1-2 Receiver (Ch.8 N.F. anomaly)	1356409-1	F03	Channel 8 noise figure failed at +44 C. Could not be repeated. DRO replaced.	Troubleshooting/analysis underway	Lambert
070	4/1/98	A1-1 Receiver	1356429-1	F01	Channel 6 noise figure was 5.96 dB (S/B 5.2 dB max). Fault isolated to DRO. After DRO replacement, NF passed.	Awaiting NASA approval	Lambert
136	8/14/98	A1-1 Receiver (Noise power stability above spec.)	1356429-1	F02	Channel 6 Noise Power Stability was 0.146 (S/B 0.08 max). LO output power to mixer reduced by adjusting waveguide attenuator. NPS reduced to .03.	Awaiting NASA approval	Lambert
140	8/25/98	A1-1 Receiver (PLO lock detect below spec. C8 reverse-biased)	1356429-1	F02	During ATP, PLO lock detect was +11V, S/B +14V min. Cause isolated to reverse-biasing of C8 on Loop-Amp CCA. Design changes implemented.	Awaiting NASA approval	Lambert
166	11/17/98	A1-1 Receiver (PLO loses lock)	1356429-1	F04	During receiver level adjustment of PLO power, PLO S/N F06 lost lock after 10 to 15 minutes .	Troubleshooting/analysis underway	Lambert
192	3/9/99	A1-1 Receiver (PLO loses lock at +5 C)	1356429-1	F05	During first temp cycle at +5.5 C, PLO lost lock. Verified by checkout with DC-DC eng model.	Troubleshooting/analysis underway	Lambert
090	6/3/98	A2 Receiver (Channel 1 noise above spec.)	1356441-1	F02	Channel 1 noise figure read 4.6 dB (S/B 4.5 dB max). Corrected by increasing power to mixer: Reduced N.F. to 4.26 dB. No impact at receiver level.	Awaiting NASA approval	Lambert
130	7/27/98	A2 Receiver (Faulty PRT)	1356441-1	F03	Resistance of PRT (RT17) measured 2.586kohm, S/B 2.2kohm +/-100ohm.	Troubleshooting/analysis underway	Lambert

E. Lorenz
3/18/99

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
131	7/28/98	A2 Receiver	1356441-1	F03	During N.F. test of Ch 2, IF power increased 8dB. No change in output (warm load to cold load).	Troubleshooting/analysis underway	Lambert
129	7/27/98	Power Relay and Housekeeping CCA (Wrong value resistor[R37)	1356969-1	C/N 002	Voltage Monitor Signal No. 9 measured 4.08V, S/B 2.85 to 3.15V. Value of R37 was incorrect (measured 14.964kohm, S/B 10kohm).	Need final draft	Nieto
097	7/2/98	V-Band PLO (TRW) (EMI test anomalies)	857270-001	002	Emission levels exceeded spec during RE02 narrowband and CE03 narrowband. No system impact. TRW to add conductive epoxy around worst leakage areas. (TRW)	Awaiting NASA approval	Lambert

AMSU-A QUALITY ASSURANCE WEEKLY REPORT
FOR WEEK ENDING 3-24-99

Accomplishments Last Week

1. QA and DA personnel are heavily involved with the preparation of the A1 & A2 105 Units for installation into the shipping containers. With the 105 units being the first METSAT Units, some snags and problems, including the wrong nut plate installed in the Container by Zero Corporation, were encountered.

   Zero admitted they did not physically verify the thread configuration of the nut plates. Aerojet source inspection verified the installation of the nutplates but did not check the thread size. A SCAR was issued to Zero and the QE will revise the Source Inspection Instruction to verify the nut plate threads are compliant to the drawing.

2. Attended the TRR for the A1-106 EMI Testing scheduled to start this week.

3. Continuing to conduct Shipping Coordination Meetings twice a week to assure that the hardware and supporting documentation required for the PSR and DD250 are completed as required.

Critical Issues

None

AMSU-A INSTRUMENT STATUS

INSTRUMENT	S/N 202	S/N 105	S/N 106	S/N 107	S/N 108	S/N 109
A1						
Machine Subassy	↓	↓	↓	↓	↓	In assembly
Antenna Subassy	↓	↓	↓	↓	Antenna range	
System Integration	↓	↓	↓	Eng CPT		
PER	↓	↓	↓			
Completed Env. Test & Calibraton Tasks	↓	↓	↓			
Scheduled Env. Test & Calibraton Tasks	↓	↓	EMI			
Final CPT	↓	↓				
PSR	↓	Pre Ship				
Shipping Configuration	Shipped					

AMSU-A INSTRUMENT STATUS

INSTRUMENT	S/N 202	S/N 105	S/N 106	S/N 107	S/N 108	S/N 109
A2						
Machine Subassy						
Antenna Subassy						Antenna Assy Integration
System Integration					Integration Testing	
PER				Final Assembly		
Completed Env. Test & Calibraton Tasks			EMI, Thermal Cycling, Qual Level Vib. (failed)			
Scheduled Env. Test & Calibraton Tasks			Retest			
Final CPT						
PSR		PreShip				
Shipping Configuration	Shipped					

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
160	10/27/98	METSAT/AMSU-A2 (Resonant frequency change in reflector/motor assy)	1331200-2	105	Post-vibration Bode plot for reflector/motor assy. showed a new peak at about 122 HZ and the original resonant frequency peak had shifted from 223.34 HZ to 204.87 HZ. Cracks in bonded reflector joints.	Awaiting NASA approval	Alvarez
164	11/9/98	METSAT/AMSU-A2 (Faulty PRT)	1331200-2	106	RF Mux PRT read 52.25 C, S/B 25+/-5 C. Cause isolated to faulty PRT.	Troubleshooting/analysis underway	Nieto
179	12/22/98	METSAT/AMSU-A2 (Reflector's main resonance shifted)	1331200-2	106	Post Z-axis vibe sine sweep showed 20 Hz shift in first natural frequency. Reflector's main resonance response has changed from 223Hz to 214Hz. R-D converter replaced / SAT resistors changed (as risk mitigation with no evidence of failure).	Troubleshooting/analysis underway	Alvarez
188	2/22/99	METSAT/AMSU-A2 (Open PRT)	1331200-2	107	PRT 3 (RF Diplexer) open. Dig A Temp reading was 32767, S/B ~18660.	Troubleshooting/analysis underway	Nieto
190	2/17/99	METSAT/AMSU-A1 (Out-of-spec linearity)	1331720-2	105	Out-of-spec calculated linearity on Channels 6, 7, 9 thru 14. Waiver request (CCR 8127) submitted.	Awaiting NASA approval	Paliwoda
182	1/21/99	METSAT/AMSU-A1	1331720-2	106	Measurement from TB3-E1 to TB3-E2 for PRT RT3 read open.	Troubleshooting/analysis underway	Nieto
184	2/2/99	METSAT/AMSU-A1 (Resistor out-of-spec.)	1331720-2	106	Turn-on inrush current for main load bus (1st current spike) below normal. DC-DC Converter(FM7) replaced. R600 resistor was out-of-spec.	Troubleshooting/analysis underway at FEI	Nieto
189	3/1/99	METSAT/AMSU-A1 (Short at connector)	1331720-2	106	Full Print Ch. 12 counts ~9000, S/B 16000-17000. Metal sliver shorting at semi-rigid connector connected to J552.	Troubleshooting/analysis underway	Nieto
170	11/25/98	METSAT/AMSU-A1 (CCA connectors inserted upside down)	1331720-2	107	During integration, +5V and -15V scan drive power supplies went into current limit. Found J403 and J404 connectors for motor driver CCAs installed upside down in upper card cage.	Troubleshooting/analysis underway	Nieto
187	2/19/99	METSAT/AMSU-A1 (Missing capacitor in DRO)	1331720-2	107	Ch. 5 IF output power was -34.38 dBm (S/B -27+/-1 dBm). Capacitor C5 missing in DRO voltage shutdown circuit.	Troubleshooting/analysis underway	Lambert

E. Lorenz
3/24/99

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
094	6/25/98	DC-DC Converter (Lost regulation; SAT resistor value too low).	1356010	FM5	During thermal vacuum at +60°C, the Module 4 outputs lost regulation. Current limiting SAT resistor value too low. High temperature, max load condition not seen in actual operation. FRB approved "Use As Is". (FEI)	Need final draft	Nieto
161	10/29/98	A1 Antenna Assembly (Burrs/debris inside feedhorn)	1331400-2	F03	Beamwidth at Beam Position 15 (crosstrack) for Channel 15 was 3.73 degrees, S/B 2.97 to 3.63 degrees. Feedhorn replaced.	Troubleshooting/analysis underway	Alvarez
098	6/30/98	Mixer-Amplifier (Out-of-spec condition)	1331562-11	7A31	N.F. was 3.6dB, S/B 3.5dB max. LO to RF isolation was 25.4dB, S/B 30dB min. Unit retuned at Spacek. Now meets all requirements. Range expanded for setting L.O. power	Awaiting NASA approval	Lambert
119	6/30/98	Mixer-Amplifier (Out-of-spec condition)	1331562-12	7A32	1) Noise Figure measured 3.3dB (S/B 3.2dB max) at L.O. power setting of +11.5dBm. 2) Overall gain measured 66.59dB, S/B 65±1.0dB. SDARs approved: Use-As-Is.	Awaiting NASA approval.	Lambert
144	8/27/98 9/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-13	7A43	1) Mixer LO to RF isolation was 27.2dB, S/B 30db min. 2) Overall Gain was 66.47dB, S/B 65 +/- 1.0dB. No system impact. Use-As-Is.	Awaiting NASA approval	Lambert
112	6/30/98	Mixer-Amplifier (Out-of-spec condition)	1331562-14	7A24	Gain sensitivity measured 1.50dB, S/B 1.4dB max. No longer a requirement at this level. SDAR withdrawn.	Awaiting NASA approval.	Lambert
120	6/30/98	Mixer-Amplifier (Out-of-spec condition)	1331562-14	7A34	1) Gain Flatness was 0.55dB peak-to-peak, S/B 0.05 dB max. 2) Mixer LO to RF isolation was 25.5dB, S/B 30db min. 3) N.F. was 3.3dB (S/B 3.2dB max) at L.O. power setting of +11.5dBm. 4) Overall gain was 66.32dB, S/B 65±1.0dB. Use-As-Is.	Awaiting NASA approval.	Lambert

E. Lorenz
3/24/99

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
145	8/27/98 8/31/98 9/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-14	7A44	1) N.F. was 3.85dB (S/B 3.8dB max) at L.O. power setting of +11.5dBm. 2) Mixer LO to RF isolation was 28.5dB, S/B 30db min. 3) Gain Flatness was 0.52dB peak-to-peak, S/B 0.5 dB max. 4) Overall Gain was 66.41dB, S/B 65 +/- 1.0dB. Unit retuned.	Awaiting NASA approval	Lambert
172	12/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-14	7A54	Gain Flatness was 0.52 dB peak-to-peak, S/B 0.5 dB max. No system impact. "Use-As-Is".	Awaiting NASA approval	Lambert
148	8/27/98 9/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-17	7A47	1) Mixer LO to RF isolation was 26.5dB, S/B 30db min. 2) Overall Gain was 66.40dB, S/B 65 +/- 1.0dB. No system impact. Use-As-Is.	Awaiting NASA approval	Lambert
173	12/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-18	7A58	Gain Flatness was 0.58 dB peak-to-peak, S/B 0.5 dB max. No system impact. "Use-As-Is".	Awaiting NASA approval	Lambert
176	12/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-18	7A68	Gain Flatness was 0.62 dB peak-to-peak, S/B 0.5 dB max. No system impact. "Use-As-Is".	Awaiting NASA approval	Lambert
177	12/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-19	7A69	1. LO to RF isolation measured 25.3 dB with +8.5 dBm LO power, S/B 27.5 dB min. 2. During input voltage and current test, current measured 51.1 mA @ +21 C, 50.9 mA @ -30 C and 51.0 mA @ +60 C, S/B 45 mA max. 3. Gain Flatness was 0.68 dB peak-to-peak, S/B 0.5 dB max. No system impact. "Use-As-Is".	Awaiting NASA approval	Lambert
174	12/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-19	7A59	1. During input voltage and current test, current measured 50.8 mA @ +21 C, 50.6 mA @ -30 C and 51.0 mA @ +60 C, S/B 45 mA max. 2. Gain Flatness was 0.54 dB peak-to-peak, S/B 0.5 dB max. 3. Total Delta Gain measures 1.49 dB , S/B 1.4 dB max. No system impact. "Use-As-Is".	Awaiting NASA approval	Lambert
125	6/30/98	Mixer-Amplifier (Out-of-spec condition)	1331562-20	7A40	1) Gain Flatness was between 1.1 and 1.5dB, S/B 1.0dB peak-to-peak. 2) Gain Flatness was 1.38dB peak-to-peak, S/B 1.00dB max. 3) Mixer LO to RF Isolation was 22.5dB, S/B 30db min. 4) N.F. was 3.96dB (S/B 3.8dB max). Use-As-Is.	Awaiting NASA approval.	Lambert
175	12/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-20	7A60	Gain Flatness was 1.15 dB peak-to-peak, S/B 1.0 dB max. No system impact. "Use-As-Is".	Awaiting NASA approval	Lambert

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
151	8/27/98 8/31/98 9/1/98	Mixer-Amplifier (Out-of-spec condition)	1331562-20	7A50	1) RF return loss was 11.0dB @ 87.45GHz, 13.5dB @ 89.00GHz, 11.4dB @ 90.55GHz (S/B 14dB min). 2) Gain Flatness was 1.42dB peak-to-peak, S/B 1.0 dB max. 3) Overall Gain was 55.34dB, S/B 53 +/-1.0dB. No system impact. Use-As-Is.	Awaiting NASA approval	Lambert
156	9/30/98	A1 METSAT Signal Processor (Shorted wire on backplane)	1331670-2	F04	Display on AASPTF was "FAIL 000", S/B "PASS". Wire from J310-64 to J301-21 shorted to post on J304-43.	Awaiting rework/retest.	Nieto
162	10/29/98	A1 Signal Processor (Faulty resistors)	1331670-2	F04	Digital A Temperature No. 15 readout was 32767, S/B 28259 to 32513. Digital A Temperature No. 33 readout was 24858, S/B 28259 to 32513. R34 on F33 and R35 on F28 found suspect.	Troubleshooting/analysis underway	Nieto
155	9/29/98	A1 Signal Processor (Cable and CCA plugged in wrong way)	1331670-2	F05	5V supply dropped to 2.7V. P1 of Scan Drive Interface cable and Motor Driver CCA plugged in the wrong way.	Rework/retest completed: Need final F/AR	Nieto
169	11/19/98	A1 Drive Assembly	1333640-1	F14	Current waveform commutation spikes above-limits.	Troubleshooting/analysis underway	Alvarez
048	12/1/97	A1 Rotating Assemblies (Inadequate lube on bearings)	1333647-1	F11, F12	Two of four units failed starting torque test at -10 C. Inadequate bearing lubrication due to repeated rinsing. Plan developed at Ball for lubrication of new bearing sets and relube of those removed from systems.	Awaiting NASA approval	Alvarez
077	4/15/98	A2 Drive Assembly	1333650-1	F05	Motor supply current exceeded spec. at both start-up and 500mVDC. Measured 51mADC and 52 mADC (S/B 50 mADC max). Motor returned to Vernitron.	Troubleshooting/analysis underway	Alvarez
186	2/15/99	A2 Drive Assembly	1333650-1	F05	Motor would not turn on. Did not rotate in CW or CCW directions.	Troubleshooting/analysis underway	Alvarez
167	11/19/98	A2 Drive Assembly (Motor clicking noise)	1333650-1	F08	Soft clicking noise heard as motor rotated.	Troubleshooting/analysis underway	Alvarez
067	3/26/98	Compensator (Motor would not rotate)	1333660-1	F05	Motor would not rotate. Hall-Effect devices found broken off of motor board. MAI revised.	Awaiting NASA approval	Alvarez

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
101	7/14/98	Stable Oscillator (Output power stability out-of-spec)	1336610-3	85096	Output power stability variation of 1.2 dB plus .5 dB allowance for aging exceeds spec of +/- 1.5 dB. (Litton)	Need final draft	Lambert
095	6/29/98	Stable Oscillator (Low output)	1336610-5	85033	During post-rework confidence test, oscillator exhibited reduced output of 10 dBM. Previously measured 11.8 dBM. (Litton)	Troubleshooting/analysis underway	Lambert
178	12/26/98	DRO, Channel 8	1336610-7	85074 (Removed from A1-105)	During the transition from +25C to -12C (T/C # 1), the Channel 8 radiometric counts decreased from ~ 16,000 to ~ 8000. Cause isolated to CH 8 DRO.	Troubleshooting/analysis underway	Lambert
078	4/17/98	DRO, Channel 7 (Channel 6 N.F. and Channel 7 NEdeltaT anomalies)	1336610	85022 (Removed from A1-202)	Channel 7 NEdeltaT was between .45K and .65K (S/B .25 max)	Awaiting NASA approval	Lambert
106	7/21/98	Stable Oscillator (Faulty Gunn Diode)	1336610-10	FM2 (Removed from A1-202)	During CS02 EMI testing, channel 15 counts dropped from 16200 to 11200. Cause isolated to faulty GDO. Gunn diode shorted.	Awaiting NASA approval.	Lambert
133	8/5/98	DRO, Channel 7 (Channel 7 NEdeltaT degraded)	1336610	85022 (Removed from A1-202)	After X-axis vibe, Channel 7 NEdeltaT was 0.447, S/B<0.25. Metal shavings in waveguide.	Awaiting NASA approval	Lambert
152	9/16/98	Bearing Assembly	1338266-1 1333666-1	Removed from A2 (105)	Barden examination of bearings removed from A2 drive assembly(F02) revealed contamination. Post vibration sine sweep anomaly caused by cracks in reflector bond area (See F/AR 160), not drive assy/bearings.	Analysis of removed bearings in progress.	Alvarez
075	4/11/98	57 GHz VCGDO (Gunn diode replaced)	1348351-1	79032	V(tune) changed by more than 5V+/-1V. (Litton)	Awaiting NASA approval	Lambert
104	7/18/98	VCGDO (Foreign material in waveguide)	1348351-1	79039	Foreign material observed inside waveguide.	Troubleshooting/analysis underway	Lambert

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
092	6/15/98	PLO Assembly (Lost lock at +60 C: EMI/RFI filter shorted)	1348360-1	F05	During T/C, broke lock at +60 C. +15V supply dropped to +5V. Isolated cause to shorted EMI/RFI filter. During T/C, exhibited random spurs about main carrier signal. VCGDO and faceplate EMI filters replaced. Problem still exists.	Troubleshooting/analysis underway	Lambert
093	6/16/98	PLO Assembly (Lost lock between 32 C & 34.5 C)	1348360-1	F06	PLO lost lock when baseplate temperature was between 32 C and 34.5 C. Unit retuned (R1, R2 reselected). Deadband resolved.	Awaiting NASA approval	Lambert
139	8/20/98	PLO Assembly (Spurs in main carrier signal)	1348360-1	F07, F08	During T/C, multiple spurs in main carrier signal. After both units were temperature cycled (before and after retuning) carrier signals showed no spurs.	Awaiting NASA approval	Lambert
158	10/20/98	PLO Assembly (Loose screw on DRO cover)	1348360-1	F09	DRO sweep frequency center was 6.899 GHz, S/B 6.8748 GHz. DRO signal would not lock. Loose screw found on DRO cover.	Awaiting NASA approval	Lambert
159	10/26/98	PLO Assembly (Resonator puck bond failure)	1348360-1	F10	PLO carrier lock signal was missing and the DRO sweep signal shifted. DRO opened and resonator puck found loose from DRO CCA.	Awaiting NASA approval	Lambert
183	2/2/99	PLO Assembly (Test setup current limit set low)	1348360-1	F11	During LPT, after Z-axis vibe, did not lock. Current limit in test setup for -15V inadvertently set to 80mA, S/B 100 mA. No failure of flight hardware.	Awaiting NASA approval	Lambert
185	2/9/99	PLO Assembly	1348360-1	F12	PLO ouput power dropped at high temp (+44C).	Troubleshooting/analysis underway	Lambert
163	11/2/98	DRO Assembly (DRO cover reversed)	1348400-1	F10	DRO signal shifted 10 MHz to right of center frequency. DRO cover found reversed 180 degrees.	Awaiting NASA approval	Lambert
061	3/19/98	PLL Assembly (Faulty U2)	1348500-1	F06	Low resistance across C22. Cause isolated to faulty U2. Analysis indicated ESD damage.	Awaiting NASA approval: Pending calibration completion	Lambert
087	5/28/98	PLL Assembly (Faulty U2)	1348500-1	F10	During continuity test of C21, resistance was 7.5 kohms (S/B>1Mohm). Isolated to faulty U2; base-emitter shorted; inadequate emitter well coverage.	Awaiting NASA approval	Lambert

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
103	7/15/98	PLL Assembly (Faulty U2)	1348500-1	F13	During continuity test, resistance across C21, C22 and C24 measured 3.94Kohms, 260 ohms and 2.8 Kohms (S/B >1Mohm, >500 ohms, >1Mohm). U2 found defective; base-emitter shorted; inadequate emitter well coverage.	Awaiting NASA approval	Lambert
180	1/7/99	PLL Assembly (Vd of U1 out-of-limit)	1348500-1	F14	Output voltage of MMIC Amplifier (U1) measured 4.78 V, S/B 4 +/- 0.5V. Spec. for Vd changed to 3.5V to 5.5V.	Awaiting NASA approval	Lambert
134	8/8/98	A1-2 Receiver (PRT RT19 open; PRT RT22 shorted)	1356409-1	F02	PRT RT19 reads open; PRT RT22 is shorted. Both PRTs replaced.	Need final draft	Nieto
153	9/17/98	A1-2 Receiver (Noise power stability above spec.)	1356409-1	F03	Channels 3, 5 and 8 failed Noise Power Stability (NPS). The readings were .23, .107 and .108, S/B .12, .08 and .08 maximum.	Pre-ATP test incorporated: Need final draft	Lambert
168	11/19/98	A1-2 Receiver (Ch.8 N.F. anomaly)	1356409-1	F03	Channel 8 noise figure failed at +44 C. Could not be repeated. DRO replaced.	Troubleshooting/analysis underway	Lambert
070	4/1/98	A1-1 Receiver	1356429-1	F01	Channel 6 noise figure was 5.96 dB (S/B 5.2 dB max). Fault isolated to DRO. After DRO replacement, NF passed.	Awaiting NASA approval	Lambert
166	11/17/98	A1-1 Receiver (PLO loses lock)	1356429-1	F04	During receiver level adjustment of PLO power, PLO S/N F06 lost lock after 10 to 15 minutes .	Troubleshooting/analysis underway	Lambert
192	3/9/99	A1-1 Receiver (PLO loses lock at +5 C)	1356429-1	F05	During first temp cycle at +5.5 C, PLO lost lock. Verified by checkout with DC-DC eng model.	Troubleshooting/analysis underway	Lambert
193	3/16/99	A1-1 Receiver (Channel 7 DRO)	1356429-1	F05	Channel 7 IF power exhibited a gradual decrease from ~27 dBm to ~35 dBm while the temperature was decreased from room ambient to -20 C	Troubleshooting/analysis underway	Lambert
130	7/27/98	A2 Receiver (Faulty PRT)	1356441-1	F03	Resistance of PRT (RT17) measured 2.586kohm, S/B 2.2kohm +/-100ohm.	Troubleshooting/analysis underway	Lambert
131	7/28/98	A2 Receiver	1356441-1	F03	During N.F. test of Ch 2, IF power increased 8dB. No change in output (warm load to cold load).	Troubleshooting/analysis underway	Lambert

AMSU-A
STATUS OF OPEN F/ARs

F/AR NO.	DOF	FAILED ITEM	PART NO.	SERIAL NO.	DESCRIPTION	STATUS	IPT
129	7/27/98	Power Relay and Housekeeping CCA (Wrong value resistor[R37)	1356969-1	C/N 002	Voltage Monitor Signal No. 9 measured 4.08V, S/B 2.85 to 3.15V. Value of R37 was incorrect (measured 14.964kohm, S/B 10kohm).	Need final draft	Nieto
097	7/2/98	V-Band PLO (TRW) (EMI test anomalies)	857270-001	002	Emission levels exceeded spec during RE02 narrowband and CE03 narrowband. No system impact. TRW to add conductive epoxy around worst leakage areas. (TRW)	Awaiting NASA approval	Lambert

Section 7

CONFIGURATION MANAGEMENT STATUS REPORT (CDRL 203)

Section 7

CONFIGURATION MANAGEMENT STATUS REPORT (CDRL 203)

During this reporting period 5 drawings were released and submitted to NASA by Configuration Management.

No Deviations or Waivers were generated during this reporting period. Deviations/Waivers are shown in the Table below.

DEVIATION/WAIVER STATUS

DEV/ WAV	DATE	TITLE	PART NAME	PART NO.	EFF	STATUS
W001	8/14/95	Alt Vendor Cert.	Brushless Mtr A1 Brushless Mtr A2 Resolver	1313921-1/ 1333648-1/ 1331529-1	105-UP/202-UP	Disappvd 9/25/95
D001	9/29/97	Conformal Coating	Circuit Card Assemblies	Various	All CCA's	Resubmit as Rev A
D001A	11/11/97	Conformal Coating	Circuit Card Assemblies	Various	All CCA's	Cancelled

Configuration Management issued 16 Class IB and 4 Class II Engineering Change Notices (ECN) as shown in Table X.

TABLE X
ECN'S PROCESSED DURING MARCH 1999

DATE ISSUED	CAMSU ECN NO.	DOCUMENT NO./REV.	TITLE	PCCD DATE	CLASS.
3/3/99	2086	1338403/C	Shipping Cont, Target Assy	3/5/99	II
3/3/99	2087	AE-26156/4D	METSAT/KLM/AMSU-A2 Sys Comp	3/22/99	IB
3/5/99	2088	1356021/NC	EOS/AMSU A-2 Drawing Tree	3/10/99	IB
3/6/99	2089	AE-26151/12	Monentum Comp/Uncomp Test Proc	3/17/99	IB
3/10/99	2090	AE-26151/3B	Ctr of Grivity/Weight Test Proc		IB
3/17/99	2091	AE-26156/3B	METSAT A1 CPT Test Proc	3/22/99	IB
3/18/99	2092	AE-26357/B	Transportation/Handling Proc	3/22/99	IB
3/18/99	2093	1338394/N	Shipping Configuration	3/14/99	II
3/18/99	2094	1338395/K	Shipping Configuration	3/14/99	II
3/18/99	2095	1331720/AH	AMSU Assy - A1	3/19/99	IB
3/19/99	2096	1333060/G	Handling Fixture		IB
3/22/99	2097	1333081/NC	Spacecraft Int Fixt-Ctr Bal, A2	3/26/99	IB
3/22/99	2098	1333090/A	Spacecraft Integration Fixture, A2	3/26/99	IB
3/23/99	2099	AE-26156/4D	Sys Compl/Lim Perf Tests Tst Proc	4/2/99	IB
3/23/99	2100	1333648/F	Motor, Torque		IB
3/24/99	2101	AE-26156/3B	CPT/LPT Test Proc, METSAT A1	4/2/99	IB
3/25/99	2102	1331100/E	Attenuator, Waveguide - A2	4/6/99	IB
3/29/99	2103	T-1291019/A	Handlg Plate, W&CG, AMSU-A1/A2	3/31/99	II
3/29/99	2104	AE-26156/3B	CPT/LPT Test Proc, METSAT A1	4/2/99	IB
3/30/99	2105	1357249/C	Monitor Assy		IB

Section 8

DOCUMENT / DATA MANAGEMENT STATUS REPORT

Section 8
DOCUMENT/DATA MANAGEMENT STATUS REPORT

*8.1 **March submittals**.* During this reporting period, Data Management submitted forty seven Contract Documentation Requirements Listings (CDRLs) as shown in Table XI.

Table XI March Document Submittal

CDRL No.	Description	Due to NASA	Submitted to NASA
March 1999			
29	PRER Data Pkg:		
	Rpt 11387, Bk 2	3/30/99	3/29/99
	Rpt 11387, Bk 1	3/31/99	3/20/99
	Rpt 11386, Bk 1 & 2	3//31/99	3/30/99
32	PSR Data Pkg:		
	Report 11393, Bk 2	3/24/99	3/24/99
	Report 11393, Bk 1	3/25/99	3/24/99
	Report 11392, Bk 2	3/25/99	3/24/99
	Report 11392, Bk 1	3/26/99	3/25/99
203	Configuration Management Status Rpt (Included in CDRL 529)	3/12/99	3/12/99
204	Performance Assurance Status Report (Included in CDRL 529)	3/12/99	3/12/99
207	Engineering Test Reports:		
	Report 11382	3/16/99	3/15/99
	Report 11407	3/3/99	3/2/99
	Report 11411	3/3/99	3/2/99
	Report 11441	3/25/99	3/24/99
	Report 11440	4/1/99	3/31/99
	Report 11442	4/1/99	3/31/99
	Report 11443	4/1/99	3/31/99
	Report 11444	4/1/99	3/31/99
	Report 11445	3/25/99	3/24/99
	Report 11446	3/25/99	3/24/99
	Report 11470	4/1/99	3/31/99
208	Performance Verif. Report:		
	Report 11406	3/5/99	3/4/99
	Report 11408	3/5/99	3/4/99
	Report 11409	3/11/99	3/10/99
	Report 11421	3/16/99	3/15/99
	Report 11426	3/23/99	3/22/99
	Report 11428	3/25/99	3/24/99
211	Problem/Failure Rpt Close-Out:		
	F/AR 159	*	3/1/99
	F/AR 160	*	3/4/99
	F/ARs 107,171,181,190 & 191	*	3/15/99
215	Trend Analysis Reports:		
	Rpt 11435	3/30/99	3/29/99
	Rpt 11436	3/29/99	3/26/99

CDRL No.	Description	Due to NASA	Submitted to NASA
March (Continued):			
222	Spec Comp/Calib Data Books:		
	Report 11429	3/29/99	3/26/99
	Report 11430	3/23/99	3/22/99
406	Trans Hanlg Proc, AE-26357C	3/30/99	3/29/99
409	Detailed Test Proc,AE-26156/3B	*	3/17/99
	AE-26151/2C	*	3/18/99
	AE-26151/7H	*	3/24/99
410	Det Ground Cal Proc, AE-26156/6D	*	3/29/99
503	Weight/Power Budgets (Included in CDRL 529)	3/12/99	3/12/99
509	Approved or Controlled Dwgs	Monthly	3/8/99
512	Config Cont Changes, CCR-8126	3/8/99	3/8/99
	CCR-8127	3/16/99	3/15/99
	CCR-8128	3/18/99	3/17/99
	CCR-8127A	3/25/99	3/24/99
518	Indentured Dwg List (105-A1/2)	3/5/99	3/4/99
521	Weekly Status Report	Weekly	3/5, 3/11, 3/19, & 3/26/99
523	Performance Measurement Status Report (Included in CDRL 534)	3/22/99	3/19/99
525	As-Built Materials Lists:		
	Rpts 11448/11449	3/30/99	3/29/99
526	Acceptance Data Package:		
	Rpts 11279/11280	4/1/99	3/31/99
527	As Des Pts List (EEE) Rpt 10385A	4/1/99	3/31/99
529	Reports of Work (Mo Status Rpt)	3/12/99	3/12/99
534	Mo./Qrtly. Financial Mgmt. Rpt. (NASA Fm. 533M/533Q)	3/22/99	3/19/99
*	As Generated		

8.2 Scheduled submittals. In accordance with the EOS/METSAT Master CDRL Schedule, the CDRL items listed in Table XII will be submitted to NASA during the months of April and May 1999.

Table XII Planned Document Submittals for April 1999

CDRL No.	Description	Due to NASA	Submitted to NASA
April 1999			
203	Configuration Management Status Rpt (Included in CDRL 529)	4/15/99	
204	Performance Assurance Status Report (Included in CDRL 529)	4/15/99	
208	Perf. Verif. Report 11413	4/14/99	4/13/99
409	Detailed Test Procedures:		
	AE-26151/12A	4/2/99	4/1/99
	AE-26156/3C	4/13/99	4/12/99
	AE-26154/4E	4/7/99	4/7/99
	AE-26156/5D	4/6/99	4/5/99
503	Weight/Power Budgets (Included in CDRL 529)	4/15/99	
509	Approved or Controlled Dwgs	Monthly	4/13/99
512	Config Cont Chg, CCR-8128A	4/5/99	4/2/99
521	Weekly Status Report	Weekly	4/1/99
523	Performance Measurement Status Report (Included in CDRL 534)	4/26/99	
525	As-Built Matl List, Rpt 11449A	4/13/99	4/12/99
529	Reports of Work (Mo Status Rpt)	4/15/99	
534	Mo./Qrtly. Financial Mgmt. Rpt. (NASA Fm. 533M/533Q)	4/26/99	
535	Small Bus Subcont Rpt (Fm 294)	4/30/99	
536	Small Bus Subcont Rpt (Fm 295)	4/30/99	

Table XII Planned Document Submittals for May 1999

CDRL No.	Description	Due to NASA	Submitted to NASA
May 1999			
203	Configuration Management Status Rpt (Included in CDRL 529)	5/14/99	
204	Performance Assurance Status Report (Included in CDRL 529)	5/14/99	
503	Weight/Power Budgets (Included in CDRL 529)	5/14/99	
509	Approved or Controlled Dwgs	Monthly	
518	Indentured Dwg List (105-A2)		
521	Weekly Status Report	Weekly	
523	Performance Measurement Status Report (Included in CDRL 534)	5/24/99	
529	Reports of Work (Mo Status Rpt)	5/14/99	
534	Mo./Qrtly. Financial Mgmt. Rpt. (NASA Fm. 533M/533Q)	5/24/99	
None	Award Fee Technical Milestones	5/31/99	

APPENDIX A

AMSU-A 90 DAY WINDOW SCHEDULE

MET FLIGHT 1 AMSU-A INSTRUMENT FLOAT ANALYSIS REPORT - MARCH '99

UNITS & SUBASSYS	COMPLETION DATES 12/1/97 BASELINE	FORECAST /ACTUAL	FLOAT BASELINE	LAST MONTH	THIS MONTH	SCHEDULE DRIVER/COMMENTS
S/N 105 AMSU-A1 INSTRUMENT						
INSTRUMENT DELIVERY	3/1/99	4/28/99	0	-10	-19	Contract Delivery Date Changed to 4/1/99
PRE-PLANNED SCHEDULE RESERVE	2/25/99	4/28/99	17	-10	-19	
PSR	2/4/99	4/28/99	0	-10	-19	
SHIPPING CONFIGURATION	2/7/99	3/24/99Act	2	-9	NA	COMPLETE
SYSTEM INTEGRATION & TEST	1/12/99	3/17/99Act	0	-10	NA	COMPLETE
ANTENNA ASSEMBLY	3/24/98	1/14/98Act	0	NA	NA	COMPLETE
SIGNAL PROCESSOR ASSY	4/15/98	3/16/98Act	0	NA	NA	COMPLETE
PREAMP DETECTOR ASSY	9/11/97Act	9/11/97Act	NA	NA	NA	COMPLETE
DC/DC CONVERTER (FEI)	7/27/98	5/5/98Act	0	NA	NA	COMPLETE
A1-1 RECEIVER ASSY	6/16/98	9/22/98Act	0	NA	NA	COMPLETE
DROs (Litton)	4/27/98	6/1/98Act	0	NA	NA	COMPLETE
PLO ASSYs	5/18/98	4/27/98Act	0	NA	NA	COMPLETE
A1-2 RECEIVER ASSY	6/16/98	8/18/98Act	0	NA	NA	COMPLETE
DROs (Litton)	5/20/98	6/3/98Act	0	NA	NA	COMPLETE
S/N 105 AMSU-A2 INSTRUMENT						
INSTRUMENT DELIVERY	3/1/99	4/28/99	0	0	-19	Contract Delivery Date Changed to 4/1/99
PRE-PLANNED SCHEDULE RESERVE	2/25/99	4/28/99	44	4	-19	
PSR	12/23/98	4/28/99	0	2	-19	
SHIPPING CONFIGURATION	12/21/98	3/15/99Act	3	0	NA	COMPLETE
SYSTEM INTEGRATION & TEST	12/1/98	3/12/99Act	0	0	NA	COMPLETE
ANTENNA ASSEMBLY	4/1/98	1/29/98Act	0	NA	NA	COMPLETE
SIGNAL PROCESSOR ASSY	4/8/98	3/9/98Act	0	NA	NA	COMPLETE
PREAMP DETECTOR ASSY	6/2/97Act	6/2/97Act	NA	NA	NA	COMPLETE
DC/DC CONVERTER (FEI)	4/14/98	4/7/98Act	0	NA	NA	COMPLETE
A2 RECEIVER ASSY	6/3/98	7/14/98Act	0	NA	NA	COMPLETE
DROs (Litton)	12/3/97Act	12/3/97Act	NA	NA	NA	COMPLETE

As of 03/29/99

MET FLIGHT 2 AMSU-A INSTRUMENT FLOAT ANALYSIS REPORT - MARCH '99

UNITS & SUBASSYS	COMPLETION DATES		FLOAT			SCHEDULE DRIVER/COMMENTS
	BASELINE 12/1/97	FORECAST /ACTUAL	BASELINE 12/1/97	LAST MONTH	THIS MONTH	
S/N 106 AMSU-A1 INSTRUMENT						
INSTRUMENT DELIVERY	7/1/99	7/30/99	0	0	0	Contract Delivery Date Changed to 8/1/99
PRE-PLANNED SCHEDULE RESERVE	6/30/99	7/29/99	56	8	0	
PSR	4/12/99	7/29/99	0	0	0	
SHIPPING CONFIGURATION	4/12/99	6/29/99	1	3	0	
SYSTEM INTEGRATION & TEST	3/17/99	6/22/99	0	0	0	
ANTENNA ASSEMBLY	6/3/98	4/1/98Act	0	NA	NA	**COMPLETE**
SIGNAL PROCESSOR ASSY	6/24/98	6/8/98Act	0	NA	NA	**COMPLETE**
PREAMP DETECTOR ASSY	11/6/97Act	11/6/97Act	NA	NA	NA	**COMPLETE**
DC/DC CONVERTER (FEI)	6/22/98	9/8/98Act	0	NA	NA	**COMPLETE**
A1-1 RECEIVER ASSY	8/25/98	12/4/98Act	0	NA	NA	**COMPLETE**
DROs (Litton)	7/7/98	6/23/98Act	0	NA	NA	**COMPLETE**
PLO ASSYs	7/28/98	9/19/98Act	0	NA	NA	**COMPLETE**
A1-2 RECEIVER ASSY	8/25/98	11/6/98Act	0	NA	NA	**COMPLETE**
DROs (Litton)	7/9/98	6/23/98Act	0	NA	NA	**COMPLETE**
S/N 106 AMSU-A2 INSTRUMENT						
INSTRUMENT DELIVERY	7/1/99	7/30/99	0	0	0	Contract Delivery Date Changed to 8/1/99
PRE-PLANNED SCHEDULE RESERVE	6/30/99	7/29/99	59	78	14	
PSR	4/7/99	7/9/99	0	0	0	
SHIPPING CONFIGURATION	4/5/99	6/9/99	2	3	0	
SYSTEM INTEGRATION & TEST	3/22/99	6/2/99	0	0	0	
ANTENNA ASSEMBLY	7/20/98	4/16/98Act	0	NA	NA	**COMPLETE**
SIGNAL PROCESSOR ASSY	8/11/98	5/28/98Act	0	NA	NA	**COMPLETE**
PREAMP DETECTOR ASSY	6/2/97Act	6/2/97Act	NA	NA	NA	**COMPLETE**
DC/DC CONVERTER (FEI)	8/17/98	8/17/98Act	0	NA	NA	**COMPLETE**
A2 RECEIVER ASSY	10/6/98	9/3/98Act	0	NA	NA	**COMPLETE**
DROs (Litton)	8/12/98	5/8/98Act	0	NA	NA	**COMPLETE**

As of 03/29/99

MET FLIGHT 3 AMSU-A INSTRUMENT FLOAT ANALYSIS REPORT - MARCH '99

UNITS & SUBASSYS	COMPLETION DATES BASELINE 12/1/97	COMPLETION DATES FORECAST /ACTUAL	FLOAT BASELINE 12/1/97	FLOAT LAST MONTH	FLOAT THIS MONTH	SCHEDULE DRIVER/COMMENTS
S/N 107 AMSU-A1 INSTRUMENT						
INSTRUMENT DELIVERY	12/1/99	12/1/99	0	0	0	
PRE-PLANNED SCHEDULE RESERVE	11/30/99	11/30/99	61	54	53	
PSR	9/1/99	9/14/99	0	0	0	
SHIPPING CONFIGURATION	8/30/99	8/13/99	1	1	0	
SYSTEM INTEGRATION & TEST	8/9/99	8/9/99	0	0	0	
ANTENNA ASSEMBLY	9/16/98	10/12/98Act	0	NA	NA	COMPLETE
SIGNAL PROCESSOR ASSY	10/15/98	10/16/98Act	0	NA	NA	COMPLETE
PREAMP DETECTOR ASSY	1/20/99	3/24/98Act	0	NA	NA	COMPLETE
DC/DC CONVERTER (FEI)	10/8/98	10/28/98Act	0	NA	NA	COMPLETE
A1-1 RECEIVER ASSY	12/16/98	2/4/99Act	0	NA	NA	COMPLETE
DROs (Litton)	8/25/98	6/23/98Act	0	NA	NA	COMPLETE
PLO ASSYs	9/14/98	11/12/98Act	0	NA	NA	COMPLETE
A1-2 RECEIVER ASSY	12/10/98	12/28/98Act	0	NA	NA	COMPLETE
DROs (Litton)	9/29/98	6/25/98Act	0	NA	NA	COMPLETE
S/N 107 AMSU-A2 INSTRUMENT						
INSTRUMENT DELIVERY	12/1/99	12/1/99	0	0	0	
PRE-PLANNED SCHEDULE RESERVE	11/30/99	11/30/99	101	1	72	
PSR	7/7/99	8/17/99	0	1	0	
SHIPPING CONFIGURATION	7/1/99	7/19/99	2	0	0	
SYSTEM INTEGRATION & TEST	6/21/99	7/12/99	0	0	0	
ANTENNA ASSEMBLY	10/26/98	6/24/98Act	0	NA	NA	COMPLETE
SIGNAL PROCESSOR ASSY	11/2/98	10/6/98Act	0	NA	NA	COMPLETE
PREAMP DETECTOR ASSY	6/2/97Act	6/2/97Act	NA	NA	NA	COMPLETE
DC/DC CONVERTER (FEI)	11/5/98	9/17/98Act	0	NA	NA	COMPLETE
A2 RECEIVER ASSY	1/6/99	11/3/98Act	0	NA	NA	COMPLETE
DROs (Litton)	11/4/98	6/29/98Act	0	NA	NA	COMPLETE

As of 03/29/99

MET FLIGHT 4 AMSU-A INSTRUMENT FLOAT ANALYSIS REPORT - MARCH '99

UNITS & SUBASSYS	COMPLETION DATES		FLOAT			SCHEDULE DRIVER/COMMENTS
	BASELINE 12/1/97	FORECAST /ACTUAL	BASELINE 12/1/97	LAST MONTH	THIS MONTH	
S/N 108 AMSU-A1 INSTRUMENT						
INSTRUMENT DELIVERY	3/30/00	3/31/00	0	0	0	
PRE-PLANNED SCHEDULE RESERVE	3/29/00	3/30/00	65	36	56	
PSR	12/21/99	1/12/00	0	0	0	
SHIPPING CONFIGURATION	12/19/99	12/6/99	2	1	0	
SYSTEM INTEGRATION & TEST	11/28/99	11/29/99	0	0	0	Antenna
ANTENNA ASSEMBLY	2/18/99	4/13/99	0	0	1	
SIGNAL PROCESSOR ASSY	3/16/99	10/21/98Act	0	NA	NA	COMPLETE
PREAMP DETECTOR ASSY	5/26/99	3/25/98Act	0	NA	NA	COMPLETE
DC/DC CONVERTER (FEI)	3/15/99	11/25/98Act	0	NA	NA	COMPLETE
A1-1 RECEIVER ASSY	5/4/99	4/20/99	0	71	45	
DROs (Litton)	10/27/98	8/11/98Act	0	NA	NA	COMPLETE
PLO ASSYs	10/27/98	1/21/99Act	0	NA	NA	COMPLETE
A1-2 RECEIVER ASSY	2/25/99	3/16/99Act	0	78	NA	COMPLETE
DROs (Litton)	12/9/98	8/11/98Act	0	NA	NA	COMPLETE
S/N 108 AMSU-A2 INSTRUMENT						
INSTRUMENT DELIVERY	3/30/00	3/31/00	0	0	0	
PRE-PLANNED SCHEDULE RESERVE	3/29/00	3/30/00	111	106	105	
PSR	10/13/99	10/25/99	0	0	0	
SHIPPING CONFIGURATION	10/11/99	9/24/99	5	5	0	
SYSTEM INTEGRATION & TEST	9/27/99	9/17/99	0	0	0	
ANTENNA ASSEMBLY	1/11/99	3/1/99Act	0	NA	NA	COMPLETE
SIGNAL PROCESSOR ASSY	2/16/99	10/15/98Act	0	NA	NA	COMPLETE
PREAMP DETECTOR ASSY	6/2/97Act	6/2/97Act	NA	NA	NA	COMPLETE
DC/DC CONVERTER (FEI)	2/22/99	12/7/98Act	0	NA	NA	COMPLETE
A2 RECEIVER ASSY	4/13/99	12/7/98Act	0	NA	NA	COMPLETE
DROs (Litton)	2/18/99	8/11/98Act	0	NA	NA	COMPLETE

As of 03/29/99

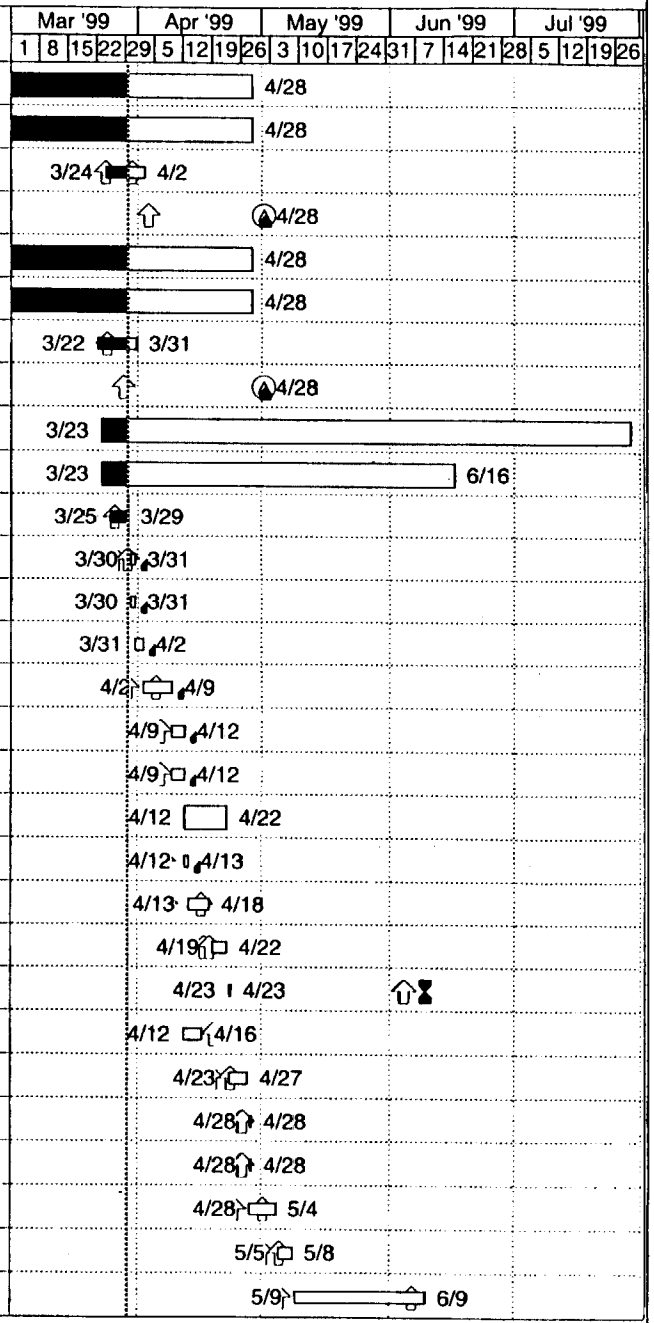
MET FLIGHT 5 AMSU-A INSTRUMENT FLOAT ANALYSIS REPORT - MARCH '99

UNITS & SUBASSYS	COMPLETION DATES		FLOAT			SCHEDULE DRIVER/COMMENTS
	BASELINE 12/1/97	FORECAST /ACTUAL	BASELINE 12/1/97	LAST MONTH	THIS MONTH	
S/N 109 AMSU-A1 INSTRUMENT						
INSTRUMENT DELIVERY	8/1/00	6/30/00	0	0	0	
PRE-PLANNED SCHEDULE RESERVE	7/31/00	6/29/00	63	43	61	
PSR	5/1/00	4/4/00	0	0	0	
SHIPPING CONFIGURATION	4/26/00	3/6/00	1	3	0	
SYSTEM INTEGRATION & TEST	4/5/00	2/28/00	0	0	0	Antenna
ANTENNA ASSEMBLY	6/29/99	6/9/99	0	12	4	
SIGNAL PROCESSOR ASSY	6/22/99	11/12/98Act	0	NA	NA	**COMPLETE**
PREAMP DETECTOR ASSY	10/7/99	3/25/98Act	0	NA	NA	**COMPLETE**
DC/DC CONVERTER (FEI)	7/21/99	2/26/99Act	0	NA	NA	**COMPLETE**
A1-1 RECEIVER ASSY	8/26/99	6/22/99	0	82	53	
DROs (Litton)	5/12/99	8/11/98Act	0	NA	NA	**COMPLETE**
PLO ASSYs	4/29/99	4/27/99	0	98	58	
A1-2 RECEIVER ASSY	9/15/99	5/21/99	0	96	75	
DROs (Litton)	7/1/99	8/31/98Act	0	NA	NA	**COMPLETE**
S/N 109 AMSU-A2 INSTRUMENT						
INSTRUMENT DELIVERY	8/1/00	6/30/00	0	0	0	
PRE-PLANNED SCHEDULE RESERVE	7/31/00	6/29/00	137	121	136	
PSR	1/18/00	12/13/99	0	0	0	
SHIPPING CONFIGURATION	1/13/00	11/10/99	4	2	0	
SYSTEM INTEGRATION & TEST	12/23/99	11/3/99	0	0	0	Antenna
ANTENNA ASSEMBLY	4/26/99	4/27/99	0	0	4	
SIGNAL PROCESSOR ASSY	6/3/99	10/15/98Act	0	NA	NA	**COMPLETE**
PREAMP DETECTOR ASSY	6/2/97Act	6/2/97Act	NA	NA	NA	**COMPLETE**
DC/DC CONVERTER (FEI)	4/19/99	4/9/99	0	79	73	
A2 RECEIVER ASSY	4/19/99	4/30/99	0	67	41	
DROs (Litton)	2/24/99	8/11/98Act	0	NA	NA	**COMPLETE**

As of 03/29/99

AMSU-A 90 DAY WINDOW SCHEDULE

ID	Team	Name	Act ID	Cost Acct	WP	Dur	Cal
3645		**S/N 105 A1 Environmental Test & Shipping Config**				**98 d**	
3683	G	**S/N 105 A1 Shipping Config**	**7192**	**03-7350**	**01**	**48 d**	
3684	G	Ship Final A1 PSR Data Package	7193	03-7350	01	10 d	7
3693	G	PSR	7199	03-7350	01	1 d	5
3933		**S/N 105 A2 Environmental Test & Shipping Config**				**183 d**	
3985	G	**S/N 105 A2 Shipping Config**	**7280**	**03-7350**	**01**	**48 d**	
3986	G	Ship A2 PSR Data Package	7281	03-7350	01	10 d	7
3996	G	PSR	7287	03-7350	01	1 d	5
4266		**S/N 106 A1 Environmental Test & Shipping Config**				**91 d**	
4267	G	**S/N 106 A1 Instrument Environmental Accept Test**	**7346**	**03-7350**	**01**	**61 d**	
4269	G	S/N 106 A1 EMI/RFI & Mag Field Tests	7350	03-7350	01	3 d	5
4270	G	Data Review (EMI Tests)	7351	03-7350	01	1.25 d	5
4271	G	Ripple Measurements/ LPT (N)	9520	03-7350	01	1.25 d	
4272	G	Initial Installation Velcro (N)	9521	03-7350	01	2 d	
4273	G	S/N 106 A1 Random Vib/LPT	7347	03-7350	01	5 d	5
4274	G	Data Review (Random Vib Tests)	7348	03-7350	01	1.25 d	
4275	G	LPT, Post-Vib Inspect & NASA Inspect	7349	03-7350	01	1.25 d	5
4276	G	**S/N 106 A1 Thermal Cycle Setup,Test, Sub CPT**				**8.5 d**	
4277	G	Thermal Cycle Setup	7352	03-7350	01	1 d	7
4278	G	Thermal CycleTest	7353	03-7350	01	5 d	7
4279	G	Sub CPT (Thermal Cycle) & AES/DCMC Inspect	7354	03-7350	01	4 d	5
4280	G	Data Review (Thermal Cycle)	7355	03-7350	01	1 d	5
4281	G	S/N 106 A1 Turbo Chamber Refurbishment	7357	03-7350	01	5 d	7
4282	G	Final Installation Velcro & Tape	9418	03-7350	01	3 d	
4283	G	Install Test Blankets (N)	9419	03-7350	01	1 d	
4284	G	Install Instrument in T/V Cal Fixture (N)	9420	03-7350	01	1 d	
4285	G	Chamber & T/V Cal Fixture Setup (N)	9421	03-7350	01	7 d	7
4286	G	Pre-Calibration T/V Cycle (N)	9422	03-7350	01	4 d	7
4287	G	S/N 106 A1 Primary Calibration (Turbo)	7359	03-7350	01	32 d	7



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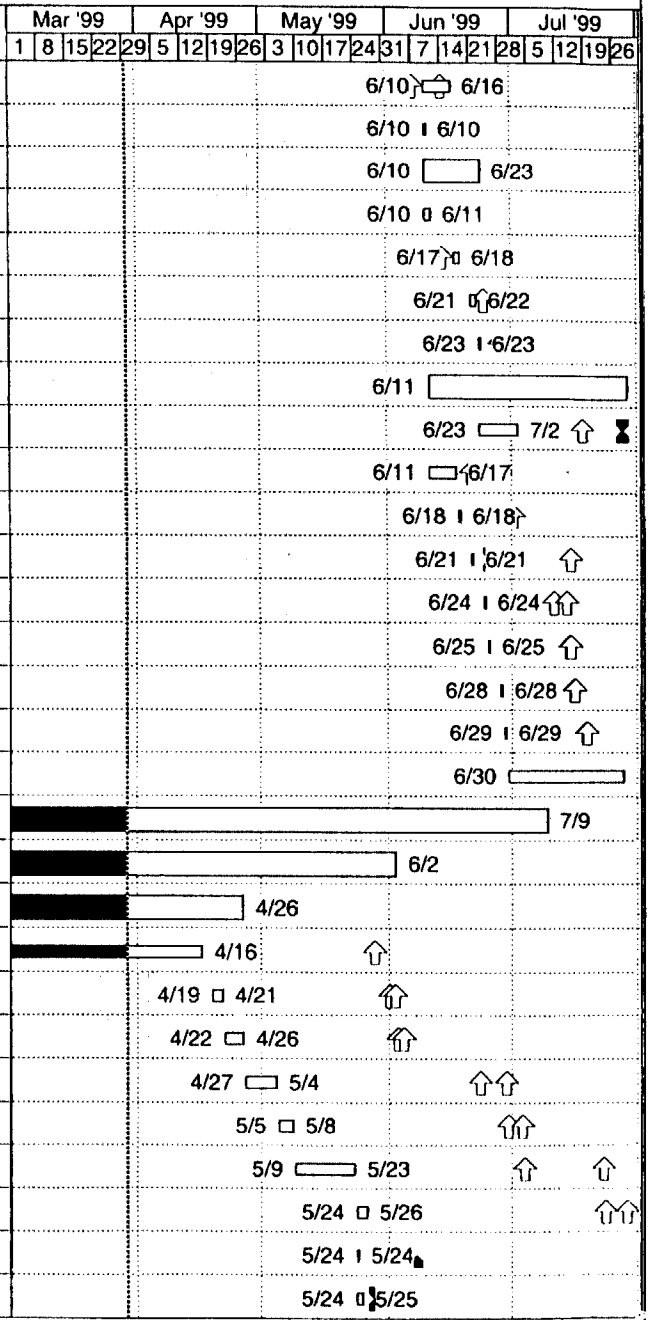
1

As of 3/29/99

AMSU-A 90 DAY WINDOW SCHEDULE

ID	Team	Name	Act ID	Cost Acct	WP	Dur	Cal
4288	G	S/N 106 A1 Final CPT (Primary Calibration)	7364	03-7350	01	5 d	5
4289	G	Data Review (Calibration)	7360	03-7350	01	1 d	5
4290	G	**S/N 106 A1 Final Assy**	**7361**	**03-7350**	**01**	**10 d**	
4291	G	Momentum Compensation Test Setup	9443	03-7350	01	2 d	
4292	G	Momentum Compensation Test	7356	03-7350	01	2 d	5
4293	G	Weight & CG	7362	03-7350	01	2 d	5
4294	G	Measure/ & Machine Isolation Pads (if required)	7363	03-7350	01	1 d	
4295	G	**S/N 106 A1 Shipping Config**	**7369**	**03-7350**	**01**	**34 d**	
4296	G	Ship Final CPT A1 PSR Data Package	7370	03-7350	01	10 d	7
4297	G	Kit Release A1 Shipping Config	7371	03-7350	01	5 d	
4298	G	Clean Shipping Container	7372	03-7350	01	1 d	
4299	G	Inspect & Purge Shipping Container	7373	03-7350	01	1 d	5
4300	G	Clean Instrument	7365	03-7350	01	1 d	
4301	G	Inspect Instrument for Cleanliness	7366	03-7350	01	1 d	5
4302	G	Load Unit In Shipping Container (Witness)	7374	03-7350	01	1 d	5
4303	G	Seal & Inspect Shipping Container	7375	03-7350	01	1 d	5
4304	G	Accept Tag & Documentation (N)	9522	03-7350	01	20 d	
4476		**S/N 106 A2 Environmental Test & Shipping Config**				**159 d**	
4477	G	**S/N 106 A2 Instrument Environmental Accept Tests**	**7433**	**03-7350**	**01**	**133 d**	
4490	G	**S/N 106 A2 Random Vib/LPT, Rework, Sub CPT, Inspect**				**86 d**	
4493	G	Engineering Evaluation & Rework	9400	03-7350	01	74 d	
4494	G	2 Axis Vib Test (N)	9389	03-7350	01	3 d	5
4495	G	Sub CPT, Post-Vib Inspect & NASA Inspect	7436	03-7350	01	3 d	5
4497	G	T/V Test Setup (N)	9379	03-7350	01	7 d	6
4498	G	Pre-Calibration T/V Cycle (N)	9380	03-7350	01	4 d	7
4499	G	S/N 106 A2 Primary Calibration (WC-1)	7446	03-7350	01	15 d	7
4500	G	Final CPT (Primary Calibration)	7451	03-7350	01	3 d	5
4501	G	Data Review (Calibration)	7447	03-7350	01	1 d	
4502	G	Momentum Compensation Test Setup (N)	9509	03-7350	01	2 d	



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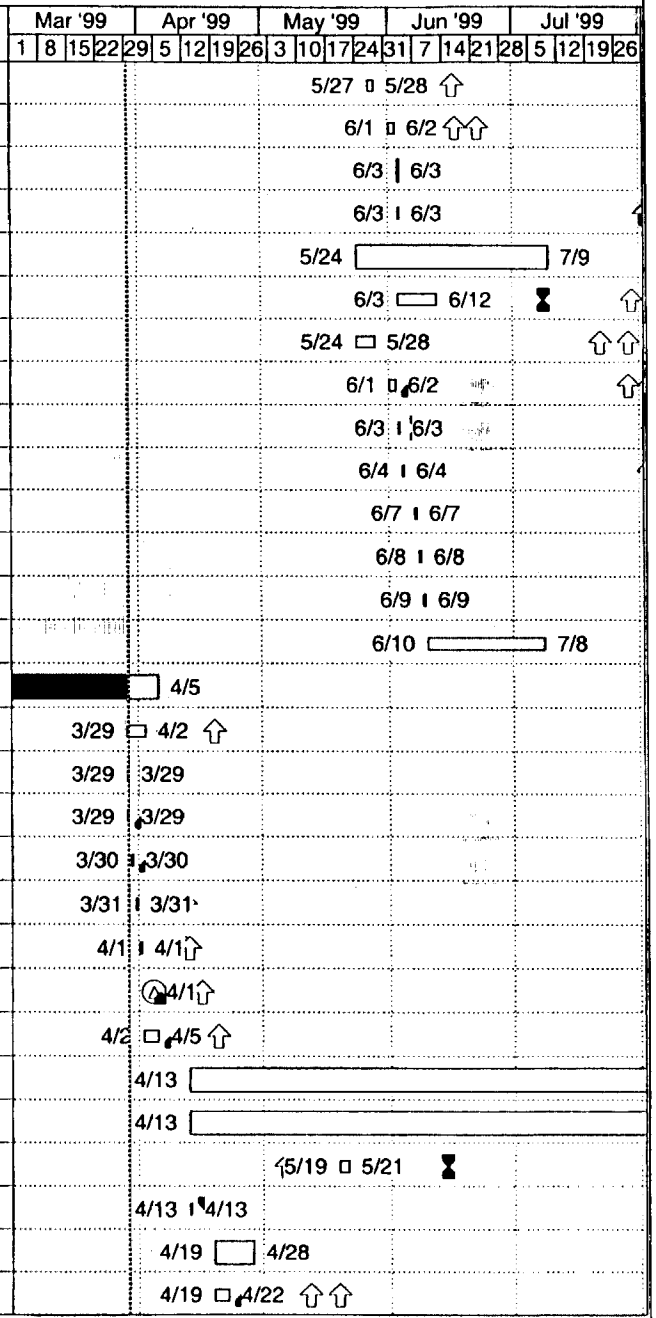
As of 3/29/99

AMSU-A 90 DAY WINDOW SCHEDULE

ID	Team	Name	Act ID	Cost Acct	WP	Dur	Cal
4503	G	S/N 106 A2 Momentum Compensation Test	7443	03-7350	01	2 d	5
4504	G	S/N 106 A2 Weight & CG	7449	03-7350	01	2 d	5
4505	**G**	**S/N 106 A2 Final Assy**	**7448**	**03-7350**	**01**	**1 d**	
4506	G	Measure/ & Machine Isolation Pads (if required)	7450	03-7350	01	1 d	
4507	**G**	**S/N 106 A2 Shipping Config**	**7456**	**03-7350**	**01**	**33 d**	
4508	G	Ship A2 PSR Data Package	7457	03-7350	01	10 d	7
4509	G	Kit Release A2 Shipping Config	7458	03-7350	01	5 d	
4510	G	Clean Shipping Container	7459	03-7350	01	2 d	
4511	G	Inspect & Purge Shipping Container	7460	03-7350	01	1 d	7
4512	G	Clean Instrument	7452	03-7350	01	1 d	
4513	G	Inspect Instrument for Cleanliness	7453	03-7350	01	1 d	
4514	G	Load Unit In Shipping Container (Witness)	7461	03-7350	01	1 d	
4515	G	Seal & Inspect Shipping Container	7462	03-7350	01	1 d	
4516	G	Accept Tag & Documentation (N)	9523	03-7350	01	20 d	
4782		**SAT & Conformal Coat CCAs - S/N 107 A1**				**67 d**	
4787	C	SAT,CC & ACCEPT M107 A1 PWR RELAY ASSY	7535	03-2210		5 d	
4789	C	METSAT 107 A1 ANTENNA DATA SEIT VALIDATED	6727			1 d	
4790	C	METSAT 107 A1 FIRMWARE CSCI- MODIFIED	6728	02-3510		1 d	
4791	C	RELEASE M107 A1 MEM PROM BURN SHOP ORDER	6729	03-2210		1 d	
4792	C	BURN M107 A1 MEM PROMS, 2 PART#'S, 1 EA.	6730	03-2210		1 d	
4793	C	INSTALL M107 A1 PROMs in 1331126-11 & INSPECT	7723	03-2210		1 d	
4794	C	RECEIVE SEIT CC GO AHEAD	7724			0 d	
4795	C	CC & ACCEPT 1331126-11	7725	03-2210		2 d	
4833		**S/N 107 A1 Environmental Test & Shipping Config**				**108 d**	
4834	**G**	**S/N 107 A1 Instrument Environmental Accept Test**	**86**	**03-7350**	**01**	**79 d**	
4847	A	Install Velcro for Blankets	623	03-7300	30	2.5 d	
4835	G	EMI Test Setup	9444	03-7350	01	1 d	
4836	**G**	**S/N 107 A1 EMI Tests**				**8 d**	
4837	G	S/N 107 A1 EMI/RFI & Mag Field Tests	82	03-7350	01	4 d	5



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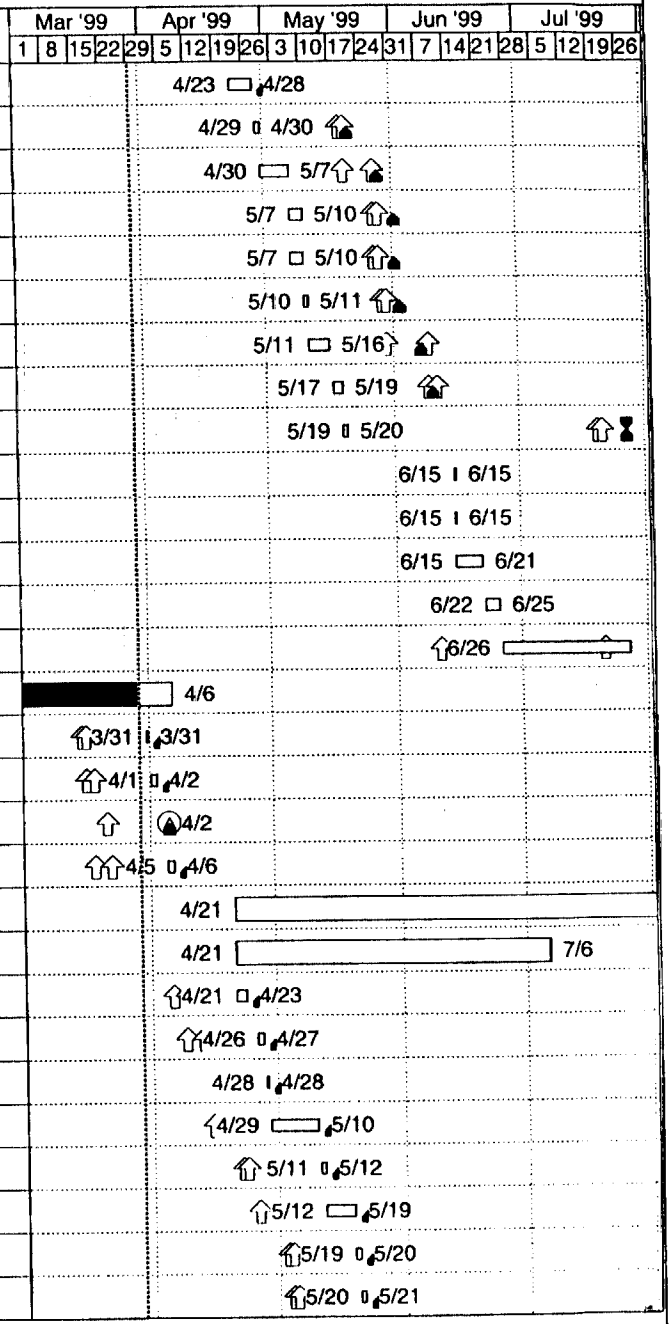
As of 3/29/99

AMSU-A 90 DAY WINDOW SCHEDULE

ID	Team	Name	Act ID	Cost Acct	WP	Dur	Cal
4838	G	METOP EMI Tests - TA #10	9445	03-7350	01	4 d	
4839	G	Data Review (EMI Tests)	81	03-7350	01	1.25 d	
4840	G	S/N 107 A1 Random Vib/LPT	85	03-7350	01	5 d	5
4841	G	Data Review (Random Vib Tests)	84	03-7350	01	1.25 d	
4842	G	LPT, Post-Vib Inspect & NASA Inspect	83	03-7350	01	1.25 d	5
4843	G	Thermal Cycle Setup	80	03-7350	01	1 d	7
4844	G	S/N 107 A1 Thermal CycleTest	78	03-7350	01	5 d	7
4845	G	Sub CPT (Thermal Cycle) & AES/DCMC Inspect	77	03-7350	01	2.5 d	5
4846	G	Data Review (Thermal Cycle)	76	03-7350	01	1.25 d	
4848	G	Install Test Blankets	9446	03-7350	01	1 d	
4849	G	Install Instrument in T/V Cal Fixture	0447	03-7350	01	1 d	
4850	G	Chamber & T/V Cal Fixture Setup (N)	9448	03-7350	01	7 d	7
4851	G	Pre-Calibration T/V Cycle (N)	9449	03-7350	01	4 d	7
4852	G	S/N 107 A1 Primary Calibration (Turbo)	1	03-7350	01	32 d	7
4995		**SAT & Conformal Coat CCAs - S/N 107 A2**				**115 d**	
5005	C	BURN A2 M107 MEM PROMS, 2 PART#'S, 1 EA.	6726	03-2210		1 d	
5006	C	INSTALL M107 A2 PROMs in 1331126-15 & INSPECT	7726	03-2210		2 d	
5007	C	RECEIVE SEIT CC GO AHEAD	7724			0 d	
5008	C	CC & ACCEPT 1331126-15	7727	03-2210		2 d	
5044		**S/N 107 A2 Environmental Test & Shipping Config**				**83 d**	
5045	**G**	**S/N 107 A2 Instrument Environmental Accept Tests**	**791**	**03-7350**	**01**	#####	
5046	A	Add Thermal Tape to Instrument	770	03-7300	30	3 d	
5047	A	Install Velcro for Blankets	788	03-7300	30	2 d	
5048	G	EMI Test Setup	9451	03-7350	01	1 d	
5049	G	S/N 107 A2 EMI/RFI & Mag Field Tests (Includes METOP TA #10)	795	03-7350	01	8 d	5
5050	G	Data Review (EMI Tests)	796	03-7350	01	1.25 d	
5051	G	S/N 107 A2 Random Vib/LPT	792	03-7350	01	5 d	5
5052	G	Data Review (Random Vib Tests)	793	03-7350	01	1.25 d	
5053	G	LPT, Post-Vib Inspect & NASA Inspect	794	03-7350	01	1.25 d	5



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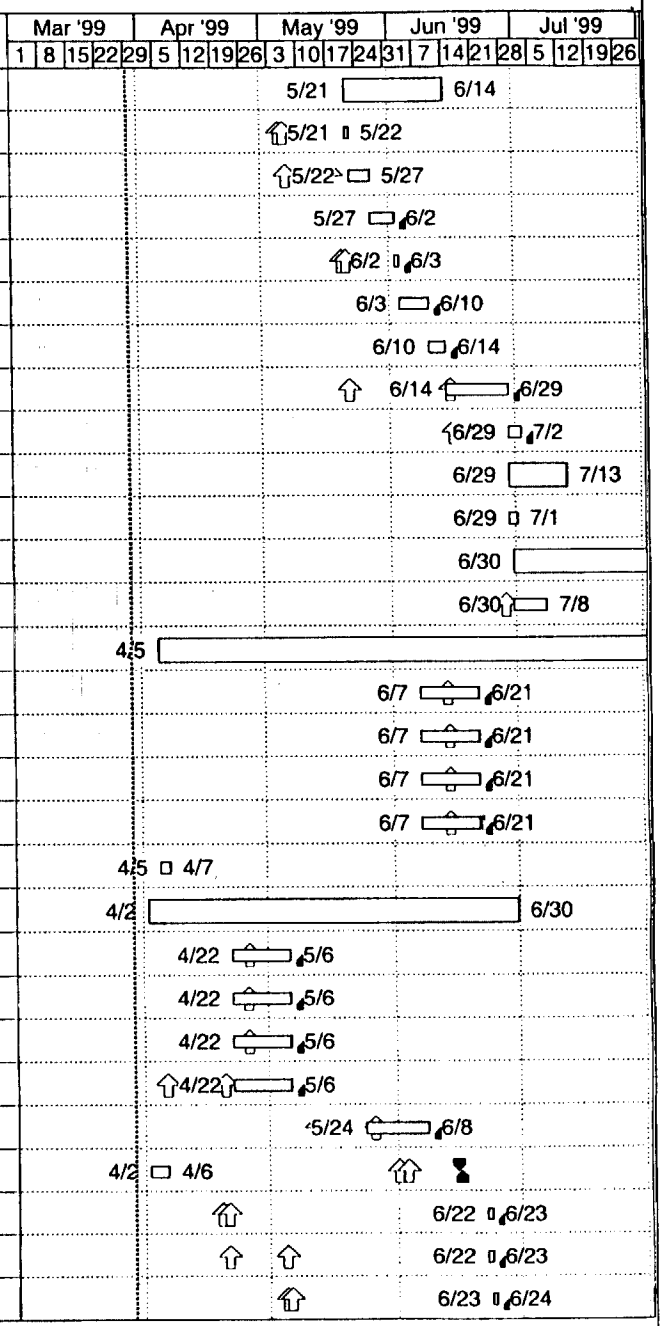
As of 3/29/99

AMSU-A 90 DAY WINDOW SCHEDULE

ID	Team	Name	Act ID	Cost Acct	WP	Dur	Cal
5054	G	**S/N 107 A2 Thermal Cycle Setup, Test, Sub CPT**				#####	
5055	G	Thermal Cycle Setup	797	03-7350	01	1 d	7
5056	G	Thermal CycleTest	798	03-7350	01	5 d	7
5057	G	Sub CPT (Thermal Cycle)	799	03-7350	01	2.5 d	5
5058	G	Data Review (Thermal Cycle)	800	03-7350	01	1.25 d	
5059	G	T/V Test Setup	9452	03-7350	01	7 d	7
5060	G	Pre-Calibration T/V Cycle	9453	03-7350	01	4 d	7
5061	G	S/N 107 A2 Primary Calibration (WC-1)	803	03-7350	01	15 d	7
5062	G	S/N 107 A2 Final CPT (Primary Calibration)	7802	03-7350	01	3 d	5
5064	G	**S/N 107 A2 Final Assy**	**7799**	**03-7350**	**01**	**9.25 d**	
5065	G	A2 Momentum Compensation Test Setup	9454	03-7350	01	2 d	
5069	G	**S/N 107 A2 Shipping Config**	**806**	**03-7350**	**01**	**33.5 d**	
5071	G	Kit Release A2 Shipping Config	808	03-7350	01	5 d	
5426		**SAT & Conformal Coat CCAs - S/N 108 A1**				#####	
5427	C	SAT,CC & ACCEPT M108 A1 PWR RELAY ASSY	7539	03-2210		10 d	
5428	C	SAT & ACCEPT METSAT M108 A1 INTERFACE CONV CCAs	8266	03-2210		10 d	
5429	C	SAT & ACCEPT M108 A1 MTR DRIVER CCAs	8342	03-2210		10 d	
5430	C	SAT,CC & ACCEPT M108 A1 R/D CONV CCAs	7766	03-2210		10 d	
5432	C	BURN M108 A1 ENGINEERING PROMS	8037	03-2210		2.5 d	
5652		**SAT & Conformal Coat CCAs - S/N 108 A2**				#####	
5653	C	SAT,CC & ACCEPT M108 A2 PWR RELAY ASSY	7540	03-2210		10 d	
5654	C	SAT & ACCEPT METSAT M108 A2 INTERFACE CONV CCAs	8267	03-2210		10 d	
5655	C	SAT & ACCEPT M108 A2 MTR DRIVER CCAs	8343	03-2210		10 d	
5656	C	SAT,CC & ACCEPT M108 A2 R/D CONV CCAs	8063	03-2210		10 d	
5657	C	SAT & ACCEPT M108 A2 PREAMP	7548	03-2210		10 d	
5658	C	BURN M108 A2 ENGINEERING PROMS	8036	03-2210		2.5 d	
5659	C	METSAT 108 A2 ANTENNA DATA SEIT VALIDATED	6731			1 d	
5660	C	METSAT 108 A2 FIRMWARE CSCI- MODIFIED	6732	02-3510		1 d	
5661	C	RELEASE M108 A2 MEM PROM BURN SHOP ORDER	6733	03-2210		1 d	



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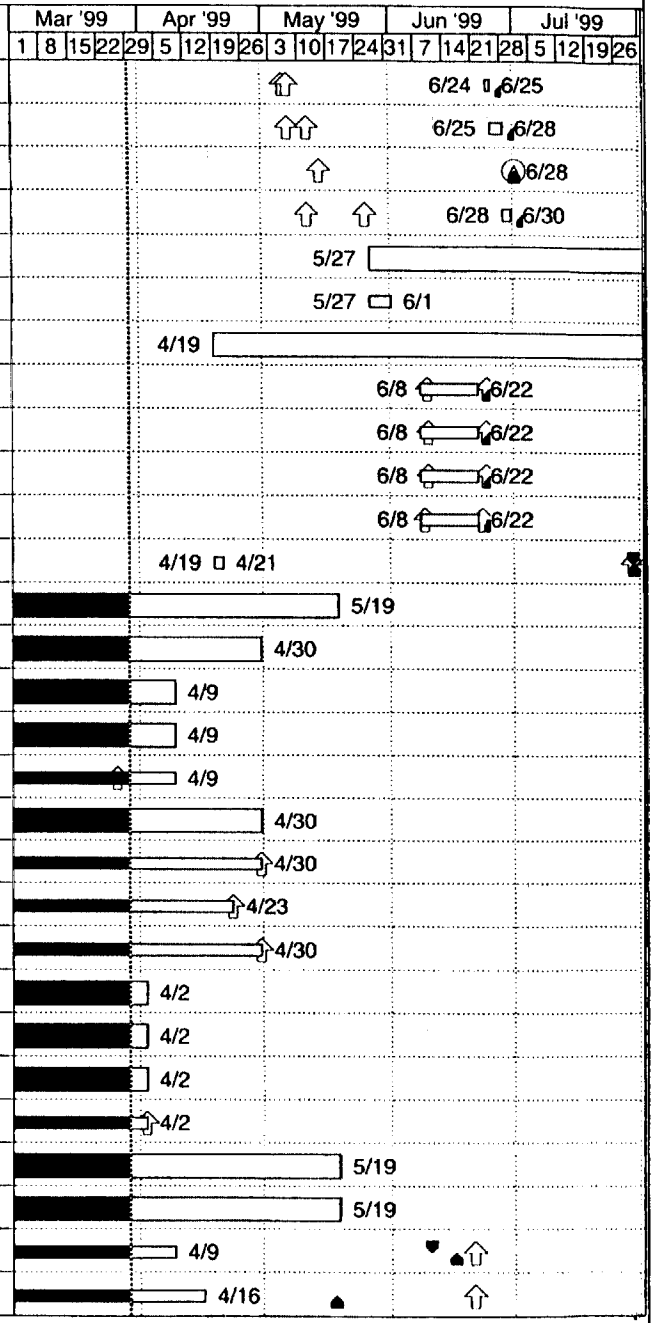
As of 3/29/99

AMSU-A 90 DAY WINDOW SCHEDULE

ID	Team	Name	Act ID	Cost Acct	WP	Dur	Cal
5662	C	BURN M108 A2 MEM PROMS, 2 PART#'S, 1 EA.	6734	03-2210		1 d	
5663	C	INSTALL M108 A2 PROMs in 1331126-16 & INSPECT	7731	03-2210		1 d	
5664	C	RECEIVE SEIT CC GO AHEAD	7729			0 d	
5665	C	CC & ACCEPT 1331126-16	7732	03-2210		2 d	
6109		**SAT & Conformal Coat CCAs - S/N 109 A1**				#####	
6115	C	BURN M109 A1 ENGINEERING PROMS	8039	03-2210		2.5 d	
6369		**SAT & Conformal Coat CCAs - S/N 109 A2**				#####	
6370	C	SAT.CC & ACCEPT M109 A2 PWR RELAY ASSY	7544	03-2210		10 d	
6371	C	SAT & ACCEPT METSAT M109 A2 INTERFACE CONV CCAs	8269	03-2210		10 d	
6372	C	SAT & ACCEPT M109 A2 MTR DRIVER CCAs	8345	03-2210		10 d	
6373	C	SAT,CC & ACCEPT M109 A2 R/D CONV CCAs	8065	03-2210		10 d	
6375	C	BURN M109 A2 ENGINEERING PROMS	8038	03-2210		2.5 d	
769	a	**SYSTEMS ENGINEERING & INTEGRATION TEAM**	**4301**			#####	
829	H	**EOS GSE & FIXTURES**	**4940**	**10-2110**		#####	
911	H	**FOURTH STE/MOD 1489**	**9256**	**10-2110**	**30**	**180 d**	
933	H	**STE Assembly**	**9277**	**10-2110**		**180 d**	
937	H	Assembly & Checkout (N)	9281	10-2110		106 d	
938	H	**STE MODS for EOS S/C I & T**	**9282**	**10-2110**	**31**	**175 d**	
941	H	Software Modification (N)	9285	10-2110		111 d	
942	H	Update O & M Manual (N)	9286	10-2110		93 d	
943	H	Test & Checkout (N)	9287	10-2110		96 d	
995	H	**METSAT GSE & FIXTURES**	**5038**	**10-3110**		#####	
1027	H	**METSAT BLACK BODY TARGETS & MONITOR**	**5182**	**10-3110**		#####	
1040	H	**BLACK BODY TARGET SET TEST**	**5194**	**10-3110**	**09**	**325 d**	
1047	H	FINAL VERSION O & M MANUAL	8931	10-3110		120 d	
1080	H	**METOP MODIFICATIONS**	**9292**	**10-3110**	**18**	#####	
1081	H	**METOP Upgrades - Mod 1489**	**9293**	**10-3110**	**18**	#####	
1082	H	Procurement (N)	9294	10-3110		211 d	
1084	H	Upgrade Software (N)	9297	10-3110		106 d	



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As of 3/29/99

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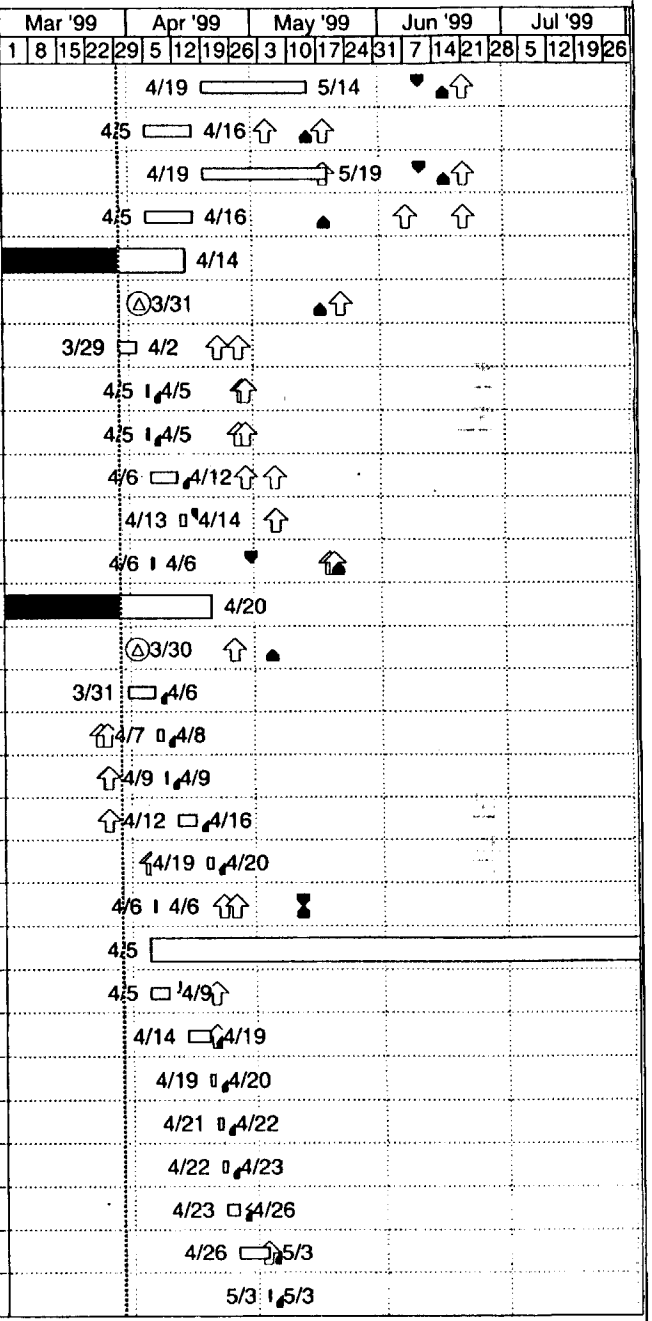
ID	Team	Name	Act ID	Cost Acct	WP	Dur	Cal
1085	H	Upgrade STEs (Qty 3) (N)	9296	10-3110		20 d	
1086	H	O & M Manual Draft (N)	9298	10-3110		10 d	
1087	H	O & M Manual Final (N)	9299	10-3110		22.5 d	
1088	H	METOP Accommodation Design Review (N)	9300	10-3110		10 d	
4796	A	**S/N 107 A1 Top Assembly - Integration & Test**	**2**	**03-7300**	**30**	**119 d**	
4825	A	Ship A1 PER Data Package to NASA	94	03-7100	30	1 d	
4826	A	Final Assy for 1st (Baseline) CPT	93	03-7300	30	5 d	
4827	A	AES/ DCMC Inspect	92	03-7300	30	1 d	
4828	A	TRR - 1st (Baseline) CPT	91	03-7300	30	1 d	
4829	A	1st A1 (Baseline) CPT	90	03-7300	30	5 d	5
4830	A	AES/ DCMC Inspect & Verify CPT Test Data	89	03-7300	30	2 d	
4831	A	S/N 107 A1 PER	87	03-7100	30	1 d	
5009	A	**S/N 107 A2 Top Assembly - Integration & Test**	**748**	**03-7300**	**30**	**181 d**	
5036	A	Ship A2 PER Data Package to NASA	781	03-7100	30	1 d	
5037	A	Final Assy for 1st (Baseline) CPT	783	03-7300	30	5 d	
5038	A	AES/ DCMC Inspect	784	03-7300	30	2 d	
5039	A	TRR - 1st (Baseline) CPT	785	03-7300	30	1 d	
5040	A	1st A2 (Baseline) CPT	786	03-7300	30	5 d	5
5041	A	AES/ DCMC Inspect & Verify CPT Test Data	787	03-7300	30	2 d	
5042	A	S/N 107 A2 PER	790	03-7100	30	1 d	
5440	A	**S/N 108 A1 Top Assembly - Integration & Test**	**7949**	**03-7300**	**30**	**#####**	
5441	A	Kit Release A1 Top Assy	378	03-7300	30	5 d	
5442	A	Remove Antenna Panels, Bond Grommet, Install Up Card Cage	127	03-7300	30	3.75 d	
5443	A	Remove Side Panel, Install Test Panel & Hinge Fixture	124	03-7300	30	1.25 d	
5444	A	Remove Panels, Rec Shelves, Instl Dummy Shelves & Test Panel	88	03-7300	30	1.25 d	
5445	A	Install Sig Proc Assy(w/o CCAs), Pwr Ctrl Mon & DC Conv(tempor)	121	03-7300	30	1.25 d	
5446	A	AES/DCMC Inspect Signal Processor	120	03-7300	30	0.63 d	
5447	A	Install A1 Cables	119	03-7300	30	5 d	
5448	A	AES/DCMC Inspect Cables	118	03-7300	30	0.63 d	



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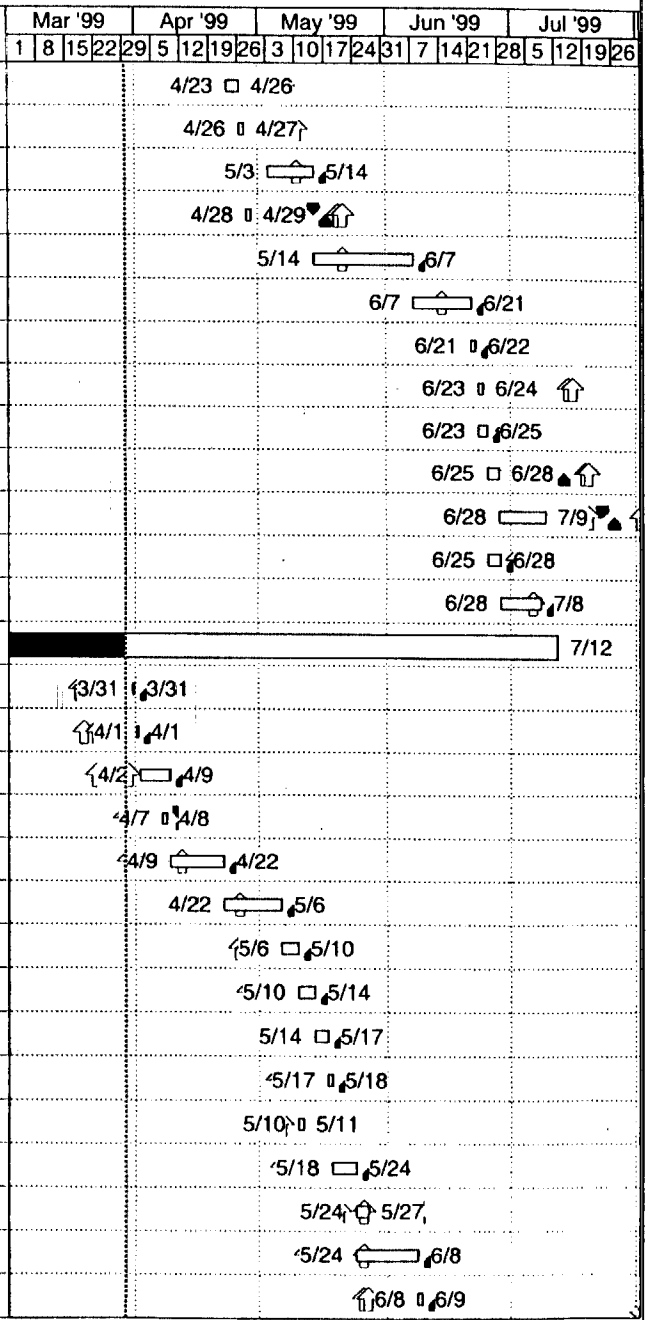
As of 3/29/99

AMSU-A 90 DAY WINDOW SCHEDULE

ID	Team	Name	Act ID	Cost Acct	WP	Dur	Cal
5449	A	Formal TRR - System Integration Test	117	03-7300	30	1.25 d	
5450	A	System Integration Test Stand-up TRR	116	03-7300	30	1.25 d	
5451	A	A1 System Integration Test	115	03-7300	30	9 d	5
5452	A	TRR - Antenna Drive Subsystem Test	114	03-7300	30	1.25 d	
5453	A	A1 Antenna Drive Subsystem Test	113	03-7300	30	15 d	5
5454	A	Conformal Coat Ant Drive & Memory CCAs and Pwr Ctrl Mon	112	03-7300	30	10 d	
5455	A	Install CCAs & complete Ant Drive Subsystem Test	111	03-7300	30	1.25 d	5
5456	A	Remove Panels & Send for Mirror Bond	8631	03-7300	30	1.25 d	
5457	A	Remove Dummy Rec Shelves/ Install Flight Recs & Dummy PDA	110	03-7300	30	2.5 d	
5458	A	Bend Semi-rigid COAX Cables	109	03-7300	30	0.63 d	
5459	A	Fab, Condition, Test & Inspect Semi-rigid COAX Cables	108	03-7300	30	8.75 d	
5460	A	TRR - System Integration Test	107	03-7300	30	1.25 d	
5461	A	A1 Receiver Perf, Gain & Offset Tests	106	03-7300	30	7 d	5
5666	**A**	**S/N 108 A2 Top Assembly - Integration & Test**	**717**	**03-7300**	**30**	#####	
5674	A	Formal TRR - System Integration, CPT,LPT Tests	729	03-7300	30	1 d	
5675	A	System Integration Test Stand-up TRR	730	03-7300	30	1 d	
5676	A	A2 System Integration Test	731	03-7300	30	5.5 d	5
5677	A	TRR - Antenna Drive Subsystem Test	732	03-7300	30	1 d	
5678	A	A2 Antenna Drive Subsystem Test & Momentum Comp Test	733	03-7300	30	9 d	5
5679	A	Conformal Coat Ant Drive & Memory CCAs and Pwr Ctrl Mon	734	03-7300	30	10 d	
5680	A	Install CCAs & complete Ant Drive Subsystem Test	735	03-7300	30	2 d	5
5681	A	Install DC/DC Conv, Temp Pwr Ctrl Mon & Mom Comp.	727	03-7300	30	3.75 d	
5682	A	AES/DCMC Insp DC Conv, Temp Pwr Ctrl Mon & Mom Comp	728	03-7300	30	1.25 d	
5683	A	Remove Dummy Receiver Shelf, Install Flight Receiver Shelf	736	03-7300	30	1.25 d	
5684	A	TRR - System Integration Test	737	03-7300	30	1.25 d	
5685	A	A2 Receiver Perf, Gain & Offset Tests (T&S Flight PDA)	738	03-7300	30	3.5 d	5
5686	A	Add Thermal Tape to Instrument	739	03-7300	30	3 d	
5687	A	Conformal Coat Preamp CCAs	740	03-7300	30	10 d	
5688	A	Connect PDA / Gain & Offset Test	741	03-7300	30	1.25 d	5



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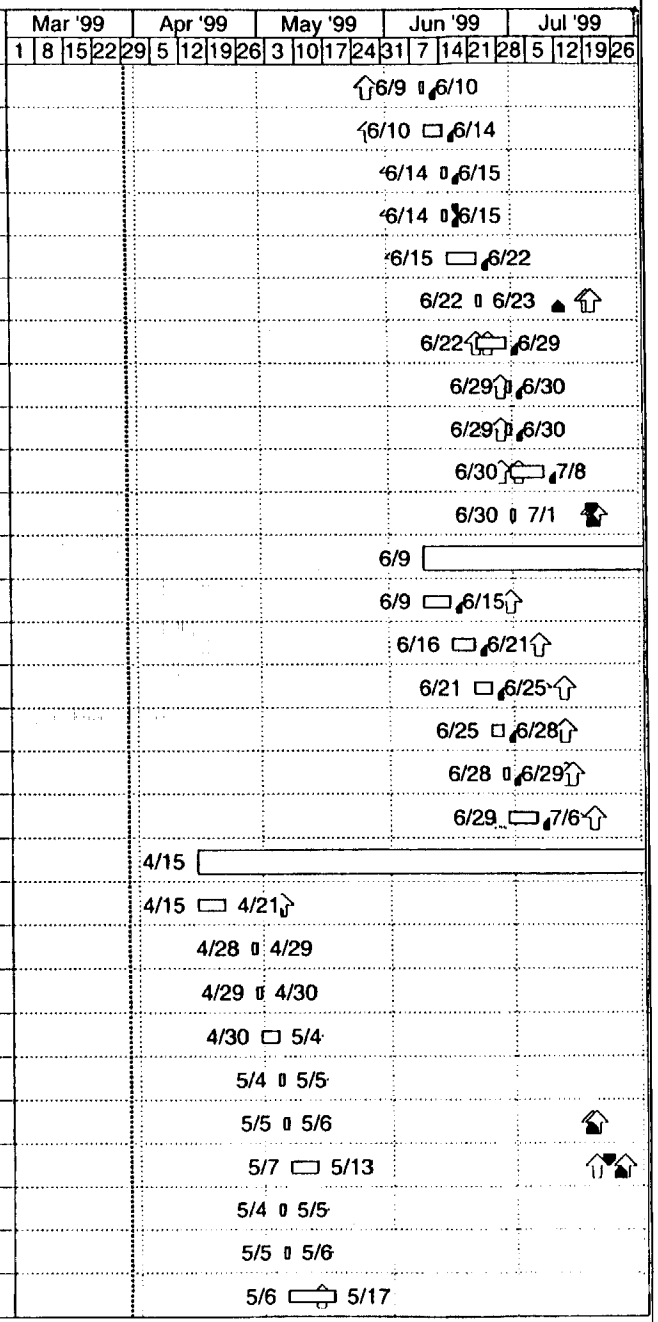
AMSU-A 90 DAY WINDOW SCHEDULE

ID	Team	Name	Act ID	Cost Acct	WP	Dur	Cal
5689	A	Install DC Conv/Remove Dummy & Install Flt PDA/Fit Check COAX Cable	742	03-7300	30	0.74 d	
5690	A	Gain & Offset, PRT Calib, & Clock Verification Tests	743	03-7300	30	2.5 d	5
5691	A	AES/ DCMC Inspect & Verify Test Data	744	03-7300	30	1.25 d	
5692	A	TRR - Evaluation CPT	745	03-7300	30	1 d	
5693	A	1st A2 Evaluation CPT	746	03-7300	30	5 d	5
5694	A	Ship A2 PER Data Package to NASA	750	03-7100	30	1 d	
5695	A	Final Assy for 1st (Baseline) CPT	752	03-7300	30	5 d	
5696	A	AES/ DCMC Inspect	753	03-7300	30	1 d	
5697	A	TRR - 1st (Baseline) CPT	754	03-7300	30	1 d	
5698	A	1st A2 (Baseline) CPT	755	03-7300	30	5 d	5
5700	A	S/N 108 A2 PER	759	03-7100	30	1 d	
6123	A	**S/N 109 A1 Top Assembly - Integration & Test**	**2**	**03-7300**	**30**	#####	
6124	A	Kit Release A1 Top Assy	378	03-7300	30	5 d	
6125	A	Remove Antenna Panels, Bond Grommet, Install Up Card Cage	127	03-7300	30	3.75 d	
6126	A	Install A1-2 Receiver(Partial-Feedhorn), Drill, Rivet	125	03-7300	30	4 d	5
6127	A	AES/DCMC Inspect A1-2 Receiver Mounting	124	03-7300	30	0.63 d	
6128	A	Remove Side Panel, Install Test Panel & Hinge Fixture	123	03-7300	30	1.25 d	
6129	A	Install A1-1 Receiver(Partial-Feedhorn), Drill, Rivet	88	03-7300	30	3.75 d	
6383	A	**S/N 109 A2 Top Assembly - Integration & Test**	**717**	**03-7300**	**30**	#####	
6384	A	Kit Parts A2 Top Assy	718	03-7300	30	5 d	
6385	A	Remove Antenna Panels, Bond Grommet	720	03-7300	30	1.25 d	
6386	A	Remove Side Panel, Install Signal Processor (w/o CCA's)	723	03-7300	30	1.25 d	
6387	A	Install A2 Cables	9434	03-7300	30	2 d	
6388	A	AES/DCMC Inspect A2 Signal Processor & Cables	724	03-7300	30	1.25 d	
6389	A	Install Dummy Preamp Det & Bend Semi-rigid COAX Cables	725	03-7300	30	1.25 d	
6390	A	Fab, Condition, Test & Inspect Semi-rigid COAX Cables	726	03-7300	30	5 d	
6391	A	Formal TRR - System Integration, CPT,LPT Tests	729	03-7300	30	1.25 d	
6392	A	System Integration Test Stand-up TRR	730	03-7300	30	1 d	
6393	A	A2 System Integration Test	731	03-7300	30	7 d	5



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As of 3/29/99

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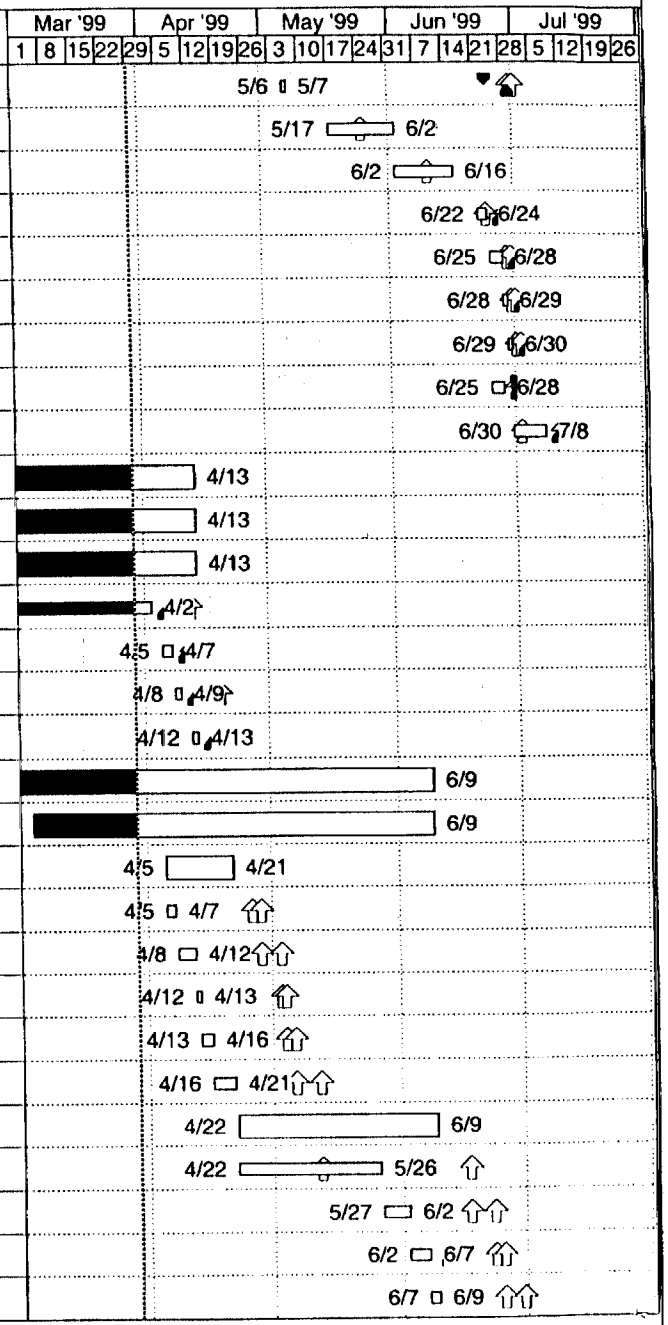
ID	Team	Name	Act ID	Cost Acct	WP	Dur	Cal
6394	A	TRR - Antenna Drive Subsystem Test	732	03-7300	30	1.25 d	
6395	A	A2 Antenna Drive Subsystem Test & Momentum Comp Test	733	03-7300	30	11 d	5
6396	A	Conformal Coat Ant Drive & Memory CCAs and Pwr Ctrl Mon	734	03-7300	30	10 d	
6397	A	Install CCAs & complete Ant Drive Subsystem Test	735	03-7300	30	2.5 d	5
6398	A	Install DC/DC Conv, Temp Pwr Ctrl Mon & Momentum Comp.	727	03-7300	30	1.25 d	
6399	A	AES/DCMC Insp DC Conv, Temp Pwr Ctrl Mon & Mom Comp	728	03-7300	30	1.25 d	
6400	A	Remove Dummy Receiver Shelf, Install Flight Receiver Shelf	736	03-7300	30	1.25 d	
6401	A	TRR - System Integration Test	737	03-7300	30	1.25 d	
6402	A	A2 Receiver Perf, Gain & Offset Tests (T&S Flight PDA)	738	03-7300	30	4.5 d	5
5356	**B**	**S/N 108 A1 Antenna Assy**	**558**	**03-3200**		**343 d**	
5401	**B**	**S/N 108 A1 Antenna Assy**	**3**	**03-3200**	**20**	**157 d**	
5409	**B**	**Antenna Range Testing & Final Assy**	**29**	**03-3200**		**112 d**	
5411	B	Subassy Pattern Test	392	03-3200	11	33 d	5
5412	B	Drill/Pin Drive Motors, Install Warmloads, Inspect	390	03-3200	20	3 d	5
5413	B	Verify all Torque & Add Wet Bends	389	03-3200	20	2 d	5
5414	B	Final Assy, Insp, NASA Insp	388	03-3200	20	2 d	5
6005	**B**	**S/N 109 A1 Antenna Assy**	**558**	**03-3200**		**#####**	
6061	**B**	**S/N 109 A1 Antenna Assy**	**3**	**03-3200**	**20**	**#####**	
6063	**B**	**Assembly**	**30**	**03-3200**		**12.5 d**	
6064	B	Install Tube Brackets & Align Cube	397	03-3200		2.5 d	5
6065	B	ID Unit & Bond Wire Mounts/Grommets	396	03-3200		2.5 d	5
6066	B	Install Drive Assemblies	395	03-3200		1.25 d	5
6067	B	Install, Align & Pin Feedhorns & Inspect	394	03-3200		2.5 d	5
6068	B	Install/Align Reflectors & Inspect	393	03-3200		3.75 d	5
6069	**B**	**Antenna Range Testing & Final Assy**	**29**	**03-3200**		**#####**	
6070	B	Subassy Pattern Test	392	03-3200	11	25 d	5
6071	B	Drill/Pin Drive Motors, Install Warmloads, Inspect	390	03-3200	20	3.75 d	5
6072	B	Verify all Torque & Add Wet Bends	389	03-3200	20	2.5 d	5
6073	B	A1 Antenna Final Assy, Insp, NASA Insp	388	03-3200	20	2.5 d	5



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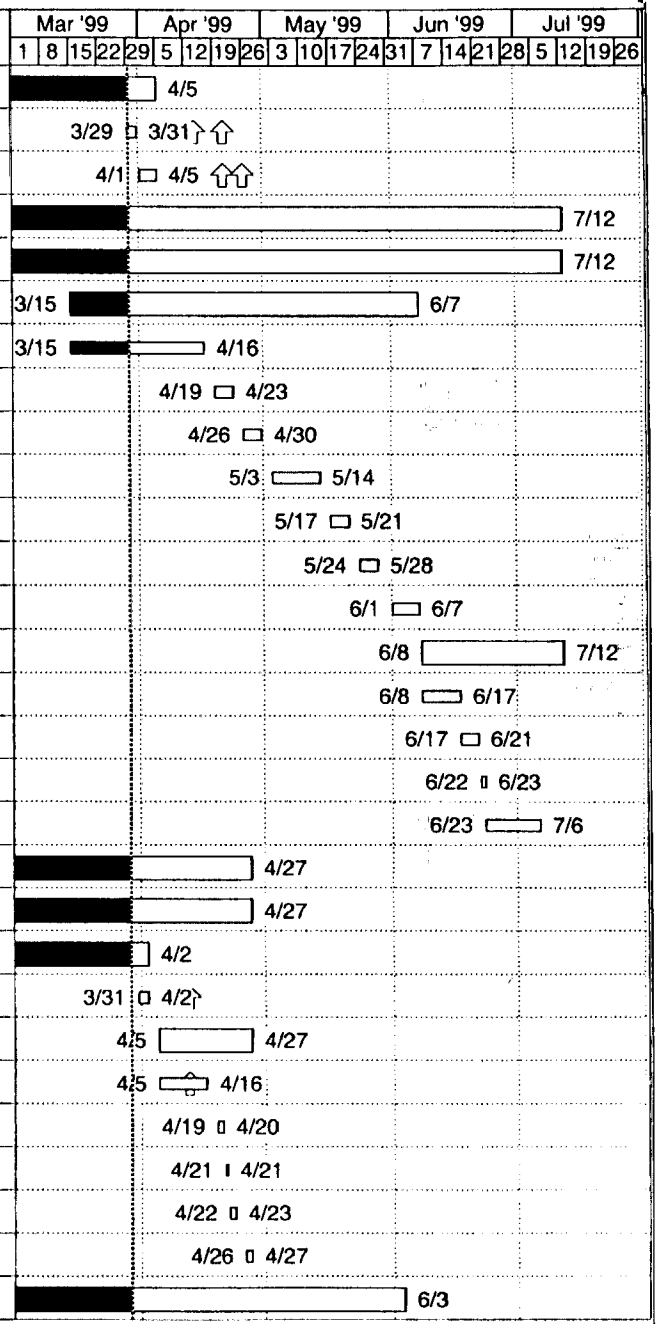
As of 3/29/99

AMSU-A 90 DAY WINDOW SCHEDULE

ID	Team	Name	Act ID	Cost Acct	WP	Dur	Cal
6006	E	**S/N 109 A1 Antenna Subassy, Machined**	7	03-1200	08	70.5 d	
6013	E	Complete/Identify Structure (MAI 60)	532	03-1200		3 d	5
6014	E	Final Inspect/ DCMC Inspect	531	03-1200		2.5 d	5
6078	B	**METSAT A1 ANTENNA SPARES**	8165			#####	
6091	B	**A1 Drive Assys, Reflector (QTY 1) (SPARE)**	8178	03-3200		#####	
6093	B	**Assemble**	8180	03-3200		60 d	
6094	B	Troubleshoot (N)	9437	03-3200		25 d	
6095	B	Install Resolver & Motor, Inspect	8181	03-3200		5 d	
6096	B	Bond	8182	03-3200		5 d	
6097	B	Wire	8183	03-3200		10 d	
6098	B	Inspect & DCMC Insp Wiring	8184	03-3200		5 d	
6099	B	Install Cover/Torque, ID Assy	8185	03-3200		5 d	
6100	B	Inspect/DCMC Inspect	8186	03-3200		5 d	
6101	B	**Test**	8187	03-3200		#####	
6102	B	Electrical Test & TRR	8188	03-3200		7.5 d	
6103	B	QE/Inspection Verify Test Data	8189	03-3200		2.5 d	
6104	B	Random Vibration Test & TRR	8190	03-3200		1.25 d	5
6105	B	Verify Motor Operation	8191	03-3200		8.75 d	
6261	B	**S/N 109 A2 Antenna Assy**	679	03-3200		451 d	
6303	B	**S/N 109 A2 Antenna Assy**	694	03-3200	21	74 d	
6305	B	**Assembly**	697	03-3200		42 d	
6309	B	Install Drive Motor, Reflector, Diplexer	701	03-3200		3 d	5
6310	B	**Antenna Range Testing & Final Assy**	702	03-3200		17 d	
6311	B	Subassy Pattern Test	703	03-3200	22	10 d	5
6312	B	Pin Drive Motor & Install Warmload	704	03-3200	21	2 d	5
6313	B	Inspect Antenna Assy	705	03-3200	21	1 d	5
6314	B	Bond Wiremounts & Identify	706	03-3200	21	2 d	5
6315	B	Final Assy, Insp, NASA Insp	707	03-3200	21	2 d	5
6325	B	**METSAT A2 ANTENNA SPARES**	8091			#####	



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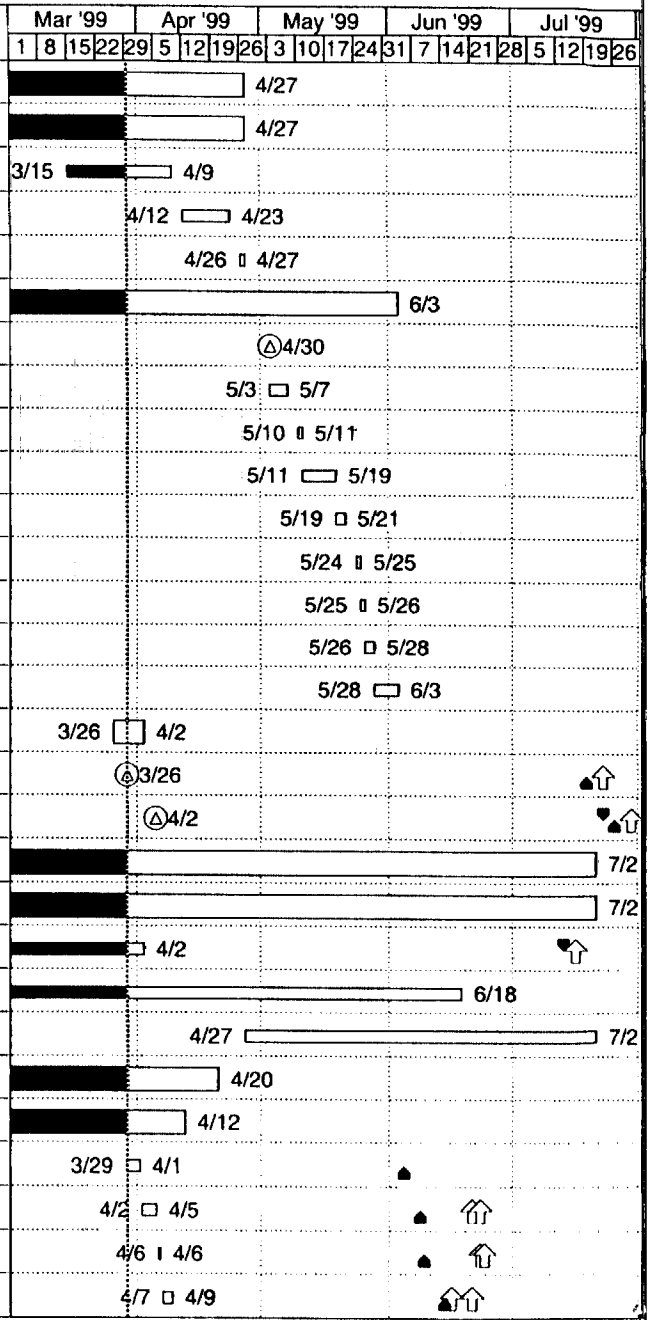
6339	**B**	**A2 Drive Assy, Reflector (1 EA) (SPARE)**	**8105**	**03-3200**		**#####**	
6348	**B**	**Test**	**8009**	**03-3200**		**53.5 d**	
6354	B	Replace Motor in Drive Assy w/KLM Spare (N)	9438	03-3200		20 d	
6355	B	Test Drive Assy w/KLM Spare (N)	9439	03-3200		10 d	
6356	B	A2 Drive Assy- Final Insp, NASA Insp	8120	03-3200		1.25 d	
6357	**B**	**A2 Compensator Assy (QTY 1) (SPARE)**	**8249**	**03-3200**		**#####**	
6359	B	Receive Reworked Bearings from Vendor (N)	9518	03-3200		1 d	
6360	B	Assemble Compensator Assys (Less Motors)	8251	03-3200		5 d	
6361	B	Torque Test	8252	03-3200		1.25 d	
6362	B	Complete Motor Assembly	8253	03-3200		6.25 d	
6363	B	Pre-Vib Performance Test	8254	03-3200		2.5 d	
6364	B	QE Data Review	8255	03-3200		1.25 d	
6365	B	Vibration Test	8256	03-3200		1 d	5
6366	B	Post-Vib Performance Test	8257	03-3200		2.5 d	
6367	B	A2 Compensator Final Inspection & DCMC Inspection	8258	03-3200		2.5 d	
6251	**C**	**S/N 109 A2 DC/DC Conv**	**669**	**70-1200**		**6 d**	
6252	C	Vendor Commit	670	70-1200		1 d	
6253	C	Dock-Stock	671	70-1200		5 d	
5	**D**	**RECEIVER SUBSYSTEM**	**1352**			**#####**	
27	**D**	**RECEIVER SHELF REPORTS (A1-1, A1-2, A2)**	**5403**	**03-5200**		**#####**	
31	D	S/N 107	5407	03-5200	19	589 d	
32	D	S/N 108	5408	03-5200	20	601 d	
33	D	S/N 109	8452	03-5200		60 d	
5286	**D**	**S/N 108 A1-1 Receiver Assy**	**15**	**03-5200**		**133 d**	
5288	**D**	**Final Assemble**	**173**	**03-5200**	**05**	**110 d**	
5293	D	Temperature Test (N)	9474	03-5200		4 d	
5294	D	Install Temp Sensor & Wire Mounts	430	03-5200		2 d	5
5295	D	AES Insp & DCMC Insp	428	03-5200		1 d	
5296	D	Wire RF Components	429	03-5200		3 d	5



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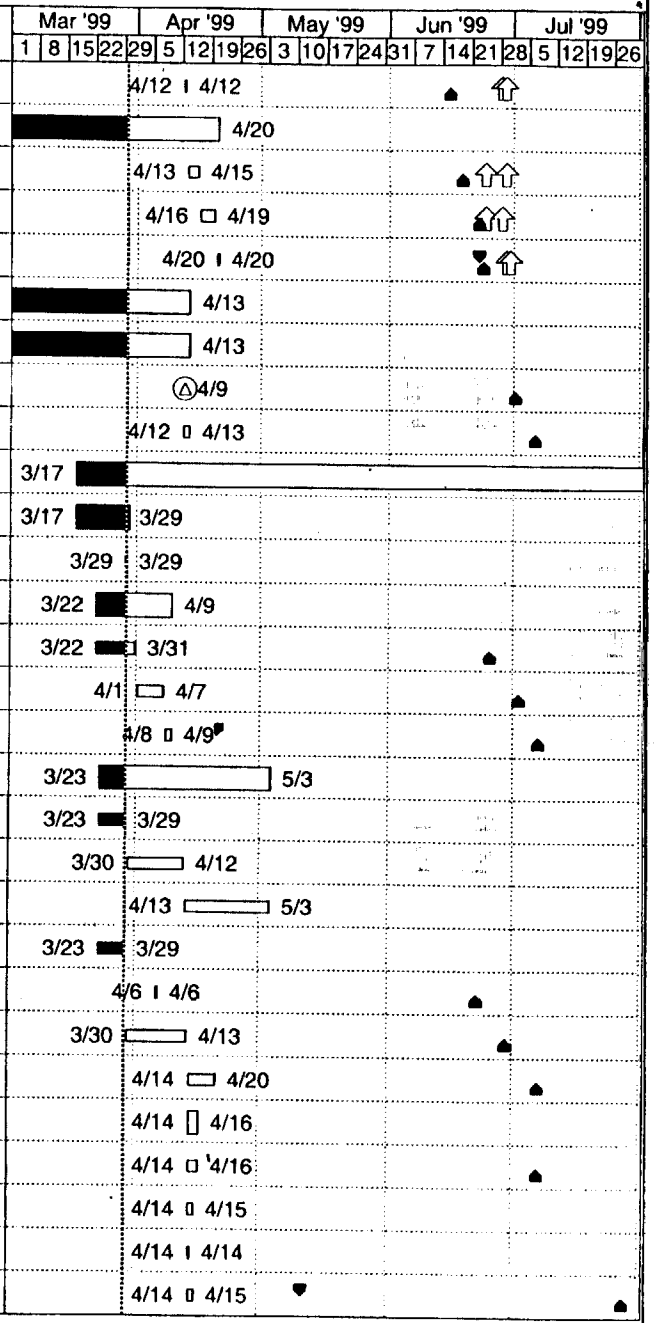
As of 3/29/99

AMSU-A 90 DAY WINDOW SCHEDULE

ID	Team	Name	Act ID	Cost Acct	WP	Dur	Cal
5297	D	AES Inspect & DCMC Inspect	8377	03-5200		1 d	
5298	**D**	**Test & Final Inspection**	**556**	**03-5200**		#####	
5300	D	Elect Performance Test (ATP)	792	03-5200	07	3 d	5
5301	D	Clean & Spot Bond	425	03-5200		2 d	
5302	D	S/N 108 A1-1 Receiver Final Insp & DCMC Insp	424	03-5200	05	1 d	
5859	**D**	**Major Subs for S/N 109 A1-1 Receiver Assy**	**45**			**613 d**	
5896	**D**	**A1-1 DRO**	**174**	**70-1000**		**170 d**	
5899	D	Receive Reworked -7 DRO from Vendor (N)	9513	70-1000		1 d	
5900	D	Reworked -7 DRO Dock-to-Stock (N)	9514	70-1000		2 d	
5903	**D**	**PLO(-3) Integration Plan**	**9480**	**03-5225**		#####	
5904	**D**	**PLO(-3) Bench Test**	**9481**	**03-5225**		**9 d**	
5907	D	PLO(-3) Engr Bench Test (N)	9484	03-5225		1 d	
5908	**D**	**PLO (-3) Tooling**	**9485**	**03-5225**		**15 d**	
5909	D	Define PLO(-3) Tooling (N)	9486	03-5225		8 d	
5910	D	Fab Tooling (N)	9487	03-5225		5 d	
5911	D	Proof PLO(-3) Tooling (N)	9488	03-5225		2 d	
5912	**D**	**Thermal Modifications**	**9489**	**03-5225**		**30 d**	
5913	D	Thermal Design (N)	9490	03-5225		5 d	
5914	D	Update Thermal Model (N)	9491	03-5225		10 d	
5915	D	Release A1 Thermal Model (N)	9492	03-5225		15 d	
5916	D	Mechanical Design (N)	9493	03-5225		5 d	
5917	D	Integrate Design and Review (N)	9494	03-5225		1 d	
5918	D	Generate & Release Shim ECNs & Drawings (N)	9495	03-5225		11 d	
5919	D	Fab Shims (N)	9496	03-5225		5 d	
5920	**D**	**Shop Order & Procedure Modifications**	**9497**	**03-5225**		**3 d**	
5921	D	Modify A1-1 Receiver Shop Order (N)	9498	03-5225		3 d	
5922	D	Modify A1 System Integ Top Level Shop Order (N)	9499	03-5225		2 d	
5923	D	Modify A1 System Integ Procedcure (N)	9500	03-5225		1 d	
5924	D	Modify A1-1 Receiver Shelf Test Procedure (N)	9501	03-5225		2 d	



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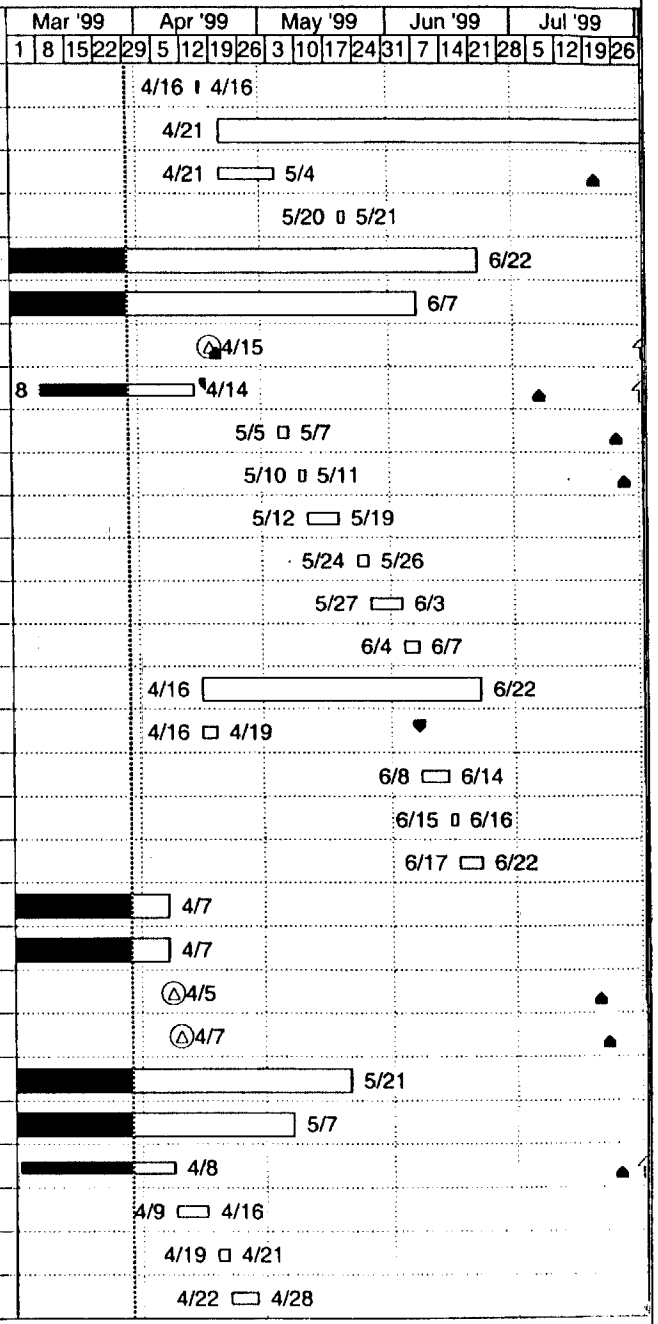
As of 3/29/99

AMSU-A 90 DAY WINDOW SCHEDULE

ID	Team	Name	Act ID	Cost Acct	WP	Dur	Cal
5925	D	Modify A1 EMI Test Shop Order (N)	9502	03-5225		1 d	
5926	**D**	**PLO(-3) Integration & Test**	**9503**	**03-5225**		**#####**	
5927	D	Integrate PLO(-3) into A1-1 Receiver Shelf Assy (N)	9504	03-5225		10 d	
5928	D	Delta A1-1 Receiver Shelf Temperature Test (N)	9504	03-5225		2 d	
5931	**D**	**S/N 109 A1-1 Receiver Assy**	**15**	**03-5200**		**157 d**	
5933	**D**	**Final Assemble**	**173**	**03-5200**	**05**	**112 d**	
5935	D	DRO/Waveguide Attenuator Test	432	03-5200		1 d	
5936	D	Install RF Components	430	03-5200		28 d	5
5937	D	Install Temp Sensor & Wire Mounts	9475	03-5200		3 d	
5938	D	AES Insp & DCMC Insp	428	03-5200		2 d	
5939	D	Pre-Test (N)	9476	03-5200		6 d	
5940	D	Temperature Test (N)	9477	03-5200		3 d	
5941	D	Wire RF Components	429	03-5200		5 d	5
5942	D	AES Insp & DCMC Insp	8380	03-5200		2 d	
5943	**D**	**Test & Final Inspection**	**556**	**03-5200**		**47 d**	
5944	D	DRO/Waveguide Attenuator Test	172	03-5200	06	2 d	5
5945	D	Elect Performance Test (ATP)	792	03-5200	07	5 d	5
5946	D	Clean & Spot Bond	425	03-5200		2 d	
5947	D	S/N 109 A1-1 Receiver AES Final Insp & DCMC Insp	424	03-5200	05	4 d	
5948	**D**	**Major Subs for S/N 109 A1-2 Receiver Assy**	**194**			**609 d**	
5970	**D**	**A1-2 DRO**	**188**	**75-1000**		**152 d**	
5973	D	Reworked -8 DRO Ship from Vendor	9435	75-1000		1 d	
5974	D	Reworked -8 DRO Dock to Stock	9436	75-1000		2 d	
5977	**D**	**S/N 109 A1-2 Receiver Assy**	**19**	**03-5200**		**#####**	
5979	**D**	**Final Shelf Assy**	**186**	**03-5200**	**05**	**54 d**	
5981	D	ID and Install RF Components	443	03-5200		28 d	5
5982	D	Pre-Test (N)	9478	03-5200		6 d	
5983	D	Temperature Test (N)	9479	03-5200		3 d	
5984	D	Install & Wire Temp Sensor & Wire Mounts	442	03-5200		5 d	5



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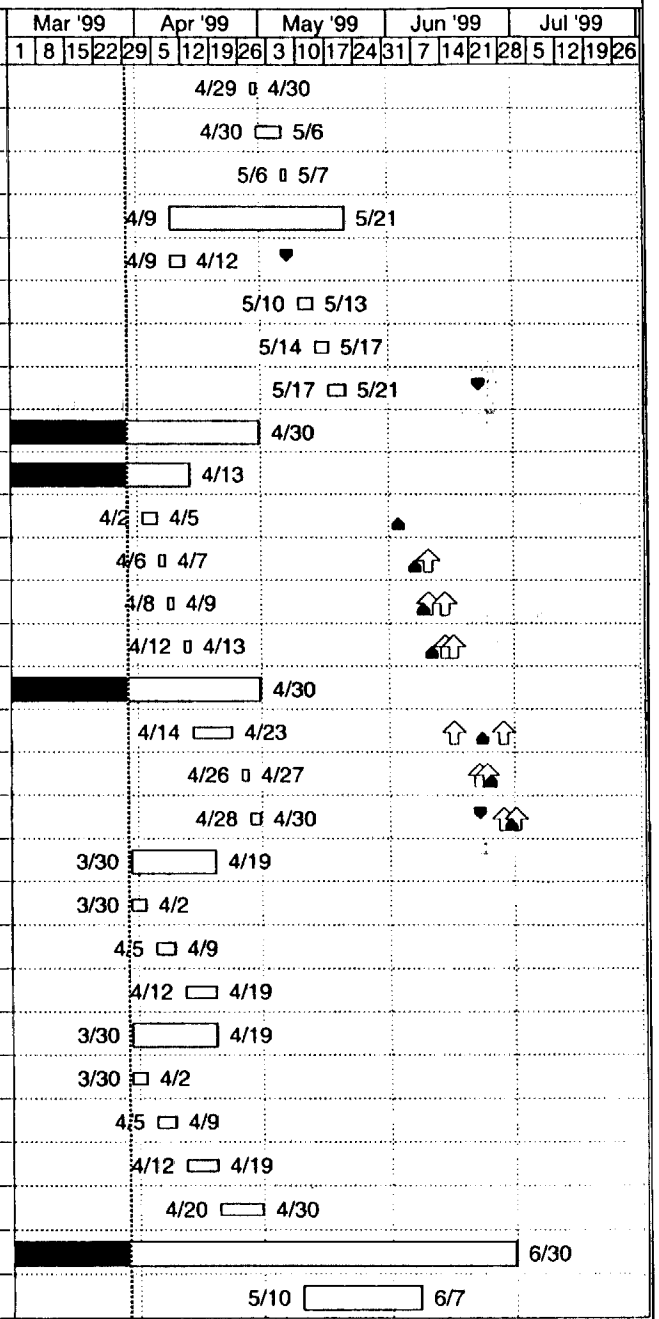
As of 3/29/99

AMSU-A 90 DAY WINDOW SCHEDULE

ID	Team	Name	Act ID	Cost Acct	WP	Dur	Cal
5985	D	AES Insp & DCMC Insp	440	03-5200		1.5 d	
5986	D	Wire RF Components	441	03-5200		4 d	5
5987	D	AES Insp & DCMC Insp	8381	03-5200		1.5 d	
5988	**D**	**Test & Final Inspection**	**554**	**03-5200**		**30.5 d**	
5989	D	DRO/Waveguide Attenuator Test	185	03-5200	06	2 d	5
5990	D	Elect Performance Test (ATP)	791	03-5200	07	4 d	5
5991	D	Clean & Spot Bond	437	03-5200		1.5 d	
5992	D	S/N 109 A1-2 Receiver AES Final Insp & DCMC Insp	436	03-5200	05	4 d	
6231	**D**	**S/N 109 A2 Receiver Assy**	**646**	**03-5200**		**121 d**	
6233	**D**	**Final Assemble**	**649**	**03-5200**	**05**	**80 d**	
6238	D	Pre-Test (N)	9515	03-5200		2 d	
6239	D	Temperature Test (N)	9473	03-5200		2 d	
6240	D	Install & Wire Temp Sensor & Wire Mounts	653	03-5200		2 d	5
6241	D	AES Inspect & DCMC Inspect (N)	9357	03-5200		2 d	
6242	**D**	**Test & Final Inspection**	**657**	**03-5200**		**79 d**	
6244	D	Elect Performance Test (ATP)	793	03-5200	07	8 d	5
6245	D	Clean & Spot Bond	656	03-5200		2 d	
6246	D	S/N 109 A2 Receiver AES Final Insp & DCMC Insp	659	03-5200	05	3 d	
603	**E**	**EOS A1 Reduced Thermal Model**	**9508**	**02-4220**		**15 d**	
604	E	Revise Reduced TRASYS Model per A1 Thermal Bal Test Results (N)	9509	02-4220		4 d	
605	E	Run NETRED to reduce the SINDA Model (N)	9510	02-4220		5 d	
606	E	Compare Reduced & Detailed Models & Adjust If Required (N)	9511	02-4220		6 d	
607	**E**	**EOS A2 Reduced Thermal Model**	**9512**	**02-4220**		**15 d**	
608	E	Revise Reduced TRASYS Model per A2 Thermal Bal Test Results (N)	9513	02-4220		4 d	
609	E	Run NETRED to reduce the SINDA Model (N)	9514	02-4220		5 d	
610	E	Compare Reduced & Detailed Models & Adjust If Required (N)	9515	02-4220		6 d	
611	E	Revise EOS CDRL 103A (N)	9516	02-4220		9 d	
630	**E**	**METOP THERMAL**	**6461**	**02-4320**		**605 d**	
638	**E**	**METOP A1 Thermal Analysis**	**9529**	**02-4320**		**20 d**	



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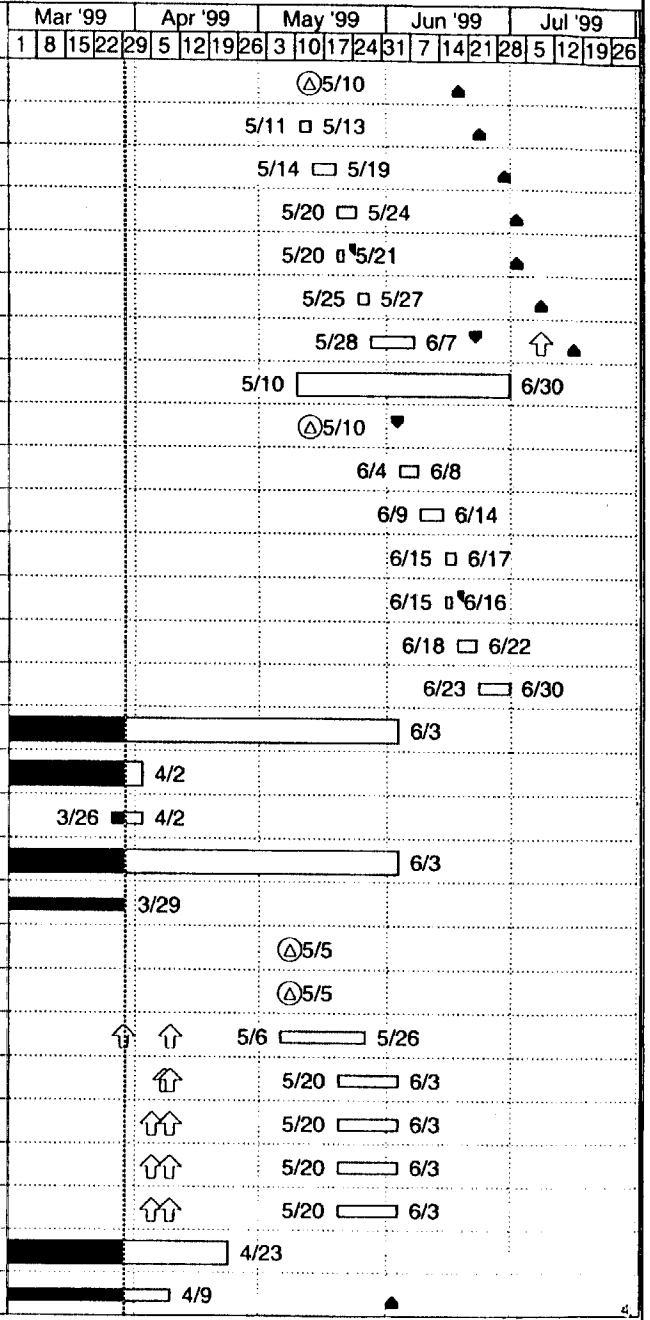
As of 3/29/99

AMSU-A 90 DAY WINDOW SCHEDULE

ID	Team	Name	Act ID	Cost Acct	WP	Dur	Cal
639	E	Receive New A1 Heat Loads from NASA (N)	9530	02-4320		1 d	
640	E	Apportion A1 Loads Amongst Detailed Nodes (N)	9531	02-4320		3 d	
641	E	A1 SINDA Temperature Predictions (N)	9532	02-4320		4 d	
642	E	Add Tape to Correct Temps. Out of Limit/Run TRASYS for Rad. Conn	9533	02-4320		3 d	
643	E	Modify Heat Load Apportionment for New Tape Pattern (N)	9534	02-4320		2 d	
644	E	Run SINDA Model for New Orbital Temperatures (N)	9535	02-4320		3 d	
645	E	Prepare A1 Reduced Thermal Model Report	6474	02-4320		6 d	
651	**E**	**METOP A2 Thermal Analysis**	**9536**	**02-4320**		**37 d**	
652	E	Receive New A2 Heat Loads from NASA (N)	9537	02-4320		1 d	
653	E	Apportion A2 Loads Amongst Detailed Nodes (N)	9538	02-4320		3 d	
654	E	A2 SINDA Temperature Predictions (N)	9539	02-4320		4 d	
655	E	Add Tape to Correct Temps. Out of Limit/Run TRASYS for Rad. Conn	9540	02-4320		3 d	
656	E	Modify Heat Load Apportionment for New Tape Pattern (N)	9541	02-4320		2 d	
657	E	Run SINDA Model for New Orbital Temperatures (N)	9542	02-4320		3 d	
658	E	Prepare A2 Reduced Thermal Model Report	6469	02-4320		6 d	
662	**E**	**KLM THERMAL**	**9401**	**13-1591**		**93 d**	
663	**E**	**KLM A1 Flight Data Comparison**	**9402**	**13-1591**		**50 d**	
669	E	Prepare KLM A1 Orbital Correlation & Thermal Improvement Memo (N	9543	13-1591		6 d	
670	**E**	**KLM A2 Flight Data Comparison**	**9408**	**13-1591**		**92 d**	
679	E	Delivery of Thermal Models to NASA (N)	9510	13-1591		21 d	
680	E	Receive Updated Spacecraft Thermal Model & NASA Input (TBD) (N)	9511	13-1591		1 d	
681	E	Aerojet's Assumption of Receipt of S/C Thermal Model (N)	9512	13-1591		1 d	
682	E	Final Correlation of SINDA & TRASYS Models to Flight Data (N)	9425	13-1591		15 d	
683	E	Final TRASYS End-of-Life Heat Loads (N)	9426	13-1591		10 d	
684	E	Final SINDA End-of-Life Temperatures (N)	9427	13-1591		10 d	
685	E	Final End-of-Life TRASYS Model w/recommended hdwe mods for L/N	9428	13-1591		10 d	
686	E	Final End-of-Life SINDA Temp Solution w/recommended hdwe mods	9429	13-1591		10 d	
3579	**E**	**S/N 105-106 A1 Flight Blanket Assys**	**6485**	**03-1410**	**03**	**103 d**	
3582	E	Assemble S/N 106 Insulating Blanket Assemblies (N)	9516	03-1410	03	78 d	



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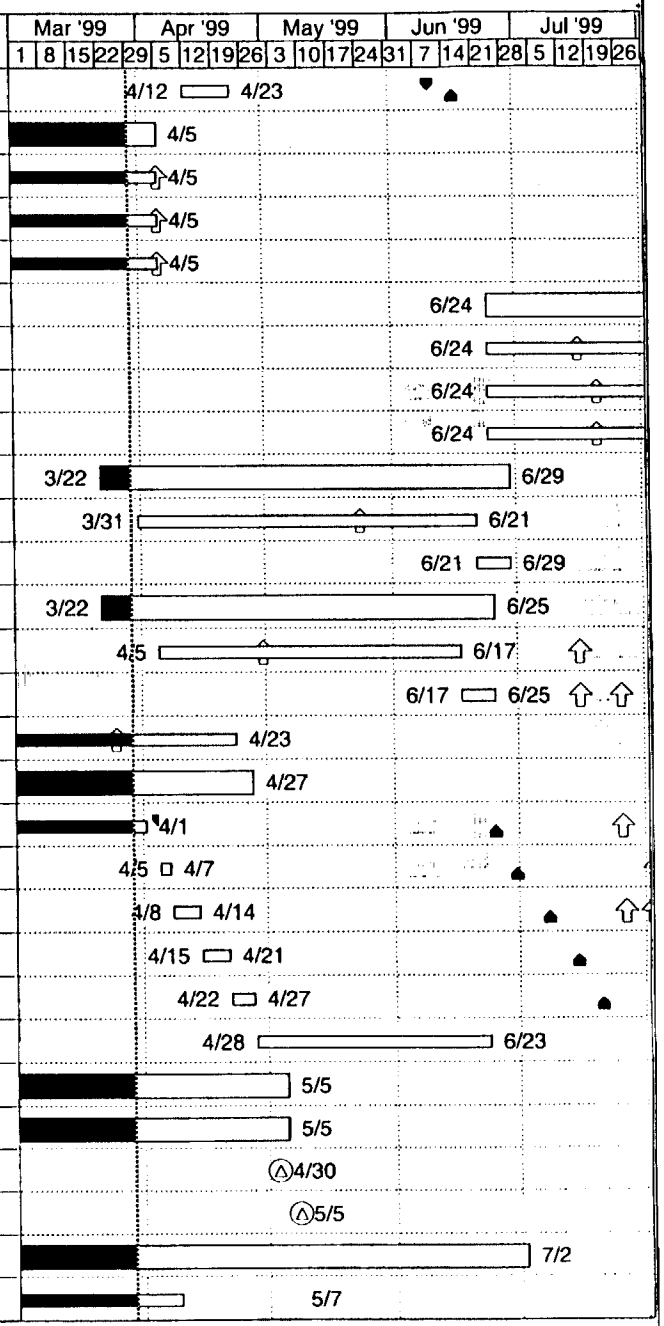
As of 3/29/99

AMSU-A 90 DAY WINDOW SCHEDULE

ID	Team	Name	Act ID	Cost Acct	WP	Dur	Cal
3584	E	S/N 106 A1 Blanket Assy Bakeout & Buyoff (N)	9517	03-1410	03	10 d	
4770	**E**	**S/N 107 A1 Top Assembly- Mirror Panel Assy's**	**8215**	**03-1410**		**39 d**	
4771	E	Assemble Mirror Panel Assemblies (1356848 Panel)	8216	03-1410		39 d	
4772	E	Assemble Mirror Panel Assemblies (1331651 & 42 Panel)	8217	03-1410		39 d	
4773	E	Assemble Mirror Panel Assemblies (1331650 & 52 Panel)	8218	03-1410		39 d	
5417	**E**	**S/N 108 A1 Top Assembly- Mirror Panel Assy's**	**8228**	**03-1410**		**#####**	
5418	E	Assemble Mirror Panel Assemblies (1356848 Panel)	8229	03-1410		#####	
5419	E	Assemble Mirror Panel Assemblies (1331651 & 42 Panel)	8230	03-1410		#####	
5420	E	Assemble Mirror Panel Assemblies (1331650 & 52 Panel)	8231	03-1410		#####	
5421	**E**	**S/N 107-109 A1 METSAT Flight Blanket Assys**	**7944**	**03-1410**		**#####**	
5423	E	Assemble A1 Flight Blanket Assemblies	7946	03-1410		57.5 d	
5424	E	A1 Flight Blanket Assy Bakeout & Buyoff	7947	03-1410		6.25 d	
5639	**E**	**S/N 107-109 A2 METSAT Flight Blanket Assys**	**6518**	**03-1410**		**#####**	
5641	E	Assemble A2 METSAT Flight Blanket Assemblies	8196	03-1410		52.5 d	
5642	E	A2 METSAT Flight Blanket Assy Bakeout & Buyoff	8197	03-1410		6.25 d	5
5242	F	PLO Test Report (F06,F11)	808	03-5210	63	61 d	
5807	**F**	**S/N 109 PLO Assy Integration & Test (F14)**	**819**	**03-5210**	**72**	**143 d**	
5811	F	Ambient Electrical Test (N)	823	03-5210		98 d	7
5812	F	PLO Vibration Test (N)	825	03-5210		3 d	5
5813	F	T/V H, M, L Temp Test (N)	824	03-5210		5 d	5
5814	F	PLO Thermal/Vacuum Test (N)	826	03-5210		7 d	7
5815	F	Final Inspect / Final DCMC Inspect (N)	7786	03-5210		4 d	
5816	F	PLO Test Report (-3, F14)	827	03-5210	73	40 d	
5836	**F**	**Major Subcontracts - PLO - SPARES**	**8121**			**306 d**	
5843	**F**	**VCGDO**	**8126**	**70-1000**		**238 d**	
5846	F	Reworked VCGDO from Vendor (N)	9391	70-1000		1 d	
5847	F	Reworked VCGDO Dock-to-Stock (N)	9392	70-1000		3 d	
5848	**F**	**PLO Assy Integration & Test (F05,F13, F12) SPARES SET 1**	**828**	**03-5210**	**82**	**#####**	
5850	F	6.87 Filter, Volt Reg, & VCGDO Integration	830	03-5210		98 d	6



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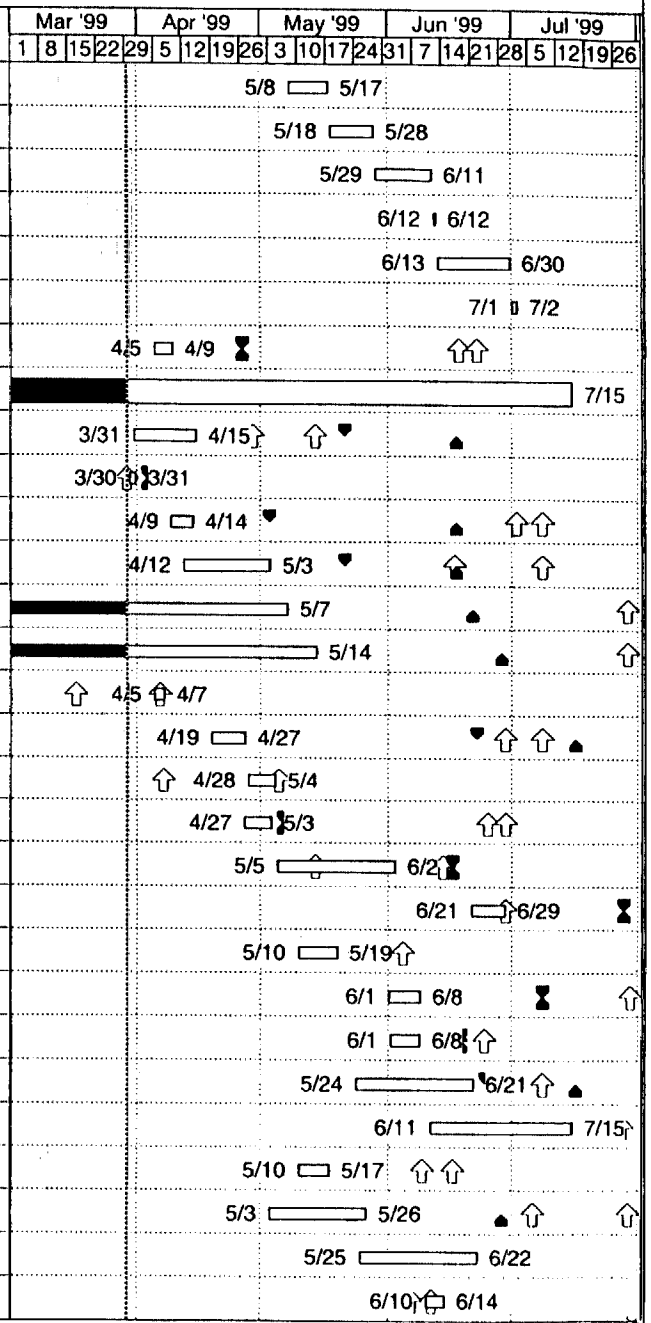
As of 3/29/99

AMSU-A 90 DAY WINDOW SCHEDULE

ID	Team	Name	Act ID	Cost Acct	WP	Dur	Cal
5851	F	DRO & PLL Assy Integration	831	03-5210		8 d	6
5852	F	Ambient Electrical Test	832	03-5210		10 d	6
5853	F	T/V H, M, L Temp Test	833	03-5210		11 d	6
5854	F	PLO Vibration Test	834	03-5210		1 d	6
5855	F	PLO Thermal/Vacuum Test	835	03-5210		18 d	7
5856	F	Final Inspect/Final DCMC Inspect	8211	03-5210		1.25 d	
4475	G	S/N 106 A2 WC-1 Chamber Refurbishment	7444	03-7350	01	5 d	7
4521	G	**S/N 106 SYSTEM TEST PREP & SUPPORT**	**5288**	**03-7350**	**01**	**173 d**	
4523	G	A1 EMI/RFI TEST REPORT	5290	03-7350	01	######;	
4526	G	PREP FOR & SUPPORT A1 VIB TEST TRR	5293	03-7350	01	2 d	
4527	G	A1 VIB TEST ANALYSIS/TREND DATA	5294	03-7350	01	3.75 d	
4528	G	A1 VIB TEST REPORT	5295	03-7350	01	15 d	
4530	G	A2 VIB TEST ANALYSIS/TREND DATA	5297	03-7350	01	93 d	
4531	G	A2 VIB TEST REPORT	5298	03-7350	01	60 d	
4532	G	PREP FOR & SUPPORT A1 AMB THERMAL CYCLE TESTS TRR	5299	03-7350	01	3 d	
4533	G	A1 THERMAL CYCLE TREND DATA	5300	03-7350	01	6.25 d	
4536	G	PREP FOR & SUPPORT A1 THERMAL VAC CALIB TESTS TRR	5303	03-7350	01	5 d	
4537	G	PREP FOR & SUPPORT A2 THERMAL VAC CALIB TESTS TRR	5305	03-7350	01	5 d	
4538	G	PREP FOR & SUPPORT A1 MOMENTUM COMP TEST TRR	5307	03-7350	01	20 d	
4539	G	COMPLETE A1 MOMENTUM COMP TEST REPORT	5308	03-7350	01	6.25 d	
4540	G	PREP FOR & SUPPORT A2 MOMENTUM COMP TEST TRR	5309	03-7350	01	8 d	
4541	G	COMPLETE A2 MOMENTUM COMP TEST REPORT	5310	03-7350	01	6 d	
4542	G	PREP FOR & SUPPORT A1 WEIGHT & CG TRR	5311	03-7350	01	5 d	
4543	G	PREPARE A1 PSR DATA PACKAGE	6488	03-7350	01	20 d	
4544	G	PREPARE A1 CALIBRATION LOG BOOK	5312	03-7350	01	24 d	
4545	G	PREP FOR & SUPPORT A2 WEIGHT & CG TRR	5313	03-7350	01	6 d	
4546	G	PREPARE A2 PSR DATA PACKAGE	6489	03-7350	01	18 d	
4547	G	PREPARE A2 CALIBRATION LOG BOOK	5314	03-7350	01	20 d	
4832	G	S/N 107 A1Turbo Chamber Refurbishment	387	03-7350	01	5 d	7



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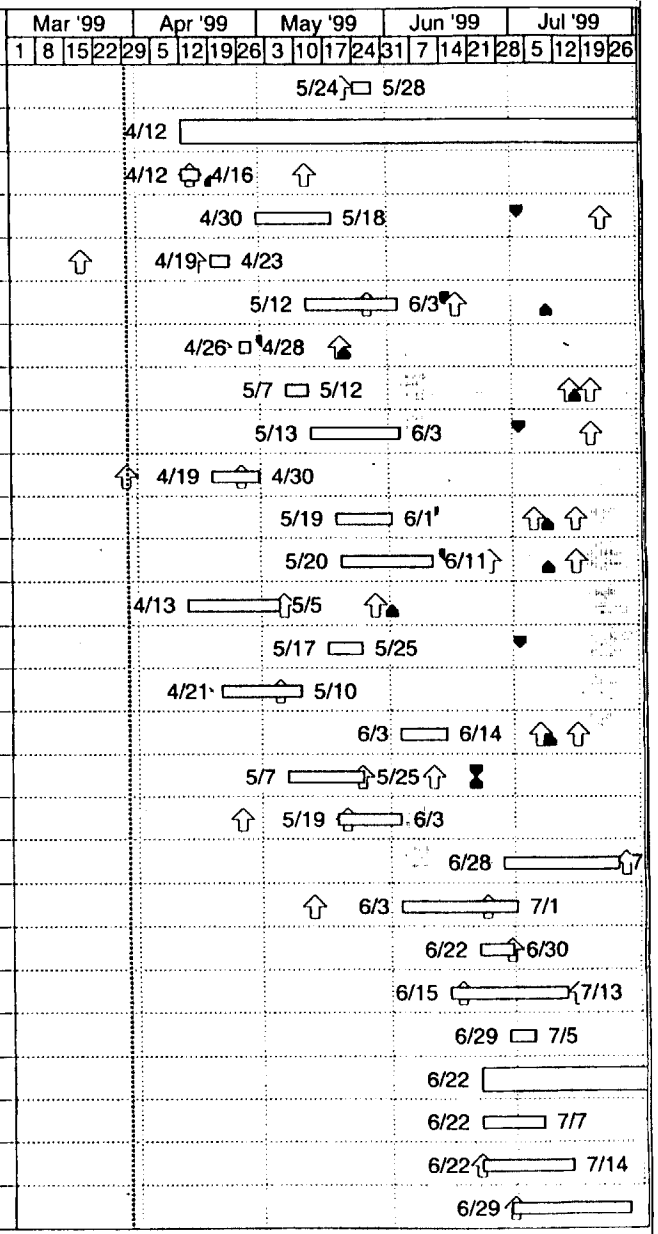
As of 3/29/99

AMSU-A 90 DAY WINDOW SCHEDULE

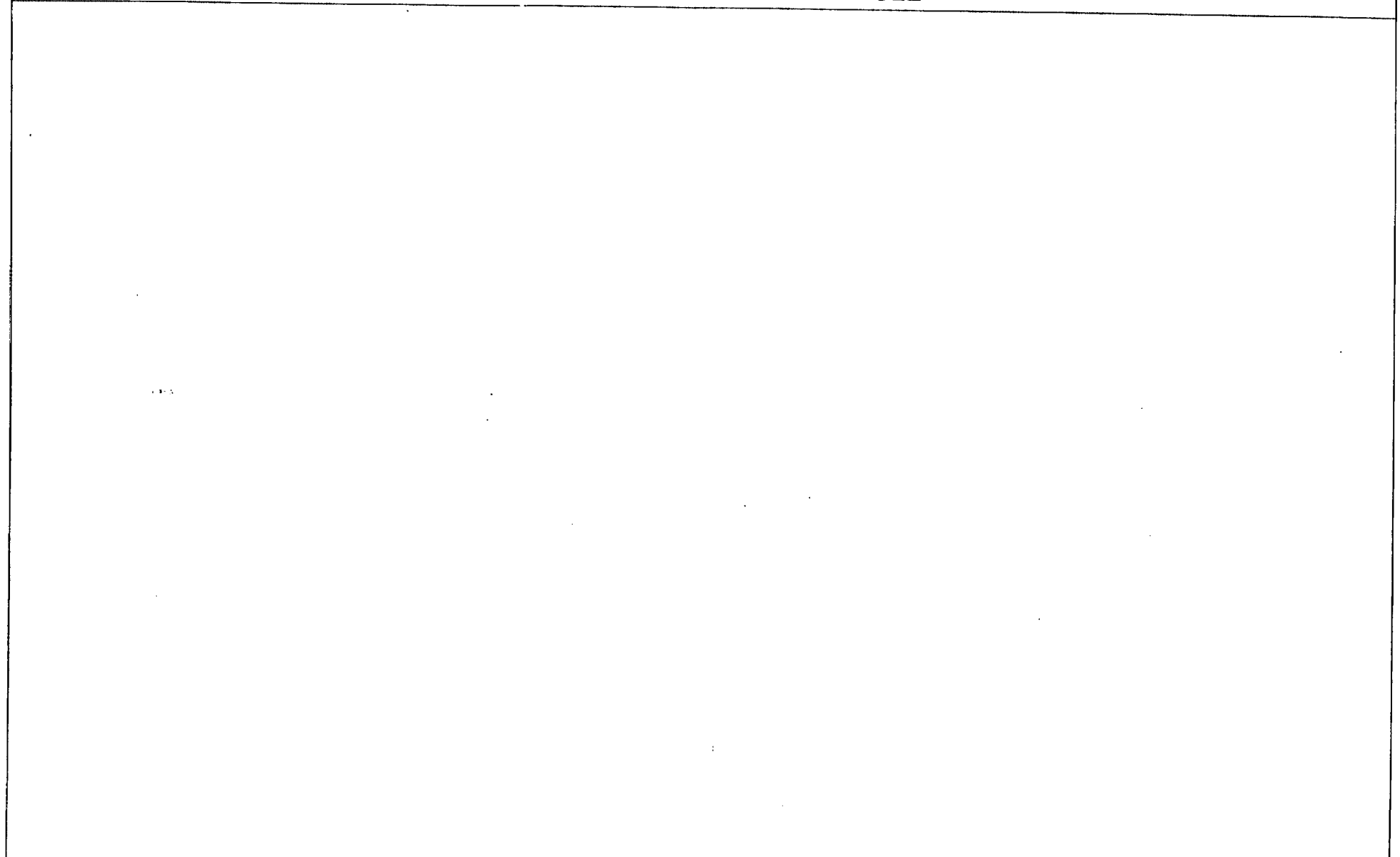
ID	Team	Name	Act ID	Cost Acct	WP	Dur	Cal
5043	G	S/N 107 A2 WC-1 Chamber Refurbishment	802	03-7350	01	5 d	7
5083	**G**	**S/N 107 SYSTEM TEST PREP & SUPPORT**	**5315**	**03-7350**	**01**	#####	
5084	G	A1 EMI/RFI TEST PREPARATION	5316	03-7350	01	5 d	
5085	G	A1 EMI/RFI TEST REPORT	5317	03-7350	01	12.5 d	
5086	G	A2 EMI/RFI TEST PREPARATION	5318	03-7350	01	5 d	
5087	G	A2 EMI/RFI TEST REPORT	5319	03-7350	01	15 d	
5088	G	PREP FOR & SUPPORT A1 VIB TEST TRR	5320	03-7350	01	3 d	
5089	G	A1 VIB TEST ANALYSIS/TREND DATA	5321	03-7350	01	3.75 d	
5090	G	A1 VIB TEST REPORT	5322	03-7350	01	15 d	
5091	G	PREP FOR & SUPPORT A2 VIB TEST TRR	5323	03-7350	01	10 d	
5092	G	A2 VIB TEST ANALYSIS/TREND DATA	5324	03-7350	01	8.75 d	
5093	G	A2 VIB TEST REPORT	5325	03-7350	01	15 d	
5094	G	PREP FOR & SUPPORT A1 AMB THERMAL CYCLE TESTS TRR	5326	03-7350	01	#####	
5095	G	A1 THERMAL CYCLE TREND DATA	5327	03-7350	01	6.25 d	
5096	G	PREP FOR & SUPPORT A2 AMB THERMAL CYCLE TESTS TRR	5328	03-7350	01	#####	
5097	G	A2 THERMAL CYCLE TREND DATA	5329	03-7350	01	7.5 d	
5098	G	PREP FOR & SUPPORT A1 THERMAL VAC CALIB TESTS TRR	5330	03-7350	01	12.5 d	
5099	G	PREP FOR & SUPPORT A2 THERMAL VAC CALIB TESTS TRR	5332	03-7350	01	10 d	
5100	G	PREP FOR & SUPPORT A1 MOMENTUM COMP TEST TRR	5334	03-7350	01	20 d	
5102	G	PREP FOR & SUPPORT A2 MOMENTUM COMP TEST TRR	5336	03-7350	01	20 d	
5107	G	PREP FOR & SUPPORT A2 WEIGHT & CG TRR	5340	03-7350	01	6.25 d	
5108	G	PREPARE A2 PSR DATA PACKAGE	6516	03-7350	01	20 d	
5701	G	S/N 108 A2 WC-1 Chamber Refurbishment	771	03-7350	01	6.25 d	7
5739	**G**	**S/N 108 SYSTEM TEST PREP & SUPPORT**	**5342**	**03-7350**	**01**	#####	
5742	G	A2 EMI/RFI TEST PREPARATION	5345	03-7350	01	10 d	
5747	G	PREP FOR & SUPPORT A2 VIB TEST TRR	5350	03-7350	01	15 d	
5755	G	PREP FOR & SUPPORT A2 THERMAL VAC CALIB TESTS TRR	5359	03-7350	01	20 d	



Teams: A,G,H = SEIT B = Antenna C = Electronics D = Receiver E = Mech/Thermal F = PLO

As of 3/29/99

AMSU-A 90 DAY WINDOW SCHEDULE



Teams: A,G,H = SEIT B = Antenna C = Electronics D = Receiver E = Mech/Thermal F = PLO

20

As of 3/29/99

March '99 Monthly Analysis
Antenna Subsystem

Current Status

The Serial Number 108 A1 Antenna Assembly has increased its slack time from 0 days to 1 day. The Antenna Pattern testing of the A1 108 is complete and final assembly is in process.

The Serial Number 109 A1 Antenna Assembly has slipped from 12 days slack to 4 days slack. This was due to schedule changes made to accommodate the Serial Number 108 A1 Antenna Assembly which have affected both the Serial Number 109 A1 and A2.

The Serial Number 109 A2 Antenna Assembly pattern testing is in process. The slack time on the Serial Number 109 A2 has increased from 0 days to 4 days.

Major Float Changes

The Serial Number 109 A1 slack time has been reduced by 8 days and the Serial Number 109 A2 slack time has increased by 4 days.

Existing Problem Areas

None

Potential Problem Areas

None

March '99 Monthly Analysis
Receiver

Current Status

S/N 107 A1-2 Receiver – Accepted and integrated into instrument.

S/N 107 A1 Receiver - Accepted and integrated into instrument.

S/N 108 A2 Receiver - Accepted and integrated into instrument.

S/N 108 A1-1 Receiver – In Thermal Cycle testing

S/N 108 A1-2 Receiver – Accepted – in stock.

S/N 109 A2 Receiver – Awaiting thermal Cycle testing.

S/N 109 A1-1 Receiver – In assembly.

S/N 109 A1-2 Receiver - In Assembly.

Major Float Changes

S/N 108 A1-1: Float went from 71 days to 45 days due to replacement of PLO and (-7) DRO during thermal cycle testing.
S/N 108 A1-2: Float was 78 days and unit is now complete and accepted.
S/N 109 A1-1: Float went from 82 to 53 days due to transfer of (-7) DRO to 108 A1-1. (-7) DRO for this shelf is now in rework at Filtronics.
S/N 109 A1-2: Float went from 96 to 75 days due to (-8) DRO still in rework at Filtronics.
S/N 109 A2: Float went from 67 to 41 days due to test resource priority given to 108 A1-1.

Existing Problem Areas

None.

March '99 Monthly Analysis
PLO

Current Status

202: EOS PLOs
F01: Complete.
F02: Complete.
Verification Report is complete.

105: METSAT 1 PLOs
F03: Complete.
F04: Complete.
Verification Report is complete.

106: METSAT 2 PLOs
F07: Complete.
F08: Complete.
Verification Report is complete.

107: METSAT 3 PLOs
F09: Completed 11/19/98
F010: Completed 11/12/98.
Verification Report is complete.

108: METSAT 4 PLOs
F06: Completed
F11: Completed Verification Report is in progress.

109: METSAT 5 PLOs
F14: Final assembly.

Major Float Changes

- 109 float went from 98 days to 58 days due to reduced resource availability during the month

- **Potential Problem Areas**

  - None

March 1999 Monthly Analysis
Electronics

Current Status

Electronics effort during this month centered around Signal Processor Retest, and DC-DC Converter flight unit production.

Major Float Changes

None

Existing Problem Areas

None

March '99 Monthly Analysis
SEIT Team

Current Status

EOS S/N 202 A1 has been delivered.
EOS S/N 202 A2 has been delivered.

METSAT S/N 105 A1 has completed thermal vacuum calibration, weight and CG, and final cleaning and is installed in the shipping container.

METSAT S/N 105 A2 has completed thermal vacuum calibration, weight and CG, and final cleaning and is installed in the shipping container.

METSAT S/N 106 A1 completed EMI testing and is in preparation for Vibration.

METSAT S/N 106 A2 Vibration anomaly has been resolved and the unit is in functional retest prior to completion of Qual Vibration.

METSAT S/N 107 A2 has completed engineering CPT and is in final assembly for Baseline CPT.

METAT S/N 107 A1 completed Engineering CPT and is in final assembly for Baseline CPT.

METSAT S/N 108 A2 completed initial system assembly and started System Integration Testing.

Major Float Changes

METSAT S/N 106 A2 pre-planned schedule reserve float went from 78 to 14 days and 107 A2 from 1 to 72 days float due to switching back to 106A2 in the next ship set instead of 107A2 as was planned last month.

Existing Problem Areas

None

Potential Problem Areas

None

REPORT DOCUMENTATION PAGE

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

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

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G	-	Grant	TA	-	Task
PE	-	Program Element	WU	-	Work Unit Accession No.

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