

625-205, GLL-3-280, Phase 2  
Telemetry Measurements and Data Formats

Table A2.2.8 Table of Contents

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IUS	- IUS Subsystem
STRU	- Structure System
RFS	- Radio Frequency Subsystem
MDS	- Modulation Demodulation Subsystem
PPS	- Power/Pyro Subsystem
CDS	- Command and Data Subsystem
AACS	- Attitude and Articulation Control Subsystem
RPM	- Retro Propulsion Module Subsystem
TEMP	- Temperature Control Subsystem
DEV	- Devices Subsystem
DMS	- Data Management Subsystem
SXA	- S/X-Band Antenna Subsystem
EUV	- Extreme Ultraviolet Subsystem
EPD	- Energetic Particle Detection Subsystem
PPR	- PhotoPolarimeter Radiometer Subsystem
HIC	- Heavy Ion Counter Subsystem
DDS	- Dust Detector Subsystem
PLS	- Plasma Subsystem
UVS	- ultraviolet Spectrometer Subsystem
MAG	- Magnetometer Subsystem
SSI	- Solid State Image Subsystem
NIMS	- Near Infrared Magnetometer Subsystem
SCAS	- Science Calibration Subsystem
XSDC	- X-Band to S-Band Downconverter
RRH	- Radio Relay Hardware
OPE	- Orbiter Purge Equipment
PRB	- Probe Equipment
Phase 2 Spare Fixed Decom Commutator Slots	

Table A2.2.B. Engineering Measurements (RJ:ell\_chan - 11/01/94)  
 IUS - IUS SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-1665	CENTAUR STATUS WORD 1		12A 00		8	V D	IUS	IUS STAT 1
F-1666	CENTAUR STATUS WORD 2		12B 00		8	V D	IUS	IUS STAT 2

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Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
 STRU - STRUCTURE SYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0000	BAY 1 TEMPERATURE	-78. to 100. Deg	T1A 5E	LLM1A N1D09 1	8	F T	STRU	BAY 1 T
E-0001	BAY 2 TEMPERATURE	-78. to 100. Deg	T1B 5E	LLM1B N1D09 1	8	F T	STRU	BAY 2 T
E-0002	BAY 3 TEMPERATURE	-78. to 100. Deg	T1A 76	LLM1A N1D09 2	8	F T	STRU	BAY 3 T
E-0003	BAY 4 TEMPERATURE	-78. to 100. Deg	T1B 66	LLM1B N1D09 2	8	F T	STRU	BAY 4 T
E-0004	BAY 5 TEMPERATURE	-78. to 100. Deg	T1A 6A	LLM1A N1D63 1	8	F T	STRU	BAY 5 T
E-0005	BAY 6 TEMPERATURE	-78. to 100. Deg	T1B 77	LLM1B N1D63 1	8	F T	STRU	BAY 6 T
E-0006	BAY 7 TEMPERATURE	-78. to 100. Deg	T1A 7E	LLM1A N1D63 2	8	F T	STRU	BAY 7 T
E-0007	BAY 8 TEMPERATURE	-78. to 100. Deg	T1B 7E	LLM1B N1D63 2	8	F T	STRU	BAY 8 T
E-0008	SCAN PLATFORM TEMPERATURE	-102. to 74. Deg	T2A 5C	LLM2A N1D09 1	8	F T	STRU	SPLAT T
E-0009 E-0009	DESPUN STRUCTURE 2 TEMPERATURE	-78. to 100. Deg	T2A 53	LLM2A N1D41 1 LLM2A N1D68 1	8	F T	STRU STRU	DESPUN T 2
E-0010 E-0010	BAY A TEMPERATURE	-78. to 100. Deg	T2A 77	LLM2A N1D41 2 LLM2A N1D68 2	8	F T	STRU STRU	BAY A T
E-0011 E-0011	BAY B TEMPERATURE	-78. to 100. Deg	T2A 5B	LLM2A N1D04 1 LLM2A N1D31 1	8	F T	STRU STRU	BAY B T
E-0012 E-0012	BAY C TEMPERATURE	-78. to 100. Deg	T2A 66	LLM2A N1D04 2 LLM2A N1D31 2	8	F T	STRU STRU	BAY C T
E-0013	BAY D TEMPERATURE	-78. to 100. Deg	T2A 7B	LLM2A N1D25 1	8	F T	STRU	BAY D T
E-0014	BAY E TEMPERATURE	-78. to 100. Deg	T2A 67	LLM2A N1D25 2	8	F T	STRU	BAY E T
E-0015 E-0015	DESPUN STRUCTURE 1 TEMPERATURE	-78. to 100. Deg	T2A 6E	LLM2A N1D58 1 LLM2A N1D85 1	8	F T	STRU STRU	DESPUN T 1
E-0016	CONTAMINATION MONITOR TELEMETRY	0 to 3 VDC	T1B 36	LLM1B T2S01	8	F A	STRU	CM TLM
E-0017 E-0017 E-0017	SUNGATE TEMPERATURE	-102. to 74. Deg	T1B 73	LLM1B N1D36 1 LLM1B N1D52 1 LLM1B N1D54 1	8	F T	STRU STRU STRU	SUN GATE T

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Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
RFS - RADIO FREQUENCY SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0018	RFS/PPS STATUS WORD 1		T1A 00		8	F D	RFS	RFS/P ST 1
E-0019	RFS/PPS STATUS WORD 2		T1B 00		8	F D	RFS	RFS/P ST 2
E-0020	RFS STATUS WORD 1 A		T1A 08	LLM1A N1D37 1	8	F D	RFS	RFS ST 1A
E-0020				LLM1A N1D64 1			RFS	
E-0021	RFS STATUS WORD 2 B		T1B 09	LLM1B N1D37 2	8	F D	RFS	RFS ST 2B
E-0021				LLM1B N1D64 2			RFS	
E-0022	RECEIVER 1/2 VCO VOLTAGE COARSE	-75. to +75. KHZ	T1B 33	LLM1B S1S03	8	B A	RFS	VCO V C
E-0023	RECEIVER 1/2 VCO VOLTAGE FINE	-30. to +30. KHZ	T1A 46	LLM1A S1S03	8	B A	RFS	FCP V F
E-0024	RECEIVER AGC A	-70. to -152. DBM	T1A 33	LLM1A S2S01	8	B A	RFS	RCV AGC A
E-0024				LLM1A S2S03			RFS	
E-0024				LLM1A S2S05			RFS	
E-0025	RECEIVER AGC B	-70. to -152. DBM	T1B 38	LLM1B S2S00	8	B A	RFS	RCV AGC B
E-0025				LLM1B S2S02			RFS	
E-0025				LLM1B S2S04			RFS	
E-0025				LLM1B S2S06			RFS	
E-0026	RECEIVER RANGING AGC VOLTAGE	-70. to -152. DBM	T1B 46	LLM1B S1S06	8	B A	RFS	RNG AGC V
E-0027	RECEIVER CURRENT	0. to 225. MA	T1B 24	LLM1B N1D15 2	8	B A	RFS	RCV I
E-0027				LLM1B N1D17 2			RFS	
E-0027				LLM1B N1D90 2			RFS	
E-0028	RECEIVER LOCAL OSCILATOR DRIVE	0. to 6. DBM	T1A 4C	LLM1A N1D00 2	8	B A	RFS	LOC OSC DR
E-0028				LLM1A N1D73 2			RFS	
E-0028				LLM1A N1D89 2			RFS	
E-0029	USO INNER OVEN CURRENT	0. to 50. MA	T1B 2D	LLM1B N1D36 2	8	F A	RFS	USO OV I
E-0029				LLM1B N1D52 2			RFS	
E-0029				LLM1B N1D54 2			RFS	
E-0030	S-BAND TWT REGULATED VOLTAGE	0. to 25. Volt	T1A 1B	LLM1A N1D36 1	8	F A	RFS	S TWT V
E-0030				LLM1A N1D52 1			RFS	
E-0030				LLM1A N1D54 1			RFS	
E-0031	S-BAND TWT DRIVE	-4. to +8. DBM	T1A 24	LLM1A N1D36 2	8	B A	RFS	S TWT DR
E-0031				LLM1A N1D52 2			RFS	
E-0031				LLM1A N1D54 2			RFS	
E-0032	S-BAND TWT CATHODE CURRENT	0. to 80. MA	T1A 2A	LLM1A T1S03	8	F A	RFS	S TWT CA I
E-0032				LLM1A N1D15 1			RFS	
E-0032				LLM1A N1D17 1			RFS	
E-0032				LLM1A N1D90 1			RFS	

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
RFS - RADIO FREQUENCY SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0033	S-BAND TWT HELIX CURRENT	0. to 20. MA	T1B 3B	LLM1B T2S06	8	F A	RFS	S TWT HE I
E-0034 E-0034 E-0034 E-0034	LOW-GAIN ANTENNA DRIVE	+27. to +45. DBM	T1A 2D	LLM1A T1S09 LLM1A N1D15 2 LLM1A N1D17 2 LLM1A N1D90 2	8	B A	RFS RFS RFS RFS	LGA DR
E-0035	S-BAND HIGH GAIN ANTENNA DRIVE	+27. to +45. DBM	T1B 4C		8	B A	RFS	S HGA DR
E-0036 E-0036 E-0036	S-BAND EXCITER CURRENT	0. to 110. MA	T1B 41	LLM1B N1D15 1 LLM1B N1D17 1 LLM1B N1D90 1	8	F A	RFS RFS RFS	S EXC I
E-0037	X-BAND TWT REGULATED VOLTAGE	0. to 25. Volt	T1B 2A		8	F A	RFS	X TWT V
E-0038	X-BAND TWT DRIVE	-6. to +6. DBM	T1A 38		8	B A	RFS	X TWT DR
E-0039	X-BAND TWT HELIX CURRENT	0. to 8. MA	T1A 1C		8	F A	RFS	X TWT HE I
E-0040	X-BAND TWT CATHODE CURRENT	0. to 60. MA	T1B 1B		8	F A	RFS	X TWT CA I
E-0041	X-BAND EXCITER CURRENT	0. to 160. MA	T1B 21		8	F A	RFS	X EXC I
E-0042	X-BAND HIGH GAIN ANTENNA DRIVE	+30. to +44. W	T1A 19		8	B A	RFS	X HGA DR
E-0043 E-0043 E-0043	RECEIVER VCO TEMPERATURE	-78. to 100. Deg	T1A 57	LLM1A N1D00 1 LLM1A N1D73 1 LLM1A N1D89 1	8	F T	RFS RFS RFS	REC VCO T
E-0044	S-BAND TWT BASE TEMPERATURE	-68. to 148. Deg	T1A 61	LLM1A N1D26 1	8	F T	RFS	S TWT B T
E-0045	S-BAND HYBRID TEMPERATURE	-78. to 100. Deg	T1A 5B	LLM1A N1D26 2	8	F T	RFS	S HYB T
E-0046	X-BAND TWT BASE TEMPERATURE	-68. to 148. Deg	T1B 61		8	F T	RFS	X TWT B T
E-0047	X-BAND HYBRID TEMPERATURE	-78. to 100. Deg	T1A 77		8	F T	RFS	X HYB T
E-0048	X-BAND RF MONITOR TEMPERATURE	-78. to 100. Deg	T1A 67		8	F T	RFS	X RF MON T
E-0049	X-BAND EXCITER TEMPERATURE	-78. to 100. Deg	T1B 6E		8	F T	RFS	X EXC T
E-0050	TRANSMITTER RF SWITCH TEMPERATURE	-78. to 100. Deg	T1B 5B	LLM1B N1D26 1	8	F T	RFS	XMT RFSW T
E-0051	AUXILLIARY OSCILLATOR TEMPERATURE	-78. to 100. Deg	T1B 67	LLM1B N1D26 2	8	F T	RFS	AUX OSC T
E-0052 E-0052	RFS STATUS WORD 1B		T1B 08	LLM1B N1D37 1 LLM1B N1D64 1	8	F D	RFS RFS	RFS ST 1B
E-0053 E-0053	RFS STATUS WORD 2A		T1A 09	LLM1A N1D37 2 LLM1A N1D64 2	8	F D	RFS RFS	RFS ST 2A

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Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
RFS - RADIO FREQUENCY SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-1551	LGA RECEIVER SW STATUS	0. to 3. Volt	T1A 36		8	F A	RFS	LGA RCV ST
E-1552	LGA POWER SUPPLY 1 CURRENT	0. to 3. Volt	T1A 37		8	F A	RFS	LGA PWR 1
E-1553	LGA POWER SUPPLY 2 CURRENT	0. to 3. Volt	T1B 31		8	F A	RFS	LGA PWR 2
E-1556	LGA TRANSMITTER SW STATUS	0. to 3. Volt	T1B 42		8	F A	RFS	LGA XMT ST
E-1557	LGA TRANSMITTER SW TEMPERATURE	-102. to +74. Deg	T1A 6E		8	F A	RFS	LGA SW T

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Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
MDS - MODULATION DEMODULATION SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0055 E-0055	TMU STATUS WORD 1 (A)		T1A 0A	LLM1A N1D10 1 LLM1A N1D74 1	8	F D	MDS MDS	TMU ST 1A
E-0056 E-0056	TMU STATUS WORD 2 (A)		T1A 0B	LLM1A N1D10 2 LLM1A N1D74 2	8	F D	MDS MDS	TMU ST 2A
E-0057	CDU SIGNAL TO NOISE RATIO A		T1A 04:05		16	D	MDS	CDU SNR A
E-0058 E-0058 E-0058	CDU OSCILLATOR MONITOR A (THIS SAMPLING NOT VALID) (THIS SAMPLING NOT VALID)		T1A 03	LLM1A N1D16 2 LLM1A N1D32 2 LLM1A N1D34 2	8	F D	MDS MDS MDS	CDU O MONA
E-0059 E-0059	TMU STATUS WORD 1 (B)		T1B 0A	LLM1B N1D10 1 LLM1B N1D74 1	8	F D	MDS MDS	TMU ST 1B
E-0060 E-0060	TMU STATUS WORD 2 (B)		T1B 0B	LLM1B N1D10 2 LLM1B N1D74 2	8	F D	MDS MDS	TMU ST 2B
E-0061	CDU SIGNAL TO NOISE RATIO B		T1B 04:05		16	D	MDS	CDU SNR B
E-0062 E-0062 E-0062	CDU OSCILLATOR MONITOR B (THIS SAMPLING NOT VALID) (THIS SAMPLING NOT VALID)		T1B 03	LLM1B N1D16 2 LLM1B N1D32 2 LLM1B N1D34 2	8	F D	MDS MDS MDS	CDU O MONB
*E-0065	PPS/MDS/CDS STATUS WORD 1		T1A 01	LLM1A N1D43 1	8	B D	*MDS	P/M/C ST 1
*E-0066	PPS/MDS/CDS STATUS WORD 2		T1B 01	LLM1B N1D43 1	8	B D	*MDS	P/M/C/ST 2

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\*Repeated from PPS

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Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
PPS - POWER/PYRO SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
*E-0018	RFS/PPS STATUS WORD 1		T1A 00		8	F D	*PPS	RFS/P ST 1
*E-0019	RFS/PPS STATUS WORD 2		T1B 00		8	F D	*PPS	RFS/P ST 2
E-0065	PPS/MDS/CDS/ STATUS WORD 1		T1A 01	LLM1A N1D43 1	8	B D	PPS	P/M/C ST 1
E-0066	PPS/MDS/CDS STATUS WORD 2		T1B 01	LLM1B N1D43 1	8	B D	PPS	P/M/C ST 2
E-0067	PPS/DEV/PRB/UVS STATUS WORD		T2A 01	LLM2A N1D40 2	8	V D	PPS	P/D/P ST 1
E-0068	PPS/DEV/PRB STATUS WORD		T2B 01		8	V D	PPS	P/D/P ST 2
E-0069	+X RTG OUTPUT VOLTAGE	0. to 35. VDC	T1A 4A	LLM1A N1D43 2	8	F A	PPS	+X RTG V
E-0070	-X RTG OUTPUT VOLTAGE	0. to 35. VDC	T1B 27	LLM1B N1D43 2	8	F A	PPS	-X RTG V
E-0071	PROBE POWER INTERFACE UNIT A MAIN BUS DC VOLTAGE	0. to 40. VDC	T2A 15	LLM2A N1D79 1	8	F A	PPS	PPIU A MB
E-0072	PROBE POWER INTERFACE UNIT A DCP BUS DC VOLTAGE	0. to 40. DCV	T2A 2B	LLM2A N1D79 2	8	F A	PPS	PPIU A DCP
E-0073	-X RTG OUTPUT CURRENT	0. to 10. ADC	T1A 3C	LLM1A N1D80 1	8	F A	PPS	-X RTG I
E-0074	PROBE POWER INTERFACE UNIT A CCD BUS DC VOLTAGE	0. to 40. DCV	T2A 3C	LLM2A N1D42 1	8	F A	PPS	PPIU A CCB
E-0075	+X RTG OUTPUT CURRENT	0. to 10. ADC	T1B 4A	LLM1B N1D80 1	8	F A	PPS	+X RTG I
E-0076	PROBE POWER INTERFACE UNIT B MAIN BUS DC VOLTAGE	0. to 40. VDC	T2A 4D	LLM2A N1D42 2	8	F A	PPS	PPIU B MB
E-0077	PROBE POWER INTERFACE UNIT B DCP BUS DC VOLTAGE	0. to 40. VDC	T2A 26	LLM2A N1D83 1	8	F A	PPS	PPIU B DCP
E-0078	DC BUS VOLTAGE	0. to 35. VDC	T1A 1D	LLM1A N1D06 1	8	B A	PPS	DC BUS V
E-0079	PROBE POWER INTERFACE UNIT B CCD BUS DC VOLTAGE	0. to 40. DCV	T2A 37	LLM2A N1D83 2	8	F A	PPS	PPIU B CCB
E-0080 E-0080	SHUNT REGULATOR INPUT CURRENT A (LF)	0. to 10. ADC	T1A 18	LLM1A S2S00 LLM1A S2S04	8	B A	PPS PPS	SH REG ILF
E-0081 E-0081	SHUNT REGULATOR INPUT CURRENT B (HF)	0. to 10. ADC	T1B 18	LLM1B S2S01 LLM1B S2S05	8	F A	PPS PPS	SH REG IHF
E-0082 E-0082	DC BUS CURRENT A	0. to 15. ADC	T1A 23	LLM1A S2S02 LLM1A S2S06	8	F A	PPS PPS	DC BUS I A
E-0083	DC BUS CURRENT B	0. to 15. ADC	T1B 23	LLM1B S2S03	8	B A	PPS	DC BUS I B
E-0086 E-0086	2.4 KHZ INVERTER OUTPUT CURRENT	0. to 6. AAC	T1A 3E	LLM1A S1S05 LLM1A S1S06	8	B A	PPS PPS	INV OUT I

\*Repeated from RFS

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Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
PPS - POWER/PYRO SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0087 E-0087 E-0087	2.4 KHZ INVERTER INPUT CURRENT	0. to 10. ADC	T1B 43	LLM1B S1S05 LLM1B T1S02 LLM1B T1S12	8	F A	PPS PPS PPS	INV IN I
E-0088	2.4 KHZ INVERTER OUTPUT VOLTAGE	40. to 60. VAC	T1B 34	LLM1B T1S04	8	F A	PPS	INV OUT V
E-0089	DISCHARGE CONTROLLER USE COUNTER		L1A FF	LLM1A N1D06 2	8	F S	PPS	DSCHG CNTL
E-0090	PYRO BANK 1A VOLTAGE	0. to 45. VDC	T1A 40		8	B A	PPS	PYRO 1A V
E-0091	PYRO BANK 1B VOLTAGE	0. to 45. VDC	T1B 40		8	B A	PPS	PYRO 1B V
E-0092	PYRO BANK 2A VOLTAGE	0. to 45. VDC	T2A 18	LLM2A N1D46 1	8	B A	PPS	PYRO 2A V
E-0093	PYRO BANK 2B VOLTAGE	0. to 45. VDC	T2A 27	LLM2A N1D46 2	8	B A	PPS	PYRO 2B V
E-0094	DC BUS VOLTAGE IMBALANCE	0. to 30. VDC	T1B 2B	LLM1B N1D27 1	8	F A	PPS	DC BUS IMB
E-0095	AC BUS VOLTAGE IMBALANCE	-25. to +25. VRMS	T1A 2B	LLM1A N1D27 1	8	F A	PPS	AC BUS IMB
E-0096	SHUNT REGULATOR TEMPERATURE	-78. to 100. Deg	T1A 7B	LLM1A N1D80 2	8	F T	PPS	SH REG T
E-0097	+X RTG CASE TEMPERATURE RTD 4	-9. to 309. Deg	T1A 54		8	F T	PPS	+X RTG T4
E-0098	+X RTG CASE TEMPERATURE RTD 2	-9. to 309. Deg	T1B 6D	LLM1B N1D27 2	8	F T	PPS	+X RTG T2
E-0099	-X RTG CASE TEMPERATURE RTD 4	-9. to 309. Deg	T1A 7D	LLM1A N1D27 2	8	F T	PPS	-X RTG T4
E-0100	-X RTG CASE TEMPERATURE RTD 2	-9. to 309. Deg	T1B 59	LLM1B N1D80 2	8	F T	PPS	-X RTG T2
E-0101	TLM Spare 6	TBD VDC	T1B 19		8	F A	PPS	TLM SP 6
E-0102	TLM Spare 7	TBD	T1B 1A		8	F A	PPS	TLM SP 7
E-0103	TLM Spare 8	TBD	T1B 1C		8	F A	PPS	TLM SP 8
E-0104	TLM Spare 9	TBD	T1B 1D		8	F A	PPS	TLM SP 9
E-0105	TLM Spare 1	TBD	T1A 1E		8	F A	PPS	TLM SP 1
E-0106	TLM Spare 11	TBD	T1B 22		8	F A	PPS	TLM SP 11
E-0107	TLM Spare 2	TBD	T1A 21		8	F A	PPS	TLM SP 2
E-0108	TLM Spare 3	TBD	T1A 22		8	F A	PPS	TLM SP 3
E-0109	TLM Spare 4	TBD	T1A 26		8	F A	PPS	TLM SP 4

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
PPS - POWER/PYRO SUBSYSTEM

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NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-1500	TLM Spare 10		T1B 26		8	F A	PPS	BDC V/T ST
E-1501	TLM Spare 5		T1A 27		8	F A	PPS	BAT SAFE 1
E-1505	PDE 30VDC INHIBIT STATUS A	0. to 3. VDC	T1A 29		8	F A	PPS	PDE 30 STA
E-1506	TLM Spare 12	TBD	T1B 1E		8	F A	PPS	BAT SAFE 2
E-1507	PDE 30VDC INHIBIT STATUS B	0. to 3. VDC	T1B 29		8	F A	PPS	PDE 30 STB
*E-1635	PPS/DEV/SXA STATUS		T1A 02		8	B D	*PPS	DEV/SXA ST
*E-1636	PPS/DEV/SXA/DDS STATUS		T1B 02	LLM1B N1D23 2	8	B D	*PPS	DEV/SXA ST

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\*Repeated from DEV

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
*E-0065	PPS/MDS/CDS STATUS WORD 1		T1A 01	LLM1A N1D43 1	8	B D	*CDS	
*E-0066	PPS/MDS/CDS STATUS WORD 2		T1B 01	LLM1B N1D43 1	8	B D	*CDS	
E-0115	HLM1A LAST BC RIM COUNT		H1A 00		24	F S	CDS	HA BC-RIM
E-0116	HLM1A LAST BC MOD91		H1A 00		8	F S	CDS	HA BC-M91
E-0117	HLM1A BC BUFFER ENTRY 1A		H1A 00		32	F S	CDS	HA BC-1A
E-0118	HLM1A BC BUFFER ENTRY 2A		H1A 00		32	F S	CDS	HA BC-2A
E-0119	HLM1A BC BUFFER ENTRY 3A		H1A 00		32	F S	CDS	HA BC-3A
E-0120	HLM1A BC BUFFER ENTRY 4A		H1A 00		32	F S	CDS	HA BC-4A
E-0121	HLM1A BC BUFFER ENTRY 5A		H1A 00		32	F S	CDS	HA BC-5A
E-0122	HLM1A BC BUFFER ENTRY 6A		H1A 00		32	F S	CDS	HA BC-6A
E-0123	HLM1A BC BUFFER ENTRY 7A		H1A 00		32	F S	CDS	HA BC-7A
E-0124	HLM1A BC BUFFER ENTRY 8A		H1A 00		32	F S	CDS	HA BC-8A
E-0125	HLM1A BC BUFFER ENTRY 9A		H1A 00		32	F S	CDS	HA BC-9A
E-0126	HLM1A BC BUFFER ENTRY 10A		H1A 00		32	F S	CDS	HA BC-10A
E-0127	HLM1A BC BUFFER ENTRY 11A		H1A 00		32	F S	CDS	HA BC-11A
E-0128	HLM1A BC BUFFER ENTRY 12A		H1A 00		32	F S	CDS	HA BC-12A
E-0129	HLM1A BC BUFFER ENTRY 13A		H1A 00		32	F S	CDS	HA BC-13A
E-0130	HLM1A BC BUFFER ENTRY 14A		H1A 00		32	F S	CDS	HA BC-14A
E-0131	HLM1A BC BUFFER ENTRY 15A		H1A 00		32	F S	CDS	HA BC-15A
E-0132	HLM1A BC BUFFER ENTRY 16A		H1A 00		32	F S	CDS	HA BC-16A
E-0133	HLM1A NOW-BUFFERED BC COUNTER		H1A 00	HLM1A N1F44 1	16	F S	CDS	HA NB-BC-C
E-0133				HLM1A N1F51 1			CDS	
E-0134	HLM1A LAST UPLINK MESSAGE		H1A 00	HLM1A N1F47 1	16	F S	CDS	HA LASTMSG
E-0134				HLM1A N1F54 1			CDS	
E-0135	HLM1A S/S FC COUNTER		H1A 00		16	F S	CDS	HA S/S-FCS

\*Repeated from RFS

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0136 E-0136	HLM1A S/S BC COUNTER		H1A 00	HLM1A N1F81 3 HLM1A N1F88 3	16	F S	CDS CDS	HA S/S-BCS
E-0137	HLM1A F/P FC COUNTER		H1A 00		16	F S	CDS	HA F/P-FCS
E-0138 E-0138	HLM1A F/P BC COUNTER		H1A 00	HLM1A N1F81 1 HLM1A N1F88 1	16	F S	CDS CDS	HA F/P-BCS
E-0141	HLM1A LLM BUS TRANSACTIONS RECEIVED		H1A 00		8	F S	CDS	HA BT-RC-C
E-0142	HLM1A DAC ERROR COUNTER		H1A 00		8	F S	CDS	HA DACER-C
E-0143	HLM1A MEM COPY/TWEAK ERROR COUNTER		H1A 00		8	F S	CDS	HA MC/T-ER
E-0144 E-0144	HLM1A BUM ERROR LIMITER		H1A 00	HLM1A N1F23 1 HLM1A N1F30 1	8	F S	CDS CDS	HA BMERLIM
E-0145	HLM1A TO LLMS PRIVILEGED FC COUNTER		H1A 00		8	F S	CDS	HA LM-P-FC
E-0146	HLM1A TO LLMS TOTAL FC COUNTER		H1A 00		8	F S	CDS	HA LM-T-FC
E-0147	HLM1A NON-PRIV CC/DC/POWER CODE COUNTER		H1A 00		8	F S	CDS	HA N-CD/PC
E-0148	HLM1A PRIV CC/DC/POWER CODE COUNTER		H1A 00		8	F S	CDS	HA P-CD/PC
E-0149	HLM1A GPV-28 (SPARE)		H1A 00		8	F S	CDS	HA HGA PD1
E-0150	HLM1A GPV-29 (SPARE)		H1A 00		8	F S	CDS	HA HGA PD2
E-0151	HLM1A GPV-30 (SPARE)		H1A 00		8	F S	CDS	HA HGA PD3
E-0152	HLM1A GPV-31 (SPARE)		H1A 00		8	F S	CDS	HA HGA PD4
E-0153	HLM1A DESPUN CRC REGISTERS 0-3		H1A 00	HLM1A N1F77 1	32	F S	CDS	HA CRC0-3
E-0154	HLM1A DESPUN CRC REGISTERS 4-6		H1A 00	HLM1A N1F40 1	24	F S	CDS	HA CRC4-6
E-0155 E-0155	HLM1A DESPUN CRC BANK A ERROR STATUS		H1A 00	HLM1A N1F23 2 HLM1A N1F30 2	8	F S	CDS CDS	HA DS CRCA
E-0156	HLM1A SPUN CRC BANK A REGISTERS 0-3		H1A 00	HLM1A N1F03 1	32	F S	CDS	HA CRCA0-3
E-0157	HLM1A SPUN CRC BANK A REGISTERS 4-6		H1A 00	HLM1A N1F57 1	24	F S	CDS	HA CRCA4-6
E-0158 E-0158	HLM1A SPUN CRC BANK A ERROR STATUS		H1A 00	HLM1A N1F23 3 HLM1A N1F30 3	8	F S	CDS CDS	HA SP CRCA
E-0159	HLM1A SPUN CRC BANK B REGISTERS 0-3		H1A 00	HLM1A N1F20 1	32	F S	CDS	HA CRCB0-3
E-0160	HLM1A SPUN CRC BANK B REGISTERS 4-7		H1A 00	HLM1A N1F74 1	32	F S	CDS	HA CRCB4-7

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0161	HLM1A HCD COMMAND SUMMARY WORD		H1A 00		8	F S	CDS	HA CMD-SMY
E-0162	HLM1A MESSAGES RECEIVED AND ACCEPTED COUNTER		H1A 00	HLM1A N1S00 1	8	F S	CDS	HA MSG-ACC
E-0162				HLM1A N1S07 1			CDS	
E-0162				HLM1A N1S14 1			CDS	
E-0162				HLM1A N1S21 1			CDS	
E-0162				HLM1A N1S28 1			CDS	
E-0162				HLM1A N1S35 1			CDS	
E-0162				HLM1A N1S42 1			CDS	
E-0162				HLM1A N1S49 1			CDS	
E-0162				HLM1A N1S56 1			CDS	
E-0162				HLM1A N1S63 1			CDS	
E-0162				HLM1A N1S70 1			CDS	
E-0162				HLM1A N1S77 1			CDS	
E-0162				HLM1A N1S84 1			CDS	
E-0163	HLM1A MESSAGES RECEIVED AND REJECTED COUNTER		H1A 00	HLM1A N1S05 1	8	F S	CDS	HA MSG-RJ
E-0163				HLM1A N1S12 1			CDS	
E-0163				HLM1A N1S19 1			CDS	
E-0163				HLM1A N1S26 1			CDS	
E-0163				HLM1A N1S33 1			CDS	
E-0163				HLM1A N1S40 1			CDS	
E-0163				HLM1A N1S47 1			CDS	
E-0163				HLM1A N1S54 1			CDS	
E-0163				HLM1A N1S61 1			CDS	
E-0163				HLM1A N1S68 1			CDS	
E-0163				HLM1A N1S75 1			CDS	
E-0163				HLM1A N1S82 1			CDS	
E-0163				HLM1A N1S89 1			CDS	
E-0164	HLM1A COMMAND FRAME ERRORS DETECTED COUNTER		H1A 00	HLM1A N1F00 1	8	F S	CDS	HA FRM-ER
E-0164				HLM1A N1F84 1			CDS	
E-0165	HLM1A DATA FRAME ERRORS CORRECTED COUNTER		H1A 00	HLM1A N1F00 2	8	F S	CDS	HA FRM-COR
E-0165				HLM1A N1F84 2			CDS	
E-0166	HLM1A DATA FRAME ERRORS UNCORRECTABLE COUNTER		H1A 00	HLM1A N1F00 3	8	F S	CDS	HA FRM-UNC
E-0166				HLM1A N1F84 3			CDS	
E-0167	HLM1A LOCK CHANGES COUNTER		H1A 00	HLM1A N1F00 4	8	F S	CDS	HA LOCK-C
E-0167				HLM1A N1F84 4			CDS	
E-0168	HLM1A SPUN CRC STATUS WORD		H1A 00	HLM1A N1F06 1	8	F S	CDS	HA CRCS-ST
E-0168				HLM1A N1F13 1			CDS	
E-0169	HLM1A ERROR WORDS IOSL 0-1-2		H1A 00	HLM1A N1F06 2	24	F S	CDS	HA IOSL012
E-0169				HLM1A N1F13 2			CDS	
E-0170	HLM1A CMD LOSS RESPONSE COUNTER		H1A 00		8	F S	CDS	HA CMDLS-C

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0171 E-0171	HLM1A BUM ERROR WORDS		H1A 00	HLM1A N1F60 1 HLM1A N1F67 1	32	F S	CDS CDS	HA BUM-ER
E-0172	HLM1A DBUM ERROR WORDS (E-0505:E-0506 = E-0172)		H1A 00		16	F S	CDS	HA DBUM-ER
E-0173	HLM1A FLAG STATUS		H1A 00		8	F S	CDS	HA FLAG-ST
E-0174 E-0174	HLM1A EXTENDED BACKGROUND PROCESSING COUNTER		H1A 00	HLM1A N1F07 1 HLM1A N1F14 1	8	F S	CDS CDS	HA RTI-789
E-0175	HLM1A THIS CDS OF MODE		H1A 00		8	F S	CDS	HA CDS-OP
E-0176 E-0176	HLM1A THIS SAFE REQUEST FLAG		H1A 00	HLM1A N1F07 2 HLM1A N1F14 2	8	F S	CDS CDS	HA SAFE-RQ
E-0177 E-0177	HLM1A THIS SAFE ENABLE		H1A 00	HLM1A N1F07 3 HLM1A N1F14 3	8	F S	CDS CDS	HA SAFE-EN
E-0178	HLM1A THIS EFFECTUAL DOWN FLAG		H1A 00		8	F S	CDS	HA EF-DOWN
E-0179 E-0179	HLM1A GPV-131 (SPARE TO OTHER HLM)		H1A 00	HLM1A N1F07 4 HLM1A N1F14 4	8	F S	CDS CDS	HA CLK ERR
E-0180	HLM1A GPV-132 (SPARE TO OTHER HLM)		H1A 00		8	F S	CDS	HA GPV-132
E-0181	HLM1A GPV-133 (SPARE TO OTHER HLM)		H1A 00		8	F S	CDS	HA GPV-133
E-0182	HLM1A THIS SIDE LAUNCH MODE READY		H1A 00		8	F S	CDS	HA LAUNCH
E-0183 E-0183	HLM1A OUT-OF-RANGE ALERT CODE COUNTER		H1A 00	HLM1A N1F58 1 HLM1A N1F65 1	8	F S	CDS CDS	HA AC-OUT
E-0184 E-0184	HLM1A ERRONEOUS ALERT CODE COUNTER		H1A 00	HLM1A N1F58 2 HLM1A N1F65 2	8	F S	CDS CDS	HA AC-ERON
E-0185 E-0185	HLM1A AACS ALERT CODE RECEIVED COUNTER		H1A 00	HLM1A N1F58 3 HLM1A N1F65 3	16	F S	CDS CDS	HA AC-RC-C
E-0186 E-0186	HLM1A HEARTBEAT ENTRY COUNTER		H1A 00	HLM1A N1F04 2 HLM1A N1F11 2	8	F S	CDS CDS	HA H/B-RSP
E-0187 E-0187	HLM1A HEARTBEAT ERROR COUNTER ACCUMULATED		H1A 00	HLM1A N1F04 3 HLM1A N1F11 3	8	F S	CDS CDS	HA H/B-ER
E-0188	HLM1A LAST ALERT CODE		H1A 00		8	F S	CDS	HA AC-LAST
E-0189 E-0189	HLM1A AACS ALERT CODE RESPONSE COUNTER		H1A 00	HLM1A N1F21 1 HLM1A N1F28 1	8	F S	CDS CDS	HA AC-EX-C
E-0190 E-0190	HLM1A COMMAND LOSS RESPONSE START TIME		H1A 00	HLM1A N1F21 2 HLM1A N1F28 2	24	F S	CDS CDS	HA CMDLS-T

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0191	HLM1A AACS HEARTBEAT CODE		H1A 00		8	F S	CDS	HA H/BCODE
E-0192	HLM1A TF IMMINENT ALERT CODE COUNTER		H1A 00		8	F S	CDS	HA TF-IMM
E-0193	HLM1A TF ALL CLEAR ALERT CODE COUNTER		H1A 00		8	F S	CDS	HA TF-ALCL
E-0194	HLM1A TF ALL CLEAR COMPLETION COUNTER		H1A 00		8	F S	CDS	HA TF-END
E-0195 E-0195	HLM1A U/V RESPONSE COUNTER		H1A 00	HLM1A N1F04 4 HLM1A N1F11 4	8	F S	CDS CDS	HA UV-RSP
E-0196 E-0196	HLM1A S/C F/P MONITOR ENABLE (PRIV)		H1A 00	HLM1A N1F61 1 HLM1A N1F68 1	8	F S	CDS CDS	HA P-MON-E
E-0197	HLM1A U/V DIODE UNSHORT COUNTER		H1A 00		8	F S	CDS	HA UV-DIO
E-0198	HLM1A OVERPRESSURE TEMPERATURE FLAG		H1A 00		8	F S	CDS	HA OVRPRES
E-0199	HLM1A U/V TRIP/INVERTER SWITCH COUNTER		H1A 00		8	F S	CDS	HA UV-INV
E-0200 E-0200	HLM1A S/C F/P RESPONSE ENABLES (PRIV)		H1A 00	HLM1A N1F61 2 HLM1A N1F68 2	24	F S	CDS CDS	HA P-F/P-E
E-0201	HLM1A CDS POR RESPONSE COUNTER		H1A 00		8	F S	CDS	HA CDS-POR
E-0202 E-0202	HLM1A F/P CONDITION (REQUESTS) ENABLES		H1A 00	HLM1A N1F24 1 HLM1A N1F31 1	24	F S	CDS CDS	HA C-F/P-E
E-0203 E-0203	HLM1A RFLOSS RESPONSE COUNTER		H1A 00	HLM1A N1F24 4 HLM1A N1F31 4	8	F S	CDS CDS	HA RFLOSS
E-0204	HLM1A F/P RESPONSE INACTIVE ENABLES (E-0507:E-0508:E-0509 = E-0204)		H1A 00		24	F S	CDS	HA I-F/P-E
E-0205 E-0205	HLM1A PRIME/BACKUP STATUS		H1A 00	HLM1A N1F23 4 HLM1A N1F30 4	8	F S	CDS CDS	HA PRM/BKU
E-0206 E-0206	HLM1A MOS F/P RESPONSE ENABLES (MON-PRIV)		H1A 00	HLM1A N1F78 1 HLM1A N1F85 1	24	F S	CDS CDS	HA N-F/P-E
E-0207 E-0207	HLM1A AACS STATUS		H1A 00	HLM1A N1F78 4 HLM1A N1F85 4	8	F S	CDS CDS	HA AACS-ST
E-0208 E-0208	HLM1A MOS F/P MONITOR ENABLE (NON-PRIV)		H1A 00	HLM1A N1F41 1 HLM1A N1F48 1	8	F S	CDS CDS	HA N-MON-E
E-0209	HLM1A MOS THRUSTER TEMPERATURE ENABLE (NON-PRIV)		H1A 00		8	F S	CDS	HA N-THR-E
E-0210	HLM1A CMD LOSS RESET DELTA RIMS		H1A 00		16	F S	CDS	HA CMDLS-R
E-0211 E-0211	HLM1A SYSTEM FAULT STATUS		H1A 00	HLM1A N1F41 3 HLM1A N1F48 3	16	F S	CDS CDS	HA SYS-ST

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0212	HLM1A F/P MODE		H1A 00		8	F S	CDS	HA F/PMODE
E-0213 E-0213	HLM1A F/P PATH CONTROL		H1A 00	HLM1A N1F41 2 HLM1A N1F48 2	8	F S	CDS CDS	HA PATHCTL
E-0214 E-0214	HLM1A GV-92 (SPARE TO OTHER HLM)		H1A 00	HLM1A N1F44 3 HLM1A N1F51 3	8	F S	CDS CDS	HA GV-92
E-0215 E-0215	HLM1A GV-93 (SPARE TO OTHER HLM)		H1A 00	HLM1A N1F44 4 HLM1A N1F51 4	8	F S	CDS CDS	HA GV-93
E-0216	HLM1A GV-94 (SPARE TO OTHER HLM)		H1A 00		8	F S	CDS	HA GV-94
E-0217	HLM1A GV-95 (SPARE TO OTHER HLM)		H1A 00		8	F S	CDS	HA GV-95
E-0218	HLM1A GV-96 (SPARE TO OTHER HLM)		H1A 00		8	F S	CDS	HA GV-96
E-0219	HLM1A GV-97 (SPARE TO OTHER HLM)		H1A 00		8	F S	CDS	HA GV-97
E-0220	HLM1A GV-98 (SPARE TO OTHER HLM)		H1A 00		8	F S	CDS	HA GV-98
E-0221	HLM1A GV-99 (SPARE TO OTHER HLM)		H1A 00		8	F S	CDS	HA PROBEGO
E-0222 E-0222	HLM1A SYS DIAGNOSTIC MSG QUEUE ENTRY 1		H1A 00	HLM1A N1F75 1 HLM1A N1F82 1	16	F S	CDS CDS	HA SYSDIA1
E-0223 E-0223	HLM1A SYS DIAGNOSTIC MSG QUEUE ENTRY 2		H1A 00	HLM1A N1F75 3 HLM1A N1F82 3	16	F S	CDS CDS	HA SYSDIA2
E-0224 E-0224	HLM1A SYS DIAGNOSTIC MSG QUEUE ENTRY 3		H1A 00	HLM1A N1F38 1 HLM1A N1F45 1	16	F S	CDS CDS	HA SYSDIA3
E-0225 E-0225	HLM1A SYS DIAGNOSTIC MSG QUEUE ENTRY 4		H1A 00	HLM1A N1F38 3 HLM1A N1F45 3	16	F S	CDS CDS	HA SYSDIA4
E-0226 E-0226	HLM1A SYS DIAGNOSTIC MSG QUEUE ENTRY 5		H1A 00	HLM1A N1F01 1 HLM1A N1F08 1	16	F S	CDS CDS	HA SYSDIA5
E-0227 E-0227	HLM1A SYS DIAGNOSTIC MSG QUEUE ENTRY 6		H1A 00	HLM1A N1F01 3 HLM1A N1F08 3	16	F S	CDS CDS	HA SYSDIA6
E-0228 E-0228	HLM1A SYS DIAGNOSTIC MSG QUEUE ENTRY 7		H1A 00	HLM1A N1F55 1 HLM1A N1F62 1	16	F S	CDS CDS	HA SYSDIA7
E-0229 E-0229	HLM1A SYS DIAGNOSTIC MSG QUEUE ENTRY 8		H1A 00	HLM1A N1F55 3 HLM1A N1F62 3	16	F S	CDS CDS	HA SYSDIA8
E-0230 E-0230	HLM1A CDS DIAGNOSTIC MSG QUEUE ENTRY 1		H1A 00	HLM1A N1F18 1 HLM1A N1F25 1	16	F S	CDS CDS	HA CDS DIA1



Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0231 E-0231	HLM1A CDS DIAGNOSTIC MSG QUEUE ENTRY 2		H1A 00	HLM1A N1F18 3 HLM1A N1F25 3	16	F S	CDS CDS	HA CDS DIA2
E-0232 E-0232	HLM1A CDS DIAGNOSTIC MSG QUEUE ENTRY 3		H1A 00	HLM1A N1F72 1 HLM1A N1F79 1	16	F S	CDS CDS	HA CDS DIA3
E-0233 E-0233	HLM1A CDS DIAGNOSTIC MSG QUEUE ENTRY 4		H1A 00	HLM1A N1F72 3 HLM1A N1F79 3	16	F S	CDS CDS	HA CDS DIA4
E-0234 E-0234	HLM1A CDS DIAGNOSTIC MSG QUEUE ENTRY 5		H1A 00	HLM1A N1F35 1 HLM1A N1F42 1	16	F S	CDS CDS	HA CDS DIA5
E-0235 E-0235	HLM1A CDS DIAGNOSTIC MSG QUEUE ENTRY 6		H1A 00	HLM1A N1F35 3 HLM1A N1F42 3	16	F S	CDS CDS	HA CDS DIA6
E-0236 E-0236	HLM1A CDS DIAGNOSTIC MSG QUEUE ENTRY 7		H1A 00	HLM1A N1F05 1 HLM1A N1F89 1	16	F S	CDS CDS	HA CDS DIA7
E-0237 E-0237	HLM1A CDS DIAGNOSTIC MSG QUEUE ENTRY 8		H1A 00	HLM1A N1F05 3 HLM1A N1F89 3	16	F S	CDS CDS	HA CDS DIA8
E-0238 E-0238	HLM1A CAP/IAP PROGRAM STATE FILE		H1A 00	HLM1A N1F52 1 HLM1A N1F59 1	32	F S	CDS CDS	HA C/I-PSF
E-0239	HLM1A F/P PROGRAM STATE FILE ENTRY 1		H1A 00		32	F S	CDS	HA F/P-1
E-0240 E-0240	HLM1A F/P PROGRAM STATE FILE ENTRY 2		H1A 00	HLM1A N1F15 1 HLM1A N1F22 1	32	F S	CDS CDS	HA F/P-2
E-0241 E-0241	HLM1A F/P PROGRAM STATE FILE ENTRY 3		H1A 00	HLM1A N1F69 1 HLM1A N1F76 1	32	F S	CDS CDS	HA F/P-3
E-0242 E-0242	HLM1A F/P PROGRAM STATE FILE ENTRY 4		H1A 00	HLM1A N1F32 1 HLM1A N1F39 1	32	F S	CDS CDS	HA F/P-4
E-0243 E-0243	HLM1A F/P PROGRAM STATE FILE ENTRY 5		H1A 00	HLM1A N1F02 1 HLM1A N1F86 1	32	F S	CDS CDS	HA F/P-5
E-0244	HLM1A F/P PROGRAM STATE FILE ENTRY 6		H1A 00		32	F S	CDS	HA F/P-6
E-0245	HLM1A F/P PROGRAM STATE FILE ENTRY 7		H1A 00		32	F S	CDS	HA F/P-7
E-0246	HLM1A F/P PROGRAM STATE FILE ENTRY 8		H1A 00		32	F S	CDS	HA F/P-8
E-0247	HLM1A F/P PROGRAM STATE FILE ENTRY 9		H1A 00		32	F S	CDS	HA F/P-9
E-0248	HLM1A F/P PROGRAM STATE FILE ENTRY 10		H1A 00		32	F S	CDS	HA F/P-10
E-0249 E-0249	HLM1A S/S PROGRAM STATE FILE ENTRY 1		H1A 00	HLM1A N1F12 1 HLM1A N1F19 1	32	F S	CDS CDS	HA S/S-1

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0250 E-0250	HLM1A S/S PROGRAM STATE FILE ENTRY 2		H1A 00	HLM1A N1F66 1 HLM1A N1F73 1	32	F S	CDS CDS	HA S/S-2
E-0251 E-0251	HLM1A S/S PROGRAM STATE FILE ENTRY 3		H1A 00	HLM1A N1F29 1 HLM1A N1F36 1	32	F S	CDS CDS	HA S/S-3
E-0252 E-0252	HLM1A S/S PROGRAM STATE FILE ENTRY 4		H1A 00	HLM1A N1F83 1 HLM1A N1F90 1	32	F S	CDS CDS	HA S/S-4
E-0253 E-0253	HLM1A S/S PROGRAM STATE FILE ENTRY 5		H1A 00	HLM1A N1F46 1 HLM1A N1F53 1	32	F S	CDS CDS	HA S/S-5
E-0254 E-0254	HLM1A S/S PROGRAM STATE FILE ENTRY 6		H1A 00	HLM1A N1F09 1 HLM1A N1F16 1	32	F S	CDS CDS	HA S/S-6
E-0255 E-0255	HLM1A S/S PROGRAM STATE FILE ENTRY 7		H1A 00	HLM1A N1F63 1 HLM1A N1F70 1	32	F S	CDS CDS	HA S/S-7
E-0256 E-0256	HLM1A S/S PROGRAM STATE FILE ENTRY 8		H1A 00	HLM1A N1F26 1 HLM1A N1F33 1	32	F S	CDS CDS	HA S/S-8
E-0257 E-0257	HLM1A S/S PROGRAM STATE FILE ENTRY 9		H1A 00	HLM1A N1F80 1 HLM1A N1F87 1	32	F S	CDS CDS	HA S/S-9
E-0258 E-0258	HLM1A S/S PROGRAM STATE FILE ENTRY 10		H1A 00	HLM1A N1F43 1 HLM1A N1F50 1	32	F S	CDS CDS	HA S/S-10
E-0259	HLM1A S/S PROGRAM STATE FILE ENTRY 11		H1A 00		32	F S	CDS	HA S/S-11
E-0260	HLM1A S/S PROGRAM STATE FILE ENTRY 12		H1A 00		32	F S	CDS	HA S/S-12
E-0261	HLM1A S/S PROGRAM STATE FILE ENTRY 13		H1A 00		32	F S	CDS	HA S/S-13
E-0262	HLM1A S/S PROGRAM STATE FILE ENTRY 14		H1A 00		32	F S	CDS	HA S/S-14
E-0263	HLM1A S/S PROGRAM STATE FILE ENTRY 15		H1A 00		32	F S	CDS	HA S/S-15
E-0264	HLM1A S/S PROGRAM STATE FILE ENTRY 16		H1A 00		32	F S	CDS	HA S/S-16
E-0265	HLM1A S/S PROGRAM STATE FILE ENTRY 17		H1A 00		32	F S	CDS	HA S/S-17
E-0266	HLM1A S/S PROGRAM STATE FILE ENTRY 18		H1A 00		32	F S	CDS	HA S/S-18
E-0267	HLM1A S/S PROGRAM STATE FILE ENTRY 19		H1A 00		32	F S	CDS	HA S/S-19
E-0268	HLM1A S/S PROGRAM STATE FILE ENTRY 20		H1A 00		32	F S	CDS	HA S/S-20
E-0269	HLM1A S/S PROGRAM STATE FILE ENTRY 21		H1A 00		32	F S	CDS	HA S/S-21
E-0270	HLM1A S/S PROGRAM STATE FILE ENTRY 22		H1A 00		32	F S	CDS	HA S/S-22

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0271	HLM1A S/S PROGRAM STATE FILE ENTRY 23		H1A 00		32	F S	CDS	HA S/S-23
E-0272	HLM1A BUFFER BC COUNTER		H1A 00		8	F S	CDS	HA BUF-BCS
E-0273	HLM1A BC BUFFER ENTRY 1B		H1A 00		8	F S	CDS	HA BC-1B
E-0274	HLM1A BC BUFFER ENTRY 2B		H1A 00		8	F S	CDS	HA BC-2B
E-0275	HLM1A BC BUFFER ENTRY 3B		H1A 00		8	F S	CDS	HA BC-3B
E-0276	HLM1A BC BUFFER ENTRY 4B		H1A 00		8	F S	CDS	HA BC-4B
E-0277	HLM1A BC BUFFER ENTRY 5B		H1A 00		8	F S	CDS	HA BC-5B
E-0278	HLM1A BC BUFFER ENTRY 6B		H1A 00		8	F S	CDS	HA BC-6B
E-0279	HLM1A BC BUFFER ENTRY 7B		H1A 00		8	F S	CDS	HA BC-7B
E-0280	HLM1A BC BUFFER ENTRY 8B		H1A 00		8	F S	CDS	HA BC-8B
E-0281	HLM1A BC BUFFER ENTRY 9B		H1A 00		8	F S	CDS	HA BC-9B
E-0282	HLM1A BC BUFFER ENTRY 10B		H1A 00		8	F S	CDS	HA BC-10B
E-0283	HLM1A BC BUFFER ENTRY 11B		H1A 00		8	F S	CDS	HA BC-11B
E-0284	HLM1A BC BUFFER ENTRY 12B		H1A 00		8	F S	CDS	HA BC-12B
E-0285	HLM1A BC BUFFER ENTRY 13B		H1A 00		8	F S	CDS	HA BC-13B
E-0286	HLM1A BC BUFFER ENTRY 14B		H1A 00		8	F S	CDS	HA BC-14B
E-0287	HLM1A BC BUFFER ENTRY 15B		H1A 00		8	F S	CDS	HA BC-15B
E-0288	HLM1A BC BUFFER ENTRY 16B		H1A 00		8	F S	CDS	HA BC-16B
E-0289 E-0289	HLM1A CAP FC COUNTER		H1A 00	HLM1A N1F27 3 HLM1A N1F34 3	8	F S	CDS CDS	HA CAP-FCS
E-0290	HLM1A CAP BC COUNTER		H1A 00		8	F S	CDS	HA CAP-BCS
E-0291 E-0291	HLM1A IAP FC COUNTER		H1A 00	HLM1A N1F27 4 HLM1A N1F34 4	8	F S	CDS CDS	HA IAP-FCS
E-0292	HLM1A IAP BC COUNTER		H1A 00		8	F S	CDS	HA IAP-BCS
E-0293 E-0293	HLM1A SFP PROTECTED PATH CONTROL		H1A 00	HLM1A N1F04 1 HLM1A N1F11 1	8	F S	CDS CDS	HA FP PPTH

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0294	HLM1A SPARE		H1A 00		8	F S	CDS	HA SPR-225
E-0295	HLM1A SPARE		H1A 00		8	F S	CDS	HA SPR-235
E-0296	HLM1A SPARE		H1A 00		8	F S	CDS	HA SPR-245
E-0297 E-0297	HLM1A UPLINK IAP COUNTER		H1A 00	HLM1A N1F47 3 HLM1A N1F54 3	8	F S	CDS CDS	HA U-IAP-C
E-0298 E-0298	HLM1A UPLINK DAC COUNTER		H1A 00	HLM1A N1F47 4 HLM1A N1F54 4	8	F S	CDS CDS	HA U-DAC-C
E-0299 E-0299	HLM1A UPLINK NML COUNTER		H1A 00	HLM1A N1F10 1 HLM1A N1F17 1	8	F S	CDS CDS	HA U-NML-C
E-0300 E-0300	HLM1A UPLINK IEX COUNTER		H1A 00	HLM1A N1F10 2 HLM1A N1F17 2	8	F S	CDS CDS	HA U-IEX-C
E-0301 E-0301	HLM1A UPLINK MSD(P) COUNTER		H1A 00	HLM1A N1F10 3 HLM1A N1F17 3	8	F S	CDS CDS	HA U-MSD-P
E-0302 E-0302	HLM1A UPLINK MSD(T) COUNTER		H1A 00	HLM1A N1F10 4 HLM1A N1F17 4	8	F S	CDS CDS	HA U-MSD-T
E-0303 E-0303	HLM1A UPLINK NMSL COUNTER		H1A 00	HLM1A N1F64 1 HLM1A N1F71 1	8	F S	CDS CDS	HA U-NMSL
E-0304 E-0304	HLM1A UPLINK PMSL COUNTER		H1A 00	HLM1A N1F64 2 HLM1A N1F71 2	8	F S	CDS CDS	HA U-PMSL
E-0305 E-0305	HLM1A UPLINK CAP COUNTER		H1A 00	HLM1A N1F64 3 HLM1A N1F71 3	8	F S	CDS CDS	HA U-CAP-C
E-0306 E-0306	HLM1A UPLINK NML/NMSL ERROR COUNTER		H1A 00	HLM1A N1F64 4 HLM1A N1F71 4	8	F S	CDS CDS	HA U-N-ER
E-0307 E-0307	HLM1A UPLINK MSL ERROR COUNTER		H1A 00	HLM1A N1F27 1 HLM1A N1F34 1	8	F S	CDS CDS	HA U-MS-ER
E-0308	HLM1A SPARE		H1A 00		8	F S	CDS	HA SPR-365
E-0309	HLM1A SPARE		H1A 00		8	F S	CDS	HA SPR-375
E-0310	HLM1A SPARE		H1A 00		8	F S	CDS	HA SPR-385
E-0311	HLM1A SPARE		H1A 00		8	F S	CDS	HA SPR-395
E-0312	HLM1A SPARE		H1A 00		8	F S	CDS	HA SPR-405
E-0313	HLM1A SPARE		H1A 00		8	F S	CDS	HA SPR-415

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0314	HLM1A SPARE		H1A 00		8	F S	CDS	HA SPR-425
E-0315	HLM1A SPARE		H1A 00		8	F S	CDS	HA SPR-435
E-0316	HLM1A SPARE		H1A 00		8	F S	CDS	HA SPR-445
E-0317	HLM1A SPARE		H1A 00		8	F S	CDS	HA SPR-455
E-0318	HLM1A SPARE		H1A 00		8	F S	CDS	HA SPR-465
E-0319	HLM1A SPARE		H1A 00		8	F S	CDS	HA SPR-475
E-0320	HLM1A SPARE		H1A 00		8	F S	CDS	HA SPR-485
E-0321	HLM1A SYSTEM DIAGNOSTIC MESSAGE COUNTER		H1A 00	HLM1A N1S03 1	8	F S	CDS	HA SDIAG-C
E-0321				HLM1A N1S10 1			CDS	
E-0321				HLM1A N1S17 1			CDS	
E-0321				HLM1A N1S24 1			CDS	
E-0321				HLM1A N1S31 1			CDS	
E-0321				HLM1A N1S38 1			CDS	
E-0321				HLM1A N1S45 1			CDS	
E-0321				HLM1A N1S52 1			CDS	
E-0321				HLM1A N1S59 1			CDS	
E-0321				HLM1A N1S66 1			CDS	
E-0321				HLM1A N1S73 1			CDS	
E-0321				HLM1A N1S80 1			CDS	
E-0321				HLM1A N1S87 1			CDS	
E-0322	HLM1A CDS DIAGNOSTIC MESSAGE COUNTER		H1A 00	HLM1A N1S01 1	8	F S	CDS	HA CDIAG-C
E-0322				HLM1A N1S08 1			CDS	
E-0322				HLM1A N1S15 1			CDS	
E-0322				HLM1A N1S22 1			CDS	
E-0322				HLM1A N1S29 1			CDS	
E-0322				HLM1A N1S36 1			CDS	
E-0322				HLM1A N1S43 1			CDS	
E-0322				HLM1A N1S50 1			CDS	
E-0322				HLM1A N1S57 1			CDS	
E-0322				HLM1A N1S64 1			CDS	
E-0322				HLM1A N1S71 1			CDS	
E-0322				HLM1A N1S78 1			CDS	
E-0322				HLM1A N1S85 1			CDS	
E-0323	HLM1A MARK FC COUNTER		H1A 00		8	F S	CDS	HA MARK-FC
E-0324	HLM1A S/C THRUSTER TEMPERATURE ENABLE (PRIV)		H1A 00		8	F S	CDS	HA P-THR-E
E-0325	HLM1A CAP START LINK		H1A 00		8	F S	CDS	HA CAP-LNK
E-0326	HLM1A F/P START LINK		H1A 00		8	F S	CDS	HA F/P-LNK
E-0327	HLM1A IAP START LINK		H1A 00		8	F S	CDS	HA IAP-LNK

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0328	HLM1A S/S START LINK		H1A 00		8	F S	CDS	HA S/S-LNK
E-0329	HLM1A UPLINK NMSL/PMSL SEQUENCE NUMBER		H1A 00	HLM1A N1F27 2	8	F S	CDS	HA U-SEQNO
E-0329				HLM1A N1F34 2			CDS	
E-0330	SEQUENCE COMPLETE				8	F S	CDS	SEQ COMPLT
E-0331	HLM1A MISSING MESSAGE LIST 1		H1A 00		8	F S	CDS	HA MSGL-1
E-0332	HLM1A MISSING MESSAGE LIST 2		H1A 00		8	F S	CDS	HA MSGL-2
E-0333	HLM1A MISSING MESSAGE LIST 3		H1A 00		8	F S	CDS	HA MSGL-3
E-0334	HLM1A MISSING MESSAGE LIST 4		H1A 00		8	F S	CDS	HA MSGL-4
E-0335	HLM1A MISSING MESSAGE LIST 5		H1A 00		8	F S	CDS	HA MSGL-5
E-0336	HLM1A MISSING MESSAGE LIST 6		H1A 00		8	F S	CDS	HA MSGL-6
E-0337	HLM1A MISSING MESSAGE LIST 7		H1A 00		8	F S	CDS	HA MSGL-7
E-0338	HLM1A MISSING MESSAGE LIST 8		H1A 00		8	F S	CDS	HA MSGL-8
E-0339	HLM1A MISSING MESSAGE LIST 9		H1A 00		8	F S	CDS	HA MSGL-9
E-0340	HLM1A MISSING MESSAGE LIST 10		H1A 00		8	F S	CDS	HA MSGL-10
E-0341	HLM1A MISSING MESSAGE LIST 11		H1A 00		8	F S	CDS	HA MSGL-11
E-0342	HLM1A MISSING MESSAGE LIST 12		H1A 00		8	F S	CDS	HA MSGL-12
E-0343	HLM1A MISSING MESSAGE LIST 13		H1A 00		8	F S	CDS	HA MSGL-13
E-0344	HLM1A MISSING MESSAGE LIST 14		H1A 00		8	F S	CDS	HA MSGL-14
E-0345	HLM1A MISSING MESSAGE LIST 15		H1A 00		8	F S	CDS	HA MSGL-15
E-0346	HLM1A MISSING MESSAGE LIST 16		H1A 00		8	F S	CDS	HA MSGL-16
E-0347	HLM1A MISSING MESSAGE LIST 17		H1A 00		8	F S	CDS	HA MSGL-17
E-0348	HLM1A MISSING MESSAGE LIST 18		H1A 00		8	F S	CDS	HA MSGL-18
E-0349	HLM1A MISSING MESSAGE LIST 19		H1A 00		8	F S	CDS	HA MSGL-19
E-0350	HLM1A MISSING MESSAGE LIST 20		H1A 00		8	F S	CDS	HA MSGL-20
E-0351	HLM1A MISSING MESSAGE LIST 21		H1A 00		8	F S	CDS	HA MSGL-21
E-0352	HLM1A MISSING MESSAGE LIST 22		H1A 00		8	F S	CDS	HA MSGL-22

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0353	HLM1A MISSING MESSAGE LIST 23		H1A 00		8	F S	CDS	HA MSGL-23
E-0354	HLM1A MISSING MESSAGE LIST 24		H1A 00		8	F S	CDS	HA MSGL-24
E-0355	HLM1A MISSING MESSAGE LIST 25		H1A 00		8	F S	CDS	HA MSGL-25
E-0356	HLM1A MISSING MESSAGE LIST 26		H1A 00		8	F S	CDS	HA MSGL-26
E-0357	HLM1A MISSING MESSAGE LIST 27		H1A 00		8	F S	CDS	HA MSGL-27
E-0358	HLM1A MISSING MESSAGE LIST 28		H1A 00		8	F S	CDS	HA MSGL-28
E-0359	HLM1A MISSING MESSAGE LIST 29		H1A 00		8	F S	CDS	HA MSGL-29
E-0360	HLM1A MISSING MESSAGE LIST 30		H1A 00		8	F S	CDS	HA MSGL-30
E-0361	HLM1A MISSING MESSAGE LIST 31		H1A 00		8	F S	CDS	HA MSGL-31
E-0362	HLM1A MISSING MESSAGE LIST 32		H1A 00		8	F S	CDS	HA MSGL-32
E-0365	LLM1A DMS FCS EXECUTED COUNTER		L1A 94	LLM1A N1D70 1	8	F S	CDS	LA DMSFCEX
E-0366	LLM1A DMS FCS REJECTED COUNTER		L1A 95	LLM1A N1D70 2	8	F S	CDS	LA DMSFCRJ
E-0367	LLM1A DMS CMDS SENT COUNTER		L1A 96		8	F S	CDS	LA DMSSENT
E-0368	LLM1A LAST DMS COMMAND SENT		L1A 97		8	F S	CDS	LA DMSLAST
E-0369	LLM1A EPD/PLS ENABLE STATUS		L1A 98	LLM1A N1D62 2	8	F S	CDS	LA SCI-EN
E-0369				LLM1A N1D72 2			CDS	
E-0370	LLM1A LAST CC/DC RIM COUNT MSB/ISB		L1A 80:81	LLM1A N1D79 1	16	F S	CDS	LA CD-RIM1
E-0371	LLM1A LAST CC/DC RIM COUNT LSB		L1A 82	LLM1A N1D42 1	8	F S	CDS	LA CD-RIM2
E-0372	LLM1A LAST CC/DC MOD91		L1A 83	LLM1A N1D42 2	8	F S	CDS	LA CD-M91
E-0373	LLM1A LAST CC/DC MOD10		L1A 84	LLM1A N1D05 1	8	F S	CDS	LA CD-M10
E-0374	LLM1A LAST CC/DC POINTER		L1A 85	LLM1A N1D05 2	8	F S	CDS	CD-PNTR
E-0375	LLM1A CC/DC BUFFER ENTRY 1		L1A 86:87	LLM1A N1D59 1	16	F S	CDS	LA CD-1
E-0376	LLM1A CC/DC BUFFER ENTRY 2		L1A 88:89	LLM1A N1D22 1	16	F S	CDS	LA CD-2
E-0377	LLM1A CC/DC BUFFER ENTRY 3		L1A 8A:8B	LLM1A N1D76 1	16	F S	CDS	LA CD-3
E-0378	LLM1A CC/DC BUFFER ENTRY 4		L1A 8C:8D	LLM1A N1D39 1	16	F S	CDS	LA CD-4
E-0379	LLM1A CC/DC BUFFER ENTRY 5		L1A 8E:8F	LLM1A N1D02 1	16	F S	CDS	LA CD-5

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0380	LLM1A CC/DC BUFFER ENTRY 6		L1A 90:91	LLM1A N1D56 1	16	F S	CDS	LA CD-6
E-0381	LLM1A CC/DC BUFFER ENTRY 7		L1A 92:93	LLM1A N1D19 1	16	F S	CDS	LA CD-7
E-0382 E-0382	LLM1A PRIV CC/DC EXECUTED COUNTER		L1A 9E	LLM1A N1D28 1 LLM1A N1D38 1	8	F S	CDS CDS	LA CD-P-EX
E-0383 E-0383	LLM1A MON-PRIV CC/DC EXECUTED COUNTER		L1A 9F	LLM1A N1D28 2 LLM1A N1D38 2	8	F S	CDS CDS	LA CD-N-EX
E-0384 E-0384	LLM1A PRIV CC/DC/(POWER CODE) QUEUED COUNTER		L1A A0	LLM1A N1D01 1 LLM1A N1D82 1	8	F S	CDS CDS	LA CD-P-Q
E-0385 E-0385	LLM1A MON-PRIV CC/DC/(POWER CODE) QUEUED COUNTER		L1A A1	LLM1A N1D01 2 LLM1A N1D82 2	8	F S	CDS CDS	LA CD-N-Q
E-0386 E-0386	LLM1A TEMPERATURE CC/DC QUEUED COUNTER		L1A A2	LLM1A N1D45 1 LLM1A N1D55 1	8	F S	CDS CDS	LA CD-T-Q
E-0387 E-0387	LLM1A DAC CC/DC QUEUED COUNTER		L1A A3	LLM1A N1D45 2 LLM1A N1D55 2	8	F S	CDS CDS	LA CD-DACQ
E-0388 E-0388	LLM1A AACS POWER CODES EXECUTED COUNTER		L1A A4	LLM1A N1D08 1 LLM1A N1D18 1	8	F S	CDS CDS	LA PC-E-C
E-0389 E-0389	LLM1A AACS POWER CODES REJECTED COUNTER		L1A A5	LLM1A N1D08 2 LLM1A N1D18 2	8	F S	CDS CDS	LA PC-RJ-C
E-0390 E-0390	LLM1A EPF/PLS CC/DC'S QUEUED COUNTER		L1A A6	LLM1A N1D62 1 LLM1A N1D72 1	8	F S	CDS CDS	LA CD-SCIQ
E-0391	LLM1A LAST VALID AACS POWER CODE		L1A A7		8	F S	CDS	LA PC-LAST
E-0392	LLM1A FC'S RECEIVED COUNTER		L1A A8		8	F S	CDS	LA FC-RC-C
E-0393 E-0393	LLM1A FC'S EXECUTED COUNTER		L1A A9	LLM1A N1D25 1 LLM1A N1D35 1	8	F S	CDS CDS	LA FC-EX-C
E-0394	LLM1A LAST VALID FC ID		L1A AA		8	F S	CDS	LA FC-LAST
E-0395 E-0395	LLM1A FC'S REJECTED COUNTER		L1A AB	LLM1A N1D25 2 LLM1A N1D35 2	8	F S	CDS CDS	LA FC-RJ-C
E-0396	LLM1A CHANGE PACKET SELECTION COUNTER		L1A AC	LLM1A N1D29 1	8	F S	CDS	LA PKT-SEL
E-0397	LLM1A BUS TRANSACTIONS SENT COUNTER		L1A AD		8	F S	CDS	LA BT-SENT
E-0398	LLM1A CHANGE PACKET TIMING COUNTER		L1A AE	LLM1A N1D66 1	8	F S	CDS	LA PKT-TMG
E-0399	LLM1A UPDATE PACKET MENU COUNTER		L1A AF	LLM1A N1D66 2	8	F S	CDS	LA MENU



Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0400	LLM1A AACS POWER CODES RECEIVED COUNTER		L1A B0:B1	LLM1A N1D83 1	16	F S	CDS	LA PC-RC-C
E-0401	LLM1A FLAG STATUS		L1A B6		8	F S	CDS	LA FLAG-ST
E-0402 E-0402	LLM1A CDS DIAGNOSTIC MESSAGE COUNTER		L1A B7	LLM1A N1D31 1 LLM1A N1D41 1	8	F S	CDS CDS	LA CDIAG-C
E-0403	LLM1A CDS DIAGNOSTIC MSG QUEUE ENTRY 1		L1A B8:B9		16	F S	CDS	LA CDS DIA1
E-0404	LLM1A CDS DIAGNOSTIC MSG QUEUE ENTRY 2		L1A BA:BB		16	F S	CDS	LA CDS DIA2
E-0405	LLM1A CDS DIAGNOSTIC MSG QUEUE ENTRY 3		L1A BC:BD		16	F S	CDS	LA CDS DIA3
E-0406	LLM1A CDS DIAGNOSTIC MSG QUEUE ENTRY 4		L1A BE:BF		16	F S	CDS	LA CDS DIA4
E-0407	LLM1A SPARE		L1A C0		8	F S	CDS	LA SPR-731
E-0408 E-0408	LLM1A SYS DIAGNOSTIC MESSAGE COUNTER		L1A C1	LLM1A N1D31 2 LLM1A N1D41 2	8	F S	CDS CDS	LA SDIAG-C
E-0409	LLM1A SYS DIAGNOSTIC MSG QUEUE ENTRY 1		L1A C2:C3		16	F S	CDS	LA SYSDIA1
E-0410	LLM1A SYS DIAGNOSTIC MSG QUEUE ENTRY 2		L1A C4:C5		16	F S	CDS	LA SYSDIA2
E-0411	LLM1A SYS DIAGNOSTIC MSG QUEUE ENTRY 3		L1A C6:C7		16	F S	CDS	LA SYSDIA3
E-0412	LLM1A SYS DIAGNOSTIC MSG QUEUE ENTRY 4		L1A C8:C9		16	F S	CDS	LA SYSDIA4
E-0413 E-0413	LLM1A ERROR WORD-1 IOSL-0		L1A CE	LLM1A N1D04 1 LLM1A N1D85 1	8	F S	CDS CDS	LA IOSL-0
E-0414 E-0414	LLM1A ERROR WORD-2 IOSL-1		L1A CF	LLM1A N1D04 2 LLM1A N1D85 2	8	F S	CDS CDS	LA IOSL-1
E-0415 E-0415	LLM1A DAC MAP PART-1		L1A D0:D1	LLM1A N1D11 1 LLM1A N1D21 1	16	F S	CDS CDS	LA DACMAP1
E-0416 E-0416	LLM1A DAC MAP PART-2		L1A D2:D3	LLM1A N1D65 1 LLM1A N1D75 1	16	F S	CDS CDS	LA DACMAP2
E-0417 E-0417	LLM1A DACS RECEIVED COUNTER		L1A D4	LLM1A N1D48 1 LLM1A N1D58 1	8	F S	CDS CDS	LA DAC-RC
E-0418 E-0418	LLM1A DACS REJECTED COUNTER		L1A D5	LLM1A N1D48 2 LLM1A N1D58 2	8	F S	CDS CDS	LA DAC-RJ
E-0419	LLM1A DAC BC COUNTER		L1A D6	LLM1A N1D33 1	8	F S	CDS	LA DAC-BCS
E-0420	LLM1A DAC CHECKSUM ERROR COUNTER		L1A D7		8	F S	CDS	LA DAC-ER
E-0421	LLM1A S/C TEMPERATURE ENABLE STATUS (PRIV)		L1A B4	LLM1A N1D46 1	8	F S	CDS	LA P-TMP-E

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0422	LLM1A MOS TEMPERATURE ENABLE STATUS (MON-PRIV)		L1A B5	LLM1A N1D46 2	8	F S	CDS	LA N-TMP-E
E-0423 E-0423 E-0423 E-0423	LLM1A DMS TAPE POSITION ESTIMATE MSB		L1A FD	LLM1A T1S00 LLM1A T1S02 LLM1A T1S07 LLM1A T1S12	8	F S	CDS CDS CDS CDS	LA DMS-MSB
E-0424 E-0424 E-0424 E-0424 E-0424 E-0424 E-0424	LLM1A DMS TAPE POSITION ESTIMATE LSB		L1A FE	LLM1A T2S00 LLM1A T2S01 LLM1A T2S02 LLM1A T2S06 LLM1A T2S07 LLM1A T2S08 LLM1A T2S12	8	F S	CDS CDS CDS CDS CDS CDS CDS	LA DMS-LSB
E-0425	LLM1A MEMORY COPY FC COUNTER		L1A 99	LLM1A N1D33 2	8	F S	CDS	LA COPY-FC
E-0426	LLM1A TEMPERATURE BC COUNTER		L1A 9A	LLM1A N1D87 1	8	F S	CDS	LA TMP-BCS
E-0427	LLM1A MEMORY TWEAK FC COUNTER		L1A 9B	LLM1A N1D87 2	8	F S	CDS	LA TWEAKS
E-0428	LLM1A CHECKSUM RESULT		L1A 9C	LLM1A N1D50 1	8	F S	CDS	LA CHK-SUM
E-0429	LLM1A CHECKSUM COUNTER		L1A 9D	LLM1A N1D50 2	8	F S	CDS	LA CHKSUMC
E-0430	LLM2A LAST CC/DC RIM COUNT MSB/ISB		L2A 80:81	LLM2A N1D84 1	16	F S	CDS	LC CD-RIM1
E-0431	LLM2A LAST CC/DC RIM COUNT LSB		L2A 82	LLM2A N1D47 1	8	F S	CDS	LC CD-RIM2
E-0432	LLM2A LAST CC/DC MOD91		L2A 83	LLM2A N1D47 2	8	F S	CDS	LC CD-M91
E-0433	LLM2A LAST CC/DC MOD10		L2A 84	LLM2A N1D10 1	8	F S	CDS	LC CD-M10
E-0434	LLM2A LAST CC/DC POINTER		L2A 85	LLM2A N1D10 2	8	F S	CDS	LC CD-PNTR
E-0435	LLM2A LAST CC/DC BUFFER ENTRY 1		L2A 86:87	LLM2A N1D64 1	16	F S	CDS	LC CD-1
E-0436	LLM2A LAST CC/DC BUFFER ENTRY 2		L2A 88:89	LLM2A N1D27 1	16	F S	CDS	LC CD-2
E-0437	LLM2A LAST CC/DC BUFFER ENTRY 3		L2A 8A:8B	LLM2A N1D81 1	16	F S	CDS	LC CD-3
E-0438	LLM2A LAST CC/DC BUFFER ENTRY 4		L2A 8C:8D	LLM2A N1D44 1	16	F S	CDS	LC CD-4
E-0439	LLM2A LAST CC/DC BUFFER ENTRY 5		L2A 8E:8F	LLM2A N1D07 1	16	F S	CDS	LC CD-5
E-0440	LLM2A LAST CC/DC BUFFER ENTRY 6		L2A 90:91	LLM2A N1D61 1	16	F S	CDS	LC CD-6
E-0441	LLM2A LAST CC/DC BUFFER ENTRY 7		L2A 92:93	LLM2A N1D24 1	16	F S	CDS	LC CD-7
E-0442 E-0442	LLM2A PRIV CC/DC EXECUTED COUNTER		L2A 9E	LLM2A N1D02 1 LLM2A N1D12 1	8	F S	CDS CDS	LC CD-P-EX

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0443 E-0443	LLM2A MON-PRIV CC/DC EXECUTED COUNTER		L2A 9F	LLM2A N1D02 2 LLM2A N1D12 2	8	F S	CDS CDS	LC CD-N-EX
E-0444 E-0444	LLM2A CC/DC/(POWER CODE) QUEUED COUNTER		L2A A0	LLM2A N1D56 1 LLM2A N1D66 1	8	F S	CDS CDS	LC CD-P-Q
E-0445 E-0445	LLM2A NON-PRIV CC/DC/(POWER CODE) QUEUED COUNTER		L2A A1	LLM2A N1D56 2 LLM2A N1D66 2	8	F S	CDS CDS	LC CD-N-Q
E-0446 E-0446	LLM2A TEMPERATURE CC/DC QUEUED COUNTER		L2A A2	LLM2A N1D19 1 LLM2A N1D29 1	8	F S	CDS CDS	LC CD-T-Q
E-0447 E-0447	LLM2A DAC CC/DC QUEUED COUNTER		L2A A3	LLM2A N1D19 2 LLM2A N1D29 2	8	F S	CDS CDS	LC CD-DACQ
E-0448 E-0448	LLM2A AACS POWER CODES EXECUTED COUNTER		L2A A4	LLM2A N1D06 1 LLM2A N1D87 1	8	F S	CDS CDS	LC CD-E-C
E-0449 E-0449	LLM2A AACS POWER CODES REJECTED COUNTER		L2A A5	LLM2A N1D06 2 LLM2A N1D87 2	8	F S	CDS CDS	LC PC-RF-C
E-0450	LLM2A EPD/PLS CC/DC QUEUED COUNTER (DUMMY)		L2A A6		8	F S	CDS	LC CD-SCIQ
E-0451	LLM2A LAST VALID AACS POWER CODE		L2A A7		8	F S	CDS	LC PC-LAST
E-0452	LLM2A FC'S RECEIVED COUNTER		L2A A8		8	F S	CDS	LC FC-RC-C
E-0453 E-0453	LLM2A FC'S EXECUTED COUNTER		L2A A9	LLM2A N1D50 1 LLM2A N1D60 1	8	F S	CDS CDS	LC FC-EX-C
E-0454	LLM2A LAST VALID FC ID		L2A AA		8	F S	CDS	LC FC-LAST
E-0455 E-0455	LLM2A FC'S REJECTED COUNTER		L2A AB	LLM2A N1D50 2 LLM2A N1D60 2	8	F S	CDS CDS	LC FC-RJ-C
E-0456	LLM2A CHANGE PACKET SELECTION COUNTER		L2A AC	LLM2A N1D45 1	8	F S	CDS	LC PKT-SEL
E-0457	LLM2A BUS TRANSACTIONS SENT COUNTER (DUMMY)		L2A AD		8	F S	CDS	LC BT-SENT
E-0458	LLM2A CHANGE PACKET TIMING COUNTER		L2A AE	LLM2A N1D08 1	8	F S	CDS	LC PKT-TMG
E-0459	LLM2A UPDATE PACKET MENU COUNTER		L2A AF	LLM2A N1D08 2	8	F S	CDS	LC MENU
E-0460	LLM2A AACS POWER CODES RECEIVED COUNTER		L2A B0:B1	LLM2A N1D62 1	16	F S	CDS	LC PC-RC-C
E-0461	LLM2A FLAG STATUS		L2A B6		8	F S	CDS	LC FLAG-ST
E-0462 E-0462	LLM2A CDS DIAGNOSTIC MESSAGE COUNTER		L2A B7	LLM2A N1D28 1 LLM2A N1D38 1	8	F S	CDS CDS	LC CDIAG-C
E-0463	LLM2A CDS DIAGNOSTIC MSG QUEUE ENTRY 1		L2A B8:B9		16	F S	CDS	LC CSDIA1

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0464	LLM2A CDS DIAGNOSTIC MSG QUEUE ENTRY 2		L2A BA:BB		16	F S	CDS	LC CSDIA2
E-0465	LLM2A CDS DIAGNOSTIC MSG QUEUE ENTRY 3		L2A BC:BD		16	F S	CDS	LC CSDIA3
E-0466	LLM2A CDS DIAGNOSTIC MSG QUEUE ENTRY 4		L2A BE:BF		16	F S	CDS	LC CSDIA4
E-0467	LLM2A SPARE		L2A C0		8	F S	CDS	LC SPR-731
E-0468 E-0468	LLM2A SYSTEM DIAGNOSTIC MESSAGE COUNTER		L2A C1	LLM2A N1D28 2 LLM2A N1D38 2	8	F S	CDS CDS	LC SDIAG-C
E-0469	LLM2A SYS DIAGNOSTIC MSG QUEUE ENTRY 1		L2A C2:C3		16	F S	CDS	LC SYSDIA1
E-0470	LLM2A SYS DIAGNOSTIC MSG QUEUE ENTRY 2		L2A C4:C5		16	F S	CDS	LC SYSDIA2
E-0471	LLM2A SYS DIAGNOSTIC MSG QUEUE ENTRY 3		L2A C6:C7		16	F S	CDS	LC SYSDIA3
E-0472	LLM2A SYS DIAGNOSTIC MSG QUEUE ENTRY 4		L2A C8:C9		16	F S	CDS	LC SYSDIA4
E-0473 E-0473	LLM2A ERROR WORD-1 IOSL-0		L2A CE:CF	LLM2A N1D01 1 LLM2A N1D82 1	8	F S	CDS CDS	LC IOSL-0
E-0474 E-0474	LLM2A ERROR WORD-2 IOSL-1		L2A CF	LLM2A N1D01 2 LLM2A N1D82 2	8	F S	CDS CDS	LC IOSL-1
E-0475 E-0475	LLM2A DAC MAP PART-1		L2A D0:D1	LLM2A N1D22 1 LLM2A N1D86 1	16	F S	CDS CDS	LC DACMAP1
E-0476 E-0476	LLM2A DAC MAP PART-2		L2A D2:D3	LLM2A N1D49 1 LLM2A N1D76 1	16	F S	CDS CDS	LC DACMAP2
E-0477 E-0477	LLM2A DACS RECEIVED COUNTER		L2A D4	LLM2A N1D32 1 LLM2A N1D59 1	8	F S	CDS CDS	LC DAC-RC
E-0478 E-0478	LLM2A DACS REJECTED COUNTER		L2A D5	LLM2A N1D32 2 LLM2A N1D59 2	8	F S	CDS CDS	LC DAC-RJ
E-0479	LLM2A DAC BC COUNTER (DUMMY)		L2A D6	LLM2A N1D45 2	8	F S	CDS	LC DAC-BCS
E-0480	LLM2A DAC CHECKSUM ERROR COUNTER		L2A D7		8	F S	CDS	LC DAC-ER
E-0481	LLM2A S/C TEMPERATURE ENABLE STATUS (PRIV)		L2A B4		8	F S	CDS	LC P-TMP-E
E-0482	LLM2A MOS TEMPERATURE ENABLE STATUS (MON-PRIV)		L2A B5		8	F S	CDS	LC N-TMP-E

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Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
#E-0501	LLM2A PLAYBACK TABLE SEGMENT NUMBER		CDS BUS	LLM2A N1D00 1	8	? ?	CDS	LC PBT SEG
E-0501				LLM2A N1D13 1			CDS	
E-0501				LLM2A N1D26 1			CDS	
E-0501				LLM2A N1D39 1			CDS	
E-0501				LLM2A N1D52 1			CDS	
E-0501				LLM2A N1D65 1			CDS	
E-0501				LLM2A N1D78 1			CDS	
#E-0502	LLM2A PLAYBACK TABLE ENTRY NUMBER		CDS BUS	LLM2A N1D00 2	8	? ?	CDS	LC PBT ENT
E-0502				LLM2A N1D13 2			CDS	
E-0502				LLM2A N1D26 2			CDS	
E-0502				LLM2A N1D39 2			CDS	
E-0502				LLM2A N1D52 2			CDS	
E-0502				LLM2A N1D65 2			CDS	
E-0502				LLM2A N1D78 2			CDS	
#E-0503	CDS DESPUN POR COUNT (CDS A)		CDS BUS	LLM2A N1D09 2	8	? ?	CDS	LC DS PORC
#E-0504	CDS PLAYBACK MANAGER STATUS (CDS A)		CDS BUS	LLM2A N1D14 2	8	? ?	CDS	LC PBMGR S
E-0504				LLM2A N1D33 2			CDS	
E-0504				LLM2A N1D69 2			CDS	
#E-0505	HLM1A DBUM1A ERROR WORD (A of E-0172 A:B)		H1A 00	HLM1A N1F40 4	8	F S	CDS	HA D1A ERR
#E-0506	HLM1A DBUM1B ERROR WORD (B of E-0172 A:B)		H1A 00	HLM1A N1F57 4	8	F S	CDS	HA D1B ERR
#E-0507	HLM1A F/P RESPONSE INACTIVE ENABLES GPV112 (A of E-0204 A:B:C:)		H1A 00	HLM1A N1S06 1	8	F S	CDS	HA GPV-112
E-0507				HLM1A N1S13 1			CDS	
E-0507				HLM1A N1S20 1			CDS	
E-0507				HLM1A N1S27 1			CDS	
E-0507				HLM1A N1S34 1			CDS	
E-0507				HLM1A N1S41 1			CDS	
E-0507				HLM1A N1S48 1			CDS	
E-0507				HLM1A N1S55 1			CDS	
E-0507				HLM1A N1S62 1			CDS	
E-0507				HLM1A N1S69 1			CDS	
E-0507				HLM1A N1S76 1			CDS	
E-0507				HLM1A N1S83 1			CDS	
E-0507				HLM1A N1S90 1			CDS	

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Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
#E-0508	HLM1A F/P RESPONSE INACTIVE ENABLES GPV113 (B of E-0204 A:B:C:)		H1A 00	HLM1A N1S04 1	8	F S	CDS	HA GPV-113
E-0508				HLM1A N1S11 1			CDS	
E-0508				HLM1A N1S18 1			CDS	
E-0508				HLM1A N1S25 1			CDS	
E-0508				HLM1A N1S32 1			CDS	
E-0508				HLM1A N1S39 1			CDS	
E-0508				HLM1A N1S46 1			CDS	
E-0508				HLM1A N1S53 1			CDS	
E-0508				HLM1A N1S60 1			CDS	
E-0508				HLM1A N1S67 1			CDS	
E-0508				HLM1A N1S74 1			CDS	
E-0508				HLM1A N1S81 1			CDS	
E-0508				HLM1A N1S88 1			CDS	
#E-0509	HLM1A F/P RESPONSE INACTIVE ENABLES GPV114 (C of E-0204 A:B:C:)		H1A 00	HLM1A N1S02 1	8	F S	CDS	HA GPV-114
E-0509				HLM1A N1S09 1			CDS	
E-0509				HLM1A N1S16 1			CDS	
E-0509				HLM1A N1S23 1			CDS	
E-0509				HLM1A N1S30 1			CDS	
E-0509				HLM1A N1S37 1			CDS	
E-0509				HLM1A N1S44 1			CDS	
E-0509				HLM1A N1S51 1			CDS	
E-0509				HLM1A N1S58 1			CDS	
E-0509				HLM1A N1S65 1			CDS	
E-0509				HLM1A N1S72 1			CDS	
E-0509				HLM1A N1S79 1			CDS	
E-0509				HLM1A N1S86 1			CDS	
#E-0510	HLM1A VCDUs IN MULTI-USE BUFFER		CDS BUS	HLM1A N1F37 1	8	? ?	CDS	HA VC MBC
E-0510				HLM1A N1F49 1			CDS	
E-0510				HLM1A N1F56 1			CDS	
#E-0511	HLM1A VCDUs REJECTED BY MULTI-USE BUFFER		CDS BUS	HLM1A N1F37 2	8	? ?	CDS	HA VC MBRJ
E-0511				HLM1A N1F49 2			CDS	
E-0511				HLM1A N1F56 2			CDS	
#E-0512	HLM1A VCDUs REJECTED BY PRIORITY BUFFER		CDS BUS	HLM1A N1F37 3	8	? ?	CDS	HA VC PBRJ
E-0512				HLM1A N1F49 3			CDS	
E-0512				HLM1A N1F56 3			CDS	
#E-0513	HLM1A IMAGE COMPRESSION STATUS (* VALID IN STR B ONLY)		CDS BUS	HLM1A N1F37 4	8	? ?	CDS	HA IMGCP S
E-0513				HLM1A N1F49 4			CDS	
E-0513				HLM1A N1F56 4			CDS	
E-0615	HLM1B LAST BC RIM COUNT		H1B 00		24	F S	CDS	HB BC-RIM
E-0616	HLM1B LAST BC MOD91		H1B 00		8	F S	CDS	HB BC-M91
E-0617	HLM1B BC BUFFER ENTRY 1A		H1B 00		32	F S	CDS	HB BC-1A

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0618	HLM1B BC BUFFER ENTRY 2A		H1B 00		32	F S	CDS	HB BC-2A
E-0619	HLM1B BC BUFFER ENTRY 3A		H1B 00		32	F S	CDS	HB BC-3A
E-0620	HLM1B BC BUFFER ENTRY 4A		H1B 00		32	F S	CDS	HB BC-4A
E-0621	HLM1B BC BUFFER ENTRY 5A		H1B 00		32	F S	CDS	HB BC-5A
E-0622	HLM1B BC BUFFER ENTRY 6A		H1B 00		32	F S	CDS	HB BC-6A
E-0623	HLM1B BC BUFFER ENTRY 7A		H1B 00		32	F S	CDS	HB BC-7A
E-0624	HLM1B BC BUFFER ENTRY 8A		H1B 00		32	F S	CDS	HB BC-8A
E-0625	HLM1B BC BUFFER ENTRY 9A		H1B 00		32	F S	CDS	HB BC-9A
E-0626	HLM1B BC BUFFER ENTRY 10A		H1B 00		32	F S	CDS	HB BC-10A
E-0627	HLM1B BC BUFFER ENTRY 11A		H1B 00		32	F S	CDS	HB BC-11A
E-0628	HLM1B BC BUFFER ENTRY 12A		H1B 00		32	F S	CDS	HB BC-12A
E-0629	HLM1B BC BUFFER ENTRY 13A		H1B 00		32	F S	CDS	HB BC-13A
E-0630	HLM1B BC BUFFER ENTRY 14A		H1B 00		32	F S	CDS	HB BC-14A
E-0631	HLM1B BC BUFFER ENTRY 15A		H1B 00		32	F S	CDS	HB BC-15A
E-0632	HLM1B BC BUFFER ENTRY 16A		H1B 00		32	F S	CDS	HB BC-16A
E-0633 E-0633	HLM1B NOW-BUFFERED BC COUNTER		H1B 00	HLM1B N1F44 1 HLM1B N1F51 1	16	F S	CDS CDS	HB NB-BC-C
E-0634 E-0634	HLM1B LAST UPLINK MESSAGE		H1B 00	HLM1B N1F47 1 HLM1B N1F54 1	16	F S	CDS CDS	HB LASTMSG
E-0635	HLM1B S/S FC COUNTER		H1B 00		16	F S	CDS	HB S/S-FCS
E-0636 E-0636	HLM1B S/S BC COUNTER		H1B 00	HLM1B N1F81 3 HLM1B N1F88 3	16	F S	CDS CDS	HB S/S-BCS
E-0637	HLM1B F/P FC COUNTER		H1B 00		16	F S	CDS	HB F/P-FCS
E-0638 E-0638	HLM1B F/P BC COUNTER		H1B 00	HLM1B N1F81 1 HLM1B N1F88 1	16	F S	CDS CDS	HB F/P-BCS
E-0641	HLM1B LLM BUS TRANSACTIONS RECEIVED		H1B 00		8	F S	CDS	HB BT-RC-C
E-0642	HLM1B DAC ERROR COUNTER		H1B 00		8	F S	CDS	HB DACER-C

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0643	HLM1B MEM COPY/TWEAK ERROR COUNTER		H1B 00		8	F S	CDS	HB MC/T-ER
E-0644 E-0644	HLM1B BUM ERROR LIMITER		H1B 00	HLM1B N1F23 1 HLM1B N1F30 1	8	F S	CDS CDS	HB BMERLIM
E-0645	HLM1B TO LLMS PRIVILEGED FC COUNTER		H1B 00		8	F S	CDS	HB LM-P-FC
E-0646	HLM1B TO LLMS TOTAL FC COUNTER		H1B 00		8	F S	CDS	HB LM-T-FC
E-0647	HLM1B NON-PRIV CC/DC/POWER CODE COUNTER		H1B 00		8	F S	CDS	HB N-CD/PC
E-0648	HLM1B PRIV CC/DC/POWER CODE COUNTER		H1B 00		8	F S	CDS	HB P-CD/PC
E-0649	HLM1B GPV-28 (SPARE)		H1B 00		8	F S	CDS	HB HGA PD1
E-0650	HLM1B GPV-29 (SPARE)		H1B 00		8	F S	CDS	HB HGA PD2
E-0651	HLM1B GPV-30 (SPARE)		H1B 00		8	F S	CDS	HB HGA PD3
E-0652	HLM1B GPV-31 (SPARE)		H1B 00		8	F S	CDS	HB HGA PD4
E-0653	HLM1B DESPUN CRC REGISTERS 0-3		H1B 00	HLM1B N1F77 1	32	F S	CDS	HB CRC0-3
E-0654	HLM1B DESPUN CRC REGISTERS 4-6		H1B 00	HLM1B N1F40 1	24	F S	CDS	HB CRC4-6
E-0655 E-0655	HLM1B DESPUN CRC BANK B ERROR STATUS		H1B 00	HLM1B N1F23 2 HLM1B N1F30 2	8	F S	CDS CDS	HB DS CRCB
E-0656	HLM1B SPUN CRC BANK A REGISTERS 0-3		H1B 00	HLM1B N1F03 1	32	F S	CDS	HB CRCA0-3
E-0657	HLM1B SPUN CRC BANK A REGISTERS 4-6		H1B 00	HLM1B N1F57 1	24	F S	CDS	HB CRCA4-6
E-0658 E-0658	HLM1B SPUN CRC BANK B ERROR STATUS		H1B 00	HLM1B N1F23 3 HLM1B N1F30 3	8	F S	CDS CDS	HB SP CRCB
E-0659	HLM1B SPUN CRC BANK B REGISTERS 0-3		H1B 00	HLM1B N1F20 1	32	F S	CDS	HB CRCB0-3
E-0660	HLM1B SPUN CRC BANK B REGISTERS 4-7		H1B 00	HLM1B N1F74 1	32	F S	CDS	HB CRCB4-7
E-0661	HLM1B HCD COMMAND SUMMARY WORD		H1B 00		8	F S	CDS	HB CMD-SMY



Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0662	HLM1B MESSAGES RECEIVED AND ACCEPTED COUNTER		H1B 00	HLM1B N1S00 1	8	F S	CDS	HB MSG-ACC
E-0662				HLM1B N1S07 1			CDS	
E-0662				HLM1B N1S14 1			CDS	
E-0662				HLM1B N1S21 1			CDS	
E-0662				HLM1B N1S28 1			CDS	
E-0662				HLM1B N1S35 1			CDS	
E-0662				HLM1B N1S42 1			CDS	
E-0662				HLM1B N1S49 1			CDS	
E-0662				HLM1B N1S56 1			CDS	
E-0662				HLM1B N1S63 1			CDS	
E-0662				HLM1B N1S70 1			CDS	
E-0662				HLM1B N1S77 1			CDS	
E-0662				HLM1B N1S84 1			CDS	
E-0663	HLM1B MESSAGES RECEIVED AND REJECTED COUNTER		H1B 00	HLM1B N1S05 1	8	F S	CDS	HB MSG-RJ
E-0663				HLM1B N1S12 1			CDS	
E-0663				HLM1B N1S19 1			CDS	
E-0663				HLM1B N1S26 1			CDS	
E-0663				HLM1B N1S33 1			CDS	
E-0663				HLM1B N1S40 1			CDS	
E-0663				HLM1B N1S47 1			CDS	
E-0663				HLM1B N1S54 1			CDS	
E-0663				HLM1B N1S61 1			CDS	
E-0663				HLM1B N1S68 1			CDS	
E-0663				HLM1B N1S75 1			CDS	
E-0663				HLM1B N1S82 1			CDS	
E-0663				HLM1B N1S89 1			CDS	
E-0664	HLM1B COMMAND FRAME ERRORS DETECTED COUNTER		H1B 00	HLM1B N1F00 1	8	F S	CDS	HB FRM-ER
E-0664				HLM1B N1F84 1			CDS	
E-0665	HLM1B DATA FRAME ERRORS CORRECTED COUNTER		H1B 00	HLM1B N1F00 2	8	F S	CDS	HB FRM-COR
E-0665				HLM1B N1F84 2			CDS	
E-0666	HLM1B DATA FRAME ERRORS UNCORRECTABLE COUNTER		H1B 00	HLM1B N1F00 3	8	F S	CDS	HB FRM-UNC
E-0666				HLM1B N1F84 3			CDS	
E-0667	HLM1B LOCK CHANGES COUNTER		H1B 00	HLM1B N1F00 4	8	F S	CDS	HB LOCK-C
E-0667				HLM1B N1F84 4			CDS	
E-0668	HLM1B SPUN CRC STATUS WORD		H1B 00	HLM1B N1F06 1	8	F S	CDS	HB CRCS-ST
E-0668				HLM1B N1F13 1			CDS	
E-0669	HLM1B ERROR WORDS IOSL 0-1-2		H1B 00	HLM1B N1F06 2	24	F S	CDS	HB IOSL012
E-0669				HLM1B N1F13 2			CDS	
E-0670	HLM1B CMD LOSS RESPONSE COUNTER		H1B 00		8	F S	CDS	HB CMDLS-C
E-0671	HLM1B BUM ERROR WORDS		H1B 00	HLM1B N1F60 1	32	F S	CDS	HB BUM-ER
E-0671				HLM1B N1F67 1			CDS	
E-0672	HLM1B DBUM ERROR WORDS (E-0505:E-0506 = E-0672)		H1B 00		16	F S	CDS	HB DBUM-ER

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0673	HLM1B FLAG STATUS		H1B 00		8	F S	CDS	HB FLAG-ST
E-0674 E-0674	HLM1B EXTENDED BACKGROUND PROCESSING COUNTER		H1B 00	HLM1B N1F07 1 HLM1B N1F14 1	8	F S	CDS CDS	HB RTI-789
E-0675	HLM1B THIS CDS OF MODE		H1B 00		8	F S	CDS	HB CDS-OP
E-0676 E-0676	HLM1B THIS SAFE REQUEST FLAG		H1B 00	HLM1B N1F07 2 HLM1B N1F14 2	8	F S	CDS CDS	HB SAFE-RQ
E-0677 E-0677	HLM1B THIS SAFE ENABLE		H1B 00	HLM1B N1F07 3 HLM1B N1F14 3	8	F S	CDS CDS	HB SAFE-EN
E-0678	HLM1B THIS EFFECTUAL DOWN FLAG		H1B 00		8	F S	CDS	HB EF-DOWN
E-0679 E-0679	HLM1B GPV-131 (SPARE TO OTHER HLM)		H1B 00	HLM1B N1F07 4 HLM1B N1F14 4	8	F S	CDS CDS	HB CLK ERR
E-0680	HLM1B GPV-132 (SPARE TO OTHER HLM)		H1B 00		8	F S	CDS	HB GPV-132
E-0681	HLM1B GPV-133 (SPARE TO OTHER HLM)		H1B 00		8	F S	CDS	HB GPV-133
E-0682	HLM1B THIS SIDE LAUNCH MODE READY		H1B 00		8	F S	CDS	HB LAUNCH
E-0683 E-0683	HLM1B OUT-OF-RANGE ALERT CODE COUNTER		H1B 00	HLM1B N1F58 1 HLM1B N1F65 1	8	F S	CDS CDS	HB AC-OUT
E-0684 E-0684	HLM1B ERRONEOUS ALERT CODE COUNTER		H1B 00	HLM1B N1F58 2 HLM1B N1F65 2	8	F S	CDS CDS	HB AC-ERON
E-0685 E-0685	HLM1B AACS ALERT CODE RECEIVED COUNTER		H1B 00	HLM1B N1F58 3 HLM1B N1F65 3	16	F S	CDS CDS	HB AC-RC-C
E-0686 E-0686	HLM1B HEARTBEAT ENTRY COUNTER		H1B 00	HLM1B N1F04 2 HLM1B N1F11 2	8	F S	CDS CDS	HB H/B-RSP
E-0687 E-0687	HLM1B HEARTBEAT ERROR COUNTER ACCUMULATED		H1B 00	HLM1B N1F04 3 HLM1B N1F11 3	8	F S	CDS CDS	HB H/B-ER
E-0688	HLM1B LAST ALERT CODE		H1B 00		8	F S	CDS	HB AC-LAST
E-0689 E-0689	HLM1B AACS ALERT CODE RESPONSE COUNTER		H1B 00	HLM1B N1F21 1 HLM1B N1F28 1	8	F S	CDS CDS	HB AC-EX-C
E-0690 E-0690	HLM1B COMMAND LOSS RESPONSE START TIME		H1B 00	HLM1B N1F21 2 HLM1B N1F28 2	24	F S	CDS CDS	HB CMOLS-T
E-0691	HLM1B AACS HEARTBEAT CODE		H1B 00		8	F S	CDS	HB H/BCODE
E-0692	HLM1B TF IMMINENT ALERT CODE COUNTER		H1B 00		8	F S	CDS	HB TF-IMM

Table A2.2.8. Engineering Measurements (Rj:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0693	HLM1B TF ALL CLEAR ALERT CODE COUNTER		H1B 00		8	F S	CDS	HB TF-ALCL
E-0694	HLM1B TF ALL CLEAR COMPLETION COUNTER		H1B 00		8	F S	CDS	HB TF-END
E-0695 E-0695	HLM1B U/V RESPONSE COUNTER		H1B 00	HLM1B N1F04 4 HLM1B N1F11 4	8	F S	CDS CDS	HB UV-RSP
E-0696 E-0696	HLM1B S/C F/P MONITOR ENABLE (PRIV)		H1B 00	HLM1B N1F61 1 HLM1B N1F68 1	8	F S	CDS CDS	HB P-MON-E
E-0697	HLM1B U/V DIODE UNSHORT COUNTER		H1B 00		8	F S	CDS	HB UV-DIO
E-0698	HLM1B OVERPRESSURE TEMPERATURE FLAG		H1B 00		8	F S	CDS	HB OVRPRES
E-0699	HLM1B U/V TRIP/INVERTER SWITCH COUNTER		H1B 00		8	F S	CDS	HB UV-INV
E-0700 E-0700	HLM1B S/C F/P RESPONSE ENABLES (PRIV)		H1B 00	HLM1B N1F61 2 HLM1B N1F68 2	24	F S	CDS CDS	HB P-F/P-E
E-0701	HLM1B CDS POR RESPONSE COUNTER		H1B 00		8	F S	CDS	HB CDS-POR
E-0702 E-0702	HLM1B F/P CONDITION (REQUESTS) ENABLES		H1B 00	HLM1B N1F24 1 HLM1B N1F31 1	24	F S	CDS CDS	HB C-F/P-E
E-0703 E-0703	HLM1B RFLOSS RESPONSE COUNTER		H1B 00	HLM1B N1F24 4 HLM1B N1F31 4	8	F S	CDS CDS	HB RFLOSS
E-0704	HLM1B F/P RESPONSE INACTIVE ENABLES (E-0507:E-0508:E-0509 = E-0704)		H1B 00		24	F S	CDS	HB I-F/P-E
E-0705 E-0705	HLM1B PRIME/BACKUP STATUS		H1B 00	HLM1B N1F23 4 HLM1B N1F30 4	8	F S	CDS CDS	HB PRM/BKU
E-0706 E-0706	HLM1B MOS F/P RESPONSE ENABLES (MON-PRIV)		H1B 00	HLM1B N1F78 1 HLM1B N1F85 1	24	F S	CDS CDS	HB N-F/P-E
E-0707 E-0707	HLM1B AACS STATUS		H1B 00	HLM1B N1F78 4 HLM1B N1F85 4	8	F S	CDS CDS	HB AACS-ST
E-0708 E-0708	HLM1B MOS F/P MONITOR ENABLE (NON-PRIV)		H1B 00	HLM1B N1F41 1 HLM1B N1F48 1	8	F S	CDS CDS	HB N-MON-E
E-0709	HLM1B MOS THRUSTER TEMPERATURE ENABLE (NON-PRIV)		H1B 00		8	F S	CDS	HB N-THR-E
E-0710	HLM1B CMD LOSS RESET DELTA RIMS		H1B 00		16	F S	CDS	HB CMDLS-R
E-0711 E-0711	HLM1B SYSTEM FAULT STATUS		H1B 00	HLM1B N1F41 3 HLM1B N1F48 3	16	F S	CDS CDS	HB SYS-ST
E-0712	HLM1B F/P MODE		H1B 00		8	F S	CDS	HB F/PMODE

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0713 E-0713	HLM1B F/P PATH CONTROL		H1B 00	HLM1B N1F41 2 HLM1B N1F48 2	8	F S	CDS CDS	HB PATHCTL
E-0714 E-0714	HLM1B GV-92 (SPARE TO OTHER HLM)		H1B 00	HLM1B N1F44 3 HLM1B N1F51 3	8	F S	CDS CDS	HB GV-92
E-0715 E-0715	HLM1B GV-93 (SPARE TO OTHER HLM)		H1B 00	HLM1B N1F44 4 HLM1B N1F51 4	8	F S	CDS CDS	HB GV-93
E-0716	HLM1B GV-94 (SPARE TO OTHER HLM)		H1B 00		8	F S	CDS	HB GV-94
E-0717	HLM1B GV-95 (SPARE TO OTHER HLM)		H1B 00		8	F S	CDS	HB GV-95
E-0718	HLM1B GV-96 (SPARE TO OTHER HLM)		H1B 00		8	F S	CDS	HB GV-96
E-0719	HLM1B GV-97 (SPARE TO OTHER HLM)		H1B 00		8	F S	CDS	HB GV-97
E-0720	HLM1B GV-98 (SPARE TO OTHER HLM)		H1B 00		8	F S	CDS	HB GV-98
E-0721	HLM1B GV-99 (SPARE TO OTHER HLM)		H1B 00		8	F S	CDS	HB PROBEGO
E-0722 E-0722	HLM1B SYS DIAGNOSTIC MSG QUEUE ENTRY 1		H1B 00	HLM1B N1F75 1 HLM1B N1F82 1	16	F S	CDS CDS	HB SYSDIA1
E-0723 E-0723	HLM1B SYS DIAGNOSTIC MSG QUEUE ENTRY 2		H1B 00	HLM1B N1F75 3 HLM1B N1F82 3	16	F S	CDS CDS	HB SYSDIA2
E-0724 E-0724	HLM1B SYS DIAGNOSTIC MSG QUEUE ENTRY 3		H1B 00	HLM1B N1F38 1 HLM1B N1F45 1	16	F S	CDS CDS	HB SYSDIA3
E-0725 E-0725	HLM1B SYS DIAGNOSTIC MSG QUEUE ENTRY 4		H1B 00	HLM1B N1F38 3 HLM1B N1F45 3	16	F S	CDS CDS	HB SYSDIA4
E-0726 E-0726	HLM1B SYS DIAGNOSTIC MSG QUEUE ENTRY 5		H1B 00	HLM1B N1F01 1 HLM1B N1F08 1	16	F S	CDS CDS	HB SYSDIA5
E-0727 E-0727	HLM1B SYS DIAGNOSTIC MSG QUEUE ENTRY 6		H1B 00	HLM1B N1F01 3 HLM1B N1F08 3	16	F S	CDS CDS	HB SYSDIA6
E-0728 E-0728	HLM1B SYS DIAGNOSTIC MSG QUEUE ENTRY 7		H1B 00	HLM1B N1F55 1 HLM1B N1F62 1	16	F S	CDS CDS	HB SYSDIA7
E-0729 E-0729	HLM1B SYS DIAGNOSTIC MSG QUEUE ENTRY 8		H1B 00	HLM1B N1F55 3 HLM1B N1F62 3	16	F S	CDS CDS	HB SYSDIA8
E-0730 E-0730	HLM1B CDS DIAGNOSTIC MSG QUEUE ENTRY 1		H1B 00	HLM1B N1F18 1 HLM1B N1F25 1	16	F S	CDS CDS	HB CDS DIA1
E-0731 E-0731	HLM1B CDS DIAGNOSTIC MSG QUEUE ENTRY 2		H1B 00	HLM1B N1F18 3 HLM1B N1F25 3	16	F S	CDS CDS	HB CDS DIA2

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0732 E-0732	HLM1B CDS DIAGNOSTIC MSG QUEUE ENTRY 3		H1B 00	HLM1B N1F72 1 HLM1B N1F79 1	16	F S	CDS CDS	HB CSDS1A3
E-0733 E-0733	HLM1B CDS DIAGNOSTIC MSG QUEUE ENTRY 4		H1B 00	HLM1B N1F72 3 HLM1B N1F79 3	16	F S	CDS CDS	HB CSDS1A4
E-0734 E-0734	HLM1B CDS DIAGNOSTIC MSG QUEUE ENTRY 5		H1B 00	HLM1B N1F35 1 HLM1B N1F42 1	16	F S	CDS CDS	HB CSDS1A5
E-0735 E-0735	HLM1B CDS DIAGNOSTIC MSG QUEUE ENTRY 6		H1B 00	HLM1B N1F35 3 HLM1B N1F42 3	16	F S	CDS CDS	HB CSDS1A6
E-0736 E-0736	HLM1B CDS DIAGNOSTIC MSG QUEUE ENTRY 7		H1B 00	HLM1B N1F05 1 HLM1B N1F89 1	16	F S	CDS CDS	HB CSDS1A7
E-0737 E-0737	HLM1B CDS DIAGNOSTIC MSG QUEUE ENTRY 8		H1B 00	HLM1B N1F05 3 HLM1B N1F89 3	16	F S	CDS CDS	HB CSDS1A8
E-0738 E-0738	HLM1B CAP/IAP PROGRAM STATE FILE		H1B 00	HLM1B N1F52 1 HLM1B N1F59 1	32	F S	CDS CDS	HB C/I-PSF
E-0739	HLM1B F/P PROGRAM STATE FILE ENTRY 1		H1B 00		32	F S	CDS	HB F/P-1
E-0740 E-0740	HLM1B F/P PROGRAM STATE FILE ENTRY 2		H1B 00	HLM1B N1F15 1 HLM1B N1F22 1	32	F S	CDS CDS	HB F/P-2
E-0741 E-0741	HLM1B F/P PROGRAM STATE FILE ENTRY 3		H1B 00	HLM1B N1F69 1 HLM1B N1F76 1	32	F S	CDS CDS	HB F/P-3
E-0742 E-0742	HLM1B F/P PROGRAM STATE FILE ENTRY 4		H1B 00	HLM1B N1F32 1 HLM1B N1F39 1	32	F S	CDS CDS	HB F/P-4
E-0743 E-0743	HLM1B F/P PROGRAM STATE FILE ENTRY 5		H1B 00	HLM1B N1F02 1 HLM1B N1F86 1	32	F S	CDS CDS	HB F/P-5
E-0744	HLM1B F/P PROGRAM STATE FILE ENTRY 6		H1B 00		32	F S	CDS	HB F/P-6
E-0745	HLM1B F/P PROGRAM STATE FILE ENTRY 7		H1B 00		32	F S	CDS	HB F/P-7
E-0746	HLM1B F/P PROGRAM STATE FILE ENTRY 8		H1B 00		32	F S	CDS	HB F/P-8
E-0747	HLM1B F/P PROGRAM STATE FILE ENTRY 9		H1B 00		32	F S	CDS	HB F/P-9
E-0748	HLM1B F/P PROGRAM STATE FILE ENTRY 10		H1B 00		32	F S	CDS	HB F/P-10
E-0749 E-0749	HLM1B S/S PROGRAM STATE FILE ENTRY 1		H1B 00	HLM1B N1F12 1 HLM1B N1F19 1	32	F S	CDS CDS	HB S/S-1
E-0750 E-0750	HLM1B S/S PROGRAM STATE FILE ENTRY 2		H1B 00	HLM1B N1F66 1 HLM1B N1F73 1	32	F S	CDS CDS	HB S/S-2

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0751 E-0751	HLM1B S/S PROGRAM STATE FILE ENTRY 3		H1B 00	HLM1B N1F29 1 HLM1B N1F36 1	32	F S	CDS CDS	HB S/S-3
E-0752 E-0752	HLM1B S/S PROGRAM STATE FILE ENTRY 4		H1B 00	HLM1B N1F83 1 HLM1B N1F90 1	32	F S	CDS CDS	HB S/S-4
E-0753 E-0753	HLM1B S/S PROGRAM STATE FILE ENTRY 5		H1B 00	HLM1B N1F46 1 HLM1B N1F53 1	32	F S	CDS CDS	HB S/S-5
E-0754 E-0754	HLM1B S/S PROGRAM STATE FILE ENTRY 6		H1B 00	HLM1B N1F09 1 HLM1B N1F16 1	32	F S	CDS CDS	HB S/S-6
E-0755 E-0755	HLM1B S/S PROGRAM STATE FILE ENTRY 7		H1B 00	HLM1B N1F63 1 HLM1B N1F70 1	32	F S	CDS CDS	HB S/S-7
E-0756 E-0756	HLM1B S/S PROGRAM STATE FILE ENTRY 8		H1B 00	HLM1B N1F26 1 HLM1B N1F33 1	32	F S	CDS CDS	HB S/S-8
E-0757 E-0757	HLM1B S/S PROGRAM STATE FILE ENTRY 9		H1B 00	HLM1B N1F80 1 HLM1B N1F87 1	32	F S	CDS CDS	HB S/S-9
E-0758 E-0758	HLM1B S/S PROGRAM STATE FILE ENTRY 10		H1B 00	HLM1B N1F43 1 HLM1B N1F50 1	32	F S	CDS CDS	HB S/S-10
E-0759	HLM1B S/S PROGRAM STATE FILE ENTRY 11		H1B 00		32	F S	CDS	HB S/S-11
E-0760	HLM1B S/S PROGRAM STATE FILE ENTRY 12		H1B 00		32	F S	CDS	HB S/S-12
E-0761	HLM1B S/S PROGRAM STATE FILE ENTRY 13		H1B 00		32	F S	CDS	HB S/S-13
E-0762	HLM1B S/S PROGRAM STATE FILE ENTRY 14		H1B 00		32	F S	CDS	HB S/S-14
E-0763	HLM1B S/S PROGRAM STATE FILE ENTRY 15		H1B 00		32	F S	CDS	HB S/S-15
E-0764	HLM1B S/S PROGRAM STATE FILE ENTRY 16		H1B 00		32	F S	CDS	HB S/S-16
E-0765	HLM1B S/S PROGRAM STATE FILE ENTRY 17		H1B 00		32	F S	CDS	HB S/S-17
E-0766	HLM1B S/S PROGRAM STATE FILE ENTRY 18		H1B 00		32	F S	CDS	HB S/S-18
E-0767	HLM1B S/S PROGRAM STATE FILE ENTRY 19		H1B 00		32	F S	CDS	HB S/S-19
E-0768	HLM1B S/S PROGRAM STATE FILE ENTRY 20		H1B 00		32	F S	CDS	HB S/S-20
E-0769	HLM1B S/S PROGRAM STATE FILE ENTRY 21		H1B 00		32	F S	CDS	HB S/S-21
E-0770	HLM1B S/S PROGRAM STATE FILE ENTRY 22		H1B 00		32	F S	CDS	HB S/S-22
E-0771	HLM1B S/S PROGRAM STATE FILE ENTRY 23		H1B 00		32	F S	CDS	HB S/S-23
E-0772	HLM1B BUFFER BC COUNTER		H1B 00		8	F S	CDS	HB BUF-BCS

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0773	HLM1B BC BUFFER ENTRY 1B		H1B 00		8	F S	CDS	HB BC-1B
E-0774	HLM1B BC BUFFER ENTRY 2B		H1B 00		8	F S	CDS	HB BC-2B
E-0775	HLM1B BC BUFFER ENTRY 3B		H1B 00		8	F S	CDS	HB BC-3B
E-0776	HLM1B BC BUFFER ENTRY 4B		H1B 00		8	F S	CDS	HB BC-4B
E-0777	HLM1B BC BUFFER ENTRY 5B		H1B 00		8	F S	CDS	HB BC-5B
E-0778	HLM1B BC BUFFER ENTRY 6B		H1B 00		8	F S	CDS	HB BC-6B
E-0779	HLM1B BC BUFFER ENTRY 7B		H1B 00		8	F S	CDS	HB BC-7B
E-0780	HLM1B BC BUFFER ENTRY 8B		H1B 00		8	F S	CDS	HB BC-8B
E-0781	HLM1B BC BUFFER ENTRY 9B		H1B 00		8	F S	CDS	HB BC-9B
E-0782	HLM1B BC BUFFER ENTRY 10B		H1B 00		8	F S	CDS	HB BC-10B
E-0783	HLM1B BC BUFFER ENTRY 11B		H1B 00		8	F S	CDS	HB BC-11B
E-0784	HLM1B BC BUFFER ENTRY 12B		H1B 00		8	F S	CDS	HB BC-12B
E-0785	HLM1B BC BUFFER ENTRY 13B		H1B 00		8	F S	CDS	HB BC-13B
E-0786	HLM1B BC BUFFER ENTRY 14B		H1B 00		8	F S	CDS	HB BC-14B
E-0787	HLM1B BC BUFFER ENTRY 15B		H1B 00		8	F S	CDS	HB BC-15B
E-0788	HLM1B BC BUFFER ENTRY 16B		H1B 00		8	F S	CDS	HB BC-16B
E-0789 E-0789	HLM1B CAP FC COUNTER		H1B 00	HLM1B N1F27 3 HLM1B N1F34 3	8	F S	CDS CDS	HB CAP-FCS
E-0790	HLM1B CAP BC COUNTER		H1B 00		8	F S	CDS	HB CAP-BCS
E-0791 E-0791	HLM1B IAP FC COUNTER		H1B 00	HLM1B N1F27 4 HLM1B N1F34 4	8	F S	CDS CDS	HB IAP-FCS
E-0792	HLM1B IAP BC COUNTER		H1B 00		8	F S	CDS	HB IAP-BCS
E-0793 E-0793	HLM1B SFP PROTECTED PATH CONTROL		H1B 00	HLM1B N1F04 1 HLM1B N1F11 1	8	F S	CDS CDS	HB FP PPTH
E-0794	HLM1B SPARE		H1B 00		8	F S	CDS	HB SPR-225
E-0795	HLM1B SPARE		H1B 00		8	F S	CDS	HB SPR-235
E-0796	HLM1B SPARE		H1B 00		8	F S	CDS	HB SPR-245

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0797 E-0797	HLM1B UPLINK IAP COUNTER		H1B 00	HLM1B N1F47 3 HLM1B N1F54 3	8	F S	CDS CDS	HB U-IAP-C
E-0798 E-0798	HLM1B UPLINK DAC COUNTER		H1B 00	HLM1B N1F47 4 HLM1B N1F54 4	8	F S	CDS CDS	HB-U-DAC-C
E-0799 E-0799	HLM1B UPLINK NML COUNTER		H1B 00	HLM1B N1F10 1 HLM1B N1F17 1	8	F S	CDS CDS	HB U-NML-C
E-0800 E-0800	HLM1B UPLINK IEX COUNTER		H1B 00	HLM1B N1F10 2 HLM1B N1F17 2	8	F S	CDS CDS	HB U-IEX-C
E-0801 E-0801	HLM1B UPLINK MSD(P) COUNTER		H1B 00	HLM1B N1F10 3 HLM1B N1F17 3	8	F S	CDS CDS	HB U-MSD-P
E-0802 E-0802	HLM1B UPLINK MSD(T) COUNTER		H1B 00	HLM1B N1F10 4 HLM1B N1F17 4	8	F S	CDS CDS	HB U-MSD-T
E-0803 E-0803	HLM1B UPLINK NMSL COUNTER		H1B 00	HLM1B N1F64 1 HLM1B N1F71 1	8	F S	CDS CDS	HB U-MMSL
E-0804 E-0804	HLM1B UPLINK PMSL COUNTER		H1B 00	HLM1B N1F64 2 HLM1B N1F71 2	8	F S	CDS CDS	HB U-PMSL
E-0805 E-0805	HLM1B UPLINK CAP COUNTER		H1B 00	HLM1B N1F64 3 HLM1B N1F71 3	8	F S	CDS CDS	HB U-CAP-C
E-0806 E-0806	HLM1B UPLINK NML/NMSL ERROR COUNTER		H1B 00	HLM1B N1F64 4 HLM1B N1F71 4	8	F S	CDS CDS	HB U-N-ER
E-0807 E-0807	HLM1B UPLINK MSL ERROR COUNTER		H1B 00	HLM1B N1F27 1 HLM1B N1F34 1	8	F S	CDS CDS	HB U-MS-ER
E-0808	HLM1B SPARE		H1B 00		8	F S	CDS	HB SPR-365
E-0809	HLM1B SPARE		H1B 00		8	F S	CDS	HB SPR-375
E-0810	HLM1B SPARE		H1B 00		8	F S	CDS	HB SPR-385
E-0811	HLM1B SPARE		H1B 00		8	F S	CDS	HB SPR-395
E-0812	HLM1B SPARE		H1B 00		8	F S	CDS	HB SPR-405
E-0813	HLM1B SPARE		H1B 00		8	F S	CDS	HB SPR-415
E-0814	HLM1B SPARE		H1B 00		8	F S	CDS	HB SPR-425
E-0815	HLM1B SPARE		H1B 00		8	F S	CDS	HB SPR-435
E-0816	HLM1B SPARE		H1B 00		8	F S	CDS	HB SPR-445



Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0817	HLM1B SPARE		H1B 00		8	F S	CDS	HB SPR-455
E-0818	HLM1B SPARE		H1B 00		8	F S	CDS	HB SPR-465
E-0819	HLM1B SPARE		H1B 00		8	F S	CDS	HB SPR-475
E-0820	HLM1B SPARE		H1B 00		8	F S	CDS	HB SPR-485
E-0821	HLM1B SYSTEM DIAGNOSTIC MESSAGE COUNTER		H1B 00	HLM1B N1S03 1	8	F S	CDS	HB SDIAG-C
E-0821		HLM1B N1S10 1						
E-0821		HLM1B N1S17 1						
E-0821		HLM1B N1S24 1						
E-0821		HLM1B N1S31 1						
E-0821		HLM1B N1S38 1						
E-0821		HLM1B N1S45 1						
E-0821		HLM1B N1S52 1						
E-0821		HLM1B N1S59 1						
E-0821		HLM1B N1S66 1						
E-0821		HLM1B N1S73 1						
E-0821	HLM1B N1S80 1							
E-0821	HLM1B N1S87 1							
E-0822	HLM1B CDS DIAGNOSTIC MESSAGE COUNTER		H1B 00	HLM1B N1S01 1	8	F S	CDS	HB CDIAG-C
E-0822		HLM1B N1S08 1						
E-0822		HLM1B N1S15 1						
E-0822		HLM1B N1S22 1						
E-0822		HLM1B N1S29 1						
E-0822		HLM1B N1S36 1						
E-0822		HLM1B N1S43 1						
E-0822		HLM1B N1S50 1						
E-0822		HLM1B N1S57 1						
E-0822		HLM1B N1S64 1						
E-0822		HLM1B N1S71 1						
E-0822		HLM1B N1S78 1						
E-0822		HLM1B N1S85 1						
E-0823		HLM1B MARK FC COUNTER						
E-0824	HLM1B S/C THRUSTER TEMPERATURE ENABLE (PRIV)		H1B 00		8	F S	CDS	HB P-THR-E
E-0825	HLM1B CAP START LINK		H1B 00		8	F S	CDS	HB CAP-LNK
E-0826	HLM1B F/P START LINK		H1B 00		8	F S	CDS	HB F/P-LNK
E-0827	HLM1B IAP START LINK		H1B 00		8	F S	CDS	HB IAP-LNK
E-0828	HLM1B S/S START LINK		H1B 00		8	F S	CDS	HB S/S-LNK
E-0829	HLM1B UPLINK NMSL/PMSL SEQUENCE NUMBER		H1B 00	HLM1B N1F27 2	8	F S	CDS	HB U-SEQNO
E-0829		HLM1B N1F34 2						

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0830	HLM1B UPLINK CHECKSTATE		H1B 00		8	F S	CDS	HB U-CHKST
E-0831	HLM1B MISSING MESSAGE LIST 1		H1B 00		8	F S	CDS	HB MSGL-1
E-0832	HLM1B MISSING MESSAGE LIST 2		H1B 00		8	F S	CDS	HB MSGL-2
E-0833	HLM1B MISSING MESSAGE LIST 3		H1B 00		8	F S	CDS	HB MSGL-3
E-0834	HLM1B MISSING MESSAGE LIST 4		H1B 00		8	F S	CDS	HB MSGL-4
E-0835	HLM1B MISSING MESSAGE LIST 5		H1B 00		8	F S	CDS	HB MSGL-5
E-0836	HLM1B MISSING MESSAGE LIST 6		H1B 00		8	F S	CDS	HB MSGL-6
E-0837	HLM1B MISSING MESSAGE LIST 7		H1B 00		8	F S	CDS	HB MSGL-7
E-0838	HLM1B MISSING MESSAGE LIST 8		H1B 00		8	F S	CDS	HB MSGL-8
E-0839	HLM1B MISSING MESSAGE LIST 9		H1B 00		8	F S	CDS	HB MSGL-9
E-0840	HLM1B MISSING MESSAGE LIST 10		H1B 00		8	F S	CDS	HB MSGL-10
E-0841	HLM1B MISSING MESSAGE LIST 11		H1B 00		8	F S	CDS	HB MSGL-11
E-0842	HLM1B MISSING MESSAGE LIST 12		H1B 00		8	F S	CDS	HB MSGL-12
E-0843	HLM1B MISSING MESSAGE LIST 13		H1B 00		8	F S	CDS	HB MSGL-13
E-0844	HLM1B MISSING MESSAGE LIST 14		H1B 00		8	F S	CDS	HB MSGL-14
E-0845	HLM1B MISSING MESSAGE LIST 15		H1B 00		8	F S	CDS	HB MSGL-15
E-0846	HLM1B MISSING MESSAGE LIST 16		H1B 00		8	F S	CDS	HB MSGL-16
E-0847	HLM1B MISSING MESSAGE LIST 17		H1B 00		8	F S	CDS	HB MSGL-17
E-0848	HLM1B MISSING MESSAGE LIST 18		H1B 00		8	F S	CDS	HB MSGL-18
E-0849	HLM1B MISSING MESSAGE LIST 19		H1B 00		8	F S	CDS	HB MSGL-19
E-0850	HLM1B MISSING MESSAGE LIST 20		H1B 00		8	F S	CDS	HB MSGL-20
E-0851	HLM1B MISSING MESSAGE LIST 21		H1B 00		8	F S	CDS	HB MSGL-21
E-0852	HLM1B MISSING MESSAGE LIST 22		H1B 00		8	F S	CDS	HB MSGL-22
E-0853	HLM1B MISSING MESSAGE LIST 23		H1B 00		8	F S	CDS	HB MSGL-23
E-0854	HLM1B MISSING MESSAGE LIST 24		H1B 00		8	F S	CDS	HB MSGL-24
E-0855	HLM1B MISSING MESSAGE LIST 25		H1B 00		8	F S	CDS	HB MSGL-25

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0856	HLM1B MISSING MESSAGE LIST 26		H1B 00		8	F S	CDS	HB MSGL-26
E-0857	HLM1B MISSING MESSAGE LIST 27		H1B 00		8	F S	CDS	HB MSGL-27
E-0858	HLM1B MISSING MESSAGE LIST 28		H1B 00		8	F S	CDS	HB MSGL-28
E-0859	HLM1B MISSING MESSAGE LIST 29		H1B 00		8	F S	CDS	HB MSGL-29
E-0860	HLM1B MISSING MESSAGE LIST 30		H1B 00		8	F S	CDS	HB MSGL-30
E-0861	HLM1B MISSING MESSAGE LIST 31		H1B 00		8	F S	CDS	HB MSGL-31
E-0862	HLM1B MISSING MESSAGE LIST 32		H1B 00		8	F S	CDS	HB MSGL-32
E-0865	LLM1B DMS FCS EXECUTED COUNTER		L1B 94	LLM1B N1D70 1	8	F S	CDS	LB DMSFCEX
E-0866	LLM1B DMS FCS REJECTED COUNTER		L1B 95	LLM1B N1D70 2	8	F S	CDS	LB DMSFCRJ
E-0867	LLM1B DMS CMDS SENT COUNTER		L1B 96		8	F S	CDS	LB DMSSENT
E-0868	LLM1B LAST DMS COMMAND SENT		L1B 97		8	F S	CDS	LB DMSLAST
E-0869	LLM1B EPD/PLS ENABLE STATUS		L1B 98	LLM1B N1D62 2	8	F S	CDS	LB SCI-EN
E-0869				LLM1B N1D72 2			CDS	
E-0870	LLM1B LAST CC/DC RIM COUNT MSB/ISB		L1B 80:81	LLM1B N1D79 1	16	F S	CDS	LB CD-RIM1
E-0871	LLM1B LAST CC/DC RIM COUNT LSB		L1B 82	LLM1B N1D42 1	8	F S	CDS	LB CD-RIM2
E-0872	LLM1B LAST CC/DC MOD91		L1B 83	LLM1B N1D42 2	8	F S	CDS	LB CD-M91
E-0873	LLM1B LAST CC/DC MOD10		L1B 84	LLM1B N1D05 1	8	F S	CDS	LB CD-M10
E-0874	LLM1B LAST CC/DC POINTER		L1B 85	LLM1B N1D05 2	8	F S	CDS	LB CD-PNTR
E-0875	LLM1B CC/DC BUFFER ENTRY 1		L1B 86:87	LLM1B N1D59 1	16	F S	CDS	LB CD-1
E-0876	LLM1B CC/DC BUFFER ENTRY 2		L1B 88:89	LLM1B N1D22 1	16	F S	CDS	LB CD-2
E-0877	LLM1B CC/DC BUFFER ENTRY 3		L1B 8A:8B	LLM1B N1D76 1	16	F S	CDS	LB CD-3
E-0878	LLM1B CC/DC BUFFER ENTRY 4		L1B 8C:8D	LLM1B N1D39 1	16	F S	CDS	LB CD-4
E-0879	LLM1B CC/DC BUFFER ENTRY 5		L1B 8E:8F	LLM1B N1D02 1	16	F S	CDS	LB CD-5
E-0880	LLM1B CC/DC BUFFER ENTRY 6		L1B 90:91	LLM1B N1D56 1	16	F S	CDS	LB CD-6
E-0881	LLM1B CC/DC BUFFER ENTRY 7		L1B 92:93	LLM1B N1D19 1	16	F S	CDS	LB CD-7

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0882 E-0882	LLM1B PRIV CC/DC EXECUTED COUNTER		L1B 9E	LLM1B N1D28 1 LLM1B N1D38 1	8	F S	CDS CDS	LB CD-P-EX
E-0883 E-0883	LLM1B NON-PRIV CC/DC EXECUTED COUNTER		L1B 9F	LLM1B N1D28 2 LLM1B N1D38 2	8	F S	CDS CDS	LB CD-N-EX
E-0884 E-0884	LLM1B PRIV CC/DC (POWER CODE) QUEUED COUNTER		L1B A0	LLM1B N1D01 1 LLM1B N1D82 1	8	F S	CDS CDS	LB CD-P-Q
E-0885 E-0885	LLM1B NON-PRIV CC/DC (POWER CODE) QUEUED COUNTER		L1B A1	LLM1B N1D01 2 LLM1B N1D82 2	8	F S	CDS CDS	LB CD-N-Q
E-0886 E-0886	LLM1B TEMPERATURE CC/DC QUEUED COUNTER		L1B A2	LLM1B N1D45 1 LLM1B N1D55 1	8	F S	CDS CDS	LB CD-T-Q
E-0887 E-0887	LLM1B DAC CC/DC QUEUED COUNTER		L1B A3	LLM1B N1D45 2 LLM1B N1D55 2	8	F S	CDS CDS	LB CD-DACQ
E-0888 E-0888	LLM1B AACS POWER CODES EXECUTED COUNTER		L1B A4	LLM1B N1D08 1 LLM1B N1D18 1	8	F S	CDS CDS	LB PC-E-C
E-0889 E-0889	LLM1B AACS POWER CODES REJECTED COUNTER		L1B A5	LLM1B N1D08 2 LLM1B N1D18 2	8	F S	CDS CDS	LB PC-RJ-C
E-0890 E-0890	LLM1B EPD/OLS CC/DC'S QUEUED COUNTER		L1B A6	LLM1B N1D62 1 LLM1B N1D72 1	8	F S	CDS CDS	LB CD-SCIQ
E-0891	LLM1B LAST VALID AACS POWER CODE		L1B A7		8	F S	CDS	LB PC-LAST
E-0892	LLM1B FC'S RECEIVED COUNTER		L1B A8		8	F S	CDS	LB FC-RC-C
E-0893 E-0893	LLM1B FC'S EXECUTED COUNTER		L1B A9	LLM1B N1D25 1 LLM1B N1D35 1	8	F S	CDS CDS	LB FC-EX-C
E-0894	LLM1B LAST VALID FC ID		L1B AA		8	F S	CDS	LB FC-LAST
E-0895 E-0895	LLM1B FC'S REJECTED COUNTER		L1B AB	LLM1B N1D25 2 LLM1B N1D35 2	8	F S	CDS CDS	LB FC-RJ-C
E-0896	LLM1B CHANGE PACKET SELECTION COUNTER		L1B AC	LLM1B N1D29 1	8	F S	CDS	LB PKT-SEL
E-0897	LLM1B BUS TRANSACTIONS SENT COUNTER		L1B AD		8	F S	CDS	LB BT-SENT
E-0898	LLM1B CHANGE PACKET TIMING COUNTER		L1B AE	LLM1B N1D66 1	8	F S	CDS	LB PKT-TMG
E-0899	LLM1B UPDATE PACKET MENU COUNTER		L1B AF	LLM1B N1D66 2	8	F S	CDS	LB MENU
E-0900	LLM1B AACS POWER CODES RECEIVED COUNTER		L1B B0:B1	LLM1B N1D83 1	16	F S	CDS	LB PC-RC-C
E-0901	LLM1B FLAG STATUS		L1B B6		8	F S	CDS	LB FLAG-ST

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0902 E-0902	LLM1B CDS DIAGNOSTIC MESSAGE COUNTER		L1B B7	LLM1B N1D31 1 LLM1B N1D41 1	8	F S	CDS CDS	LB CDIAG-C
E-0903	LLM1B CDS DIAGNOSTIC MSG QUEUE ENTRY 1		L1B B8:B9		16	F S	CDS	LB CDS DIA1
E-0904	LLM1B CDS DIAGNOSTIC MSG QUEUE ENTRY 2		L1B BA:BB		16	F S	CDS	LB CDS DIA2
E-0905	LLM1B CDS DIAGNOSTIC MSG QUEUE ENTRY 3		L1B BC:BD		16	F S	CDS	LB CDS DIA3
E-0906	LLM1B CDS DIAGNOSTIC MSG QUEUE ENTRY 4		L1B BE:BF		16	F S	CDS	LB CDS DIA4
E-0907	LLM1B SPARE		L1B C0		8	F S	CDS	LB SPR-731
E-0908 E-0908	LLM1B SYSTEM DIAGNOSTIC MESSAGE COUNTER		L1B C1	LLM1B N1D31 2 LLM1B N1D41 2	8	F S	CDS CDS	LB SDIAG-C
E-0909	LLM1B SYS DIAGNOSTIC MSG QUEUE ENTRY 1		L1B C2:C3		16	F S	CDS	LB SYS DIA1
E-0910	LLM1B SYS DIAGNOSTIC MSG QUEUE ENTRY 2		L1B C4:C5		16	F S	CDS	LB SYS DIA2
E-0911	LLM1B SYS DIAGNOSTIC MSG QUEUE ENTRY 3		L1B C6:C7		16	F S	CDS	LB SYS DIA3
E-0912	LLM1B SYS DIAGNOSTIC MSG QUEUE ENTRY 4		L1B C8:C9		16	F S	CDS	LB SYS DIA4
E-0913 E-0913	LLM1B ERROR WORD-1 IOSL-0		L1B CE	LLM1B N1D04 1 LLM1B N1D85 1	8	F S	CDS CDS	LB IOSL-0
E-0914 E-0914	LLM1B ERROR WORD-2 IOSL-1		L1B CF	LLM1B N1D04 2 LLM1B N1D85 2	8	F S	CDS CDS	LB IOSL-1
E-0915 E-0915	LLM1B DAC MAP PART-1		L1B D0:D1	LLM1B N1D11 1 LLM1B N1D21 1	16	F S	CDS CDS	LB DACMAP1
E-0916 E-0916	LLM1B DAC MAP PART-2		L1B D2:D3	LLM1B N1D65 1 LLM1B N1D75 1	16	F S	CDS CDS	LB DACMAP2
E-0917 E-0917	LLM1B DACS RECEIVED COUNTER		L1B D4	LLM1B N1D48 1 LLM1B N1D58 1	8	F S	CDS CDS	LB DAC-RC
E-0918 E-0918	LLM1B DACS REJECTED COUNTER		L1B D5	LLM1B N1D48 2 LLM1B N1D58 2	8	F S	CDS CDS	LB DAC-RJ
E-0919	LLM1B DAC BC COUNTER		L1B D6	LLM1B N1D33 1	8	F S	CDS	LB DAC-BCS
E-0920	LLM1B DAC CHECKSUM ERROR COUNTER		L1B D7		8	F S	CDS	LB DAC-ER
E-0921	LLM1B S/C TEMPERATURE ENABLE STATUS (PRIV)		L1B B4	LLM1B N1D46 1	8	F S	CDS	LB P-TMP-E
E-0922	LLM1B MOS TEMPERATURE ENABLE STATUS (NON-PRIV)		L1B B5	LLM1B N1D46 2	8	F S	CDS	LB N-TMP-E

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0923 E-0923 E-0923	LLM1B DMS TAPE POSITION ESTIMATE MSB		L1B FD	LLM1B T1S09 LLM1B T1S10 LLM1B T1S11	8	F S	CDS CDS CDS	LB DMS-MSB
E-0924 E-0924 E-0924 E-0924 E-0924 E-0924	LLM1B DMS TAPE POSITION ESTIMATE LSB		L1B FE	LLM1B T2S03 LLM1B T2S04 LLM1B T2S05 LLM1B T2S09 LLM1B T2S10 LLM1B T2S11	8	F S	CDS CDS CDS CDS CDS CDS	LB DMS-LSB
E-0925	LLM1B MEMORY COPY FC COUNTER		L1B 99	LLM1B N1D33 2	8	F S	CDS	LB COPY-FC
E-0926	LLM1B TEMPERATURE BC COUNTER		L1B 9A	LLM1B N1D87 1	8	F S	CDS	LB TMP-BCS
E-0927	LLM1B MEMORY TWEAK FC COUNTER		L1B 9B	LLM1B N1D87 2	8	F S	CDS	LB TWEAKS
E-0928	LLM1B CHECKSUM RESULT		L1B 9C	LLM1B N1D50 1	8	F S	CDS	LB CHK-SUM
E-0929	LLM1B CHECKSUM COUNTER		L1B 9D	LLM1B N1D50 2	8	F S	CDS	LB CHKSUMC
E-0930	LLM2B LAST CC/DC RIM COUNT MSB/ISB		L2B 80:81	LLM2B N1D84 1	16	F S	CDS	LD CD-RIM1
E-0931	LLM2B LAST CC/DC RIM COUNT LSB		L2B 82	LLM2B N1D47 1	8	F S	CDS	LD CD-RIM2
E-0932	LLM2B LAST CC/DC MOD91		L2B 83	LLM2B N1D47 2	8	F S	CDS	LD CD-M91
E-0933	LLM2B LAST CC/DC MOD10		L2B 84	LLM2B N1D10 1	8	F S	CDS	LD CD-M10
E-0934	LLM2B LAST CC/DC POINTER		L2B 85	LLM2B N1D10 2	8	F S	CDS	LD CD-PNTR
E-0935	LLM2B CC/DC BUFFER ENTRY 1		L2B 86:87	LLM2B N1D64 1	16	F S	CDS	LD CD-1
E-0936	LLM2B CC/DC BUFFER ENTRY 2		L2B 88:89	LLM2B N1D27 1	16	F S	CDS	LD CD-2
E-0937	LLM2B CC/DC BUFFER ENTRY 3		L2B 8A:8B	LLM2B N1D81 1	16	F S	CDS	LD CD-3
E-0938	LLM2B CC/DC BUFFER ENTRY 4		L2B 8C:8D	LLM2B N1D44 1	16	F S	CDS	LD CD-4
E-0939	LLM2B CC/DC BUFFER ENTRY 5		L2B 8E:8F	LLM2B N1D07 1	16	F S	CDS	LD CD-5
E-0940	LLM2B CC/DC BUFFER ENTRY 6		L2B 90:91	LLM2B N1D61 1	16	F S	CDS	LD CD-6
E-0941	LLM2B CC/DC BUFFER ENTRY 7		L2B 92:93	LLM2B N1D24 1	16	F S	CDS	LD CD-7
E-0942 E-0942	LLM2B PRIV CC/DC EXECUTED COUNTER		L2B 9E	LLM2B N1D02 1 LLM2B N1D12 1	8	F S	CDS CDS	LD CD-P-EX
E-0943 E-0943	LLM2B NON-PRIV CC/DC EXECUTED COUNTER		L2B 9F	LLM2B N1D02 2 LLM2B N1D12 2	8	F S	CDS CDS	LD CD-N-EX

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0944 E-0944	LLM2B PRIV CC/DC/(POWER CODE) QUEUED COUNTER		L2B A0	LLM2B N1D56 1 LLM2B N1D66 1	8	F S	CDS CDS	LD CD-P-Q
E-0945 E-0945	LLM2B NON-PRIV CC/DC/(POWER CODE) QUEUED COUNTER		L2B A1	LLM2B N1D56 2 LLM2B N1D66 2	8	F S	CDS CDS	LD CD-N-Q
E-0946 E-0946	LLM2B TEMPERATURE CC/DC QUEUED COUNTER		L2B A2	LLM2B N1D19 1 LLM2B N1D29 1	8	F S	CDS CDS	LD CD-T-Q
E-0947 E-0947	LLM2B DAC CC/DC QUEUED COUNTER		L2B A3	LLM2B N1D19 2 LLM2B N1D29 2	8	F S	CDS CDS	LD CD-DACQ
E-0948 E-0948	LLM2B AACS POWER CODES EXECUTED COUNTER		L2B A4	LLM2B N1D06 1 LLM2B N1D87 1	8	F S	CDS CDS	LD PC-E-C
E-0949 E-0949	LLM2B AACS POWER CODES REJECTED COUNTER		L2B A5	LLM2B N1D06 2 LLM2B N1D87 2	8	F S	CDS CDS	LD PC-RJ-C
E-0950	LLM2B EPD/PLS CC/DC QUEUED COUNTER (DUMMY)		L2B A6		8	F S	CDS	LD CD-SCIQ
E-0951	LLM2B LAST VALID AACS POWER CODE		L2B A7		8	F S	CDS	LD PC-LAST
E-0952	LLM2B FC'S RECEIVED COUNTER		L2B A8		8	F S	CDS	LD FC-RC-C
E-0953 E-0953	LLM2B FC'S EXECUTED COUNTER		L2B A9	LLM2B N1D50 1 LLM2B N1D60 1	8	F S	CDS CDS	LD FC-EX-C
E-0954	LLM2B LAST VALID FC ID		L2B AA		8	F S	CDS	LD FC-LAST
E-0955 E-0955	LLM2B FC'S REJECTED COUNTER		L2B AB	LLM2B N1D50 2 LLM2B N1D60 2	8	F S	CDS CDS	LD FC-RJ-C
E-0956	LLM2B CHANGE PACKET SELECTION COUNTER		L2B AC	LLM2B N1D45 1	8	F S	CDS	LD PKT-SEL
E-0957	LLM2B BUS TRANSACTIONS SENT COUNTER (DUMMY)		L2B AD		8	F S	CDS	LD BT-SENT
E-0958	LLM2B CHANGE PACKET TIMING COUNTER		L2B AE	LLM2B N1D08 1	8	F S	CDS	LD PKT-TMG
E-0959	LLM2B UPDATE PACKET MENU COUNTER		L2B AF	LLM2B N1D08 2	8	F S	CDS	LD MENU
E-0960	LLM2B AACS POWER CODES RECEIVED COUNTER		L2B B0:B1	LLM2B N1D62 1	16	F S	CDS	LD PC-RC-C
E-0961	LLM2B FLAG STATUS		L2B B6		8	F S	CDS	LD FLAG-ST
E-0962 E-0962	LLM2B CDS DIAGNOSTIC MESSAGE COUNTER		L2B B7	LLM2B N1D28 1 LLM2B N1D38 1	8	F S	CDS CDS	LD CDIAG-C
E-0963	LLM2B CDS DIAGNOSTIC MSG QUEUE ENTRY 1		L2B B8:B9		16	F S	CDS	LD CSDIA1
E-0964	LLM2B CDS DIAGNOSTIC MSG QUEUE ENTRY 2		L2B BA:BB		16	F S	CDS	LD CSDIA2

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-0965	LLM2B CDS DIAGNOSTIC MSG QUEUE ENTRY 3		L2B BC:BD		16	F S	CDS	LD CDS DIA3
E-0966	LLM2B CDS DIAGNOSTIC MSG QUEUE ENTRY 4		L2B BE:BF		16	F S	CDS	LD CDS DIA4
E-0967	LLM2B SPARE		L2B C0		8	F S	CDS	LD SPR-731
E-0968 E-0968	LLM2B SYSTEM DIAGNOSTIC MESSAGE COUNTER		L2B C1	LLM2B N1D28 2 LLM2B N1D38 2	8	F S	CDS CDS	LD SDIAG-C
E-0969	LLM2B SYS DIAGNOSTIC MSG QUEUE ENTRY 1		L2B C2:C3		16	F S	CDS	LD SYS DIA1
E-0970	LLM2B SYS DIAGNOSTIC MSG QUEUE ENTRY 2		L2B C4:C5		16	F S	CDS	LD SYS DIA2
E-0971	LLM2B SYS DIAGNOSTIC MSG QUEUE ENTRY 3		L2B C6:C7		16	F S	CDS	LD SYS DIA3
E-0972	LLM2B SYS DIAGNOSTIC MSG QUEUE ENTRY 4		L2B C8:C9		16	F S	CDS	LD SYS DIA4
E-0973 E-0973	LLM2B ERROR WORD-1 IOSL-0		L2B CE	LLM2B N1D01 1 LLM2B N1D82 1	8	F S	CDS CDS	LD IOSL-0
E-0974 E-0974	LLM2B ERROR WORD-2 IOSL-1		L2B CF	LLM2B N1D01 2 LLM2B N1D82 2	8	F S	CDS CDS	LD IOSL-1
E-0975 E-0975	LLM2B DAC MAP PART-1		L2B D0:D1	LLM2B N1D22 1 LLM2B N1D86 1	16	F S	CDS CDS	LD DACMAP1
E-0976 E-0976	LLM2B DAC MAP PART-2		L2B D2:D3	LLM2B N1D49 1 LLM2B N1D76 1	16	F S	CDS CDS	LD DACMAP2
E-0977 E-0977	LLM2B DACS RECEIVED COUNTER		L2B D4	LLM2B N1D32 1 LLM2B N1D59 1	8	F S	CDS CDS	LD DAC-RC
E-0978 E-0978	LLM2B DACS REJECTED COUNTER		L2B D5	LLM2B N1D32 2 LLM2B N1D59 2	8	F S	CDS CDS	LD DAC-RJ
E-0979	LLM2B DAC BC COUNTER (DUMMY)		L2B D6	LLM2B N1D45 2	8	F S	CDS	LD DAC-BCS
E-0980	LLM2B DAC CHECKSUM ERROR COUNTER		L2B D7		8	F S	CDS	LD DAC-ER
E-0981	LLM2B S/C TEMPERATURE ENABLE STATUS (PRIV)		L2B B4		8	F S	CDS	LD P-TMP-E
E-0982	LLM2B MOS TEMPERATURE ENABLE STATUS (NON-PRIV)		L2B B5		8	F S	CDS	LD N-TMP-E
#E-1001 E-1001 E-1001 E-1001 E-1001 E-1001 E-1001	LLM2B PLAYBACK TABLE SEGMENT NUMBER (* VALID IN STR A ONLY)		CDS BUS	LLM2B N1D00 1 LLM2B N1D13 1 LLM2B N1D26 1 LLM2B N1D39 1 LLM2B N1D52 1 LLM2B N1D65 1 LLM2B N1D78 1	8	? ?	CDS CDS CDS CDS CDS CDS CDS	LD PBT SEG

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Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
#E-1002	LLM2B PLAYBACK TABLE ENTRY NUMBER (* VALID IN STR A ONLY)		CDS BUS	LLM2B N1D00 2	8	? ?	CDS	LD PBT ENT
E-1002				LLM2B N1D13 2			CDS	
E-1002				LLM2B N1D26 2			CDS	
E-1002				LLM2B N1D39 2			CDS	
E-1002				LLM2B N1D52 2			CDS	
E-1002				LLM2B N1D65 2			CDS	
E-1002				LLM2B N1D78 2			CDS	
#E-1003	CDS DESPUN POR COUNT (CDS B)		CDS BUS	LLM2B N1D09 2	8	? ?	CDS	LD DS PORC
#E-1004	CDS PLAYBACK MANAGER STATUS (CDS B)		CDS BUS	LLM2B N1D14 2	8	? ?	CDS	LD PBMGR S
E-1004				LLM2B N1D33 2			CDS	
E-1004				LLM2B N1D69 2			CDS	
#E-1005	HLM1B DBUM1A ERROR WORD (A of E-0672 A:B)		H1B 00	HLM1B N1F40 4	8	F S	CDS	HB D1A ERR
#E-1006	HLM1B DBUM1B ERROR WORD (B of E-0672 A:B)		H1B 00	HLM1B N1F57 4	8	F S	CDS	HB D1B ERR
#E-1007	HLM1B F/P RESPONSE INACTIVE ENABLES GPV112 (A of E-0704 A:B:C:)		H1B 00	HLM1B N1S06 1	8	F S	CDS	HB GPV-112
E-1007				HLM1B N1S13 1			CDS	
E-1007				HLM1B N1S20 1			CDS	
E-1007				HLM1B N1S27 1			CDS	
E-1007				HLM1B N1S34 1			CDS	
E-1007				HLM1B N1S41 1			CDS	
E-1007				HLM1B N1S48 1			CDS	
E-1007				HLM1B N1S55 1			CDS	
E-1007				HLM1B N1S62 1			CDS	
E-1007				HLM1B N1S69 1			CDS	
E-1007				HLM1B N1S76 1			CDS	
E-1007				HLM1B N1S83 1			CDS	
E-1007				HLM1B N1S90 1			CDS	
#E-1008				HLM1B F/P RESPONSE INACTIVE ENABLES GPV113 (B of E-0704 A:B:C:)				
E-1008	HLM1B N1S11 1	CDS						
E-1008	HLM1B N1S18 1	CDS						
E-1008	HLM1B N1S25 1	CDS						
E-1008	HLM1B N1S32 1	CDS						
E-1008	HLM1B N1S39 1	CDS						
E-1008	HLM1B N1S46 1	CDS						
E-1008	HLM1B N1S53 1	CDS						
E-1008	HLM1B N1S60 1	CDS						
E-1008	HLM1B N1S67 1	CDS						
E-1008	HLM1B N1S74 1	CDS						
E-1008	HLM1B N1S81 1	CDS						
E-1008	HLM1B N1S88 1	CDS						

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
#E-1009 E-1009 E-1009 E-1009 E-1009 E-1009 E-1009 E-1009 E-1009 E-1009 E-1009 E-1009 E-1009	HLM1B F/P RESPONSE INACTIVE ENABLES GPV114 (C of E-0704 A:B:C:)		H1B 00	HLM1B N1S02 1 HLM1B N1S09 1 HLM1B N1S16 1 HLM1B N1S23 1 HLM1B N1S30 1 HLM1B N1S37 1 HLM1B N1S44 1 HLM1B N1S51 1 HLM1B N1S58 1 HLM1B N1S65 1 HLM1B N1S72 1 HLM1B N1S79 1 HLM1B N1S86 1	8	F S	CDS CDS CDS CDS CDS CDS CDS CDS CDS CDS CDS CDS CDS	HB GPV-114
#E-1010 E-1010 E-1010	HLM1B VCDUs IN MULTI-USE BUFFER (* VALID IN STR A ONLY)		CDS BUS	HLM1B N1F37 1 HLM1B N1F49 1 HLM1B N1F56 1	8	? ?	CDS CDS CDS	HB VC MBC
#E-1011 E-1011 E-1011	HLM1B VCDUs REJECTED BY MULTI-USE BUFFER (* VALID IN STR A ONLY)		CDS BUS	HLM1B N1F37 2 HLM1B N1F49 2 HLM1B N1F56 2	8	? ?	CDS CDS CDS	HB VC MBRJ
#E-1012 E-1012 E-1012	HLM1B VCDUs REJECTED BY PRIORITY BUFFER (* VALID IN STR A ONLY)		CDS BUS	HLM1B N1F37 3 HLM1B N1F49 3 HLM1B N1F56 3	8	? ?	CDS CDS CDS	HB VC PBRJ
#E-1013 E-1013 E-1013	HLM1B IMAGE COMPRESSION STATUS		CDS BUS	HLM1B N1F37 4 HLM1B N1F49 4 HLM1B N1F56 4	8	? ?	CDS CDS CDS	HB IMGCP S
E-1100 E-1100	CDS +5 VDC P/C A STATUS		T1A 10	LLM1A N1D07 1 LLM1A N1D88 1	8	F A	CDS CDS	CDS +5V A
E-1101 E-1101	CDS +10 VDC P/C A STATUS		T1A 11	LLM1A N1D07 2 LLM1A N1D88 2	8	F A	CDS CDS	CDS +10V A
E-1102 E-1102	CDS +12 VDC P/C A STATUS		T1A 12	LLM1A N1D51 1 LLM1A N1D61 1	8	F A	CDS CDS	CDS +12V A
E-1103 E-1103	CDS -12 VDC P/C A STATUS		T1A 13	LLM1A N1D51 2 LLM1A N1D61 2	8	F A	CDS CDS	CDS -12V A
E-1104 E-1104	CDS RELAY VOLTAGE P/C A STATUS		T1A 14	LLM1A N1D14 1 LLM1A N1D24 1	8	F A	CDS CDS	CDS +15V A
E-1105 E-1105	CDS MEMORY KEEP-ALIVE PPS-A STATUS		T1A 15	LLM1A N1D14 2 LLM1A N1D24 2	8	F A	CDS CDS	CDS +9V A
E-1106 E-1106	CDS +10 VOLT CURRENT P/C A STATUS		T1A 16	LLM1A N1D68 1 LLM1A N1D78 1	8	F A	CDS CDS	CDS +10I A

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-1107	CDS HARDWARE SPARE		T1A 17		8	F A	CDS	CDS H-SPRA
E-1108 E-1108	CDS +3 VOLT ADC-B STATUS		T1A 28	LLM1A N1D68 2 LLM1A N1D78 2	8	F A	CDS CDS	CDS +3ADCB
E-1109 E-1109	CDS BACKUP DESPUN MEASUREMENT - LLM1A		T1A 4B	LLM1A T1S08 LLM1A N1D49 1	8	F A	CDS CDS	CDS BKU A
E-1110 E-1110	CDS BACKUP DESPUN MEASUREMENT (FILTERED) - LLM1A		T1A 2E	LLM1A T1S11 LLM1A N1D49 2	8	F A	CDS CDS	CDS BKUF A
E-1120 E-1120	CDS +5 VDC P/C B STATUS		T1B 10	LLM1B N1D07 1 LLM1B N1D88 1	8	F A	CDS CDS	CDS +5V B
E-1121 E-1121	CDS +10 VDC P/C B STATUS		T1B 11	LLM1B N1D07 2 LLM1B N1D88 2	8	F A	CDS CDS	CDS +10V B
E-1122 E-1122	CDS +12 VDC P/C B STATUS		T1B 12	LLM1B N1D51 1 LLM1B N1D61 1	8	F A	CDS CDS	CDS +12V B
E-1123 E-1123	CDS -12 VDC P/C B STATUS		T1B 13	LLM1B N1D51 2 LLM1B N1D61 2	8	F A	CDS CDS	CDS -12V B
E-1124 E-1124	CDS RELAY VOLTAGE P/C B STATUS		T1B 14	LLM1B N1D14 1 LLM1B N1D24 1	8	F A	CDS CDS	CDS +15V B
E-1125 E-1125	CDS MEMORY KEEP-ALIVE PPS-B STATUS		T1B 15	LLM1B N1D14 2 LLM1B N1D24 2	8	F A	CDS CDS	CDS +9V B
E-1126 E-1126	CDS +10 VOLT CURRENT P/C B STATUS		T1B 16	LLM1B N1D68 1 LLM1B N1D78 1	8	F A	CDS CDS	CDS +10I B
E-1127	CDS HARDWARE SPARE		T1B 17		8	F A	CDS	CDS H-SPRB
E-1128 E-1128	CDS +3 VOLT ADC-A STATUS		T1B 28	LLM1B N1D68 2 LLM1B N1D78 2	8	F A	CDS CDS	CDS +3ADCA
E-1129 E-1129	CDS BACKUP DESPUN MEASUREMENT - LLM1B		T1B 4B	LLM1B T1S08 LLM1B N1D49 1	8	F A	CDS CDS	CDS BKU B
E-1130 E-1130	CDS BACKUP DESPUN MEASUREMENT (FILTERED) - LLM1B		T1B 2E	LLM1B T1S05 LLM1B N1D49 2	8	F A	CDS CDS	CDS BKUF B
E-1136 E-1136	+3VDC TO RRA POS POT 2	0. to 6.0 Volt	T2A 25	LLM2A N1D11 2 LLM2A N1D75 2	8	F A	CDS CDS	CDS +3V P2
E-1137	+3VDC TO RRA POS POT 1 (ALSO ADC-C)	0. to 6.0 Volt	BDM 02		8	A	CDS	CDS +3V P1
E-1138	DESPUN COMMUTATOR TREE OUTPUT		BDM 03		8		CDS	CDS COMTRE

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
CDS - COMMAND AND DATA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-1139	DESPUN SIGNAL GROUND	0. to 3.0 Volt	BDM 04		8	A	CDS	CDS DSGGND
E-1140	FILTER CALIBRATION VOLTAGE (+2.73 V)	0. to 3.3 Volt	BDM 05		8	A	CDS	CDS FILCLV
E-1141	COM-1A TREE-1 ZERO REF		T1A 1F		8	V A	CDS	CDS C1AT1Z
E-1142	COM-1A TREE-2 ZERO REF		T1A 2F		8	V A	CDS	CDS C1AT2Z
E-1143	COM-1A TREE-3 ZERO REF		T1A 3F		8	V A	CDS	CDS C1AT3Z
E-1144	COM-1A TREE-4 ZERO REF		T1A 4F		8	V A	CDS	CDS C1AT4Z
E-1145	COM-1A TREE-5 ZERO REF		T1A 5F		8	V A	CDS	CDS C1AT5Z
E-1146	COM-1A TREE-6 ZERO REF		T1A 6F		8	V A	CDS	CDS C1AT6Z
E-1147	COM-1A TREE-7 ZERO REF		T1A 7F		8	V A	CDS	CDS C1AT7Z
E-1148	COM-1B TREE-1 ZERO REF		T1B 1F		8	V A	CDS	CDS C1BT1Z
E-1149	COM-1B TREE-2 ZERO REF		T1B 2F		8	V A	CDS	CDS C1BT2Z
E-1150	COM-1B TREE-3 ZERO REF		T1B 3F		8	V A	CDS	CDS C1BT3Z
E-1151	COM-1B TREE-4 ZERO REF		T1B 4F		8	V A	CDS	CDS C1BT4Z
E-1152	COM-1B TREE-5 ZERO REF		T1B 5F		8	V A	CDS	CDS C1BT5Z
E-1153	COM-1B TREE-6 ZERO REF		T1B 6F		8	V A	CDS	CDS C1BT6Z
E-1154	COM-1B TREE-7 ZERO REF		T1B 7F		8	V A	CDS	CDS C1BT7Z
E-1155	COM-2A TREE-1 ZERO REF		T2A 1F		8	V A	CDS	CDS C2AT1Z
E-1156	COM-2A TREE-2 ZERO REF		T2A 2F		8	V A	CDS	CDS C2AT2Z
E-1157	COM-2A TREE-3 ZERO REF		T2A 3F		8	V A	CDS	CDS C2AT3Z
E-1158	COM-2A TREE-4 ZERO REF		T2A 4F		8	V A	CDS	CDS C2AT4Z
E-1159	COM-2A TREE-5 ZERO REF		T2A 5F		8	V A	CDS	CDS C2AT5Z
E-1160	COM-2A TREE-6 ZERO REF		T2A 6F		8	V A	CDS	CDS C2AT6Z
E-1161	COM-2A TREE-7 ZERO REF		T2A 7F		8	V A	CDS	CDS C2AT7Z

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
AACS - ATTITUDE AND ARTICULATION CONTROL SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
ALL AACS CHANNELS By Channel Number (RJ:all_aacs -04/22/95)								
E-1200	COMBINED STAR CODE		AACS		16	B S	AACS	STAR CODE
E-1201	POWER STATE #1		AACS	AACS T2D11 1	16	F S	AACS	PWR ST 1
E-1201	One Instance DELETED							
E-1202	SCAN POINTING TYPE		AACS	AACS T1D09 1	16	F S	AACS	SCAN TYPE
E-1203	STAR IDENTIFICATION		AACS	AACS N1D32 1	16	F S	AACS	STAR ID
E-1203	One Instance DELETED							
E-1204	-Z1A 11 MS COUNT (LS)		AACS	AACS T2D06 1	16	F S	AACS	-Z1A CT
E-1205	-Z2A 11 MS COUNT (LS)		AACS	AACS T3D06 1	16	F S	AACS	-Z2A CT
E-1206	-Z1B 11 MS COUNT (LS)		AACS	AACS T2D07 1	16	F S	AACS	-Z3A CT
E-1207	-Z2B 11 MS COUNT (LS)		AACS	AACS T3D07 1	16	F S	AACS	-Z2B CT
E-1208	ROTOR SPIN RATE		AACS	AACS T1D08 1	16	B S	AACS	SPIN RATE
E-1209	THRUSTER COUNTER		AACS	AACS T1D11 1	16	F S	AACS	THRUST CT
E-1210	RPM HEATER CYCLE COUNT		AACS	AACS T2D03 1	16	F S	AACS	RPM CYCLE
E-1210			AACS	AACS N1D23 1				
E-1211	LAST "BC" COMMAND		AACS	AACS T2D02 1	16	F S	AACS	LAST CMD
E-1212	TASK ABORT COUNT		AACS	AACS T1D03 1	16	F S	AACS	TASK ABORT
E-1213	CURRENT TASK ID		AACS	AACS N1D31 1	16	F S	AACS	TASK ID
E-1214	BIG SPIN RATE PROFILE		AACS		16	F S	AACS	BS RT PROF
E-1215	SBA ENCODER RATE		AACS	AACS T3D08 1	16	F S	AACS	SBA RATE
E-1216	STAR CLOCK TRANSIT TIME		AACS		16	V S	AACS	CLK TIME
E-1217	+P1A 11 MS COUNT (LS)		AACS	AACS T2D04 1	16	F S	AACS	+P1A CT
E-1218	+L1B 11 MS COUNT (LS)		AACS	AACS T2D05 1	16	F S	AACS	+L1B CT
E-1219	-S1A 11 MS COUNT (LS)		AACS	AACS T1D04 1	16	F S	AACS	-S1A CT
E-1220	+S2A 11 MS COUNT (LS)		AACS	AACS T1D06 1	16	F S	AACS	+S2A CT
E-1221	ACQUISITION SENSOR PULSE CENTER TIME		AACS		16	V S	AACS	AS CENTER
E-1222	STAR CLOCK ANGLE		AACS	AACS N1D10 1	16	V S	AACS	STAR CLK
E-1223	AS MINIMUM OUTPUT VALUE		AACS		16	V S	AACS	AS MIN

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
AACS - ATTITUDE AND ARTICULATION CONTROL SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-1224	STAR ELEVATION ANGLE		AACS	AACS N1D29 1	16	V S	AACS	STAR ELEV
E-1224	One Instance DELETED							
E-1225	LAST FAULT CODE		AACS	AACS N1D70 1	16	F S	AACS	FAULT CODE
E-1226	SPUN CONFIGURATION		AACS	AACS T1D00 1	16	B S	AACS	SPUN CONF
E-1227	DESPUN CONFIGURATION		AACS	AACS T2D00 1	16	B S	AACS	DSPN CONF
E-1228	SAS ENCODER RATE		AACS	AACS N1D86 1	16	F S	AACS	SAS RATE
E-1229	STAR CONE TRANSIT TIME		AACS		16	V S	AACS	CONE TIME
E-1230	+P2A 11 MS COUNT (LS)		AACS	AACS T3D04 1	16	F S	AACS	+P2A CT
E-1231	+L2B 11 MS COUNT (LS)		AACS	AACS T3D05 1	16	F S	AACS	+L2B CT
E-1232	-S1B 11 MS COUNT (LS)		AACS	AACS T1D05 1	16	F S	AACS	-S1B CT
E-1233	+S2B 11 MS COUNT (LS)		AACS	AACS T1D07 1	16	F S	AACS	+S2B CT
E-1234	ACQUISITION SENSOR PULSE WIDTH		AACS		16	V S	AACS	AS WIDTH
E-1235	AS MAXIMUM OUTPUT VALUE		AACS		16	V S	AACS	AS MAX
E-1236	SEARCH PHASE FAIL COUNT		AACS		16	V S	AACS	SEARCH CT
E-1237	CYCLE SLIP COUNTER		AACS	AACS N1D57 1	16	F S	AACS	CYSLIP CT
E-1238	IDLE TIME COUNTER		AACS		16	V S	AACS	IDLE TIME
E-1239	HGA POINTING ERROR		AACS		16	F S	AACS	HGA ERROR
E-1239	One Instance DELETED							
E-1239	One Instance DELETED							
E-1240	THRUSTER CONFIGURATION		AACS		16	V S	AACS	THR CONF
E-1241	S/S THRESHOLD DEFAULT		AACS		16	V S	AACS	THRSH DFT
E-1242	S/S THRESHOLD		AACS	AACS N1D59 1	16	F S	AACS	THRESHOLD
E-1243	STAR BACKGROUND		AACS		16	V S	AACS	BACKGRND
E-1244	EARTH STAR 1 POINTER		AACS	AACS N1D60 1	16	F S	AACS	RTH STAR1
E-1245	MANEUVER STAR 1 POINTER		AACS	AACS N1D61 1	16	F S	AACS	MVR STAR1
E-1246	SUN STAR 1 POINTER		AACS	AACS N1D63 1	16	F S	AACS	SUN STAR1

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
AACS - ATTITUDE AND ARTICULATION CONTROL SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS		10-CHAR TITLE
E-1247	ALERT CODE COUNT		AACS	AACS T3D01 1	16	F S	AACS	ALT CD CT
E-1248	POWER CODE COUNT		AACS	AACS T1D02 1	16	F S	AACS	PWR CD CT
E-1248	One Instance DELETED							
E-1249	GYRO DRIFT M		AACS	AACS N1D11 1	16	F S	AACS	GYDRIFT M
E-1250	GYRO DRIFT N		AACS	AACS N1D12 1	16	F S	AACS	GYDRIFT N
E-1251	GYRO DRIFT L		AACS	AACS N1D13 1	16	F S	AACS	GYDRIFT L
E-1252	LBA 1 POSITION		AACS	AACS N1D14 1	16	B S	AACS	LBA 1 POS
E-1253	LBA 2 POSITION		AACS	AACS N1D15 1	16	B S	AACS	LBA 2 POS
E-1254	ISOVALVE AND PDE ANNEX STATUS		AACS	AACS T1D12 1	16	B S	AACS	LVS/PA ST
E-1255	ROTOR ATTITUDE FAULT COUNT		AACS	AACS T3D03 1	16	F S	AACS	RATT FAULT
E-1256	INERTIAL OBSERVER FAULT COUNT		AACS	AACS N1D49 1	16	F S	AACS	INOB FAULT
E-1257	SUCCESSFUL COMMAND COUNTER		AACS	AACS N1D02 1	16	F S	AACS	CM COUNT
E-1258	A/D REFERENCE VOLTAGE - LOW		AACS		16	V S	AACS	A/D LO
E-1259	A/D REFERENCE VOLTAGE - HIGH		AACS		16	V S	AACS	A/D HI
E-1260	SPIN RATE ERROR		AACS		16	F S	AACS	SPN ERROR
E-1261	BAD COMMAND COUNT 1		AACS	AACS N1D25 1	16	F S	AACS	BAD CMD 1
E-1262	BAD COMMAND COUNT 2		AACS	AACS N1D26 1	16	F S	AACS	BAD CMD 2
E-1263	FUNCTION STATUS		AACS	AACS N1D27 1	16	F S	AACS	FUNCTION
E-1264	IVP STATUS		AACS	AACS T1D10 1	16	F S	AACS	IVP STAT
E-1265	AACS STATUS #5		AACS	AACS N1D85 1	16	F S	AACS	AACS ST #5
E-1266	HGA SLOT #		AACS	AACS N1D03 1	16	F S	AACS	HGA SLOT
E-1267	HGA DEADBAND		AACS	AACS T3D02 1	16	F S	AACS	HGA DBAND
E-1270	LBA ABORT COUNT		AACS	AACS N1D35 1	16	F S	AACS	LBA ABORT
E-1276	SPIN RATE DEADBAND		AACS	AACS N1D43 1	16	F S	AACS	SPN DBAND
E-1277	RESYNCHRONIZATION COUNTER		AACS	AACS N1D81 1	16	F S	AACS	RESYNC CT
E-1278	SLEW COUNT		AACS	AACS T2D10 1	16	F S	AACS	SLEW COUNT

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
 AACS - ATTITUDE AND ARTICULATION CONTROL SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	10-CHAR TITLE
E-1279	SUN AVOIDANCE SLEW COUNT		AACS	AACS N1D30 1	16	F S	AACS SUN AVOID
E-1280	MISSED SLEW TIME (MS)		AACS		16	V S	AACS MISLEW MS
E-1281	MISSED SLEW TIME (LS)		AACS	AACS N1D58 1	16	F S	AACS MISLEW LS
E-1282	MISSED SLEW COUNTER		AACS	AACS T3D09 1	16	F S	AACS MISLEW CT
E-1283	CONFIGURATION FAIL COUNT		AACS	AACS N1D87 1	16	V S	AACS CONFIGFAIL
E-1284	CONFIGURATION READY WORD		AACS	AACS T1D01 1	16	F S	AACS CONREADY
E-1284	One Instance DELETED						
E-1285	SS THRESHOLD MODE		AACS		16	V S	AACS THRSH MODE
E-1288	RANGE 1 CHECKSUM		AACS	AACS N1D84 1	16	F S	AACS CHECKSUM 1
E-1289	RANGE 2 CHECKSUM		AACS	AACS N1D08 1	16	F S	AACS CHECKSUM 2
E-1289				AACS N1D36 1			AACS
E-1289				AACS N1D67 1			AACS
E-1290	SSSR RETURN CODE		AACS		8	V S	AACS SSSR RC
E-1291	DELTA CLOCK SLEW ANGLE		AACS		16	V S	AACS DEL A
E-1292	DELTA CONE SLEW ANGLE		AACS		16	V S	AACS DEL B
E-1293	SBA ENCODER ANGLE (CLOCK)		AACS	AACS T2D08 1	16	F S	AACS SBA POS
E-1294	SAS ENCODER ANGLE (CONE)		AACS	AACS T2D09 1	16	F S	AACS SAS POS
E-1295	S/S I/O ERROR COUNTER		AACS	AACS N1D07 1	16	F S	AACS SS ERR CT
E-1296	WRITE PROTECT LIMITS - ON LINE CPU		AACS	AACS N1D76 1	16	F S	AACS CPU PRIWP
E-1297	WRITE PROTECT LIMITS - OFFLINE CPU		AACS	AACS N1D77 1	16	F S	AACS CPU SECWP
E-1298	WRITE PROTECT LIMITS - ONLINE DMA		AACS	AACS N1D78 1	16	F S	AACS DMA PRIWP
E-1299	WRITE PROTECT LIMITS - OFFLINE DMA		AACS	AACS N1D79 1	16	F S	AACS DMA SECWP
E-1303	TRICKLE MEMORY READOUT ADDRESS		AACS	AACS N2D00 1	16	B S	AACS TMRO ADDR
E-1304	TRICKLE MEMORY READOUT DATA		AACS	AACS N2D01 1	16	F S	AACS TMRO DATA
E-1304				AACS N2D02 1			AACS
E-1304				AACS N2D03 1			AACS
E-1304				AACS N2D04 1			AACS
E-1304				AACS N2D05 1			AACS
E-1304				AACS N2D06 1			AACS

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Table A2.2.8. Engineering Measurements (RJ:all chan - 11/01/94)  
 AACS - ATTITUDE AND ARTICULATION CONTROL SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS
E-1304				AACS N2D07	1	AACS
E-1304				AACS N2D08	1	AACS
E-1304				AACS N2D09	1	AACS
E-1304				AACS N2D10	1	AACS
E-1304				AACS N2D11	1	AACS
E-1304				AACS N2D12	1	AACS
E-1304				AACS N2D13	1	AACS
E-1304				AACS N2D14	1	AACS
E-1304				AACS N2D15	1	AACS
E-1304				AACS N2D16	1	AACS
E-1304				AACS N2D17	1	AACS
E-1304				AACS N2D18	1	AACS
E-1304				AACS N2D19	1	AACS
E-1304				AACS N2D20	1	AACS
E-1304				AACS N2D21	1	AACS
E-1304				AACS N2D22	1	AACS
E-1304				AACS N2D23	1	AACS
E-1304				AACS N2D24	1	AACS
E-1304				AACS N2D25	1	AACS
E-1304				AACS N2D26	1	AACS
E-1304				AACS N2D27	1	AACS
E-1304				AACS N2D28	1	AACS
E-1304				AACS N2D29	1	AACS
E-1304				AACS N2D30	1	AACS
E-1304				AACS N2D31	1	AACS
E-1304				AACS N2D32	1	AACS
E-1304				AACS N2D33	1	AACS
E-1304				AACS N2D34	1	AACS
E-1304				AACS N2D35	1	AACS
E-1304				AACS N2D36	1	AACS
E-1304				AACS N2D37	1	AACS
E-1304				AACS N2D38	1	AACS
E-1304				AACS N2D39	1	AACS
E-1304				AACS N2D40	1	AACS
E-1304				AACS N2D41	1	AACS
E-1304				AACS N2D42	1	AACS
E-1304				AACS N2D43	1	AACS
E-1304				AACS N2D44	1	AACS
E-1304				AACS N2D45	1	AACS
E-1304				AACS N2D46	1	AACS
E-1304				AACS N2D47	1	AACS
E-1304				AACS N2D48	1	AACS
E-1304				AACS N2D49	1	AACS
E-1304				AACS N2D50	1	AACS
E-1304				AACS N2D51	1	AACS
E-1304				AACS N2D52	1	AACS
E-1304				AACS N2D53	1	AACS
E-1304				AACS N2D54	1	AACS
E-1304				AACS N2D55	1	AACS
E-1304				AACS N2D56	1	AACS
E-1304				AACS N2D57	1	AACS
E-1304				AACS N2D58	1	AACS

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
AACS - ATTITUDE AND ARTICULATION CONTROL SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	10-CHAR TITLE
E-1304				AACS N2D59	1		AACS
E-1304				AACS N2D60	1		AACS
E-1304				AACS N2D61	1		AACS
E-1304				AACS N2D62	1		AACS
E-1304				AACS N2D63	1		AACS
E-1304				AACS N2D64	1		AACS
E-1304				AACS N2D65	1		AACS
E-1304				AACS N2D66	1		AACS
E-1304				AACS N2D67	1		AACS
E-1304				AACS N2D68	1		AACS
E-1304				AACS N2D69	1		AACS
E-1304				AACS N2D70	1		AACS
E-1304				AACS N2D71	1		AACS
E-1304				AACS N2D72	1		AACS
E-1304				AACS N2D73	1		AACS
E-1304				AACS N2D74	1		AACS
E-1304				AACS N2D75	1		AACS
E-1304				AACS N2D76	1		AACS
E-1304				AACS N2D77	1		AACS
E-1304				AACS N2D78	1		AACS
E-1304				AACS N2D79	1		AACS
E-1304				AACS N2D80	1		AACS
E-1304				AACS N2D81	1		AACS
E-1304				AACS N2D82	1		AACS
E-1304				AACS N2D83	1		AACS
E-1304				AACS N2D84	1		AACS
E-1304				AACS N2D85	1		AACS
E-1304				AACS N2D86	1		AACS
E-1304				AACS N2D87	1		AACS
E-1304				AACS N2D88	1		AACS
E-1304				AACS N2D89	1		AACS
E-1304				AACS N2D90	1		AACS
E-1305	TCON SPN STATE		AACS	AACS N1D75	1	16 F S	AACS TCON SPN
E-1306	TCON UNB STATE		AACS			16 V S	AACS TCON UNB
E-1307	TCON POSZ STATE		AACS			16 V S	AACS TCON POSZ
E-1308	TCON HGA STATE		AACS	AACS N1D88	1	16 F S	AACS TCON HGA
E-1309	TCON BAL STATE		AACS			16 V S	AACS TCON BAL
E-1310	TCON SUN STATE		AACS			16 F S	AACS TCON SUN
E-1311	TCON LAT STATE		AACS			16 V S	AACS TCON LAT
E-1312	TCON PULZ STATE		AACS			16 V S	AACS TCON PULZ
E-1313	TCON NEGZ STATE		AACS			16 V S	AACS TCON NEGZ
E-1314	LBA 1 COUNT MS WORD		AACS			16 V S	AACS LBA1 CT MS

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
AACS - ATTITUDE AND ARTICULATION CONTROL SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	
E-1315	LBA 1 COUNT LS WORD		AACS		16	V S	AACS LBA1 CT LS
E-1316	LAST POWER CODE TIME (MS)		AACS		16	V S	AACS PWR CD MS
E-1317	LAST POWER CODE TIME (LS)		AACS		16	F S	AACS PWR CD LS
E-1318	LAST FAULT CODE TIME (MS)		AACS		16	V S	AACS FALT CD MS
E-1319	LAST FAULT CODE TIME (LS)		AACS	AACS N1D51 1	16	F S	AACS FALT CD LS
E-1320	LAST ALERT CODE TIME (MS)		AACS		16	V S	AACS ALT CD MS
E-1321	LAST ALERT CODE TIME (LS)		AACS		16	F S	AACS ALT CD LS
E-1322	LAST BUS COMMAND TIME (MS)		AACS		16	V S	AACS LASTBC MS
E-1323	LAST BUS COMMAND TIME (LS)		AACS	AACS N1D56 1	16	F S	AACS LASTBC LS
E-1328	TMRO START ADDRESS		AACS	AACS N1D05 1	16	F S	AACS TMRO STRT
E-1329	TMRO END ADDRESS		AACS	AACS N1D06 1	16	F S	AACS TMRO END
E-1330	ON-LINE BUS PARITY ERROR COUNT		AACS	AACS N1D82 1	16	F S	AACS BUS 1 ERR
E-1331	OFF-LINE BUS PARITY ERROR COUNT		AACS	AACS N1D83 1	16	F S	AACS BUS 2 ERR
E-1332	ON-LINE MESSAGE PARITY ERROR COUNT		AACS	AACS N1D00 1	16	F S	AACS MES 1 ERR
E-1333	OFF-LINE MESSAGE PARITY ERROR COUNT		AACS	AACS N1D01 1	16	F S	AACS MES 3 ERR
E-1334	ON-LINE ERROR FLAG		AACS	AACS N1D89 1	16	F S	AACS PRI ER FLG
E-1335	OFF-LINE ERROR FLAG		AACS	AACS N1D90 1	16	F S	AACS SEC ER FLG
E-1336	SBA A VIOLATION COUNT		AACS	AACS T3D10 1	16	F S	AACS SBA A VCT
E-1337	SBA B VIOLATION COUNT		AACS	AACS N1D72 1	16	F S	AACS SBA B VCT
E-1338	SAS A VIOLATION COUNT		AACS	AACS T3D11 1	16	F S	AACS SAS A VCT
E-1339	SAS B VIOLATION COUNT		AACS	AACS N1D74 1	16	F S	AACS SAS B VCT
E-1340	INERTIAL OBSERVER CONVERGENCE COUNTER		AACS	AACS N1D50 1	16	F S	AACS INOB CONV
E-1341	INERTIAL OBSERVER GAIN FACTOR		AACS	AACS N1D24 1	16	F S	AACS INOB GAIN
E-1342	ROTOR ATTITUDE CONVERGENCE COUNTER		AACS	AACS N1D37 1	16	F S	AACS RATT CONN
E-1343	ROTOR ATTITUDE GAIN FACTOR		AACS	AACS N1D22 1	16	F S	AACS RATT GAIN

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
AACS - ATTITUDE AND ARTICULATION CONTROL SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	
E-1344	SUN SHUTTER Y-AXIS WOBBLE ESTIMATE		AACS		16	F S	AACS WOBBLE EST
E-1345	SUN SHUTTER/HIGH VOLTAGE COMMAND		AACS		8	V S	AACS SS/HV CMD
E-1346	SUN SHUTTER/HIGH VOLTAGE STATE		AACS		8	V S	AACS SS/HV ST
E-1347	ENCODER TIME TAG		AACS		16	V S	AACS ENCOD TIME
E-1348	GYRO TIME TAG		AACS		16	V S	AACS GYRO TIME
E-1349	THRUSTER ON HEAT		AACS		16	V S	AACS THR ON HT
E-1350	THRUSTER OFF HEAT		AACS		16	V S	AACS THR OFF HT
E-1351	ISOVALVE COMMAND		AACS		16	V S	AACS ISOV CMD
E-1352	PLUME IMPINGEMENT VIOLATION COUNT		AACS		16	V S	AACS PLM IM VCT
E-1353	RTIO TIME MS WORD		AACS		16	V S	AACS RTIO MS
E-1354	RTIO TIME LS WORD		AACS		16	V S	AACS RTIO LS
E-1359	LBA2 COUNT MS WORD		AACS		16	V S	AACS LBA2 CT MS
E-1360	LBA2 COUNT LS WORD		AACS		16	V S	AACS LBA2 CT LS
E-1361	FLOOD MODE WORD 1		AACS		16	V S	AACS FLD MOD W1
E-1362	FLOOD MODE WORD 2		AACS		16	V S	AACS FLD MOD W2
E-1363	FLOOD MODE WORD 3		AACS		16	V S	AACS FLD MOD W3
E-1364	FLOOD MODE WORD 4		AACS		16	V S	AACS FLD MOD W4
E-1365	FLOOD MODE WORD 5		AACS		16	V S	AACS FLD MOD W5
E-1366	FLOOD MODE WORD 6		AACS		16	V S	AACS FLD MOD W6
E-1370	FAULT COUNTER		AACS	AACS T3D00 1	16	F S	AACS FAULTCOUNT
E-1370	One Instance DELETED						
E-1371	FAULT FLAG #1		AACS	AACS N1D52 1	16	F S	AACS FAULTFLAG1
E-1372	FAULT FLAG #2		AACS	AACS N1D53 1	16	F S	AACS FAULTFLAG2
E-1373	FAULT FLAG #3		AACS	AACS N1D54 1	16	F S	AACS FAULTFLAG3
E-1374	FAULT PROTECTION STATE 1		AACS	AACS N1D39 1	16	F S	AACS FAULTPRO 1

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
AACS - ATTITUDE AND ARTICULATION CONTROL SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	10-CHAR TITLE
E-1375	FAULT PROTECTION STATE 2		AACS	AACS N1D40 1	16	F S	AACS FAULTPRO 2
E-1376	FAULT PROTECTION STATE 3		AACS	AACS N1D41 1	16	F S	AACS FAULTPRO 3
E-1377	ROM SAS ENCODER ANGLE		ROM		16	ROM	AACS SASPOS ROM
E-1378	ROM SBA ENCODER ANGLE		ROM		16	ROM	AACS SBAPOS ROM
E-1379	ROM AS DATA		ROM		16	ROM	AACS AS DAT ROM
E-1380	ROM SPIN PERIOD		ROM		16	ROM	AACS SPN PD ROM
E-1381	ROM AS PULSE WORD		ROM		16	ROM	AACS AS PW ROM
E-1382	ROM MEMORY LOSS ALARM		ROM		16	ROM	AACS MEMLOS ROM
E-1383	BAD PWR CODE ECHO ONLINE COUNT		AACS	AACS N1D55 1	16	V S	AACS EC ONL CT
E-1384	BAD PWR CODE ECHO OFFLINE COUNT		AACS		16	V S	AACS EC OFFL CT
E-1385	PWR CODE TIMED OUT		AACS		16	V S	AACS PC TIMEOUT
E-1386	POWER CODE RESTARTS		AACS	AACS N1D16 1	16	F S	AACS PC RESTART
E-1387	ACCELEROMETER 1 I/O ERROR COUNT		AACS	AACS N1D64 1	16	F S	AACS AC1 ERR CT
E-1388	ACCELEROMETER 2 I/O ERROR COUNT		AACS	AACS N1D65 1	16	F S	AACS AC2 ERR CT
E-1389	GYRO 2 I/O ERROR COUNT		AACS	AACS N1D44 1	16	F S	AACS CY2 ERR CT
E-1390	DEUCE I/O ERROR COUNT		AACS	AACS N1D17 1	16	F S	AACS DCE ERR CT
E-1391	ACE I/O ERROR COUNT		AACS	AACS N1D18 1	16	F S	AACS ACE ERR CT
E-1392	GYRO 1 I/O ERROR COUNT		AACS	AACS N1D34 1	16	F S	AACS GY1 ERR CT
E-1393	A/D I/O ERROR COUNT		AACS	AACS N1D80 1	16	F S	AACS A/D ERR CT
E-1394	LAST ALERT CODE		AACS	AACS Z1S00 1	8	F S	AACS ALRT CODE
E-1395	LAST POWER CODE		AACS	AACS Z2S00 1	8	F S	AACS PWR CODE
E-1396	AACS STATUS #1		AACS	AACS Z1D00 1	16	F S	AACS AACS ST 1
E-1397	AACS STATUS #2		AACS	AACS Z2D00 1	16	F S	AACS AACS ST 2
E-1398	GYRO 1Y RAW DATA		AACS		16	V S	AACS GYRO 1Y
E-1399	GYRO 1X RAW DATA		AACS		16	V S	AACS GYRO 1X
E-1400	GYRO 2Y RAW DATA		AACS		16	V S	AACS GYRO 2Y

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
 AACS - ATTITUDE AND ARTICULATION CONTROL SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS		
E-1401	GYRO 2X RAW DATA		AACS		16	V S	AACS	GYRO 2X
E-1402	ACCELEROMETER 1 RAW DATA		AACS		16	V S	AACS	ACCEL 1
E-1403	ACCELEROMETER 2 RAW DATA		AACS		16	V S	AACS	ACCEL 2
E-1404	ACCUMULATED DELTA-V		AACS		16	V S	AACS	DELTA V
E-1405	SBA TOTAL TORQUE		AACS	AACS N1D04 1	16	V S	AACS	SBA TORQUE
E-1405				AACS N1D33 1			AACS	
E-1405				AACS N1D62 1			AACS	
E-1405				AACS N1D66 1			AACS	
E-1406	SAS TOTAL TORQUE		AACS	AACS N1D09 1	16	V S	AACS	SAS TORQUE
E-1406				AACS N1D38 1			AACS	
E-1406				AACS N1D42 1			AACS	
E-1406				AACS N1D71 1			AACS	
E-1407	SBA POSITION ERROR		AACS		16	V S	AACS	SBA P ERR
E-1408	SAS POSITION ERROR		AACS		16	V S	AACS	SAS P ERR
E-1409	SBA RATE ERROR		AACS		16	V S	AACS	SBA R ERR
E-1410	SAS RATE ERROR		AACS		16	V S	AACS	SAS R ERR
E-1411	SBA FEED-FORWARD TORQUE		AACS		16	V S	AACS	SBA FE TQ
E-1412	SAS FEED-FORWARD TORQUE		AACS		16	V S	AACS	SAS FE TQ
E-1413	CLOCK CONTROLLER TORQUE		AACS		16	V S	AACS	CLK CN TQ
E-1414	CONE CONTROLLER TORQUE		AACS		16	V S	AACS	CON CN TQ
E-1415	ACQUISITION SENSOR E-DATA		AACS		16	B S	AACS	E DATA
E-1416	ACQUISITION SENSOR I/G DATA		AACS		16	B S	AACS	I/G DATA
E-1417	ROTOR ATTITUDE - RA		AACS	AACS N1D19 1	16	B S	AACS	ROTOR RA
E-1418	ROTOR ATTITUDE - DEC		AACS	AACS N1D20 1	16	B S	AACS	ROTOR DEC
E-1419	PLATFORM ATTITUDE - RA		AACS	AACS T2D12 1	16	B S	AACS	PLAT RA
E-1420	PLATFORM ATTITUDE - DEC		AACS	AACS T3D12 1	16	B S	AACS	PLAT DEC
E-1421	ROTOR ATTITUDE - TWIST		AACS	AACS N1D21 1	16	F S	AACS	ROTOR TWST
E-1422	PLATFORM ATTITUDE - TWIST		AACS		16	V S	AACS	PLAT TWST
E-1423	PLATFORM RATE - CONE		AACS		16	V S	AACS	CONE RATE

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
 AACS - ATTITUDE AND ARTICULATION CONTROL SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	10-CHAR TITLE
E-1424	PLATFORM RATE - CROSS CONE		AACS		16	V S	AACS XCONE RATE
E-1425	STAR PULSE INTENSITY		AACS		16	V S	AACS STAR INT
E-1426	STAR PULSE TIME		AACS		16	V S	AACS STAR TIME
E-1427	STAR SCANNER SAMPLE COUNT		AACS		16	V S	AACS STAR COUNT
E-1428	SPIN DETECTOR HIGH RATE RAW DATA		AACS		16	V S	AACS SDHI RAW
E-1429	SPIN DETECTOR LOW RATE RAW DATA		AACS		16	V S	AACS SDLO RAW
E-1430	SPIN DETECTOR HIGH RATE FILTERED SPIN RATE		AACS	AACS N1D46 1	16	F S	AACS SDHI RATE
E-1431	SPIN DETECTOR LOW RATE FILTERED SPIN RATE		AACS	AACS T2D01 1	16	F S	AACS SDLO RATE
E-1432	ACTUAL RANGE 3 CHECKSUM		AACS	AACS N1D68 1	16	F S	AACS CHECKSUM 3
E-1433	ACTUAL RANGE 4 CHECKSUM		AACS	AACS N1D45 1	16	F S	AACS CHECKSUM 4
E-1433				AACS N1D47 1			AACS
E-1433				AACS N1D69 1			AACS
E-1434	SEQID RETURN CODE		AACS		8	V S	AACS SEQID RC
E-1435	BUFFERED STAR POINTER		AACS		8	V S	AACS STAR PTR
E-1436	SEU DETECTION		AACS		16	V S	AACS SEU DETECT
E-1437	TARGET STAR		AACS		8	V S	AACS TARGET STR
E-1438	SEU COUNTER		AACS	AACS N1D73 1	16	V S	AACS SEU COUNT
E-1439	FAULTPAR		AACS	AACS N1D28 1	16	V S	AACS FAULTPAR
E-1440	SUN GATE RAW DATA		AACS		16	V S	AACS SG RAW
E-1441	SEU GATE RAW DATA/LAST VIOLATION		AACS		16	V S	AACS SG RW VIOL
E-1442	PA THRUSTER DISABLE COUNT		AACS		16	V S	AACS PA THR DCT
E-1443	PA INTEG TOGGLE COUNT		AACS		16	V S	AACS PA INT TOG
E-1444	FAULT ADDRESS		AACS	AACS N1D48 1	16	V S	AACS FAULT ADDR
*E-1450	ROTOR ATTITUDE SOURCE	0 to 255	AACS		8		AACS RTR AT AVL
*E-1451	HGA POINTING ERROR (ONE BYTE)	0 to 255	AACS		8		AACS HGA ERR 1B
*E-1452	SPIN RATE ERROR (ONE-BYTE)	-128 to 127	AACS		8		AACS SPN ERR 1B
*E-1453	Y-AXIS WOBBLE ESTIMATE (ONE BYTE)	-128 to 127	AACS		8		AACS WOBEST 1B

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Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
AACS - ATTITUDE AND ARTICULATION CONTROL SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS		10-CHAR TITLE
*E-1454	FUNCTION (ONE BYTE)	00 to FF	AACS		8		AACS	FUNCTION1B
*E-1455	FAULT CODE (ONE BYTE)	00 to FF	AACS		8		AACS	FAULTCD 1B
E-1472 E-1472	STAR SCANNER TEMPERATURE	-78. to 100. Deg	T1B 76	LLM1B N1D20 2 LLM1B N1D47 2	8	F T	AACS AACS	SS T
E-1473	GYRO SENSOR 1 TEMPERATURE	-78. to 100. Deg	T2A 56	LLM2A N1D23 1	8	F T	AACS	GYRO 1 T
E-1474	GYRO SENSOR 2 TEMPERATURE	-78. to 100. Deg	T2A 6B	LLM2A N1D67 1	8	F T	AACS	GYRO 2 T
E-1475	SPIN BEARING ASSEMBLY MECHANICAL TEMPERATURE 1	-78. to 100. Deg	T2A 5A	LLM2A N1D23 2	8	F T	AACS	SBA M T1
E-1476	SPIN BEARING ASSEMBLY MECHANICAL TEMPERATURE 2	-78. to 100. Deg	T2A 7A	LLM2A N1D67 2	8	F T	AACS	SBA M T2
E-1477 E-1477	LINEAR BOOM ACTUATOR 1 TEMPERATURE	-102. to 74. Deg	T1B 68	LLM1B N1D57 1 LLM1B N1D84 1	8	F T	AACS AACS	LBA 1 T
E-1478 E-1478	LINEAR BOOM ACTUATOR 2 TEMPERATURE	-102. to 74. Deg	T1A 68	LLM1A N1D57 1 LLM1A N1D84 1	8	F T	AACS AACS	LBA 2 T
E-1479	SCAN ACTUATOR SUBASSEMBLY MECHANICAL TEMPERATURE	-102. to 74. Deg	T2A 58	LLM2A N1D30 1	8	F T	AACS	SAS M T1
E-1480	SCAN ACTUATOR SUBASSEMBLY MECHANICAL TEMPERATURE	-102. to 74. Deg	T2A 65	LLM2A N1D77 1	8	F T	AACS	SAS M T2
E-1481	ACCELEROMETER TRANSDUCER 1 TEMPERATURE	-102. to 74. Deg	T2A 6C	LLM2A N1D77 2	8	F T	AACS	ACC 1 T
E-1482	ACCELEROMETER TRANSDUCER 2 TEMPERATURE	-102. to 74. Deg	T2A 75	LLM2A N1D30 2	8	F T	AACS	ACC 2 T
E-1483 E-1483	SPIN DETECTOR TEMPERATURE	-102. to 74. Deg	T1A 7A	LLM1A N1D57 2 LLM1A N1D84 2	8	F T	AACS AACS	SPN DET T1
E-1485 E-1485	ACQUISITION SENSOR TEMPERATURE	-102. to 74. Deg	T1B 56	LLM1B N1D57 2 LLM1B N1D84 2	8	F T	AACS AACS	ACQ SENS T
E-1486 E-1486	PA LV/PV VOLT SENSE A	0. to 3. Volt	T1A 4E	LLM1A N1D20 1 LLM1A N1D47 1	8	B A	AACS AACS	VLV VOLT A
E-1487 E-1487	PA LV/PV VOLT SENSE B	0. to 3. Volt	T1B 4E	LLM1B N1D20 1 LLM1B N1D47 1	8	B A	AACS AACS	VLV VOLT B



Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
RPM - RETRO PROPULSION MODULE SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-1585	HELIUM TANK MANIFOLD PRESSURE, PH1	0. to 275. BAR	T1A 1A	LLM1A N1D81 1	8	B A	RPM	PH1
E-1586	OXIDIZER TANK 1 PRESSURE, PO1	0. to 24. BAR	T1A 20	LLM1A N1D81 2	8	B A	RPM	PO1
E-1587 E-1587	OXIDIZER TANK 2 PRESSURE, PO2	0. to 24. BAR	T1B 39	LLM1B T1S00 LLM1B N1D81 1	8	B A	RPM RPM	PO2
E-1588	FUEL TANK 1 PRESSURE, PF1	0. to 24. BAR	T1A 44	LLM1A N1D44 1	8	B A	RPM	PF1
E-1589 E-1589	FUEL TANK 2 PRESSURE, PF2	0. to 24. BAR	T1B 20	LLM1B T1S07 LLM1B N1D81 2	8	B A	RPM RPM	PF2
E-1590	OXIDIZER FEED LINE PRESSURE, PO3	0. to 24. BAR	T1B 2C	LLM1B N1D44 1	8	B A	RPM	PO3
E-1591	FUEL FEED LINE PRESSURE, PF3	0. to 24. BAR	T1A 39	LLM1A N1D44 2	8	B A	RPM	PF3
E-1594	400 N ENGINE CHAMBER PRESSURE, PE1	0. to 27.5 BAR	T1B 49		8	B A	RPM	400N ENG P
E-1595	HELIUM TANK #1 TEMPERATURE, TH1	-102. to 74. Deg	T1B 51	LLM1B N1D44 2	8	B T	RPM	HE TANK1 T
E-1596	HELIUM TANK #2 TEMPERATURE, TH2	-102. to 74. Deg	T1A 71	LLM1A N1D13 1	8	B T	RPM	HE TANK2 T
E-1597	FUEL TANK #1 OUTLET TEMPERATURE, TF1	-102. to 74. Deg	T1B 78	LLM1B N1D13 1	8	B T	RPM	TF1
E-1598	FUEL TANK #2 OUTLET TEMPERATURE, TF2	-102. to 74. Deg	T1A 78	LLM1A N1D13 2	8	B T	RPM	TF2
E-1599	OXIDIZER TANK #1 OUTLET TEMPERATURE, TO1	-102. to 74. Deg	T1B 74	LLM1B N1D13 2	8	B T	RPM	TO1
E-1600	OXIDIZER TANK #2 OUTLET TEMPERATURE, TO2	-102. to 74. Deg	T1A 5C	LLM1A N1D67 1	8	B T	RPM	TO2
E-1601	-Z1B THRUSTER TEMPERATURE, TT3	-50. to 586. Deg	T1B 7C	LLM1B T1S03	8	B T	RPM	Z1B
E-1602	CLUSTER 2 TEMPERATURE 1, TC3	-98. to 100. Deg	T1A 6C	LLM1A T1S04	8	B T	RPM	TC3
E-1603	OXIDIZER TANK 1 INLET TEMPERATURE, TO4	-102. to 74. Deg	T1A 74	LLM1A N1D67 2	8	B T	RPM	TO4
E-1604	FUEL TANK 1 INLET TEMPERATURE, TF4	-102. to 74. Deg	T1B 55	LLM1B N1D67 1	8	B T	RPM	TF4
E-1605	-S1B THRUSTER TEMPERATURE, TT11	-50. to 586. Deg	T1B 64	LLM1B N1D67 2	8	B T	RPM	S1B
E-1606	P2A THRUSTER TEMPERATURE, TT8	-50. to 586. Deg	T1A 64		8	B T	RPM	P2A
E-1607	P1A THRUSTER TEMPERATURE, TT6	-52. to 555. Deg	T1A 53		8	B T	RPM	+P1A
E-1608	L1B THRUSTER TEMPERATURE, TT7	-52. to 555. Deg	T1B 52	LLM1B T2S08	8	B T	RPM	L1B
E-1609	+S2B THRUSTER TEMPERATURE, TT13	-52. to 555. Deg	T1B 63	LLM1B T1S06	8	B T	RPM	S2B
E-1610	+S2A THRUSTER TEMPERATURE, TT12	-52. to 555. Deg	T1A 63	LLM1A T1S05	8	B T	RPM	S2A

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Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
RPM - RETRO PROPULSION MODULE SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-1611	400 N INJECTOR TEMPERATURE, TE1	-82. to 201. Deg	T1A 73		8	F T	RPM	400N INJ T
E-1612	400 N JACKET TEMPERATURE, TE2	-82. to 201. Deg	T1B 60		8	F T	RPM	400N JKT T
E-1613	CLUSTER 1 TEMPERATURE 2, TC2	-225. to 121. Deg	T1A 51	LLM1A T1S01	8	B T	RPM	TC2
E-1614	CLUSTER 2 TEMPERATURE 2, TC4	-225. to 121. Deg	T1B 72	LLM1B T2S07	8	B T	RPM	TC4
E-1615	-S1A THRUSTER TEMPERATURE, TT10	-50. to 586. Deg	T1A 62	LLM1A T1S06	8	B T	RPM	S1A
E-1616	-Z2B THRUSTER TEMPERATURE, TT5	-50. to 586. Deg	T1B 7B	LLM1B T1S01	8	B T	RPM	Z2B
E-1617	CLUSTER 1 TEMPERATURE 1, TC1	-98. to 100. Deg	T1B 6A	LLM1B T2S00	8	B T	RPM	TC1
E-1618	-Z1A THRUSTER TEMPERATURE, TT2	-50. to 586. Deg	T1A 5A		8	B T	RPM	-Z1A TT02
E-1619	-Z2A THRUSTER TEMPERATURE, TT4	-50. to 586. Deg	T1A 66	LLM1A T1S10	8	B T	RPM	Z2A
E-1620	L2B THRUSTER TEMPERATURE, TT9	-52. to 555. Deg	T1B 71		8	B T	RPM	+L2B TT09

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Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
TEMP - TEMPERATURE CONTROL SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-1625 E-1625	PLUME SHIELD TEMPERATURE	-250. to 580. Deg	T2A 60	LLM2A N1D58 2 LLM2A N1D85 2	8	F T	TEMP TEMP	PL SN TEMP

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
DEV - DEVICES SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
*E-0067	PPS/DEV/PRB/UVS STATUS WORD		T2A 01	LLM2A N1D40 2	8	V D	*DEV	P/D/P ST 1
*E-0068	PPS/DEV/PRB STATUS WORD		T2B 01		8	V D	*DEV	P/D/P ST 2
E-1635	PPS/DEV/SXA STATUS		T1A 02		8	B D	DEV	DEV/SXA ST
E-1636	PPS/DEV/SXA/DDS STATUS		T1B 02	LLM1B N1D23 2	8	B D	DEV	DEV/SXA ST
E-1637	+X RTG BOOM ACTUATOR TEMPERATURE 1	-102. to 74. Deg	T1B 7D	LLM1B N1D53 1	8	F T	DEV	+X RTG AT1
E-1637				LLM1B N1D69 1			DEV	
E-1637				LLM1B N1D71 1			DEV	
E-1638	-X RTG BOOM ACTUATOR TEMPERATURE 1	-102. to 74. Deg	T1A 69	LLM1A N1D53 1	8	F T	DEV	-X RTG AT1
E-1638				LLM1A N1D69 1			DEV	
E-1638				LLM1A N1D71 1			DEV	
E-1639	MUTATION DAMPER TEMPERATURE 1	-102. to 74. Deg	T1A 58	LLM1A N1D53 2	8	F T	DEV	NDA T1
E-1639				LLM1A N1D69 2			DEV	
E-1639				LLM1A N1D71 2			DEV	
E-1640	MUTATION DAMPER TEMPERATURE 2	-102. to 74. Deg	T1B 54	LLM1B N1D53 2	8	F T	DEV	NDA T2
E-1640				LLM1B N1D69 2			DEV	
E-1640				LLM1B N1D71 2			DEV	
E-1641	SCIENCE BOOM ACTUATOR TEMPERATURE 1	-102. to 74. Deg	T1B 65		8	F T	DEV	S BM A T1
E-1642	SCIENCE BOOM ACTUATOR TEMPERATURE 2	-102. to 74. Deg	T1A 70		8	F T	DEV	S BM A T2
E-1643	MAG BOOM RATE LIMITER TEMPERATURE 1	-102. to 74. Deg	T1A 52		8	F T	DEV	MGBM RL T1
E-1644	MAG BOOM RATE LIMITER TEMPERATURE 2	-102. to 74. Deg	T1B 58		8	F T	DEV	MGBM RL T2
E-1645	+X RTG BOOM ACTUATOR TEMPERATURE 2	-102. to 74. Deg	T1A 65	LLM1A N1D16 1	8	F T	DEV	+X RTG AT2
E-1645				LLM1A N1D32 1			DEV	
E-1645				LLM1A N1D34 1			DEV	
E-1646	-X RTG BOOM ACTUATOR TEMPERATURE 2	-102. to 74. Deg	T1B 75	LLM1B N1D16 1	8	F T	DEV	-X RTG AT2
E-1646				LLM1B N1D32 1			DEV	
E-1646				LLM1B N1D34 1			DEV	
E-1647	RELAY ANTENNA DEPLOYMENT MOTOR TEMPERATURE	-102. to 74. Deg	T2A 69	LLM2A N1D40 1	8	F T	DEV	RAD MOTR T
E-1648	LGA-2 MOTOR TEMPERATURE 1	-102. to 74. Deg	T1A 56		8	F T	DEV	LGA2 M T1
E-1649	LGA-2 MOTOR TEMPERATURE 2	-102. to 74. Deg	T1B 53		8	F T	DEV	LGA2 M T2

\*Repeated from PPS

S/S 177 2013

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
DMS - DATA MANAGEMENT SUB SYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-1650 E-1650 E-1650	DMS STATUS DATA A		T1A 0C	LLM1A S1S00 LLM1A S1S01 LLM1A S1S02	8	F D	DMS DMS DMS	DMS ST A
E-1651 E-1651 E-1651	DMS STATUS DATA B		T1B 0C	LLM1B S1S00 LLM1B S1S01 LLM1B S1S02	8	F D	DMS DMS DMS	DMS ST B
E-1652 E-1652 E-1652 E-1652 E-1652 E-1652	DMS DC MOTOR CURRENT	0. to 300. MA	T1A 30	LLM1A T2S03 LLM1A T2S04 LLM1A T2S05 LLM1A T2S09 LLM1A T2S10 LLM1A T2S11	8	F A	DMS DMS DMS DMS DMS DMS	DC MTR I
E-1653 E-1653	DMS TRANSPORT PRESSURE	0. to 30. PSI	T1B 30	LLM1B T2S02 LLM1B T2S12	8	F A	DMS DMS	XPORT P

S/S 225 2017

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
 SXA - S/X-BAND ANTENNA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
*E-1635	PPS/DEV/SXA STATUS		T1A 02		8	B D	*SXA	DEV/SXA ST
*E-1636	PPS/DEV/SXA/DDS STATUS		T1B 02	LLM1B N1D23 2	8	B D	*SXA	DEV/SXA ST
E-1657	HGA MOTOR TEMPERATURE A	-225. to 121. Deg	T1A 60		8	F T	SXA	HGA MTR TA
E-1658	HGA S-BAND FEED TEMPERATURE	-225. to 121. Deg	T1B 70		8	F T	SXA	HGA S FHT
E-1659	HGA X-BAND FEED HORN TEMPERATURE	-225. to 121. Deg	T1B 50		8	F T	SXA	HGA X FHT
E-1660	LGA BODY TEMPERATURE	-225. to 121. Deg	T1A 50	LLM1A N1D20 2	8	F T	SXA	LGA BODY T
E-1660				LLM1A N1D47 2			SXA	

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\*Repeated from DEV

S/S 179 2017

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
SXA - S/X-BAND ANTENNA SUBSYSTEM

S/S # 2023

NUMBER	MEASUREMENT TITLE	PWS - PLASMA WAVE SUBSYSTEM			NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
		ENGINEERING RANGE	TREE POS	COMM POS				
E-1675	SEARCH COIL PREAMPLIFIER TEMPERATURE	-94. to 122. Deg	T1A 75	LLM1A N1D23 1	8	F T	PWS	PWS SCP T
E-1676	MAIN ELECTRONICS TEMPERATURE	-78. to 100. Deg	T1B 7A	LLM1B N1D23 1	8	F T	PWS	PWS ELC T

S/S 180 2024

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
EUV - EXTREME ULTRAVIOLET SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-1680 E-1680	EUV ANALOG MULTIPLEXED HOUSEKEEPING	0 to 3 Volt	T1A 2C	LLM1A S1S04 LLM1A N1D30 2	8	F A	EUV EUV	EUV ANALOG
E-1681	EUV ELECTRONICS TEMPERATURE	-102. to 74. Deg	T1A 72	LLM1A N1D30 1	8	F T	EUV	EUV ELEC



S/S 181 2025

Table A2.2.8. Engineering Measurements (Rj:all\_chan - 11/01/94)  
 EPD - ENERGETIC PARTICLE DETECTION SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
#S-1673 S-1673	EPD STATUS		CDS BUS	LLM1A N1D29 2 LLM1B N1D29 2	8	? ?	EPD EPD	EP STATUS
E-1690	LEMMS TELESCOPE TEMPERATURE	-102. to 74. Deg	T1A 59	LLM1A N1D60 2	8	F T	EPD	EP LEMMS T
E-1691	CMS TELESCOPE TEMPERATURE	-128. to 48. Deg	T1A 79	LLM1A N1D60 1	8	F T	EPD	EP CMS T
E-1692	MAIN ELECTRONICS COVER TEMPERATURE	-102. to 74. Deg	T1B 69	LLM1B N1D60 2	8	F T	EPD	EP ELECT T
E-1693	MOTOR LEG TEMPERATURE	-128. to 48. Deg	T1B 5C	LLM1B N1D60 1	8	F T	EPD	EP MOTOR T

S/S 182 2027

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
PPR - PHOTOPOLARIMETER RADIOMETER SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-1715 E-1715	PRISM/DETECTOR ASSEMBLY TEMPERATURE	-102. to 74. Deg	T2A 59	LLM2A N1D21 1 LLM2A N1D48 1	8	F T	PPR PPR	PR DET T
E-1716 E-1716	MAIN ELECTRONICS TEMPERATURE	-102. to 74. Deg	T2A 79	LLM2A N1D21 2 LLM2A N1D48 2	8	F T	PPR PPR	PR ELEC T

S/S 183 2028

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
HIC - HEAVY ION COUNTER SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-1720	HIC ANALOG MULTIPLEXED HOUSEKEEPING	0 to 3 Volt	T1B 3D	LLM1B S1S04	8	F A	HIC	HIC AN MUX
E-1722	HIC TELESCOPE TEMPERATURE	-102. to 74. Deg	T1B 62	LLM1B N1D30 1	8	F T	HIC	HIC TELE T

S/S 184 2029

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
DDS - DUST DETECTOR SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
*E-1636	PPS/DEV/SXA/DDS STATUS		T1B 02	LLM1B N1D23 2	8	B D	*DDS	DEV/SXA ST
E-1740	SENSOR TEMPERATURE	-102. to 74. Deg	T1A 5D	LLM1A N1D23 2	8	F T	DDS	DDS SENS T

\*Repeated from DEV

S/S 185 2032

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
PLS - PLASMA SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-1750	VELOCITY DISTRIBUTION ANALYZER TEMPERATURE	-102. to 74. Deg	T1A 6D	LLM1A N1D86 1	8	F T	PLS	PLS VEL T
E-1751	COMPOSITION ANALYZER TEMPERATURE	-102. to 74. Deg	T1B 5D	LLM1B N1D86 1	8	F T	PLS	PLS COMP T
E-1752	HIGH VOLTAGE POWER SUPPLY TEMPERATURE	-102. to 74. Deg	T1A 7C	LLM1A N1D86 2	8	F T	PLS	PLS HVPS T
E-1753	DATA HANDLING AND CONTROL TEMPERATURE	-102. to 74. Deg	T1B 6C	LLM1B N1D86 2	8	F T	PLS	PLS DHC T

S/S 186 2034

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
UVS - ULTRAVIOLET SPECTROMETER SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
*E-0067	PPS/DEV/PRB/UVS STATUS WORD		T2A 01	LLM2A N1D40 2	8	V D	*UVS	P/D/P ST 1
E-1790 E-1790	TC-TRANSDUCER TEMPERATURE	-102. to 74. Deg	T2A 64	LLM2A N1D11 1 LLM2A N1D75 1	8	V D	UVS UVS	UVS TC T

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\*Repeated from PPS

S/S 187 2035

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
MAG - MAGNETOMETER SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-1860	INBOARD SENSOR TEMPERATURE	-87. to 166. Deg	T1A 55	LLM1A N1D12 1	8	F T	MAG	MAG IB T
E-1861	OUTBOARD SENSOR TEMPERATURE	-87. to 166. Deg	T1B 79	LLM1B N1D12 1	8	F T	MAG	MAG OB T
E-1862	ADC TEMPERATURE	-78. to 100. Deg	T1A 68	LLM1A N1D12 2	8	F T	MAG	MAG ADC T
E-1863	ANALOG ELECTRONICS TEMPERATURE	-78. to 100. Deg	T1B 57	LLM1B N1D12 2	8	F T	MAG	MAG ELEC T
#S-1844 S-1844	MAG ZO AVERAGE/Z SENSOR OFFSET		CDS BUS	LLM1A N1D03 1 LLM1B N1D03 1	16	? ?	MAG MAG	MAG Z AVER
#S-1846 S-1846	MAG YO AVERAGE/Y SENSOR OFFSET		CDS BUS	LLM1A N1D40 1 LLM1B N1D40 1	16	? ?	MAG MAG	MAG Y AVER
#S-1848 S-1848	MAG XO AVERAGE/X SENSOR OFFSET		CDS BUS	LLM1A N1D77 1 LLM1B N1D77 1	16	? ?	MAG MAG	MAG X AVER

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Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
SSI - SOLID STATE IMAGE SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-1880 E-1880 E-1880	FRONT OPTICS TEMPERATURE	-102. to 74. Deg	T2A 68	LLM2A N1D54 1 LLM2A N1D55 1 LLM2A N1D73 1	8	F T	SSI SSI SSI	SSI F OP T
E-1881 E-1881 E-1881	REAR OPTICS TEMPERATURE	-102. to 74. Deg	T2A 74	LLM2A N1D54 2 LLM2A N1D55 2 LLM2A N1D73 2	8	F T	SSI SSI SSI	SSI R OP T
E-1882 E-1882 E-1882	RADIATOR PLATE TEMPERATURE	-206. to 50. Deg	T2A 71	LLM2A N1D17 1 LLM2A N1D18 1 LLM2A N1D36 1	8	F T	SSI SSI SSI	SSI R PL T
E-1883 E-1883 E-1883	CCD HOUSING TEMPERATURE	-102. to 74. Deg	T2A 55	LLM2A N1D17 2 LLM2A N1D18 2 LLM2A N1D36 2	8	F T	SSI SSI SSI	SSI HSG T
E-1884 E-1884 E-1884	REAR ELECTRONICS TEMPERATURE	-102. to 74. Deg	T2A 6D	LLM2A N1D71 1 LLM2A N1D72 1 LLM2A N1D90 1	8	F T	SSI SSI SSI	SSI R EL T
E-1885 E-1885 E-1885	FRONT ELECTRONICS TEMPERATURE	-102. to 74. Deg	T2A 5D	LLM2A N1D71 2 LLM2A N1D72 2 LLM2A N1D90 2	8	F T	SSI SSI SSI	SSI F EL T
#S-1840 S-1840 S-1840	SSI STATE VECTOR STATUS BYTE		CDS BUS	LLM2B N1D17 2 LLM2B N1D18 2 LLM2B N1D36 2	8	? ?	SSI SSI SSI	SSI ST VEC
#S-1841 S-1841 S-1841	SSI IMAGE MODE/COMPRESSOR STATUS BYTE		CDS BUS	LLM2B N1D15 1 LLM2B N1D51 1 LLM2B N1D70 1	8	? ?	SSI SSI SSI	SSI IM/CMP
#S-1842 S-1842 S-1842	SSI ACTUAL FILTER/WATCHDOG TRIP STATUS BYTE		CDS BUS	LLM2B N1D15 2 LLM2B N1D51 2 LLM2B N1D70 2	8	? ?	SSI SSI SSI	SSI FI/WDT
S-1881 S-1881 S-1881	SSI INPUT CURRENT		CDS BUS	LLM2B N1D71 1 LLM2B N1D72 1 LLM2B N1D90 1	8	? ?	SSI SSI SSI	SSI IN CUR
S-1886 S-1886 S-1886	SSI +5 VOLTAGE		CDS BUS	LLM2B N1D71 2 LLM2B N1D72 2 LLM2B N1D90 2	8	? ?	SSI SSI SSI	SSI +5V

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Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
SSI - SOLID STATE IMAGE SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
S-1888 S-1888 S-1888	SSI CCD HEATER VOLTAGE		CDS BUS	LLM2B N1D34 1 LLM2B N1D35 1 LLM2B N1D53 1	8	? ?	SSI SSI SSI	CCD HEAT V
S-1890 S-1890 S-1890	SSI BASELINE CORR VOLTAGE		CDS BUS	LLM2B N1D34 2 LLM2B N1D35 2 LLM2B N1D53 2	8	? ?	SSI SSI SSI	SSI BASE V
S-1894 S-1894 S-1894	SSI CCD COARSE TEMPERATURE		CDS BUS	LLM2B N1D16 1 LLM2B N1D88 1 LLM2B N1D89 1	8	? ?	SSI SSI SSI	CCD T CORS
S-1912 S-1912 S-1912	SSI PICTURE COUNT		CDS BUS	LLM2B N1D16 2 LLM2B N1D88 2 LLM2B N1D89 2	8	? ?	SSI SSI SSI	SSI PICCNT
S-1915 S-1915 S-1915	SSI PROGRAMMED MEMORY READOUT WORD		CDS BUS	LLM2B N1D17 1 LLM2B N1D18 1 LLM2B N1D36 1	8	? ?	SSI SSI SSI	SSI PMEMWD
#S-1918 S-1918 S-1918	SSI RAM CHECKSUM		CDS BUS	LLM2B N1D54 1 LLM2B N1D55 1 LLM2B N1D73 1	8	? ?	SSI SSI SSI	SSI RAMCHK
#S-1919 S-1919 S-1919	SSI ROM CHECKSUM		CDS BUS	LLM2B N1D54 2 LLM2B N1D55 2 LLM2B N1D73 2	8	? ?	SSI SSI SSI	SSI ROMCHK

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Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
NIMS - NEAR INFRARED MAGNETOMETER SPECTROMETER

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-1910 E-1910 E-1910	FOCAL PLANE TEMPERATURE	-206. to 50. Deg	T2A 51	LLM2A N1D34 1 LLM2A N1D35 1 LLM2A N1D53 1	8	F T	NIMS NIMS NIMS	NIM FPA R
E-1911 E-1911 E-1911	RADIATOR SHIELD TEMPERATURE	-206. to 50. Deg	T2A 70	LLM2A N1D34 2 LLM2A N1D35 2 LLM2A N1D53 2	8	F T	NIMS NIMS NIMS	NIM SHLD T
E-1912 E-1912 E-1912	TELESCOPE TEMPERATURE	-206. to 50. Deg	T2A 62	LLM2A N1D16 1 LLM2A N1D88 1 LLM2A N1D89 1	8	F T	NIMS NIMS NIMS	NIM TEL T
E-1913 E-1913 E-1913	GRATING MECHANISM TEMPERATURE	-206. to 50. Deg	T2A 52	LLM2A N1D16 2 LLM2A N1D88 2 LLM2A N1D89 2	8	F T	NIMS NIMS NIMS	NIM GRAT T
E-1914 E-1914 E-1914	OPTICAL CHOPPER TEMPERATURE	-206. to 50. Deg	T2A 63	LLM2A N1D15 1 LLM2A N1D51 1 LLM2A N1D70 1	8	F T	NIMS NIMS NIMS	NIM CHOP T
E-1915 E-1915 E-1915	ELECTRONICS CHASSIS TEMPERATURE	-206. to 74. Deg	T2A 54	LLM2A N1D15 2 LLM2A N1D51 2 LLM2A N1D70 2	8	F T	NIMS NIMS NIMS	NIM ELEC T
E-1916 E-1916 E-1916	FLEXPRINT TEMPERATURE	-78. to 100. Deg	T2A 5E	LLM2A N1D14 1 LLM2A N1D33 1 LLM2A N1D69 1	8	F T	NIMS NIMS NIMS	NIM FLEX R
S-1924 S-1924 S-1924 S-1924	NIMS POWER SUPPLY CURRENT		CDS BUS	LLM2A N1D63 1 LLM2B N1D23 1 LLM2B N1D41 1 LLM2B N1D79 1	8	? ?	NIMS NIMS NIMS NIMS	NIM PS I
S-1925 S-1925 S-1925 S-1925	NIMS MIRROR DRIVE CURRENT		CDS BUS	LLM2A N1D63 2 LLM2B N1D23 2 LLM2B N1D41 2 LLM2B N1D79 2	8	? ?	NIMS NIMS NIMS NIMS	NIM MIR I
S-1926 S-1926 S-1926 S-1926	NIMS GRATING DRIVE CURRENT		CDS BUS	LLM2A N1D80 1 LLM2B N1D04 1 LLM2B N1D42 1 LLM2B N1D77 1	8	? ?	NIMS NIMS NIMS NIMS	NIM GRAT I
S-1927 S-1927 S-1927 S-1927	NIMS REFERENCE VOLTAGE		CDS BUS	LLM2A N1D80 2 LLM2B N1D04 2 LLM2B N1D42 2 LLM2B N1D77 2	8	? ?	NIMS NIMS NIMS NIMS	NIM REF V

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Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
NIMS - NEAR INFRARED MAGNETOMETER SPECTROMETER

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
S-1929	NIMS HARDWARE STATUS		CDS BUS	LLM2A N1D43 1	8	? ?	NIMS	NIMHWSTAT
S-1929				LLM2B N1D05 1			NIMS	
S-1929				LLM2B N1D40 1			NIMS	
S-1929				LLM2B N1D58 1			NIMS	
S-1930	NIMS SOFTWARE STATUS		CDS BUS	LLM2A N1D43 2	8	? ?	NIMS	NIMSWSTAT
S-1930				LLM2B N1D05 2			NIMS	
S-1930				LLM2B N1D40 2			NIMS	
S-1930				LLM2B N1D58 2			NIMS	

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Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
SCAS - SCIENCE CALIBRATION SUBSYSTEM

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-1945	RCT-NIMS TEMPERATURE-PT	-102. to 74. Deg	T2A 7D	LLM2A N1D05 1	8	F T	SCAS	NMSRCT PIT
E-1946	RCT-NIMS TEMPERATURE-NI	-48. to 47. Deg	T2A 78		8	F T	SCAS	NMSRCT NIT
E-1947	RCT-NIMS REFERENCE R	999.90 to 999.90TBD	T2A 7C	LLM2A N1D05 2	8	F T	SCAS	NMSRCT R
E-1948	PCT TEMPERATURE	-102. to 74. Deg	T1B 5A		8	F T	SCAS	PCT T

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Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
XSDC - X-BAND TO S-BAND DOWNCONVERTER

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-1980	X/S DC LO VOLTAGE	TBD to TBD	TBD	T1A 32	8	F A	XSDC	XSDC LO V
E-1981	X/S DC POWER SUPPLY VOLTAGE	0. to 9. Volt		T1B 32	8	F A	XSDC	XSDC POW V
E-1982	X/S DC TEMPERATURE	-78. to 100. Deg		T1B 68	8	F T	XSDC	XSDC TEMP

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Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
RRH - RADIO RELAY HARDWARE

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
*E-1950	PROBE/RRH STATUS WORD 1		T2A 02		8	F D	*RRH	P/R/IM ST1
*E-1951	PROBE/RRH STATUS WORD 2		T2B 02		8	F D	*RRH	P/R/IM ST2
E-1960	RRA POSITION POT 1	0. to 115. Deg	T2A 4B		8	F A	RRH	RR POT1POS
E-1961	RRA POSITION POT 2	0. to 115. Deg	BDM 00		8	A	RRH	RR POT2POS
E-1965	RECEIVE 1 TEMPERATURE	-78. to 100. Deg	T2A 76		8	F T	RRH	RR RCVR1 T
E-1966	RECEIVE 2 TEMPERATURE	-78. to 100. Deg	T2A 6A		8	F T	RRH	RR RCVR2 T
E-1967	OSCILLATOR 1 TEMPERATURE	-78. to 100. Deg	T2A 57		8	F T	RRH	RR OSC 1 T
E-1968	OSCILLATOR 2 TEMPERATURE	-78. to 100. Deg	T2A 7E		8	F T	RRH	RR OSC 2 T

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\*Repeat from PROBE

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Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
OPE - ORBITER PURGE EQUIPMENT

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF BITS	FLAGS	SUB SYSTEM	10-CHAR TITLE
E-1970	OPE PRESSURE 1	0. to 50. PSIA	T2A 31		8	F A	OPE	OPE PRES 1

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)  
PRB - PROBE EQUIPMENT

NUMBER	MEASUREMENT TITLE	ENGINEERING RANGE	TREE POS	COMM POS	NO. OF	FLAGS	SUB	10-CHAR
E-1950	PROBE/RRH STATUS WORD 1		T2A 02		8	F D	PRB	P/R/IM ST1
E-1951	PROBE/RRH STATUS WORD 2		T2B 02		8	F D	PRB	P/R/IM ST2
E-1952	COMMUNICATIONS SHELF TEMPERATURE	-102. to 74. Deg	T2A 50		8	F T	PRB	COM SHLF T
E-1953	SHELF TEMPERATURE 1	-102. to 74. Deg	T2A 61		8	F T	PRB	SHELF T 1
E-1954	SHELF TEMPERATURE 2	-102. to 74. Deg	T2A 72		8	F T	PRB	SHELF T 2



Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)

## Phase 2 Spare Fixed Decom Commutator Slots

Spare Commutator Slot	LLM1B N1D00 1	8
Spare Commutator Slot	LLM1B N1D00 2	8
Spare Commutator Slot	LLM1B N1D06 1	8
Spare Commutator Slot	LLM1B N1D06 2	8
Spare Commutator Slot	LLM1B N1D30 2	8
Spare Commutator Slot	LLM1B N1D73 1	8
Spare Commutator Slot	LLM1B N1D73 2	8
Spare Commutator Slot	LLM1B N1D89 1	8
Spare Commutator Slot	LLM1B N1D89 2	8
Spare Commutator Slot	LLM2A N1D03 1	8
Spare Commutator Slot	LLM2A N1D03 2	8
Spare Commutator Slot	LLM2A N1D20 1	8
Spare Commutator Slot	LLM2A N1D20 2	8
Spare Commutator Slot	LLM2A N1D37 1	8
Spare Commutator Slot	LLM2A N1D37 2	8
Spare Commutator Slot	LLM2A N1D57 1	8
Spare Commutator Slot	LLM2A N1D57 2	8
Spare Commutator Slot	LLM2A N1D74 1	8
Spare Commutator Slot	LLM2A N1D74 2	8
Spare Commutator Slot	LLM2B N1D03 1	8
Spare Commutator Slot	LLM2B N1D03 2	8
Spare Commutator Slot	LLM2B N1D09 1	8
Spare Commutator Slot	LLM2B N1D11 1	8
Spare Commutator Slot	LLM2B N1D11 2	8
Spare Commutator Slot	LLM2B N1D14 1	8
Spare Commutator Slot	LLM2B N1D20 1	8
Spare Commutator Slot	LLM2B N1D20 2	8
Spare Commutator Slot	LLM2B N1D21 1	8
Spare Commutator Slot	LLM2B N1D21 2	8
Spare Commutator Slot	LLM2B N1D25 1	8
Spare Commutator Slot	LLM2B N1D25 2	8
Spare Commutator Slot	LLM2B N1D30 1	8
Spare Commutator Slot	LLM2B N1D30 2	8
Spare Commutator Slot	LLM2B N1D31 1	8
Spare Commutator Slot	LLM2B N1D31 2	8
Spare Commutator Slot	LLM2B N1D33 1	8
Spare Commutator Slot	LLM2B N1D37 1	8
Spare Commutator Slot	LLM2B N1D37 2	8
Spare Commutator Slot	LLM2B N1D43 1	8
Spare Commutator Slot	LLM2B N1D43 2	8
Spare Commutator Slot	LLM2B N1D46 1	8
Spare Commutator Slot	LLM2B N1D46 2	8
Spare Commutator Slot	LLM2B N1D48 1	8
Spare Commutator Slot	LLM2B N1D48 2	8
Spare Commutator Slot	LLM2B N1D57 1	8
Spare Commutator Slot	LLM2B N1D57 2	8
Spare Commutator Slot	LLM2B N1D63 1	8
Spare Commutator Slot	LLM2B N1D63 2	8
Spare Commutator Slot	LLM2B N1D67 1	8
Spare Commutator Slot	LLM2B N1D67 2	8
Spare Commutator Slot	LLM2B N1D68 1	8

Table A2.2.8. Engineering Measurements (RJ:all\_chan - 11/01/94)

Phase 2 Spare Fixed Decom Commutator Slots (Cont)

Spare Commutator Slot	LLM2B N1D68	2	8
Spare Commutator Slot	LLM2B N1D69	1	8
Spare Commutator Slot	LLM2B N1D74	1	8
Spare Commutator Slot	LLM2B N1D74	2	8
Spare Commutator Slot	LLM2B N1D75	1	8
Spare Commutator Slot	LLM2B N1D75	2	8
Spare Commutator Slot	LLM2B N1D80	1	8
Spare Commutator Slot	LLM2B N1D80	2	8
Spare Commutator Slot	LLM2B N1D83	1	8
Spare Commutator Slot	LLM2B N1D83	2	8
Spare Commutator Slot	LLM2B N1D85	1	8
Spare Commutator Slot	LLM2B N1D85	2	8