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AFAL-TR-78-135 ✓

PART I, VOLUME III

KA-BAND RELIABILITY IMPROVEMENT

Ka-Band SATCOM Set Analysis—Appendix C

J. E. Drennan, L. R. Albrechtson
W. Gordon, and J. L. Easterday

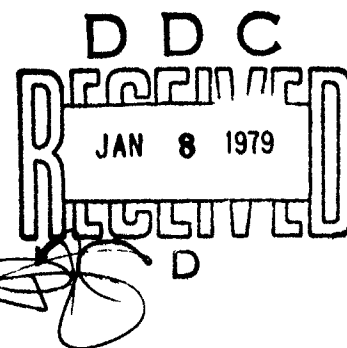
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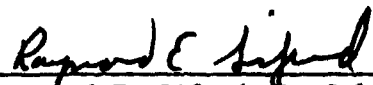


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PREFACE

This is the Final Report on studies related to Ka-Band System Reliability Improvement under Air Force Contract No. F33615-75-C-1208. The report is organized in three parts. Part I, Volume I, depicts the system model as organized in its functional relationship form; describes the overall program; presents the probabilistic estimates of reliability, maintainability, availability, dependability, etc. of the Ka-Band SATCOM Set based on all the data available; identifies the components most likely to malfunction or fail; and presents guidelines for the specification of reliability and maintainability requirements for the next generation system. Part I, Volume II, contains Appendix B which presents detailed results of the Tabular System Analysis (TASA) of the Ka-Band SATCOM Set. Part I, Volume III contains Appendix C which presents detailed results of the numerical reliability, availability and dependability predictions for the Ka-Band SATCOM Set. Part II contains guidelines for an Integrated Reliability and Maintainability (R/M) Program Plan intended as a model for the specific R/M plans that will be required for the procurement of future generation systems. Part III is the DEPEND Computer Program User's Manual. The DEPEND (Determination of Equipment Performance and Expected Nonoperational Delay) program is used to perform the arithmetic and documentation for the Tabular System Analysis.

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APPENDIX C
RESULTS OF ANALYSIS OF THE
KA-BAND SATCOM SET

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SECTION I
RESULTS OF ANALYSIS OF THE
KA-BAND SATCOM SET

INTRODUCTION

In the following pages computer print-outs are given detailing the results of the analyses of the Ka-Band SATCOM Set*. As noted in the Review and Comment section of this report**, three analyses were performed: the flight test data analysis, the theoretical analysis, and a combined analysis (A Bayesian combination of theoretical and flight test data).

The first computer print-outs present a summary of the results of the combined analysis for some of the more important functional sub-assemblies of the ADM Ka-Band SATCOM Set. Following these computer-generated summaries is a complete listing of all the results, at all functional levels, of the combined analysis of the Ka-Band Set. Following this, abbreviated partial results of the flight test data analysis and of the theoretical analysis are given, including results for only the major functional assemblies. Thus the reader is presented with a complete detailed print-out of the analysis which, in Battelle's opinion, yielded the best results, and is also given partial results of the other analyses so that differences between them, and techniques for combining the data may be studied.

The major part of this appendix is data or information in the form of computer printouts. The appendix is organized in the three following sections.

SECTION II. Analysis of the Ka-Band SATCOM Set based on the combined data, including:

- A. Input data tabulation
- B. Analysis schedule
- C. Summary of results
- D. Analysis summary

SECTION III. Abbreviated results of analysis based on flight test data, including:

- A. Input data tabulation

*Analyses of UHF equipment is not included.
**The Review and Comment Section is contained in Volume I.

B. Summary of results

C. Analysis summary for selected functional assemblies

SECTION IV. Abbreviated results of analysis based on theoretical data, including:

A. Input data tabulation

B. Summary of results

C. Analysis summary for selected functional assemblies

DATA COMBINATION

In performing analyses of the Ka-Band set, the set was first broken down into "black boxes" or basic functional building blocks consisting of modules, chassis, drawers, etc. This breakdown was accomplished with the help of the equipment manufacturers. The equipment manufacturers also provided reliability estimates for each of these basic functional building blocks, obtained using the methods of MIL-Hdbk-217-B. Estimates of the reliabilities of these various functional basic building blocks were also obtained through study and analysis of data taken during the flight test program for the ADM Ka-Band SATCOM set. As noted in the main body of this report, each of these sets of data provide information not contained in the other set. Thus, in Battelle's opinion, a combination of the two sets of data provides the best available estimate of the reliabilities of the basic functional building blocks. As the reliabilities of these blocks are rolled up in the course of the analysis into the reliability of the larger functional building blocks, and of the Ka-Band SATCOM set, a combination of the data provides the best reliability estimates at all functional levels. Bayesian statistics provide a method for combining data so that an original estimate of reliability can be made and then be improved as subsequent data becomes available. A discussion of the various ramifications of Bayesian statistics is beyond the scope of this report, but a brief description of the manner in which the data were combined is pertinent.

The methods of MIL-Hdbk-217-B depend on failure-rate data for parts obtained from experience and testing of these parts. In order to combine the theoretical data and the flight test data, it was necessary to

estimate the number of test hours represented by the figures used in MIL-Hdbk-217-B predictions. Based on Battelle's extensive experience in reliability, it was felt reasonable to assume that the failure rate data given in MIL-Hdbk-217-B, on the average, represented results of about ten 1,000-hour experiments or 10,000 test hours. For each of the functional building blocks the methods of MIL-Hdbk-217-B provided an estimate or prediction of the MTBF of that block. The 10,000 hours assumed test time was divided by this MTBF in order to estimate the average number of failures that would have occurred in the 10,000 hours. This procedure then provided an estimate of the number of test hours and the average number of failures that would have occurred during these hours if the tests had actually been conducted in the manner hypothesized.

From the flight test data it was possible to determine an actual number of hours of operation of the equipment, and the actual number of failures that occurred during this period*. The information was studied in order to cull from it shut-downs which were not properly attributable to failure of the equipment, such as shut-downs to make changes or modifications in the equipment, etc. Also censored were failures due to wear and because of the considerable amount of maintenance, excessive pattern failures, and conditions which were eliminated by equipment modification. When this task had been completed, data were available from the flight test providing the number of hours of test and the number of failures that occurred during these flight test hours for each of the basic functional building blocks.

To combine these two sets of data the 10,000 hours of assumed test time were added to the flight test hours which (including the roof top equipment operating time) was about 3400 to 3900 hours. The numbers of failures of any basic functional building block experienced during the flight test hours in both the aircraft and rooftop equipment were added to the number of failures calculated from the MIL-Hdbk-217-B reliability estimates as described above. In this way combined figures for a total number of test hours and a total number of failures were obtained. These figures then served as the basis for the combined reliability analysis. The results can be expressed as an MTBF

*Only the data for the calendar period from October, 1976, to October, 1977 were utilized because data prior to this interval are incomplete and include a significant amount of equipment debugging.

representing an average estimated use of the various functional blocks during a typical mission. In combining the data, if no failures were observed during the flight test, zero failures were added to the failures predicted by the methods of MIL-Hdbk-217-B.

INITIALIZATION

In starting up the equipment there is an initialization procedure that must be followed. For the purposes of the analyses in this report it has been assumed that this initialization procedure requires six minutes. This is based on the fact that there is a five-minute period during which information stored on punched paper tape is loaded into the system, and one minute has been allowed for system adjustments. The analyses consider that such initialization occurs only once during a mission. If there is a failure so that the system is shut down, there may be a need for an additional initialization procedure after repairs have been made. This is covered in the analysis by including the additional necessary initialization time in the mean restoration time for the equipment.

COMPUTATIONS

The availability, dependability, reliability, and maintainability estimates for this report were accomplished using the TASRA (tabulated system reliability analysis) approach. (Part I, Volume I, Appendix A provides a description of the TASRA computations.) The maintainability estimates are based on an overlap factor of 0.8; that is, it is assumed that in the case of more than one malfunction, the time to restore is the maximum of the individual restore time plus 80 percent of the sum of the other restore times.

PRESENTATION FORMATS

The formats used for presenting the analysis results are described in the following paragraphs.

Input Data Tabulation

The input data tabulation lists the ELEMENT LABEL, which is an identification number for each element followed by a listing of the DATA IDENTIFICATION, which describes each data element. The elements include

functional blocks of the system and the various possible states of malfunction or failure of these blocks, as used in the analyses. The functional blocks can be readily identified because the element label number associated with these blocks has a zero following the decimal point. Thus element label 115.0 is the teletypewriter. The various malfunction states for the teletypewriter are then listed under element label 115, but with various numbers following the decimal point. Element label number 115.1, for example, and its associated data identification (NO/INCORRECT TTY TRANSMISSION AND RECEPTION) provide the information that the teletypewriter has a state in which it is not operational in that both the transmission and reception are incorrect or are not functioning at all.

The column headed CYCLES contains a 1 or a 0, indicating that the functional block listed is or is not used during the mission for which the specific analysis is being performed.

The column headed USE, SECONDS, lists the number of seconds required to complete one functional cycle of the subject functional block. Thus element 4.0, the SATCOM Terminal Primary Power, for example, is used for 36,000 seconds; that is, for the entire ten hours of the mission described in the main body of this report. The functional cycle duration for most functional blocks is 4.2 seconds, although there are several exceptions.

The column labelled MTBF, HRS, lists the MTBF associated with that assembly or malfunction, in hours. (It should be remembered that these figures constitute an input to the computer program.) This column, and the last column, MTTR, HRS, at the basic building block level, contain data generated during flight test, received from manufacturers, etc. The results obtained for the higher functional levels are based on the data for the basic building block level.

Analysis Schedule

The analysis schedule lists the computations used in the analysis, the order in which they were performed, the input information needed by each computation, the assembly for which the computation was performed, and the

assemblies that need the information generated on this assembly in their calculations. Thus the first computation listed requires only input data. Subsequent computations may require input data plus the results of this first computation, etc. The analysis schedule provides a brief over-view of the entire analysis and can be used as a map to guide the reader through the analysis paths. The analysis schedule is presented only for the combined analysis since the schedule is the same for the other analyses.

Analysis Summary

The analysis summary provides the results of the analysis for the functional blocks of the system. Analysis summaries are provided for all functional blocks of the system utilizing the combined theoretical and flight test data. However, analysis summaries are provided only for the major functional blocks in the analyses based on theoretical and on flight-test data alone. The computer printout provides an explanation of the quantities given.

Summary of Results

The analysis summary described above includes a brief statement of the most important results of the analyses for each of the functional blocks. In this section the summary statement is listed for each of the functional blocks considered in the analysis. These summaries provide a complete listing of the results of the analyses of the Ka-band SATCOM Set.

Abbreviated Results

As noted above, analysis summaries based on the flight test data and the theoretical data are given for a few of the larger functional assemblies of the Ka-band System. These are given to provide a comparison among the analyses performed using the various data sources. As noted in the main body of this report, Battelle feels that the combined data analysis provides the best figures for most purposes.

SECTION II

RESULTS OF ANALYSES OF THE KA-BAND SATCOM SET BASED ON THE
COMBINED THEORETICAL AND FLIGHT-TEST DATA

COMBINED INPUT DATA TABULATION

ELEMENT DATA LABEL	INVESTIGATION	CYCLES	USF, SEC	MYAF, HRS	MYTR, HRS
4.0	SATCOM TERMINAL (PRIMARY POWER)	136000.000		.11550E+04	1.00
4.1	PRIMARY POWER FAILURE				
11.0	KA-BAND MODEM POWER CONTROL PANEL	1	4.200	.15660E+05	.50
11.1	ALL KA-BAND LINKS INOPERATIVE				
14.0	COLM 1402 COMPUTER	1	4.200	.51770E+03	1.00
14.1	COL STOP, NO UPLINK, POINTER AND CRT EXCEPT FWD. LINK OR CINCMET				
21.0	INTELL NAVIGATION SYSTEM	1	600.000	.11750E+03	1.00
21.1	NO/INCORRECT INS DATA				
22.0	COMMUNICATIONS CONTROL COMPUTER	1	600.000	.11940E+03	.50
22.1	NO/INCORRECT RATE AND RATE-RATE DATA				
41.0	ANTENNA CONTROL/MONITORING (KA-BAND)	1	4.200	.21540E+04	2.00
41.1	ANTENNA CONTROL/MONITORING FAILURE				
42.0	ANTENNA PENETRAL (KA-BAND)	1	4.200	.21370E+05	1.00
42.1	ANTENNA PENETRAL FAILURE				
43.0	ANTENNA POSITION CONTROL/POWER (KA-BAND)	1	4.200	.11440E+05	2.00
43.1	ANTENNA POSITION CONTROL/POWER FAILURE				
44.0	KA-BAND POLARIZATION/INTERLEAVE	1	4.200	.23010E+04	1.00
44.1	PO. POLARIZATION/INTERLEAVE FAILURE				
45.0	PROCESSOR AND FUME SENSOR (KA-BAND)	1	4.200	.24150E+05	2.00
45.1	PROCESSOR AND FUME SENSOR FAILURE				
46.0	RF WAVEGUIDE PRESUPPRESSION (KA-BAND)	1	4.200	.58110E+04	2.00
46.1	PRESUPPRESSION FAILURE IN KA-BAND RF WAVEGUIDE				
115.0	TELETYPEWRITER	1	4.200	.15330E+04	1.00
115.1	NO/INCORRECT TTY TRANSMISSION AND RECEPTION			.66440E+04	1.00
115.2	NO/INCORRECT TTY TRANSMISSION			.24470E+04	1.00
115.3	NO/INCORRECT TTY RECEPTION				
116.0	VOLTER	0	4.200	.27540E+04	1.00
116.1	VOLTER HALF INJECTION				
117.0	CR/KEYBOARD	1	4.200	.12290E+04	2.00
117.1	CR/KEYBOARD MALFUNCTION				
118.0	PAPER-TAPE READER	1	300.000	.96600E+03	.50
118.1	PAPER-TAPE READER MALFUNCTION				
119.0	LINE PRINTER	1	4.200	.12290E+04	1.00
119.1	LINE PRINTER MALFUNCTION				
121.0	4211/114/BUS BUFFER	1	600.000	.14100E+06	.50
121.1	NO 0V-227 RANGE (LARI NO SSMP, ANTENNA POINTING)				
122.0	ELEVATION/RANGE BUFFER	1	600.000	.12420E+05	.50
122.1	NO 0V-227 RANGE RATE (LARI NO SSMP, ANTENNA POINTING)				
141.0	FORWARD UPLINK INPUT MUX, ENCODING AND INTERLEAVING	1	4.200	.71990E+04	.50
141.1	NO FORWARD UPLINK				
142.0	CONF. UPLINK INPUT MUX, ENCODING AND INTERLEAVING	1	4.200	.64770E+04	.50
142.1	NO CONFERENCE UPLINK				
143.0	CONF. RATE 1/2 ENCODE	1	4.200	.10330E+07	.50
143.1	NO RATE 1/2 IN CONFERENCE UPLINK				
146.0	COT I/O INTERFACE	1	4.200	.11270E+05	.50
146.1	NO COT I/O				
145.0	UPLINK DATA TIMING	1	4.200	.24000E+05	.50
145.1	NO UPLINK, NO OFFSET-BACK DOWNLINK AND NO SYNC.				
146.0	CONTROL PANEL OUTPUT BUFFER	1	4.200	.46710E+05	.50
146.1	NO UPLINK, NO FORWARD DOWNLINK AND NO CONFERENCE DOWNLINK				
151.0	KA-BAND MODEM CONTROL PANEL (FORWARD LINK)	1	4.200	.62640E+04	.50
151.1	KA-BAND FORWARD LINK INOPERATIVE				

ELEMENT DATA				IDENTIFICATION			
LA9CL	USE:SEC	MTBF:HRS	MTTR:HRS	CYCLES	USE:SEC	MTBF:HRS	MTTR:HRS
153.0	KA-PANO MODEM CONTROL PANEL (CONFERENCE LINK)			1	4.200		
153.1	KA-PANO CONFERENCE LINK INOPERATIVE						
154.0	KA-PANO MODEM CONTROL PANEL (FORWARD AND CONFERENCE COMMON FUNCTIONS)			1	4.200	.1009E+05	.50
154.1	FORWARD AND CONFERENCE LINKS INOPERATIVE						
155.0	KA-PANO MODEM CONTROL PANEL (COMMON FUNCTIONS)			1	4.200	.1235E+05	.50
155.1	ALL KA-PANO LINKS INOPERATIVE						
155.2	NO KA-PANO R/B AND CONF. LINKS AND FWD. LINK DEGRADED						
156.0	MODEM CONTROL						
156.1	MODEM CONTROL						
157.0	MODEM CONTROL						
157.1	MODEM CONTROL						
157.2	MODEM CONTROL						
157.3	MODEM CONTROL						
157.4	MODEM CONTROL						
157.5	MODEM CONTROL						
157.6	MODEM CONTROL						
157.7	MODEM CONTROL						
157.8	MODEM CONTROL						
157.9	MODEM CONTROL						
158.0	MODEM CONTROL						
158.1	MODEM CONTROL						
158.2	MODEM CONTROL						
158.3	MODEM CONTROL						
158.4	MODEM CONTROL						
158.5	MODEM CONTROL						
158.6	MODEM CONTROL						
158.7	MODEM CONTROL						
158.8	MODEM CONTROL						
158.9	MODEM CONTROL						
159.0	MODEM CONTROL						
159.1	MODEM CONTROL						
159.2	MODEM CONTROL						
159.3	MODEM CONTROL						
159.4	MODEM CONTROL						
159.5	MODEM CONTROL						
159.6	MODEM CONTROL						
159.7	MODEM CONTROL						
159.8	MODEM CONTROL						
159.9	MODEM CONTROL						

ELEMENT DATA					CYCLES			USE, SEC		MTBF, HRS		MTTR, HRS	
LABEL	IDENTIFICATION												
199.1	NO CONFERENCE AND REPORT-BACK DOWNLINK AND NO SYNC.	CGU-04, CGU-04											
199.0	DOWNLINK CODE GENERATOR	CGU-06											
190.1	NO DOWNLINK CONFERENCE AND REPORT-BACK: NO SYNC.	CGU-06											
191.1	CLOCK AND CODE GENERATOR	CGU-06											
191.0	NO DOWNLINK CONFERENCE AND NO X-DOWNLINK REPORT BACK	CGU-05, CGU-07											
192.0	MEV MODULATOR, TIMING AND SINGLE SIDEBAND MOD.	CGU-05, CGU-07											
192.1	NO FORWARD UPLINK	MOD-01, MOD-02, MOD-03											
193.0	OPSC MODULATOR	MOD-04											
193.1	NO CONFERENCE UPLINK	MOD-04											
194.0	VIS FREQ MULTIPLIER AND POWER COMBINER	MOD-05, MOD-06											
194.1	NO UPLINK	MOD-05, MOD-06											
195.0	UPLINK FREQUENCY SYNTHESIZER	UP FREQ SYNTH											
195.1	NO UPLINK	UP FREQ SYNTH											
196.0	FM/SSD DECODER	UP FREQ SYNTH											
196.1	NO FORWARD DOWNLINK	UP FREQ SYNTH											
197.0	REPORT-BACK DECODER/INTERLEAVER	FRA-01											
197.1	NO REPORT-BACK DOWNLINK	FRA-02											
198.0	CONFERENCE DECODER	FRA-02											
198.1	NO CONFERENCE DOWNLINK	CON-01											
199.0	REPORT-BACK DEMODULATOR	CON-01											
199.1	NO REPORT-BACK DOWNLINK	RBD-01, -02, -03, -04, -05											
311.0	POWER DISTORTION	RBD-01, -02, -03, -04, -05											
311.1	POWER DISTORTION FAILURE												
312.0	LOW VOLTAGE POWER SUPPLY												
312.1	LOW VOLTAGE POWER SUPPLY FAILURE												
321.0	LIQUID-AIR HEAT EXCHANGER												
321.1	LIQUID-AIR HEAT EXCHANGER FAILURE												
322.0	PUMP/CONTROL MODULE												
322.1	PUMP/CONTROL MODULE FAILURE												
323.0	COOLANT LINES/FITTINGS												
323.1	COOLANT LINES/FITTINGS RUPTURE OR STOPPAGE												
323.2	PARTIAL STOPPAGE OR LEAKAGE OF COOLANT LINES/FITTINGS												
331.0	INITIUM FREQUENCY STANDARD												
331.1	NO/INCORRECT STANDARD FREQUENCY												
332.0	1 MHz FREQUENCY SYNTHESIZER												
332.1	NO/INSUFFICIENT 1 MHz FREQUENCY SIGNAL												
333.0	STABLE FREQUENCY SYNTHESIZER												
333.1	STABLE FREQUENCY SYNTHESIZER FAILURE												
334.0	FREQUENCY GENERATOR												
334.1	FREQUENCY GENERATOR FAILURE												
341.0	LOA NOISE AMPLIFIER												
341.1	LOSS OF 20 DB GAIN												
341.2	NO KA-BAND SIGNAL AMPLIFICATION												
342.0	DOWN CONVERTER												
342.1	NO/INCORRECT DOWN CONVERSION												
343.0	KA-BAND RECEIVER												
343.1	NO/INADEQUATE KA-BAND RECEIVER OUTPUT												
344.0	AUTO-TRACK RECEIVER												
344.1	NO/INCORRECT AUTO-TRACK RECEIVER OUTPUT												
351.0	NOPLER CORRECTION												
351.1	NO/INCORRECT NOPLER CORRECTION												
352.0	KA-BAND EXCITER												

ELEMENT DATA				CYCLES USE, SEC				MYTR, HRS			
LABEL IDENTIFICATION											
352.1	NO/INSUFFICIENT KA-BAND EXCITATION										
361.0	RF MODULE			1	4.200			.44460E+04			1.00
361.1	IMPOW/EDATE POWER AMPLIFIER FAILURE										
361.2	HIGH POWER AMPLIFIER FAILURE							.10490E+04			3.00
362.0	HIGH VOLTAGE POWER SUPPLY							.94920E+03			2.00
362.1	NO/INSUFFICIENT HIGH VOLTAGE POWER			1	4.200						
362.2	LOCAL CONTROL/MONITOR (KA-BAND TRANSMITTER)							.67510E+03			4.00
363.1	LOCAL CONTROL/MONITOR FAILURE			1	4.200						
364.0	KA-BAND TRANSMITTER FAILURE							.85490E+03			1.00
364.1	TRANSMITTER REMOTE CONTROL			1	4.200						
914.0	TRANSMITTER REMOTE CONTROL FAILURE							.27060E+05			1.00
914.1	TELETYPEWRITER			1	4.200						
915.1	TTY MALFUNCTION							.46660E+03			1.00
915.0	TELETYPEWRITER			0	4.200						
915.1	TTY MALFUNCTION							.86660E+03			1.00
916.0	VOCODER			1	4.200						
916.1	VOCODER MALFUNCTION							.22540E+04			1.00

ELEMENT DATA		CYCLES USE/SEC		RELIABILITY		AVAILABILITY		MYP/MRS	
LA9FL	IDENTIFICATION								
4.0	SATCOM TERMINAL (PRIMARY POWER)	1	36000.000	.991379E+00	.999137E+00	.999137E+00	.999137E+00	1.000	
4.1	PRIMARY POWER FAILURE			.962044E-02	.965476E-03	.965476E-03	.965476E-03	1.000	
13.0	KA-RAND MODRM POWER CONTROL PANEL	1	4.200	.100000E+01	.999988E+01	.999988E+01	.999988E+01	.500	
13.1	ALL KA-RAND LINKS INOPERATIVE			.744998E-07	.319240E-04	.319240E-04	.319240E-04	.500	
14.0	COLN 1602 COMPUTER	1	4.200	.999999E+00	.999999E+00	.999999E+00	.999999E+00	1.000	
14.1	CPU STOP: NO UPLINK, PRINTER AND CRT EXCEPT FWD. LINK OR CINCNET	1	600.000	.225355E-05	.102976E-02	.102976E-02	.102976E-02	1.000	
21.0	INERTIAL NAVIGATION SYSTEM	1	600.000	.999999E+00	.999999E+00	.999999E+00	.999999E+00	1.000	
21.1	NO/INCORRECT INS DATA			.141743E-02	.847453E-02	.847453E-02	.847453E-02	1.000	
22.0	COMMUNICATIONS CONTROL COMPUTER	1	600.000	.999999E+00	.999999E+00	.999999E+00	.999999E+00	.500	
22.1	NO/INCORRECT RANGE AND RANGE-RATE DATA			.130024E-02	.416433E-02	.416433E-02	.416433E-02	.500	
41.0	ANTENNA CONTROL/MONITORING (KA-BAND)	1	4.200	.999999E+00	.999999E+00	.999999E+00	.999999E+00	2.000	
41.1	ANTENNA CONTROL/MONITORING FAILURE			.541628E-05	.924074E-03	.924074E-03	.924074E-03	2.000	
42.0	ANTENNA PEDESTAL (KA-BAND)	1	4.200	.100000E+01	.999999E+00	.999999E+00	.999999E+00	1.000	
42.1	ANTENNA PEDESTAL FAILURE			.545917E-07	.467935E-04	.467935E-04	.467935E-04	1.000	
43.0	ANTENNA POSITION CONTROL/POWER (KA-BAND)	1	4.200	.100000E+01	.999999E+00	.999999E+00	.999999E+00	2.000	
43.1	ANTENNA POSITION CONTROL/POWER FAILURE			.945360E-07	.158905E-03	.158905E-03	.158905E-03	2.000	
44.0	KA-BAND POLARIZER/TOLERANCE	1	4.200	.999999E+00	.999999E+00	.999999E+00	.999999E+00	1.000	
44.1	POLARIZER/TOLERANCE FAILURE			.507026E-06	.414499E-03	.414499E-03	.414499E-03	1.000	
45.0	PROCESSOR AND FINE SENSOR (KA-BAND)	1	4.200	.100000E+01	.999999E+00	.999999E+00	.999999E+00	2.000	
45.1	PROCESSOR AND FINE SENSOR FAILURE			.414466E-07	.710454E-04	.710454E-04	.710454E-04	2.000	
46.0	WAVEGUIDE PRESSURIZATION (KA-BAND)	1	4.200	.100000E+01	.999999E+00	.999999E+00	.999999E+00	2.000	
46.1	WAVEGUIDE PRESSURIZATION FAILURE IN KA-BAND RF WAVEGUIDE			.200000E-06	.342936E-03	.342936E-03	.342936E-03	2.000	
115.0	TELETYPE UNIT	1	4.200	.999999E+00	.999999E+00	.999999E+00	.999999E+00	1.000	
115.1	NO/INCORRECT TV TRANSMISSION AND RECEPTION			.761035E-06	.652103E-03	.652103E-03	.652103E-03	1.000	
115.2	NO/INCORRECT TV TRANSMISSION			.175577E-03	.150500E-03	.150500E-03	.150500E-03	1.000	
115.3	NO/INCORRECT TV RECEPTION			.409784E-06	.351195E-03	.351195E-03	.351195E-03	1.000	
116.0	VIDEOER	8	4.200	.100000E+01	.999999E+00	.999999E+00	.999999E+00	1.000	
116.1	VIDEOER MALFUNCTION			.0	.443557E-03	.443557E-03	.443557E-03	1.000	
117.0	CRT/KEYBOARD	1	4.200	.999999E+00	.999999E+00	.999999E+00	.999999E+00	2.000	
117.1	CRT/KEYBOARD MALFUNCTION			.949241E-06	.162602E-02	.162602E-02	.162602E-02	2.000	
118.0	PAPER-TAPE READER	1	100.000	.999999E+00	.999999E+00	.999999E+00	.999999E+00	.500	
118.1	PAPER-TAPE READER MALFUNCTION			.862677E-04	.517464E-03	.517464E-03	.517464E-03	.500	
119.0	LINE PRINTER	1	4.200	.999999E+00	.999999E+00	.999999E+00	.999999E+00	1.000	
119.1	LINE PRINTER MALFUNCTION			.949241E-06	.162602E-02	.162602E-02	.162602E-02	1.000	
121.0	RTM/JTR/RANGE GUFEE	1	600.000	.999999E+00	.999999E+00	.999999E+00	.999999E+00	.500	
121.1	NO OK-227 RANGE (LARS NO SSMP ANTENNA POINTING)			.910746E-06	.273224E-05	.273224E-05	.273224E-05	.500	
122.0	ELEVATION/RANGE BUFFER	1	600.000	.999999E+00	.999999E+00	.999999E+00	.999999E+00	.500	
122.1	NO OK-227 RANGE RATE (LARS NO SSMP ANTENNA POINTING)			.130074E-03	.370004E-04	.370004E-04	.370004E-04	.500	
141.0	FORWARD UPLINK INPUT MIX, ENCODING AND INTERLEAVING	1	4.200	.100000E+01	.999999E+00	.999999E+00	.999999E+00	.500	
141.1	NO FORWARD UPLINK			.162042E-06	.694133E-04	.694133E-04	.694133E-04	.500	
142.0	CONF. UPLINK INPUT MIX, ENCODING AND INTERLEAVING	1	4.200	.100000E+01	.999999E+00	.999999E+00	.999999E+00	.500	
142.1	NO CONFERENCE UPLINK			.260591E-06	.111676E-03	.111676E-03	.111676E-03	.500	
143.0	CONF. RATE 1/2 ENCODE	1	4.200	.100000E+01	.999999E+00	.999999E+00	.999999E+00	.500	
143.1	NO RATE 1/2 ON CONFERENCE UPLINK			.116314E-04	.498504E-04	.498504E-04	.498504E-04	.500	
144.0	CRT I/O INTERFACE	1	4.200	.100000E+01	.999999E+00	.999999E+00	.999999E+00	.500	
144.1	NO CRT I/O			.107529E-06	.443566E-04	.443566E-04	.443566E-04	.500	
145.0	UPLINK DATA TIMING	1	4.200	.100000E+01	.999999E+00	.999999E+00	.999999E+00	.500	
145.1	NO UPLINK, NO REPORT-BACK DOWNLINK AND NO SYNC.			.416477E-07	.178570E-04	.178570E-04	.178570E-04	.500	
146.0	CONTROL PANEL OUTPUT BUFFER	1	4.200	.100000E+01	.999999E+00	.999999E+00	.999999E+00	.500	
146.1	NO UPLINK, NO FORWARD DOWNLINK AND NO CONFERENCE DOWNLINK			.240764E-07	.107043E-04	.107043E-04	.107043E-04	.500	
151.0	KA-BAND MODRM CONTROL PANEL (FORWARD LINK)	1	4.200	.100000E+01	.999999E+00	.999999E+00	.999999E+00	.500	
151.1	KA-BAND FORWARD LINK INOPERATIVE			.1866249E-08	.981800E-04	.981800E-04	.981800E-04	.500	

ELEMENT DATA		CYCLES		USE, SEC		RELIABILITY		AVAILABILITY		MTTR, HRS	
LABEL IDENTIFICATION											
151.0	K4-RAND MODRM CONTROL PANEL (CONFERENCE LINK)	1	4.200	-100000E+01		999954E+00					
151.1	K4-RAND CONFERENCE LINK INOPERATIVE					107051E-04					.500
154.0	K4-RAND MODRM CONTROL PANEL (FORWARD AND CONFERENCE COMMON FUNCTIONS)	1	4.200	-100000E+01		999950E+00					
154.1	K4-RAND MODRM CONTROL PANEL (INOPERATIVE)					943274E-07					.500
155.0	K4-RAND MODRM CONTROL PANEL (COMMON FUNCTIONS)	1	4.200	-100000E+01		999949E+00					
155.1	ALL K4-RAND LINKS INOPERATIVE					934143E-07					.500
155.2	NO K4-RAND R/R AND CONF. LINKS AND FWD. LINK DEGRADED	1	4.200	-100000E+01		103416E-04					.500
155.3	MODRM BUFFER					24136F-07					.500
167.1	K4 CPU DROPPER TO COMMUNICATIONS TERMINAL GROUP	1	4.200	-100000E+01		999990E+00					
167.2	K4 CPU DROPPER TO COMMUNICATIONS TERMINAL GROUP					223545E-07					.500
169.1	K4-RAND MODRM CONTROL PANEL (COMMON FUNCTIONS)	1	4.200	-100000E+01		999975E+00					
169.2	NO FREQUENCY SYNC AND NO FORWARD DOWNLINK					524109E-06					.500
169.3	MODRM DATA BUFFER AND DEMUX	1	4.200	-100000E+01		999936E+00					
169.4	NO FORWARD DOWNLINK					104728E-07					.500
170.0	DATA 1/2 DECODE	1	4.200	-100000E+01		103336E-06					.500
170.1	NO RATE 1/2 ON CONFERENCE DOWNLINK					100000E+01					.500
171.0	CONFERENCE DECODE TIMING, BUFFER AND DEMUX	1	4.200	-100000E+01		166500E-06					.500
171.1	NO CONFERENCE DOWNLINK					100000E+01					.500
172.0	REPORT-RACK DATA BUFFER	1	4.200	-100000E+01		362442E-06					.500
172.1	NO REPORT-RACK DOWNLINK					999939E+00					.500
173.0	SYNC DATA RECOVER	1	4.200	-100000E+01		519405E-06					.500
173.1	NO FREQUENCY SYNCHRONIZATION					999937E+00					.500
174.0	UTC TIME BUFFER	1	60.000	-999997E+00		999923E+00					.500
174.1	NO MASTER CLOCK LOAD					286568E-05					.500
175.0	MMF TIME SIGNAL	1	60.000	-999993E+00		999967E+00					.000
175.1	NO TIME CORRECT MMF TIME OUTPUT					677740E-05					.000
176.0	UMF TIME SIGNAL	1	60.000	-999995E+00		999974E+00					.000
176.1	NO INCOMPLETE UMF TIME OUTPUT					461041E-05					.000
177.0	MASTER CLOCK	1	4.200	-100000E+01		999945E+00					.500
177.1	NO UPLINK, NO CONFERENCE DOWNLINK AND NO REPORT-RACK DOWNLINK					381442E-06					.500
179.0	DELTA-T COUNTER	1	4.200	-100000E+01		919414E+01					.500
179.1	NO UPLINK					262172E-06					.500
179.2	NO UPLINK, POSSIBLE CPU STOP	1	4.200	-100000E+01		999932E+00					.500
180.0	DECEIVER LOCK AND CONTROL PANEL BUFFER, TIME SYNC	1	4.200	-999997E+00		74270E-05					.500
180.1	NO DOWNLINK					999999E+00					.500
181.0	DOWNLINK DATA DEMUX	1	4.200	-100000E+01		373065E-03					.500
181.1	NO DOWNLINK DATA, TIME PROBE ONLY					999963E+00					.500
182.0	CONTROL PANEL INPUT BUFFER	1	4.200	-100000E+01		17753E-03					.500
182.1	NO DOWNLINK DATA, TIME PROBE ONLY, NO SYNC STATUS DISPLAY					999957E+00					.500
183.0	DOWNLINK TRACKING CONTROLLER	1	4.200	-100000E+01		999966E+00					.500
183.1	NO CONFERENCE DOWNLINK AND NO REPORT-RACK DOWNLINK					338716E-04					.500
184.0	DATA MUX	1	4.200	-100000E+01		999952E+00					.500
184.1	NO REPORT-RACK DOWNLINK					879419E-07					.500
185.0	CPJ SYNC BUFFER	1	4.200	-999990E+00		999777E+00					.500
185.1	NO SYNC STATUS DISPLAY					521046E-06					.500
186.0	UPLINK CLOCK	1	4.200	-100000E+01		999956E+00					.500
186.1	NO UPLINK					101154E-06					.500
187.0	UPLINK CODE GENERATOR	1	4.200	-100000E+01		999952E+00					.500
187.1	NO REPORT-RACK UPLINK AND NO COVERED UPLINK					874736E-07					.500
188.0	LES-4/9, FE/MD MODE	1	4.200	-100000E+01		999993E+00					.500
188.1	NO UPLINK, NO CONFERENCE DOWNLINK AND NO REPORT-RACK DOWNLINK					159817E-07					.500
189.0	DOWNLINK CLOCK AND DOWN/CROSS-LINK MUX	1	4.200	-100000E+01		999952E+00					.500

ELEMENT	IDENTIFICATION	CYCLES	USE/SEC	RELIABILITY	AVAILABILITY	MTTR,MRS
190.1	NO CONFERENCE AND REPORT-RACK DOWNLINK AND NO SYNC.			.11153E-06	.478657E-04	.500
190.0	DOWNLINK CODE GENERATOR	1	4.200	.100000E+01	.999935E+00	.500
190.1	NO D-DOWNLINK CONFERENCE AND REPORT-BACK: NO SYNC			.152625E-06	.654084E-04	.500
191.0	CLOCKING CLOCK AND CODE GENERATOR	1	4.200	.100000E+01	.999935E+00	.500
191.1	NO Y-DOWNLINK CONFERENCE AND NO X-DOWNLINK REPORT BACK			.11219E-06	.470754E-04	.500
192.0	WFSK MODULATOR, TIMING AND SINGLE SIDE BAND MOD.	1	4.200	.100000E+01	.999935E+00	.500
192.1	NO FORWARD UPLINK			.390199E-07	.167223E-04	.500
193.0	WFSK MODULATOR	1	4.200	.100000E+01	.999935E+00	.500
193.1	NO CONFERENCE UPLINK			.949241E-07	.406837E-04	.500
194.0	X15, CPEO MULTIPLIER AND POWER COMBINER	1	4.200	.100000E+01	.999935E+00	.500
194.1	NO UPLINK			.537644E-04	.210414E-05	.500
195.0	UPLINK FREQUENCY SYNTHESIZER	1	4.200	.999999E+00	.999657E+00	.500
195.1	NO UPLINK			.777777E-06	.313274E-03	.500
196.0	FORWARD DECODER	1	4.200	.100000E+01	.999935E+00	.500
196.1	NO FORWARD DOWNLINK			.292241E-07	.125250E-04	.500
197.0	REPORT-RACK DECODER/DEINTERLEAVER	1	4.200	.100000E+01	.999935E+00	.500
197.1	NO REPORT-RACK DOWNLINK			.37452E-07	.16512E-04	.500
198.0	CONFERENCE DECODER	1	4.200	.100000E+01	.999935E+00	.500
198.1	NO CONFERENCE DOWNLINK			.200035E-06	.835636E-04	.500
199.0	REPORT-RACK DEMODULATOR	1	4.200	.999999E+00	.999724E+00	.500
199.1	NO REPORT-RACK DOWNLINK			.643456E-06	.275900E-03	.500
311.0	POWER DISTORTION FAILURE	1	4.200	.100000E+01	.999935E+00	.500
311.1	POWER DISTORTION FAILURE			.430024E-05	.36823E-03	1.000
312.0	LOW VOLTAGE POWER SUPPLY	1	4.200	.100000E+01	.999724E+00	1.000
312.1	LOW VOLTAGE POWER SUPPLY FAILURE			.278043E-06	.219294E-03	1.000
321.0	LIQUID-AIR HEAT EXCHANGER	1	4.200	.100000E+01	.999999E+00	.500
321.1	LIQUID-AIR HEAT EXCHANGER FAILURE			.116667E-04	.300000E-05	1.000
322.0	PUMP/CONTROL MODULE	1	4.200	.999999E+00	.999876E+00	2.170
322.1	PUMP/CONTROL MODULE FAILURE			.60355E-06	.112194E-02	2.170
323.0	COOLANT LINES/FITTINGS	1	4.200	.100000E+01	.999935E+00	.500
323.1	COOLANT LINES/FITTINGS RUPTURE OR STOPPAGE			.583344E-09	.100000E-05	2.000
323.2	PARTIAL STOPPAGE OR LEAKAGE OF COOLANT LINES/FITTINGS			.46024E-07	.362575E-04	.500
331.0	RESTART FREQUENCY STANDARD	1	4.200	.999999E+00	.999657E+00	.500
331.1	NO/INCORRECT STANDARD FREQUENCY			.83037E-06	.355330E-03	.500
332.0	1 MHZ FREQUENCY SYNTHESIZER	1	4.200	.100000E+01	.999935E+00	.500
332.1	NO/INSUFFICIENT 1 MHZ FREQUENCY SIGNAL			.172471E-06	.305946E-04	.200
333.0	STEPPABLE FREQUENCY SYNTHESIZER	1	4.200	.100000E+01	.999935E+00	.500
333.1	STEPPABLE FREQUENCY SYNTHESIZER FAILURE			.47771E-07	.115411E-04	.330
334.0	FREQUENCY GENERATOR	1	4.200	.999999E+00	.999529E+00	1.000
334.1	FREQUENCY GENERATOR FAILURE			.550955E-06	.471365E-03	1.000
341.0	LOW NOISE AMPLIFIER	1	4.200	.999999E+00	.999657E+00	.500
341.1	LOSS OF 20 DB GAIN			.74407E-06	.310827E-03	.500
341.2	NO KA-RAND SIGNAL AMPLIFICATION			.99032E-07	.870159E-04	.500
342.0	DOWN CONVERTER	1	4.200	.100000E+01	.999761E+00	1.000
342.1	NO/INCORRECT DOWN CONVERSION			.295248E-06	.218794E-03	1.000
343.0	KA-RAND RECEIVER	1	4.200	.100000E+01	.999935E+00	1.000
343.1	NO/INVALIDATE KA-RAND RECEIVER OUTPUT			.827421E-09	.709217E-05	1.000
344.0	AUTO-TRACK RECEIVER	1	4.200	.100000E+01	.999657E+00	1.000
344.1	NO/INCORRECT AUTO-TRACK RECEIVER OUTPUT			.185213E-06	.330194E-03	1.000
351.0	OPPLER CORRECTION	1	4.200	.100000E+01	.999210E+00	2.000
351.1	NO/INCORRECT OPPLER CORRECTION			.656621E-06	.742473E-03	2.000
352.0	KA-RAND EXCITER	1	4.200	.100000E+01	.999775E+00	.500

ELEMENT DATA		CYCLES USE/SEC RELIABILITY AVAILABILITY QTY/HR			
Label	IDENTIFICATION				
352.1	NO/INSUFFICIENT KA-BAND EXCITATION			.26300E-06	.22540E-03
361.0	PF MODULE	1	4.200	.99099E+00	.99503E+00
361.1	INTERMEDIATE POWER AMPLIFIER FAILURE			.11121E-05	.21557E-02
361.2	HIGH POWER AMPLIFIER FAILURE			.12291E-05	.21042E-02
362.0	HIGH VOLTAGE POWER SUPPLY	1	4.200	.99999E+00	.99403E+00
362.1	NO/INSUFFICIENT HIGH VOLTAGE POWER			.17281E-05	.59075E-02
363.0	LOCAL CONTROL/MCUNIT (KA-BAND TRANSMITTER)			.99999E+00	.97883E+00
363.1	LOCAL CONTROL/MCUNIT FAILURE			.13542E-05	.11691E-02
364.0	KA-BAND TRANSMITTER REMOTE CONTROL	1	4.200	.10000E+01	.99993E+00
364.1	TRANSMITTER REMOTE CONTROL FAILURE			.93114E-07	.35952E-04
914.0	TELETYPEWRITER	1	4.200	.99999E+00	.95887E+00
914.1	TTY MALFUNCTION			.13467E-05	.11532E-02
915.0	TELETYPEWRITER	8	4.200	.10000E+01	.99887E+00
915.1	TTY MALFUNCTION			0.	.11532E-02
916.0	MODEM	1	4.200	.99999E+00	.99955E+00
916.1	MODEM MALFUNCTION			.51759E-06	.44355E-03

ANALYSIS SCHEDULE

ANALYSIS SCHEDULE

ITERATION	ELEMENTS/SUBASSEMBLIES										ASSEMBLY	NEXT ASSEMBLIES									
1	21	22									20	209									
2	121	122									12	209									
3	174	175	176								166	104									
4	114	165									104	209									
5	145	177	179	180	181	182	186	189	190	144	135										
6	14										160	108									
7	20	17	104	147							147	209									
8	311	312									31	6	7	8	2						
9	321	322	323								32	38									
10	331	332	333	334							33	44									
11	341	342	343	344							34	36									
12	361	362	363	364							360	35									
13	351	352	360								35	34									
14	41	42	43	44	45	46					40	39									
15	31	32	33	34	35						34	39									
16	127										105	104									
17	146	157	158	173	178	186	194	195			161	107									
18	154	157	161								107	108									
19	181	191									162	136									
20	162										106	104									
21	142	147	170	171	193	198					164	103									
22	119	115									112	102									
23	172	144	197	199							165	102									
24	112	165									102	212	216								
25	115										111	101									
26	141	169	192	196							163	101									
27	111	151	163								101	211	215								
28	214	214									113	103									
29	101										215	205									
30	215										205	208									
31	102										216	206									
32	216										206	204									
33	20	34									39	206									
34	17	160	155	105	106	107					104	200									
35	108	39									200	211	212	213	284						
36	113	153	164								103	213	217								
37	14	200	101								211	201									
38	211										201	6									
39	14	200	102								212	202									
40	212										202	7									
41	14	200	103								213	283									
42	213										203	8									
43	14	200									204	208									
44	103										217	207									
45	217										207	238									
46	204	205	206	207							204	2									
47	4	203	201								7	0									
48	4	209	202								8	0									
49	4	209	203								8	0									
50	4	203	204								2	0									

ANALYSIS RESULTS FOR A 10-HOUR MISSION UTILIZING ALL COMMUNICATION LINKS

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 2

KA-BAND SATCOM SET (SUMMARY)

SIASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF RESTORE SUBASSEMBLY	UNAVAILABILITY IDENTIFICATION
CYCLES USE SEC OCCURRENCE TIME HRS		
4.1 ENT	136000.00 .46204E-02 1.00	.4643E-01 PRIMARY POWER FAILURE
209.1 CWP	1 649.00 .14459E-02 .43	.16255E-01 UNABLE TO START SYSTEM
209.2 CWP	1 649.00 .14459E-02 .43	.41007E-04 ALTERNATE INITIALIZATION MODE REQUIRED
209.3 CWP	136000.00 .46204E-02 1.00	.20115E-01 ALL KA-BAND LINKS INOPERATIVE
209.4 CWP	136000.00 .46204E-02 1.00	.16372E-02 COMBINATION OF 1 (2) INOPERATIVE AND 2 (1) DEGRADED KA-BAND LINKS
209.5 CWP	136000.00 .46204E-02 1.00	.32762E-02 ALL KA-BAND LINKS DEGRADED
209.6 CWP	136000.00 .46204E-02 1.00	.22535E-01 TWO KA-BAND LINKS INOPERATIVE
209.7 CWP	136000.00 .46204E-02 1.00	.64120E-03 ONE INOPERATIVE AND ONE DEGRADED KA-BAND LINK
209.8 CWP	136000.00 .46204E-02 1.00	.10575E-01 TWO KA-BAND LINKS DEGRADED
209.9 CWP	136000.00 .46204E-02 1.00	.21055E-01 ONE KA-BAND LINK INOPERATIVE
209.10 CWP	136000.00 .46204E-02 1.00	.20745E-01 ONE KA-BAND LINK DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	ATBD. HRS.	ATTP. HRS.	IDENTIFICATION
0	.7493220012			NORMAL OPERATION
1	.461193E-01	1.46080E+02	1.316	ALL KA-BAND LINKS INOPERATIVE
2	.144225E-02	2.97271E+03	1.851	COMBINATION OF 1 (2) INOPERATIVE AND 2 (1) DEGRADED KA-BAND LINKS
3	.456618E-02	1.54751E+03	1.024	ALL KA-BAND LINKS DEGRADED
4	.104407E-01	2.97574E+02	3.006	TWO KA-BAND LINKS INOPERATIVE
5	.472051E-03	1.10791E+04	1.982	ONE INOPERATIVE AND ONE DEGRADED KA-BAND LINK
6	.17481E-01	6.76133E+02	2.054	TWO KA-BAND LINKS DEGRADED
7	.144146E-01	5.44336E+02	.672	ONE KA-BAND LINK INOPERATIVE
8	.271214E-01	3.92041E+02	.992	ONE KA-BAND LINK DEGRADED
9	.160237E-01	5.00625E+01	1.494	OTHER STATES
CONTINUED				

ASSEMBLY 2 OPERATES FOR 36000.000 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .9572576255. RELIABILITY IS .818352377 AND DEPENDABILITY IS .7839320012.
 216.97 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
 AND A DELAY OF 46.79 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

SYSTEM DATA

2 KA-BAND SATCOM SET (SUMMARY)			
LABEL	AVAILABILITY	RELIABILITY	DEPENDABILITY IDENTIFICATION
2.0	.95724E+00	.41944E+00	.74393E+00 NORMAL OPERATION
2.1	.22770E-01	.67952E-01	.86119E-01 ALL KA-BAND LINKS INOPERATIVE
2.2	.27418E-03	.33543E-02	.36425E-02 COMBINATION OF 1 (2) INOPERATIVE AND 2 (1) DEGRADED KA-BAND LINKS
2.3	.67080E-03	.62794E-02	.65662E-02 ALL KA-BAND LINKS DEGRADED
2.4	.91631E-02	.33046E-01	.37441E-01 TWO KA-BAND LINKS INOPERATIVE
2.5	.10473E-04	.90319E-03	.47205E-03 ONE INOPERATIVE AND ONE DEGRADED KA-BAND LINK
2.6	.43075E-02	.14480E-01	.17643E-01 TWO KA-BAND LINKS DEGRADED
2.7	.16918E-02	.18704E-01	.18179E-01 ONE KA-BAND LINK INOPERATIVE
2.8	.36721E-02	.25182E-01	.27121E-01 ONE KA-BAND LINK DEGRADED
2.9	.24639E-03	.12360E-01	.16024E-01 OTHER STATES

A N A L Y S I S S U M M A R Y

FOR ASSEMBLY NUMBER 209

KA-BAND SATCOM SET (SYSTEM INITIALIZATION)

ASSEMBLY 209 IS USED BY ASSEMBLY(S) 6 7 8 2

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF POOR. OF		RESTORE	SUBASSEMBLY	IDENTIFICATION	
	CYCLES USE, SEC	OCCURRENCE			TIME, HRS	UNAVAILABILITY
20.1 CWP	1	600.00	.24057E-02	.42	.12604E-01	NJ/INCORRECT RANGE AND/OR RANGE-RATE DATA
12.1 CWP	1	600.00	.13911E-04	.50	.41731E-04	NO OK-227 RANGE AND/OR RANGE RATE
12.1 CWP	1	600.00	.44228E-04	.50	.59419E-03	UNABLE TO START SYSTEM
12.2 CWP	1	300.00	.37117E-09	.14	.71347E-09	ALTERNATE INITIALIZATION MODE REQUIRED
147.1 CWP	AS	4.20	.22516E-05	1.00	.19294E-02	UNABLE TO START SYSTEM
						COMMUNICATIONS CONTROL
						ANT ALIG. GEN
						KA-BAND MODEM
						KA-BAND MODEM

A S S E M B L Y S T A T E S

STATE	PROBABILITY	ATRO, MOS	ATIR, HRS	IDENTIFICATION
0	.0416517113			NORMAL OPERATION
1	.142917E-01	5.93306E+01	.435	UNABLE TO START SYSTEM
2	.546266E-04	1.72172E+04	.520	ALTERNATE INITIALIZATION MODE REQUIRED
3	.246404E-11	5.90647E+01	.436	OTHER STATES

ASSEMBLY 209 OPERATES FOR 460.000 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .9967014363. RELIABILITY IS .9969008699 AND DEPENDABILITY IS .9816517113.
 19.75 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
 AND A DELAY OF 29.50 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 147

POLY 1602 COMPUTER (INITIALIZATION)

*SSF48LY 147 IS USED BY ASSEMBLY(S) 209

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROGR. OF RESOUR. SUBASSEMBLY	CYCLES USE, SEC OCCURRENCE TIME, HRS UNAVAILABILITY	IDENTIFICATION
14-1 ENT	1	4.20 .25516E-05 1.00	.19298E-02 CPU STOP; NO UPLINK, PRINTER AND CRT EXCEPT FMO. LINK OR CACHET

ASSEMBLY STATES

STATE	PROBABILITY	ATRO, HRS.	ATTR, HRS.	IDENTIFICATION
0	.9999670045			NORMAL OPERATION
1	.193701E-02	5.17700E+02	1.000	UNABLE TO START SYSTEM
2	.543561E-14	5.17700E+02	1.000	OTHER STATES
COMBINED				

ASSEMBLY 147 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .9999670045, RELIABILITY IS .9999670045 AND DEPENDABILITY IS .9999670045.
 16 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 95 FUNCTIONAL CYCLES
 AND A RFLAY OF 10.04 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 104

KA-BAND MODEM GROUP (SYSTEM INITIALIZATION)

ASSEMBLY 104 IS USED BY ASSEMBLY(S) 289

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF POOR. OF RESTORE SUBASSEMBLY		CYCLES 15% SEC OCCURRENCE TIME, HRS		UNAVAILABILITY IDENTIFICATION	
114.1 ENT	1	309.00	.05263E-04	.50	.51746E-03	PAPER-TAPE READER MALFUNCTION
154.1 CWD	1	50.00	.25657E-05	.50	.7767E-04	UNABLE TO LOAD MASTER CLOCK
154.2 CWD	1	50.00	.31248E-10	.14	.71949E-09	ALTERNATE INITIALIZATION MODE REQUIRED
						K-SIG PROC K-SIG PROC

ASSEMBLY STATES

STATE	PROBABILITY	ATRO, HRS.		ATTR, HRS.		IDENTIFICATION
0	.9993168316					NORMAL OPERATION
1	.000167E-03	1.12572E+03		.500		UNABLE TO START SYSTEM
2	.105037E-04	3.01960E+04		.144		ALTERNATE INITIALIZATION MODE REQUIRED
3	.967416E-13					OTHER STATES
COMBINED		1.12572E+03		.500		

ASSEMBLY 104 OPERATES FOR 160.000 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .9994856977, RELIABILITY IS .9999111715, AND DEPENDABILITY IS .9993168316.
.24 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 16.95 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 166

SIGNAL PROCESSING (INITIALIZATION)

ASSEMBLY 166 IS USED BY ASSEMBLY(S) 104

SUPASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROP. OF		RESTORE	SUPASSEMBLY	IDENTIFICATION
	CYCLES USE	SEC OCCURRENCE	TIME+MRS	UNAVAILABILITY	
174.1 ENT	1	60.00	.25657E-05	.50	NO MASTER CLOCK LOAD
175.1 ENT	1	60.00	.6777E-05	.74	NO/INCORRECT MMV TIME OUTPUT
176.1 ENT	1	60.00	.46104E-05	.08	NO/INCORRECT UMF TIME OUTPUT

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ASSEMBLY STATES

STATE	PROBABILITY	ATRO, MRS.	ATTR, MRS.	IDENTIFICATION
0	.3999204660			NORMAL OPERATION
1	.705330E-04	6.49600E+03	.500	UNABLE TO LOAD MASTER CLOCK
2	.105109E-04	5.3339E+04	.144	ALTERNATE INITIALIZATION MODE REQUIRED
3	.207419E-13			OTHER STATES
COMBINED		6.49592E+03	.500	

K-SIG P00C
K-SIG P00C

ASSEMBLY 166 OPERATES FOR 60.000 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .99992031. RELIABILITY IS .9999974343 AND DEPENDABILITY IS .9999204660.
0.00 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 15.44 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 20

COMMUNICATIONS CONTROL GROUP

ASSEMBLY 20 IS USED BY ASSEMBLY(S) 200

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF RESTORE SUBASSEMBLY		CYCLES USE SEC OCCURRENCE TIME MRS UNAVAILABILITY IDENTIFICATION		INS
21.1 ENT	1	600.00	.14174E-02	1.00	.84745E-02 NO/INCORRECT INS DATA
22.1 ENT	1	600.00	.11902E-02	.50	.41649E-02 NO/INCORRECT RANGE AND RANGE-RATE DATA
					COMM. CONT. COMP.

ASSEMBLY STATES

STATE	PROBABILITY	ATTR. MRS.	ATTR. MRS.	IDENTIFICATION	
0	.9846255048			NORMAL OPERATION	
1	.151745E-01	5.93194E+01	.023	NO/INCORRECT RANGE AND/OR RANGE-RATE DATA	COMMUNICATIONS CONTROL
2	.749401E-14			OTHER STATES	
COMBINED		5.93194E+01	.023		

ASSEMBLY 20 OPERATES FOR 600.000 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .9873950452. RELIABILITY IS .9971942961 AND DEPENDABILITY IS .9846255048.
 15.37 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
 AND A DELAY OF 29.84 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 12

ANTENNA ALIGNMENT

ASSEMBLY 12 IS USED BY ASSEMBLY(S) 289

SUBASSEMBLY STATE DATA

LAP	NO. OF TIME OF PROB. OF RESTORE SUBASSEMBLY	CYCLES USE-SEC OCCURRENCE TIME-MS UNAVAILABILITY	IDENTIFICATION
121.1 ENT	1	600.00 .91074E-04	NO OK-227 RANGE (LAB) NO SSMP ANTENNA POINTING)
122.1 ENT	1	600.00 .17070E-04	NO OK-227 RANGE RATE (LAB) NO SSMP ANTENNA POINTING)

ASSEMBLY STATES

STATE	PROBABILITY	ATTR. MS.	ATTR. MRS.	IDENTIFICATION
0	.309944565			NORMAL OPERATION
1	.554435E-04	1.19407E+04	.500	NO OK-227 RANGE AND/OR RANGE RATE
2	.572075E-14	1.19407E+04	.500	OTHER STATES

ASSEMBLY 12 OPERATES FOR 600.000 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .999944565, RELIABILITY IS .999944565 AND DEPENDABILITY IS .999944565.
.05 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 14.75 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 208

KA-BAND SATCOM SET (SYSTEM OPERATION)

ASSEMBLY 208 IS USED BY ASSEMBLY(S) 2

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF RESTORE SUBASSEMBLY	IDENTIFICATION
CYCLES USE SEC OCCURRENCE TIME HRS UNAVAILABILITY		
204.1 CWD 502A 4.20 .45976E-05 1.32 .71947E-02 ALL KA-BAND LINKS INOPERATIVE		
204.2 CWD 502A 4.20 .24939E-07 3.63 .11037E-04 FORWARD AND CONFERENCE LINKS INOPERATIVE AND R/B LINK DEGRADED		
204.3 CWD 502A 4.20 .36044E-06 .92 .25979E-03 P/B AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED		
204.4 CWD 502A 4.20 .17956E-05 .90 .66571E-03 ALL KA-BAND LINKS DEGRADED		
204.5 CWD 502A 4.20 .50123E-05 3.02 .95664E-02 KA-BAND FORWARD AND CONFERENCE LINKS INOPERATIVE		
204.6 CWD 502A 4.20 .43931E-07 .50 .34029E-04 KA-BAND REPORT-RACK AND CONFERENCE LINKS INOPERATIVE		
204.7 CWD 502A 4.20 .19208E-05 2.61 .62349E-02 KA-BAND FORWARD AND CONFERENCE LINKS DEGRADED		
204.8 CWD 502A 4.20 .81353E-06 .50 .34155E-03 KA-BAND REPORT-RACK AND CONFERENCE LINKS DEGRADED		
205.1 CWD 240 21.00 .56052E-05 .91 .96600E-03 KA-BAND FORWARD MESSAGE INOPERATIVE		
205.2 CWD 240 21.00 .22349E-05 .94 .36604E-03 KA-BAND FORWARD MESSAGE DEGRADED		
206.1 CWD 720 12.60 .31929E-05 .50 .44415E-03 KA-BAND REPORT-RACK MESSAGE INOPERATIVE		
206.2 CWD 720 12.60 .68333E-05 1.00 .18117E-02 KA-BAND REPORT-RACK MESSAGE DEGRADED		
207.1 CWD 12 894.80 .17405E-03 .50 .35441E-03 KA-BAND CONFERENCE INOPERATIVE		
207.2 CWD 12 894.40 .41990E-03 .99 .16347E-02 KA-BAND CONFERENCE DEGRADED		

ASSEMBLY STATES

STATE	RELIABILITY	ATRO. HRS.	ATTR. HRS.	IDENTIFICATION
0	.7795571950			NORMAL OPERATION
1	.508501E-01	2.11274E+02	1.344	ALL KA-BAND LINKS INOPERATIVE
2	.676783E-02	4.57444E+03	1.452	COMBINATION OF 1 (2) INOPERATIVE AND 2 (1) DEGRADED KA-BAND LINKS
3	.924914E-02	1.77252E+03	1.031	ALL KA-BAND LINKS DEGRADED
4	.479014E-01	3.31624E+02	3.006	TWO KA-BAND LINKS INOPERATIVE
5	.111117E-02	1.11760E+05	1.942	ONE INOPERATIVE AND ONE DEGRADED KA-BAND LINK
6	.220107E-01	7.20445E+02	2.064	TWO KA-BAND LINKS DEGRADED
7	.276574E-01	1.82275E+03	.672	ONE KA-BAND LINK INOPERATIVE
8	.345107E-01	1.10946E+03	.932	ONE KA-BAND LINK DEGRADED
9	.4946471E-02	8.13643E+01	1.606	OTHER STATES
COMBINED				

ASSEMBLY 208 OPERATES FOR 1500.000 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .7795571950. RELIABILITY IS .7795571950 AND DEPENDABILITY IS .7795571950.
 27.44 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
 AND A CFLAV OF 45.17 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 207

KA-RAND MODERN GROUP (CONFERENCE)

ASSEMBLY 207 IS USED BY ASSEMBLY(S) 208

SUPRASSEMBLY STATE DATA

NO. OF TIME OF PROJ. OF RESTORE SUPRASSEMBLY		CYCLES USE, SEC OCCURRENCE TIME, MRS UNAVAILABILITY IDENTIFICATION	
LABEL			
217.1 CMP	214	4.20 .83920E-06	.50 .35902E-03 KA-BAND CONFERENCE CYCLE INOPERATIVE
217.2 CMP	214	4.20 .19650E-05	.99 .16393E-02 KA-BAND CONFERENCE CYCLE DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	ATRO, MRS.	ATRO, MRS.	IDENTIFICATION
0	.9974044156			NORMAL OPERATION
1	.516974E-03	1.39625E+03	.503	KA-BAND CONFERENCE INOPERATIVE
2	.205750E-02	5.94460E+02	.916	KA-BAND CONFERENCE DEGRADED
3	.110770E-05			OTHER STATES
COMBINED		4.16461E+02	.916	

ASSEMBLY 207 OPERATES FOR 99.800 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .9980022471. RELIABILITY IS .9990009719 AND DEPENDABILITY IS .9974.4156.
 .03 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 12 FUNCTIONAL CYCLES
 AND A DELAY OF 12.43 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 217

KA-RAND MODEM GROUP (CONFERENCE CYCLE)

ASSEMBLY 217 IS USED BY ASSEMBLY(S) 207

SUBASSEMBLY STATE DATA

LABEL	CYCLES USE	SEC	OF PROB.	RESTORE	SURASSEMBLY	IDENTIFICATION	KA-BAND MODEM
103.1 CMP	1	4.20	.1927E-06	.50	.35961E-03	INOPERATIVE CONFERENCE LINK	KA-BAND MODEM
103.2 CMP	1	4.20	.19571E-05	.99	.16100E-02	DEGRADED CONFERENCE LINK	KA-BAND MODEM

ASSEMBLY STATES

STATE	PROBABILITY	ATRO, HRS.	ATRO, HRS.	IDENTIFICATION
0	.9079992732			NORMAL OPERATION
1	.163155E-03	1.39021E+03	.503	KA-RAND CONFERENCE CYCLE INOPERATIVE
2	.163124E-02	5.93723E+02	.946	KA-RAND CONFERENCE CYCLE DEGRADED
3	.501109E-06	4.16041E+02	.999	OTHER STATES

ASSEMBLY 217 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.

THE AVAILABILITY IS .999001068, RELIABILITY IS .999971954 AND DEPENDABILITY IS .9979982732.

43 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 214 FUNCTIONAL CYCLES AND A DELAY OF 27.01 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 103

KA-BAND MODEM GROUP (CONFERENCE LINK)

ASSEMBLY 103 IS USED BY ASSEMBLY(S) 213 217

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROG. OF RESTORE SUBASSEMBLY	CYCLES USE SEC OCCURRENCE TIME	HRS	UNAVAILABILITY	IDENTIFICATION	
					NO CONFERENCE TV AND VOICE	KA-BAND I/O
113.1 CMP	1	4.20	.69647E-12	1.00	.51154E-06	NO CONFERENCE TV AND VOICE
113.2 CMP	1	4.20	.14613E-05	1.00	.15954E-02	DEGRADED CONFERENCE LINK INPUT/OUTPUT
153.1 ENT	1	4.20	.10715E-06	.50	.45479E-04	KA-RAND CONFERENCE LINK INOPERATIVE
154.1 CMP	1	4.20	.73102E-06	.50	.31325E-03	CONFERENCE LINK INOPERATIVE
154.2 CMP	1	4.20	.10450E-06	.50	.44770E-04	CONFERENCE LINK DEGRADED
						K-SIG PROC
						K-SIG PROC

ASSEMBLY STATES

STATE	PROBABILITY	ATBO, HRS.	A1TR, HRS.	IDENTIFICATION	
				NORMAL OPERATION	KA-BAND MODEM
0	.7079976635			INOPERATIVE CONFERENCE LINK	KA-BAND MODEM
1	.360447E-03	1.39009E+03	.503	DEGRADED CONFERENCE LINK	KA-BAND MODEM
2	.164147E-02	5.93042E+02	.946	OTHER STATES	
3	.149049E-07				
COMBINED		4.15722E+02	.199		

ASSEMBLY 103 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .9999971936 AND DEPENDABILITY IS .9979976635.
2.00 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 27.02 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 164

SIGNAL PROCESSING (CONFERENCE LINK)

ASSEMBLY 164 IS USED BY ASSEMBLY(S) 103

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF RESTORE SUBASSEMBLY	CYCLES USE SEC OCCURRENCE TIME+HRS UNAVAILABILITY	IDENTIFICATION
142.1 ENT	1	4.20 .26059E-06	.50 .11164E-03 NO CONFERENCE UPLINK
143.1 ENT	1	4.20 .11632E-06	.50 .47850E-06 NO RATE 1/2 ON CONFERENCE UPLINK
170.1 ENT	1	4.20 .10384E-06	.50 .44286E-04 NO RATE 1/2 ON CONFERENCE DOWNLINK
171.1 ENT	1	4.20 .16650E-06	.50 .71355E-04 NO CONFERENCE DOWNLINK
193.1 ENT	1	4.20 .96924E-07	.50 .40683E-04 NO CONFERENCE UPLINK
194.1 ENT	1	4.20 .20901E-06	.50 .89570E-04 NO CONFERENCE DOWNLINK
			MPU-02, MPU-05 MPU-04 MPU-13 MPU-14, MPU-15, MPU-16, MPU-17 MOD-34 COD-01

ASSEMBLY STATES

STATE	PROBABILITY	ATRO, HRS.	ATTR, HRS.	IDENTIFICATION
0	.9996411471			NORMAL OPERATION
1	.113974E-03	1.59593E+03	.500	CONFERENCE LINK INOPERATIVE
2	.44749E-04	1.11643E+04	.500	CONFERENCE LINK DEGRADED
3	.237605E-13	1.39613E+03	.500	OTHER STATES
COMBINED				K-SIG PROC K-SIG PROC

ASSEMBLY 164 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .9996419424, RELIABILITY IS .9999991645 AND DEPENDABILITY IS .9996411471.
16 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 15.04 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 113

KA-BAND INPUT/OUTPUT (CONFERENCE LINK)

ASSEMBLY 113 IS USED BY ASSEMBLY(S) 183

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROGR.	OF RESTORE	SUBASSEMBLY
	CYCLES	USER OCCURRENCE TIME	MRS UNAVAILABILITY IDENTIFICATION
916.1 ENT	1	6.20 .13463E-05	1.00 .11533E-02 TTY MALFUNCTION
916.1 ENT	1	6.20 .51780E-06	1.00 .44356E-03 VOCODER MALFUNCTION

ASSEMBLY STATES

STATE	PROBABILITY	ATTR. MRS.	ATTR. MRS.	IDENTIFICATION
0	.9994018239			NORMAL OPERATION
1	.512735E-05	1.65452E+09	1.000	NO CONFERENCE TTY AND VOICE
2	.150768E-02	6.25903E+02	1.000	DEGRADED CONFERENCE LINK INPUT/OUTPUT
3	.953494E-16	6.25903E+02	1.000	OTHER STATES
COMBINED				KA-BAND I/O

ASSEMBLY 113 OPERATES FOR 6.200 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .9994018239, RELIABILITY IS .999991361 AND DEPENDABILITY IS .9984018239.
 1.00 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
 AND A DELAY OF 30.84 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 206

KA-BAND MODEM GROUP (REPORT-BACK MESSAGE)

ASSEMBLY 206 IS USED BY ASSEMBLY(S) 200

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF RESTORE SUBASSEMBLY		IDENTIFICATION
	CYCLES USE	SEC OCCURRENCE TIME, HRS UNAVAILABILITY	
216.1 CMO	7	4.20 .1134E-05	.50 .44503E-03 KA-RAND REPORT-BACK CYCLE INOPERATIVE
216.2 CMO	7	4.20 .2114E-05	1.00 .11126E-02 KA-RAND REPORT-BACK CYCLE DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	ATTR. NOS.	ATTR. HRS.	IDENTIFICATION
0	.3076935147			NORMAL OPERATION
1	.507536E-03	1.03155E+03	.504	KA-RAND REPORT-BACK MESSAGE INOPERATIVE
2	.111906E-02	5.52630E+02	1.000	KA-RAND REPORT-BACK MESSAGE DEGRADED
3	.444417E-06	3.59444E+02	.495	OTHER STATES
COMBINE				

ASSEMBLY 206 OPERATES FOR 12.600 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .9977312227, RELIABILITY IS .9999902737 AND DEPENDABILITY IS .9976935147.
1.66 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 720 FUNCTIONAL CYCLES
AND A DELAY OF 26.95 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 216

KA-BAND MODEM GROUP (REPORT-BACK CYCLE)

ASSEMBLY 216 IS USED BY ASSEMBLY(S) 206

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF	CYCLES USED	SEC OCCURRENCE TIME	MRS UNAVAILABILITY	IDENTIFICATION	
102.1 CMP	1	4.20	.1134E-05	.50	4A591E-03	INOPERATIVE REPORT-BACK LINK
102.2 CMP	1	4.20	.2117E-05	1.00	.1817E-02	DEGRADED REPORT-BACK LINK
						KA-BAND MODEM KA-BAND MODEM

ASSEMBLY STATES

STATE	PROBABILITY	ATRO. MRS.	ATRO. MRS.	IDENTIFICATION
0	.9976942215			NORMAL OPERATION
1	.445161E-03	1.02074E+03	.504	KA-BAND REPORT-BACK CYCLE INOPERATIVE
2	.181473E-02	5.51421E+02	1.900	KA-BAND REPORT-BACK CYCLE DEGRADED
3	.882201E-06			OTHER STATES
COMBINED		3.59164E+02	.495	

ASSEMBLY 216 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .9977014221 RELIABILITY IS .9999967517 AND DEPENDABILITY IS .9976942215.
2.10 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 25.97 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 102

KA-BAND MODEM GROUP (REPORT-RACK LINK)

ASSEMBLY 102 IS USED BY ASSEMBLY(S) 212 216

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROGR. OF		RESTORE	SUBASSEMBLY		IDENTIFICATION	
	CYCLES USE	SEC OCCURRENCE	TIME	HRS	UNAVAILABILITY		
112.1 CWP	1	4.20	.11114E-11	1.40	.81552E-06	NOZINCORRECT REPORT-BACK OUTPUT	KA-BAND I/O
112.2 CWP	1	4.20	.21201E-05	1.00	.18144E-02	DEGRADED REPORT-BACK OUTPUT	KA-BAND I/O
165.1 CWP	1	4.20	.11322E-05	.50	.44510E-03	REPORT-RACK LINK INCOPERATIVE	K-SIG PROC

ASSEMBLY STATES

STATE	PROBABILITY	ATRO, HRS.	ATTP, HRS.	IDENTIFICATION
0	.9976973357			NORMAL OPERATION
1	.447047E-03	1.02374E+03	.504	INCOPERATIVE REPORT-RACK LINK
2	.111562E-02	5.51015E+02	1.000	DEGRADED REPORT-RACK LINK
3	.144446E-06			OTHER STATES
COMBINED		3.54421E+02	.895	

ASSEMBLY 102 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .9976973357, RELIABILITY IS .999967406 AND DEPENDABILITY IS .9976973357.
 2.37 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
 AND A DELAY OF 96.49 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 165

SIGNAL PROCESSING (REPORT-BACK LINK)

ASSEMBLY 165 IS USED BY ASSEMBLY(S) 102

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROGR. OF RESTORE SUBASSEMBLY	CYCLES USE SEC	OC-CURFENCE TIME, MRS	UNAVAILABILITY	IDENTIFICATION
122.1 ENT	1	4.20	.34290E-06	.50	NO REPORT-BACK DOWNLINK
144.1 ENT	1	4.20	.47904E-07	.50	NO REPORT-BACK DOWNLINK
137.1 ENT	1	4.20	.37653E-07	.50	NO REPORT-BACK DOWNLINK
193.1 ENT	1	4.20	.64346E-06	.50	NO REPORT-BACK DOWNLINK

ASSEMBLY STATES

STATE	PROBABILITY	ATRO, MRS.	ATR, MRS.	IDENTIFICATION
0	.3995137591			NORMAL OPERATION
1	.446232E-03	1.03046E+03	.500	REPORT-BACK LINK INOPERATIVE
2	.150002E-13			OTHER STATES
COMBINED		1.03046E+03	.500	

ASSEMBLY 165 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .999514999, RELIABILITY IS .999998674 AND DEPENDABILITY IS .9995137691.
 .49 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
 AND A DELAY OF 15.04 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 112

KA-8AND INPUT/OUTPUT (REPORT-BACK LINK)

ASSEMBLY 112 IS USED BY ASSEMBLY(S) 102

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF 2009. OF RESTORE SUBASSEMBLY	CYCLES USE SEC OCCURRENCE TIME, WRS UNAVAILABILITY	IDENTIFICATION
119.1 ENT	1	4.20 .96924E-06	1.00 .91334E-03 LINE PRINTED MALFUNCTION
115.1 ENT	1	4.20 .76103E-06	1.00 .65210E-03 NO/INCORRECT ITY TRANSMISSION AND RECEPTION
115.2 ENT	1	4.20 .17660E-06	1.00 .15050E-03 NO/INCORRECT ITY TRANSMISSION
115.3 ENT	1	4.20 .40974E-06	1.00 .35119E-03 NO/INCORRECT ITY RECEPTION

ASSEMBLY STATES

STATE	POTENTIALITY	ATTR, WPS.	ATTR, WPS.	IDENTIFICATION
0	.2591023016			NORMAL OPERATION
1	.117421E-06	1.04582E+09	1.000	NO/INCORRECT REPORT-BACK OUTPUT
2	.181650E-02	5.50244E+02	1.000	DEGRADED REPORT-BACK OUTPUT
3	.180822E-06			OTHER STATES
COMBINED		5.50297E+02	1.000	

ASSEMBLY 112 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION
 THE AVAILABILITY IS .9991464179, RELIABILITY IS .9999978799 AND DEPENDABILITY IS .9981823016.
 1.42 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
 AND 1 OFLAY OF 10.04 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 205

KA-9AND MODEM GROUP (FORWARD MESSAGE)

ASSEMBLY 205 IS USED BY ASSEMBLY(S) 200

SUBASSEMBLY STATE DATA

NO. OF TIME OF POOR. OF RESTORE SUBASSEMBLY

CYCLES USE, SEC OCCURRENCE TIME, MRS UNAVAILABILITY IDENTIFICATION

LABEL	215.1 Cmp	215.2 Cmp	5	4.20	.13720E-05	.91	.96715E-03	KA-RAND FORWARD CYCLE INOPERATIVE
			5	4.20	.46790E-06	.98	.36720E-03	KA-RAND FORWARD CYCLE DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	ATBO, MRS.	ATTR, MRS.	IDENTIFICATION
0	.9996571740			NORMAL OPERATION
1	.271390E-03	8.83136E+02	.914	KA-RAND FORWARD MESSAGE INOPERATIVE
2	.164072E-03	2.61013E+03	.977	KA-RAND FORWARD MESSAGE DEGRADED
3	.159734E-06			OTHER STATES
COMBINED		6.59967E+02	.931	

ASSEMBLY 205 OPERATES FOR 21.000 SECONDS TO COMPLETE ITS FUNCTION.

THE AVAILABILITY IS .9996571740, RELIABILITY IS .9999911599 AND DEPENDABILITY IS .9986571740.
 .12 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 240 FUNCTIONAL CYCLES
 AND A DELAY OF 24.12 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 215

KA-BAND MODEM GROUP (FORWARD CYCLE)

ASSEMBLY 215 IS USED BY ASSEMBLY(S) 285

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF	OF	RESTORE	SUBASSEMBLY	IDENTIFICATION
	CYCLES USE	SEC	OCCURRENCE TIME	HRS	UNAVAILABILITY
101.1 CMP	1	4.20	.13229E-05	.91	.96751E-03 INOPERATIVE FORWARD LINK
101.2 CMP	1	4.20	.44942E-05	.91	.36755E-03 DEGRADED FORWARD LINK

KA-BANDS MODEM
KA-BANDS MODEM

ASSEMBLY STATES

STATE	PROBABILITY	ATRO, MOS.	ATTR, HRS.	IDENTIFICATION
0	.9986635240			NORMAL OPERATION
1	.367644E-03	4.82520E+02	.914	KA-BAND FORWARD CYCLE INOPERATIVE
2	.367644E-03	2.60475E+03	.977	KA-BAND FORWARD CYCLE DEGRADED
3	.356529E-06	6.59141E+02	.931	OTHER STATES

ASSEMBLY 215 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .9986635240, RELIABILITY IS .9999982101 AND DEPENDABILITY IS .9986635240.
1.1% MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 27.94 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 101
KA-BAND MODEM GROUP (FORWARD LINK)

ASSEMBLY 101 IS USED BY ASSEMBLY(S) 211 215

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROG. OF RESTORE	SUBASSEMBLY	UNAVAILABILITY	IDENTIFICATION
111.1 Cwp	1	4.20 .76103E-06	1.00	65178E-03 NO/INCORRECT FORWARD LINK INPUT AND OUTPUT
111.2 Cwp	1	4.20 .17560E-06	1.00	15015E-03 NO/INCORRECT FORWARD LINK INPUT
111.3 Cwp	1	4.20 .40979E-06	1.00	35090E-03 NO/INCORRECT FORWARD LINK OUTPUT
151.1 ENT	1	4.20 .15625E-06	.50	79818E-04 KA-BAND FORWARD LINK INOPERATIVE
161.1 Cwp	1	4.20 .5110E-06	.50	46182E-04 FORWARD LINK INOPERATIVE
163.2 Cwp	1	4.20 .39699E-07	.50	17012E-04 FORWARD LINK DEGRADED

ASSEMBLY STATES

STATE	RELIABILITY	ATRO. HRS.	ATTR. HRS.	IDENTIFICATION
0	.998662789			NORMAL OPERATION
1	.969924E-03	8.81924E+02	.914	INOPERATIVE FORWARD LINK
2	.148001E-03	2.59941E+03	.977	DEGRADED FORWARD LINK
3	.141752E-06			OTHER STATES
COMBINED		6.59576E+02	.931	

ASSEMBLY 101 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .998665591, RELIABILITY IS .9999982283 AND DEPENDABILITY IS .9986627898.
1.3% MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 27.97 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 163

SIGNAL PROCESSING (FORWARD LINK)

ASSEMBLY 163 IS USED BY ASSEMBLY(S) 101

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROGR. OF RESTORE		SHRASSEMBLY	IDENTIFICATION	
	CYCLES USE	SEC OCCURRENCE	TIME, HRS	UNAVAILABILITY	IDENTIFICATION
141.1 ENT	1	4.20	.16294E-06	.50	.69461E-04 NO FORWARD UPLINK
169.1 ENT	1	4.20	.10473E-07	.50	.44443E-05 NO FORWARD DOWNLINK
132.1 ENT	1	4.20	.17019E-07	.50	.16722E-04 NO FORWARD UPLINK
196.1 ENT	1	4.20	.20225E-07	.50	.12525E-04 NO FORWARD DOWNLINK
					MOD-01, MOD-02, MOD-03
					FRB-01

ASSEMBLY STATES

STATE	RELIABILITY		ATTR. HRS.	IDENTIFICATION	
	ATRO. HRS.	ATTR. HRS.	ATTR. HRS.	IDENTIFICATION	IDENTIFICATION
0	.999965550			NORMAL OPERATION	
1	.961915E-04	5.40140E+03	.500	FORWARD LINK INOPERATIVE	K-SIG PROC
2	.170515E-04	2.91446E+04	.500	FORWARD LINK DEGRADED	K-SIG PROC
3	.209555E-13			OTHER STATES	
COMBINED		6.44694E+03	.500		

ASSEMBLY 163 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .999965550. RELIABILITY IS .999997552 AND DEPENDABILITY IS .999965550.
 .10 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
 AND A DELAY OF 15.04 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 111

KA-BAND INPUT/OUTPUT (FORWARD LINK)

ASSEMBLY 111 IS USED BY ASSEMBLY(S) 101

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF	RESTORE	SUBASSEMBLY	UNAVAILABILITY	IDENTIFICATION
CYCLES USE	SEC	OCCURRENCE	TIME, HRS		
115.1 ENT	1	4.20	.74103E-06	1.00	.65210E-03 NO/INCORRECT TTY TRANSMISSION AND RECEPTION
115.2 ENT	1	4.20	.17550E-06	1.00	.14050E-03 NO/INCORRECT TTY TRANSMISSION
115.3 ENT	1	4.20	.40979E-06	1.00	.35119E-03 NO/INCORRECT TTY RECEPTION

ASSEMBLY STATES

STATE	PROBABILITY	ATTR. HRS.	ATTR. HRS.	IDENTIFICATION
0	.9091452464			NORMAL OPERATION
1	.642536E-03	1.5330E+03	1.000	NO/INCORRECT FORWARD LINK INPUT AND OUTPUT
2	.14424E-03	6.64401E+03	1.000	NO/INCORRECT FORWARD LINK INPUT
3	.351312E-03	2.84700E+03	1.000	NO/INCORRECT FORWARD LINK OUTPUT
4	.340422E-06			OTHER STATES
COMBINEC		8.66405E+02	1.000	

ASSEMBLY 111 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .9091452464, RELIABILITY IS .9999986536 AND DEPENDABILITY IS .9988452464.
1.14 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 30.03 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 204

KA-BAND SATCOM SET (COMMON FUNCTIONS)

ASSEMBLY 204 IS USED BY ASSEMBLY(S) 200

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF		SUBASSEMBLY	IDENTIFICATION
	CYCLES	USE OF RESIDUE		
14.1 ENT	1	4.20 .22534E-05	1.00	1.0294E-02 CPL STOP: NO UPLINK, PRINTER AND CRT EXCEPT FWD. LINK OR CINCHNEY
200.1 CWP	1	4.20 .44313E-05	1.42	53473E-02 ALL KA-BAND LINKS INOPERATIVE
200.2 CWP	1	4.20 .14294E-07	3.63	10267E-04 FORWARD AND CONFERENCE LINKS INOPERATIVE AND R/R LINK DEGRADED
200.3 CWP	1	4.20 .37079E-06	.92	26569E-03 R/R AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
200.4 CWP	1	4.20 .11133E-05	.90	67157E-03 ALL KA-BAND LINKS DEGRADED
200.5 CWP	1	4.20 .57410E-05	3.72	97114E-02 KA-BAND FORWARD AND CONFERENCE LINKS INOPERATIVE
200.6 CWP	1	4.20 .27411E-07	.50	34901E-04 KA-BAND REPORT-RACK AND CONFERENCE LINKS INOPERATIVE
200.7 CWP	1	4.20 .20177E-05	2.61	43136E-02 KA-BAND FORWARD AND CONFERENCE LINKS DEGRADED
200.8 CWP	1	4.20 .42608E-05	.50	34924E-03 KA-BAND REPORT-RACK AND CONFERENCE LINKS DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	ATTR. MRS.	ATTR. MRS.	IDENTIFICATION
0	.3775164E+3			NORMAL OPERATION
1	.716709E-02	1.35696E+02	1.321	ALL KA-BAND LINKS INOPERATIVE
2	.100608E-04	4.64372E+04	3.629	FORWARD AND CONFERENCE LINKS INOPERATIVE AND R/R LINK DEGRADED
3	.260135E-03	3.23692E+03	.914	R/R AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
4	.667763E-03	1.07463E+03	.599	ALL KA-BAND LINKS DEGRADED
5	.353215E-02	2.07136E+02	3.019	KA-BAND FORWARD AND CONFERENCE LINKS INOPERATIVE
6	.141155E-04	1.29772E+04	.500	KA-BAND REPORT-RACK AND CONFERENCE LINKS INOPERATIVE
7	.674472E-02	4.07405E+02	2.613	KA-BAND FORWARD AND CONFERENCE LINKS DEGRADED
8	.342134E-03	1.45175E+03	.500	KA-BAND REPORT-RACK AND CONFERENCE LINKS DEGRADED
9	.142947E-03	6.33010E+01	2.250	OTHER STATES
COMBINF				

ASSEMBLY 204 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .977516416. RELIABILITY IS .9999414847 AND DEPENDABILITY IS .9775166423.
133.24 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 5928 FUNCTIONAL CYCLES
AND A DELAY OF 67.57 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 200

KA-BAND SATCOM SET (COMMON FUNCTIONS)

ASSEMBLY 200 IS USED BY ASSEMBLY(S) 211 212 213 204

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF RESTORE	CYCLES USE, SEC	OCCURRENCE TIME, HRS	SUBASSEMBLY UNAVAILABILITY	IDENTIFICATION
104.1 CWP	1	4.20	.21614E-05	.50	.92573E-03 ALL KA-BAND LINKS INOPERATIVE
104.2 CWP	1	4.20	.17145E-11	.00	.11444E-06 FORWARD AND CONFERENCE LINKS INOPERATIVE AND 9/8 LINK DEGRADED
104.3 CWP	1	4.20	.24131E-07	.52	.10199E-04 P/B AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
104.4 CWP	1	4.20	.62351E-06	.50	.26697E-03 ALL KA-BAND LINKS DEGRADED
104.5 CWP	1	4.20	.21132E-05	.50	.99655E-03 KA-BAND FORWARD AND CONFERENCE LINKS INOPERATIVE
104.6 CWP	1	4.20	.91026E-07	.50	.39714E-04 KA-BAND REPORT-BACK AND CONFERENCE LINKS INOPERATIVE
104.7 CWP	1	4.20	.10343E-05	1.97	.16590E-02 KA-BAND FORWARD AND CONFERENCE LINKS DEGRADED
104.8 CWP	1	4.20	.11216E-06	.50	.47944E-04 KA-BAND REPORT-BACK AND CONFERENCE LINKS DEGRADED
104.9 CWP	1	4.20	.43259E-05	1.60	.44939E-02 ALL KA-BAND LINKS INOPERATIVE
104.10 CWP	1	4.20	.13202E-07	3.93	.66126E-05 FORWARD AND CONFERENCE LINKS INOPERATIVE AND 9/8 LINK DEGRADED
104.11 CWP	1	4.20	.34510E-06	.93	.26014E-03 P/B AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
104.12 CWP	1	4.20	.53444E-06	1.14	.42654E-03 ALL KA-BAND LINKS DEGRADED
104.13 CWP	1	4.20	.15511E-05	3.30	.AA160E-02 KA-BAND FORWARD AND CONFERENCE LINKS INOPERATIVE
104.14 CWP	1	4.20	.10356E-05	3.00	.27115E-02 KA-BAND FORWARD AND CONFERENCE LINKS DEGRADED
104.15 CWP	1	4.20	.72996E-06	.50	.30471E-03 KA-BAND REPORT-BACK AND CONFERENCE LINKS DEGRADED

ASSEMBLY STATE

STATE	OCCURABILITY	ATBO, HRS.	AFT, HRS.	IDENTIFICATION
0	.27916A0293			NORMAL OPERATION
1	.53556E-12	1.81744E+02	1.422	ALL KA-BAND LINKS INOPERATIVE
2	.102921E-04	7.74967E+04	1.629	FORWARD AND CONFERENCE LINKS INOPERATIVE AND 9/8 LINK DEGRADED
3	.266044E-03	3.16667E+03	.914	P/B AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
4	.62255E-03	1.04734E+03	.499	ALL KA-BAND LINKS DEGRADED
5	.171741E-12	2.01740E+02	3.019	KA-BAND FORWARD AND CONFERENCE LINKS INOPERATIVE
6	.140306E-04	1.26247E+04	.500	KA-BAND REPORT-BACK AND CONFERENCE LINKS INOPERATIVE
7	.431547E-02	5.74227E+02	2.413	KA-BAND FORWARD AND CONFERENCE LINKS DEGRADED
8	.350045E-03	1.41224E+03	.500	KA-BAND REPORT-BACK AND CONFERENCE LINKS DEGRADED
9	.374560E-04	7.00674E+01	2.167	OTHER STATES
COMBINED				

ASSEMBLY 200 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .9791443331, RELIABILITY IS .9999933496 AND DEPENDABILITY IS .9791680293.
 20.81 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
 AND A DELAY OF 71.04 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 100

KA-BAND MODEM GROUP (COMMON FUNCTIONS)

ASSEMBLY 100 IS USED BY ASSEMBLY(S) 200

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROG. OF CYCLES USE SEC	RESTORE OCCURENCE TIME	SUBASSEMBLY UNAVAILABILITY	IDENTIFICATION	
13.1 ENT	1	4.20	.74500E-07	.50	ALL KA-BAND LINKS INOPERATIVE
140.1 CWD	1	4.20	.12911E-05	.50	ALL KA-BAND LINKS INOPERATIVE
150.2 CWD	1	4.20	.62454E-05	.50	ALL KA-BAND LINKS D-GRADED
155.1 ENT	1	4.20	.97836E-07	.50	ALL KA-BAND LINKS INOPERATIVE
155.2 ENT	1	4.20	.24131E-07	.50	NO KA-BAND 0/9 AND CONF. LINKS AND FWD. LINK DEGRADED
105.1 CWD	1	4.20	.82746E-07	.50	NO/INCORRECT FREQUENCY HOPPING AND MESSAGE COVER
106.1 CWD	1	4.20	.91016E-07	.50	CONFERENCE AND REPORT-RACK LINKS INOPERATIVE
106.2 CWD	1	4.20	.11217E-05	.50	CONFERENCE AND REPORT-RACK LINKS DEGRADED
107.1 CWD	1	4.20	.23322E-05	.50	FORWARD AND CONFERENCE LINKS INOPERATIVE
107.2 CWD	1	4.20	.24928E-05	2.00	FORWARD AND CONFERENCE LINKS DEGRADED
					MODEM POWER CONTROL PANEL
					K-SIG PROC
					K-SIG PROC
					MODEM CONTROL
					KA-BAND MODEM
					KA-BAND MODEM
					KA-BAND MODEM
					KA-BAND MODEM

ASSEMBLY STATES

STATE	UNAVAILABILITY	ATBO. HRS.	ATTR. HRS.	IDENTIFICATION	
0	.3960452559			NORMAL OPERATION	
1	.927446E-03	5.19741E+02	.504	ALL KA-BAND LINKS INOPERATIVE	
2	.319351E-06	6.78447E+04	.903	FORWARD AND CONFERENCE LINKS INOPERATIVE AND R/R LINK DEGRADED	
3	.104224E-04	4.81479E+04	.516	R/R AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED	
4	.267544E-03	1.47111E+03	.504	ALL KA-BAND LINKS DEGRADED	
5	.324466E-03	5.00321E+02	.503	KA-BAND FORWARD AND CONFERENCE LINKS INOPERATIVE	
6	.100074E-04	1.25411E+04	.500	KA-BAND REPORT-RACK AND CONFERENCE LINKS INOPERATIVE	
7	.166000E-02	1.12501E+03	1.955	KA-BAND FORWARD AND CONFERENCE LINKS DEGRADED	
8	.473354E-04	1.04017E+04	.500	KA-BAND REPORT-RACK AND CONFERENCE LINKS DEGRADED	
9	.145304E-05			OTHER STATES	
COMPLETE		1.82412E+02	1.117		

ASSEMBLY 100 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .9960516125. RELIABILITY IS .9999946182 AND DEPENDABILITY IS .9960452559.
1.95 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 13.54 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 160

SIGNAL PROCESSING (COMMON FUNCTIONS)

ASSEMBLY 160 IS USED BY ASSEMBLY(S) 100

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROG. OF RESTORE	SUBASSEMBLY	UNAVAILABILITY	IDENTIFICATION	
145.1 ENT	1	4.20 .41667E-07	.50	.17457E-04	NO UPLINK, NO REPORT-BACK DOWNLINK AND NO SYNC. MPU-07
177.1 ENT	1	4.20 .15134E-07	.50	.15512E-03	NO UPLINK, NO CONFERENCE DOWNLINK AND NO REPORT-BACK DOWNLINK SCU-02
179.1 ENT	1	4.20 .17254E-07	.50	.78247E-05	NO UPLINK, POSSIBLE CPU STOP SCU-04
180.1 ENT	1	4.20 .47065E-06	.50	.37106E-03	NO DOWNLINK SCU-05, SCU-06, SCU-07
181.1 ENT	1	4.20 .17051E-04	.50	.13775E-03	NO DOWNLINK DATA, TIME PROBE ONLY SCU-07
182.1 ENT	1	4.20 .09890E-07	.50	.42771E-04	NO UPLINK, NO CONFERENCE DOWNLINK AND NO REPORT-BACK DOWNLINK SCU-08
184.1 ENT	1	4.20 .15012E-07	.50	.68491E-05	NO UPLINK, NO CONFERENCE DOWNLINK AND NO REPORT-BACK DOWNLINK CGU-03
189.1 ENT	1	4.20 .11164E-06	.50	.47846E-04	NO CONFERENCE AND REPORT-PACK DOWNLINK AND NO SYNC. CGU-04, CGU-05
190.1 ENT	1	4.20 .15263E-06	.50	.65809E-04	NO D-DOWNLINK CONFERENCE AND REPORT-BACK: NO SYNC. CGU-06
196.1 ENT	1	4.20 .10352E-06	.50	.44165E-04	NO CRT I/O MPU-05
195.1 ENT	1	4.20 .52107E-06	.50	.22329E-03	NO SYNC STATUS DISPLAY SCU-12

ASSEMBLY STATES

STATE	PROBABILITY	AIRD. MRS.	ATTP. MRS.	IDENTIFICATION
0	.999761424			NORMAL OPERATION
1	.955419E-03	5.45344E+02	.500	ALL KA-9AND LINKS IMPERATIVE
2	.269030E-03	1.86791E+03	.500	ALL KA-9AND LINKS DEGRADED
3	.195155E-13			OTHER STATES
COMBINED		4.456344E+02	.500	

ASSEMBLY 160 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .999761424, RELIABILITY IS .999971423 AND DEPENDABILITY IS .9988761424.
 1.12 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
 AND A DELAY OF 15.04 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 107
 KA-BAND MODEM GROUP (FORWARD AND CONFERENCE COMMON FUNCTIONS)

ASSEMBLY 107 IS USED BY ASSEMBLY(S) 108

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROGR. OF	RESTORE	SUBASSEMBLY	UNAVAILABILITY	IDENTIFICATION	
154.1 ENT	1	4.20	.94129E-07	.50	.40426E-04	FORWARD AND CONFERENCE LINKS INOPERATIVE
117.1 ENT	1	4.20	.94924E-06	2.00	.16268E-02	CRY/KEYBOARD MALFUNCTION
151.1 C/P	1	4.20	.22349E-05	.50	.95977E-03	FORWARD AND CONFERENCE LINKS INOPERATIVE
						K-SIS PROC

ASSEMBLY STATES

STATE	PROBABILITY	ATRO, HRS.	ATTR, HRS.	IDENTIFICATION
0	.9971729779			NORMAL OPERATION
1	.107179E-02	5.00071E+02	.503	FORWARD AND CONFERENCE LINKS INOPERATIVE
2	.162533E-02	1.22900E+03	2.000	FORWARD AND CONFERENCE LINKS DEGRADED
3	.105402E-13			OTHER STATES
COMBINED		3.55419E+02	1.429	

ASSEMBLY 107 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .9971761518; RELIABILITY IS .999997175 AND DEPENDABILITY IS .9973729779.
 2.61 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
 AND A DELAY OF 42.91 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 161
SIGNAL PROCESSING (FORWARD AND CONFERENCE COMMON FUNCTIONS)

ASSEMBLY 161 IS USED BY ASSEMBLY(S) 107

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF RESTORE SUBASSEMBLY	CYCLES USED SEC OCCURRENCE TIME, HRS	UNAVAILABILITY	IDENTIFICATION
146.1 ENT	1	4.20 .24977E-07	.50	.10704E-04 NO UPLINK, NO FORWARD DOWNLINK AND NO CONFERENCE DOWNLINK
147.1 ENT	1	4.20 .22359E-07	.50	.95422E-05 NO CPU DOPPLER TO COMMUNICATIONS TERMINAL GROUP
148.1 ENT	1	4.20 .52411E-06	.50	.22459E-03 NO FREQUENCY SYNC AND NO FORWARD DOWNLINK
173.1 ENT	1	4.20 .51898E-06	.50	.22440E-03 NO FREQUENCY SYNCHRONIZATION
174.1 ENT	1	4.20 .75217E-06	.50	.11235E-03 NO UPLINK
176.1 ENT	1	4.20 .10315E-05	.50	.44204E-04 NO UPLINK
194.1 ENT	1	4.20 .53763E-08	.50	.23041E-05 NO UPLINK
195.1 ENT	1	4.20 .77774E-06	.50	.33324E-03 NO UPLINK

MOD-05, MOD-06
UP FREQ SYNT4

ASSEMBLY STATES

STATE	PRIORITY	ATTR, HRS.	ATTR, HRS.	IDENTIFICATION
0	.9990366931			NORMAL OPERATION
1	.361307E-03	5.21098E+02	.500	FORWARD AND CONFERENCE LINKS INOPERATIVE
2	.455302E-13	5.21044E+02	.500	OTHER STATES
COMBINED				K-SIG PROC

ASSEMBLY 161 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .9990366931. RELIABILITY IS .9999977611 AND DEPENDABILITY IS .9990366931.
.05 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 15.04 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 106
KA-BAND MODEM GROUP (CONFERENCE AND REPORT-BACK COMMON FUNCTIONS)

ASSEMBLY 106 IS USED BY ASSEMBLY(S) 106

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF RESTORE SUBASSEMBLY	CYCLES USE, SEC	OCCURRENCE TIME, MRS	UNAVAILABILITY	IDENTIFICATION	
162.1 CMO	1	4.20	.93036F-07	.50	.39872E-04	CONFERENCE AND REPORT-BACK LINKS INOPERATIVE
162.2 CMO	1	4.20	.11218F-06	.50	.44074E-04	CONFERENCE AND REPORT-BACK LINKS DEGRADED
						K-SIG PROC
						K-SIG PROC

ASSEMBLY STATES

STATE	PROBABILITY	ATRO, MRS.	ATTR, MRS.	IDENTIFICATION	
0	.1099114513			NORMAL OPERATION	
1	.10262E-04	1.25400E+04	.500	CONFERENCE AND REPORT-BACK LINKS INOPERATIVE	KA-BAND MODEM
2	.41641E-04	1.06004E+04	.500	CONFERENCE AND REPORT-BACK LINKS DEGRADED	KA-BAND MODEM
3	.19257E-04			OTHER STATES	
COMBINED		5.64514E+03	.500		

ASSEMBLY 106 OPERATES FOR 6.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .999912055. RELIABILITY IS .999997944 AND DEPENDABILITY IS .9999110513.
.09 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 15.03 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

A N A L Y S I S S U M M A R Y

FOR ASSEMBLY NUMBER 162
SIGNAL PROCESSING (CONFERENCE AND REPORT-BACK COMMON FUNCTIONS)

ASSEMBLY 162 IS USED BY ASSEMBLY(S) 106

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF		RESTORE	SUBASSEMBLY		IDENTIFICATION
	CYCLES USE	SEC OCCURRENCE TIME		MRS UNA	AVAILABILITY	
193.1 ENT	1	4.20	.93036E-07	.50	.30472E-04	NO CONFERENCE DOWNLINK AND NO REPORT-BACK DOWNLINK
191.1 ENT	1	4.20	.11210E-06	.50	.40076E-04	NO X-DOWNLINK CONFERENCE AND NO X-DOWNLINK REPORT BACK
						CGU-05, CGU-07

A S S E M B L Y S T A T E S

STATE	PROBABILITY	ATRO, MRS.	ATTR, MRS.	IDENTIFICATION
0	.999114693			NORMAL OPERATION
1	.399646E-04	1.25400E+04	.500	CONFERENCE AND REPORT-BACK LINKS INOPERATIVE
2	.481460E-04	1.04000E+04	.500	CONFERENCE AND REPORT-RACK LINKS DEGRADED
3	.21454E-14	9.68509E+73	.500	OTHER STATES
COMBINED				K-SIG PROC
				K-SIG PROC

ASSEMBLY 162 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .999120545, RELIABILITY IS .999997944 AND DEPENDABILITY IS .999118493.
.39 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 15.04 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 105
KA-BAND MODEM GROUP (FREQUENCY HOPPING AND MESSAGE COVER)

ASSEMBLY 105 IS USED BY ASSEMBLY(S) 108

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF PESTORE SUBASSEMBLY	CYCLES USE, SEC OCCURRENCE TIME, HRS UNAVAILABILITY	IDENTIFICATION
1A7-1 ENI	1	4.20 .49744E-07	.50 .3A461E-04 NO HOPPED UPLINK AND NO COVERED UPLINK

ASSEMBLY STATES

STATE	PROBABILITY	ATTR. HRS.	ATTR. HRS.	IDENTIFICATION
0	.9999614435			NORMAL OPERATION
1	.3A5505E-04	1.30000E+04	.500	NO/INCORRECT FREQUENCY HOPPING AND MESSAGE COVER
2	.547A26E-14			OTHER STATES
CUMULATIVE		1.40000E+04	.500	

ASSEMBLY 105 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .9999615192, RELIABILITY IS .9999999101 AND DEPENDABILITY IS .9999614435.
.04 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 15.01 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 39

KA-BAND ANTENNA AND TERMINAL GROUP COMMON FUNCTIONS

ASSEMBLY 39 IS USED BY ASSEMBLY(S) 200

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROGR. OF RESTORE	CYCLES USE SEC OCCURRENCE TIME	SURASSEMBLY	IDENTIFICATION		ANY CONT GRP
				UNAVAILABILITY	RECEPTION	
40.1 Cmp	1	4.20	16019E-05	1.75	NO KA-BAND TRANSMISSION AND RECEPTION	ANY CONT GRP
40.2 Cmp	1	4.20	41445E-07	2.00	DEGRADED KA-BAND TRANSMISSION AND RECEPTION	ANY CONT GRP
40.3 Cmp	1	4.20	23201E-05	1.46	NO KA-BAND TRANSMISSION AND RECEPTION	
40.4 Cmp	1	4.20	44034E-11	3.49	NO KA-BAND TRANSMISSION AND DEGRADED RECEPTION	
40.5 Cmp	1	4.20	36154E-06	.93	NO KA-BAND RECEPTION	
40.6 Cmp	1	4.20	46914E-05	.36	DEGRADED KA-BAND TRANSMISSION AND RECEPTION	
40.7 Cmp	1	4.20	36104E-05	3.30	NO KA-BAND TRANSMISSION	
40.8 Cmp	1	4.20	10716E-05	3.00	DEGRADED KA-BAND TRANSMISSION	
40.9 Cmp	1	4.20	76373E-06	.50	DEGRADED KA-BAND RECEPTION	

ASSEMBLY STATES

STATE	PROBABILITY	ATRD. HRS.	ATTR. HRS.	IDENTIFICATION	
				UNAVAILABILITY	RECEPTION
0	.9999975727			NORMAL OPERATION	
1	.000001919E-02	2.69694E+02	1.691	ALL KA-BAND LINKS INOPERATIVE	
2	.562512E-05	0.83675E+04	3.986	FORWARD AND CONFERENCE LINKS INOPERATIVE AND R/R LINK DEGRADED	
3	.260526E-03	3.26547E+03	.930	R/B AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED	
4	.427329E-03	2.31201E+03	1.135	ALL KA-BAND LINKS DEGRADED	
5	.441334E-02	3.24541E+02	3.298	KA-BAND FORWARD AND CONFERENCE LINKS INOPERATIVE	
6	.273247E-02	1.12669E+03	3.002	KA-BAND FORWARD AND CONFERENCE LINKS DEGRADED	
7	.103425E-03	1.59826E+03	.500	KA-BAND REPORT-BACK AND CONFERENCE LINKS DEGRADED	
8	.547771E-04	1.10949E+02	2.652	OTHER STATES	

COMBINED

ASSEMBLY 39 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .9999975727. RELIABILITY IS .999999947 AND DEPENDABILITY IS .9999975727.
17.11 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 79.63 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 40

ANTENNA CONTROL GROUP (KA-BAND)

ASSEMBLY 40 IS USED BY ASSEMBLY(S) 39

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF REPAIR OF RESTORE	CYCLES USE, SEC	OF OCCURRENCE	TIME, HRS	SUBASSEMBLY UNAVAILABILITY	IDENTIFICATION	
41.1 ENT	1	4.20	54164E-06	2.00	9.707E-03	ANTENNA CONTROL/MONITORING FAILURE	KA-BAND
42.1 ENT	1	4.20	54594E-07	1.00	4.679E-04	ANTENNA PERISTAL FAILURE	KA-BAND
43.1 ENT	1	4.20	74536E-07	2.00	1.640E-03	ANTENNA POSITION CONTROL/POWER FAILURE	KA-BAND
44.1 ENT	1	4.20	50704E-06	1.00	4.3450E-03	POLARIZER/DIAPHRAGM FAILURE	KA-BAND
45.1 ENT	1	4.20	41445E-07	2.00	7.1045E-04	PRESSURE AND FUME SENSOR FAILURE	KA-BAND
46.1 ENT	1	4.20	27000E-06	2.00	3.4294E-03	PRESSURIZATION FAILURE IN KA-BAND RF WAVEGUIDE	KA-BAND

ASSEMBLY STATES

STATE	PROBABILITY	ATBO, HRS.	ATTR, HRS.	IDENTIFICATION	
0	3990076436			NORMAL OPERATION	ANT CONT GRP
1	10214E-02	8.3225E+02	1.750	NO KA-BAND TRANSMISSION AND RECEPTION	ANT CONT GRP
2	709503E-04	2.6150E+04	2.000	DEGRADED KA-BAND TRANSMISSION AND RECEPTION	
3	877644E-13			OTHER STATES	
COMBINED		8.04324E+02	1.759		

ASSEMBLY 40 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .9999991299. RELIABILITY IS .999999567 AND DEPENDABILITY IS .9980076896.
1.09 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES.
400 A DELAY OF 52.82 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 36

KA-BAND TERMINAL GROUP

ASSEMBLY 36 IS USED BY ASSEMBLY(S) 39

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF	RESTORE	SUBASSEMBLY	IDENTIFICATION	
	CYCLES USEC	OCCURENCE TIME, MRS	UNAVAILABILITY		
31.1 CMO	1	4.20 .70A07E-06	1.00	.60673E-03	COMMUNICATIONS TERMINAL POWER FAILURE
32.1 CMO	1	4.20 .60530E-06	2.17	.11240E-02	NO HEAT EXCHANGING
33.1 CMO	1	4.20 .46602E-07	.50	.36217E-04	DEGRADED HEAT EXCHANGING
34.1 CMO	1	4.20 .14056E-05	.75	.A2110E-03	NO/INCORRECT FREQUENCY GENERATION
35.1 CMO	1	4.20 .14520E-06	1.00	.33000E-03	AUTO-TRACK RECEIVER FAILURE
36.1 CMO	1	4.20 .36160E-06	.92	.267A8E-03	NO KA-BAND RECEPTION
37.1 CMO	1	4.20 .74405E-06	.50	.31A74E-03	DEGRADED KA-BAND RECEPTION
38.1 CMO	1	4.20 .10944E-05	3.00	.20063E-02	DEGRADED RF POWER OUTPUT (50 WATTS MAX)
39.1 CMO	1	4.20 .32144E-05	3.42	.61A52E-02	INSUFFICIENT RF POWER OUTPUT (LESS THAN 100 MW)
39.3 CMO	1	4.20 .45452E-06	2.00	.773A4E-03	NO/INCORRECT DOPPLER CORRECTION
					KA-BAND TRANSMISSION
					KA-BAND TRANSMISSION
					KA-9AND TRANSMISSION

ASSEMBLY STATE

STATE	PROBABILITY	ATPO, MRS.	ATTR, MRS.	IDENTIFICATION
0	.9467190166			NORMAL OPERATION
1	.2694A0E-02	3.99524E+02	1.462	NO KA-BAND TRANSMISSION AND RECEPTION
2	.510413E-05	2.64420E+04	3.491	NO KA-BAND TRANSMISSION AND DEGRADED RECEPTION
3	.264973E-03	3.22497E+03	.930	NO KA-BAND RECEPTION
4	.161131E-03	2.44459E+03	.964	DEGRADED KA-BAND TRANSMISSION AND RECEPTION
5	.144314E-02	3.21157E+02	3.298	NO KA-BAND TRANSMISSION
6	.277214E-02	1.04476E+03	3.002	DEGRADED KA-BAND TRANSMISSION
7	.314713E-03	1.56444E+03	.500	OTHER STATES
8	.117467E-04	1.26444E+02	2.770	

COMBINED

ASSEMBLY 36 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .9467190166. RELIABILITY IS .9999900034 AND DEPENDABILITY IS .9467190166.
15.25 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 43.15 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 35

KA-BAND TRANSMISSION

ASSEMBLY 35 IS USED BY ASSEMBLY(S) 3R

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROG. OF		SUBASSEMBLY	RESTORE		IDENTIFICATION	KA-BAND
	CYCLES USE	% OF OCCURRENCE		TIME HRS	UNAVAILABILITY		
151.1 ENT	1	4.20	45662E-06	2.00	76247E-03	NO/INCORRECT DOPPLER CORRECTION	KA-BAND
357.1 ENT	1	4.20	26300E-06	1.00	22540E-03	NO/INSUFFICIENT KA-BAND EXCITATION	KA-BAND HI PWR AMP
360.1 CMP	1	4.20	11122E-05	3.00	28329E-02	DEGRADED RF POWER OUTPUT (50 WATTS MAX)	KA-BAND HI PWR AMP
360.2 CMP	1	4.20	23572E-05	3.49	79939E-02	INSUFFICIENT RF POWER OUTPUT (LESS THAN 100 MW)	KA-BAND HI PWR AMP
360.3 CVD	1	4.20	14079E-05	1.00	11930E-02	DEGRADED RF CONTROL (OUTPUT OK)	KA-BAND HI PWR AMP

ASSEMBLY STATES

STATE	PROBABILITY	ATBO, HRS.	ATTR, HRS.	IDENTIFICATION	KA-BAND TRANSMISSION
0	9.41942E-5			NORMAL OPERATION	KA-BAND TRANSMISSION
1	240737E-02	1.06561E+03	3.002	DEGRADED RF POWER OUTPUT (50 WATTS MAX)	KA-BAND TRANSMISSION
2	81837E-02	3.62906E+02	3.420	INSUFFICIENT RF POWER OUTPUT (LESS THAN 100 MW)	KA-BAND TRANSMISSION
3	774292E-03	2.55591E+03	2.001	NO/INCORRECT DOPPLER CORRECTION	KA-BAND TRANSMISSION
4	357220E-04	2.44794E+02	3.217	OTHER STATES	KA-BAND TRANSMISSION
COMBINED					

ASSEMBLY 35 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .9981942435, RELIABILITY IS .9999952141 AND DEPENDABILITY IS .9981942435.
 11.91 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
 AND A DELAY OF 16.57 MINUTE IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 360
KA-BAND HIGH POWER AMPLIFIER

ASSEMBLY 360 IS USED BY ASSEMBLY(S) 35

SUBASSEMBLY STATE DATA

STATE	NO. OF TIME OF PROB. OF RESTORE	SUBASSEMBLY	IDENTIFICATION
LAPEL	CYCLES USE+SEC OCCURRENCE TIME+HRS UNAVAILABILITY		
161.1 ENT	1 4.20 .11127E-05	2A55AE-02	INTERMEDIATE POWER AMPLIFIER FAILURE
161.2 ENT	1 4.20 .12291E-05	2104AE-02	HIGH POWER AMPLIFIED FAILURE
162.1 ENT	1 4.20 .17241E-05	50075E-02	NO/INSUFFICIENT HIGH VOLTAGE POWER
163.1 ENT	1 4.20 .11649E-05	11692E-02	LOCAL CONTROL/MONITOR FAILURE
164.1 ENT	1 4.20 .43114E-07	3695AE-04	TRANSMITTER REMOTE CONTROL FAILURE
			KA-BAND RF MODULE KA-BAND RF MODULE KA-BAND PM2 SUPPLY KA-BAND

ASSEMBLY STATES

STATE	PROBABILITY	ATRO, MRS.	ATTR, MRS.	IDENTIFICATION
0	.9879687130			NORMAL OPERATION
1	.243603E-02	1.06900E+03	1.001	DEGRADED RF POWER OUTPUT (50 WATTS MAX)
2	.739587E-02	3.96512E+02	3.456	INSUFFICIENT RF POWER OUTPUT (LESS THAN 100 MW)
3	.119437E-02	8.24624E+02	1.000	DEGRADED RF CONTROL (OUTPUT OK)
4	.631674E-05			OTHER STATES
COMBINED		2.12999E+02	3.123	

ASSEMBLY 360 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .9879687130, RELIABILITY IS .9999945226 AND DEPENDABILITY IS .9879687130.
12.03 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 33.74 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 34

KA-BAND RECEPTION

ASSEMBLY 34 IS USED BY ASSEMBLY(S) 38

SUBASSEMBLY STATE DATA

Label	NO. OF TIME OF PROB. OF CYCLES USE OFC OCCURRENCE	RESTORE TIME, HRS	SUBASSEMBLY UNAVAILABILITY	IDENTIFICATION	
341.1 ENT	1	4.20	.74005E-06	.31943E-03	LOSS OF 20 DB GAIN
341.2 ENT	1	4.20	.99039E-07	.42016E-04	NO KA-BAND SIGNAL AMPLIFICATION
342.1 ENT	1	4.20	.25529E-06	.21878E-03	NO/INCORRECT DOWN CONVERSION
343.1 ENT	1	4.20	.97742E-06	.70322E-05	NO/INADEQUATE KA-BAND RECEIVER OUTPUT
344.1 ENT	1	4.20	.34528E-06	.33020E-03	NO/INCORRECT AUTO-TRACK RECEIVER OUTPUT

ASSEMBLY STATES

STATE	PROBABILITY	ATRO, HRS.	ATTR, HRS.	IDENTIFICATION
0	.9300818749			NORMAL OPERATION
1	.730387E-03	3.02400E+03	1.000	AUTO-TRACK RECEIVER FAILURE
2	.268240E-03	3.22639E+03	.922	NO KA-BAND RECEPTION
3	.810495E-03	1.56400E+03	.500	DEGRADED KA-BAND RECEPTION
4	.134534E-07	7.82503E+02	.603	OTHER STATES
COMBINED				

ASSEMBLY 34 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .9999999999, RELIABILITY IS .9999999999 AND DEPENDABILITY IS .9999999999.
MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 24.1 HOURS IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 33

FREQUENCY GENERATION

ASSEMBLY 33 IS USED BY ASSEMBLY(S) 38

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF RESTORE SUBASSEMBLY			IDENTIFICATION		
	CYCLES	USC	SEC			
311.1 ENT	1	4.20	.93017E-06	.50	.355A1F-03	NO/INCORRECT STANDARD FREQUENCY
312.1 ENT	1	4.20	.17447E-04	.20	.30595F-04	NO/INSUFFICIENT 1 MHZ FREQUENCY SIGNAL
313.1 ENT	1	4.20	.47473E-07	.33	.13541F-04	STEPPABLE FREQUENCY SYNTHESIZER FAILURE
314.1 ENT	1	4.20	.55005E-05	1.00	.47116E-03	FREQUENCY GENERATOR FAILURE

ASSEMBLY STATES

STATE	PROBABILITY	ATTR, MRS.	ATTR, MRS.	IDENTIFICATION
0	.9991272933			NORMAL OPERATION
1	.472710E-03	7.26096E+02	.757	NO/INCORRECT FREQUENCY GENERATION
2	.171946E-13			OTHER STATES
COMBINED		7.26096E+02	.757	

ASSEMBLY 33 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .9991272933, RELIABILITY IS .999993932 AND DEPENDABILITY IS .9991272933.
.87 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 22.75 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 32

HEAT-EXCHANGING THERMAL CYCLES

ASSEMBLY 32 IS USED BY ASSEMBLY(S) 38

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PRON. OF RESTORE SUBASSEMBLY		IDENTIFICATION
	CYCLES USED	SEC OCCURRENCE TIME, HRS	
3P1-1 ENT	1	4.20 .11997E-06	1.00 .1000E-09 (PUMP/CONTROL MODULE FAILURE)
3P2-1 ENT	1	4.20 .51195E-06	2.17 .1120E-02 (PUMP/CONTROL MODULE FAILURE)
3P3-1 ENT	1	4.20 .50131E-03	7.00 .1000E-05 (COOLANT LINES/FITTINGS RUPTURE OR STOPPAGE)
3P4-1 ENT	1	4.20 .44632E-07	.50 .3675E-04 (PARTIAL STOPPAGE OR LEAKAGE OF COOLANT LINES/FITTINGS)

STATE RELIABILITY ATTR. HRS. ATTR. HRS. IDENTIFICATION

STATE	RELIABILITY	ATTR. HRS.	ATTR. HRS.	IDENTIFICATION
0	.999999119	1.99741E+03	2.109	NO HEAT EXCHANGING
1	.11204E-02	1.37012E-16	.500	DEGRADED HEAT EXCHANGING
2	.11204E-02	1.37012E-16	.500	OTHER STATES

CONSEQUENCE OF STATE 1: 1.66105E+03 HRS. 2.3179 (COMPUTER TIME) CYCLES. RELIABILITY IS .999999119.

ASSEMBLY 32 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION. THE RELIABILITY IS .999999119. RELIABILITY IS .999999119 AND DEPENDABILITY IS .999999119. 1.16 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES AND A DELAY OF 53.53 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 31

COMMUNICATIONS TERMINAL POWER

ASSEMBLY 31 IS USED BY ASSEMBLY(S) 30

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF RESTORE		SUBASSEMBLY	CYCLES USE, SEC OCCURRENCE TIME, HRS		UNAVAILABILITY	IDENTIFICATION
	1	2		1	2		
311.1 ENT	1	4.20	43003F-06	1.00	.36453E-03	POWER DISTRIBUTION FAILURE	
312.1 ENT	1	4.20	27A04E-06	1.00	.23029E-03	LOW VOLTAGE POWER SUPPLY FAILURE	

ASSEMBLY STATES

STATE	PROBABILITY	ATBO, HRS.		ATTR, HRS.	IDENTIFICATION
		1	2		
0	.9993925546				NORMAL OPERATION
1	.507441E-03	1.64767E+03	1.000		COMMUNICATIONS TERMINAL POWER FAILURE
2	.121783E-13	1.64767E+03	1.000		OTHER STATES

ASSEMBLY 31 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .9993912661. RELIABILITY IS .999992919 AND DEPENDABILITY IS .9993925506.
 .61 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
 AND A OFLAY OF 30.04 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

SENSITIVITY TABULATIONS

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	PERCENTAGE CONTRIBUTION TO ASSEMBLY 2 UNAVAILABILITY											
		4.1	209.1	209.2	209.3	209.4	209.5	209.6	209.7	209.8	TOTAL		
2.1		2.0	34.4	.0	16.2	.0	.3	.0	.1	.1	53.6		
2.2		.0	.0	.0	.0	.6	.0	.0	.0	.0	.6		
2.3		.0	.0	.1	.0	1.5	.0	.0	.0	.0	1.6		
2.4		.0	.1	.0	.0	.0	21.4	.0	.0	.0	21.6		
2.5		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
2.6		.0	.0	.0	.0	.9	.0	.0	10.1	.0	10.1		
2.7		.0	.0	.0	.0	.0	.1	.0	.0	.0	.1		
2.8		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
TOTAL		2.0	35.0	.1	16.7	.7	21.4	.0	10.2	.4	53.5		

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	PERCENTAGE CONTRIBUTION TO ASSEMBLY 2 UNRELIABILITY											
		4.1	209.1	209.2	209.3	209.4	209.5	209.6	209.7	209.8	TOTAL		
2.1		4.6	1.9	.0	31.5	.1	.1	.6	.0	.3	.5	39.7	
2.2		.0	.0	.0	.0	1.9	.0	.0	.0	.0	.0	2.0	
2.3		.0	.0	.0	.0	3.6	.0	.0	.0	.0	.0	3.7	
2.4		.0	.0	.0	.4	.0	.0	14.7	.0	.1	.1	15.6	
2.5		.0	.0	.0	.0	.0	.0	.0	.5	.0	.0	.5	
2.6		.0	.0	.0	.1	.0	.0	.1	.0	.3	.0	.4	
2.7		.0	.0	.0	.2	.0	.0	.1	.0	10.3	.1	10.8	
2.8		.0	.0	.0	.3	.0	.0	.2	.0	.1	.1	14.2	
TOTAL		4.6	1.9	.0	32.5	2.0	3.6	19.7	.6	5.4	10.9	55.0	

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	PERCENTAGE CONTRIBUTION TO ASSEMBLY 2 UNDEPENDABILITY											
		4.1	209.1	209.2	209.3	209.4	209.5	209.6	209.7	209.8	TOTAL		
2.1		4.2	4.0	.0	24.2	.1	.2	.9	.0	.4	.6	43.1	
2.2		.0	.0	.0	.0	1.6	.0	.0	.0	.0	.0	1.7	
2.3		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
2.4		.1	.1	.0	.4	.0	.1	14.5	.0	.1	.1	15.7	
2.5		.0	.0	.0	.0	.0	.0	.0	.4	.0	.0	.4	
2.6		.0	.0	.0	.2	.0	.0	.1	.0	.8	.1	1.0	
2.7		.0	.0	.0	.2	.0	.0	.1	.0	.1	.1	1.4	
2.8		.0	.1	.0	.3	.0	.0	.2	.0	.1	.1	12.3	
TOTAL		4.4	5.3	.0	29.3	1.8	3.4	19.6	.5	9.0	9.6	13.6	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 209 UNAVAILABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

	20.1	12.1	104.1	104.2	147.1	TOTAL
203.1	2.2	.0	3.9	.0	13.6	99.7
203.2	.0	.3	.0	.0	.0	.3
TOTAL	22.2	.3	3.9	.0	13.6	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 209 UNRELIABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

	20.1	12.1	104.1	104.2	147.1	TOTAL
203.1	20.5	.0	2.9	.0	6.2	99.6
203.2	.0	.4	.0	.0	.0	.4
TOTAL	20.5	.4	2.9	.0	6.2	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 209 UNDEPENDABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

	20.1	12.1	104.1	104.2	147.1	TOTAL
203.1	21.6	.0	3.7	.0	12.4	99.7
203.2	.0	.3	.0	.0	.0	.3
TOTAL	21.6	.3	3.7	.0	12.4	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 147 UNAVAILABILITY

ASSEMBLY
STATE SURASSEMBLY AND/OR ELEMENT STATES

147.1 100.0 100.0
TOTAL 100.0

PERCENTAGE CONTRIBUTION TO ASSEMBLY 147 UNRELIABILITY

ASSEMBLY
STATE SURASSEMBLY AND/OR ELEMENT STATES

147.1 100.0 100.0
TOTAL 100.0

PERCENTAGE CONTRIBUTION TO ASSEMBLY 147 UNDEPENDABILITY

ASSEMBLY
STATE SURASSEMBLY AND/OR ELEMENT STATES

147.1 100.0 100.0
TOTAL 100.0

PERCENTAGE CONTRIBUTION TO ASSEMBLY 104 UNAVAILABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

104.1	119.1	166.1	166.2	TOTAL
104.2	97.1	17.9	.0	100.0
TOTAL	97.1	12.9	.0	.0

PERCENTAGE CONTRIBUTION TO ASSEMBLY 104 UNRELIABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

104.1	119.1	166.1	166.2	TOTAL
104.2	97.1	17.9	.0	100.0
TOTAL	97.1	12.9	.0	.0

PERCENTAGE CONTRIBUTION TO ASSEMBLY 104 UNDEPENDABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

104.1	119.1	166.1	166.2	TOTAL
104.2	97.1	17.9	.0	100.0
TOTAL	97.1	12.9	.0	.0

PERCENTAGE CONTRIBUTION TO ASSEMBLY 166 UNAVAILABILITY

ASSEMBLY
STATE

SUBASSEMBLY AND/OR ELEMENT STATES

	174.1	175.1	176.1	TOTAL
166.1	100.0	.0	.0	100.0
166.2	.0	.0	.0	.0
TOTAL	100.0	.0	.0	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 166 UNRELIABILITY

ASSEMBLY
STATE

SUBASSEMBLY AND/OR ELEMENT STATES

	174.1	175.1	176.1	TOTAL
166.1	100.0	.0	.0	100.0
166.2	.0	.0	.0	.0
TOTAL	100.0	.0	.0	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 166 UNDEPENDABILITY

ASSEMBLY
STATE

SUBASSEMBLY AND/OR ELEMENT STATES

	174.1	175.1	176.1	TOTAL
166.1	100.0	.0	.0	100.0
166.2	.0	.0	.0	.0
TOTAL	100.0	.0	.0	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 20 UNAVAILABILITY	
ASSEMBLY STATE	SUPRASSEMBLY AND/OR ELEMENT STATES
20.1	21.1 22.1 TOTAL
TOTAL	67.1 32.9 100.0

PERCENTAGE CONTRIBUTION TO ASSEMBLY 20 UNRELIABILITY	
ASSEMBLY STATE	SUPRASSEMBLY AND/OR ELEMENT STATES
20.1	21.1 22.1 TOTAL
TOTAL	50.5 49.5 100.0

PERCENTAGE CONTRIBUTION TO ASSEMBLY 20 UNDEPENDABILITY	
ASSEMBLY STATE	SUPRASSEMBLY AND/OR ELEMENT STATES
20.1	21.1 22.1 TOTAL
TOTAL	64.1 35.9 100.0

PERCENTAGE CONTRIBUTION TO ASSEMBLY 12 UNAVAILABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

121.1 122.1 TOTAL
6.5 93.5 100.0
TOTAL 6.5 93.5

PERCENTAGE CONTRIBUTION TO ASSEMBLY 12 UNRELIABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

121.1 122.1 TOTAL
6.5 93.5 100.0
TOTAL 6.5 93.5

PERCENTAGE CONTRIBUTION TO ASSEMBLY 12 UNDEPENDABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

121.1 122.1 TOTAL
6.5 93.5 100.0
TOTAL 6.5 93.5

PERCENTAGE CONTRIBUTION TO ASSEMBLY 208 UNAVAILABILITY

ASSEMBLY
STATE SUPRASSEMBLY AND/OR ELEMENT STATES

	204.1	204.2	204.3	204.4	204.5	204.6	204.7	204.8	205.1	205.2	206.1	206.2	207.1	207.2	TOTAL
204.1	22.6	.3	.0	.0	.2	.0	.1	.0	.2	.1	.2	.3	.1	.3	24.1
204.2	.0	.1	.9	.0	.1	.0	.0	.0	.0	.0	.0	.2	.0	.0	1.5
204.3	.0	.0	.0	2.6	.0	.0	.1	.0	.0	.0	.0	.0	.1	.0	2.8
204.4	.1	.0	.0	.0	16.1	.2	.0	.0	.2	.1	.1	.1	.1	.2	19.3
204.5	.0	.0	.0	.0	.0	.0	.1	.0	.2	.0	.1	.1	.1	.1	.5
204.6	.1	.0	.0	.0	.0	.0	6.7	1.8	.0	.1	.0	.1	.1	.2	9.1
204.7	.2	.0	.0	.0	.1	.0	.0	.0	7.9	.0	5.7	.1	4.0	.0	18.0
204.8	.2	.0	.0	.0	.1	.0	.0	.0	.1	2.7	.0	11.4	.0	10.0	24.6
TOTAL	23.1	.1	.9	2.7	16.4	.2	7.1	1.9	6.6	3.0	6.2	12.3	4.3	10.4	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 209 UNRELIABILITY

ASSEMBLY
STATE SUPRASSEMBLY AND/OR ELEMENT STATES

	204.1	204.2	204.3	204.4	204.5	204.6	204.7	204.8	205.1	205.2	206.1	206.2	207.1	207.2	TOTAL
204.1	19.8	.0	.0	.1	.4	.0	.1	.1	.1	.0	.1	.2	.1	.2	41.3
204.2	.0	.1	1.6	.0	.1	.0	.1	.0	.0	.0	.0	.1	.0	.0	1.9
204.3	.0	.0	.0	4.4	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	5.0
204.4	.4	.0	.0	.0	25.3	.4	.1	.0	.0	.0	.0	.0	.1	.1	26.5
204.5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1
204.6	.1	.0	.0	.0	.1	.0	1.4	3.6	.0	.0	.0	.0	.0	.0	12.3
204.7	.0	.3	.0	.0	.0	.0	.0	.0	1.2	.0	1.9	.0	1.7	.4	4.9
204.8	.1	.0	.0	.0	.0	.0	.0	.0	.0	.4	.0	3.5	.0	3.9	8.0
TOTAL	40.5	.1	1.7	5.0	26.0	.4	1.7	3.7	1.4	.5	2.1	3.9	1.8	4.3	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 208 UNDEPENDABILITY

ASSEMBLY
STATE SUPRASSEMBLY AND/OR ELEMENT STATES

	204.1	204.2	204.3	204.4	204.5	204.6	204.7	204.8	205.1	205.2	206.1	206.2	207.1	207.2	TOTAL
204.1	29.6	.0	.0	.1	.7	.0	.2	.1	.4	.1	.5	.6	.2	.6	33.2
204.2	.0	.1	1.2	.1	.2	.0	.1	.0	.0	.0	.1	.3	.0	.0	2.1
204.3	.1	.0	.0	3.5	.0	.0	.1	.1	.0	.0	.0	.1	.0	.0	3.9
204.4	.6	.0	.0	.0	.1	20.4	.3	.1	.0	.1	.1	.1	.2	.4	22.4
204.5	.0	.3	.0	.0	.0	.0	.1	.0	.1	.0	.1	.1	.1	.1	.5
204.6	.2	.0	.0	.0	.1	.0	7.1	2.6	.0	.0	.0	.1	.0	.2	10.5
204.7	.2	.0	.0	.0	.1	.0	.0	.0	4.4	.0	3.6	.0	2.7	.0	11.1
204.8	.3	.0	.0	.0	.2	.0	.1	.0	.0	1.5	.0	7.1	.0	6.6	15.9
TOTAL	30.9	.1	1.3	3.8	21.9	.3	7.8	2.9	5.3	1.4	4.4	6.5	3.3	7.9	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 207 UNAVAILABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

	217.1	217.2	TOTAL
207.1	17.9	.0	17.9
207.2	.0	82.0	82.1
TOTAL	17.9	82.1	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 207 UNRELIABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

	217.1	217.2	TOTAL
207.1	20.9	.0	20.9
207.2	.0	70.1	70.1
TOTAL	20.9	70.1	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 207 UNDEPENDABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

	217.1	217.2	TOTAL
207.1	20.7	.0	20.7
207.2	.0	72.3	72.3
TOTAL	20.7	72.3	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 217 UNAVAILABILITY

ASSEMBLY STATE SURASSEMBLY AND/OR ELEMENT STATES

103.1 103.2 TOTAL
217.1 14.0 .0 14.0
217.2 .0 42.0 42.0
TOTAL 14.0 42.0

PERCENTAGE CONTRIBUTION TO ASSEMBLY 217 UNRELIABILITY

ASSEMBLY STATE SURASSEMBLY AND/OR ELEMENT STATES

103.1 101.2 TOTAL
217.1 29.9 .0 29.9
217.2 .0 70.1 70.1
TOTAL 29.9 70.1

PERCENTAGE CONTRIBUTION TO ASSEMBLY 217 UNDEPENDABILITY

ASSEMBLY STATE SURASSEMBLY AND/OR ELEMENT STATES

103.1 103.2 TOTAL
217.1 14.0 .0 14.0
217.2 .0 42.0 42.0
TOTAL 14.0 42.0

PERCENTAGE CONTRIBUTION TO ASSEMBLY 103 UNAVAILABILITY

ASSEMBLY STATE	SUBASSEMBLY	AND/OR ELEMENT	STATES
103.1	113.1	113.2	153.1 164.1 164.2 TOTAL
103.2	.0	.0	2.3 15.7 .0 19.0
TOTAL	.0	79.4	.0 .0 2.2 82.0
	.0	79.4	2.3 15.7 2.2

PERCENTAGE CONTRIBUTION TO ASSEMBLY 103 UNRELIABILITY

ASSEMBLY STATE	SUBASSEMBLY	AND/OR ELEMENT	STATES
103.1	113.1	113.2	153.1 164.1 164.2 TOTAL
103.2	.0	.0	3.8 26.0 .0 29.8
TOTAL	.0	66.6	.0 .0 3.7 70.1
	.0	66.6	3.8 26.0 3.7

PERCENTAGE CONTRIBUTION TO ASSEMBLY 103 UNDEPENDABILITY

ASSEMBLY STATE	SUBASSEMBLY	AND/OR ELEMENT	STATES
103.1	113.1	113.2	153.1 164.1 164.2 TOTAL
103.2	.0	.0	2.3 15.7 .0 18.0
TOTAL	.0	79.4	.0 .0 2.2 82.0
	.0	79.4	2.3 15.7 2.2

PERCENTAGE CONTRIBUTION TO ASSEMBLY 164 UNAVAILABILITY

ASSEMBLY STATE	SURASSEMBLY AND/OR ELEMENT STATES	142.1	143.1	170.1	171.1	193.1	194.1	TOTAL
164.1	31.2	.0	.0	19.9	11.4	25.0	87.5	
164.2	.0	.1	12.4	.0	.0	.0	12.5	
TOTAL	31.2	.1	12.4	19.9	11.4	25.0		

PERCENTAGE CONTRIBUTION TO ASSEMBLY 164 UNRELIABILITY

ASSEMBLY STATE	SURASSEMBLY AND/OR ELEMENT STATES	142.1	143.1	170.1	171.1	193.1	194.1	TOTAL
164.1	31.2	.0	.0	19.9	11.4	25.0	87.5	
164.2	.0	.1	12.4	.0	.0	.0	12.5	
TOTAL	31.2	.1	12.4	19.9	11.4	25.0		

PERCENTAGE CONTRIBUTION TO ASSEMBLY 164 UNDEPENDABILITY

ASSEMBLY STATE	SURASSEMBLY AND/OR ELEMENT STATES	142.1	143.1	170.1	171.1	193.1	194.1	TOTAL
164.1	31.2	.0	.0	19.9	11.4	25.0	87.5	
164.2	.0	.1	12.4	.0	.0	.0	12.5	
TOTAL	31.2	.1	12.4	19.9	11.4	25.0		

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES PERCENTAGE CONTRIBUTION TO ASSEMBLY 206 UNAVAILABILITY

206.1	21.1	.0	21.1
206.2	.0	79.9	79.9
TOTAL	21.1	79.9	

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES PERCENTAGE CONTRIBUTION TO ASSEMBLY 206 UNRELIABILITY

206.1	21.1	215.2	TOTAL
206.2	79.9	.0	34.9
TOTAL	79.9	65.1	65.1

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES PERCENTAGE CONTRIBUTION TO ASSEMBLY 206 UNDEPENDABILITY

206.1	21.1	216.2	TOTAL
206.2	.0	79.9	79.9
TOTAL	21.1	79.9	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 206 UNAVAILABILITY

ASSEMBLY
STATE SUPRASSEMBLY AND/OR ELEMENT STATES

216.1 216.2 TOTAL
206.1 21.1 .0 21.1
206.2 .0 78.9 78.9
TOTAL 21.1 78.9

PERCENTAGE CONTRIBUTION TO ASSEMBLY 206 UNRELIABILITY

ASSEMBLY
STATE SUPRASSEMBLY AND/OR ELEMENT STATES

216.1 216.2 TOTAL
206.1 74.9 .0 74.9
206.2 .0 65.1 65.1
TOTAL 74.9 65.1

PERCENTAGE CONTRIBUTION TO ASSEMBLY 206 UNDEPENDABILITY

ASSEMBLY
STATE SUPRASSEMBLY AND/OR ELEMENT STATES

216.1 216.2 TOTAL
206.1 21.1 .0 21.1
206.2 .0 78.9 78.9
TOTAL 21.1 78.9

PERCENTAGE CONTRIBUTION TO ASSEMBLY 216 UNAVAILABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

	102.1	102.2	TOTAL
216.1	21.1	.0	21.1
216.2	.0	74.9	74.9
TOTAL	21.1	74.9	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 216 UNRELIABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

	102.1	102.2	TOTAL
216.1	34.9	.0	34.9
216.2	.0	65.1	65.1
TOTAL	34.9	65.1	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 216 UNDEPENDABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

	102.1	102.2	TOTAL
216.1	21.1	.0	21.1
216.2	.0	74.9	74.9
TOTAL	21.1	74.9	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 216 UNAVAILABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

102-1 102-2 TOTAL
215.1 21.1 .0 21.1
216.2 .0 7.9 79.9
TOTAL 21.1 79.9

PERCENTAGE CONTRIBUTION TO ASSEMBLY 216 UNRELIABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

102-1 102-2 TOTAL
215.1 21.1 .0 21.1
216.2 .0 65.1 65.1
TOTAL 34.9 65.1

PERCENTAGE CONTRIBUTION TO ASSEMBLY 216 UNDEPENDABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

102-1 102-2 TOTAL
215.1 21.1 .0 21.1
216.2 .0 79.9 79.9
TOTAL 21.1 79.9

PERCENTAGE CONTRIBUTION TO ASSEMBLY 165 UNAVAILABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

165.1	172.1	184.1	197.1	199.1	TOTAL
32.1	7.4	3.3	56.9	100.0	
TOTAL	32.1	7.4	3.3	56.9	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 165 UNRELIABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

165.1	172.1	184.1	197.1	199.1	TOTAL
32.1	7.4	3.3	56.9	100.0	
TOTAL	32.1	7.4	3.3	56.9	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 165 UNDEPENDABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

165.1	172.1	184.1	197.1	199.1	TOTAL
32.1	7.4	3.3	56.9	100.0	
TOTAL	32.1	7.4	3.3	56.9	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 112 UNAVAILABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

119.1 115.1 115.2 115.3 TOTAL
112.1 .0 .0 .0 .0
112.2 44.8 35.9 .0 19.3 100.0
TOTAL 44.8 35.9 .0 19.3

PERCENTAGE CONTRIBUTION TO ASSEMBLY 112 UNRELIABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

119.1 115.1 115.2 115.3 TOTAL
112.1 .0 .0 .0 .0
112.2 44.8 35.9 .0 19.3 100.0
TOTAL 44.8 35.9 .0 19.3

PERCENTAGE CONTRIBUTION TO ASSEMBLY 112 UNDEPENDABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

119.1 115.1 115.2 115.3 TOTAL
112.1 .0 .0 .0 .0
112.2 44.8 35.9 .0 19.3 100.0
TOTAL 44.8 35.9 .0 19.3

PERCENTAGE CONTRIBUTION TO ASSEMBLY 205 UNAVAILABILITY

A - MRLV SUBASSEMBLY AND/OR ELEMENT STATES

205.1 215.1 215.2 TOTAL
72.5 .0 27.5
205.2 .0 27.5 27.5
TOTAL 72.5 27.5

PERCENTAGE CONTRIBUTION TO ASSEMBLY 205 UNRELIABILITY

ASS-MRLV SUBASSEMBLY AND/OR ELEMENT STATES

205.1 215.1 215.2 TOTAL
74.7 .0 74.7
205.2 .0 25.3 25.3
TOTAL 74.7 25.3

PERCENTAGE CONTRIBUTION TO ASSEMBLY 205 UNDEPENDABILITY

ASSEMBLY SUBASSEMBLY AND/OR ELEMENT STATES

205.1 215.1 215.2 TOTAL
72.5 .0 72.5
205.2 .0 27.5 27.5
TOTAL 72.5 27.5

PERCENTAGE CONTRIBUTION TO ASSEMBLY 215 UNAVAILABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

101.1 101.2 TOTAL
215.1 72.5 .0 72.5
215.2 .0 27.5 27.5
TOTAL 72.5 27.5

PERCENTAGE CONTRIBUTION TO ASSEMBLY 215 UNRELIABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

101.1 101.2 TOTAL
215.1 74.7 .0 74.7
215.2 .0 25.3 25.3
TOTAL 74.7 25.3

PERCENTAGE CONTRIBUTION TO ASSEMBLY 215 UNDEPENDABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

101.1 101.2 TOTAL
215.1 72.5 .0 72.5
215.2 .0 27.5 27.5
TOTAL 72.5 27.5

PERCENTAGE CONTRIBUTION TO ASSEMBLY 101 UNAVAILABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

	111.1	111.2	111.3	151.1	163.1	163.2	TOTAL
101.1	48.8	11.2	.0	6.0	6.5	.0	72.5
101.2	.0	.0	26.3	.0	.0	1.3	27.5
TOTAL	48.8	11.2	26.3	6.0	6.5	1.3	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 101 UNRELIABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

	111.1	111.2	111.3	151.1	163.1	163.2	TOTAL
101.1	42.9	9.3	.0	10.5	11.4	.0	74.7
101.2	.0	.0	23.1	.0	.0	2.2	25.3
TOTAL	42.9	9.3	23.1	10.5	11.4	2.2	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 101 UNDEPENDABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

	111.1	111.2	111.3	151.1	163.1	163.2	TOTAL
101.1	48.8	11.2	.0	6.0	6.5	.0	72.5
101.2	.0	.0	26.3	.0	.0	1.3	27.5
TOTAL	48.8	11.2	26.3	6.0	6.5	1.3	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 163 UNAVAILABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

163.1	141.1	169.1	192.1	196.1	TOTAL
67.3	0	16.2	0	83.5	
163.2	0	4.3	0	12.1	16.5
TOTAL	67.3	4.3	16.2	12.1	12.1

PERCENTAGE CONTRIBUTION TO ASSEMBLY 163 UNRELIABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

163.1	141.1	169.1	192.1	196.1	TOTAL
67.3	0	16.2	0	83.5	
163.2	0	4.3	0	12.1	16.5
TOTAL	67.3	4.3	16.2	12.1	12.1

PERCENTAGE CONTRIBUTION TO ASSEMBLY 163 UNDEPENDABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

163.1	141.1	169.1	192.1	196.1	TOTAL
67.3	0	16.2	0	83.5	
163.2	0	4.3	0	12.1	16.5
TOTAL	67.3	4.3	16.2	12.1	12.1

PERCENTAGE CONTRIBUTION TO ASSEMBLY III UNAVAILABILITY

ASSEMBLY
STATE SUPASSEMBLY AND/OR ELEMENT STATES

115.1 115.2 115.3 TOTAL
56.5 .0 .0 56.5
111.2 .0 13.0 .0 13.0
111.3 .0 .0 30.4 30.4
TOTAL 56.5 13.0 30.4

PERCENTAGE CONTRIBUTION TO ASSEMBLY III UNRELIABILITY

ASSEMBLY
STATE SUPASSEMBLY AND/OR ELEMENT STATES

115.1 115.2 115.3 TOTAL
56.5 .0 .0 56.5
111.2 .0 13.0 .0 13.0
111.3 .0 .0 30.4 30.4
TOTAL 56.5 13.0 30.4

PERCENTAGE CONTRIBUTION TO ASSEMBLY III UNDEPENDABILITY

ASSEMBLY
STATE SUPASSEMBLY AND/OR ELEMENT STATES

115.1 115.2 115.3 TOTAL
56.5 .0 .0 56.5
111.2 .0 13.0 .0 13.0
111.3 .0 .0 30.4 30.4
TOTAL 56.5 13.0 30.4

PERCENTAGE CONTRIBUTION TO ASSEMBLY 204 UNAVAILABILITY

ASSEMBLY STATE	SURASSEMBLY AND/OR ELEMENT STATES	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	TOTAL
204.1	9.5 23.5	.0	.0	.0	.0	.0	.1	.0	.0	.0	32.2
204.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
204.3	.0	.0	.0	1.2	.0	.0	.0	.0	.0	.0	1.2
204.4	.0	.0	.0	.0	3.0	.0	.0	.0	.0	.0	3.0
204.5	.0	.0	.0	.0	.0	42.4	.0	.0	.0	.0	42.4
204.6	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0	.2
204.7	.0	.0	.0	.0	.0	.0	.0	.0	10.9	.0	10.9
204.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.5
TOTAL	9.5 23.5	.0	1.2	3.0	43.0	.2	19.0	1.5			

PERCENTAGE CONTRIBUTION TO ASSEMBLY 204 UNRELIABILITY

ASSEMBLY STATE	SURASSEMBLY AND/OR ELEMENT STATES	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	TOTAL
204.1	12.2 34.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	46.4
204.2	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	.1
204.3	.0	.0	.0	1.4	.0	.0	.0	.0	.0	.0	1.4
204.4	.0	.0	.0	.0	5.9	.0	.0	.0	.0	.0	5.9
204.5	.0	.0	.0	.0	.0	30.4	.0	.0	.0	.0	30.4
204.6	.0	.0	.0	.0	.0	.0	.0	.5	.0	.0	.5
204.7	.0	.0	.0	.0	.0	.0	.0	.0	10.4	.0	10.4
204.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	12.2 34.3	.1	1.4	5.9	30.4	.5	10.4	4.3			

PERCENTAGE CONTRIBUTION TO ASSEMBLY 204 UNDEPENDABILITY

ASSEMBLY STATE	SURASSEMBLY AND/OR ELEMENT STATES	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	TOTAL
204.1	9.5 23.5	.0	.0	.0	.0	.0	.1	.0	.0	.0	32.2
204.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
204.3	.0	.0	.0	1.2	.0	.0	.0	.0	.0	.0	1.2
204.4	.0	.0	.0	.0	3.0	.0	.0	.0	.0	.0	3.0
204.5	.0	.0	.0	.0	.0	42.4	.0	.0	.0	.0	42.4
204.6	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0	.2
204.7	.0	.0	.0	.0	.0	.0	.0	.0	10.9	.0	10.9
204.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.5
TOTAL	9.5 23.5	.0	1.2	3.0	43.0	.2	19.0	1.5			

PERCENTAGE CONTRIBUTION TO ASSEMBLY 200 UNAVAILABILITY

ASSEMBLY STATE SUPPLEMENT AND/OR ELEMENT STATES

	100.1	100.2	100.3	100.4	100.5	100.6	100.7	100.8	39.1	39.2	39.3	39.4	39.5	39.6	39.7	TOTAL
200.1	4.4	.0	.0	.0	.0	.0	.0	.0	21.3	.0	.0	.0	.1	.0	.0	25.8
200.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.2	.0	.0	.0	.0	1.3
200.4	.0	.0	.0	1.3	.0	.0	.0	.0	.0	.0	.0	2.0	.0	.0	.0	3.3
200.5	.0	.0	.0	.0	4.7	.0	.1	.0	.0	.0	.0	.0	42.0	.0	.0	46.9
200.6	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.2
200.7	.0	.0	.0	.0	.0	.0	7.8	.0	.0	.0	.0	.0	.0	12.3	.0	20.5
200.8	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0	1.7
TOTAL	4.4	.0	.0	1.3	4.8	.2	7.9	.2	21.3	.0	1.2	2.0	42.1	13.0	.0	1.5

PERCENTAGE CONTRIBUTION TO ASSEMBLY 200 UNRELIABILITY

ASSEMBLY STATE SUPPLEMENT AND/OR ELEMENT STATES

	100.1	100.2	100.3	100.4	100.5	100.6	100.7	100.8	39.1	39.2	39.3	39.4	39.5	39.6	39.7	TOTAL
200.1	13.0	.0	.0	.0	.0	.0	.0	.0	25.7	.0	.0	.0	.0	.0	.0	38.6
200.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.1
200.3	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	2.1	.0	.0	.0	.0	2.2
200.4	.0	.0	.0	3.7	.0	.0	.0	.0	.0	.0	.0	3.0	.0	.0	.0	6.7
200.5	.0	.0	.0	.0	13.9	.0	.0	.0	.0	.0	.0	.0	20.8	.0	.0	34.7
200.6	.0	.0	.0	.0	.0	.5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.5
200.7	.0	.0	.0	.0	.0	.0	5.1	.0	.0	.0	.0	.0	.0	.0	.0	5.1
200.8	.0	.0	.0	.0	.0	.0	.0	.7	25.7	.1	2.1	3.0	20.6	6.0	.0	5.0
TOTAL	13.0	.0	.1	3.7	13.9	.5	5.1	.7	25.7	.1	2.1	3.0	20.6	6.0	.0	4.3

PERCENTAGE CONTRIBUTION TO ASSEMBLY 200 UNDEPENDABILITY

ASSEMBLY STATE SUPPLEMENT AND/OR ELEMENT STATES

	100.1	100.2	100.3	100.4	100.5	100.6	100.7	100.8	39.1	39.2	39.3	39.4	39.5	39.6	39.7	TOTAL
200.1	4.4	.0	.0	.0	.0	.0	.0	.0	21.3	.0	.0	.0	.1	.0	.0	25.8
200.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.2	.0	.0	.0	.0	1.3
200.4	.0	.0	.0	1.3	.0	.0	.0	.0	.0	.0	.0	2.0	.0	.0	.0	3.3
200.5	.0	.0	.0	.0	4.7	.0	.1	.0	.0	.0	.0	.0	42.0	.0	.0	46.9
200.6	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.2
200.7	.0	.0	.0	.0	.0	.0	7.8	.0	.0	.0	.0	.0	.0	12.3	.0	20.5
200.8	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0	1.7
TOTAL	4.4	.0	.0	1.3	4.8	.2	7.9	.2	21.3	.0	1.2	2.0	42.1	13.0	.0	1.5

PERCENTAGE CONTRIBUTION TO ASSEMBLY 100 UNAVAILABILITY

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	13.1	160.1	160.2	155.1	155.2	105.1	106.1	106.2	107.1	107.2	TOTAL
109.1		.4	21.6	.0	1.0	.0	.0	.0	.0	.0	.0	23.5
109.2		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
109.3		.0	.0	.0	.0	.3	.0	.0	.0	.0	.0	.3
109.4		.0	.0	6.4	.0	.0	.0	.0	.0	.0	.0	6.4
109.5		.0	.0	.0	.0	.0	.0	.0	.0	25.2	.0	25.2
109.6		.0	.0	.0	.0	.0	.0	1.0	.0	.0	.0	1.0
109.7		.0	.0	.0	.0	.0	1.0	.0	.0	.0	.0	1.0
109.8		.0	.0	.0	.0	.0	.0	.0	1.2	.0	.0	1.2
TOTAL		.4	21.6	6.4	1.0	.3	1.0	1.0	1.2	25.2	.0	41.1

PERCENTAGE CONTRIBUTION TO ASSEMBLY 100 UNRELIABILITY

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	13.1	160.1	160.2	155.1	155.2	105.1	106.1	106.2	107.1	107.2	TOTAL
109.1		1.2	31.2	.0	1.5	.0	.0	.0	.0	.0	.0	33.9
109.2		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
109.3		.0	.0	.0	.4	.0	.0	.0	.0	.0	.0	.4
109.4		.0	.0	9.4	.0	.0	.0	.0	.0	.0	.0	9.4
109.5		.0	.0	.0	.0	.0	.0	.0	.0	36.6	.0	36.6
109.6		.0	.0	.0	.0	.0	.0	1.5	.0	.0	.0	1.5
109.7		.0	.0	.0	.0	.0	1.4	.0	.0	.0	.0	1.4
109.8		.0	.0	.0	.0	.0	.0	.0	1.0	.0	.0	1.0
TOTAL		1.2	31.2	9.4	1.5	.4	1.4	1.5	1.0	36.6	.0	44.4

PERCENTAGE CONTRIBUTION TO ASSEMBLY 100 UNDEPENDABILITY

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	13.1	160.1	160.2	155.1	155.2	105.1	106.1	106.2	107.1	107.2	TOTAL
109.1		.0	21.6	.0	1.0	.0	.0	.0	.0	.0	.0	23.5
109.2		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
109.3		.0	.0	.0	.0	.3	.0	.0	.0	.0	.0	.3
109.4		.0	.0	6.4	.0	.0	.0	.0	.0	.0	.0	6.4
109.5		.0	.0	.0	.0	.0	.0	.0	.0	25.2	.0	25.2
109.6		.0	.0	.0	.0	.0	.0	1.0	.0	.0	.0	1.0
109.7		.0	.0	.0	.0	.0	1.0	.0	.0	.0	.0	1.0
109.8		.0	.0	.0	.0	.0	.0	.0	1.2	.0	.0	1.2
TOTAL		.0	21.6	6.4	1.0	.3	1.0	1.0	1.2	25.2	.0	41.0

PERCENTAGE CONTRIBUTION TO ASSEMBLY 160 UNAVAILABILITY

ASSEMBLY
STATE SURASSEMBLY AND/OR ELEMENT STATES

145.1	177.1	179.1	180.1	181.1	182.1	183.1	184.1	185.1	186.1	187.1	188.1	189.1	190.1	191.1	192.1	193.1	194.1	195.1	TOTAL
1.6	1.6	.7	3.4	12.2	3.4	.6	4.3	5.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	76.2
167.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	23.8
TOTAL	1.6	1.6	.7	3.4	12.2	3.4	.6	4.3	5.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	100.0

PERCENTAGE CONTRIBUTION TO ASSEMBLY 160 UNRELIABILITY

ASSEMBLY
STATE SURASSEMBLY AND/OR ELEMENT STATES

145.1	177.1	179.1	180.1	181.1	182.1	183.1	184.1	185.1	186.1	187.1	188.1	189.1	190.1	191.1	192.1	193.1	194.1	195.1	TOTAL
1.6	1.6	.7	3.4	12.2	3.4	.6	4.3	5.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	76.1
167.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	23.9
TOTAL	1.6	1.6	.7	3.4	12.2	3.4	.6	4.3	5.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	100.0

PERCENTAGE CONTRIBUTION TO ASSEMBLY 160 UNDEPENDABILITY

ASSEMBLY
STATE SURASSEMBLY AND/OR ELEMENT STATES

145.1	177.1	179.1	180.1	181.1	182.1	183.1	184.1	185.1	186.1	187.1	188.1	189.1	190.1	191.1	192.1	193.1	194.1	195.1	TOTAL
1.6	1.6	.7	3.4	12.2	3.4	.6	4.3	5.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	76.2
167.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	23.8
TOTAL	1.6	1.6	.7	3.4	12.2	3.4	.6	4.3	5.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	100.0

PERCENTAGE CONTRIBUTION TO ASSEMBLY 107 UNAVAILABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

107.1	154.1	117.1	161.1	TOTAL
107.2	1.5	.0	36.5	38.1
TOTAL	.0	61.9	.0	61.9
	1.5	61.9	36.5	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 107 UNRELIABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

107.1	154.1	117.1	161.1	TOTAL
107.2	2.9	.0	64.2	71.1
TOTAL	.0	24.3	.0	24.3
	2.9	24.9	64.2	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 107 UNDEPENDABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

107.1	154.1	117.1	161.1	TOTAL
107.2	1.5	.0	36.6	38.1
TOTAL	.0	61.9	.0	61.9
	1.5	61.9	36.6	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 161 UNAVAILABILITY

ASSEMBLY STATE SURASSEMBLY AND/OR ELEMENT STATES

161.1	1.1	1.0	23.4	23.2	11.7	4.6	.2	34.7	100.0
TOTAL	1.1	1.0	23.4	23.2	11.7	4.6	.2	34.7	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 161 UNRELIABILITY

ASSEMBLY STATE SURASSEMBLY AND/OR ELEMENT STATES

161.1	1.1	1.0	23.4	23.2	11.7	4.6	.2	34.7	100.0
TOTAL	1.1	1.0	23.4	23.2	11.7	4.6	.2	34.7	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 161 UNDEPENDABILITY

ASSEMBLY STATE SURASSEMBLY AND/OR ELEMENT STATES

161.1	1.1	1.0	23.4	23.2	11.7	4.6	.2	34.7	100.0
TOTAL	1.1	1.0	23.4	23.2	11.7	4.6	.2	34.7	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 106 UNAVAILABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

162.1 162.2 TOTAL
45.3 .0 45.3
106.2 .0 54.7 54.7
TOTAL 45.3 54.7

PERCENTAGE CONTRIBUTION TO ASSEMBLY 106 UNRELIABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

162.1 162.2 TOTAL
45.3 .0 45.3
106.2 .0 54.7 54.7
TOTAL 45.3 54.7

PERCENTAGE CONTRIBUTION TO ASSEMBLY 106 UNDEPENDABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

162.1 162.2 TOTAL
45.3 .0 45.3
106.2 .0 54.7 54.7
TOTAL 45.3 54.7

PERCENTAGE CONTRIBUTION TO ASSEMBLY 162 UNAVAILABILITY

ASSEMBLY STATE SURASSEMBLY AND/OR ELEMENT STATES

162.1 191.1 TOTAL
45.3 .0 45.3
162.2 .0 54.7 54.7
TOTAL 45.3 54.7

PERCENTAGE CONTRIBUTION TO ASSEMBLY 162 UNRELIABILITY

ASSEMBLY STATE SURASSEMBLY AND/OR ELEMENT STATES

162.1 191.1 TOTAL
45.3 .0 45.3
162.2 .0 54.7 54.7
TOTAL 45.3 54.7

PERCENTAGE CONTRIBUTION TO ASSEMBLY 162 UNDEPENDABILITY

ASSEMBLY STATE SURASSEMBLY AND/OR ELEMENT STATES

162.1 191.1 TOTAL
45.3 .0 45.3
162.2 .0 54.7 54.7
TOTAL 45.3 54.7

PERCENTAGE CONTRIBUTION TO ASSEMBLY 105 UNAVAILABILITY

ASSEMBLY STATE SURASSEMBLY AND/OR ELEMENT STATES

105.1 100.0 100.0
TOTAL 100.0

PERCENTAGE CONTRIBUTION TO ASSEMBLY 105 UNRELIABILITY

ASSEMBLY STATE SURASSEMBLY AND/OR ELEMENT STATES

105.1 100.0 100.0
TOTAL 100.0

PERCENTAGE CONTRIBUTION TO ASSEMBLY 105 UNDEPENDABILITY

ASSEMBLY STATE SURASSEMBLY AND/OR ELEMENT STATES

105.1 100.0 100.0
TOTAL 100.0

PERCENTAGE CONTRIBUTION TO ASSEMBLY 39 UNAVAILABILITY

ASSEMBLY
STATE SUPRASSEMBLY AND/OR ELEMENT STATES

	40.1	40.2	39.1	39.2	39.3	39.4	39.5	39.6	39.7	TOTAL
39.1	11.2	.0	15.0	.0	.0	.0	.1	.0	.0	26.3
39.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
39.3	.0	.0	.0	.0	1.5	.0	.0	.0	.0	1.5
39.4	.0	.4	.0	.0	.0	2.1	.0	.0	.0	2.5
39.5	.0	.0	.0	.0	.0	.0	51.7	.0	.0	51.8
39.6	.0	.0	.0	.0	.0	.0	.0	16.0	.0	16.0
39.7	.0	.0	.0	.0	.0	.0	.0	.0	1.8	1.8
TOTAL	11.2	.4	15.1	.0	1.5	2.1	51.8	16.1	1.8	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 39 UNRELIABILITY

ASSEMBLY
STATE SUPRASSEMBLY AND/OR ELEMENT STATES

	40.1	40.2	39.1	39.2	39.3	39.4	39.5	39.6	39.7	TOTAL
39.1	13.3	.1	27.8	.0	.0	.0	.0	.0	.0	41.1
39.2	.0	.0	.0	.1	.0	.0	.0	.0	.0	.1
39.3	.0	.0	.0	.0	3.4	.0	.0	.0	.0	3.4
39.4	.0	.4	.0	.0	.0	4.4	.0	.0	.0	4.8
39.5	.0	.0	.0	.0	.0	.0	33.8	.0	.0	33.8
39.6	.0	.0	.0	.0	.0	.0	.0	9.8	.0	9.8
39.7	.0	.0	.0	.0	.0	.0	.0	.0	6.9	6.9
TOTAL	13.3	.4	27.8	.1	3.4	4.4	33.8	9.8	6.9	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 39 UNDEPENDABILITY

ASSEMBLY
STATE SUPRASSEMBLY AND/OR ELEMENT STATES

	40.1	40.2	39.1	39.2	39.3	39.4	39.5	39.6	39.7	TOTAL
39.1	11.2	.0	15.0	.0	.0	.0	.1	.0	.0	26.3
39.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
39.3	.0	.0	.0	.0	1.5	.0	.0	.0	.0	1.5
39.4	.0	.4	.0	.0	.0	2.1	.0	.0	.0	2.5
39.5	.0	.0	.0	.0	.0	.0	51.7	.0	.0	51.7
39.6	.0	.0	.0	.0	.0	.0	.0	16.0	.0	16.0
39.7	.0	.0	.0	.0	.0	.0	.0	.0	1.8	1.8
TOTAL	11.2	.4	15.1	.0	1.5	2.1	51.8	16.1	1.8	

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES PERCENTAGE CONTRIBUTION TO ASSEMBLY 40 UNAVAILABILITY

ASSEMBLY STATE	41.1	42.1	43.1	44.1	45.1	46.1	TOTAL
40.1	46.6	2.3	0.5	21.8	0.0	17.2	96.4
40.2	0.0	0.0	0.0	0.0	3.6	0.0	3.6
TOTAL	46.6	2.3	0.5	21.8	3.6	17.2	

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES PERCENTAGE CONTRIBUTION TO ASSEMBLY 40 UNRELIABILITY

ASSEMBLY STATE	41.1	42.1	43.1	44.1	45.1	46.1	TOTAL
40.1	17.5	3.4	6.4	35.1	0.0	13.9	97.1
40.2	0.0	0.0	0.0	0.0	2.9	0.0	2.9
TOTAL	17.5	3.4	6.4	35.1	2.9	13.9	

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES PERCENTAGE CONTRIBUTION TO ASSEMBLY 40 UNDEPENDABILITY

ASSEMBLY STATE	41.1	42.1	43.1	44.1	45.1	46.1	TOTAL
40.1	46.6	2.3	0.5	21.8	0.0	17.2	96.4
40.2	0.0	0.0	0.0	0.0	3.6	0.0	3.6
TOTAL	46.6	2.3	0.5	21.8	3.6	17.2	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 3A UNAVAILABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

	31.1	32.1	32.2	33.1	34.1	34.2	34.3	35.1	35.2	35.3	TOTAL
3A.1	4.0	7.3	.0	5.7	.0	.0	.0	.0	.1	.0	17.1
3A.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3A.3	.0	.0	.0	.0	1.7	.0	.0	.0	.0	.0	1.7
3A.4	.0	.0	.2	.0	2.1	.0	.0	.0	.0	.0	2.4
3A.5	.0	.0	.0	.0	.0	.0	.0	.0	53.4	.0	53.4
3A.6	.0	.0	.0	.0	.0	.0	.0	18.2	.0	.0	18.2
3A.7	.0	.0	.0	.0	.0	.0	2.1	.0	.0	.0	2.1
TOTAL	4.0	7.3	.2	5.7	2.2	1.7	2.1	18.3	53.5	.0	87.5

PERCENTAGE CONTRIBUTION TO ASSEMBLY 3B UNRELIABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

	31.1	32.1	32.2	33.1	34.1	34.2	34.3	35.1	35.2	35.3	TOTAL
3B.1	7.7	6.5	.0	17.5	.0	.0	.0	.0	.0	.0	31.8
3B.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3B.3	.0	.0	.0	.0	3.9	.0	.0	.0	.0	.0	3.9
3B.4	.0	.0	.9	.0	4.2	.0	.0	.0	.0	.0	5.1
3B.5	.0	.0	.0	.0	.0	.0	.0	.0	34.6	.0	34.6
3B.6	.0	.0	.0	.0	.0	.0	.0	11.7	.0	.0	11.7
3B.7	.0	.0	.0	.0	.0	.0	9.1	.0	.0	.0	9.1
TOTAL	7.7	6.5	.9	17.5	4.2	3.9	9.1	11.7	34.6	.0	80.8

PERCENTAGE CONTRIBUTION TO ASSEMBLY 3C UNDEPENDABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

	31.1	32.1	32.2	33.1	34.1	34.2	34.3	35.1	35.2	35.3	TOTAL
3C.1	4.0	7.1	.0	5.7	.0	.0	.0	.0	.1	.0	17.1
3C.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3C.3	.0	.0	.0	.0	1.7	.0	.0	.0	.0	.0	1.7
3C.4	.0	.0	.2	.0	2.1	.0	.0	.0	.0	.0	2.4
3C.5	.0	.0	.0	.0	.0	.0	.0	.0	53.3	.0	53.3
3C.6	.0	.0	.0	.0	.0	.0	.0	18.2	.0	.0	18.2
3C.7	.0	.0	.0	.0	.0	.0	2.1	.0	.0	.0	2.1
TOTAL	4.0	7.1	.2	5.7	2.2	1.8	2.1	18.2	53.5	.0	87.5

PERCENTAGE CONTRIBUTION TO ASSEMBLY 35 UNAVAILABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

35.1	351.1	352.1	360.1	360.2	360.3	TOTAL
35.2	.0	.0	23.8	.0	.0	23.9
35.3	.0	1.9	.0	67.6	.0	69.6
TOTAL	6.6	1.9	23.8	67.6	.0	6.6

PERCENTAGE CONTRIBUTION TO ASSEMBLY 35 UNRELIABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

35.1	351.1	352.1	360.1	360.2	360.3	TOTAL
35.2	.0	.0	23.8	.0	.0	23.8
35.3	.0	5.6	.0	61.9	.0	67.6
TOTAL	6.6	5.6	23.8	61.9	.0	7.6

PERCENTAGE CONTRIBUTION TO ASSEMBLY 35 UNDEPENDABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

35.1	351.1	352.1	360.1	360.2	360.3	TOTAL
35.2	.0	.0	23.8	.0	.0	23.9
35.3	.0	1.9	.0	67.6	.0	69.6
TOTAL	6.6	1.9	23.9	67.6	.0	6.6

PERCENTAGE CONTRIBUTION TO ASSEMBLY 360 UNAVAILABILITY

ASSEMBLY STATE	SUBASSEMBLY	AND/OR ELEMENT STATES	TOTAL
360.1	361.1	362.1	363.1
23.5	.0	.0	.0
360.2	.1	17.4	49.9
360.3	.0	.0	.0
TOTAL	23.6	17.4	49.9

PERCENTAGE CONTRIBUTION TO ASSEMBLY 360 UNRELIABILITY

ASSEMBLY STATE	SUBASSEMBLY	AND/OR ELEMENT STATES	TOTAL
360.1	361.1	362.1	363.1
20.3	.0	.0	.0
360.2	.0	22.4	31.6
360.3	.0	.0	.0
TOTAL	20.3	22.4	31.6

PERCENTAGE CONTRIBUTION TO ASSEMBLY 360 UNDEPENDABILITY

ASSEMBLY STATE	SUBASSEMBLY	AND/OR ELEMENT STATES	TOTAL
360.1	361.1	362.1	363.1
23.5	.0	.0	.0
360.2	.1	17.4	49.9
360.3	.0	.0	.0
TOTAL	23.6	17.4	49.9

PERCENTAGE CONTRIBUTION TO ASSEMBLY 34 UNAVAILABILITY

ASSEMBLY STATE SURASSEMBLY AND/OR ELEMENT STATES

	341.1	341.2	342.1	343.1	344.1	TOTAL
34.1	.0	.0	.0	.0	36.0	36.0
34.2	.0	4.6	23.9	.0	.0	29.2
34.3	34.8	.0	.0	.0	.0	34.8
TOTAL	34.8	4.6	23.9	.0	36.0	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 34 UNRELIABILITY

ASSEMBLY STATE SURASSEMBLY AND/OR ELEMENT STATES

	341.1	341.2	342.1	343.1	344.1	TOTAL
34.1	.0	.0	.0	.0	25.4	25.4
34.2	.0	6.6	17.1	.6	.0	24.3
34.3	49.9	.0	.0	.0	.0	49.9
TOTAL	49.9	6.6	17.1	.6	25.4	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 34 UNDEPENDABILITY

ASSEMBLY STATE SURASSEMBLY AND/OR ELEMENT STATES

	341.1	341.2	342.1	343.1	344.1	TOTAL
34.1	.0	.0	.0	.0	36.0	36.0
34.2	.0	4.6	23.9	.0	.0	29.2
34.3	34.8	.0	.0	.0	.0	34.8
TOTAL	34.8	4.6	23.9	.0	36.0	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 33 UNAVAILABILITY

ASSEMBLY STATE	SUBASSEMBLY	AND/OR ELEMENT	STATES	
33.1	40.8	3.5	1.6	54.1 100.0
TOTAL	40.8	3.5	1.6	54.1

PERCENTAGE CONTRIBUTION TO ASSEMBLY 33 UNRELIABILITY

ASSEMBLY STATE	SUBASSEMBLY	AND/OR ELEMENT	STATES	
33.1	51.7	11.1	1.0	34.2 100.0
TOTAL	51.7	11.1	1.0	34.2

PERCENTAGE CONTRIBUTION TO ASSEMBLY 33 UNDEPENDABILITY

ASSEMBLY STATE	SUBASSEMBLY	AND/OR ELEMENT	STATES	
33.1	40.9	1.5	1.6	54.1 100.0
TOTAL	40.9	1.5	1.6	54.1

PERCENTAGE CONTRIBUTION TO ASSEMBLY 32 UNAVAILABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

32.1	321.1	322.1	323.1	323.2	TOTAL
.1	.1	96.7	.1	.0	96.9
32.2	.0	.0	.0	3.1	3.1
TOTAL	.1	96.7	.1	3.1	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 32 UNRELIABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

32.1	321.1	322.1	323.1	323.2	TOTAL
.2	.2	87.5	.1	.0	87.7
32.2	.0	.0	.0	12.3	12.3
TOTAL	.2	87.5	.1	12.3	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 32 UNDEPENDABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

32.1	321.1	322.1	323.1	323.2	TOTAL
.1	.1	96.7	.1	.0	96.9
32.2	.0	.0	.0	3.1	3.1
TOTAL	.1	96.7	.1	3.1	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 31 UNAVAILABILITY

ASSEMBLY STATE SURASSEMBLY AND/OR ELEMENT STATES

312.1 312.1 TOTAL
31.1 60.7 39.3 100.0
TOTAL 60.7 39.3

PERCENTAGE CONTRIBUTION TO ASSEMBLY 31 UNRELIABILITY

ASSEMBLY STATE SURASSEMBLY AND/OR ELEMENT STATES

311.1 312.1 TOTAL
31.1 60.7 39.3 100.0
TOTAL 60.7 39.3

PERCENTAGE CONTRIBUTION TO ASSEMBLY 31 UNDEPENDABILITY

ASSEMBLY STATE SURASSEMBLY AND/OR ELEMENT STATES

311.1 312.1 TOTAL
31.1 60.7 39.3 100.0
TOTAL 60.7 39.3

ANALYSIS RESULTS FOR A 10-HOUR MISSION UTILIZING ONLY THE FORWARD LINKS

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 6

KA-BAND SATCOM SET (FORWARD LINK)

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROG. OF	RESTORE	SUBASSEMBLY	UNAVAILABILITY	IDENTIFICATION	
	CYCLES USE, SEC	OCCURRENCE	TIME, HRS			
4.1 ENT	134000.00	.46206E-02	1.00	.06563E-03	PRIMARY POWER FAILURE	
209.1 CMP	1	.660.00	.30853E-02	.93	.14205E-01	UNABLE TO START SYSTEM
209.2 CMP	1	.660.00	.17469E-04	.50	.41007E-04	ALTERNATE INITIALIZATION MODE REQUIRED
201.1 CMP	240	21.00	.77794E-04	2.22	.17639E-01	KA-BAND FORWARD MESSAGE INOPERATIVE
201.2 CMP	240	21.00	.16074E-04	2.24	.51679E-02	KA-BAND FORWARD MESSAGE DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	ATBO, HRS.	ATTR, HRS.	IDENTIFICATION
0	.9119643077			NORMAL OPERATION
1	.157121E+00	3.32154E+02	2.046	KA-BAND FORWARD LINK INOPERATIVE
2	.264454E-01	2.71064E+03	2.241	KA-BAND FORWARD LINK DEGRADED
3	.076720E-02	2.94453E+02	2.032	OTHER STATES

ASSEMBLY 6 OPERATES FOR 16000.000 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .0300097571. RELIABILITY IS .966089730 AND DEPENDABILITY IS .918641077.
 144.16 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
 AND A DELAY OF 116.49 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

SYSTEM DATA

6 KA-BAND SATCOM SET (FORWARD LINK)

IDENTIFICATION

RELIABILITY

DEPENDABILITY

IDENTIFICATION

6.0 .1993E+00 .9655E+00 .8114E+00 NORMAL OPERATION

6.1 .13240E+00 .29640E-01 .15712E+00 KA-BAND FORWARD LINK INOPERATIVE

6.2 .26274E-01 .36923E-02 .26545E-01 KA-BAND FORWARD LINK DEGRADED

6.3 .14177E-02 .44426E-04 .41632E-02 OTHER STATES

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 201

KA-BAND SATCOM SET (FORWARD MESSAGE)

ASSEMBLY 201 IS USED BY ASSEMBLY(S) 6

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROG. OF RESTORE SUBASSEMBLY		CYCLES USE SEC OCCURRENCE TIME MRS UNAVAILABILITY		IDENTIFICATION	
	1	2	3	4	5	6
211.1 CND	5	4.20	.15577E-04	2.22	.17732E-01	KA-BAND FORWARD CYCLE INOPERATIVE
211.2 CND	5	4.20	.14541E-05	2.24	.52561E-02	KA-BAND FORWARD CYCLE DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	ATTR. MRS.	ATTR. MRS.	IDENTIFICATION
0	.3770137644			NORMAL OPERATION
1	.177130E-01	7.60110E+01	2.220	KA-BAND FORWARD MESSAGE INOPERATIVE
2	.517457E-02	3.53977E+02	2.244	KA-BAND FORWARD MESSAGE DEGRADED
3	.019903E-04	6.25745E+01	2.225	OTHER STATES
COMBINED				

ASSEMBLY 201 OPERATES FOR 21.000 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .97710444. RELIABILITY IS .999867421 AND DEPENDABILITY IS .9778137648.
 5.52 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 240 FUNCTIONAL CYCLES
 AND A DELAY OF 57.04 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 211

KA-BAND SATCOM SET (FORWARD CYCLE)

ASSEMBLY 211 IS USED BY ASSEMBLY(S) 201

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF RESTORE SUBASSEMBLY	UNAVAILABILITY	IDENTIFICATION
14.1 ENT	1	4.20 .22436E-05	1.00 .12298E-02 CPU STOP: NO UPLINK, PRINTER AND CRT EXCEPT FWD. LINK OR CINCNET
200.1 Cmp	1	4.20 .64333E-05	1.42 .53473E-02 ALL KA-BAND LINKS INOPERATIVE
200.2 Cmp	1	4.20 .14994E-07	3.63 .10267E-04 FORWARD AND CONFERENCE LINKS INOPERATIVE AND P/B LINK DEGRADED
200.3 Cmp	1	4.20 .17079E-06	.92 .26569E-03 P/R AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
200.4 Cmp	1	4.20 .11133E-05	.90 .68157E-03 ALL KA-BAND LINKS DEGRADED
200.5 Cmp	1	4.20 .57419E-05	3.07 .97114E-02 KA-BAND FORWARD AND CONFERENCE LINKS INOPERATIVE
200.6 Cmp	1	4.20 .97411E-07	.50 .34901E-04 KA-BAND REPORT-RACK AND CONFERENCE LINKS INOPERATIVE
200.7 Cmp	1	4.20 .20177E-05	2.51 .43136E-02 KA-BAND FORWARD AND CONFERENCE LINKS DEGRADED
200.8 Cmp	1	4.20 .87404E-06	.50 .34924E-03 KA-BAND REPORT-RACK AND CONFERENCE LINKS DEGRADED
101.1 Cmp	1	4.20 .13229E-05	.91 .96751E-03 INOPERATIVE FORWARD LINK
101.2 Cmp	1	4.20 .44442E-06	.94 .36755E-03 DEGRADED FORWARD LINK

KA-BAND MODEM
X3- 10 0354

ASSEMBLY STATES

STATE	PROBABILITY	ATRO, HRS.	ATIR, HRS.	IDENTIFICATION
0	.97686499475			NORMAL OPERATION
1	.177476E-01	7.44974E+01	2.220	KA-BAND FORWARD CYCLE INOPERATIVE
2	.525975E-02	3.37740E+02	2.204	KA-BAND FORWARD CYCLE DEGRADED
3	.143344E-03			OTHER STATES
C049INEC		6.13024E+01	2.221	

ASSEMBLY 211 OPERATES FOR 6.200 SECONDS TO COMPLETE ITS FUNCTION.

THE AVAILABILITY IS .976864519, RELIABILITY IS .999809694 AND DEPENDABILITY IS .9768 99475.

23.15 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES

AND A DELAY OF 56.64 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

FORWARD LINKS SENSITIVITY TABULATION

PERCENTAGE CONTRIBUTION TO ASSEMBLY 6 UNAVAILABILITY

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	4.1 209.1	209.2	201.1	201.2	TOTAL
6.1		9.3	.0	73.5	1.2	94.5
6.2		.1	.0	.5	14.9	15.5
TOTAL		9.4	.0	74.0	16.0	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 6 UNRELIABILITY

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	4.1 209.1	209.2	201.1	201.2	TOTAL
6.1		25.6	9.5	.0	53.6	88.9
6.2		.0	.0	.0	11.0	11.1
TOTAL		25.6	9.5	.0	53.7	11.1

PERCENTAGE CONTRIBUTION TO ASSEMBLY 6 UNDEPENDABILITY

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	4.1 209.1	209.2	201.1	201.2	TOTAL
6.1		5.0	3.4	.0	69.5	14 95.5
6.2		.0	.1	.0	.6	13.9 14.5
TOTAL		5.0	3.5	.0	70.1	15.2

PERCENTAGE CONTRIBUTION TO ASSEMBLY 201 UNAVAILABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

201.1	77.3	.1	77.4
201.2	.1	22.6	22.6
TOTAL	77.3	22.7	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 201 UNRELIABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

201.1	42.3	.0	42.3
201.2	.0	17.7	17.7
TOTAL	42.3	17.7	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 201 UNDEPENDABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

201.1	77.3	.1	77.4
201.2	.1	22.6	22.6
TOTAL	77.4	22.6	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 211 UNAVAILABILITY

ASSEMBLY
STATE

ASSEMBLY AND/OR ELEMENT STATES

	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	101.1	101.2	TOTAL
211.1	2.3	22.4	.0	.0	.0	41.6	.0	.1	.0	4.2	.0	77.1
211.2	.0	.0	.0	.0	2.9	.0	.0	18.3	.0	.0	.0	22.9
TOTAL	2.3	22.4	.0	.0	2.9	41.7	.0	18.4	.0	4.2	.0	100.0

PERCENTAGE CONTRIBUTION TO ASSEMBLY 211 UNRELIABILITY

ASSEMBLY
STATE

ASSEMBLY AND/OR ELEMENT STATES

	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	101.1	101.2	TOTAL
211.1	11.4	11.3	.1	.0	.0	29.6	.0	.0	.0	6.9	.0	61.6
211.2	.0	.0	.0	.0	5.7	.0	.0	10.1	.0	.0	.0	15.8
TOTAL	11.4	11.3	.1	.0	5.7	29.6	.0	10.1	.0	6.9	.0	77.4

PERCENTAGE CONTRIBUTION TO ASSEMBLY 211 UNDEPENDABILITY

ASSEMBLY
STATE

ASSEMBLY AND/OR ELEMENT STATES

	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	101.1	101.2	TOTAL
211.1	2.3	22.4	.0	.0	.0	41.6	.0	.1	.0	4.2	.0	77.1
211.2	.0	.0	.0	.0	2.9	.0	.0	18.3	.0	.0	.0	22.9
TOTAL	2.3	22.4	.0	.0	2.9	41.7	.0	18.4	.0	4.2	.0	100.0

ANALYSIS RESULTS FOR A 10-HOUR MISSION
UTILIZING ONLY THE REPORT-BACK LINK

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 7

KA-RAND SATCOM SET (REPORT-BACK LINK)

SUPRASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF RESTORE SUPRASSEMBLY	UNAVAILABILITY	IDENTIFICATION
	CYCLES USE-SEC OCCURRENCE TIME HRS		
4.1 ENT	136000.00 .46236E-02	1.00	.46236E-02 PRIMARY POWER FAILURE
209.1 Cmp	1 660.00 .10453E-02	.41	.15255E-01 UNABLE TO START SYSTEM
209.2 Cmp	1 650.00 .14469E-04	.50	.41007E-04 ALTERNATE INITIALIZATION MODE REQUIRED
202.1 Cmp	720 12.60 .30152E-04	1.26	.70413E-02 KA-RAND REPORT-BACK MESSAGE INOPERATIVE
202.2 Cmp	720 12.60 .11735E-04	.95	.27974E-02 KA-RAND REPORT-BACK MESSAGE DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	ATMO. HRS.	ATTR. HRS.	IDENTIFICATION
0	.9544015631			NORMAL OPERATION
1	.111091E+00	3.00449E+02	1.104	KA-RAND REPORT-BACK LINK INOPERATIVE
2	.315647E-01	1.27147E+01	.949	KA-RAND REPORT-BACK LINK DEGRADED
3	.315060E-02	2.39752E+02	1.110	OTHER STATES
COMBINED				

ASSEMBLY 7 OPERATES FOR 1600.000 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .950649145. RELIABILITY IS .950644505 AND DEPENDABILITY IS .9544015631.
 145.40 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
 AND A DELAY OF 64.27 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

SYSTEM DATA

7	KA-RAND SATCOM SET (REPORT-BACK LINK)	IDENTIFICATION
7.0	RELIABILITY	DEPENDABILITY
7.0	.0907E+00	.0540E+00
7.1	.0252E-01	.1110E+00
7.2	.2490E-01	.3137E-01
7.3	.1007E-02	.3150E-02

NORMAL OPERATION
KA-RAND REPORT-BACK LINK INDEPACTIVE
KA-RAND REPORT-BACK LINK DEGRADED
OTHER STATES

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 202

KA-BAND SATCOM SET (REPORT-BACK MESSAGE)

ASSEMBLY 202 IS USED BY ASSEMBLY(S) 7

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROP. OF RESTORE SUBASSEMBLY		IDENTIFICATION
	CYCLES USE	SEC OCCURRENCE TIME	
212.1 CMP	1	4.20 .10142E-04	1.25 .79638E-02 KA-BAND REPORT-BACK CYCLE INOPERATIVE
212.2 CMP	3	4.20 .60244E-05	.95 .24149E-02 KA-BAND REPORT-BACK CYCLE DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	ATRO, HRS.	ATTR, HRS.	IDENTIFICATION
0	.7492024040			NORMAL OPERATION
1	.792098E-02	1.16662E+02	1.250	KA-BAND REPORT-BACK MESSAGE INOPERATIVE
2	.240402E-02	2.96774E+02	.969	KA-BAND REPORT-BACK MESSAGE DEGRADED
3	.255949E-04			OTHER STATES
COMBINED		0.36743E+01	1.175	

ASSEMBLY 202 OPERATES FOR 12.600 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .9992418019, RELIABILITY IS .9999581520 AND DEPENDABILITY IS .9992024040.
 7.77 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 720 FUNCTIONAL CYCLES
 AND A DELAY OF 15.40 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 212

KA-RAND SATCOM SET (REPORT-BACK CYCLE)

ASSEMBLY 212 IS USED BY ASSEMBLY(S) 202

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PRGR. OF RESTORE SUBASSEMBLY	CYCLES USE %FC OCCURRENCE TIME-MRS	UNAVAILABILITY	IDENTIFICATION
14.1 ENT	1	4.20 .2251E-05	1.00	GPU STOP; NO UPLINK, PRINTED AND CRT EXCEPT FWD. LINK OR CINCNET
200.1 CWD	1	4.20 .6433E-05	1.42	ALL KA-RAND LINKS INOPERATIVE
200.2 CWD	1	4.20 .1490E-07	3.63	FORWARD AND CONFERENCE LINKS INOPERATIVE
200.3 CWD	1	4.20 .1702E-05	.92	R/B AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
200.4 CWD	1	4.20 .1113E-05	.90	ALL KA-RAND LINKS DEGRADED
200.5 CWD	1	4.20 .5719E-05	3.02	KA-RAND FORWARD AND CONFERENCE LINKS INOPERATIVE
200.6 CWD	1	4.20 .9241E-07	.50	KA-RAND REPORT-BACK AND CONFERENCE LINKS INOPERATIVE
200.7 CWD	1	4.20 .2017E-05	2.61	KA-RAND FORWARD AND CONFERENCE LINKS DEGRADED
200.8 CWD	1	4.20 .9250E-05	.50	KA-RAND REPORT-BACK AND CONFERENCE LINKS DEGRADED
102.1 CWD	1	4.20 .1134E-05	.50	INOPERATIVE REPORT-BACK LINK
102.2 CWD	1	4.20 .2117E-05	1.00	DEGRADED REPORT-BACK LINK
				KA-RAND MODE 4
				KA-RAND MODE 4

ASSEMBLY STATES

STATE	DEGRADABILITY	ATRD. MRS.	ATTR. MRS.	IDENTIFICATION
0	.980636540			NORMAL OPERATION
1	.707370E-02	1.16591E+02	1.258	KA-RAND REPORT-BACK CYCLE INOPERATIVE
2	.241827E-12	2.88612E+02	.949	KA-RAND REPORT-BACK CYCLE DEGRADED
3	.143972E-03			OTHER STATES
COMBINED		4.20917E+01	1.162	

ASSEMBLY 212 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .980636540. RELIABILITY IS .99995759% AND DEPENDABILITY IS .980636540.
 10.04 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
 AND A DELAY OF 14.95 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

REPORT-BACK LINK SENSITIVITY TABULATIONS

ASSEMBLY STATE	PERCENTAGE CONTRIBUTION TO ASSEMBLY 7 UNAVAILABILITY				
	SUBASSEMBLY AND/OR ELEMENT STATES				
	6.1	209.1	209.2	202.1	202.2 TOTAL
7.1	.9	13.6	.0	61.5	.9 76.7
7.2	.0	.1	.0	.5	22.7 23.3
TOTAL	.9	13.7	.0	61.9	23.6

ASSEMBLY STATE	PERCENTAGE CONTRIBUTION TO ASSEMBLY 7 UNRELIABILITY				
	SUBASSEMBLY AND/OR ELEMENT STATES				
	6.1	209.1	209.2	202.1	202.2 TOTAL
7.1	20.6	7.4	.0	51.3	.3 80.2
7.2	.0	.0	.0	.1	19.6 19.4
TOTAL	20.6	7.4	.0	51.4	19.9

ASSEMBLY STATE	PERCENTAGE CONTRIBUTION TO ASSEMBLY 7 UNDEPENDABILITY				
	SUBASSEMBLY AND/OR ELEMENT STATES				
	6.1	209.1	209.2	202.1	202.2 TOTAL
7.1	6.6	12.2	.0	54.1	1.3 74.0
7.2	.1	.1	.0	.6	23.2 22.0
TOTAL	6.6	12.3	.0	54.7	22.5

PERCENTAGE CONTRIBUTION TO ASSEMBLY 202 UNAVAILABILITY

ASSEMBLY STATE SURASSEMBLY AND/OR ELEMENT STATES

	212.1	212.2	TOTAL
202.1	73.9	.0	74.0
202.2	.0	26.0	26.0
TOTAL	74.0	26.0	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 202 UNRELIABILITY

ASSEMBLY STATE SURASSEMBLY AND/OR ELEMENT STATES

	212.1	212.2	TOTAL
202.1	71.9	.0	71.9
202.2	.0	29.2	29.2
TOTAL	71.9	29.2	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 202 UNDEPENDABILITY

ASSEMBLY STATE SURASSEMBLY AND/OR ELEMENT STATES

	212.1	212.2	TOTAL
202.1	73.9	.0	74.0
202.2	.0	26.0	26.0
TOTAL	74.0	26.0	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 212 UNAVAILABILITY

ASSEMBLY
STATE

SUBASSEMBLY AND/OR ELEMENT STATES

	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	102.1	102.2	TOTAL
212.1	17.7	44.5	.0	2.4	.0	.2	.4	.1	.0	4.5	.1	73.9
212.2	.0	.0	.1	.0	6.2	.1	.0	.0	3.2	.0	16.5	26.1
TOTAL	17.7	44.5	.1	2.4	6.2	.3	.4	.1	3.2	4.5	16.6	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 212 UNRELIABILITY

ASSEMBLY
STATE

SUBASSEMBLY AND/OR ELEMENT STATES

	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	102.1	102.2	TOTAL
212.1	15.9	44.5	.0	2.5	.0	.0	.6	.0	.0	4.0	.0	71.7
212.2	.0	.0	.2	.0	7.6	.0	.0	.0	5.7	.0	14.9	24.3
TOTAL	15.9	44.5	.2	2.5	7.6	.0	.6	.0	5.7	4.0	14.9	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 212 UNDEPENDABILITY

ASSEMBLY
STATE

SUBASSEMBLY AND/OR ELEMENT STATES

	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	102.1	102.2	TOTAL
212.1	17.7	44.5	.0	2.4	.0	.2	.4	.1	.0	4.5	.1	73.9
212.2	.0	.0	.1	.0	6.2	.1	.0	.0	3.2	.0	16.5	26.1
TOTAL	17.7	44.5	.1	2.4	6.2	.3	.4	.1	3.2	4.5	16.6	

ANALYSIS RESULTS FOR A 10-HOUR MISSION UTILIZING ONLY THE CONFERENCE LINK

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 0

KA-RAND SATCOM SET (CONFERENCE LINK)

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROG. OF RESTORE	SUBASSEMBLY	UNAVAILABILITY	IDENTIFICATION
CYCLES USED	TIME, HRS			
209.1 CWP	135000.00	96206E-02	1.30	.86543E-03 PRIMARY POWER FAILURE
209.2 CWP	1 650.00	30653E-02	.43	.15955E-01 UNABLE TO START SYSTEM
209.1 CWP	1 650.00	.11669E-04	.50	.41007E-04 ALTERNATE INITIALIZATION MODE REQUIRED
209.2 CWP	12 999.40	.32674E-02	2.23	.17313E-01 KA-RAND CONFERENCE INOPERATIVE
209.1 CWP	12 834.00	.11841E-02	1.96	.67245E-02 KA-RAND CONFERENCE DEGRADED

ASSEMBLY STATES

STATE	POBABILITY	ATRO, HRS.	ATTR, HRS.	IDENTIFICATION
0	.7966672127			NORMAL OPERATION
1	.151877E+00	1.99547E+02	2.956	KA-RAND CONFERENCE LINK INOPERATIVE
2	.423737E-01	7.67229E+02	1.959	KA-RAND CONFERENCE LINK DEGRADED
3	.634155E-02			OTHER STATES
COMBINED		1.55344E+02	1.965	

ASSEMBLY 9 OPERATES FOR 36000.000 SECONDS TO COMPLETE ITS FUNCTION.

THE AVAILABILITY IS .0696346291. RELIABILITY IS .9376547693 AND DEPENDABILITY IS .7966672127.

297.33 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES

WITH A DELAY OF 106.53 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

SYSTEM DATA

LABEL	KA-BAND SATCOM SET (CONFERENCE LINK)			
	AVAILABILITY	RELIABILITY	DEPENDABILITY	IDENTIFICATION
9.0	.40964E+00	.93765E+00	.79567E+00	NORMAL OPERATION
9.1	.11241E+00	.49570E-01	.15335E+00	KA-BAND CONFERENCE LINK INOPERATIVE
9.2	.13631E-01	.12969E-01	.82974E-01	KA-BAND CONFERENCE LINK DEGRADED
9.3	.18962E-02	.51726E-03	.69415E-02	OTHER STATES

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 203

KA-9AND SATCOM SET (CONFERENCE)

ASSEMBLY 203 IS USED BY ASSEMBLY(S) 0

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF RESTORE	SUBASSEMBLY	IDENTIFICATION			
	CYCLES USE, SEC	OCURRENCE TIME, HRS	UNAVAILABILITY			
213.1 CMO	214	4.20	.15544E-04	2.23	.17432E-01	KA-9AND CONFERENCE CYCLE INOPERATIVE
213.2 CMO	214	4.20	.57750E-05	1.96	.58434E-02	KA-9AND CONFERENCE CYCLE DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	ATTR, HRS.	ATTR, HRS.	IDENTIFICATION
0	.9714955657			NORMAL OPERATION
1	.206407E-01	2.62867E+01	2.233	KA-9AND CONFERENCE INOPERATIVE
2	.745803E-02	2.1071E+02	1.960	KA-9AND CONFERENCE DEGRADED
3	.165660E-03	5.59117E+01	2.165	OTHER STATES
CUMULATIVE				

ASSEMBLY 203 OPERATES FOR 494.400 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .975443354, RELIABILITY IS .9954445030 AND DEPENDABILITY IS .9714955657.
 .16 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 12 FUNCTIONAL CYCLES
 AND A DELAY OF 76.41 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 213

KA-BAND SATCOM SET (CONFERENCE CYCLE)

ASSEMBLY 213 IS USED BY ASSEMBLY(S) 203

SUBASSEMBLY STATE DATA

LAFEL	NO. OF TIME OF PROR. OF RESTORE SUBASSEMBLY		IDENTIFICATION	CPU STOP: NO UPLINK, PRINTER AND CRT EXCEPT FMO, LINK OR CINCNET
	CYCLES	USP, SEC	OCURFENCE TIME, HRS	UNAVAILABILITY
14.1 ENT	1	4.20	.22536E-05	1.00
200.1 CMO	1	4.20	.64333E-05	1.47
200.2 CMO	1	4.20	.16224E-07	3.63
200.3 CMO	1	4.20	.37079E-05	.92
200.4 CMO	1	4.20	.11133E-05	.90
200.5 CMO	1	4.20	.57419E-05	3.02
200.6 CMO	1	4.20	.92411E-07	.50
200.7 CMO	1	4.20	.20177E-05	2.61
200.8 CMO	1	4.20	.27609E-05	.50
103.1 CMO	1	4.20	.83927E-06	.50
103.2 CMO	1	4.20	.13671E-05	.94

ASSEMBLY STATES

STATE	PROBABILITY	ATTR. HRS.		ATTR. HRS.	IDENTIFICATION
		ATRO	HRS.		
0	.3755599191				NORMAL OPERATION
1	.174472E-01	7.50537E+01		2.253	KA-BAND CONFERENCE CYCLE INOPERATIVE
2	.594931E-02	2.02019E+02		1.960	KA-BAND CONFERENCE CYCLE DEGRADED
3	.143573E-03				OTHER STATES
COMBINED		5.47226E+01		2.144	

ASSEMBLY 213 OPERATES FOR 6.200 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .9755497169, RELIABILITY IS .9999786806 AND DEPENDABILITY IS .9755599191.
 5.21 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 214 FUNCTIONAL CYCLES
 AND A DELAY OF 64.37 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

CONFERENCE LINK SENSITIVITY TABULATION

ASSEMBLY STATE	PERCENTAGE CONTRIBUTION TO ASSEMBLY 0 UNAVAILABILITY				
	SUBASSEMBLY	AND/OR	ELEMENT STATES		
	4.1	203.1	209.2	203.1	203.2 TOTAL
9.1	.6	9.9	.0	65.2	1.3 77.0
9.2	.0	.1	.0	.7	22.1 23.0
TOTAL	.6	10.0	.0	66.0	23.4

ASSEMBLY STATE	PERCENTAGE CONTRIBUTION TO ASSEMBLY 0 UNRELIABILITY				
	SUBASSEMBLY	AND/OR	ELEMENT STATES		
	4.1	209.1	209.2	203.1	203.2 TOTAL
9.1	13.6	5.1	.0	50.0	.4 79.1
9.2	.0	.0	.0	.7	20.7 20.9
TOTAL	13.7	5.2	.0	60.1	21.1

ASSEMBLY STATE	PERCENTAGE CONTRIBUTION TO ASSEMBLY 0 UNDEPENDABILITY				
	SUBASSEMBLY	AND/OR	ELEMENT STATES		
	4.1	209.1	209.2	203.1	203.2 TOTAL
9.1	4.6	9.4	.0	62.6	2.0 78.1
9.2	.1	.1	.0	1.0	20.6 21.9
TOTAL	4.7	9.0	.0	63.7	22.7

PERCENTAGE CONTRIBUTION TO ASSEMBLY 203 UNAVAILABILITY

ASSEMBLY STATE	SURASSEMBLY AND/OR ELEMENT STATES	213.1	213.2	TOTAL
203.1		71.9	.1	72.0
203.2		.1	27.9	28.0
TOTAL		72.0	28.0	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 203 UNRELIABILITY

ASSEMBLY STATE	SURASSEMBLY AND/OR ELEMENT STATES	213.1	213.2	TOTAL
203.1		73.6	.0	73.6
203.2		.0	26.6	26.6
TOTAL		73.6	26.6	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 203 UNDEPENDABILITY

ASSEMBLY STATE	SURASSEMBLY AND/OR ELEMENT STATES	213.1	213.2	TOTAL
203.1		72.1	.1	72.2
203.2		.1	27.6	27.7
TOTAL		72.2	27.7	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 213 UNAVAILABILITY

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	103.1	103.2	TOTAL
213.1		7.9	21.6	.0	1.1	.0	39.4	.2	.1	.0	1.5	.1	71.0
213.2		.0	.0	.0	.0	2.7	.0	.0	17.4	1.4	.0	6.6	24.2
TOTAL		7.9	21.6	.0	1.1	2.8	39.5	.2	17.4	1.4	1.5	6.7	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 213 UNRELIABILITY

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	103.1	103.2	TOTAL
213.1		10.6	29.4	.1	1.7	.0	26.4	.4	.0	.0	1.9	.0	72.9
213.2		.0	.0	.0	.0	5.1	.0	.0	9.0	3.8	.0	9.2	27.1
TOTAL		10.6	29.4	.1	1.7	5.1	26.4	.4	9.0	3.8	1.9	9.2	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 213 UNDEPENDABILITY

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	103.1	103.2	TOTAL
213.1		7.9	21.6	.0	1.1	.0	39.4	.2	.1	.0	1.5	.1	71.0
213.2		.0	.0	.0	.0	2.7	.0	.0	17.4	1.4	.0	6.6	24.2
TOTAL		7.9	21.6	.0	1.1	2.8	39.4	.2	17.4	1.4	1.5	6.7	

SECTION III

RESULTS OF ANALYSIS OF THE KA-BAND SATCOM SET

BASED ON THE FLIGHT TEST DATA

FLIGHT TEST INPUT DATA TABULATION

ELEMENT DATA		CYCLES	USE, SEC	MYR, MRS	MYR, MRS
LABEL IDENTIFICATION					
4.0	SATCOM TERMINAL (PRIMARY POWER)	1	136000.000		
4.1	PRIMARY POWER FAILURE			.19200E+04	1.00
11.0	KA-BAND MODEM POWER CONTROL PANEL	1	4.200		
11.1	ALL KA-BAND LINKS INOPERATIVE			.99540E+04	.50
14.0	MODEM POWER CONTROL PANEL	1	4.200		
14.1	CPJ STOPS NO UPLINK, POINTER AND CRT EXCEPT FWD. LINK OR CINCNET	1	600.000	.2710E+03	1.00
21.0	IN ORBIT NAVIGATION SYSTEM	1	600.000	.14350E+03	1.00
21.1	COMMUNICATIONS CONTROL COMPUTER	1	600.000	.40650E+03	.50
22.0	COMMUNICATIONS RANGE AND RANGE-RATE DATA	1	4.200		
22.1	ANTENNA CONTROL/MONITORING (KA-BAND)	1	4.200	.64700E+03	2.00
41.0	ANTENNA POSITION (KA-BAND)	1	4.200	.10400E+05	1.00
41.1	ANTENNA POSITION FAILURE			.38500E+04	2.00
42.0	ANTENNA POSITION CONTROL/POWER (KA-BAND)	1	4.200	.64700E+03	1.00
42.1	ANTENNA POSITION CONTROL/POWER FAILURE			.10400E+05	2.00
43.0	KA-BAND POLARIZATION/POWER	1	4.200	.19200E+04	2.00
43.1	POLARIZATION/POWER FAILURE			.14100E+04	1.00
45.0	RECEIVER AND FUSE SENSOR (KA-BAND)	1	4.200	.99200E+04	1.00
45.1	RECEIVER AND FUSE SENSOR FAILURE			.19464E+04	1.00
46.0	SE NAVIGATION DECLASSIFICATION (KA-BAND)	1	4.200	.17620E+04	1.00
46.1	DECLASSIFICATION FAILURE IN KA-BAND OF NAVGUIDE			.5973E+03	2.00
115.0	TELETYPE UNIT TRANSMISSION AND RECEPTION	1	300.000	.08100E+03	.50
115.1	TELETYPE UNIT TRANSMISSION	1	4.200	.39240E+04	1.00
115.2	TELETYPE UNIT RECEPTION				
115.3	VOCALIZER	0	4.200		
116.0	VOCALIZER MALFUNCTION	1	4.200	.99540E+04	.50
117.0	CODE/REVERB	1	600.000	.35240E+04	.50
117.1	CODE/REVERB MALFUNCTION				
118.0	TAPE-READER	1	300.000	.08100E+03	.50
118.1	TAPE-READER READER MALFUNCTION	1	4.200	.39240E+04	1.00
119.0	LINE PRINTER	1	600.000	.99540E+04	.50
119.1	LINE PRINTER MALFUNCTION				
121.0	ASYMPTOTIC RANGE GATES	1	600.000	.99540E+04	.50
121.1	ASYMPTOTIC RANGE GATES (LARS NO SSMP ANTENNA POINTING)	1	600.000	.35240E+04	.50
122.0	CL VARIATION/RANGE GATES	1	600.000	.35240E+04	.50
122.1	CL VARIATION/RANGE GATES (LARS NO SSMP ANTENNA POINTING)	1	4.200	.35240E+04	.50
141.0	FORWARD UPLINK INPUT MUX, ENCODING AND INTERLEAVING	1	4.200	.35240E+04	.50
141.1	FORWARD UPLINK INPUT MUX, ENCODING AND INTERLEAVING				
142.0	CONF. UPLINK INPUT MUX, ENCODING AND INTERLEAVING	1	4.200	.35240E+04	.50
142.1	CONF. UPLINK INPUT MUX, ENCODING AND INTERLEAVING				
143.0	CONF. RATE 1/2 ENCODE	1	4.200	.99540E+04	.50
143.1	CONF. RATE 1/2 ENCODE				
144.0	CONF. RATE 1/2 ENCODE	1	4.200	.99540E+04	.50
144.1	CONF. RATE 1/2 ENCODE				
145.0	UPLINK DATA TIMING	1	4.200	.99540E+04	.50
145.1	UPLINK DATA TIMING				
146.0	CONTROL PANEL OUTPUT BUFFER	1	4.200	.99540E+04	.50
146.1	CONTROL PANEL OUTPUT BUFFER				
151.0	KA-BAND MODEM POWER CONTROL PANEL (FORWARD LINK)	1	4.200	.99540E+04	.50
151.1	KA-BAND MODEM POWER CONTROL PANEL (FORWARD LINK)			.17620E+04	.50

ELEMENT DATA		CYCLES			USE/SEC		MYBF.HRS		MYTP.HRS	
LABEL	DESCRIPTION									
153.0	KA-RAND MODEM CONTROL PANEL (CONFERENCE LINK)									
153.1	KA-RAND CONFERENCE LINK INOPERATIVE									
154.0	KA-RAND MODEM CONTROL PANEL (FORWARD AND CONFERENCE COMMON FUNCTIONS)									
154.1	FORWARD AND CONFERENCE LINKS INOPERATIVE									
155.0	KA-RAND MODEM CONTROL PANEL (COMMON FUNCTIONS)									
155.1	ALL KA-RAND LINKS INOPERATIVE									
156.0	NO KA-RAND R/R AND CONF. LINKS AND FWD. LINK DEGRADED									
156.1	MODEM CONTROL									
157.0	MODEM CONTROL									
157.1	MODEM CONTROL									
158.0	NO CPU DROOPER TO COMMUNICATIONS TERMINAL GROUP									
158.1	MODEM CONTROL									
159.0	FORWARD SYNC DATA MUX									
159.1	NO FREQUENCY SYNC AND NO FORWARD DOWNLINK									
160.0	FORWARD DATA BUFFER AND DEMUX									
160.1	NO FORWARD DOWNLINK									
161.0	DATA 1/2 OFFCODE									
161.1	NO RATE 1/2 ON CONFERENCE DOWNLINK									
162.0	CONFERENCE DECODE TIMING, BUFFER AND DEMUX									
162.1	NO CONFERENCE DOWNLINK									
163.0	FORWARD-RECK DATA BUFFER									
163.1	NO REPORT-BACK DOWNLINK									
164.0	SYNC DATA DECODED									
164.1	NO FREQUENCY SYNCHRONIZATION									
165.0	UT - TIME BUFFER									
165.1	NO MASTER CLOCK LOAD									
166.0	MMV TIME SIGNAL									
166.1	NO/INCORRECT MMV TIME OUTPUT									
167.0	TIME TIME SIGNAL									
167.1	NO/INCORRECT TIME TIME OUTPUT									
168.0	MASTER CLOCK									
168.1	NO UPLINK, NO CONFERENCE DOWNLINK AND NO REPORT-BACK DOWNLINK									
169.0	NO/FA-T COUNTER									
169.1	NO UPLINK									
170.0	MEASURED DOPPLER COUNTER									
170.1	NO UPLINK, POSSIBLE CPU STOP									
171.0	RECEIVED LOCK AND CONTROL PANEL BUFFER, TIME SYNC									
171.1	NO DOWNLINK									
172.0	DOWNLINK DATA DEMUX									
172.1	NO DOWNLINK DATA, TIME PROBE ONLY									
173.0	CONTROL PANEL INPUT BUFFER									
173.1	NO DOWNLINK DATA, TIME PROBE ONLY, NO SYNC STATUS DISPLAY									
174.0	DOWNLINK TRACKING CONTROLLER									
174.1	NO CONFERENCE DOWNLINK AND NO REPORT-BACK DOWNLINK									
175.0	DATA MUX									
175.1	NO REPORT-BACK DOWNLINK									
176.0	CPU SYNC BUFFER									
176.1	NO SYNC STATUS DISPLAY									
177.0	UPLINK CLOCK									
177.1	NO UPLINK									
178.0	UPLINK CODE GENERATOR									
178.1	NO REPORT UPLINK AND NO COVERED UPLINK									
179.0	LFS-479, FE/CMD MOOS									
179.1	NO UPLINK, NO CONFERENCE DOWNLINK AND NO REPORT-BACK DOWNLINK									
180.0	DOWNLINK CLOCK AND DOWN/CROSS-LINK MIX									
180.1	CGU-01									
181.0	CGU-02									
181.1	CGU-03									
182.0	CGU-04									
182.1	CGU-05									

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ELEMENT DATA		CYCLES				USE, SEC		MYTR, HRS		MYTR, HRS	
LABEL	IDENTIFICATION										
952.1	KA-BAND EXCITATION										
951.0	KA-BAND RF MODULE										
951.1	INTERMEDIATE POWER AMPLIFIER FAILURE										
951.2	HIGH POWER AMPLIFIER FAILURE										
952.0	HIGH VOLTAGE POWER SUPPLY										
952.1	INSUFFICIENT HIGH VOLTAGE POWER										
953.0	LOCAL CONTROL/MONITOR (KA-BAND TRANSMITTER)										
953.1	LOCAL CONTROL/MONITOR FAILURE										
954.0	KA-BAND TRANSMITTER REMOTE CONTROL										
954.1	TRANSMITTER REMOTE CONTROL FAILURE										
914.0	TELETYPE ADAPTER										
914.1	TTY MALFUNCTION										
915.0	TELETYPE WRITER										
915.1	TTY MALFUNCTION										
916.0	MODERATOR										
916.1	MODERATOR MALFUNCTION										

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ELEMENT DATA		CYCLES USE SEC RELIABILITY AVAILABILITY MTBF HRS				
LABEL IDENTIFICATION						
952.1	NOTINSUFFICIENT KA-BAND EXCITATION			.907205E-06	.777303E-03	1.000
961.0	RF MODULE			.999995E+00	.990433E+00	
961.1	INTERMEDIATE POWER AMPLIFIER FAILURE	1	4.200	.2116+2E-05	.542944E-02	1.000
961.2	HIGH POWER AMPLIFIER FAILURE			.2419+1E-05	.413964E-02	2.000
962.0	HIGH VOLTAGE BJTREF SUPPLY	1	4.200	.999995E+00	.911513E+00	
962.1	NOTINSUFFICIENT HIGH VOLTAGE POWER			.544110E-05	.154137E-01	4.000
963.0	LOCAL CONTROL/MONITOR (KA-BAND TRANSMITTER)	1	4.200	.999995E+00	.996636E+00	
963.1	LOCAL CONTROL/MONITOR FAILURE			.19+121E-05	.376394E-02	1.000
964.0	KA-BAND TRANSMITTER REMOTE CONTROL	1	4.200	.100900E+01	.999304E+00	
964.1	TRANSMITTER REMOTE CONTROL FAILURE			.107050E-05	.917531E-04	1.000
914.0	TELETYPEWRITER B	1	4.200	.999995E+00	.939642E+00	
914.1	TTY MALFUNCTION			.1577+5E-05	.170804E-02	1.000
915.0	TELETYPEWRITER S	0	4.200	.100000E+01	.998692E+00	
915.1	TTY MALFUNCTION			C	.110904E-02	1.000
916.0	JOINDER	1	4.200	.999995E+00	.999431E+00	
916.1	V-20000 MALFUNCTION			.662126E-06	.567376E-03	1.000

ANALYSIS RESULTS FOR A 10-HOUR MISSION UTILIZING ALL COMMUNICATION LINKS

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 2

KA-BAND SATCOM SET (SUMMARY)

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF RESTORE SUBASSEMBLY CYCLES USE SEC OCCURRENCE TIME MRS UNAVAILABILITY	IDENTIFICATION
4.1 ENT	136000.00 .51706E-02	1.00 .51827E-03 PRIMARY POWER FAILURE
299.1 CWD	1 650.00 .20192E-02	.92 .12965E-01 UNABLE TO START SYSTEM
299.2 CWD	1 650.00 .63904E-04	.50 .14961E-03 ALTERNATE INITIALIZATION MODE REQUIRED
299.3 CWD	136000.00 .10164E+00	1.52 .56104E-01 ALL KA-BAND LINKS INOPERATIVE
299.4 CWD	136000.00 .56457E-02	1.99 .64572E-02 COMBINATION OF 1 (2) INOPERATIVE AND 2 (1) DEGRADED KA-BAND LINKS
299.5 CWD	136000.00 .11731E-01	.99 .67525E-02 ALL KA-BAND LINKS DEGRADED
299.6 CWD	136000.00 .60416E-01	3.15 .51012E-01 TWO KA-BAND LINKS INOPERATIVE
299.7 CWD	136000.00 .25110E-03	1.96 .13921E-02 ONE INOPERATIVE AND ONE DEGRADED KA-BAND LINK
299.8 CWD	136000.00 .20333E-01	1.92 .16776E-01 TWO KA-BAND LINKS DEGRADED
299.9 CWD	136000.00 .97103E-02	.60 .35454E-01 ONE KA-BAND LINK INOPERATIVE
299.9 CWD	136000.00 .97071E-02	.95 .28970E-01 ONE KA-BAND LINK DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	ATRO. MRS.	ATTR. MRS.	IDENTIFICATION
0	.5793652698			NORMAL OPERATION
1	.13319E+00	.06412E+01	1.501	ALL KA-BAND LINKS INOPERATIVE
2	.54334E+02	1.52117E+03	1.898	COMBINATION OF 1 (2) INOPERATIVE AND 2 (1) DEGRADED KA-BAND LINKS
3	.103729E-01	9.83111E+02	.873	ALL KA-BAND LINKS DEGRADED
4	.584294E-01	1.80045E+02	3.147	TWO KA-BAND LINKS INOPERATIVE
5	.15149E-02	6.17645E+03	1.955	ONE INOPERATIVE AND ONE DEGRADED KA-BAND LINK
6	.206782E-01	6.05649E+02	1.921	TWO KA-BAND LINKS DEGRADED
7	.243076E-01	4.12445E+02	.603	ONE KA-BAND LINK INOPERATIVE
8	.199772E-01	5.32539E+02	.963	ONE KA-BAND LINK DEGRADED
9	.423371E-01	3.04945E+01	1.561	OTHER STATES
COMBINED				

ASSEMBLY 2 OPERATES FOR 36000.000 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .929091326, RELIABILITY IS .7215080290 AND DEPENDABILITY IS .6703452698.
129.65 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 90.96 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

SYSTEM DATA

LABEL	AVAILABILITY	2 KA-BAND SATCOM SET (SUMMARY)		IDENTIFICATION
		RELIABILITY	DEPENDABILITY	
2.0	.92909E+00	.72151E+00	.67035E+00	NORMAL OPERATION
2.1	.70089E-01	.11657E+00	.13515E+00	ALL KA-BAND LINKS INOPERATIVE
2.2	.81985E-03	.65439E-02	.66313E-02	COMBINATION OF 1 (2) INOPERATIVE AND 2 (1) DEGRADED KA-BAND LINKS
2.3	.13974E-02	.10957E-01	.10373E-01	ALL KA-BAND LINKS DEGRADED
2.4	.27610E-01	.56329E-01	.59029E-01	TWO KA-BAND LINKS INOPERATIVE
2.5	.27881E-04	.16124E-02	.15150E-02	ONE INOPERATIVE AND ONE DEGRADED KA-BAND LINK
2.6	.76024E-02	.15377E-01	.20679E-01	TWO KA-BAND LINKS DEGRADED
2.7	.27744E-02	.23911E-01	.24303E-01	ONE KA-BAND LINK INOPERATIVE
2.8	.36336E-02	.19601E-01	.19377E-01	ONE KA-BAND LINK DEGRADED
2.9	.17443E-02	.30769E-01	.42337E-01	OTHER STATES

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 209

KA-BAND SATCOM SET (SYSTEM INITIALIZATION)

ASSEMBLY 209 IS USED BY ASSEMBLY(S) 6 7 8 2

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF RESTORE		SUBASSEMBLY		IDENTIFICATION	
	CYCLES	USE, SEC	OCCURRENCE	TIME, HRS	UNAVAILABILITY	
20.1 C-M	1	600.00	.15702E-02	.92	.8.651E-02	NO/INCORRECT RANGE AND/OR RANGE-RATE DATA
12.1 C-M	1	600.00	.64035E-04	.50	.19209E-03	NO KA-227 RANGE AND/OR RANGE RATE
104.1 C-M	1	360.00	.10404E-03	.50	.85004E-03	UNABLE TO START SYSTEM
104.2 C-M	1	360.00	.35545E-04	.14	.77203E-08	ALTERNATE INITIALIZATION MODE REQUIRED
147.1 C-M	65	4.20	.43038E-05	1.00	.36722E-02	UNABLE TO START SYSTEM

COMMUNICATIONS CONTROL
ANT ALIGNMENT
KA-BAND MODEM

ASSEMBLY STATISTICS

STATE	PROBABILITY	ATQO, HRS.	ATTR, HRS.	IDENTIFICATION
0	.3847202969			NORMAL OPERATION
1	.140774E-01	8.94115E+01	.917	UNABLE TO START SYSTEM
2	.252291E-03	2.86862E+03	.500	ALTERNATE INITIALIZATION MODE REQUIRED
3	.211345E-10			OTHER STATES
COMBINE		8.70736E+01	.911	

ASSEMBLY 209 OPERATES FOR 800.700 HOURS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .9869457711. RELIABILITY IS .9974968607 AND DEPENDABILITY IS .9847782969.
15.73 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 31.70 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 208

KA-BAND SATCOM SET (SYSTEM OPERATION)

ASSEMBLY 208 IS USED BY ASSEMBLY(S) 2

SUBASSEMBLY STATE DATA

LABEL	CYCLES USE	SEC	NO. OF TIME OF PROB. OF	RESTORE	SUBASSEMBLY	IDENTIFICATION
204.1 CWP	5924	4.20	.22022E-06	1.42	.10544E-01	ALL KA-BAND LINKS INOPERATIVE
204.2 CWP	5924	4.20	.17379E-06	3.70	.63311E-04	FORWARD AND CONFERENCE LINKS INOPERATIVE AND R/R LINK DEGRADED
204.3 CWP	5924	4.20	.17296E-05	.97	.80645E-03	R/R AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
204.4 CWP	5924	4.20	.27476E-05	.74	.13752E-02	ALL KA-BAND LINKS DEGRADED
204.5 CWP	5924	4.20	.11756E-04	3.17	.25166E-01	KA-BAND FORWARD AND CONFERENCE LINKS INOPERATIVE
204.6 CWP	5924	4.20	.19244E-06	.50	.12573E-03	KA-BAND REPORT-RACK AND CONFERENCE LINKS INOPERATIVE
204.7 CWP	5924	4.20	.10669E-05	2.54	.73364E-02	KA-BAND FORWARD AND CONFERENCE LINKS DEGRADED
204.8 CWP	5924	4.20	.21372E-05	.50	.80564E-03	KA-BAND REPORT-RACK AND CONFERENCE LINKS DEGRADED
205.1 CWP	240	21.05	.10227E-04	.91	.12780E-02	KA-BAND FORWARD MESSAGE AND CONFERENCE LINKS DEGRADED
205.2 CWP	240	21.00	.40905E-05	.92	.60096E-03	KA-BAND FORWARD MESSAGE DEGRADED
206.1 CWP	720	12.60	.22430E-05	.50	.10401E-02	KA-BAND REPORT-RACK MESSAGE INOPERATIVE
206.2 CWP	720	12.60	.51935E-05	1.00	.14454E-02	KA-BAND REPORT-RACK MESSAGE DEGRADED
207.1 CWP	12	400.00	.42363E-03	.50	.84904E-03	KA-BAND CONFERENCE INOPERATIVE
207.2 CWP	12	400.00	.56079E-03	.95	.20603E-02	KA-BAND CONFERENCE DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	AT80, WPS.	ATTR, WPS.	IDENTIFICATION
0	.5974225030			NORMAL OPERATION
1	.147101E+00	9.13957E+01	1.516	ALL KA-BAND LINKS INOPERATIVE
2	.944044E-12	1.79471E+03	1.844	COMBINATION OF 1 (2) INOPERATIVE AND 2 (1) DEGRADED KA-BAND LINKS
3	.140744E-01	8.47409E+02	.879	ALL KA-BAND LINKS DEGRADED
4	.726255E-01	1.59377E+02	3.147	TWO KA-BAND LINKS INOPERATIVE
5	.225400E-02	3.97885E+04	1.455	ONE INOPERATIVE AND ONE DEGRADED KA-BAND LINK
6	.293241E-01	4.71172E+02	1.421	TWO KA-BAND LINKS DEGRADED
7	.149455E-01	1.02270E+03	.603	ONE KA-BAND LINK INOPERATIVE
8	.289380E-01	1.14349E+03	.963	ONE KA-BAND LINK DEGRADED
9	.459234E-01	1.66040E+01	1.604	OTHER STATES
COMBINF.				

ASSEMBLY 208 OPERATES FOR 7600.000 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .7794261940. RELIABILITY IS .7609677435 AND DEPENDABILITY IS .5934225030.
406.54 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 105.44 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 207

KA-BAND MODEN GROUP (CONFERENCE)

ASSEMBLY 207 IS USED BY ASSEMBLY(S) 200

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF POOR. OF RESTORE SUBASSEMBLY		IDENTIFICATION
	CYCLES USE	TIME, HRS	
217.1 CWP	214	6.20 .19475E-05	.50 KA-BAND CONFERENCE CYCLE INOPERATIVE
217.2 CWP	214	6.20 .26257E-05	.95 KA-BAND CONFERENCE CYCLE DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	ATTN, HRS.	ATTN, HRS.	IDENTIFICATION
0	.9951041552			NORMAL OPERATION
1	.125926E-02	5.89222E+02	.503	KA-BAND CONFERENCE INOPERATIVE
2	.261954E-02	4.65094E+02	.954	KA-BAND CONFERENCE DEGRADED
3	.131944E-05			OTHER STATES
COMBINED		2.53632E+02	.066	

ASSEMBLY 207 OPERATES FOR 490.000 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .9970999465, RELIABILITY IS .9990153431 AND DEPENDABILITY IS .9951081552.
 .05 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 12 FUNCTIONAL CYCLES
 AND A DELAY OF 29.96 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 217

KA-BAND MODEM GROUP (CONFERENCE CYCLE)

ASSEMBLY 217 IS USED BY ASSEMBLY(S) 207

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF RESTORE SUBASSEMBLY		IDENTIFICATION	
	CYCLES USE	SEC OF CONFERENCE TIME, HRS	UNAVAILABILITY	
103.1 Cmp	1	4.20	19915-05	.50
103.2 Cmp	1	4.20	26351F-05	.95
			ASISSE-03	INOPERATIVE CONFERENCE LINK
			21638F-02	DEGRADED CONFERENCE LINK
				KA-BAND MODEM
				KA-BAND MODEM

ASSEMBLY STATES

STATE	PROBABILITY	ATTR, HRS.	ATTR, HRS.	IDENTIFICATION
0	.9970919341			NORMAL OPERATION
1	.951760E-03	5.87013E+02	.503	KA-BAND CONFERENCE CYCLE IMPERATIVE
2	.705463E-02	4.43470F+02	.956	KA-BAND CONFERENCE CYCLE DEGRADED
3	.176374E-05			OTHER STATES
COMBINED		2.52735E+02	.822	

ASSEMBLY 217 OPERATES FOR 6.200 SECONDS TO COMPLETE ITS FUNCTION.

THE AVAILABILITY IS .9970919341, RELIABILITY IS .999953839 AND DEPENDABILITY IS .9978918341.

.62 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 214 FUNCTIONAL CYCLES AND A DELAY OF 24.64 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 206

KA-BAND MODEM GROUP (REPORT-BACK MESSAGE)

ASSEMBLY 206 IS USED BY ASSEMBLY(S) 206

SUBASSEMBLY STATE DATA

NO. OF TIME OF PROB. OF RESIDUE SUBASSEMBLY		CYCLES USED PER OCCURRENCE TIME HRS UNAVAILABILITY IDENTIFICATION	
LABEL			
216.1 CWD	3	4.20 .26154E-05	.50 .10417E-02 KA-BAND REPORT-BACK CYCLE INOPERATIVE
216.2 CWD	3	4.20 .17333E-05	1.00 .14469E-02 KA-BAND REPORT-BACK CYCLE DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	ATTR, HRS.	ATTR, HRS.	IDENTIFICATION
0	.3374605012			NORMAL OPERATION
1	.104779E-02	4.40113E+02	.502	KA-BAND REPORT-BACK MESSAGE INOPERATIVE
2	.143956E-02	6.75222E+02	1.000	KA-BAND REPORT-BACK MESSAGE DEGRADED
3	.156515E-05			OTHER STATES
CONTINUED		2.40595E+02	.794	

ASSEMBLY 206 OPERATES FOR 12.600 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .9974779431. RELIABILITY IS .0099879266 AND DEPENDABILITY IS .9974605012.
 1.44 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 720 FUNCTIONAL CYCLES
 AND A DELAY OF 3.92 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 216

KA-BAND MODEM GROUP (REPORT-RACK CYCLE)

ASSEMBLY 216 IS USED BY ASSEMBLY(S) 206

ASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROGR. OF	CYCLES USE SEC	OCCURRENCE TIME	MRS	UNAVAILABILITY	IDENTIFICATION
102.1 C4P	1	4.20	.24354E-05	.50	.10412E-02	INOPERATIVE REPORT-RACK LINK
102.2 C4P	1	4.20	.17347E-05	1.00	.14445E-02	DEGRADED REPORT-BACK LINK
						KA-BAND MODEM
						KA-BAND MODEM

ASSEMBLY STATES

STATE	PROBABILITY	ATRO. MRS.	ATTR. MRS.	IDENTIFICATION
0	.3974656432			NORMAL OPERATION
1	.104404E-02	4.70919E+02	.502	KA-BAND REPORT-RACK CYCLE INOPERATIVE
2	.144467E-02	6.71099E+02	1.000	KA-BAND REPORT-RACK CYCLE DEGRADED
3	.154425E-05			OTHER STATES
COMBINED		2.79462E+02	.704	

ASSEMBLY 216 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.

THE AVAILABILITY IS .9974656432, RELIABILITY IS .9999958113 AND DEPENDABILITY IS .9974656432.

2.53 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES

AND A DELAY OF 3.14E MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 205

KA-BAND MODERN GROUP (FORWARD MESSAGE)

ASSEMBLY 205 IS USED BY ASSEMBLY(S) 208

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF RESIDUE SUBASSEMBLY		IDENTIFICATION
	CYCLES USE	SEC OCCURRENCE TIME	
215.1 CND	5	4.20 .23476E-05	.81 .12777E-03 KA-BAND FORWARD CYCLE IMPERATIVE
215.2 CND	5	4.20 .81419E-06	.92 .60173E-03 KA-BAND FORWARD CYCLE DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	AIRB, MRS.	ATTB, MRS.	IDENTIFICATION
0	.991060170			NORMAL OPERATION
1	.124910E-02	5.70404E+02	.814	KA-BAND FORWARD MESSAGE IMPERATIVE
2	.576025E-03	1.42956E+03	.917	KA-BAND FORWARD MESSAGE DEGRADED
3	.740445E-04			OTHER STATES
COMBINED			.967	

ASSEMBLY 205 OPERATES FOR 21.000 SECONDS TO COMPLETE ITS FUNCTION.
 THE RELIABILITY IS .991060170, RELIABILITY IS .999956928 AND DEPENDABILITY IS .9981060330.
 .45 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 240 FUNCTIONAL CYCLES
 AND A DELAY OF 25.60 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 215

KA-BAND MODEM GROUP (FORWARD CYCLE)

ASSEMBLY 215 IS USED BY ASSEMBLY(S) 205

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF POSS. OF RESTORE SUBASSEMBLY		CYCLES USE, SEC OCCURRENCE TIME, HRS UNAVAILABILITY IDENTIFICATION		
101.1 CND	1	4.20	.20444E-05	.91	.12705E-02 INOPERATIVE FORWARD LINK
101.2 CND	1	4.20	.12064E-06	.92	.60250E-03 DEGRADED FORWARD LINK
					KA-BAND MODEM
					KA-BAND MODEM

ASSEMBLY STATES

STATE	DETERMINABILITY	ATPC, HRS.	ATTP, HRS.	IDENTIFICATION
0	.998159143			NORMAL OPERATION
1	.124072E-02	5.60765E+02	.814	KA-BAND FORWARD CYCLE INOPERATIVE
2	.402543E-03	1.42556E+03	.917	KA-BAND FORWARD CYCLE DEGRADED
3	.771171E-06			OTHER STATES
COMBINED		4.07049E+02	.947	

ASSEMBLY 215 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .998159143. RELIABILITY IS .9999971340 AND DEPENDABILITY IS .998159143.
1.44 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 25.44 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 204

KA-RAND SATCOM SET (COMMON FUNCTIONS)

ASSEMBLY 204 IS USED BY ASSEMBLY(S) 208

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF REPAIR OF CYCLES USE SFC OCCURRENCE	RESTORE TIME, HRS	SUBASSEMBLY UNAVAILABILITY	IDENTIFICATION	
14.1 ENT	1	4.20	4.034E-05	1.00	CPU STOP: NO UPLINK, PRINT, R AND CRT EXCEPT FMO, LINK OR CINCNET
200.1 C4P	1	4.20	1.435E-04	1.50	ALL KA-RAND LINKS INOPERATIVE
200.2 C4P	1	4.20	9.965E-07	3.70	FORWARD AND CONFERENCE LINKS INOPERATIVE AND R/B LINK DEGRADED
200.3 C4P	1	4.20	1.115E-05	.97	R/B AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
200.4 C4P	1	4.20	2.031E-05	.78	ALL KA-RAND LINKS DEGRADED
200.5 C4P	1	4.20	1.431E-04	3.17	KA-RAND FORWARD AND CONFERENCE LINKS INOPERATIVE
200.6 C4P	1	4.20	3.569E-06	.50	KA-RAND REPORT-RACK AND CONFERENCE LINKS INOPERATIVE
200.7 C4P	1	4.20	3.565E-05	2.58	KA-RAND FORWARD AND CONFERENCE LINKS DEGRADED
200.8 C4P	1	4.20	2.249E-05	.50	KA-RAND REPORT-RACK AND CONFERENCE LINKS DEGRADED

ASSEMBLY STATES

STATE	RELIABILITY	ATRO, HRS.	ATTR. HRS.	IDENTIFICATION	
0	.0445549115				NORMAL OPERATION
1	.18587E-01	5.29767E+01	1.424		ALL KA-RAND LINKS INOPERATIVE
2	.63476E-04	6.71319E+03	3.636		FORWARD AND CONFERENCE LINKS INOPERATIVE AND R/B LINK DEGRADED
3	.80789E-03	1.13319E+03	.973		R/B AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
4	.13770E-02	4.24512E+02	.785		ALL KA-RAND LINKS DEGRADED
5	.25169E-01	4.40919E+01	3.166		KA-RAND FORWARD AND CONFERENCE LINKS INOPERATIVE
6	.12591E-03	3.45244E+03	.500		KA-RAND REPORT-RACK AND CONFERENCE LINKS INOPERATIVE
7	.74842E-02	3.80406E+02	2.542		KA-RAND FORWARD AND CONFERENCE LINKS DEGRADED
8	.494611E-03	5.47547E+02	.500		KA-RAND REPORT-RACK AND CONFERENCE LINKS DEGRADED
9	.19628E-03				OTHER STATES
COMBINED		2.57936E+01	2.315		

ASSEMBLY 204 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .9445549115, RELIABILITY IS .9999547782 AND DEPENDABILITY IS .9445549115.
923.27 HALF-FUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 5928 FUNCTIONAL CYCLES
AND A PLAY OF 59.52 MINUTES IS EXPECTED WHEN A HALF-FUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 200

KA-BAND SATCOM SET (COMMON FUNCTIONS)

ASSEMBLY 200 IS USED BY ASSEMBLY(S) 211 212 213 204

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF RESIDUE SUBASSEMBLY	CYCLES USE+SEC OCCURANCE TIME+HRS UNAVAILABILITY	IDENTIFICATION
10A.1 CMP	1	4.20 .54930E-05	.51 .25163E-02 ALL KA-BAND LINKS INOPERATIVE
10A.2 CMP	1	4.20 .15540E-10	.91 .24652E-05 FORWARD AND CONFERENCE LINKS INOPERATIVE AND R/R LINK DEGRADED
10A.3 CMP	1	4.20 .11720E-06	.53 .50544E-04 R/R AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
10A.4 CMP	1	4.20 .23050E-05	.51 .94514E-03 ALL KA-BAND LINKS DEGRADED
10A.5 CMP	1	4.20 .64274E-05	.51 .27314E-02 KA-BAND FORWARD AND CONFERENCE LINKS INOPERATIVE
10A.5 CDP	1	4.20 .31192E-06	.10 .14044E-03 KA-BAND REPORT-RACK AND CONFERENCE LINKS INOPERATIVE
10A.7 CDP	1	4.20 .20752E-05	.10 .14044E-03 KA-BAND REPORT-RACK AND CONFERENCE LINKS INOPERATIVE
10A.9 CDP	1	4.20 .11713E-06	.50 .49717E-04 KA-BAND REPORT-RACK AND CONFERENCE LINKS INOPERATIVE
10.1 CDP	1	4.20 .17455E-04	1.66 .13447E-01 ALL KA-BAND LINKS INOPERATIVE
10.2 CDP	1	4.20 .47179E-07	4.06 .37923E-04 FORWARD AND CONFERENCE LINKS INOPERATIVE
10.3 CDP	1	4.20 .13652E-05	.99 .14507E-03 R/R AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
10.4 CDP	1	4.20 .62349E-06	1.25 .53410E-03 ALL KA-BAND LINKS DEGRADED
10.5 CDP	1	4.20 .91417E-05	3.45 .24123E-01 KA-BAND FORWARD AND CONFERENCE LINKS INOPERATIVE
10.6 CDP	1	4.20 .17304E-05	3.01 .47953E-02 KA-BAND FORWARD AND CONFERENCE LINKS DEGRADED
10.7 CDP	1	4.20 .23011E-05	.50 .95141E-03 KA-BAND REPORT-RACK AND CONFERENCE LINKS DEGRADED

ASSEMBLY STATES

STATE	POBABILITY	ATTR. HRS.	ATTR. HRS.	IDENTIFICATION
1	.3454105957			NORMAL OPERATION
2	.155165E-01	6.35606E+01	1.500	ALL KA-BAND LINKS INOPERATIVE
3	.472010E-04	1.17059E+04	3.696	FORWARD AND CONFERENCE LINKS INOPERATIVE AND R/R LINK DEGRADED
4	.964143E-03	1.04773E+01	.973	R/R AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
5	.145560E-02	3.94037E+02	.745	ALL KA-BAND LINKS DEGRADED
6	.261579E-01	7.06421E+01	3.166	KA-BAND FORWARD AND CONFERENCE LINKS INOPERATIVE
7	.133407E-03	3.54514E+03	.500	KA-BAND REPORT-RACK AND CONFERENCE LINKS INOPERATIVE
8	.741539E-02	3.29103E+02	2.592	KA-BAND REPORT-RACK AND CONFERENCE LINKS DEGRADED
9	.360555E-03	5.09474E+02	.500	KA-BAND REPORT-RACK AND CONFERENCE LINKS DEGRADED
COMBINE		2.64233E+01	2.408	OTHER STATES

ASSEMBLY 200 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .9464521603, RELIABILITY IS .9999565064 AND DEPENDABILITY IS .9464109957.
 51.59 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
 AND A DELAY OF 72.33 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 39

KA-BAND ANTENNA AND TERMINAL GROUP COMMON FUNCTIONS

ASSEMBLY 39 IS USED BY ASSEMBLY(S) 200

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF		SUBASSEMBLY	IDENTIFICATION	
	CYCLES USE	SEC OCCURRENCE TIME		UNAVAILABILITY	
40.1 CWP	1	4.20 .46431E-05	1.74	.62927E-02	NO KA-BAND TRANSMISSION AND RECEPTION
40.2 CWP	1	4.20 .10705E-05	2.00	.18234E-03	DEGRADED KA-BAND TRANSMISSION AND RECEPTION
40.3 CWP	1	4.20 .01825E-05	1.53	.74397E-02	NO KA-BAND TRANSMISSION AND RECEPTION
40.4 CWP	1	4.20 .27254E-10	3.93	.35101E-04	NO KA-BAND TRANSMISSION AND DEGRADED RECEPTION
40.5 CWP	1	4.20 .11211E-05	.99	.44609E-03	NO KA-BAND RECEPTION
40.6 CWP	1	4.20 .63213E-05	.89	.37946E-03	DEGRADED KA-BAND TRANSMISSION AND RECEPTION
40.7 CWP	1	4.20 .06931E-05	3.45	.24541E-01	NO KA-BAND TRANSMISSION
40.8 CWP	1	4.20 .19070E-05	3.01	.48666E-02	DEGRADED KA-BAND TRANSMISSION
40.9 CWP	1	4.20 .24154E-05	.50	.98542E-03	DEGRADED KA-BAND RECEPTION

ASSEMBLY STATES

STATE	RELIABILITY	ATPD, MRS.	ATTR, MRS.	IDENTIFICATION	
				UNAVAILABILITY	
0	.354817895				NORMAL OPERATION
1	.136595E-01	9.07271E+01	1.661		ALL KA-BAND LINKS INOPERATIVE
2	.140804E-04	1.33824E+04	4.057		FORWARD AND CONFERENCE LINKS INOPERATIVE AND P/B LINK DEGRADED
3	.146956E-03	1.09524E+03	.931		P/B AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
4	.511752E-03	1.69272E+03	1.251		ALL KA-BAND LINKS DEGRADED
5	.241311E-01	1.27610E+02	3.453		KA-BAND FORWARD AND CONFERENCE LINKS INOPERATIVE
6	.172648E-02	6.74200E+02	3.906		KA-BAND FORWARD AND CONFERENCE LINKS DEGRADED
7	.357547E-03	5.07070E+02	.500		KA-BAND REPORT-BACK AND CONFERENCE LINKS DEGRADED
8	.424247E-03	4.14490E+01	2.705		OTHER STATES
COMBINED					

ASSEMBLY 19 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .954405179. RELIABILITY IS .999721217 AND DEPENDABILITY IS .954417895.
4.14 MILLISECONDS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 11.25 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 38

KA-BAND TERMINAL GROUP

ASSEMBLY 38 IS USED BY ASSEMBLY(S) 39

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF REPAIR. OF CYCLES USE SEC OCCURRENCE TIME, HRS	OF RESTORE TIME, HRS	SUBASSEMBLY UNAVAILABILITY	IDENTIFICATION		
31.1 CMO	1	4.20	.24192E-05	1.00	.20715E-02	COMMUNICATIONS TERMINAL POWER FAILURE
32.1 CMO	1	4.20	.17261E-05	2.13	.30428E-02	NO HEAT EXCHANGING
32.2 CMO	1	4.20	.10240E-06	.50	.12419E-03	DEGRADED HEAT EXCHANGING
34.1 CMO	1	4.20	.40383E-05	.77	.22477E-02	NO/INCORRECT FREQUENCY GENERATION
34.1 CMO	1	4.20	.30240E-06	1.00	.25446E-03	AUTO-TRACK RECEIVER FAILURE
34.2 CMO	1	4.20	.11213E-05	.94	.91477E-03	NO KA-BAND RECEPTION
34.3 CMO	1	4.20	.24172E-05	.50	.10351E-02	DEGRADED KA-BAND RECEPTION
35.1 CMO	1	4.20	.25124E-05	3.01	.51651E-02	DEGRADED RF POWER OUTPUT (50 WATTS MAX)
35.2 CMO	1	4.20	.97470E-05	3.54	.28043E-01	INSUFFICIENT RF POWER OUTPUT (LESS THAN 100 MW)
35.3 CMO	1	4.20	.12093E-05	2.00	.20125E-02	NO/INCORRECT DOPPLER CORRECTION
						KA-BAND TRANSMISSION
						KA-BAND TRANSMISSION
						KA-BAND TRANSMISSION

ASSEMBLY STATES

STATE	PROBABILITY	ATOP, HRS.	ATTP, HRS.	IDENTIFICATION
0	.3604376231			NORMAL OPERATION
1	.764789E-02	1.42562E+02	1.503	NO KA-BAND TRANSMISSION AND RECEPTION
2	.351444E-04	3.94722E+07	3.926	NO KA-BAND TRANSMISSION AND DEGRADED RECEPTION
3	.445150E-04	1.04958E+03	.930	NO KA-BAND RECEPTION
4	.340459E-04	1.51756E+03	.443	DEGRADED KA-BAND TRANSMISSION AND RECEPTION
5	.245408E-01	1.20359E+02	3.453	NO KA-BAND TRANSMISSION
6	.468932E-02	6.11766E+02	3.006	DEGRADED KA-BAND TRANSMISSION
7	.307715E-03	4.42456E+02	.500	OTHER STATES
8	.177662E-03	4.47672E+01	2.450	

ASSEMBLY 38 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .9804606001, RELIABILITY IS .9999760771 AND DEPENDABILITY IS .9804376231.
37.54 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 95.91 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

SENSITIVITY TABULATIONS

PERCENTAGE CONTRIBUTION TO ASSEMBLY 2 UNAVAILABILITY

ASSEMBLY
STATE
SUBASSEMBLY AND/OR ELEMENT STATES

	4.1	209.1	209.2	209.1	209.2	209.3	209.4	209.5	209.6	209.7	209.8	TOTAL
2.1	.7	17.5	.0	26.7	.0	.0	.0	.0	.2	.1	.1	4.2
2.2	.0	.0	.0	1.2	.0	.0	.0	.0	.0	.0	.0	1.2
2.3	.0	.0	.0	.0	1.2	.0	.0	.0	.0	.0	.0	2.0
2.4	.0	.1	.0	.2	.0	.0	31.3	.0	.1	.0	.0	31.7
2.5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2.6	.0	.0	.0	.0	.0	.0	.1	.0	10.5	.0	.0	10.6
2.7	.0	.0	.0	.0	.0	.0	.0	.0	.0	3.9	.0	4.0
2.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	5.2
TOTAL	.7	17.5	.3	28.5	1.2	1.4	33.0	.0	10.7	4.0	.3	5.3

PERCENTAGE CONTRIBUTION TO ASSEMBLY 2 UNRELIABILITY

ASSEMBLY
STATE
SUBASSEMBLY AND/OR ELEMENT STATES

	4.1	209.1	209.2	209.1	209.2	209.3	209.4	209.5	209.6	209.7	209.8	TOTAL
2.1	1.9	.3	.0	40.6	.2	.3	1.5	.0	.5	.7	.5	47.1
2.2	.0	.0	.0	.1	2.5	.0	.0	.0	.0	.0	.0	2.6
2.3	.0	.0	.0	.1	.0	3.4	.1	.0	.0	.0	.0	4.1
2.4	.0	.3	.0	1.1	.1	.1	19.0	.0	.2	.2	.2	21.8
2.5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.7
2.6	.0	.3	.0	.2	.0	.0	.1	.0	5.1	.1	.0	6.6
2.7	.0	.0	.0	.4	.0	.0	.2	.0	.1	8.9	.1	9.7
2.8	.0	.0	.0	.3	.0	.0	.1	.0	.0	.1	.0	7.5
TOTAL	1.9	.3	.0	42.7	2.8	6.3	22.0	.7	6.9	10.0	7.8	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 2 UNDEPENDABILITY

ASSEMBLY
STATE
SUBASSEMBLY AND/OR ELEMENT STATES

	4.1	209.1	209.2	209.1	209.2	209.3	209.4	209.5	209.6	209.7	209.8	TOTAL
2.1	1.7	4.6	.0	36.2	.2	.3	2.1	.1	.7	.4	.6	47.1
2.2	.0	.0	.0	.1	2.1	.0	.0	.0	.0	.0	.0	2.3
2.3	.0	.0	.1	.1	.0	3.2	.1	.0	.0	.0	.0	3.6
2.4	.1	.1	.0	1.4	.1	.1	21.1	.0	.3	.3	.3	23.8
2.5	.0	.0	.0	.0	.0	.0	.0	.5	.0	.0	.0	.5
2.6	.0	.0	.0	.3	.0	.0	.2	.0	4.5	.1	.1	7.2
2.7	.0	.0	.0	.4	.0	.0	.2	.0	.1	7.6	.1	9.5
2.8	.0	.0	.0	.3	.0	.0	.2	.0	.1	.1	.1	6.3
TOTAL	1.8	4.6	.1	39.7	2.5	5.4	23.9	.6	7.6	8.9	7.4	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 209 UNAVAILABILITY

ASSEMBLY STATE	SUBASSEMBLY	AND/OR ELEMENT	STATES	
	20.1	12.1	104.1	104.2 147.1 TOTAL
209.1	61.9	.0	6.4	.0 30.2 31.5
209.2	.0	1.4	.0	.0 .0 1.4
TOTAL	61.9	1.5	6.4	.0 30.2

PERCENTAGE CONTRIBUTION TO ASSEMBLY 209 UNRELIABILITY

ASSEMBLY STATE	SUBASSEMBLY	AND/OR ELEMENT	STATES	
	20.1	12.1	104.1	104.2 147.1 TOTAL
209.1	74.6	.0	4.9	.0 17.4 37.0
209.2	.0	3.0	.0	.0 .0 3.0
TOTAL	74.6	3.0	4.9	.0 17.4

PERCENTAGE CONTRIBUTION TO ASSEMBLY 209 UNDEPENDABILITY

ASSEMBLY STATE	SUBASSEMBLY	AND/OR ELEMENT	STATES	
	20.1	12.1	104.1	104.2 147.1 TOTAL
209.1	61.6	.0	6.2	.0 24.5 31.3
209.2	.0	1.7	.0	.0 .0 1.7
TOTAL	61.6	1.7	6.2	.0 24.5

PERCENTAGE CONTRIBUTION TO ASSEMBLY 208 UNAVAILABILITY

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	204.1	204.2	204.3	204.4	204.5	204.6	204.7	204.8	205.1	205.2	206.1	206.2	207.1	207.2	TOTAL
204.1		27.6	.0	.0	.1	.8	.0	.2	.1	.5	.2	.7	.4	.4	.5	11.3
204.2		.0	.2	1.2	.1	.1	.0	.0	.0	.0	.0	.1	.2	.0	.0	2.1
204.3		.0	.0	.0	2.9	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	3.2
204.4		.5	.0	.0	.1	21.4	.3	.1	.0	.4	.1	.2	.1	.3	.4	24.2
204.5		.0	.0	.0	.0	.0	.0	.1	.0	.1	.0	.1	.1	.1	.1	7.9
204.6		.1	.0	.0	.0	.1	.0	5.1	2.2	.0	.1	.0	.1	.0	.1	7.9
204.7		.3	.0	.0	.0	.2	.0	.1	.0	5.8	.0	5.9	.0	.0	.1	17.0
204.8		.2	.0	.0	.0	.2	.0	.0	.0	.0	2.3	.1	4.4	.0	.0	13.7
TOTAL		28.8	.2	1.3	3.2	22.9	.3	5.7	2.4	7.0	2.9	7.0	5.3	5.4	7.5	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 208 UNRELIABILITY

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	204.1	204.2	204.3	204.4	204.5	204.6	204.7	204.8	205.1	205.2	206.1	206.2	207.1	207.2	TOTAL
204.1		47.9	.0	.1	.3	1.5	.0	.3	.2	.1	.1	.4	.2	.3	.3	46.8
204.2		.1	.3	1.8	.0	.1	.0	.0	.0	.0	.0	.0	.1	.0	.0	2.5
204.3		.1	.0	.0	4.9	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	5.3
204.4		1.2	.0	.1	.1	24.7	.5	.1	.1	.1	.0	.1	.0	.1	.2	27.5
204.5		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1
204.6		.3	.0	.0	.0	.2	.0	5.1	3.9	.0	.0	.0	.0	.0	.1	9.5
204.7		.1	.0	.0	.0	.1	.0	.0	.0	.8	.0	1.7	.0	1.7	.0	4.4
204.8		.1	.0	.0	.0	.1	.0	.0	.0	.0	.3	.0	1.2	.0	.0	3.9
TOTAL		44.7	.4	2.0	5.5	26.7	.5	5.6	4.3	1.1	.4	2.2	1.6	2.1	2.4	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 208 UNDEPENDABILITY

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	204.1	204.2	204.3	204.4	204.5	204.6	204.7	204.8	205.1	205.2	206.1	206.2	207.1	207.2	TOTAL
204.1		11.6	.0	.2	.6	2.6	.1	.6	.3	.8	.3	1.3	.7	.9	1.1	40.8
204.2		.1	.2	1.4	.1	.2	.0	.1	.0	.1	.0	.1	.3	.1	.0	2.7
204.3		.2	.0	.0	3.5	.1	.0	.1	.0	.0	.0	.0	.1	.0	.1	4.2
204.4		1.9	.0	.1	.7	20.3	.4	.3	.2	.5	.2	.3	.2	.5	.6	25.7
204.5		.0	.0	.0	.0	.0	.0	.1	.1	.1	.0	.1	.0	.1	.1	.6
204.6		.4	.0	.0	.0	.3	.0	4.4	2.7	.0	.0	.0	.1	.0	.2	8.3
204.7		.4	.0	.0	.1	.3	.0	.1	.0	2.8	.0	3.2	.0	.0	.1	9.7
204.8		.4	.0	.0	.0	.2	.0	.1	.0	.0	.1	.0	2.4	.0	.0	3.6
TOTAL		35.0	.3	1.7	4.4	26.0	.5	5.6	1.4	4.4	1.8	5.1	3.8	4.2	5.7	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 207 UNAVAILABILITY

ASSEMBLY STATE	SURASSEMBLY AND/OR ELEMENT STATES	217.1	217.2	TOTAL
207.1		29.2	.0	29.2
207.2		.0	70.4	70.4
TOTAL		29.2	70.4	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 207 UNRELIABILITY

ASSEMBLY STATE	SURASSEMBLY AND/OR ELEMENT STATES	217.1	217.2	TOTAL
207.1		43.0	.0	43.0
207.2		.0	57.0	57.0
TOTAL		43.0	57.0	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 207 UNDEPENDABILITY

ASSEMBLY STATE	SURASSEMBLY AND/OR ELEMENT STATES	217.1	217.2	TOTAL
207.1		32.6	.0	32.7
207.2		.0	67.3	67.3
TOTAL		32.7	67.3	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 217 UNAVAILABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

103.1 103.2 TOTAL
217.1 29.2 .0 29.2
217.2 .0 70.8 70.8
TOTAL 29.2 70.8

PERCENTAGE CONTRIBUTION TO ASSEMBLY 217 UNRELIABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

103.1 103.2 TOTAL
217.1 43.1 .0 43.1
217.2 .0 56.9 56.9
TOTAL 43.1 56.9

PERCENTAGE CONTRIBUTION TO ASSEMBLY 217 UNDEPENDABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

103.1 103.2 TOTAL
217.1 29.2 .0 29.2
217.2 .0 70.8 70.8
TOTAL 29.2 70.8

PERCENTAGE CONTRIBUTION TO ASSEMBLY 206 UNAVAILABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

206.1	216.1	216.2	TOTAL
41.2	.0	41.2	
206.2	.0	59.4	59.4
TOTAL	41.2	59.4	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 206 UNRELIABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

206.1	216.1	216.2	TOTAL
54.6	.0	54.6	
206.2	.0	41.5	41.5
TOTAL	54.6	41.5	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 206 UNDEPENDABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

206.1	216.1	216.2	TOTAL
41.3	.0	41.3	
206.2	.0	59.7	59.7
TOTAL	41.3	59.7	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 216 UNAVAILABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

	102.1	102.2	TOTAL
216.1	41.2	.0	41.2
216.2	.0	59.4	59.4
TOTAL	41.2	59.4	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 216 UNRELIABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

	102.1	102.2	TOTAL
216.1	59.4	.0	59.4
216.2	.0	41.6	41.6
TOTAL	59.4	41.6	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 216 UNDEPENDABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

	102.1	102.2	TOTAL
216.1	41.2	.0	41.2
216.2	.0	59.4	59.4
TOTAL	41.2	59.4	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 205 UNAVAILABILITY

ASSEMBLY STATE SURASSEMBLY AND/OR ELEMENT STATES

205.1	64.0	215.2	TOTAL
205.2	.0	32.0	
TOTAL	64.0	32.0	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 205 UNRELIABILITY

ASSEMBLY STATE SURASSEMBLY AND/OR ELEMENT STATES

205.1	71.5	215.2	TOTAL
205.2	.0	24.5	
TOTAL	71.5	24.5	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 205 UNDEPENDABILITY

ASSEMBLY STATE SURASSEMBLY AND/OR ELEMENT STATES

205.1	64.0	215.2	TOTAL
205.2	.0	32.0	
TOTAL	64.0	32.0	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 215 UNAVAILABILITY

ASSEMBLY STATE SUPRASSEMBLY AND/OR ELEMENT STATES

	101.1	101.2	TOTAL
215.1	64.0	.0	64.0
215.2	.0	32.0	32.0
TOTAL	64.0	32.0	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 215 UNRELIABILITY

ASSEMBLY STATE SUPRASSEMBLY AND/OR ELEMENT STATES

	101.1	101.2	TOTAL
215.1	71.6	.0	71.6
215.2	.0	24.6	24.6
TOTAL	71.6	24.6	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 215 UNDEPENDABILITY

ASSEMBLY STATE SUPRASSEMBLY AND/OR ELEMENT STATES

	101.1	101.2	TOTAL
215.1	64.0	.0	64.0
215.2	.0	32.0	32.0
TOTAL	64.0	32.0	

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES PERCENTAGE CONTRIBUTION TO ASSEMBLY 204 UNAVAILABILITY

	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	TOTAL
204.1	6.6	27.0	.0	.0	.0	.3	.0	.1	.0	34.0
204.2	.0	.0	.1	.0	.0	.0	.0	.0	.0	.1
204.3	.0	.0	.0	1.5	.0	.0	.0	.0	.0	1.5
204.4	.0	.0	.0	.0	2.5	.0	.0	.0	.0	2.5
204.5	.0	.2	.0	.0	.0	46.0	.0	.1	.0	46.4
204.6	.0	.0	.0	.0	.0	.0	.2	.0	.0	.2
204.7	.0	.0	.0	.0	.0	.1	.0	13.5	.0	13.6
204.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.6
TOTAL	6.6	27.3	.1	1.5	2.5	46.4	.2	13.7	.0	1.7

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES PERCENTAGE CONTRIBUTION TO ASSEMBLY 204 UNRELIABILITY

	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	TOTAL
204.1	9.5	39.2	.0	.0	.0	.0	.0	.0	.0	49.7
204.2	.0	.0	.4	.0	.0	.0	.0	.0	.0	.4
204.3	.0	.0	.0	2.3	.0	.0	.0	.0	.0	2.3
204.4	.0	.0	.0	.0	6.1	.0	.0	.0	.0	6.1
204.5	.0	.0	.0	.0	.0	30.4	.0	.0	.0	30.4
204.6	.0	.0	.0	.0	.0	.0	.7	.0	.0	.7
204.7	.0	.0	.0	.0	.0	.0	.0	6.4	.0	6.4
204.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	9.5	39.2	.4	2.3	6.1	30.4	.7	6.4	.0	4.7

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES PERCENTAGE CONTRIBUTION TO ASSEMBLY 204 UNDEPENDABILITY

	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	TOTAL
204.1	6.6	27.0	.0	.0	.0	.3	.0	.1	.0	34.0
204.2	.0	.0	.1	.0	.0	.0	.0	.0	.0	.1
204.3	.0	.0	.0	1.5	.0	.0	.0	.0	.0	1.5
204.4	.0	.0	.0	.0	2.5	.0	.0	.0	.0	2.5
204.5	.0	.2	.0	.0	.0	46.0	.0	.1	.0	46.4
204.6	.0	.0	.0	.0	.0	.0	.2	.0	.0	.2
204.7	.0	.0	.0	.0	.0	.1	.0	13.5	.0	13.6
204.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.6
TOTAL	6.6	27.3	.1	1.5	2.5	46.4	.2	13.7	.0	1.7

PERCENTAGE CONTRIBUTION TO ASSEMBLY 200 UNAVAILABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

	10A.1	10A.2	10A.3	10A.4	10A.5	10A.6	10A.7	10A.8	39.1	39.2	39.3	39.4	39.5	39.6	39.7	TOTAL
200.1	4.6	.0	.0	.0	.0	.0	.0	.0	24.3	.0	.0	.0	.0	.0	.0	24.3
200.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.4	.0	.0	.0	1.4	.0	.0	.0	.0	.0	.0	1.5	.0	.0	.0	.0	1.5
200.5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.0	.0	.0	.0	1.0
200.6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	4.6	.0	.0	1.4	5.0	.0	.0	.0	24.3	.0	1.5	1.0	44.3	6.7	1.7	1.7

PERCENTAGE CONTRIBUTION TO ASSEMBLY 200 UNRELIABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

	10A.1	10A.2	10A.3	10A.4	10A.5	10A.6	10A.7	10A.8	39.1	39.2	39.3	39.4	39.5	39.6	39.7	TOTAL
200.1	11.5	.0	.0	.0	.0	.0	.0	.0	26.7	.0	.0	.0	.0	.0	.0	43.2
200.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.4	.0	.0	.0	5.2	.0	.0	.0	.0	.0	.0	.0	1.5	.0	.0	.0	6.7
200.5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	11.5	.0	.0	5.2	14.6	.0	.0	.0	26.7	.0	.0	1.5	19.5	3.5	5.0	5.3

PERCENTAGE CONTRIBUTION TO ASSEMBLY 200 UNDEPENDABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

	10A.1	10A.2	10A.3	10A.4	10A.5	10A.6	10A.7	10A.8	39.1	39.2	39.3	39.4	39.5	39.6	39.7	TOTAL
200.1	4.6	.0	.0	.0	.0	.0	.0	.0	24.3	.0	.0	.0	.0	.0	.0	24.3
200.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.4	.0	.0	.0	1.4	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.4
200.5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	4.6	.0	.0	1.4	5.1	.0	.0	.0	24.3	.0	.0	.0	.0	.0	.0	1.7

PERCENTAGE CONTRIBUTION TO ASSEMBLY 39 UNAVAILABILITY

ASSEMBLY STATE	SURASSEMBLY AND/OR ELEMENT STATES	40.1	40.2	39.1	39.2	39.3	39.4	39.5	39.6	39.7 TOTAL
39.1		13.7	0	15.9	0	0	0	3	1	0 30.1
39.2		0	0	0	1	0	0	0	0	0 1
39.3		0	0	0	0	1.9	0	0	0	0 1.9
39.4		0	0	0	0	0	0	0	0	0 1.2
39.5		1	0	1	0	0	0	51.6	1	0 53.9
39.6		0	0	0	0	0	0	0	10.6	0 10.7
39.7		0	0	0	0	0	0	0	0	0 2.1
TOTAL		13.7	0	16.1	1	1.9	0	54.5	10.8	2.1

PERCENTAGE CONTRIBUTION TO ASSEMBLY 39 UNRELIABILITY

ASSEMBLY STATE	SURASSEMBLY AND/OR ELEMENT STATES	40.1	40.2	39.1	39.2	39.3	39.4	39.5	39.6	39.7 TOTAL
39.1		16.7	0	29.5	0	0	0	0	0	0 46.1
39.2		0	0	0	0	0	0	0	0	0 3
39.3		0	0	0	0	3.8	0	0	0	0 3.8
39.4		0	0	0	0	0	2.1	0	0	0 2.5
39.5		0	0	0	0	0	0	32.8	0	0 32.8
39.6		0	0	0	0	0	0	0	6.2	0 6.2
39.7		0	0	0	0	0	0	0	0	0 8.3
TOTAL		16.7	0	29.5	0	3.8	2.1	32.8	6.2	8.3

PERCENTAGE CONTRIBUTION TO ASSEMBLY 39 UNDEPENDABILITY

ASSEMBLY STATE	SURASSEMBLY AND/OR ELEMENT STATES	40.1	40.2	39.1	39.2	39.3	39.4	39.5	39.6	39.7 TOTAL
39.1		13.7	0	16.0	0	0	0	3	1	0 30.1
39.2		0	0	0	1	0	0	0	0	0 1
39.3		0	0	0	0	1.9	0	0	0	0 1.9
39.4		0	0	0	0	0	0	0	0	0 1.2
39.5		1	0	1	0	0	0	51.6	1	0 53.9
39.6		0	0	0	0	0	0	0	10.6	0 10.7
39.7		0	0	0	0	0	0	0	0	0 2.1
TOTAL		13.7	0	16.1	1	1.9	0	54.5	10.8	2.1

PERCENTAGE CONTRIBUTION TO ASSEMBLY 34 UNAVAILABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

	31.1	32.1	32.2	33.1	34.1	34.2	34.3	35.1	35.2	35.3	TOTAL
31.1	5.2	7.7	.0	5.7	.0	.0	.0	.1	.3	.0	19.9
31.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1
31.3	.0	.0	.0	.0	2.2	.0	.0	.0	.0	.0	2.2
31.4	.0	.0	.1	.0	.6	.0	.0	.0	.0	.0	1.0
31.5	.0	.0	.0	.0	.0	.0	.0	.1	57.4	4.9	62.6
31.7	.0	.0	.0	.0	.0	.0	.0	12.6	.1	.0	12.7
TOTAL	5.2	7.7	.3	5.7	.6	2.3	2.6	12.7	57.8	5.0	2.5

PERCENTAGE CONTRIBUTION TO ASSEMBLY 38 UNRELIABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

	31.1	32.1	32.2	33.1	34.1	34.2	34.3	35.1	35.2	35.3	TOTAL
31.1	10.1	7.2	.0	16.9	.0	.0	.0	.0	.0	.0	34.2
31.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
31.3	.0	.0	.0	.0	.0	4.7	.1	.0	.0	.0	4.7
31.4	.0	.0	1.3	.0	1.3	.0	.0	.0	.0	.0	2.5
31.5	.0	.0	.0	.0	.0	.0	.0	.0	35.7	4.8	40.5
31.6	.0	.0	.0	.0	.0	.0	.0	6.0	.0	.0	6.0
31.7	.0	.0	.0	.0	.0	.0	10.1	.0	.0	.0	10.1
TOTAL	10.1	7.2	1.3	16.9	1.3	4.7	10.1	6.0	35.7	4.8	4.4

PERCENTAGE CONTRIBUTION TO ASSEMBLY 36 UNDEPENDABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

	31.1	32.1	32.2	33.1	34.1	34.2	34.3	35.1	35.2	35.3	TOTAL
31.1	5.2	7.7	.0	5.7	.0	.0	.0	.1	.3	.0	19.9
31.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1
31.3	.0	.0	.0	.0	.0	2.2	.0	.0	.0	.0	2.2
31.4	.0	.0	.1	.0	.6	.0	.0	.0	.0	.0	1.0
31.5	.0	.0	.0	.0	.0	.0	.0	.1	57.4	4.9	62.6
31.7	.0	.0	.0	.0	.0	.0	.0	12.6	.1	.0	12.7
TOTAL	5.2	7.7	.3	5.7	.7	2.3	2.6	12.7	57.8	5.0	2.5

ANALYSIS RESULTS FOR A 10-HOUR MISSION UTILIZING ONLY THE FORWARD LINK

A N A L Y S I S S U M M A R Y

FOR ASSEMBLY NUMBER 6

KA-BAND SATCOM SET (FORWARD LINK)

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF RESTORE	SUBASSEMBLY	UNAVAILABILITY	IDENTIFICATION
CYCLES USE SEC OCCURRENCE TIME, MRS				
4-1 ENT	18400.00	5170E-02	1.80	59427E-03 PRIMARY POWER FAILURE
209.1 C40	1 650.00	2032E-02	.92	12965E-01 UNABLE TO START SYSTEM
239.7 C40	1 650.00	938E-04	.50	18951E-03 ALTERNATE INITIALIZATION MODE REQUIRED
201.1 C40	240	21.00 18207E-01	2.39	56765E-01 KA-BAND FORWARD MESSAGE INOPERATIVE
211.2 C40	240	21.00 29447E-04	2.22	45667E-02 KA-BAND FORWARD MESSAGE DEGRADED

A S S E M B L Y S T A T E S

STATE	PROBABILITY	ATRO, MRS.	ATTR, MRS.	IDENTIFICATION
0	.551200415			NORMAL OPERATION
1	.26876E+00	1.9475E+02	2.339	KA-BAND FORWARD LINK INOPERATIVE
2	.36544E-01	1.6393E+03	2.230	KA-BAND FORWARD LINK DEGRADED
3	.157665E-01			OTHER STATES
COMBINED		1.7588E+02	2.220	

ASSEMBLY 6 OPERATES FOR 1600.000 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .551200415. RELIABILITY IS .9445787601 AND DEPENDABILITY IS .651200415.
 144.72 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
 AND A DELAY OF 154.95 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

S Y S T E M D A T A

LAPEL	AVAILABILITY	RELIABILITY	KA-BAND SATCOM SET DEPENDABILITY	IDENTIFICATION
6.0	.44949E+00	.94654E+00	.65124E+00	NORMAL OPERATION
6.1	.26307E+00	.49254E-01	.29636E+00	KA-BAND FORWARD LINK INOPERATIVE
6.2	.34074E-01	.60450E-02	.36549E-01	KA-BAND FORWARD LINK DEGRADED
6.3	.12517E-01	.26724E-01	.15767E-01	OTHER STATES

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 201

KA-RAND SATCOM SET (FORWARD MESSAGE)

ASSEMBLY 201 IS USED BY ASSEMBLY(S) 6

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF RESTORE	SUBASSEMBLY	IDENTIFICATION
	CYCLES USE-SEC OCCURRENCE TIME, HRS	UNAVAILABILITY	
211-1 CWP	5 4.20 14 000E-04	2.39	45149E-01 KA-RAND FORWARD CYCLE INOPERATIVE
211-2 CWP	5 4.20 65328E-05	2.22	93702E-02 KA-RAND FORWARD CYCLE DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	ATBO, MO'S.	ATTR, HRS.	IDENTIFICATION
0	.3456636045			NORMAL OPERATION
1	.460170E-01	3.19444E+01	2.390	KA-RAND FORWARD MESSAGE INOPERATIVE
2	.497299E-02	1.97425E+02	2.214	KA-RAND FORWARD MESSAGE DEGRADED
3	.426198E-03			OTHER STATES
COMBINED		2.75040E+01	2.343	

ASSEMBLY 201 OPERATES FOR 21.000 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .9454641903. RELIABILITY IS .9997079381 AND DEPENDABILITY IS .9456636855.
 12.04 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 240 FUNCTIONAL CYCLES
 AND A DELAY OF 70.57 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 211

KA-BAND SATCOM SET (FORWARD CYCLE)

ASSEMBLY 211 IS USED BY ASSEMBLY(S) 201

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF RESTORE SUBASSEMBLY		CYCLES USE, SFC OCCURRENCE TIME, HRS UNAVAILABILITY		IDENTIFICATION	
14.1 ENT	1	4.20	.4703AF-05	1.00	.36A22E-02	CPU STOP! NO LINK, PRINTER AND CRT EXCEPT FWD. LINK OR CINCNET
200.1 CMP	1	4.20	.1435AF-04	1.50	.15699E-01	ALL KA-BAND LINKS INOPERATIVE
200.2 CMP	1	4.20	.9066AF-07	1.70	.67027E-04	FORWARD AND CONFERENCE LINKS INOPERATIVE AND R/B LINK DEGRADED
200.3 CMP	1	4.20	.1113AF-05	.97	.45111E-03	R/B AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
200.4 CMP	1	4.20	.20310E-05	.74	.14539E-02	ALL KA-BAND LINKS DEGRADED
200.5 CMP	1	4.20	.14A3AF-04	3.17	.26144E-01	KA-BAND FORWARD AND CONFERENCE LINKS INOPERATIVE
200.6 CMP	1	4.20	.32540E-06	.50	.13310E-03	KI-RAND REPORT-ACK AND CONFERENCE LINKS INOPERATIVE
200.7 CMP	1	4.20	.56450E-05	2.54	.74123E-02	KA-RAND FORWARD AND CONFERENCE LINKS DEGRADED
230.4 CMP	1	4.20	.2249AF-05	.50	.94A43E-03	KA-RAND REPORT-ACK AND CONFERENCE LINKS DEGRADED
121.1 CMP	1	4.20	.2049AF-05	.81	.12795E-02	INOPERATIVE FORWARD LINK
101.2 CMP	1	4.20	.5205AF-06	.92	.50250E-03	DEGRADED FORWARD LINK

KA-BAND MODEM
KA-BAND POCEN

ASSEMBLY STATES

STATE	PROBABILITY	ATBD, HRS.	ATTR. HRS.	IDENTIFICATION	
0	.34650E+0435				
1	.457239E-01	3.07014E+01	2.330		NORMAL OPERATION
2	.377601E-02	1.75492E+02	2.214		KA-RAND FORWARD CYCLE INOPERATIVE
3	.496007E-03				KA-RAND FORWARD CYCLE DEGRADED
COMBINED		2.61345E+01	2.322		OTHER STATES

ASSEMBLY 211 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .94454E+051. RELIABILITY IS .9999553669 AND DEPENDABILITY IS .9445040435.
55.50 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 59.75 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

FORWARD LINK SENSITIVITY TABULATIONS

		PERCENTAGE CONTRIBUTION TO ASSEMBLY 6 UNAVAILABILITY			
ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	4.1	209.1	209.2	201.1 201.2 TOTAL
6.1		.2	4.4	.0	40.0 3.0 64.5
6.2		.0	.0	.0	1.0 10.1 11.4
TOTAL		.2	4.4	.1	61.0 13.1

		PERCENTAGE CONTRIBUTION TO ASSEMBLY 6 UNRELIABILITY			
ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	4.1	209.1	209.2	201.1 201.2 TOTAL
6.1		3.2	4.2	.0	75.1 .2 49.0
6.2		.0	.0	.1	10.4 11.0
TOTAL		3.2	4.2	.1	75.4 11.0

		PERCENTAGE CONTRIBUTION TO ASSEMBLY 6 UNDEPENDABILITY			
ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	4.1	209.1	209.2	201.1 201.2 TOTAL
6.1		1.4	4.4	.0	71.7 3.7 93.0
6.2		.0	.0	.0	1.2 9.7 11.0
TOTAL		1.4	4.4	.1	72.9 13.4

PERCENTAGE CONTRIBUTION TO ASSEMBLY 201 UNAVAILABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

	211.1	211.2	TOTAL
201.1	43.1	.3	43.3
201.2	.2	16.5	16.7
TOTAL	43.3	16.7	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 201 UNRELIABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

	211.1	211.2	TOTAL
201.1	46.1	.0	46.1
201.2	.0	13.3	13.3
TOTAL	46.1	13.3	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 201 UNDEPENDABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

	211.1	211.2	TOTAL
201.1	43.1	.3	43.4
201.2	.2	16.5	16.6
TOTAL	43.3	16.7	

ANALYSIS RESULTS FOR A 10-HOUR MISSION
UTILIZING ONLY THE REPORT-BACK LINE

A N A L Y S I S S U M M A R Y

FOR ASSEMBLY NUMBER 7

KA-RAND SATCOM SET (REPORT-BACK LINK)

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROGR. OF	RESTORE	SUBASSEMBLY	IDENTIFICATION
	CYCLES USE, SEC	TIME, MRS	UNAVAILABILITY	
4.1 ENT	135000.00	.51706F-02	1.00	.51A27E-03 PRIMARY POWER FAILURE
209.1 CWP	1	.650.00	.20332F-02	.92 UNABLE TO START SYSTEM
209.2 CWP	1	.640.00	.51939F-04	.50 ALTERNATE INITIALIZATION MODE REQUIRED
202.1 CWP	720	12.60	.74017F-04	1.36 KA-RAND REPORT-BACK MESSAGE INOPERATIVE
202.2 CWP	720	12.60	.1A930F-04	.A3 KA-RAND REPORT-BACK MESSAGE DEGRADED

A S S E M B L Y S T A T E S

STATE	PROBABILITY	ATTR, MRS.	ATTR, MRS.	IDENTIFICATION
0	.2754005663			NORMAL OPERATION
1	.210776E+00	1.67641E+02	1.366	KA-RAND REPORT-BACK LINK INOPERATIVE
2	.424004E-01	1.01646E+02	.994	KA-RAND REPORT-BACK LINK DEGRADED
3	.112167E-01			OTHER STATES
COMBINED		1.35464E+02	1.215	

ASSEMBLY 7 OPERATES FOR 16000.000 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .7915744244. RELIABILITY IS .9290352791 AND DEPENDABILITY IS .7354005663.
 266.60 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
 AND A DELAY OF 74.14 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

S Y S T E M D A T A

LABEL	7 KA-9AND SATCOM SET (REPORT-BACK LINK)		
	AVAILABILITY	RELIABILITY	DEPENDABILITY IDENTIFICATION
7.0	.79157E+00	.92904E+00	.73540E+00 NORMAL OPERATION
7.1	.11677E+00	.57443E-01	.21074E+00 KA-RAND REPORT-BACK LINK INOPERATIVE
7.2	.46744E-01	.12307E-01	.42507E-01 KA-RAND REPORT-BACK LINK DEGRADED
7.3	.64250E-02	.67442E-03	.11217E-01 OTHER STATES

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 202

KA-BAND SATCOM SET (PEPORT-BACK MESSAGE)

ASSEMBLY 202 IS USED BY ASSEMBLY(S) 7

SUBASSEMBLY STATE DATA

LABEL	CYCLES	USE	SEC	OCCURRENCE	TIME	MRS	UNAVAILABILITY	IDENTIFICATION
212.1 CWP	3	4.20	.25700F-04	1.36	.20500E-01			KA-BAND REPORT-RACK CYCLE INOPERATIVE
212.2 CWP	3	4.21	.67444E-05	.83	.37662E-02			KA-BAND REPORT-RACK CYCLE DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	AFRO	MRS	AYR	MRS	IDENTIFICATION
0	.3757002A24					NOPHAL OPERATION
1	.204946E-01	4.72722E+01	1.351			KA-BAND REPORT-RACK MESSAGE INOPERATIVE
2	.377641E-02	1.44309E+02	.886			KA-BAND REPORT-RACK MESSAGE DEGRADED
3	.742419E-04	3.76215E+01	1.204			OTHER STATES
COMBINED						

ASSEMBLY 202 OPERATES FOR 12.600 SECONDS TO COMPLETE ITS FUNCTION.

THE AVAILABILITY IS .9757010543, RELIABILITY IS .999069723 AND DEPENDABILITY IS .9757002424.
17.50 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 720 FUNCTIONAL CYCLES
AND A DELAY OF 39.66 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 212

KA-BAND SATCOM SET (REPORT-BACK CYCLE)

ASSEMBLY 212 IS USED BY ASSEMBLY(S) 202

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROR. OF		RESTATE	SUBASSEMBLY		IDENTIFICATION
	CYCLES USE	SEC OCCURRENCE	TIME, HRS	UNAVAILABILITY	TIME, HRS	
14.1 FMT	1	4.20	.47014E-05	1.00	.16822E-02	CPU STOP NO UPLINK, PRINTER AND CRT EXCEPT FMO, LINK OR CINCH
200.1 CMP	1	4.20	.19355E-04	1.50	.15499E-01	ALL KA-BAND LINKS INOPERATIVE
200.2 CMP	1	4.20	.99456E-07	3.70	.57027E-04	FORWARD AND CONFERENCE LINKS INOPERATIVE AND R/R LINK DEGRADED
200.3 CMP	1	4.20	.11135E-05	.97	.85111E-03	R/R AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
200.4 CMP	1	4.20	.29310E-05	.74	.14539E-02	ALL KA-BAND LINKS DEGRADED
200.5 CMP	1	4.20	.16814E-04	3.17	.26144E-01	KA-BAND FORWARD AND CONFERENCE LINKS INOPERATIVE
200.6 CMP	1	4.20	.32540E-05	.50	.13110E-03	KA-BAND REPORT-BACK AND CONFERENCE LINKS INOPERATIVE
200.7 CMP	1	4.20	.45450E-05	2.54	.77123E-02	KA-BAND FORWARD AND CONFERENCE LINKS DEGRADED
200.8 CMP	1	4.20	.22899E-05	.50	.94443E-03	KA-BAND REPORT-BACK AND CONFERENCE LINKS DEGRADED
102.1 CMP	1	4.20	.24354E-05	.50	.10432E-02	INOPERATIVE REPORT-BACK LINK
102.2 CMP	1	4.20	.17347E-05	1.00	.14889E-02	DEGRADED REPORT-BACK LINK

KA-9AND MODEM
KA-8AND MODEM

ASSEMBLY STATES

STATE	PROBABILITY	ATTR. HRS.	ATTR. HRS.	IDENTIFICATION
0	.3747861696			NORMAL OPERATION
1	.085246E-01	4.52370E+01	1.351	KA-BAND REPORT-BACK CYCLE INOPERATIVE
2	.179240E-02	1.71953E+02	.896	KA-BAND REPORT-BACK CYCLE DEGRADED
3	.496791E-03			OTHER STATES
COMBINED		3.58164E+01	1.261	

ASSEMBLY 212 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .9744141030. RELIABILITY IS .9999674249 AND DEPENDABILITY IS .9747861696.
25.21 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 37.35 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

REPORT-BACK LINK SENSITIVITY TABULATIONS

PERCENTAGE CONTRIBUTION TO ASSEMBLY 7 UNAVAILABILITY

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	6.1	209.1	209.2	202.1	202.2	TOTAL
7.1		.3	6.1	.0	74.4	1.9	82.7
7.2		.0	.1	.1	.9	16.2	17.3
TOTAL		.3	6.2	.1	75.3	18.1	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 7 UNRELIABILITY

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	6.1	209.1	209.2	202.1	202.2	TOTAL
7.1		7.2	3.1	.0	71.5	.6	82.4
7.2		.0	.0	.1	.2	17.3	17.6
TOTAL		7.2	3.1	.1	71.7	17.7	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 7 UNDEPENDABILITY

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	6.1	209.1	209.2	202.1	202.2	TOTAL
7.1		2.2	5.4	.0	72.4	2.8	82.8
7.2		.0	.1	.1	1.2	15.4	16.8
TOTAL		2.2	5.5	.1	73.6	18.2	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 202 UNAVAILABILITY

ASSEMBLY
STATE

SURASSEMBLY AND/OR ELEMENT STATES

202.1	46.5	-1	84.6
202.2	-1	15.3	15.4
TOTAL	46.6	15.4	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 202 UNRELIABILITY

ASSEMBLY
STATE

SURASSEMBLY AND/OR ELEMENT STATES

202.1	79.6	-0	79.6
202.2	-0	20.4	20.4
TOTAL	79.6	20.4	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 202 UNDEPENDABILITY

ASSEMBLY
STATE

SURASSEMBLY AND/OR ELEMENT STATES

202.1	46.5	-1	84.6
202.2	-1	15.3	15.4
TOTAL	46.6	15.4	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 212 UNAVAILABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	102.1	102.2	TOTAL
212.1	14.7	60.5	.0	3.3	.0	.7	.5	.2	.0	4.2	.1	84.4
212.2	.0	.0	.3	.0	5.6	.1	.0	.0	3.7	.0	5.9	15.6
TOTAL	14.7	60.7	.3	3.3	5.6	.8	.5	.2	3.7	4.2	6.0	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 212 UNRELIABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	102.1	102.2	TOTAL
212.1	14.2	54.4	.0	3.2	.0	.0	.9	.0	.0	7.5	.0	79.2
212.2	.0	.0	.5	.0	8.4	.0	.0	.0	6.5	.0	5.3	20.8
TOTAL	14.2	54.4	.5	3.2	8.4	.0	.9	.0	6.5	7.5	5.3	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 212 UNDEPENDABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	102.1	102.2	TOTAL
212.1	14.7	60.5	.0	3.3	.0	.7	.5	.2	.0	4.2	.1	84.4
212.2	.0	.0	.3	.0	5.6	.1	.0	.0	3.7	.0	5.9	15.6
TOTAL	14.7	60.7	.3	3.3	5.6	.8	.5	.2	3.7	4.2	6.0	

ANALYSIS RESULTS FOR A 10-HOUR MISSION UTILIZING ONLY THE CONFERENCE LINK

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 8

KA-BAND SATCOM SET (CONFERENCE LINK)

SUBASSEMBLY STATE DATA

LAPEL	NO. OF TIME OF PRIOR. OF RESTORE	SUBASSEMBLY	UNAVAILABILITY	IDENTIFICATION
	CYCLES USE/SEC OCCURRENCE TIME, MRS			
209.1 CWP	1 19400.00 .5170E-02	1.00	.51927E-03	PRIMARY POWER FAILURE
209.2 CWP	1 660.00 .70392E-02	.92	.12945E-01	UNABLE TO START SYSTEM
209.3 CWP	1 660.00 .61909E-04	.50	.18451E-03	ALTERNATE INITIALIZATION MODE REQUIRED
209.4 CWP	12 892.90 .90322E-02	2.37	.45174E-01	KA-BAND CONFERENCE INOPERATIVE
209.5 CWP	12 892.90 .20774E-02	1.94	.11116E-01	KA-BAND CONFERENCE DEGRADED

ASSEMBLY STATES

STATE	UNAVAILABILITY	ATPO, MRS.	ATPO, MRS.	IDENTIFICATION
0	.526552E-02			NORMAL OPERATION
1	.29284E+00	1.00227E+02	2.121	KA-BAND CONFERENCE LINK INOPERATIVE
2	.55819E-01	4.99144E+02	1.934	KA-BAND CONFERENCE LINK DEGRADED
3	.24743E-01			OTHER STATES
COMBINED		3.05190E+01	2.109	

ASSEMBLY 8 OPERATES FOR 16000.000 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .7091912795, RELIABILITY IS .4032354090 AND DEPENDABILITY IS .6265524302.
 173.45 MALFUNCTIONS WERE EXPECTED TO OCCUR DURING 1.00 FUNCTIONAL CYCLES
 AND A DELAY OF 174.55 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

SYSTEM DATA

LABEL	KA-BAND SATCOM SET (CONFERENCE LINK)			
	AVAILABILITY	RELIABILITY	DEFENDABILITY	IDENTIFICATION
A.0	.70938E+00	.88324E+00	.62655E+00	NORMAL OPERATION
A.1	.27009E+00	.84058E-01	.23244E+00	KA-BAND CONFERENCE LINK INOPERATIVE
A.2	.46232E-01	.19731E-01	.59820E-01	KA-BAND CONFERENCE LINK DEGRADED
A.3	.14796E-01	.19734E-02	.24743E-01	OTHER STATES

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 203

KA-BAND SATCOM SET (CONFERENCE)

ASSEMBLY 203 IS USED BY ASSEMBLY(S) 0

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF RESTORE	SURASSEMBL	CYCLES USE SEC OCCURRENCE TIME HRS	UNAVAILABILITY	IDENTIFICATION
213.1 CWP	214	4.20	.19272F-04	2.37	.45711E-01 KA-BAND CONFERENCE CYCLE INOPERATIVE
213.2 CWP	214	4.20	.10573F-04	1.94	.11644E-01 KA-BAND CONFERENCE CYCLE DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	ATPO, HRS.	ATPO, HRS.	IDENTIFICATION
0	.336697700			NORMAL OPERATION
1	.526619E-01	3.09541E+01	2.369	KA-BAND CONFERENCE INOPERATIVE
2	.120347E-01	1.22931E+02	1.934	KA-BAND CONFERENCE DEGRADED
3	.729740E-03			OTHER STATES
COMBINED		2.46519E+01	2.259	

ASSEMBLY 203 OPERATES FOR 194,000 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .9317711, RELIABILITY IS .9499214455 AND DEPENDABILITY IS .9336697700.
 .00 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 12 FUNCTIONAL CYCLES
 AND A DELAY OF 74.91 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 213

KA-BAND SATCOM SET (CONFERENCE CYCLE)

ASSEMBLY 213 IS USED BY ASSEMBLY(S) 203

SUBASSEMBLY STATE DATA

NO. OF TIME OF PROB. OF PESTORE SUBASSEMBLY

LABEL	CYCLES USE	SEC OCCURRENCE	TIME, HRS	UNAVAILABILITY	IDENTIFICATION
14.1 ENT	1	4.20	.4103FE-05	1.00	CPU STOP: NO UPLINK, PRINTER AND CRT EXCEPT FWD. LINK OR CINCHET
200.1 CMP	1	4.20	.18355E-04	1.50	ALL KA-BAND LINKS INOPERATIVE
200.2 CMP	1	4.20	.92656E-07	3.70	FORWARD AND CONFERENCE LINKS INOPERATIVE AND O/B LINK DEGRADED
200.3 CMP	1	4.20	.1113E-05	.97	R/R AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
200.4 CMP	1	4.20	.23710E-05	.74	ALL KA-BAND LINKS DEGRADED
200.5 CMP	1	4.20	.10434E-04	3.17	KA-BAND FORWARD AND CONFERENCE LINKS INOPERATIVE
200.6 CMP	1	4.20	.12540E-06	.50	KA-BAND REPORT-BACK AND CONFERENCE LINKS INOPERATIVE
200.7 CMP	1	4.20	.15650E-05	2.59	KA-BAND FORWARD AND CONFERENCE LINKS DEGRADED
200.8 CMP	1	4.20	.22890E-05	.50	KA-BAND REPORT-BACK AND CONFERENCE LINKS DEGRADED
103.1 CMP	1	4.20	.10441E-05	.50	INOPERATIVE CONFERENCE LINK
103.2 CMP	1	4.20	.26151E-05	.95	DEGRADED CONFERENCE LINK

KA-BAND MODEM
KA-BAND MODEM

ASSEMBLY STATES

STATE	PROBABILITY	ATRO. HRS.	ATTR. HRS.	IDENTIFICATION
0	.941698893			NORMAL OPERATION
1	.457468E-01	2.97064E+01	2.169	KA-BAND CONFERENCE CYCLE INOPERATIVE
2	.116574E-01	1.10341E+02	1.939	KA-BAND CONFERENCE CYCLE DEGRADED
3	.196952E-03			OTHER STATES
COMBINED		2.34050E+01	2.246	

ASSEMBLY 213 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .941746777. RELIABILITY IS .9999501543 AND DEPENDABILITY IS .9416988933.
12.49 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 214 FUNCTIONAL CYCLES
AND A DELAY OF 67.47 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

CONFERENCE LINK SENSITIVITY TABULATIONS

ASSEMBLY STATE	PERCENTAGE CONTRIBUTION TO ASSEMBLY 8 UNAVAILABILITY					
	SURASSEMBLY AND/OR ELEMENT STATES					
	4.1	209.1	209.2	203.1	203.2	TOTAL
A.1	.2	6.5	.0	75.1	3.4	85.3
A.2	.0	.1	.1	1.4	15.2	16.7
TOTAL	.2	6.7	.1	76.5	18.5	

ASSEMBLY STATE	PERCENTAGE CONTRIBUTION TO ASSEMBLY 8 UNRELIABILITY					
	SURASSEMBLY AND/OR ELEMENT STATES					
	4.1	203.1	209.2	203.1	203.2	TOTAL
A.1	4.4	2.0	.0	75.5	.8	82.7
A.2	.0	.0	.0	.4	16.8	17.3
TOTAL	4.4	2.0	.1	76.0	17.6	

ASSEMBLY STATE	PERCENTAGE CONTRIBUTION TO ASSEMBLY 8 UNDEPENDABILITY					
	SURASSEMBLY AND/OR ELEMENT STATES					
	4.1	209.1	209.2	203.1	203.2	TOTAL
A.1	1.7	4.4	.0	72.5	5.3	84.0
A.2	.0	.1	.0	2.0	13.8	16.0
TOTAL	1.8	4.5	.1	74.5	19.2	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 203 UNAVAILABILITY

ASSEMBLY STATE SUPPLEMENTARY AND/OR ELEMENT STATES

213.1 213.2 TOTAL
203.1 40.0 .3 40.3
203.2 .2 19.5 19.7
TOTAL 40.2 19.4

PERCENTAGE CONTRIBUTION TO ASSEMBLY 203 UNRELIABILITY

ASSEMBLY STATE SUPPLEMENTARY AND/OR ELEMENT STATES

213.1 213.2 TOTAL
203.1 79.8 .9 79.7
203.2 .0 20.1 20.1
TOTAL 79.8 20.2

PERCENTAGE CONTRIBUTION TO ASSEMBLY 203 UNDEPENDABILITY

ASSEMBLY STATE SUPPLEMENTARY AND/OR ELEMENT STATES

213.1 213.2 TOTAL
203.1 79.9 .4 80.3
203.2 .2 19.5 19.7
TOTAL 80.2 19.4

PERCENTAGE CONTRIBUTION TO ASSEMBLY 213 UNAVAILABILITY

ASSEMBLY STATE SUPPLEMENTARY AND/OR ELEMENT STATES

	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	103.1	103.2	TOTAL
213.1	6.3	25.9	.1	1.4	.0	44.0	.2	.2	.0	1.5	.1	79.7
213.2	.0	.1	.0	.0	2.4	.1	.0	12.8	1.6	.0	3.4	20.3
TOTAL	6.3	26.0	.1	1.4	2.4	44.1	.2	13.0	1.6	1.5	3.5	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 213 UNR LIABILITY

ASSEMBLY STATE SUPPLEMENTARY AND/OR ELEMENT STATES

	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	103.1	103.2	TOTAL
213.1	8.6	35.5	.3	2.1	.0	27.6	.6	.0	.0	4.0	.0	78.8
213.2	.0	.0	.0	.0	5.5	.0	.0	6.2	4.3	.0	5.3	21.2
TOTAL	8.6	35.5	.3	2.1	5.5	27.6	.6	6.2	4.3	4.0	5.3	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 213 UNDEPENDABILITY

ASSEMBLY STATE SUPPLEMENTARY AND/OR ELEMENT STATES

	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	103.1	103.2	TOTAL
213.1	6.3	25.9	.1	1.4	.0	44.0	.2	.2	.0	1.5	.1	79.7
213.2	.0	.1	.0	.0	2.4	.1	.0	12.8	1.6	.0	3.4	20.3
TOTAL	6.3	26.0	.1	1.4	2.4	44.1	.2	13.0	1.6	1.5	3.5	

SECTION IV

RESULTS OF ANALYSES OF THE KA-BAND SATCOM SET

BASED ON THEORETICAL DATA

THEORETICAL INPUT DATA TABULATION

ELEMENT DATA					
L-EFL	IDENTIFICATION	CYCLES	USE, SEC	MTBF, HRS	MTTR, HRS
4.0	SATCOM TERMINAL (PRIMARY POWER)	136000.000			
4.1	PRIMARY POWER FAILURE			.10000E+04	1.00
13.0	KA-BAND MODEM CONTROL PANEL	1	6.200	.1566E+05	.50
13.1	ALL KA-BAND LINKS INOPERATIVE				
14.0	MODEM POWER CONTROL PANEL				
14.1	MODEM POWER CONTROL PANEL	1	6.200	.76200E+03	1.00
14.2	CPU STOP NO UPLINK, PRINTER AND CRT EXCEPT FWD LINK OR DOWNLINK	1	600.000	.11570E+03	1.00
21.0	INTEGRAL NAVIGATION SYSTEM				
21.1	NO INCORRECT INS DATA	1	600.000	.11330E+03	.50
22.0	COMMUNICATIONS CONTROL COMPUTER				
22.1	NO INCORRECT RANGE AND RANGE RATE DATA	1	6.200	.23036E+05	2.00
41.0	ANTENNA CONTROL/MONITORING (KA-BAND)				
41.1	ANTENNA CONTROL/MONITORING FAILURE	1	6.200	.21360E+05	1.00
42.0	ANTENNA POSITION FAILURE				
42.1	ANTENNA POSITION FAILURE	1	6.200	.58207E+05	2.00
43.0	ANTENNA POSITION CONTROL/POWER (KA-BAND)				
43.1	ANTENNA POSITION CONTROL/POWER FAILURE	1	6.200	.44603E+06	1.00
44.0	KA-BAND POLARIZER/DEPOLARIZER				
44.1	POLARIZER/DEPOLARIZER FAILURE	1	6.200	.20150E+05	2.00
45.0	PRESSURE AND FUME SENSOR (KA-BAND)				
45.1	PRESSURE AND FUME SENSOR FAILURE	1	6.200	.26560E+05	2.00
46.0	RF WAVEGUIDE PRESSURIZATION (KA-BAND)				
46.1	RF WAVEGUIDE PRESSURIZATION FAILURE IN KA-BAND RF WAVEGUIDE	1	6.200	.16667E+04	1.00
115.0	TELETYPE UNIT				
115.1	NO INCORRECT TTY TRANSMISSION AND RECEPTION	1	6.200	.50000E+04	1.00
115.2	NO INCORRECT TTY TRANSMISSION				
115.3	NO INCORRECT TTY RECEPTION	0	6.200	.25900E+04	1.00
116.0	VOCODER				
116.1	VOCODER MALFUNCTION	1	6.200	.20000E+04	2.00
117.0	CRT/KEYBOARD				
117.1	CRT/KEYBOARD MALFUNCTION	1	300.000	.10000E+04	.50
118.0	PAPEX-FAPE READER				
118.1	PAPEX-FAPE READER MALFUNCTION	1	6.200	.10000E+04	1.00
119.0	LINE PRINTER				
119.1	LINE PRINTER MALFUNCTION	1	600.000	.10300E+06	.50
121.0	NO FORWARD UPLINK				
121.1	NO FORWARD UPLINK	1	6.200	.11300E+05	.50
122.0	CONF. JPLINK INPUT MUX, ENCODING AND INTERLEAVING				
122.1	CONF. JPLINK INPUT MUX, ENCODING AND INTERLEAVING	1	6.200	.10300E+06	.50
142.0	CONF. JPLINK INPUT MUX, ENCODING AND INTERLEAVING				
142.1	CONF. JPLINK INPUT MUX, ENCODING AND INTERLEAVING	1	6.200	.10300E+06	.50
143.0	CONF. JPLINK INPUT MUX, ENCODING AND INTERLEAVING				
143.1	CONF. JPLINK INPUT MUX, ENCODING AND INTERLEAVING	1	6.200	.10300E+06	.50
144.0	CRT I/O INTERFACE				
144.1	CRT I/O INTERFACE	1	6.200	.10300E+06	.50
145.0	UPLINK DATA T-4ING				
145.1	UPLINK DATA T-4ING	1	6.200	.20000E+05	.50
146.0	CONTROL PANEL OUTPUT BUFFER				
146.1	CONTROL PANEL OUTPUT BUFFER	1	6.200	.16710E+05	.50
151.0	KA-BAND MODEM CONTROL PANEL (FORWARD LINK)				
151.1	KA-BAND MODEM CONTROL PANEL (FORWARD LINK)	1	6.200	.62893E+05	.50

ELEMENT IDENTIFICATION		CY	S	USE, SEC	MTBF, HRS	MTTR, HRS
153.0	KA-BAND MODEM CONTROL PANEL (CONFERENCE LINK)	1	4.200			
153.1	KA-BAND CONFERENCE LINK IMPERATIVE				.41500E+05	.50
154.0	KA-BAND MODEM CONTROL PANEL (FORWARD AND CONFERENCE COMMON FUNCTIONS)	1	4.200			
154.1	FO-MAX2 AND CONFERENCE LINKS IMPERATIVE				.4E+06	.50
155.0	KA-BAND MODEM CONTROL PANEL (COMMON FUNCTIONS)	1	4.200			
155.1	ALL KA-BAND LINK IMPERATIVE				.11400E+06	.50
155.2	NO KA-BAND R/B AND CONF. LINKS AND FWD. LINK DEGRADED				.35750E+05	.50
167.0	COPIER BUFFER	1	4.200			
167.1	NO CPU DOPPLER TO COMMUNICATIONS TERMINAL GROUP				.52100E+05	.50
168.0	FORM32 SYNC DATA MUX	1	4.200			
168.1	NO FREQUENCY SYNC AND NO FORWARD DOWNLINK				.13460E+06	.50
169.0	FORWARD DATA BUFFER AND DEMUX	1	4.200			
169.1	NO FORWARD DOWNLINK				.11140E+06	.50
170.0	RAE 1/2 DECODE	1	4.200			
170.1	NO RATE 1/2 DECODE				.50600E+05	.50
171.0	CONFERENCE OF CODE TIMING, BUFFER AND DEMUX	1	4.200			
171.1	NO CONFERENCE DOWNLINK				.10750E+05	.50
172.0	REPORT-BACK DATA BUFFER	1	4.200			
172.1	NO REPORT-BACK DOWNLINK				.40320E+05	.50
173.0	SYNC DATA DECODE	1	4.200			
173.1	NO FREQUENCY SYNCHRONIZATION				.63000E+06	.50
174.0	UPLINK BUFFER	1	4.200			
174.1	NO MASTER CLOCK LOAD				.12200E+06	.50
175.0	MMW TIME SIGNAL	1	4.200			
175.1	NO INCORRECT MMW TIME OUTPUT				.20000E+05	.00
176.0	UPLINK SIGNAL	1	4.200			
176.1	NO INCORRECT UPLINK TIME OUTPUT				.13500E+05	.00
177.0	MAJORITY LOGIC	1	4.200			
177.1	NO UPLINK, NO CONFERENCE DOWNLINK AND NO REPORT-BACK DOWNLINK				.51100E+05	.50
178.0	DELTA-I COUNTER	1	4.200			
178.1	NO UPLINK				.25500E+06	.50
179.0	MEASURED DOPPLER COUNTER	1	4.200			
179.1	NO UPLINK, POSSIBLE CPU STOP				.63900E+05	.50
180.0	FEEDBACK LOCK AND CONTROL PANEL BUFFER, TIME SYNC	1	4.200			
180.1	NO DUALINK				.47000E+04	.50
181.0	DOWNLINK DATA DEMUX	1	4.200			
181.1	NO DOWNLINK DATA, TIME PROBE ONLY				.36400E+04	.50
182.0	CONTROL PANEL INPUT BUFFER	1	4.200			
182.1	NO DOWNLINK DATA, TIME PROBE ONLY, NO SYNC STATUS DISPLAY				.63300E+05	.50
183.0	DOWNLINK TRACKING CONTROLLER	1	4.200			
183.1	NO CONFERENCE DOWNLINK AND NO REPORT-BACK DOWNLINK				.12790E+06	.50
184.0	Q/Z MUX	1	4.200			
184.1	NO REPORT-BACK DOWNLINK				.51100E+06	.50
185.0	CPU SYNC BUFFER	1	4.200			
185.1	NO SYNC STATUS DISPLAY				.25500E+06	.50
186.0	UPLINK CLOCK	1	4.200			
186.1	NO UPLINK				.51100E+05	.50
187.0	UPLINK CODE GENERATOR	1	4.200			
187.1	NO REPORT-BACK UPLINK AND NO COVERED UPLINK				.13000E+05	.50
188.0	LF-379, FE/CMD MODS	1	4.200			
188.1	NO UPLINK, NO CONFERENCE DOWNLINK AND NO REPORT-BACK DOWNLINK				.73000E+05	.50
189.0	DOWNLINK CLOCK AND DOWN/CROSS-LINK MUX	1	4.200			
189.1	DOWNLINK CLOCK AND DOWN/CROSS-LINK MUX					

ELEMENT DATA		IDENTIFICATION		CYCLES		USE, SEC	MTBF, HRS	MTTR, HRS
139.1	NO CONFERENCE AND REPORT-BACK DOWNLINK AND NO SYNC.	CSJ-04, CGU-08						
140.0	DOWNLINK CODE GENERATOR	CGU-06		1	4.200	.34000E+05	.50	
140.1	NO D-DOWNLINK CONFERENCE AND REPORT-BACK: NO SYNC	CGU-06						
141.0	CROSS-LINK CLOCK AND CODE GENERATOR	CGU-05, CGU-07		1	4.200	.13000E+05	.50	
141.1	NO X-DOWNLINK CONFERENCE AND NO X-DOWNLINK REPORT BACK	CGU-05, CGU-07						
142.0	MFSK MODULATOR, TIMING AND SINGLE SIDEBAND MDO.	MOD-01, MOD-02, MOD-03		1	4.200	.10400E+05	.50	
142.1	NO FM/MA-0 UPLINK	MOD-01, MOD-02, MOD-03				.29900E+05	.50	
143.0	OP-K MODULATOR	MOD-04		1	4.200	.10000E+06	.50	
143.1	NO CONFERENCE UPLINK	MOD-04						
144.0	X10 PRE-AMPLIFIER AND POWER COMBINER	MOD-05, MOD-06		1	4.200	.21700E+06	.50	
144.1	NO UPLINK	MOD-05, MOD-06						
145.0	UPLINK FREQUENCY SYNTHESIZER	JP FREQ SYNTH		1	4.200	.15000E+04	.50	
145.1	UP FREQ SYNTH	JP FREQ SYNTH						
146.0	FORMER DECODE	FR8-01		1	4.200	.39922E+05	.50	
146.1	NO FORMER DOWNLINK	FR8-01						
147.0	FFO-T-BACK DECODE/INTERLEAVER	FR8-02		1	4.200	.31189E+05	.50	
147.1	NO REPORT-BACK DOWNLINK	FR8-02				.23657E+05	.50	
148.0	CONFERENCE DECODER	MOD-01		1	4.200	.18300E+04	.50	
148.1	NO CONFERENCE DOWNLINK	MOD-01						
149.0	REPORT-BACK DEMODULATOR	R80-01, -02, -03, -04, -05		1	4.200	.93084E+05	1.00	
149.1	NO REPORT-BACK DOWNLINK	R80-01, -02, -03, -04, -05				.33000E+05	1.00	
150.0	POWER DISTRIBUTION FAILURE			1	4.200	.10000E+07	1.00	
150.1	LOW VOLTAGE POWER SUPPLY FAILURE							
151.0	LIQUID-AIR HEAT EXCHANGER FAILURE			1	4.200	.46070E+04	2.17	
151.1	LIQUID-AIR HEAT EXCHANGER FAILURE					.20000E+07	2.00	
152.0	PUMP/CONTROL MODULE FAILURE			1	4.200	.20000E+07	.50	
152.1	COOLANT LINES/FITTINGS RUPTURE OR STOPPAGE							
153.0	PARTIAL STOPPAGE OR LEAKAGE OF COOLANT LINES/FITTINGS			1	4.200	.34965E+04	.50	
153.1	NO/INCORRECT STANDARD FREQUENCY					.09286E+04	.20	
153.2	1 MHZ FREQUENCY SYNTHESIZER			1	4.200	.26372E+05	.33	
153.3	NO/INSUFFICIENT 1 MHZ FREQUENCY SIGNAL							
153.4	SEPARABLE FREQUENCY SYNTHESIZER FAILURE			1	4.200	.65240E+04	1.00	
154.0	FREQUENCY GENERATOR FAILURE							
154.1	LOW NOISE AMPLIFIER			1	4.200	.11899E+05	.50	
154.2	LOSS OF 20 DB GAIN					.11999E+05	.50	
155.0	NO KA-BAND SIGNAL AMPLIFICATION			1	4.200	.30501E+06	1.00	
155.1	DOWN CONVERTER							
156.0	NO/INCORRECT DOWN CONVERSION			1	4.200	.14104E+06	1.00	
156.1	KA-BAND RECEIVER					.27961E+06	1.00	
157.0	NO/INDEQUATE KA-BAND RECEIVER OUTPUT			1	4.200	.70282E+04	2.00	
157.1	AUTO-TRACK RECEIVER							
158.0	NO/INCORRECT AUTO-TRACK RECEIVER OUTPUT			1	4.200			
158.1	DOPPLER CORRECTION							
159.0	NO/INCORRECT DOPPLER CORRECTION			1	4.200			
159.1	KA-BAND EXCITER							

ELEMENT DATA		CYCLES USE, SEC				MTBF, HRS		MTTR, HRS	
LOCAL IDENTIFICATION									
352.1	NO/INSUFFICIENT KA-BAND EXCITATION								
361.1	RF MODULE						.80567E+05		1.00
361.1	INTERMEDIATE POWER AMPLIFIER FAILURE						.16102E+04		3.00
361.2	HIGH POWER AMPLIFIER FAILURE						.15152E+04		2.00
362.0	HIGH VOLTAGE POWER SUPPLY								
362.1	NO/INSUFFICIENT HIGH VOLTAGE POWER								
363.0	LOCAL CONTROL/MONITOR (KA-BAND TRANSMITTER)						.39553E+04		4.00
363.1	LOCAL CONTROL/MONITOR FAILURE								
364.1	KA-BAND TRANSMITTER REMOTE CONTROL						.31141E+04		1.00
364.1	TRANSMITTER REMOTE CONTROL FAILURE						.27061E+05		1.00
914.1	TELETYPE/TELETYPE								
914.1	TTY MALFUNCTION						.10000E+04		1.00
915.0	TELETYPE/TELETYPE								
915.1	TTY MALFUNCTION						.10000E+04		1.00
916.0	VOCODE								
916.1	VOCODE MALFUNCTION						.25000E+04		1.00

ELEMENT DATA		CYCLES USE, SEC				RELIABILITY		AVAILABILITY		MTTR, HRS	
LABEL	IDENTIFICATION										
4.0	SATCOM TERMINAL (PRIMARY POWER)		136000.000			.990050E+00		.990000E+00			
4.1	PRIMARY POWER FAILURE					.995017E-02		.939500E-03			1.000
7.0	KA-BAND MODEM POWER CONTROL PANEL		1	4.200		.100000E+01		.999960E+00			
17.1	ALL KA-BAND LINKS INOPERATIVE				MODEM POWER CONTROL PANEL	.744738E-07		.213190E-04			.500
14.0	ONLY 1602 COMPUTER		1	4.200		.999999E+00		.933605E+00			
14.1	CPU STOP: NO UPLINK, PRINTER AND CRT EXCEPT FWD LINK OR CINCPAC					.153106E-05		.111445E-02			1.000
19.0	INERTIAL NAVIGATION SYSTEM		1	600.000		.994561E+00		.931394E+00			
21.0	COMMUNICATIONS CONTROL COMPUTED				INS	.143944E-02		.860572E-02			1.000
22.0	NO/INCORRECT INS DATA		1	600.000		.998510E+00		.935597E+00			
22.1	NO/INCORRECT RANGE AND RANGE-RATE DATA				COMM, CONT, COMP.	.146931E-02		.403325E-02			.500
41.0	ANTENNA CONTROL/MONITORING (KA-BAND)		1	4.200		.100000E+01		.939313E+00			
41.1	ANTENNA CONTROL/MONITORING FAILURE				KA-BAND	.505131E-07		.865902E-04			2.000
42.0	ANTENNA PEDESTAL (KA-BAND)		1	4.200		.100000E+01		.939955E+00			
42.1	ANTENNA PEDESTAL FAILURE				KA-BAND	.545978E-07		.467370E-04			1.000
43.0	ANTENNA POSITION CONTROL/POWER (KA-BAND)		1	4.200		.100000E+01		.999960E+00			
43.1	ANTENNA POSITION CONTROL/POWER FAILURE				KA-BAND	.193723E-07		.346372E-04			2.000
44.0	KA-BAND POLARIZATION/FEEDBACK		1	4.200		.100000E+01		.939999E+00			
44.1	POLARIZATION/FEEDBACK FAILURE				KA-BAND	.261567E-08		.224200E-05			1.000
45.0	PRESSURE AND FUME SENSOR (KA-BAND)		1	4.200		.100000E+01		.939329E+00			
45.1	PRESSURE AND FUME SENSOR FAILURE				KA-BAND	.414466E-07		.710456E-04			2.000
46.0	RF MAGNITUDE PRESSURIZATION (KA-BAND)		1	4.200		.100000E+01		.939325E+00			
46.1	PRESSURIZATION FAILURE IN KA-BAND RF MAGNITUDE					.439244E-07		.752955E-04			2.000
115.0	TELETYPEWRITER		1	4.200		.999993E+00		.939003E+00			
115.1	NO/INCORRECT TTY TRANSMISSION AND RECEPTION					.699338E-06		.598133E-03			1.000
115.2	NO/INCORRECT TTY TRANSMISSION					.233333E-06		.199903E-03			1.000
115.3	NO/INCORRECT TTY RECEPTION					.233333E-06		.199903E-03			1.000
116.0	VOCODER		0	4.200		.100000E+01		.939600E+00			
116.1	VOCODER MALFUNCTION					.339320E-03		.339320E-03			1.000
117.0	CRYSTAL OSCILLATOR		1	4.200		.999999E+00		.939000E+00			
117.1	CRYSTAL OSCILLATOR MALFUNCTION					.563333E-06		.939500E-03			2.000
118.0	PAPER-TAPE READER		1	300.000		.999317E+00		.939500E+00			
118.1	PAPER-TAPE READER MALFUNCTION					.833233E-04		.433175E-03			.500
119.0	LINE PRINTER		1	4.200		.999999E+00		.939000E+00			
119.1	LINE PRINTER MALFUNCTION					.116667E-05		.939500E-03			1.000
121.0	4210/4210 RANGE BUFFER		1	600.000		.999993E+00		.939997E+00			
121.1	NO 4210/4210 RANGE BUFFER (LARGE NO SSMP ANTENNA POINTING)				APU-01	.910746E-06		.273224E-05			.500
122.0	ELEVATION/RANGE BUFFER		1	600.000		.999993E+00		.939997E+00			
122.1	NO 4210/4210 RANGE BUFFER (LARGE NO SSMP ANTENNA POINTING)				APU-02	.910746E-06		.273224E-05			.500
123.0	FORWARD UPLINK INPUT MUX, ENCODING AND INTER-LEAVING		1	4.200		.100000E+01		.939956E+00			
123.1	NO FORWARD UPLINK				MPU-01, MPU-03	.102511E-06		.433355E-04			.500
124.0	CONF. JPLINK INPUT MUX, ENCODING AND INTER-LEAVING		1	4.200		.100000E+01		.939999E+00			
124.1	NO CONFERENCE UPLINK				MPU-02, MPU-05	.235715E-06		.101025E-03			.500
125.0	CONF. RATE 1/2 ENCODE		1	4.200		.100000E+01		.100000E+01			
125.1	NO RATE 1/2 ON CONFERENCE UPLINK				MPU-04	.116317E-06		.436493E-06			.500
126.0	CRT I/O INTERFACE		1	4.200		.100000E+01		.939990E+00			
126.1	NO CRT I/O				MPU-06	.233707E-07		.100160E-04			.500
127.0	UPLINK DATA TIMING		1	4.200		.100000E+01		.939982E+00			
127.1	NO UPLINK, NO REPORT-BACK DOWNLINK AND NO SYNC.				MPU-07	.416664E-07		.178569E-04			.500
128.0	CONTROL PANEL OUTPUT BUFFER		1	4.200		.100000E+01		.939385E+00			
128.1	NO UPLINK, NO FORWARD DOWNLINK AND NO CONFERENCE DOWNLINK				MPU-08	.249760E-07		.107043E-04			.500
131.0	KA-BAND MODEM CONTROL PANEL (FORWARD LINK)		1	4.200		.100000E+01		.999992E+00			
131.1	KA-BAND FORWARD LINK INOPERATIVE				MODEM CONTROL	.165500E-07		.794998E-05			.500

F. EXHIBIT DATA		CYCLES USE, SEC RELIABILITY AVAILABILITY				MTR, MRS
L-REL	IDENTIFICATION					
153.0	KA-9AND MODEM CONTROL PANEL (CONFERENCE LINK)	1	4.200	.100000E+01	.999988E+00	.500
153.1	KA-9AND CONFERENCE LINK INOPERATIVE			.20125E-07	.120441E-04	.500
154.0	KA-BAND MODEM CONTROL PANEL (FORWARD AND CONFERENCE COMMON FUNCTIONS)	1	4.200	.100000E+01	.999988E+00	.500
154.1	FORWARD AND CONFERENCE LINKS INOPERATIVE			.10933E-07	.55728E-05	.500
155.0	KA-9AND MODEM CONTROL PANEL (COMMON FUNCTIONS)	1	4.200	.100000E+01	.999988E+00	.500
155.1	ALL KA-BAND LINKS INOPERATIVE			.10233E-07	.41859E-05	.500
155.2	NO KA-BAND R/B AND C/NF. LINKS AND FMO. LINK DEGRADED			.32634E-07	.13985E-04	.500
157.0	COPIER BUFFER	1	4.200	.100000E+01	.999988E+00	.500
157.1	NO CPU DOPPLER TO COMMUNICATIONS TERMINAL GROUP			.22353E-07	.95821E-05	.500
159.0	FORWARD SYNC DATA BUFFER	1	4.200	.100000E+01	.999988E+00	.500
159.1	NO FREQUENCY SYNC AND NO FORWARD DOWNLINK			.86676E-08	.37147E-05	.500
159.2	FORWARD DATA BUFFER AND DEMUX	1	4.200	.100000E+01	.999988E+00	.500
159.3	NO FORWARD DOWNLINK			.10473E-07	.44864E-05	.500
170.0	DATA 1/2 DECODE	1	4.200	.100000E+01	.999988E+00	.500
170.1	NO RATE 1/2 ON CONFERENCE DOWNLINK			.23056E-07	.96813E-05	.500
171.0	CONFERENCE DECODE LINK, BUFFER AND DEMUX	1	4.200	.100000E+01	.999988E+00	.500
171.1	NO CONFERENCE DOWNLINK			.10952E-06	.44508E-04	.500
172.0	REPORT-BACK DATA BUFFER	1	4.200	.100000E+01	.999988E+00	.500
172.1	NO REPORT-BACK DOWNLINK			.10473E-07	.44864E-05	.500
173.0	SYNC DATA DECODE	1	4.200	.100000E+01	.999988E+00	.500
173.1	NO FREQUENCY SYNCHRONIZATION			.10473E-07	.44864E-05	.500
174.0	UIC LINE BUFFER	1	4.200	.100000E+01	.999988E+00	.500
174.1	NO MASTER CLOCK LOAD			.15661E-06	.63933E-05	.500
175.0	NO TIME SIGNAL	1	4.200	.100000E+01	.999988E+00	.500
175.1	NO TIME SIGNAL			.83333E-06	.33999E-05	.500
176.0	UIC TIME 3.1AL	1	4.200	.100000E+01	.999988E+00	.500
176.1	NO IN-CORRECT UHF TIME OUTPUT			.12345E-05	.50259E-05	.500
177.0	MAJES CLOCK	1	4.200	.100000E+01	.999988E+00	.500
177.1	NO UPLINK, NO CONFERENCE DOWNLINK AND NO REPORT-BACK DOWNLINK			.22311E-07	.97846E-05	.500
178.0	DELA-1 COUNTER	1	4.200	.100000E+01	.999988E+00	.500
178.1	NO UPLINK			.85751E-06	.19687E-05	.500
179.0	MEASURED DOPPLER COUNTER	1	4.200	.100000E+01	.999988E+00	.500
179.1	NO UPLINK, POSSIBLE CPU STOP			.18257E-07	.74247E-05	.500
180.0	RELEVER LOCK AND CONTROL PANEL BUFFER, TIME SYNC	1	4.200	.100000E+01	.999988E+00	.500
180.1	NO DOWNLINK			.24407E-06	.10459E-03	.500
181.0	DOWNLINK DATA DEMUX	1	4.200	.100000E+01	.999988E+00	.500
181.1	NO DOWNLINK DATA, TIME PROBE ONLY			.32051E-06	.17353E-03	.500
182.0	CONTROL PANEL INPUT BUFFER	1	4.200	.100000E+01	.999988E+00	.500
182.1	NO DOWNLINK DATA, TIME PROBE ONLY, NO SYN. STATUS DISPLAY			.18257E-07	.74247E-05	.500
183.0	DOWNLINK TRACKING CONTROLLER	1	4.200	.100000E+01	.999988E+00	.500
183.1	NO CONFERENCE DOWNLINK AND NO REPORT-BACK DOWNLINK			.91151E-09	.33664E-05	.500
184.0	DATA MUX	1	4.200	.100000E+01	.999988E+00	.500
184.1	NO REPORT-BACK DOWNLINK			.22311E-07	.97846E-05	.500
185.0	CPU SYNC BUFFER	1	4.200	.100000E+01	.999988E+00	.500
185.1	NO SYNC STATUS DISPLAY			.85751E-06	.19687E-05	.500
186.0	UPLINK CLOCK	1	4.200	.100000E+01	.999988E+00	.500
186.1	NO UPLINK			.22311E-07	.97846E-05	.500
187.0	UPLINK CODE GENERATOR	1	4.200	.100000E+01	.999988E+00	.500
187.1	NO HOPPER UPLINK AND NO COVERED UPLINK			.85751E-06	.19687E-05	.500
188.0	LES-A/9.1 FE/CND MDS	1	4.200	.100000E+01	.999988E+00	.500
188.1	NO UPLINK, NO CONFERENCE DOWNLINK AND NO REPORT-BACK DOWNLINK			.15981E-07	.64929E-05	.500
189.0	DOWNLINK CLOCK AND DATA/CROSS-LINK MUX	1	4.200	.100000E+01	.999988E+00	.500

ELEMENT DATA		CYCLES USE-SEC		RELIABILITY		AVAILABILITY		MTTR, HRS
LIBEL	IDENTIFICATION							
152.1	NO/INSUFFICIENT KA-BAND EXCITATION			.146807E-07	.126119E-04			1.000
351.0	1F WDJULF			.999999E+00	.936819E+00			
351.1	ANTENNA/DATE POWER AMPLIFIER FAILURE	1	4.200	.725565E-06	.136143E-02			3.000
351.2	HIGH POWER AMPLIFIER FAILURE			.770000E-06	.131913E-02			2.000
352.0	HIGH VOLTAGE PUMP SUPPLY	1	4.200	.100000E+01	.936945E+00			
352.1	NO/INSUFFICIENT HIGH VOLTAGE POWER			.294965E-06	.101060E-02			4.000
353.0	LOCAL CONTROL/MONITOR (KA-BAND TRANSMITTER)	1	4.200	.100000E+01	.936795E+00			
353.1	LOCAL CONTROL/MONITOR FAILURE			.374400E-06	.321069E-03			1.000
354.0	KA-BAND TRANSMITTER REMOTE CONTROL	1	4.200	.136000E+01	.999363E+00			
354.1	TRANSMITTER REMOTE CONTROL FAILURE			.431113E-07	.369523E-04			1.000
914.0	TELETYPE/RETRATER	1	4.200	.999999E+00	.936000E+00			
914.1	1FV MALFUNCTION			.116667E-05	.935000E-03			1.000
915.0	TELETYPE/RETRATER	0	4.200	.130000E+01	.999000E+00			
915.1	1FV MALFUNCTION			.100000E+01	.995000E-03			1.000
916.0	VOCODER	1	4.200	.100000E+01	.996000E+00			
916.1	VOCODER MALFUNCTION			.466667E-06	.339200E-03			1.000

ANALYSIS RESULTS FOR A 10-HOUR MISSION UTILIZING ALL COMMUNICATION LINKS

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 2

KA-BAND SATCOM SET (SUMMARY)

SUBASSEMBLY STATE DATA

LEVEL	NO. OF TIME OF POURS. OF CYCLES USE, SEC OCCURENCE	RESTORE TIME, HRS	SUBASSEMBLY UNAVAILABILITY	IDENTIFICATION
4.1 ENT	136000.00 .93502E-02	1.00	.94950E-03	PRIMARY POWER FAILURE
2.9.1 CMP	1 650.00 .1122E-02	.02	.14871E-01	UNABLE TO START SYSTEM
2.9.2 CMP	1 650.00 .1154E-05	.00	.53832E-05	ALTERNATE INITIALIZATION MODE REQUIRED
2.9.1 CMP	136000.00 .2333E-01	1.23	.11910E-01	ALL KA-BAND LINKS INOPERATIVE
2.9.2 CMP	136000.00 .8741E-01	1.86	.67375E-03	COMBINATION OF 1 (2) INOPERATIVE AND 2 (1) DEGRADED KA-BAND LINKS
2.9.1 CMP	136000.00 .2582E-02	1.32	.14900E-02	ALL KA-BAND LINKS DEGRADED
2.9.4 CMP	136000.00 .1163E-01	2.49	.4383E-02	TWO KA-BAND LINKS INOPERATIVE
2.9.5 CMP	136000.00 .4448E-04	2.95	.47216E-03	ONE INOPERATIVE AND ONE DEGRADED KA-BAND LINK
2.9.6 CMP	136000.00 .4511E-02	2.78	.67731E-02	TWO KA-BAND LINKS DEGRADED
2.9.7 CMP	136000.00 .3707E-02	2.73	.15319E-01	ONE KA-BAND LINK INOPERATIVE
2.9.8 CMP	136000.00 .4544E-02	1.77	.27657E-01	ONE KA-BAND LINK DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	A*00, HRS.	ATTR, HRS.	IDENTIFICATION
0	.0575319215			NORMA OPERATION
1	.567461E-01	2.6977E+02	1.130	ALL KA-BAND LINKS INOPERATIVE
2	.151932E-02	6.6675E+03	1.463	COMBINATION OF 1 (2) INOPERATIVE AND 2 (1) DEGRADED KA-BAND LINKS
3	.371930E-02	2.8994E+03	1.717	ALL KA-BAND LINKS DEGRADED
4	.164354E-01	6.9135E+02	2.493	TWO KA-BAND LINKS INOPERATIVE
5	.594468E-03	1.6070E+04	2.047	ONE INOPERATIVE AND ONE DEGRADED KA-BAND LINK
6	.177778E-01	3.4105E+02	2.175	TWO KA-BAND LINKS DEGRADED
7	.157771E-01	6.6537E+02	.733	ONE KA-BAND LINK INOPERATIVE
8	.266251E-01	3.5957E+02	.996	ONE KA-BAND LINK DEGRADED
9	.576544E-02			OTHER STATES
COMBINEU		0.06197E+01	1.295	

ASSEMBLY 2 OPERATES FOR 36000.000 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .970747864, RELIABILITY IS .843452591 AND DEPENDABILITY IS .0575019215.
142.50 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 72.15 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

SYSTEM DATA

2 KA-BAND SATCOM SET (SUMMARY)

IDENTIFICATION

DEPENDABILITY

RELIABILITY

AVAILABILITY

LEVEL

2.0	.97074E+00	.09335E+00	.05750E+00	NORMAL OPERATION
2.1	.14610E-01	.39246E-01	.56346E-01	ALL KA-BAND LINKS INOPERATIVE
2.2	.72943E-04	.14394E-02	.15199E-02	COMBINATION OF 1 (2) INOPERATIVE AND 2 (1) DEGRADED KA-BAND LINKS
2.3	.42447E-03	.16670E-02	.37199E-02	ALL KA-BAND LINKS DEGRADED
2.4	.22454E-02	.14360E-01	.16435E-01	TWO KA-BAND LINKS INOPERATIVE
2.5	.64045E-05	.00595E-03	.59457E-03	ONE INOPERATIVE AND ONE DEGRADED KA-BAND LINK
2.6	.22756E-02	.10570E-01	.12746E-01	TWO KA-BAND LINKS DEGRADED
2.7	.12379E-02	.14315E-01	.15647E-01	ONE KA-BAND LINK INOPERATIVE
2.8	.32933E-02	.27431E-01	.29625E-01	ONE KA-BAND LINK DEGRADED
2.9	.75871E-04	.45906E-02	.57694E-02	OTHER STATES

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 209

KA-BAND SATCOM SRT SYSTEM INITIALIZATION

ASSEMBLY 209 IS USED BY ASSEMBLY(S) 6 7 0 2

SUBASSEMBLY STATE DATA

REF	NO. OF TIME OF P308. OF RESTORE	SUBASSEMBLY	UNAVAILABILITY	IDENTIFICATION	COMMUNICATIONS CONTROL
20.1 CMP	1	600.00	.23073E-02	.A2	NO/IN CORRECT RANGE AND/OR RANGE RATE DATA
12.1 CMP	1	600.00	.11215E-05	.50	NO OK-227 RANGE AND/OR RANGE RATE
174.1 CMP	1	360.00	.33468E-04	.50	UNABLE TO START SYSTEM
14.2 CMP	1	360.00	.10906E-10	.14	ALTERNATE INITIALIZATION MODE REQUIRED
147.1 CMP	05	6.20	.11311E-05	1.00	UNABLE TO START SYSTEM

ASSEMBLY STATE

REF	UNAVAILABILITY	ATTC, HRS	IDENTIFICATION	OTHER STATES
0	.9920478677		NORMAL OPERATION	
1	.179650E-01	.025	UNABLE TO START SYSTEM	
2	.715624E-05	1.00954E+05	ALTERNATE INITIALIZATION MODE REQUIRED	
3	.155914E-12	5.86316E+01	OTHER STATES	

ASSEMBLY 209 OPERATES FOR 660.000 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .9951234594; RELIABILITY IS .9968779620 AND DEPENDABILITY IS .9828470673.
 17.35 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1710 FUNCTIONAL CYCLES
 A DELAY OF 29.25 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 200

KA-BAND SAICUM SET (SYSTEM OPERATIONS)

ASSEMBLY 200 IS USED BY ASSEMBLY(S) 2

SUBASSEMBLY STATE DATA

LINE	CMP	NO. OF TIME OF PROB. OF RESIDUE SUBASSEMBLY		UNAVAILABILITY	IDENTIFICATION		
		CYCLES USE	SEC OCCURRENCE				
204.1	CMP	5328	4.20	.35698E-05	1.18	.27421E-02	ALL KA-BAND LINKS INOPERATIVE
204.2	CMP	5328	4.20	.31449E-08	3.33	.15508E-05	FORWARD AND CONFERENCE LINKS INOPERATIVE AND 2/8 LINK DEGRADED
204.3	CMP	5328	4.20	.14394E-06	.59	.64812E-04	2/8 AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
204.4	CMP	5328	4.20	.47627E-06	1.16	.43003E-03	ALL KA-BAND LINKS DEGRADED
204.5	CMP	5328	4.20	.22745E-05	2.48	.29417E-02	KA-BAND FORWARD AND CONFERENCE LINKS INOPERATIVE
204.6	CMP	5328	4.20	.89115E-08	.53	.34333E-05	KA-BAND REPORT-BACK AND CONFERENCE LINKS INOPERATIVE
204.7	CMP	5328	4.20	.13477E-05	2.62	.22394E-02	KA-BAND FORWARD AND CONFERENCE LINKS DEGRADED
204.8	CMP	5328	4.20	.23527E-06	.50	.84008E-04	KA-BAND REPORT-BACK AND CONFERENCE LINKS DEGRADED
204.9	CMP	5328	4.20	.54515E-05	.95	.87177E-03	KA-BAND FORWARD MESSAGE INOPERATIVE
205.1	CMP	340	21.00	.17547E-05	.95	.21624E-03	KA-BAND FORWARD MESSAGE DEGRADED
206.1	CMP	720	12.60	.21041E-05	.51	.33027E-03	KA-BAND REPORT-BACK MESSAGE INOPERATIVE
206.2	CMP	720	12.60	.62310E-05	1.00	.17957E-02	KA-BAND REPORT-BACK MESSAGE DEGRADED
207.1	CMP	12	999.80	.92731E-04	.50	.12550E-03	KA-BAND CONFERENCE INOPERATIVE
207.2	CMP	12	892.80	.35402E-03	1.00	.14042E-02	KA-BAND CONFERENCE DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	ATBO, HRS.	ATTR, MPS.	IDENTIFICATION
0	.0748219727			NORMAL OPERATION
1	.16270E-01	4.86731E+02	1.226	ALL KA-BAND LINKS INOPERATIVE
2	.174712E-02	1.13423E+04	1.463	COMBINATION OF 1 (2) INOPERATIVE AND 2 (1) DEGRADED KA-BAND LINKS
3	.431070E-02	3.72259E+03	1.318	ALL KA-BAND LINKS DEGRADED
4	.134735E-01	9.54646E+02	2.493	TWO KA-BAND LINKS INOPERATIVE
5	.693241E-03	2.30133E+05	2.047	ONE INOPERATIVE AND ONE DEGRADED KA-BAND LINK
6	.146920E-01	1.14614E+03	2.375	TWO KA-BAND LINKS DEGRADED
7	.173207E-01	2.69272E+03	.733	ONE KA-BAND LINK INOPERATIVE
8	.333164E-01	1.15972E+03	.496	ONE KA-BAND LINK DEGRADED
9	.203932E-02	1.69732E+02	1.411	OTHER STATES
COMBINED				

ASSEMBLY 200 OPERATES FOR 15000.000 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .9278976567, RELIABILITY IS .9428051472 AND DEPENDABILITY IS .8748219727.
12.10 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 79.92 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 207

KA-BAND MODEM GROUP (CONFERENCE)

ASSEMBLY 207 IS USED BY ASSEMBLY(S) 208

SUBASSEMBLY STATE DATA

NO. OF TIME OF P203, OF RESTORE	SUBASSEMBLY	IDENTIFICATION
CYCLES USE, SEC DUEPENCE	TIME, HRS UNAVAILABILITY	
217.1 C4P	214 4.20 4.20E-06	.50 .1584E-03 KA-BAND CONFERENCE CYCLE INOPERATIVE
217.2 C4P	214 4.20 4.20E-06	1.00 .1408E-02 KA-BAND CONFERENCE CYCLE DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	ATRO, HRS.	ATTR, HRS.	IDENTIFICATION
0	.9979599149			NORMAL OPERATION
1	.270067E-03	2.69312E+02	.504	KA-BAND CONFERENCE INOPERATIVE
2	.176159E-02	7.06100E+02	.994	KA-BAND CONFERENCE DEGRADED
3	.493924E-06			OTHER STATES
COMBINED		5.58716E+02	.929	

ASSEMBLY 207 OPERATES FOR 499.400 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .9994059610. RELIABILITY IS .9995532417 AND DEPENDABILITY IS .9979599149.
 12 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 12 FUNCTIONAL CYCLES
 AND A DELAY OF 33.76 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 217

KA-BAND MODEM GROUP (CONFERENCE CYCLE)

ASSEMBLY 217 IS USED BY ASSEMBLY(S) 287

SUBASSEMBLY STATE DATA

MODEL	NO. OF TIME OF PROB. OF RESTORE SUBASSEMBLY	CYCLES USE, SEC	OCURRENCE TIME, MFS	UNAVAILABILITY	IDENTIFICATION
113.1 C/P	1	4.20	.4329E-06	.50	1*610E-01 INOPERATIVE CONFERENCE LINK
113.2 C/P	1	4.20	.16566E-05	1.00	14017E-02 DEGRADED CONFERENCE LINK
					KA-BAND MODEM
					KA-BAND MODEM

ASSEMBLY STATES

STATE	PROBABILITY	ATBO, MFS.	ATTR, MFS.	IDENTIFICATION
0	.994033504			NORMAL OPERATION
1	.155275E-03	2.68547E+03	.504	KA-BAND CONFERENCE CYCLE INOPERATIVE
2	.151611E-02	7.04642E+02	.996	KA-BAND CONFERENCE CYCLE DEGRADED
3	.253038E-05			OTHER STATES
COMBINED		5.50223E+02	.939	

ASSEMBLY 217 OPERATES FOR 4.20E+02 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .994033504, RELIABILITY IS .999379100 AND DEPENDABILITY IS .994033504.
.34 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 214 FUNCTIONAL CYCLES
AND A DELAY OF 28.29 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 206

KA-BAND MODEM GROUP (REPORT-BACK MESSAGE)

ASSEMBLY 206 IS USED BY ASSEMBLY(S) 208

SUBASSEMBLY STATE DATA

REF	NO. OF TIME OF F32B. OF RESTORE	SUBASSEMBLY	NO. OF CYCLES USE, SEC	OF OCCURRENCE TIME, HRS	UNAVAILABILITY	IDENTIFICATION
216.1 Cmp	1	4.20	.70376E-06	.51	.30081E-03	KA-BAND REPORT-BACK CYCLE INOPERATIVE
216.2 Cmp	1	4.20	.27916E-05	1.00	.17982E-02	KA-BAND REPORT-BACK CYCLE DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	ATBO, HRS.	ATTR, HRS.	IDENTIFICATION
0	.9978951122			NORMAL OPERATION
1	.332170E-03	1.66341E+03	.522	KA-BAND REPORT-BACK MESSAGE INOPERATIVE
2	.163194E-02	5.57235E+02	1.000	KA-BAND REPORT-BACK MESSAGE DEGRADED
3	.544933E-06	6.17406E+02	.929	OTHER STATES
CUMINF				

ASSEMBLY 208 OPERATES FOR 12.600 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .997997597, RELIABILITY IS .999991619 AND DEPENDABILITY IS .9978951122.
 1.52 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 720 FUNCTIONAL CYCLES
 AND A DELAY OF 27.97 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 216

KA-BAND MODEM GROUP (REPORT-BACK CYCLE)

ASSEMBLY 216 IS USED BY ASSEMBLY(S) 28A

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF RESTORE	CYCLES USED, SEC OCCURRENCE TIME, MRS UNAVAILABILITY	IDENTIFICATION	KA-BAND MODEM
12.1 CMP	1	4.20 .2032E-06	.51 .30135E-03	INOPERATIVE REPORT-BACK LINK
12.2 CMP	1	4.20 .20979E-05	1.00 .17960E-02	DEGRADED REPORT-BACK LINK

ASSEMBLY STATES

STATE	PROBABILITY	ATBO, MRS.	ATTR, MRS.	IDENTIFICATION
0	.0078996359			MODUL OPERATION
1	.0078996359	1.6593E-03	.505	KA-BAND REPORT-BACK CYCLE INOPERATIVE
2	.179811E-02	5.56729E+02	1.000	KA-BAND REPORT-BACK CYCLE DEGRADED
3	.543356E-06			OTHER STATES
07492MED		6.16447E+02	.979	

ASSEMBLY 216 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .9978996359, RELIABILITY IS .9999972012 AND DEPENDABILITY IS .9978996350.
 2.10 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
 -NO A DELAY OF 27.90 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 205

KA-BAND MODEM GROUP (FORWARD MESSAGE)

ASSEMBLY 205 IS USED BY ASSEMBLY(S) 20A

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF RESTORE	CYCLES USED	SEC OCCURRENCE TIME	HRS	UNAVAILABILITY	IDENTIFICATION
215.1 CWP	5	4.20	10910E-05	.96	.06736E-03	KA-BAND FORWARD CYCLE INOPERATIVE
215.2 CWP	5	4.20	127213E-06	.96	.21645E-03	KA-BAND FORWARD CYCLE DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	1.RO. HRS.	ATTN. HRS.	IDENTIFICATION
0	.994909E+01			NORMAL OPERATION
1	.072624E-03	1.06971E+03	.960	KA-BAND FORWARD MESSAGE INOPERATIVE
2	.217620E-03	4.29349E+03	.961	KA-BAND FORWARD MESSAGE DEGRADED
3	.190170E-06			OTHER STATES
COMBINED		0.55917E+02	.960	

ASSEMBLY 205 OPERATES FOR 21,000 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .99916739, RELIABILITY IS .999931867 AND DEPENDABILITY IS .9989095651.
 .26 MA FUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 240 FUNCTIONAL CYCLES
 AND A DELAY OF 28.99 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 215

KA-BAND MODEM GROUP (FORWARD CYCLE)

ASSEMBLY 215 IS USED BY ASSEMBLY(S) 205

SUBASSEMBLY STATE DATA

TIME OF LINE OF P203 OF RESIDUE SUBASSEMBLY		Cycles Use, Sec Occurrence Time, MRS Unavailability		IDENTIFICATION	
Label					
101.1 C4P	1	4.20	.10975E-05	.96	.R6755E-03 INOPERATIVE FORWARD LINK
101.2 C4P	1	4.27	.27255E-06	.95	.21654E-03 DEGRADED FORWARD LINK
					KA-BAND MODEM
					KA-BAND MODEM

ASSEMBLY STATES

STATE	PROBABILITY	AT80, MRS.	ATFR, MRS.	IDENTIFICATION
0	.5309145349			NORMAL OPERATION
1	.964453E-03	1.06454E+03	.960	KA-BAND FORWARD CYCLE INOPERATIVE
2	.216724E-03	4.28641E+03	.961	KA-BAND FORWARD CYCLE DEGRADED
3	.198419E-06	8.55124E+02	.960	OTHER STATES
COMBINED				

ASSEMBLY 215 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .996915973. RELIABILITY IS .9939946360 AND DEPENDABILITY IS .9989146348.
 1.79 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
 AND A DELAY OF 20.85 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 204

KA-BAND SATCOM SET (COMMON FUNCTIONS)

ASSEMBLY 204 IS USED BY ASSEMBLY(S) 200

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF		RESTORE	SUPASSEMBLY		IDENTIFICATION
	CYCLES	USE	SEC	UNAVAILABILITY	TIME	
14.1 ENT	1	4.20	15.11E-05	1.03	1.15E-02	CPU STOP; NO UP-LINK, PRINTER AND CRT EXCEPT FWD. LINK OR CINCMET
210.1 CWP	1	4.20	15.11E-05	1.32	1.41E-02	ALL KA-BAND LINKS INOPERATIVE
210.2 CWP	1	4.20	15.11E-05	1.33	1.41E-02	ALL KA-BAND LINKS INOPERATIVE AND R/B LINK DEGRADED
210.3 CWP	1	4.20	15.11E-05	1.33	1.41E-02	FORWARD AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
210.4 CWP	1	4.20	15.11E-05	1.33	1.41E-02	R/B AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
210.5 CWP	1	4.20	15.11E-05	1.16	1.41E-02	ALL KA-BAND LINKS DEGRADED
210.6 CWP	1	4.20	15.11E-05	2.43	2.36E-02	KA-BAND REPORT-BACK AND CONFERENCE LINKS INOPERATIVE
210.7 CWP	1	4.20	15.11E-05	1.51	1.41E-02	KA-BAND REPORT-BACK AND CONFERENCE LINKS DEGRADED
210.8 CWP	1	4.20	15.11E-05	2.62	2.35E-02	KA-BAND FORWARD AND CONFERENCE LINKS DEGRADED
210.9 CWP	1	4.20	15.11E-05	1.51	1.41E-02	KA-BAND REPORT-BACK AND CONFERENCE LINKS DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	ATBN, MRS.	ATTR, MRS.	IDENTIFICATION	
				NORMAL OPERATION	OTHER STATES
1	1.000000E-02	3.26016E+02	1.178	ALL KA-BAND LINKS INOPERATIVE	
2	1.55334E-05	7.7977E+05	7.129	FORWARD AND CONFERENCE LINKS INOPERATIVE AND R/B LINK DEGRADED	
3	1.64972E-04	9.3244E+03	5.86	R/B AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED	
4	1.31361E-03	2.44958E+03	1.156	ALL KA-BAND LINKS DEGRADED	
5	1.29476E-02	5.6237E+02	2.485	KA-BAND FORWARD AND CONFERENCE LINKS INOPERATIVE	
6	1.11111E-05	1.2327E+05	5.00	KA-BAND REPORT-BACK AND CONFERENCE LINKS DEGRADED	
7	1.11111E-02	8.6577E+02	2.621	KA-BAND FORWARD AND CONFERENCE LINKS DEGRADED	
8	1.82119E-04	5.65507E+03	1.570	KA-BAND REPORT-BACK AND CONFERENCE LINKS DEGRADED	
9	1.213654E-04	1.49051E+02	2.031	OTHER STATES	
COMBINED					

ASSEMBLY 204 OPERATES FOR 6.200 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .990444247. RELIABILITY IS .999921732 AND DEPENDABILITY IS .990366696.
 54.32 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 5928 FUNCTIONAL CYCLES.
 NO MALFUNCTION IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 200

KA-BAND SATCOM SET (COMMON FUNCTIONS)

ASSEMBLY 200 IS USED BY ASSEMBLY(S) 211 212 213 204

SUBASSEMBLY STATE DATA

LEVEL	NO. OF TIME OF RESTORE	NO. OF CYCLES USE, SEC	OF OCCURRENCE	TIME, MRS	SUBASSEMBLY UNAVAILABILITY	IDENTIFICATION
100.1 C40	1	4.20	.93075F-06	.50	.3151E-03	ALL KA-BAND LINKS INOPERATIVE
100.2 C40	1	4.20	.12120E-12	.90	.22591E-07	FORWARD AND CONFERENCE LINKS INOPERATIVE AND 2/8 LINK DEGRADED
100.3 C40	1	4.20	.12120E-12	.50	.17073F-04	2/8 AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
100.4 C40	1	4.20	.27927E-07	.51	.12017E-04	ALL KA-BAND LINKS DEGRADED
100.5 C40	1	4.20	.47932E-06	.50	.37623E-03	KA-BAND FORWARD AND CONFERENCE LINKS INOPERATIVE
100.6 C40	1	4.20	.91141F-04	.50	.30909F-05	KA-BAND REPORT-PACK AND CONFERENCE LINKS INOPERATIVE
100.7 C40	1	4.20	.67130F-06	1.04	.10347E-02	KA-BAND FORWARD AND CONFERENCE LINKS DEGRADED
100.8 C40	1	4.20	.11214E-06	.50	.47543F-04	KA-BAND REPORT-PACK AND CONFERENCE LINKS DEGRADED
100.9 C40	1	4.20	.11574E-05	1.61	.17667F-02	ALL KA-BAND LINKS INOPERATIVE
101.1 C40	1	4.20	.10340F-08	3.65	.12210F-05	FORWARD AND CONFERENCE LINKS INOPERATIVE AND 2/8 LINK DEGRADED
101.2 C40	1	4.20	.10934E-06	.60	.51664E-04	2/8 AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
101.3 C40	1	4.20	.45639F-06	1.17	.42533E-03	ALL KA-BAND LINKS DEGRADED
101.5 C40	1	4.20	.12362E-05	2.77	.25912E-02	KA-BAND FORWARD AND CONFERENCE LINKS INOPERATIVE
101.6 C40	1	4.20	.7309E-06	3.00	.18771E-02	KA-BAND FORWARD AND CONFERENCE LINKS DEGRADED
101.7 C40	1	4.20	.37312E-07	.50	.41526E-04	KA-BAND REPORT-PACK AND CONFERENCE LINKS DEGRADED

ASSEMBLY STATUS

STATE	PROBABILITY	ATBO, MRS.	ATTR, MRS.	IDENTIFICATION
0	.997104197			NORMAL OPERATION
1	.146131E-02	5.6336E+02	1.724	ALL KA-BAND LINKS INOPERATIVE
2	.156431E-05	5.5014E+05	3.323	FORWARD AND CONFERENCE LINKS INOPERATIVE AND 2/8 LINK DEGRADED
3	.655668E-04	6.25576E+03	.566	2/8 AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
4	.475161E-03	2.62463E+03	1.156	ALL KA-BAND LINKS DEGRADED
5	.296419E-02	5.57431E+02	2.485	KA-BAND FORWARD AND CONFERENCE LINKS INOPERATIVE
6	.347741E-05	1.25349E+05	.500	KA-BAND REPORT-PACK AND CONFERENCE LINKS INOPERATIVE
7	.285174E-02	8.52297E+02	2.621	KA-BAND FORWARD AND CONFERENCE LINKS DEGRADED
8	.890197E-04	5.55970E+03	.500	KA-BAND REPORT-PACK AND CONFERENCE LINKS DEGRADED
9	.135756E-04			OTHER STATES
COMBINED		1.83646E+02	7.203	

ASSEMBLY 200 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .9981105214. RELIABILITY IS .9999936472 AND DEPENDABILITY IS .9921843987.
7.99 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
END A DELAY OF 66.11 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 39

KA-BAND ANTENNA AND TERMINAL GROUP COMMON FUNCTIONS

ASSEMBLY 39 IS USED BY ASSEMBLY(S) 200

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROB. OF RESIDUE SUBASSEMBLY		CYCLES USE SEC OCCURRENCE TIME MFS UNAVAILABILITY		IDENTIFICATION	
40.1 CWP	1	4.20	.17153E-06	1.20	244.37E-03	NO KA-BAND TRANSMISSION AND RECEPTION
40.2 CWP	1	4.20	.41445E-07	2.00	.71026E-04	DEGRADED KA-BAND TRANSMISSION AND RECEPTION
40.3 CWP	1	4.20	.93130E-06	1.55	.84636E-03	NO KA-BAND TRANSMISSION AND RECEPTION
40.4 CWP	1	4.20	.51731E-12	3.53	.17427E-05	NO KA-BAND TRANSMISSION AND DEGRADED RECEPTION
40.5 CWP	1	4.20	.11113E-06	.60	.52175E-04	NO KA-BAND RECEPTION
40.6 CWP	1	4.20	.41771E-06	1.01	.35663E-03	DEGRADED KA-BAND TRANSMISSION AND RECEPTION
40.7 CWP	1	4.20	.12159E-05	2.77	.24072E-02	NO KA-BAND TRANSMISSION
40.8 CWP	1	4.20	.71017E-06	3.00	.16449E-02	DEGRADED KA-BAND TRANSMISSION
40.9 CWP	1	4.20	.35037E-07	.50	.41777E-04	DEGRADED KA-BAND RECEPTION

ASSEMBLY STATES

STATE	PROBABILITY	ATBO, MFS.	ATTP, MFS.	IDENTIFICATION
0	.9933434130			NORMAL OPERATION
1	.168792E-02	1.00377E+03	1.607	ALL KA-BAND LINKS INOPERATIVE
2	.122314E-05	6.35941E+05	3.654	FORWARD AND CONFERENCE LINKS INOPERATIVE AND R/B LINK DEGRADED
3	.519744E-04	1.06479E+04	.605	R/B AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
4	.625779E-03	2.55234E+03	1.172	ALL KA-BAND LINKS DEGRADED
5	.253437E-02	9.51479E+02	2.769	KA-BAND FORWARD AND CONFERENCE LINKS INOPERATIVE
6	.193777E-02	1.56737E+03	3.001	KA-BAND FORWARD AND CONFERENCE LINKS DEGRADED
7	.416226E-04	1.11435E+04	.500	KA-BAND REPORT-BACK AND CONFERENCE LINKS DEGRADED
8	.117213E-04	3.09911E+02	2.440	OTHER STATES

ASSEMBLY 39 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .9933434130. RELIABILITY IS .9999362343 AND DEPENDABILITY IS .9933434130.
 6.36 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
 AND A DELAY OF 74.43 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 30

KA-BAND TERMINAL GROUP

ASSEMBLY 30 IS USED BY ASSEMBLY(S) 39

SUBASSEMBLY STATE DATA

L-REL	NO. OF TYPE OF PPOA. OF RESTORE	CYCLES USE-SEC OCCURRENCE TIME, MFS	SUBASSEMBLY UNAVAILABILITY	IDENTIFICATION	
1.1 C4P	1	4.20 .47497E-07	1.00	.41045E-04	COMMUNICATIONS TERMINAL POWER FAILURE
12.1 C4P	1	4.20 .25433E-06	2.17	.47291E-03	NO HEAT EXCHANGING
12.2 C4P	1	4.20 .54331E-09	.50	.24988E-06	DEGRADED HEAT EXCHANGING
13.1 C4P	1	4.20 .69101E-06	.70	.33216E-03	NO/INCORRECT FREQUENCY GENERATION
14.1 C4P	1	4.20 .41724E-06	1.00	.35754E-03	AUTO-TRACK RECEIVER FAILURE
14.2 C4P	1	4.20 .11011E-06	.60	.52372E-04	NO KA-BAND RECEPTION
14.3 C4P	1	4.20 .34047E-07	.50	.42017E-04	DEGRADED KA-BAND RECEPTION
15.1 C4P	1	4.20 .72049E-06	1.00	.14571E-02	DEGRADED RF POWER OUTPUT (50 WATTS MAX)
15.2 C4P	1	4.20 .10771E-05	2.34	.21314E-02	INSUFFICIENT RF POWER OUTPUT (LESS THAN 100 MW)
15.3 C4P	1	4.20 .16600E-06	2.00	.23333E-03	NO/INCORRECT DOPPLER CORRECTION
					KA-BAND TRANSMISSION
					KA-BAND TRANSMISSION
					KA-BAND TRANSMISSION

ASSEMBLY STATES

STATE	PROBABILITY	ATBO, HRS.	ATTP, MFS.	IDENTIFICATION	
0	.39424E+03			NORMAL OPERATION	
1	.84705E-03	1.1742E+07	1.548	NO KA-BAND TRANSMISSION AND RECEPTION	
2	.10444E-05	1.4247E+09	3.527	NO KA-BAND TRANSMISSION AND DEGRADED RECEPTION	
3	.52284E-04	1.0594E+04	.604	NO KA-BAND RECEPTION	
4	.35701E-03	2.07923E+03	1.005	DEGRADED KA-BAND TRANSMISSION AND RECEPTION	
5	.26081E-02	9.4324E+02	2.769	NO KA-BAND TRANSMISSION	
6	.14450E-02	1.6232E+03	3.001	DEGRADED KA-BAND TRANSMISSION	
7	.41745E-04	1.15032E+04	.600	DEGRADED KA-BAND RECEPTION	
8	.55461E-05			OTHER STATES	
COMBINED		3.26533E+02	2.516		

ASSEMBLY 39 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
 THE RELIABILITY IS .99424E+03, RELIABILITY IS .99994E+02 AND DEPENDABILITY IS .99424E+03.
 5.75 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
 AND A DELAY OF 5.52 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

SENSITIVITY TABULATIONS

ASSEMBLY STATE	PERCENTAGE CONTRIBUTION TO ASSEMBLY 2 UNRELIABILITY											
	SUPERASSEMBLY AND/OR ELEMENT STATES											
	4.1	209.1	203.2	208.1	208.2	208.3	208.4	208.5	208.6	208.7	208.8	TOTAL
2.1	3.4	50.0	.0	9.2	.0	.0	.1	.0	.1	.1	.1	61.1
2.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2.4	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2.5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2.6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2.7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	3.4	50.1	.0	9.2	.2	1.5	9.9	.0	9.8	6.5	11.4	

ASSEMBLY STATE	PERCENTAGE CONTRIBUTION TO ASSEMBLY 2 UNRELIABILITY											
	SUPERASSEMBLY AND/OR ELEMENT STATES											
	4.1	209.1	209.2	208.1	208.2	209.3	208.4	209.5	208.6	208.7	208.8	TOTAL
2.1	5.3	2.7	.0	22.9	.0	.1	.2	.0	.2	.2	.4	35.8
2.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2.4	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2.5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2.6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2.7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	5.4	2.6	.0	23.4	1.4	3.1	12.9	.6	9.5	13.4	24.5	

ASSEMBLY STATE	PERCENTAGE CONTRIBUTION TO ASSEMBLY 2 UNDEPENDABILITY											
	SUPERASSEMBLY AND/OR ELEMENT STATES											
	4.1	209.1	209.2	209.1	209.2	209.3	209.4	209.5	209.6	209.7	209.8	TOTAL
2.1	7.4	12.0	.0	20.1	.0	.1	.4	.0	.3	.3	.6	41.2
2.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2.4	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2.5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2.6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2.7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	7.5	12.1	.0	20.5	1.1	2.4	12.3	.5	9.5	11.6	21.0	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 209 UNAVAILABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

	20.1	12.1	104.1	104.2	147.1	TOTAL
209.1	87.1	.0	3.4	.0	9.5	100.0
209.2	.0	.0	.0	.0	.0	.0
TOTAL	87.1	.0	3.4	.0	9.5	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 209 UNRELIABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

	20.1	12.1	104.1	104.2	147.1	TOTAL
209.1	93.1	.0	2.7	.0	4.2	99.9
209.2	.0	.1	.0	.0	.0	.1
TOTAL	93.1	.1	2.7	.0	4.2	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 209 UNDEPENDABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

	20.1	12.1	104.1	104.2	147.1	TOTAL
209.1	88.1	.0	3.3	.0	8.6	100.0
209.2	.0	.0	.0	.0	.0	.0
TOTAL	88.1	.0	3.3	.0	8.6	

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	PERCENTAGE CONTRIBUTION TO ASSEMBLY 208 UNAVAILABILITY													
		204.1	204.2	204.3	204.4	204.5	204.6	204.7	204.8	205.1	205.2	206.1	206.2	207.1	207.2 TOTAL
204.1	16.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
204.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
204.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
204.4	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
204.5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
204.6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
204.7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
204.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	16.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	PERCENTAGE CONTRIBUTION TO ASSEMBLY 208 UNRELIABILITY													
		204.1	204.2	204.3	204.4	204.5	204.6	204.7	204.8	205.1	205.2	206.1	206.2	207.1	207.2 TOTAL
204.1	35.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
204.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
204.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
204.4	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
204.5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
204.6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
204.7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
204.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	35.6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	PERCENTAGE CONTRIBUTION TO ASSEMBLY 208 UNDEPENDABILITY													
		204.1	204.2	204.3	204.4	204.5	204.6	204.7	204.8	205.1	205.2	206.1	206.2	207.1	207.2 TOTAL
204.1	23.9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
204.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
204.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
204.4	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
204.5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
204.6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
204.7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
204.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	24.5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

PERCENTAGE CONTRIBUTION TO ASSEMBLY 207 UNAVAILABILITY

ASSEMBLY SUBASSEMBLY AND/OR ELEMENT STATES

217.1 217.2 TOTAL
207.1 11.6 .0 11.6
207.2 .0 88.4 88.4
TOTAL 11.6 88.4

PERCENTAGE CONTRIBUTION TO ASSEMBLY 207 UNRELIABILITY

ASSEMBLY SUBASSEMBLY AND/OR ELEMENT STATES

217.1 217.2 TOTAL
207.1 20.2 .0 20.2
207.2 .0 79.2 79.2
TOTAL 20.2 79.2

PERCENTAGE CONTRIBUTION TO ASSEMBLY 207 UNDEPENDABILITY

ASSEMBLY SUBASSEMBLY AND/OR ELEMENT STATES

217.1 217.2 TOTAL
207.1 13.6 .0 13.6
207.2 .0 86.4 86.4
TOTAL 13.6 86.4

PERCENTAGE CONTRIBUTION TO ASSEMBLY 217 UNAVAILABILITY

ASSEMBLY STATE	SURASSEMBLY AND/OR ELEMENT STATES	

	103.1 103.2 TOTAL	
217.1	11.7 .0 11.7	
217.2	.0 88.3 88.3	
TOTAL	11.7 88.3	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 217 UNRELIABILITY

ASSEMBLY STATE	SURASSEMBLY AND/OR ELEMENT STATES	

	103.1 103.2 TOTAL	
217.1	20.5 .0 20.5	
217.2	.3 79.2 79.2	
TOTAL	20.4 79.2	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 217 UNDEPENDABILITY

ASSEMBLY STATE	SURASSEMBLY AND/OR ELEMENT STATES	

	103.1 103.2 TOTAL	
217.1	11.7 .0 11.7	
217.2	.0 88.3 88.3	
TOTAL	11.7 88.3	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 206 UNAVAILABILITY

ASSEMBLY STATE SUPPLEMENTARY AND/OR ELEMENT STATES

206.1 14.3 0 14.3
206.2 0 95.7 95.7
TOTAL 14.3 95.7

PERCENTAGE CONTRIBUTION TO ASSEMBLY 206 UNRELIABILITY

ASSEMBLY STATE SUPPLEMENTARY AND/OR ELEMENT STATES

206.1 25.1 0 25.1
206.2 0 74.9 74.9
TOTAL 25.1 74.9

PERCENTAGE CONTRIBUTION TO ASSEMBLY 206 UNDEPENDABILITY

ASSEMBLY STATE SUPPLEMENTARY AND/OR ELEMENT STATES

206.1 14.4 0 14.4
206.2 0 85.6 85.6
TOTAL 14.4 85.6

PERCENTAGE CONTRIBUTION TO ASSEMBLY 216 UNAVAILABILITY	
ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES

	102.1 102.2 TOTAL
216.1	14.3 .3 14.3
216.2	.0 85.7 85.7
TOTAL	14.3 85.7

PERCENTAGE CONTRIBUTION TO ASSEMBLY 216 UNRELIABILITY	
ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES

	102.1 102.2 TOTAL
216.1	25.1 .0 25.1
216.2	.0 74.9 74.9
TOTAL	25.1 74.9

PERCENTAGE CONTRIBUTION TO ASSEMBLY 216 UNDEPENDABILITY	
ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES

	102.1 102.2 TOTAL
216.1	14.4 .0 14.4
216.2	.0 85.6 85.6
TOTAL	14.4 85.6

PERCENTAGE CONTRIBUTION TO ASSEMBLY 205 UNAVAILABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

215.1 215.2 TOTAL
205.1 80.0 .0 80.0
205.2 .0 20.0 20.0
TOTAL 80.0 20.0

PERCENTAGE CONTRIBUTION TO ASSEMBLY 205 UNRELIABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

215.1 215.2 TOTAL
205.1 80.1 .0 80.1
205.2 .0 19.9 19.9
TOTAL 80.1 19.9

PERCENTAGE CONTRIBUTION TO ASSEMBLY 205 UNDEPENDABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

215.1 215.2 TOTAL
205.1 80.0 .0 80.0
205.2 .0 20.0 20.0
TOTAL 80.0 20.0

PERCENTAGE CONTRIBUTION TO ASSEMBLY 215 UNAVAILABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

101.1 101.2 TOTAL
215.1 90.0 0 00.0
215.2 0 20.0 20.0
TOTAL 90.0 20.0

PERCENTAGE CONTRIBUTION TO ASSEMBLY 215 UNRELIABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

101.1 101.2 TOTAL
215.1 90.0 0 00.0
215.2 0 20.0 20.0
TOTAL 90.0 20.0

PERCENTAGE CONTRIBUTION TO ASSEMBLY 215 UNDEPENDABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

101.1 101.2 TOTAL
215.1 90.0 0 00.0
215.2 0 20.0 20.0
TOTAL 90.0 20.0

ASSEMBLY STATE	PERCENTAGE CONTRIBUTION TO ASSEMBLY 204 UNAVAILABILITY											
	SU-ASSEMBLY AND/OR ELEMENT STATES											
	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	TOTAL		
204.1	14.3	15.9	.0	.0	.0	.0	.0	.0	.0	39.2		
204.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
204.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
204.4	.0	.0	.0	.0	4.7	.0	.0	.0	.0	4.7		
204.5	.0	.0	.0	.0	.0	32.2	.0	.0	.0	32.2		
204.6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
204.7	.0	.0	.0	.0	.0	.0	.0	31.1	.0	31.1		
204.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.0		
TOTAL	14.3	15.9	.0	.0	4.7	32.2	.0	31.1	.0	1.0		

ASSEMBLY STATE	PERCENTAGE CONTRIBUTION TO ASSEMBLY 204 UNRELIABILITY											
	SU-ASSEMBLY AND/OR ELEMENT STATES											
	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	TOTAL		
204.1	19.6	26.0	.0	.0	.0	.0	.0	.0	.0	45.6		
204.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
204.3	.0	.0	.0	1.8	.0	.0	.0	.0	.0	1.8		
204.4	.0	.0	.0	.0	6.1	.0	.0	.0	.0	6.1		
204.5	.0	.0	.0	.0	.0	26.5	.0	.0	.0	26.5		
204.6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
204.7	.0	.0	.0	.0	.0	.0	.0	17.2	.0	17.2		
204.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	2.6		
TOTAL	19.6	26.0	.0	1.8	6.1	26.5	.0	17.2	.0	2.6		

ASSEMBLY STATE	PERCENTAGE CONTRIBUTION TO ASSEMBLY 204 UNDEPENDABILITY											
	SU-ASSEMBLY AND/OR ELEMENT STATES											
	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	TOTAL		
204.1	14.3	15.9	.0	.0	.0	.0	.0	.0	.0	30.3		
204.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
204.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
204.4	.0	.0	.0	.0	4.7	.0	.0	.0	.0	4.7		
204.5	.0	.0	.0	.0	.0	32.2	.0	.0	.0	32.2		
204.6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
204.7	.0	.0	.0	.0	.0	.0	.0	31.1	.0	31.1		
204.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.0		
TOTAL	14.3	15.9	.0	.0	4.7	32.2	.0	31.1	.0	1.0		

ASSEMBLY		PERCENTAGE CONTRIBUTION TO ASSEMBLY 200 UNRELIABILITY															
STATE	SUBASSEMBLY AND/OR ELEMENT STATES	103.1	103.2	103.3	103.4	103.5	103.6	103.7	103.8	103.9	104.1	104.2	104.3	104.4	104.5	104.6	104.7
200.1	4.5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.4	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	4.5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

ASSEMBLY		PERCENTAGE CONTRIBUTION TO ASSEMBLY 200 UNRELIABILITY															
STATE	SUBASSEMBLY AND/OR ELEMENT STATES	103.1	103.2	103.3	103.4	103.5	103.6	103.7	103.8	103.9	104.1	104.2	104.3	104.4	104.5	104.6	104.7
200.1	14.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.4	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	14.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

ASSEMBLY		PERCENTAGE CONTRIBUTION TO ASSEMBLY 200 UNRELIABILITY															
STATE	SUBASSEMBLY AND/OR ELEMENT STATES	103.1	103.2	103.3	103.4	103.5	103.6	103.7	103.8	103.9	104.1	104.2	104.3	104.4	104.5	104.6	104.7
200.1	4.5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.4	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
200.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	4.5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

ASSEMBLY		PERCENTAGE CONTRIBUTION TO ASSEMBLY 39 UNAVAILABILITY									
STATE	SUBASSEMBLY	AND/OR ELEMENT STATES									
		40.1	40.2	39.1	39.2	39.3	39.4	39.5	39.6	39.7	TOTAL
39-1		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39-2		0.0	0.0	13.9	0.0	0.0	0.0	0.0	0.0	0.0	13.9
39-3		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39-4		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39-5		0.0	1.2	0.0	0.0	0.0	5.9	0.0	0.0	0.0	7.1
39-6		0.0	0.0	0.0	0.0	0.0	0.0	43.0	0.0	0.0	43.0
39-7		0.0	0.0	0.0	0.0	0.0	0.0	2.2	39.4	0.0	39.4
TOTAL		0.0	1.2	13.9	0.0	0.0	5.9	43.0	10.4	0.0	77.5

PERCENTAGE CONTRIBUTION TO ASSEMBLY 39 UNRELIABILITY												
A. SEMI- STATE		SUB-ASSEMBLY AND/OR ELEMENT STATES										
		40.1	40.2	39.1	39.2	39.3	39.4	39.5	39.6	39.7	TOTAL	
39.1	4.6	0.1	26.4	0	0	0	0	0	0	0	31.0	
39.2	0	0	0	0	0	0	0	0	0	0	0	
39.3	0	0	0	0	2.9	0	0	0	0	0	2.9	
39.4	0	1.1	0	0	0	11.0	0	0	0	0	12.1	
39.5	0	0	0	0	0	0	32.5	0	0	0	32.5	
39.6	0	0	0	0	0	0	0	0	18.6	0	18.6	
39.7	0	0	0	0	0	0	0	0	0	2.6	2.6	
TOTAL	4.6	1.1	26.4	0	2.9	11.0	32.6	19.0	0	2.6	2.6	

ASSEMBLY STATE	PERCENTAGE CONTRIBUTION TO ASSEMBLY 39 UNDEPENDABILITY									
	SUBASSEMBLY AND/OR ELEMENT STATES									
	40.1	40.2	39.1	39.2	39.3	39.4	39.5	39.6	39.7	TOTAL
39.1	4.0	0.0	13.9	0.0	0.0	0.0	0.0	0.0	0.0	18.8
39.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39.4	0.0	1.2	0.0	0.0	5.9	0.0	0.0	0.0	0.0	7.0
39.5	0.0	0.0	0.0	0.0	0.0	63.9	0.0	0.0	0.0	63.8
39.6	0.0	0.0	0.0	0.0	0.0	0.0	38.4	0.0	0.0	38.4
39.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	4.0	1.2	13.9	0.0	5.9	63.9	38.4	0.0	0.0	177.4

PERCENTAGE CONTRIBUTION TO ASSEMBLY 38 UNAVAILABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

	31.1	32.1	32.2	33.1	34.1	34.2	34.3	35.1	35.2	35.3 TOTAL
34.1	.7	8.2	.0	5.4	.0	.0	.0	.0	.0	.0 14.7
34.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0 .0
34.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0 .0
34.4	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0 .0
34.5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0 .0
34.6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0 .0
34.7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0 .0
TOTAL	.7	8.2	.0	5.4	.0	.0	.0	.0	.0	.0 14.7

PERCENTAGE CONTRIBUTION TO ASSEMBLY 38 UNRELIABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

	31.1	32.1	32.2	33.1	34.1	34.2	34.3	35.1	35.2	35.3 TOTAL
34.1	11.1	12.1	.0	19.1	.0	.0	.0	.0	.0	.0 27.8
34.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0 .0
34.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0 .0
34.4	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0 .0
34.5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0 .0
34.6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0 .0
34.7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0 .0
TOTAL	11.1	12.1	.0	19.1	.0	.0	.0	.0	.0	.0 27.8

PERCENTAGE CONTRIBUTION TO ASSEMBLY 38 UNDEPENDABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

	31.1	32.1	32.2	33.1	34.1	34.2	34.3	35.1	35.2	35.3 TOTAL
34.1	.7	8.2	.0	5.4	.0	.0	.0	.0	.0	.0 14.7
34.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0 .0
34.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0 .0
34.4	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0 .0
34.5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0 .0
34.6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0 .0
34.7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0 .0
TOTAL	.7	8.2	.0	5.4	.0	.0	.0	.0	.0	.0 14.7

ANALYSIS RESULTS FOR A 10-HOUR MISSION UTILIZING ONLY THE FORWARD LINK

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 6

KA-BAND SAICOM SEE (FORWARD LINK)

SUBASSEMBLY STATE DATA

L-REL	NO. OF TIME OF PROB. OF RESTORE	SUBASSEMBLY	UNAVAILABILITY	IDENTIFICATION	
CYCLES USE,SEC	OCURRANCE TIME,MPS				
6.1 EN	136030.00	.39502E-02	1.00	.94950E-03 PRIMARY POWER FAILURE	
2.9.1 C4P	1.650.00	.11232E-02	.02	.14971E-01 UNABLE TO START SYSTEM	
2.9.2 C4P	1.650.00	.11519E-05	.50	.51072E-05 ALTERNATE INITIALIZATION MODE REQUIRED	
2.1.1 C4P	240	21.00	.34529E-04	1.74	.65463E-02 KA-BAND FORWARD MESSAGE INOPERATIVE
2.1.2 C4P	240	21.00	.15776E-04	2.36	.36570E-02 KA-BAND FORWARD MESSAGE DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	AIR0, MPS.	ATTR, MPS.	IDENTIFICATION
0	.0926072591			NORMAL OPERATION
1	.473679E-01	4.71294E+02	1.506	KA-BAND FORWARD LINK INOPERATIVE
2	.157359E-01	6.21472E+03	2.117	KA-BAND FORWARD LINK DEGRADED
3	.124697E-02			OTHER STATES
COMBINED		4.22673E+02	1.633	

ASSEMBLY 6 OPERATES FOR 4500.000 SECONDS TO COMPLETE ITS FUNCTION.
 TIME AVAILABILITY IS .913727572; RELIABILITY IS .976616889 AND DEPENDABILITY IS .0926072591.
 107.13 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
 AND A DELAY OF 90.60 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

SYSTEM DATA

L-FEL	6 KA-BAND SATCOM SET (FORWARD LINK)			IDENTIFICATION
	AVAILABILITY	RELIABILITY	DEPENDABILITY	
6.0	.01309F+00	.97652E+00	.09261E+00	NOMINAL OPERATION
6.1	.61110E-01	.20335E-01	.07130E-01	KA-BAND FORWARD LINK INOPERATIVE
6.2	.16925E-01	.23709E-02	.10736E-01	KA-BAND FORWARD LINK DEGRADED
6.3	.90826E-03	.19077E-04	.12690E-02	OTHER STATES

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 201

KA-BAND SAICOM SET (FORWARD MESSAGE)

ASSEMBLY 201 IS USED BY ASSEMBLY(S) 6

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF PROG. OF		SUBASSEMBLY	IDENTIFICATION	
	CYCLES USED	SEC OCCURRENCE TIME		UNAVAILABILITY	
211.1 CMP	5	4.20	6739E-05	1.74	65F97E-02 KA-BAND FORWARD CYCLE INOPERATIVE
211.2 CMP	6	4.20	20951E-05	2.34	34819E-02 KA-BAND FORWARD CYCLE DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	A*BO, MRS.	ATTR, MRS.	IDENTIFICATION
0	.963274774			NORMAL OPERATION
1	.657327E-02	1.7394E+02	1.737	KA-BAND FORWARD MESSAGE INOPERATIVE
2	.346379E-02	5.6705E+02	2.346	KA-BAND FORWARD MESSAGE DEGRADED
3	.230504E-04			OTHER STATES
COMBINED		1.33166E+02	1.940	

ASSEMBLY 201 OPERATES FOR 21.000 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .963274774. RELIABILITY IS .9999561959 AND DEPENDABILITY IS .9899278774.
 2.42 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 240 FUNCTIONAL CYCLES.
 NO A DELAY OF 55.44 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

PERCENTAGE CONTRIBUTION TO ASSEMBLY 201 UNAVAILABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

201.1 65.4 0 65.4
201.2 0 34.5 34.6
TOTAL 65.4 34.6

PERCENTAGE CONTRIBUTION TO ASSEMBLY 201 UNRELIABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

201.1 76.5 0 76.5
201.2 0 23.5 23.5
TOTAL 76.5 23.5

PERCENTAGE CONTRIBUTION TO ASSEMBLY 201 UNDEPENDABILITY

ASSEMBLY STATE SUBASSEMBLY AND/OR ELEMENT STATES

201.1 65.4 0 65.4
201.2 0 34.5 34.5
TOTAL 65.4 34.5

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 202

KA-BAND SATCOM SET (REPORT-BACK MESSAGE)

ASSEMBLY 202 IS USED BY ASSEMBLY(S) 7

SUB-ASSEMBLY STATE DATA

LINE	NO. OF TIME OF P209, OF RESIDUE SUBASSEMBLY	CYCLES USED/SEC OCCURRENCE TIME, HRS	UNAVAILABILITY	IDENTIFICATION
212.1 C4P	3	4.20	4.221E-05	1.13 3.337E-02 KA-BAND REPORT-BACK CYCLE INOPERATIVE
212.2 C4P	3	4.20	2.7912E-05	1.02 2.195E-02 KA-BAND REPORT-BACK CYCLE DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	ATBO, HRS.	ATTP, HRS.	IDENTIFICATION
1	.7965667498	2.65173E+02	1.103	MOFMA OPERATION
2	.231142E-02	4.23272E+02	1.023	KA-BAND REPORT-BACK MESSAGE INOPERATIVE
3	.721961E-05	1.61015E+02	1.067	KA-BAND REPORT-BACK MESSAGE DEGRADED
COMBINFU				OTHER STATES

ASSEMBLY 202 OPERATES FOR 12.600 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .994566107. RELIABILITY IS .999795324 AND DEPENDABILITY IS .9945667498
 1.43 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 728 FUNCTIONAL LES
 AND A DELAY OF 12.15 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 211

KA-BAND SATCOM SET (FORWARD CYCLE)

ASSEMBLY 211 IS USED BY ASSEMBLY(S) 201

SUB-ASSEMBLY STATE DATA

LEVEL	NO. OF TIME OF PROB. OF RESIDUE SURASSEMBLY	UNAVAILABILITY	IDENTIFICATION
14.1 FMT	1	4.20 .15311E-05	1.00 CPU STOP NO UPLINK, PRINTER AND CRT EXCEPT FWD. LINK OR CINCPAC
20.1 CWP	1	4.20 .27491E-05	1.32 ALL KA-BAND LINKS INOPERATIVE
20.2 CWP	1	4.20 .21193E-05	1.33 FORWARD AND CONFERENCE LINKS INOPERATIVE AND R/B LINK DEGRADED
20.3 CWP	1	4.20 .14112E-06	1.53 FORWARD AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
20.4 CWP	1	4.20 .41117E-06	1.54 R/B AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
20.5 CWP	1	4.20 .20327E-05	1.16 ALL KA-BAND LINKS DEGRADED
20.6 CWP	1	4.20 .20370E-06	1.51 KA-BAND FORWARD AND CONFERENCE LINKS INOPERATIVE
20.7 CWP	1	4.20 .11688E-05	2.62 KA-BAND REPORT-BACK AND CONFERENCE LINKS INOPERATIVE
20.8 CWP	1	4.20 .15311E-05	2.62 KA-BAND FORWARD AND CONFERENCE LINKS DEGRADED
20.9 CWP	1	4.20 .15311E-05	2.62 KA-BAND REPORT-BACK AND CONFERENCE LINKS DEGRADED
21.1 CWP	1	4.20 .15311E-05	2.62 KA-BAND REPORT-BACK AND CONFERENCE LINKS DEGRADED
21.2 CWP	1	4.20 .27265E-06	1.96 KA-BAND FORWARD LINK

ASSEMBLY STATES

STATE	PROBABILITY	ATBO, HRS.	ATE, HRS.	IDENTIFICATION
0	.9899181934			NORMAL OPERATION
1	.657619E-02	1.73113E+02	1.737	KA-BAND FORWARD CYCLE INOPERATIVE
2	.149396E-02	5.56569E+02	2.338	KA-BAND FORWARD CYCLE DEGRADED
3	.215510E-04			OTHER STATES
TOTAL		1.73113E+02	1.941	

ASSEMBLY 211 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .9899181934, RELIABILITY IS .9899181934 AND DEPENDABILITY IS .9899181934.
11.93 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
AND A DELAY OF 50.21 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

FORWARD LINK SENSITIVITY TABULATION

ASSEMBLY STATE	PERCENTAGE CONTRIBUTION TO ASSEMBLY 6 UNAVAILABILITY				
	SUBASSEMBLY AND/OR ELEMENT STATES				
	4.1	209.1	209.2	201.1	201.2 TOTAL
6.1	1.2	16.9	.0	51.5	.6 80.1
6.2	.0	.1	.0	.3	19.5 19.9
TOTAL	1.2	16.9	.0	61.8	20.2

ASSEMBLY STATE	PERCENTAGE CONTRIBUTION TO ASSEMBLY 6 UNRELIABILITY				
	SUBASSEMBLY AND/OR ELEMENT STATES				
	4.1	209.1	209.2	201.1	201.2 TOTAL
6.1	42.7	13.7	.0	13.8	.1 89.9
6.2	.0	.0	.0	.0	10.1 10.1
TOTAL	42.7	13.7	.0	13.8	10.2

ASSEMBLY STATE	PERCENTAGE CONTRIBUTION TO ASSEMBLY 6 UNDEPENDABILITY				
	SUBASSEMBLY AND/OR ELEMENT STATES				
	4.1	209.1	209.2	201.1	201.2 TOTAL
6.1	9.9	16.2	.0	55.4	.6 82.3
6.2	.0	.1	.0	.3	17.2 17.7
TOTAL	10.0	16.3	.0	55.7	18.0

PERCENTAGE CONTRIBUTION TO ASSEMBLY 211 UNAVAILABILITY

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	100.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	101.1	101.2	TOTAL
211.1	17.1 14.4	.0	.0	.0	.0	.0	29.3	.0	.1	.0	8.6	.0	65.4
211.2	.0	.0	.0	.0	4.3	.0	.0	.0	28.2	.0	.0	.0	34.6
TOTAL	17.1 14.4	.0	.0	.0	4.3	29.3	.0	28.2	.0	8.6	.0	2.1	2.1

PERCENTAGE CONTRIBUTION TO ASSEMBLY 211 UNRELIABILITY

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	100.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	101.1	101.2	TOTAL
211.1	17.1 23.1	.0	.0	.0	.0	23.5	.0	.0	.0	.0	12.4	.0	76.3
211.2	.0	.0	.0	.0	5.4	.0	.0	15.3	.0	.0	.0	.0	23.7
TOTAL	17.1 23.1	.0	.0	.0	5.4	21.5	.0	15.3	.0	12.4	.0	3.1	3.1

PERCENTAGE CONTRIBUTION TO ASSEMBLY 211 UNDEPENDABILITY

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	100.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	101.1	101.2	TOTAL
211.1	17.1 14.4	.0	.0	.0	.0	.0	29.3	.0	.1	.0	8.6	.0	65.4
211.2	.0	.0	.0	.0	4.3	.0	.0	.0	28.2	.0	.0	.0	34.6
TOTAL	17.1 14.4	.0	.0	.0	4.3	29.3	.0	28.2	.0	8.6	.0	2.1	2.1

ANALYSIS RESULTS FOR A 10-HOUR MISSION
UTILIZING ONLY THE REPORT-BACK LINK

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 7

KA-BAND SATCOM SET (REPORT-BACK LINK)

SUBASSEMBLY STATE DATA

LINE	NO. OF TIME OF PRGR. OF RESTORE	SUBASSEMBLY	UNAVAILABILITY	IDENTIFICATION
	CYCLES USE/SEC OCCURRENCE TIME, MFS			
4-1 FMT	136970.00	.95502E-02	1.00	.90950E-03 PRIMARY POWER FAILURE
279.1 C4p	1	650.00	.31202E-02	.A2 UNABLE TO START SYSTEM
279.2 C4p	1	650.00	.15153E-05	.50 ALTERNATE INITIALIZATION MODE REQUIRED
272.1 C4p	720	12.60	.13190E-04	1.10 KA-BAND REPORT-BACK MESSAGE INOPERATIVE
272.2 C4p	720	17.60	.87649E-05	1.02 KA-BAND REPORT-BACK MESSAGE DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	ATBO. MRS.	ATTR. MRS.	IDENTIFICATION
1	.95502E-02			NORMAL OPERATION
2	.643918E-01	4.41674E-02	1.038	KA-BAND REPORT-BACK LINK INOPERATIVE
3	.287326E-01	1.72961E-03	1.022	KA-BAND REPORT-BACK LINK DEGRADED
COMBINED	.101424E-02	3.49495E-02	1.022	OTHER STATES

ASSEMBLY 7 OPERATES FOR 1000.000 SECONDS TO COMPLETE ITS FUNCTION.

THE AVAILABILITY IS .9352419376, RELIABILITY IS .9717927555 AND DEPENDABILITY IS .9988613349.

9.14 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES

AND A DELAY OF 56.20 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

SYSTEM DATA

L-BE	AVAILABILITY	RELIABILITY	7	KA-BAND SATCOM SET	(REPORT-BACK LINK)	IDENTIFICATION
7.0	.93524E+09	.97179E+00	.90836E+00	NORMAL OPERATION		
7.1	.46392E-01	.22397E-01	.66392E-01	KA-BAND REPORT-BACK LINK IMPERATIVE		
7.2	.15762E-01	.57550E-02	.23733E-01	KA-BAND REPORT-BACK LINK DEGRADED		
7.3	.61433E-01	.55523E-04	.10142E-02	OTHER STATES		

ANALYSTS SUMMARY

FOR ASSEMBLY NUMBER 202

KA-RAND SATCOM SFT (REPORT-BACK MESSAGE)

ASSEMBLY 202 IS USED BY ASSEMBLY(S) 7

SUBASSEMBLY STATE DATA

LABEL	NO. OF TIME OF FROM. OF RESTORE SUBASSEMBLY	CYCLES USE SFC OCCURRENCE	TIME, MRS	UNAVAILABILITY	IDENTIFICATION
212-1 CMP	1	4.20	10102E-04	1.26	KA-RAND REPORT-BACK CYCLE INOPERATIVE
212-2 CMP	3	4.20	40204E-05	.95	KA-RAND REPORT-BACK CYCLE DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	ATBO, MRS.	ATTR, MRS.	IDENTIFICATION
0	.9892024040			NORMAL OPERATION
1	.797098E-02	1.15462E+02	1.258	KA-RAND REPORT-BACK MESSAGE INOPERATIVE
2	.200602E-02	2.96774E+02	.949	KA-RAND REPORT-BACK MESSAGE DEGRADED
3	.225940E-04			OTHER STATES
COMBINED		0.36343E+01	1.175	

ASSEMBLY 202 OPERATES FOR 12.600 SECONDS TO COMPLETE ITS FUNCTION.

THE AVAILABILITY IS .9892430019, RELIABILITY IS .999951520 AND DEPENDABILITY IS .9892024040.
7.77 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 720 FUNCTIONAL CYCLES
AND A DELAY OF 35.40 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 212

KA-BAND SATCOM SET (REPORT-BACK CYCLE)

ASSEMBLY 212 IS USED BY ASSEMBLY(S) 202

SUBASSEMBLY STATE DATA

NO. OF TIME OF PROB. OF RESTORE SUBASSEMBLY			
LEVEL	CYCLES USE	SFC OF JURENCE	TIME AND S UNAVAILABILITY IDENTIFICATION
14-1 ENT	1	4-20 .15311E-05	1-00 CPU STOP: NO UPLINK, PRINTER AND CRT EXCEPT FWD. LINK OR CIMCNET
20-1 CWP	1	4-20 .20411E-05	1-32 ALL KA-BAND LINKS INOPERATIVE
20-2 CWP	1	4-20 .21190E-06	3-33 FORWARD AND CONFERENCE LINKS INOPERATIVE AND R/B LINK DEGRADED
20-3 CWP	1	4-20 .14132E-06	.59 R/R AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
20-4 CWP	1	4-20 .45117E-06	1-16 ALL KA-BAND LINKS DEGRADED
20-5 CWP	1	4-20 .21927E-05	2-44 KA-BAND FORWARD AND CONFERENCE LINKS INOPERATIVE
20-6 CWP	1	4-20 .20470E-06	.53 KA-BAND REPORT-BACK AND CONFERENCE LINKS INOPERATIVE
20-7 CWP	1	4-20 .17549E-05	2-62 KA-BAND FORWARD AND CONFERENCE LINKS DEGRADED
20-8 CWP	1	4-20 .21945E-06	.50 KA-BAND REPORT-BACK AND CONFERENCE LINKS DEGRADED
102-1 CWP	1	4-20 .20327E-06	.51 INOPERATIVE REPORT-BACK LINK
102-2 CWP	1	4-20 .21975E-05	1-00 DEGRADED REPORT-BACK LINK
			KA-BAND MODEM
			KA-BAND MODEM

KA-BAND MODEM
KA-BAND MODEM

ASSEMBLY STATES

STATE	PROBABILITY	MTBF, HRS.	MTTR, HRS.	IDENTIFICATION
0	.995299229			NORMAL OPERATION
1	.11506E-02	2.6387E+02	1.103	KA-BAND REPORT-BACK CYCLE INOPERATIVE
2	.21131E-02	4.19675E+02	1.023	KA-BAND REPORT-BACK CYCLE DEGRADED
3	.219097E-04			OTHER STATES
COMBINED		1.61940E+02	1.065	

ASSEMBLY 212 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .994519360, RELIABILITY IS .999927966 AND DEPENDABILITY IS .9945298229.
5.47 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES
NO DELAY OF 12.01 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

REPORT-BACK LINK SENSITIVITY TABULATIONS

		PERCENTAGE CONTRIBUTION TO ASSEMBLY				7 UNRELIABILITY
ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	4.1	209.1	209.2	202.1	202.2 TOTAL
7.1	1.5 22.4	.0	46.3	.6	70.8	
7.2	4.0 .1	.0	.2	20.9	25.2	
TOTAL	1.5 22.5	.0	46.5	29.5		

		PERCENTAGE CONTRIBUTION TO ASSEMBLY				7 UNRELIABILITY
ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	4.1	209.1	209.2	202.1	202.2 TOTAL
7.1	35.0 11.3	.0	38.0	.2	73.5	
7.2	4.0 .1	.0	.0	20.4	20.5	
TOTAL	39.0 11.4	.0	38.0	20.6		

		PERCENTAGE CONTRIBUTION TO ASSEMBLY				7 UNDEPENDABILITY
ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	4.1	209.1	209.2	202.1	202.2 TOTAL
7.1	11.7 19.1	.0	42.0	.9	71.7	
7.2	4.1 .1	.0	.3	25.0	26.3	
TOTAL	15.8 19.3	.0	42.3	26.7		

PERCENTAGE CONTRIBUTION TO ASSEMBLY 202 UNAVAILABILITY

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	
	212.1 212.2 TOTAL	
202.1	57.5 .0 57.6	
202.2	.0 42.4 42.4	
TOTAL	57.6 42.4	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 202 UNRELIABILITY

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	
	212.1 212.2 TOTAL	
202.1	61.5 .0 61.5	
202.2	.0 38.5 38.5	
TOTAL	61.5 38.5	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 202 UNDEPENDABILITY

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	
	212.1 212.2 TOTAL	
202.1	57.5 .0 57.6	
202.2	.0 42.4 42.4	
TOTAL	57.6 42.4	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 212 UNAVAILABILITY

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	102.1	102.2	TOTAL
212.1	26.3	26.6	.0	1.2	.0	.1	.1	.1	.1	.0	5.5	.1	57.5
212.2	.0	.0	.0	.0	7.9	.1	.0	.1	1.6	.0	32.0	42.5	
TOTAL	26.0	26.6	.0	1.2	7.9	.1	.1	.1	1.6	5.5	32.2		

PERCENTAGE CONTRIBUTION TO ASSEMBLY 212 UNRELIABILITY

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	102.1	102.2	TOTAL
212.1	21.3	26.3	.0	1.9	.0	.0	.1	.0	.0	.0	9.8	.0	61.4
212.2	.0	.0	.0	.0	6.6	.0	.0	.0	2.9	.0	29.1	38.6	
TOTAL	21.3	26.3	.0	1.9	6.6	.0	.1	.0	2.9	9.8	29.1		

PERCENTAGE CONTRIBUTION TO ASSEMBLY 212 UNDEPENDABILITY

ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	102.1	102.2	TOTAL
212.1	26.0	26.6	.0	1.2	.0	.1	.1	.1	.1	.0	5.5	.1	57.5
212.2	.0	.0	.0	.0	7.9	.1	.0	.1	1.6	.0	32.0	42.5	
TOTAL	26.0	26.6	.0	1.2	7.9	.1	.1	.1	1.6	5.5	32.6		

ANALYSIS RESULTS FOR A 10-HOUR MISSION UTILIZING ONLY THE CONFERENCE LINK

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 8

KA-BAND SATCOM SET (CONFERENCE LINK)

SUBASSEMBLY STATE DATA

L-CELL	NO. OF TIME OF PROG. OF RESTORE	SUBASSEMBLY	UNAVAILABILITY	IDENTIFICATION
CYCLES USE*SEC OCCURRENCE TIME*HRS				
4.1 EN	136200.00	33502E-02	1.00	94959E-03 PRIMARY POWER FAILURE
2-3.1 CWP	1 663.00	31232E-02	.02	14871E-01 UNABLE TO START SYSTEM
2-3.2 CWP	1 650.00	16153E-05	.50	57872E-05 ALTERNATE INITIALIZATION MODE REQUIRED
2-3.1 CWP	12 934.00	17241E-02	1.90	53324E-02 KA-BAND CONFERENCE INOPERATIVE
2-3.2 CWP	12 198.90	77574E-03	1.97	67249E-02 KA-BAND CONFERENCE DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	AIRB, HRS.	ATTR, HRS.	IDENTIFICATION
0	9541373056			NORMAL OPERATION
1	813745E-01	3.4650E+02	1.536	KA-BAND CONFERENCE LINK INOPERATIVE
2	314532E-01	1.12117E+03	1.972	KA-BAND CONFERENCE LINK DEGRADED
3	137797E-02			OTHER STATES
COMBINED		2.61975E+02	1.628	

ASSEMBLY 8 OPERATES FOR 15300.000 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .918616376, RELIABILITY IS .962437622 AND DEPENDABILITY IS .6041973056.
 115.90 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING 1000 FUNCTIONAL CYCLES.
 NO 4 DELAY OF 93.41 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

SYSTEM DATA

LAEL	AVAILABILITY	RELIABILITY	KA-BAND SATCON SET (CONFERENCE LINK)	DEPENDABILITY	IDENTIFICATION
C.0	.91961E+00	.9625E+00	.00420E+00		NORMAL OPERATION
E.1	.55911E-01	.2044E-01	.81975E-01		KA-BAND CONFERENCE LINK INOPERATIVE
A.2	.24190E-01	.00795E-02	.31950E-01		KA-BAND CONFERENCE LINK DEGRADED
E.3	.10338E-02	.1429E-03	.19780E-02		OTHER STATES

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 203

KA-BAND SATCOM SFI (CONFERENCE)

ASSEMBLY 203 IS USED BY ASSEMBLY(S) A

SUBASSEMBLY STATE DATA

LEVEL	NO. OF TIME OF PRCSL OF RESTORE SUBASSEMBLY	CYCLES USE, SEC OCCURRENCE TIME, HRS UNAVAILABILITY IDENTIFICATION
213.1 Cmp	214	4.20 .62338E-05 1.87 .59608E-02 KA-BAND CONFERENCE CYCLE INOPERATIVE
213.2 Cmp	214	4.20 .36859E-05 1.97 .87532E-02 KA-BAND CONFERENCE CYCLE DEGRADED

ASSEMBLY STATES

STATE	PROBABILITY	ATBO, HRS.	ATTR, HRS.	IDENTIFICATION
0	.9872359864			NORMAL OPERATION
1	.72774E-02	1.82174E+02	1.797	KA-BAND CONFERENCE INOPERATIVE
2	.549635E-02	3.21718E+02	1.972	KA-BAND CONFERENCE DEGRADED
3	.422200E-04	1.14716E+02	1.867	OTHER STATES
UNDEFINED				

ASSEMBLY 203 OPERATES FOR 896,800 SECONDS TO COMPLETE ITS FUNCTION.
THE AVAILABILITY IS .9872359864, RELIABILITY IS .5978991536 AND DEPENDABILITY IS .9872359864.
*15 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 12 FUNCTIONAL CYCLES.
AND A DELAY OF 65.34 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

ANALYSIS SUMMARY

FOR ASSEMBLY NUMBER 213

KA-BAND SAICOM SET (CONFERENCE CYCLE)

ASSEMBLY 213 IS USED BY ASSEMBLY(S) 201

SUBASSEMBLY STATE DATA

MODEL	NO. OF TIME OF PROB. OF RESIDUE SUBASSEMBLY	TIME, HRS	UNAVAILABILITY	IDENTIFICATION
10.1 CWP	1	4.20	.15311E-05	1.00 CPU STOP NO UPLINK, PRINTER AND CRT EXCEPT FWD. LINK OR CINCPAC
20.1 CWP	1	4.20	.21391E-05	1.32 ALL KA-BAND LINKS INOPERATIVE
20.2 CWP	1	4.20	.21133E-18	3.33 FORWARD AND CONFERENCE LINKS INOPERATIVE AND 7/8 LINK DEGRADED
20.3 CWP	1	4.20	.14112E-05	.53 R/S AND CONFERENCE LINKS INOPERATIVE AND FORWARD LINK DEGRADED
20.4 CWP	1	4.20	.44117E-06	1.16 ALL KA-BAND LINKS DEGRADED
20.5 CWP	1	4.20	.20927E-05	2.48 KA-BAND FORWARD AND CONFERENCE LINKS INOPERATIVE
20.6 CWP	1	4.20	.37570E-08	.50 KA-BAND REPORT-BACK AND CONFERENCE LINKS INOPERATIVE
20.7 CWP	1	4.20	.13619E-05	2.62 KA-BAND FORWARD AND CONFERENCE LINKS DEGRADED
20.8 CWP	1	4.20	.20545E-06	.50 KA-BAND REPORT-BACK AND CONFERENCE LINKS DEGRADED
10.3.1 CWP	1	4.20	.43423E-06	.50 INOPERATIVE CONFERENCE LINK
10.3.2 CWP	1	4.20	.15566E-05	1.00 DEGRADED CONFERENCE LINK

ASSEMBLY STATES

STATE	PROBABILITY	ATRA, HRS	ATRA, HRS	IDENTIFICATION
0	.9992546506			NORMAL OPERATION
1	.596692E-02	1.07249E+02	1.797	KA-BAND CONFERENCE CYCLE INOPERATIVE
2	.475601E-02	3.16524E+02	1.972	KA-BAND CONFERENCE CYCLE DEGRADED
3	.216277E-04			OTHER STATES
COMBINED		1.17546E+02	1.071	

ASSEMBLY 213 OPERATES FOR 4.200 SECONDS TO COMPLETE ITS FUNCTION.
 THE AVAILABILITY IS .9992546506, RELIABILITY IS .999990833 AND DEPENDABILITY IS .9092546506.
 2.10 MALFUNCTIONS ARE EXPECTED TO OCCUR DURING A MISSION CONSISTING OF 216 FUNCTIONAL CYCLES
 -NO A DELAY OF 56.19 MINUTES IS EXPECTED WHEN A MALFUNCTION OCCURS.

CONFERENCE LINK SENSITIVITY TABULATIONS

		PERCENTAGE CONTRIBUTION TO ASSEMBLY 8 UNAVAILABILITY			
ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	209.1	209.2	203.1	203.2 TOTAL
9.1	1.2	17.4	.0	49.9	7.7 69.6
9.2	9.1	.0	.0	.4	29.9 30.4
TOTAL	1.2	17.9	.0	50.3	30.6

		PERCENTAGE CONTRIBUTION TO ASSEMBLY 8 UNRELIABILITY			
ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	209.1	209.2	203.1	203.2 TOTAL
9.1	26.2	8.5	.0	41.1	.3 76.2
9.2	9.1	.0	.0	.1	23.6 23.6
TOTAL	26.3	8.5	.0	41.2	24.0

		PERCENTAGE CONTRIBUTION TO ASSEMBLY 8 UNDEPENDABILITY			
ASSEMBLY STATE	SUBASSEMBLY AND/OR ELEMENT STATES	209.1	209.2	203.1	203.2 TOTAL
0.1	9.2	15.0	.0	46.7	1.1 72.0
0.2	0.1	.1	.0	.5	27.3 28.0
TOTAL	9.3	15.2	.0	47.2	28.4

PERCENTAGE CONTRIBUTION TO ASSEMBLY 203 UNAVAILABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

213.1 213.2 TOTAL
203.1 55.6 .1 55.7
203.2 .0 44.3 44.3
TOTAL 55.7 44.3

PERCENTAGE CONTRIBUTION TO ASSEMBLY 203 UNRELIABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

213.1 213.2 TOTAL
203.1 67.0 .0 67.1
203.2 .0 36.9 36.9
TOTAL 67.1 36.9

PERCENTAGE CONTRIBUTION TO ASSEMBLY 203 UNDEPENDABILITY

ASSEMBLY
STATE SUBASSEMBLY AND/OR ELEMENT STATES

213.1 213.2 TOTAL
203.1 56.9 .1 56.9
203.2 .1 43.1 43.1
TOTAL 56.9 43.1

PERCENTAGE CONTRIBUTION TO ASSEMBLY 213 UNAVAILABILITY

ASSEMBLY

STATE SUBASSEMBLY AND/OR ELEMENT STATES

213.1	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	103.1	103.2	TOTAL
12.2	13.5	.0	.6	.8	27.4	.0	.0	.0	.0	1.7	.1	55.6
213.2	.0	.0	.0	4.0	.0	.0	26.4	.0	.0	13.0	44.4	
TOTAL	12.2	13.5	.0	.6	4.0	27.5	.0	26.5	.0	1.7	13.1	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 213 UNRELIABILITY

ASSEMBLY

STATE SUBASSEMBLY AND/OR ELEMENT STATES

213.1	14.1	200.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	103.1	103.2	TOTAL
15.4	20.6	.0	1.4	.0	20.9	.1	.0	.0	.0	4.4	.0	62.8
213.2	.0	.0	.0	4.0	.0	.0	13.6	2.1	.0	16.7	37.2	
TOTAL	15.4	20.6	.0	1.4	4.0	20.9	.1	13.6	2.1	4.4	16.7	

PERCENTAGE CONTRIBUTION TO ASSEMBLY 213 UNDEPENDABILITY

ASSEMBLY

STATE SUBASSEMBLY AND/OR ELEMENT STATES

213.1	14.1	210.1	200.2	200.3	200.4	200.5	200.6	200.7	200.8	103.1	103.2	TOTAL
12.2	13.5	.0	.6	.8	27.4	.0	.0	.0	.0	1.7	.1	55.6
213.2	.0	.0	.0	4.0	.0	.0	26.4	.0	.0	13.0	44.4	
TOTAL	12.2	13.5	.0	.6	4.0	27.5	.1	26.5	.0	1.7	13.1	