Bailout during Burn (COL. Anom. # 4/5)

INPUT DATA

VERIFICATION NO : C4.18A TEST TAPE : WEDB RUN : 6 AGC PROG : COLOSSUS237

VEHICLE CONFIGURATION

MODE : 1 CSM

MASS
26518.82537

ORBIT - ACTIVE VEHICLE

MODE : 1 R,V-REFERENCE COORD

TIME
1551.000000

X	Y	Z	VX	VY	VZ
6043233.570	2377189.620	-1351033.440	-3191.830000	6145.517000	-3501.810000

PLATFORM ORIENTATION

MODE : 2 NOMINAL

ΔTIME
.0000000000

VEHICLE ATTITUDE

MODE : 2 NOMINAL

ΔTIME
.0000000000

ORBIT - PASSIVE VEHICLE

MODE : 1 R,V-REFERENCE COORD

X	Y	Z	VX	VY	VZ
6047567.910	2415654.150	-1372715.710	-3228.602000	6112.715000	-3482.747000

INITIAL VALUES

ACTIVE VEHICLE - CSM TIME 1638.390000

STATE VECTOR - CM

X	Y	Z	Vx	VY	VZ
5733260.000	2900910.000	-1649454.000	-3895.957041	5829.937696	-3321.871567

STATE VECTOR - LM

X	Y	Z	Vx	VY	VZ
5734672.000	2936448.000	-1669436.000	-3926.076651	5795.887709	-3302.124500

RELATIVE POSITION

RANGE	AZIMUTH	ELEVATION	RANGE RATE
40794.24345	-.3672678125	32.18586145	-40.37774726

PLATFORM ORIENTATION

$$TSR = \begin{pmatrix} -.4122230443 & .7915908127 & -.4510611345 \\ .0004209526 & -.4949168604 & -.8689402304 \\ -.9110828637 & -.3583870624 & .2036829127 \end{pmatrix}$$

VEHICLE ATTITUDE

$$TVR = \begin{pmatrix} -.4122230443 & .7915908127 & -.4510611345 \\ .0004209526 & -.4949168604 & -.8689402304 \\ -.9110828637 & -.3583870624 & .2036829127 \end{pmatrix}$$

AIG	AMG	AOG
.2084408316E-09	-.1984666122E-11	.7093909161E-10

AGC DATA LOAD

TEPHEM	1706	00010	12300	10700			
AZO	1711	30636	33226				
UNITW	1713	00000	13204	00000	30310	37777	37777
504LM	2007	77777	61657	77763	66026	00004	05670
PBIASX	1452	00000					
PIPASCFX	1453	00000					
PBIASY	1454	00000					
PIPASCFY	1455	00000					
PBIASZ	1456	00000					
PIPASCFZ	1457	00000					
NBDX	1460	00000					
NBDY	1461	00000					
NBDZ	1462	00000					
ADIAX	1463	00000					
ADIAY	1464	00000					
ADIAZ	1465	00000					
ADSRAX	1466	00000					
ADSRAY	1467	00000					
ADSRAZ	1470	00000					
RRECTCSM	1554	00256	36706	00130	20727	77715	65150
VRECTCSM	1562	66205	45462	16446	12177	67544	40107
TETCSM	1570	00011	37777				
DELTACSM	1572	00000	00000	00000	00000	00000	00000
NUCSM	1600	00000	00000	00000	00000	00000	00000
RCVCSM	1606	00256	36706	00130	20727	77715	65150
VCVCSM	1614	66205	45462	16446	12177	67544	40107
TCCSM	1622	00000	00000				
XKEPCSM	1624	00000	00000				
RRECTLEM	1626	00257	00210	00131	23500	77715	41541
VRECTLEM	1634	66136	63714	16372	27437	67575	50765
TETLEM	1642	00011	37777				
DELTALEM	1644	00000	00000	00000	00000	00000	00000
NULEM	1652	00000	00000	00000	00000	00000	00000
RCVLEM	1660	00257	00210	00131	23500	77715	41541
VCVLEM	1666	66136	63714	16372	27437	67575	50765
TCLEM	1674	00000	00000				
XKEPLEM	1676	00000	00000				
REFSMMAT	1735	71317	42147	14524	26620	70620	75017
		00003	16263	70051	64407	62061	64420
		61330	55060	72210	42766	03204	22201
RN	1170	00256	36706	00130	20727	77715	65150
VN	1176	66205	45462	16446	12177	67544	40107
PIPTIME	1204	00011	37777				
R-OTHER	1721	00257	00210	00131	23500	77715	41541
V-OTHER	1727	66136	63714	16372	27437	67575	50765
TIME2	0024	00011	37777				

AGC DATA LOAD - CARDS + CONSOLE

0034	OCT	00000	0034	00000
0077	OCT	10000	0077	10000
1074	OCT	37777	1074	37777
1341	OCT	00005	1341	00005
1717	OCT	37777	1717	37777
1720	OCT	37777	1720	37777
2000	OCT	00037	2000	00037
2001	OCT	00244	2001	00244
2002	OCT	05516	2002	05516
2003	OCT	00165	2003	00165
2021	OCT	00002	2021	00002
2022	OCT	22020	2022	22020
2023	OCT	00002	2023	00002
2024	OCT	22020	2024	22020
2033	OCT	00010	2033	00010
2034	OCT	21555	2034	21555
2035	OCT	14155	2035	14155
2036	OCT	00011	2036	00011
2037	OCT	04245	2037	04245
2040	OCT	77772	2040	77772
2041	OCT	65307	2041	65307
2042	OCT	77775	2042	77775
2043	OCT	42200	2043	42200
2044	OCT	77753	2044	77753
2045	OCT	63132	2045	63132
2046	OCT	77760	2046	77760
2047	OCT	70021	2047	70021
2050	OCT	77767	2050	77767
2051	OCT	65166	2051	65166
2052	OCT	77731	2052	77731
2053	OCT	70406	2053	70406
2054	OCT	00061	2054	00061
2055	OCT	01657	2055	01657
2056	OCT	00032	2056	00032
2057	OCT	35137	2057	35137
2060	OCT	00136	2060	00136
2061	OCT	37524	2061	37524
2062	OCT	00006	2062	00006
2063	OCT	37257	2063	37257
2064	OCT	00003	2064	00003
2065	OCT	26176	2065	26176
2066	OCT	77510	2066	77510
2067	OCT	72544	2067	72544
2070	OCT	77672	2070	77672
2071	OCT	74056	2071	74056
2072	OCT	77732	2072	77732
2073	OCT	46600	2073	46600
2074	OCT	00215	2074	00215
2075	OCT	26454	2075	26454
2076	OCT	01336	2076	01336
2077	OCT	00225	2077	00225
2100	OCT	00622	2100	00622
2101	OCT	20526	2101	20526

```
2102    8CT    04214
2103    8CT    37431
2104    8CT    76557
2105    8CT    43104
2106    8CT    77227
2107    8CT    42446
2110    8CT    74722
2111    8CT    40726
2112    8CT    71105
2113    8CT    61047
2114    8CT    74172
2115    8CT    62162
2116    8CT    67045
2117    8CT    54520
2120    8CT    03333
2121    8CT    05765
2122    8CT    01703
2123    8CT    33373
2124    8CT    02172
2125    8CT    15722
2126    8CT    04675
2127    8CT    02720
2130    8CT    02525
2131    8CT    27227
2132    8CT    21256
2133    8CT    17662
2134    8CT    00641
2135    8CT    11730
2136    8CT    00264
2137    8CT    37026
2140    8CT    77260
2141    8CT    73076
2142    8CT    21076
2143    8CT    32653
2144    8CT    07331
2145    8CT    30536
2146    8CT    00536
2147    8CT    20517
3002    8CT    27231
3003    8CT    10543
3004    8CT    00000
3005    8CT    00000
3006    8CT    73265
3012    8CT    00005
3013    8CT    00123
3014    8CT    00077
3015    8CT    00071
3016    8CT    17433
3017    8CT    04222
3020    8CT    00002
3021    8CT    00006
3022    8CT    10000
3023    8CT    01000
3024    8CT    00232
3025    8CT    77604
```

```
2102    04214
2103    37431
2104    76557
2105    43104
2106    77227
2107    42446
2110    74722
2111    40726
2112    71105
2113    61047
2114    74172
2115    62162
2116    67045
2117    54520
2120    03333
2121    05765
2122    01703
2123    33373
2124    02172
2125    15722
2126    04675
2127    02720
2130    02525
2131    27227
2132    21256
2133    17662
2134    00641
2135    11730
2136    00264
2137    37026
2140    77260
2141    73076
2142    21076
2143    32653
2144    07331
2145    30536
2146    00536
2147    20517
3002    27231
3003    10543
3004    00000
3005    00000
3006    73265
3012    00005
3013    00123
3014    00077
3015    00071
3016    17433
3017    04222
3020    00002
3021    00006
3022    10000
3023    01000
3024    00232
3025    77604
```

```
3026            8CT     00136
3027            8CT     10000
3030            8CT     75024
3031            8CT     47207
3032            8CT     01066
3033            8CT     33013
3034            8CT     77705
3035            8CT     61340
3036            8CT     57377
3037            8CT     74664
3040            8CT     14414
3041            8CT     36243
3042            8CT     74624
3043            8CT     73117
3066            8CT     11103
3067            8CT     11111
3074            8CT     14746
3424            8CT     10000
3655            8CT     00025
3656            8CT     25317
0110            8CT     01160
0111            8CT     10226
1036            8CT     00000
1353            8CT     00656
1356            8CT     02062
2377            8CT     00000
```

```
3026    00136
3027    10000
3030    75024
3031    47207
3032    01066
3033    33013
3034    77705
3035    61340
3036    57377
3037    74664
3040    14414
3041    36243
3042    74624
3043    73117
3066    11103
3067    11111
3074    14746
3424    10000
3655    00025
3656    25317
0110    01160
0111    10226
1036    00000
1353    00656
1356    02062
2377    00000
```

TAPE WEDB RUN 6 VERIFICATION C4.18A TEST RUN DATE 10/23/68 EDIT DATE 23OCT68 SDS TIME 1640 AGC TIME 1639.56 ID 777 PAGE 1

PROGRAM	VERB 21	NOUN 15	R1	37777	R2	R3	00025	FLASH 0	DSPTAB +11 00000
PROGRAM	VERB 21	NOUN 15	R1	37777	R2	R3	00025	FLASH 0	DSPTAB +11 00000

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
-.41222304	.79159081	-.45106113	-.41222304	.79159081	-.45106113	-.41226554	.79156518	-.45106578
.00042095	-.49491686	-.86894023	.00042095	-.49491686	-.86894023	.00031686	-.49497294	-.86890769
-.91108286	-.35838706	.20368291	-.91108285	-.35838706	.20368291	-.91106343	-.35836411	.20380950

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	AIG= -.00	-.00	.01	-.03	10.99	R ERROR	.00	.00	-.00
Z= -.000	AMG= .00	.00	.00	AGC TRUN	SDS TRUN	V ERROR	.00	-.00	.00
X= .000	AOG= .01	.01	.00	.01	113.35				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	5725335.1	2912736.6	-1656192.7	6633737.3	-3911.85	5821.87	-3317.27	7758.94	1640.42
AGC CM	5725335.1	2912736.6	-1656192.7	6633737.3	-3911.85	5821.87	-3317.27	7758.94	
DELTA	.0	.0	.0	.00	.00	.00	.00	-.00	
SDS LM	5726686.1	2948205.5	-1676134.6	6655544.8	-3941.82	5787.80	-3297.51	7740.17	1640.42
AGC LM	5726686.1	2948205.5	-1676134.6	6655544.8	-3941.82	5787.80	-3297.51	7740.17	
DELTA	.0	.0	.0	.0	.00	.00	.00	-.00	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-14.55	-18.91	256909.9	282612.2	253710.6	-.37	32.24	40713.0	-40.35
SDS LM	-14.68	-18.63	278740.9	282711.0	276459.4				

FLAGWD 0 00000	FLAGWD 1 00000	FLAGWD 2 00000	FLAGWD 3 10000	FLAGWD 4 00000	FLAGWD 5 40200	FLAGWD 6 00000	FLAGWD 7 00100
FLAGWD 8 00000	FLAGWD 9 00000						
RCSFLAGS 40011	RCSFLAGS 40011	RSBBQ 66102	RSBBQ+1 03304	CADRFLSH 56016	CADR+1 73174	CADR+2 10132	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77752	PIPA Y 77775	PIPA Z 77540	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00000	IMODE 30 36001	IMODE 33 26000	CHAN 11 01000	CHAN 12 00000
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67767		

CDUX	.0000000	CDUY	.1C98633E-01	CDUZ	.0000000	CDUT	-19.76440
ADOT/OBP	-1.256434	ADOT/OBY	.3407679	AK	.0000000	AK1	-57.75513
THETAD X	-.5163574	THETAD Y	-64.36890	THETAD Z	10.53589	TIG	2372.820
BEST J	.1666667	MRKTIME1	404463.1	STAR X1	.7653723E-01	STAR Y1	-.2367206E-01
STAR RS1	.5063776	MRKTIME2	2368.290	STAR X2	-.1118258E-03	STAR Y2	1.219482
STAR RS2	1.219482	HAPO	84000.00	HPER	.2709327E 08	RSP-RREC	575738.0
VGTIG Y	409.6725	VGTIG Z	1078.389	ADOT/	-.3012188	ADOT/OBP	-1.256434
AK	.0000000	AK1	-57.75513	AK2	2.186279	THETAD X	-.5163574
THETAD Z	10.53589	OGC	.0000000	IGC	.0000000	MGC	.1301066
LAUNCHAZ	-49.97680	LEMMASS	.0000000	CSMMASS	26520.00	ERRORX	-.1428223
ERRORZ	-2.208252	WBOD/OCR	-.3902782	WBOD/OCP	-3.980499	WBOD/OCY	.5621408E-01
THETAD Y	-111.4453	THETAD Z	15.16113	S/C MASS	1788.571	X CG	8.466005
Z CG	.5077438	JET FUEL	3.000366	SLOSH AR	-7.886368	IXX	31119.44
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454
WY DEG/S	.1049118E-01	WZ DEG/S	.3497057E-02	CONFIG	1.000000	AXSCM/S2	-.9327403E-03
AZSCM/S2	.4605405E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000
AYSMM/S2	-.1333495E-02	AZSMM/S2	.4614544E-02	ARSMM/S2	.4893284E-02		

ADOT/	-.3012188		
AK2	2.186279		
BEST I	.0000000		
STAR Z1	.5000000		
STAR Z2	.0000000		
VGTIG X	-85.17761		
ADOT/OBY	.3407679		
THETAD Y	-64.36890		
TEVENT	2372.820		
ERRORY	58.55713		
THETAD X	5.778809		
Y CG	.3071489		
IYY	79900.74		
WX DEG/S	-.3497057E-02		
AYSCM/S2	-.1329155E-02		
AXSMM/S2	-.9338093E-03		

PROGRAM	VERB 21	NOUN 15	R1 37777	R2	R3 00025	FLASH 0	DSPTAB +11 00000	
PROGRAM	VERB 21	NOUN 15	R1 37777	R2	R3 00025	FLASH 0	DSPTAB +11 00000	

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.28719282	.82805347	-.48150468
.04307723	-.49100709	-.87008953
-.95690346	-.27062583	.10534310

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	AIG= 7.65	7.65	7.47	-.02	10.99	R ERROR	.00	.00	-.00
Z= -.000	AMG= .48	.48	.47	AGC TRUN	SDS TRUN	V ERROR	.00	.00	.00
X= .000	AOG= -2.41	-2.41	-2.34	.01	76.35				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	5489817.8	3237873.4	-1841450.2	6634219.0	-4348.83	5582.23	-3180.58	7758.20	1697.42
AGC CM	5489817.8	3237873.4	-1841450.2	6634219.0	-4348.83	5582.23	-3180.58	7758.20	
DELTA	.0	.0	.0	.0	.00	.00	.00	-.00	
SDS LM	5489581.3	3271389.3	-1860260.2	6655678.7	-4374.58	5547.83	-3160.66	7739.84	1697.42
AGC LM	5489581.3	3271389.3	-1860260.2	6655678.7	-4374.58	5547.83	-3160.66	7739.84	
DELTA	.0	.0	.0	.0	.00	.00	.00	-.00	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-16.22	-15.58	257707.6	281794.1	253938.0	-.43	33.80	38434.2	-39.59
SDS LM	-16.33	-15.32	279190.3	281843.1	276742.6				

FLAGWD 0 00000	FLAGWD 1 00000	FLAGWD 2 00000	FLAGWD 3 10000	FLAGWD 4 00000	FLAGWD 5 40200	FLAGWD 6 00000	FLAGWD 7 00100	
FLAGWD 8 00000	FLAGWD 9 00000							
RCSFLAGS 40011	RCSFLAGS 40011	RSBBQ 66102	RSBBQ+1 03304	CADRFLSH 56016	CADR+1 73174	CADR+2 10132	FAILREG 00000	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77752	PIPA Y 77771	PIPA Z 77426	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120	
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00000	IMODE 30 36001	IMODE 33 26000	CHAN 11 01000	CHAN 12 00000	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765			

CDUX	-2.241211	CDUY	7.239990	CDUZ	.4504395	CDUT	-19.76440	ADOT/	-.3012188		
ADOT/OBP	-1.256434	ADOT/OBY	.3407679	AK	.0000000	AK1	-57.75513	AK2	2.186279		
THETAD X	-.5163574	THETAD Y	-64.36890	THETAD Z	10.53589	TIG	2372.820	BEST I	.0000000		
BEST J	.1666667	MRKTIME1	404463.1	STAR X1	.7653723E-01	STAR Y1	-.2367206E-01	STAR Z1	.5000000		
STAR RS1	.5063776	MRKTIME2	2368.290	STAR X2	-.1118258E-03	STAR Y2	1.219482	STAR Z2	.0000000		
STAR RS2	1.219482	HAPO	84000.00	HPER	.2709327E 08	RSP-RREC	575738.0	VGTIG X	-85.17761		
VGTIG Y	409.6725	VGTIG Z	1078.389	ADOT/	-.3012188	ADOT/OBP	-1.256434	ADOT/OBY	.3407679		
AK	.0000000	AK1	-57.75513	AK2	2.186279	THETAD X	-.5163574	THETAD Y	-64.36890		
THETAD Z	10.53589	OGC	.0000000	IGC	.0000000	MGC	.1301066	TEVENT	2372.820		
LAUNCHAZ	-49.97680	LEMMASS	.0000000	CSMMASS	26520.00	ERRORX	-.1428223	ERRORY	58.55713		
ERRORZ	-2.208252	WBOD/OCR	-.3902782	WBOD/OCP	-3.980499	WBOD/OCY	.5621408E-01	THETAD X	5.778809		
THETAD Y	-111.4453	THETAD Z	15.16113	S/C MASS	1788.571	X CG	8.466005	Y CG	.3071489		
Z CG	.5077438	JET FUEL	3.022461	SLOSH AR	-7.886368	IXX	31119.44	IYY	79900.74		
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454	WX DEG/S	-.8392937E-01		
WY DEG/S	.2552852	WZ DEG/S	.2447940E-01	CONFIG	1.000000	AXSCM/S2	.1818844E-02	AYSCM/S2	-.1422429E-02		
AZSCM/S2	.6109449E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	.2670622E-02		
AYSMM/S2	-.1151820E-02	AZSMM/S2	.5875369E-02	ARSMM/S2	.6555827E-02						

PRØGRAM ØC	VERB	NØUN	R1	R2	R3	FLASH Ø	DSPTAB +11 00000
PRØGRAM ØØ	VERB	NØUN	R1	R2	R3	FLASH Ø	DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

.10642123	.86656952	-.48757720
.19088173	-.49904609	-.84529114
-.97582698	-.00311255	-.21852160

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LØS DR	LØS ALT	LØS CR
Y= .ØØØ	AIG= 3Ø.45	3Ø.45	3Ø.28	-.Ø3	1Ø.99	R ERRØR	.ØØ	.ØØ	-.ØØ
Z= -.ØØØ	AMG= -.3Ø	-.3Ø	-.3Ø	AGC TRUN	SDS TRUN	V ERRØR	.ØØ	.ØØ	.ØØ
X= .ØØØ	AØG= -11.Ø1	-11.Ø1	-1Ø.82	.Ø1	55.82				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	52Ø6Ø17.Ø	3575170.1	-2Ø33625.6	6634763.6	-4802.ØØ	5293.57	-3Ø15.91	7757.37	1759.42
AGC CM	52Ø6Ø17.Ø	3575170.1	-2Ø33625.6	6634763.6	-4802.ØØ	5293.57	-3Ø15.91	7757.37	
DELTA	.Ø	.Ø	.Ø	.Ø	.ØØ	.ØØ	.ØØ	-.ØØ	
SDS LM	52Ø4321.7	36Ø6552.6	-2Ø51Ø2Ø.7	6655795.2	-4823.34	5259.21	-2996.Ø3	7739.51	1759.42
AGC LM	52Ø4321.7	36Ø6552.6	-2Ø51Ø2Ø.7	6655795.2	-4823.34	5259.21	-2996.Ø3	7739.51	
DELTA	.Ø	.Ø	.Ø	.Ø	.ØØ	.ØØ	.ØØ	-.ØØ	

PØSITIØN	LAT	LØNG	ALT	APØGEE	PERIGEE	AZIMUTH	ELEVATIØN	RANGE	RANGE RATE
SDS CM	-17.96	-11.89	258615.Ø	28Ø874.7	254178.7	-.5Ø	35.61	36ØØ8.5	-38.64
SDS LM	-18.Ø6	-11.65	279668.8	28Ø892.1	277Ø23.Ø				

FLAGWD Ø 00000	FLAGWD 1 00000	FLAGWD 2 00400	FLAGWD 3 10000	FLAGWD 4 00000	FLAGWD 5 40200	FLAGWD 6 20000	FLAGWD 7 00100
FLAGWD 8 50000	FLAGWD 9 00000						
RCSFLAGS 00005	RCSFLAGS 00001	RSBBQ 66102	RSBBQ+1 03304	CADRFLSH 56016	CADR+1 64051	CADR+2 1Ø132	FAILREG 00000
FAILRG+1 ØØØØØ	FAILRG+2 00000	PIPA X 77752	PIPA Y 77770	PIPA Z 77417	FLAG 1Ø 00000	FLAG 11 00000	ØPTMØDES ØØ12Ø
HØLDFLAG 00000	DAPDATR1 11103	DAPDATR2 11111	REDØCTR 00000	IMØDE 3Ø 36001	IMØDE 33 26000	CHAN 11 01000	CHAN 12 00040
CHAN 13 40100	CHAN 14 00000	CHAN 3Ø 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX	-1Ø.62378	CDUY	29.8Ø591	CDUZ	-.2307129	CDUT	-19.76440	AØT/	-.3Ø12188
AØT/ØBP	-1.256434	AØT/ØBY	.3407679	AK	.ØØØØØØØ	AK1	-57.75513	AK2	2.186279
THETAD X	-7.426758	THETAD Y	21.44531	THETAD Z	.4174805	TIG	2372.820	BEST I	.ØØØØØØØ
BEST J	.1666667	MRKTIME1	4Ø4463.1	STAR X1	.7653723E-Ø1	STAR Y1	-.2367206E-Ø1	STAR Z1	.5ØØØØØØ
STAR RS1	.5Ø63776	MRKTIME2	2368.29Ø	STAR X2	-.1118258E-Ø3	STAR Y2	1.219482	STAR Z2	.ØØØØØØØ
STAR RS2	1.219482	HAPØ	84ØØØ.ØØ	HPER	.27Ø9327E Ø8	RSP-RREC	575738.Ø	VGTIG X	-85.17761
VGTIG Y	4Ø9.6725	VGTIG Z	1Ø78.389	AØT/	-.1836643	AØT/ØBP	.5Ø21833	AØT/ØBY	.9Ø42398E-Ø1
AK	.ØØØØØØØ	AK1	.ØØØØØØØ	AK2	.ØØØØØØØ	THETAD X	-7.426758	THETAD Y	21.44531
THETAD Z	.4174805	BGC	.ØØØØØØØ	IGC	.ØØØØØØØ	MGC	.1Ø1Ø66	TEVENT	2372.820
LAUNCHAZ	-49.97680	LEMMASS	.ØØØØØØØ	CSMMASS	26520.ØØ	ERRØRX	-.4394532E-Ø1	ERRØRY	.7690430E-Ø1
ERRØRZ	.2197266E-Ø1	WBØD/ØCR	.ØØØØØØØ	WBØD/ØCP	.ØØØØØØØ	WBØD/ØCY	.ØØØØØØØ	THETAD X	5.778Ø89
THETAD Y	-111.4453	THETAD Z	15.16113	S/C MASS	1788.571	X CG	8.466ØØ5	Y CG	.3Ø71489
Z CG	.5Ø77438	JET FUEL	2.755981	SLØSH AR	-7.886368	IXX	31119.44	IYY	79900.74
IZZ	84710.12	IXY	2Ø36.133	IXZ	246.1853	IYZ	1424.454	WX DEG/S	-.1853440
WY DEG/S	.8392937E-Ø1	WZ DEG/S	.R742643E-Ø1	CØNFIG	1.ØØØØØØ	AXSCM/S2	-.9327403E-Ø3	AYSCM/S2	-.1422429E-Ø2
AZSCM/S2	.6109449E-Ø2	XGYRØØUT	.ØØØØØØØ	YGYRØØUT	.ØØØØØØØ	ZGYRØØUT	.ØØØØØØØ	AXSMM/S2	.2379942E-Ø2
AYSMM/S2	-.2216435E-Ø3	AZSMM/S2	.5889Ø3E-Ø2	ARSMM/S2	.6356430E-Ø2				

PROGRAM 20 VERB 16 NOUN 45 R1 +00 00 R2 +00 02 R3 +35999 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
-.41222304	.79159081	-.45106113	.00000000	.00000000	.00000000	.49552202	.80030942	-.33758211
.00042095	-.49491686	-.86894023	.00000000	.00000000	.00000000	.18375635	-.47644520	-.85978723
-.91108286	-.35838706	.20368291	.00000000	.00000000	.00000000	-.84893560	.36401010	-.38315153

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	AIG= 54.23	54.23	54.34	-.03	10.99	R ERROR	62.40	-62.48	-17.53
Z= .000	AMG= -5.89	-5.89	-5.89	AGC TRUN	SDS TRUN	V ERROR	-.01	-.03	-.01
X= .000	AOG= -8.81	-8.81	-8.81	.01	70.65				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	4905340.6	3883738.9	-2209419.4	6635309.2	-5216.42	4987.86	-2841.49	7756.53	1819.42
AGC CM	4905330.8	3883786.3	-2209414.0	6635327.9	-5216.43	4987.86	-2841.48	7756.54	
DELTA	9.8	-47.4	-5.4	-18.7	-.02	-.00	-.01	-.01	
SDS LM	4902488.1	3913070.0	-2225808.5	6655879.4	-5233.69	4953.90	-2821.86	7739.22	1819.42
AGC LM	4902545.7	3913059.0	-2225791.0	6655909.5	-5233.67	4953.90	-2821.87	7739.21	
DELTA	-57.6	11.0	-17.5	-30.1	-.02	-.00	.01	.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-19.57	-8.25	259524.0	279973.1	254401.1	-.58	37.48	33720.2	-37.62
SDS LM	-19.66	-8.02	280114.7	279977.4	277267.2				

FLAGWD 0 00310	FLAGWD 1 01120	FLAGWD 2 00404	FLAGWD 3 10014	FLAGWD 4 00000	FLAGWD 5 41200	FLAGWD 6 20000	FLAGWD 7 00100
FLAGWD 8 50000	FLAGWD 9 00400						
RCSFLAGS 00001	VHFCNT 00000	IRKMKCNT 00000	RCSFLAGS 00001	RSBBQ 66102	RSBBQ+1 03304	CADRFLSH 56016	CADR+1 64051
CADR+2 10264	FAILREG 00000	FAILRG+1 00000	FAILRG+2 00000	PIPA X 77751	PIPA Y 77770	PIPA Z 77233	OPTMODES 00120
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00000	IMODE 30 36001	IMODE 33 26000	CHAN 11 01002	CHAN 12 00040
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765	FLAG 10 20000	FLAG 11 00000

CDUX -8.800049	CDUY 54.37134	CDUZ -5.888672	CDUT -19.76440	ADOT/ .5931035E-02			
ADOT/OBP -.5119667E-01	ADOT/OBY -.1198948E-01	AK .5163574	AK1 .1098633	AK2 -.4833984			
THETAD X -8.283691	THETAD Y 54.33838	THETAD Z -6.394043	TIG 2372.820	DELLT4 1940.660			
RTARG X 1149968.	RTARG Y 1421296.	RTARG Z -2726400	VHFTIME 1768.210	MARKDOWN 404463.1			
MARKCDUY 6.888428	MARKCDUS -1.274414	MARKCDUZ -2.131348	MARKCDUT 3.532104	MARKCDUX 45.00000			
RM .0000000	TPI 2018630.	ECSTEER 1.000244	DELVTPF .0000000	TPASS4 3550.230			
DELVSLVX -.4863740E-02	DELVSLVY -.8106232E-02	DELVSLVZ .3547669E-01	DELVSLVS .3671461E-01	RANGE 12236.00			
RRATE -15.93809	ADOT/ .3315881E-02	ADOT/OBP -.4631505E-01	ADOT/OBY -.1198948E-01	AK .5163574			
AK1 .1208496	AK2 -.4543848	THETAD X -8.283691	THETAD Y 54.30542	THETAD Z -6.394043			
ELEV -41.07942	CENTANG 61.50000	DELTAR 1312.000	DELV3 X 17.06915	DELV3 Y 15.02166			
DELV3 Z 2.607441	DELV3 S 22.88678	LEMMASS .0000000	CSMMASS 26520.00	ERRORX -.5163574			
ERRORY -.1098633	ERRORZ .5053711	WBODOCR .3892556E-02	WBODOCP -.3314708E-01	WBODOCY -.1058132E-01			
THETAD X -8.283691	THETAD Y 54.38232	THETAD Z -6.394043	RTHETA 32.56187	LAT(SPL) 27.92083			
LNG(SPL) -152.2167	VPRED 7701.699	GAMMAEI -114.4775	S/C MASS 1788.571	X CG 8.466005			
Y CG .3071489	Z CG .5077438	JET FUEL 10.44238	SLOSH AR -7.886368	IXX 31119.44			
IYY 79900.74	IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454			
WX DEG/S .3846763E-01	WY DEG/S -.2098235E-01	WZ DEG/S -.6994114E-02	CONFIG 1.000000	AXSCM/S2 .0000000			
AYSCM/S2 -.1608977E-02	AZSCM/S2 .4512131E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000			
AXSMM/S2 .3357354E-02	AYSMM/S2 -.4033185E-03	AZSMM/S2 .3618966E-02	ARSMM/S2 .4952918E-02				

PROGRAM 35 VERB NOUN R1 R2 R3 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

.00000000	.00000000	.00000000
.00000000	.00000000	.00000000
.00000000	.00000000	.00000000

S/C ATTITUDE MATRIX

.47264647	.81775331	-.32845640
.19531393	-.46065187	-.86582446
-.85933566	.34507608	-.37744451

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		L&S DR	L&S ALT	L&S CR
Y= .000	AIG= 52.77	52.77	52.87	-.03	10.99	R ERROR	5.39	-2.34	89.77
Z= .000	AMG= -6.84	-6.84	-6.82	AGC TRUN	SDS TRUN	V ERROR	-.01	-.02	-.01
X= .000	AOG= -9.09	-9.09	-9.04	.01	56.35				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	4586220.6	4168518.6	-2371643.8	6635861.8	-5598.74	4663.52	-2656.41	7755.69	1878.41
AGC CM	4586186.0	4168530.3	-2371698.7	6635864.8	-5598.74	4663.50	-2656.40	7755.68	
DELTA	34.6	-11.7	54.8	-3.0	.00	.02	-.01	.01	
SDS LM	4582461.3	4195865.6	-2386887.2	6655935.0	-5612.25	4630.26	-2637.21	7738.96	1878.41
AGC LM	4582430.4	4195916.6	-2386861.3	6655936.6	-5612.23	4630.25	-2637.22	7738.94	
DELTA	30.9	-51.0	-26.0	-1.5	-.02	.01	.00	.02	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-21.07	-4.60	260438.3	279091.9	254605.9	-.67	39.43	31533.3	-36.51
SDS LM	-21.14	-4.39	280530.2	279095.7	277481.9				

FLAGWD 0	00310	FLAGWD 1	01020	FLAGWD 2	00404	FLAGWD 3	10200	FLAGWD 4	00000	FLAGWD 5	43201	FLAGWD 6	20000	FLAGWD 7	02100
FLAGWD 8	50000	FLAGWD 9	00200												
RCSFLAGS	00011	VHFCNT	00001	TRKMKCNT	00000	RCSFLAGS	00011	RSBBQ	66102	RSBBQ+1	03304	CADRFLSH	56016	CADR+1	64051
CADR+2	73045	FAILREG	00000	FAILRG+1	00000	FAILRG+2	00000	PIPA X	77753	PIPA Y	77767	PIPA Z	77236	OPTMODES	00120
HOLDFLAG	77776	DAPDATR1	11103	DAPDATR2	11111	RENDCTR	00000	IMODE 30	36001	IMODE 33	26000	CHAN 11	01002	CHAN 12	00040
CHAN 13	00101	CHAN 14	00000	CHAN 30	37373	CHAN 31	37777	CHAN 32	77777	CHAN 33	67765	FLAG 10	20000	FLAG 11	00000

CDUX	-8.997803	CDUY	52.89917	CDUZ	-6.800537	CDUT	-19.76440	ADOT/	-.1918115E-01
ADOT/OBP	-.3395007E-01	ADOT/OBY	-.1987517E-01	AK	.2966309	AK1	-.5273437	AK2	-.2966309
THETAD X	-8.668213	THETAD Y	52.30591	THETAD Z	-6.866455	TIG	2277.350	DELLT4	1940.660
RTARG X	1149968.	RTARG Y	14212960	RTARG Z	-272640.0	VHFTIME	1828.500	MARKDOWN	404463.1
MARKCDUY	6.888428	MARKCDUS	-1.274414	MARKCDUZ	-2.131348	MARKCDUT	3.532104	MARKCDUX	45.00000
RM	33395.56	TPI	2018630	ECSTEER	1.000244	DELVTPF	.0000000	TPASS4	3550.230
DELVSLVX	-.4863740E-02	DELVSLVY	-.8106232E-02	DELVSLVZ	.3547669E-01	DELVSLVS	.3671461E-01	RANGE	12236.00
RRATE	-15.93809	ADOT/	-.2005287E-01	ADOT/OBP	-.4404858E-01	ADOT/OBY	-.1830608E-01	AK	.4174805
AK1	-.5493164	AK2	-.1977539	THETAD X	-8.668213	THETAD Y	52.27295	THETAD Z	-6.866455
ELEV	-41.07942	CENTANG	61.50000	DELTAR	1312.000	DELV3 X	17.06915	DELV3 Y	15.02166
DELV3 Z	2.607441	DELV3 S	22.88678	LEMMASS	.0000000	CSMMASS	26520.00	ERRORX	-.4394531
ERRORY	.5493164	ERRORZ	.2087402	WBODOCR	.4195981E-02	WBODOCP	-.3122930E-01	WBODOCY	-.1030136E-01
THETAD X	-8.668213	THETAD Y	52.61353	THETAD Z	-6.855469	RTHETA	32.56187	LAT(SPL)	27.92083
LNG(SPL)	-152.2167	VPRED	7701.699	GAMMAEI	-114.4775	S/C MASS	1788.571	X CG	8.466005
Y CG	.3071489	Z CG	.5077438	JET FUEL	10.60559	SLOSH AR	-7.886368	IXX	31119.44
IYY	79900.74	IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454
WX DEG/S	-.2098235E-01	WY DEG/S	-.2098235E-01	WZ DEG/S	-.6994114E-02	CONFIG	1.000000	AXSCM/S2	.8861033E-03
AYSCM/S2	-.1235881E-02	AZSCM/S2	.4791953E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000
AXSMM/S2	.4454670E-02	AYSMM/S2	-.5704594E-03	AZSMM/S2	.2289105E-02	ARSMM/S2	.5040785E-02		

PROGRAM 35 VERB 16 NOUN 45 R1 +01 00 R2 -05 41 R3 -00001 FLASH 1 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

.00000000	.00000000	.00000000
.00000000	.00000000	.00000000
.00000000	.00000000	.00000000

S/C ATTITUDE MATRIX

.44264674	.83516788	-.32643127
.20890808	-.45007038	-.86821342
-.87202144	.31611729	-.37369561

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	AIG= 50.86	50.86	50.95	-.03	10.99	R ERROR	4.85	-3.32	89.26
Z= .000	AMG= -7.44	-7.44	-7.29	AGC TRUN	SDS TRUN	V ERROR	-.01	-.02	-.01
X= .000	AOG= -9.75	-9.75	-9.68	.01	97.72				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	4239310.4	4437865.4	-2525056.6	6636438.2	-5960.18	4311.05	-2455.26	7754.82	1938.41
AGC CM	4239275.6	4437875.8	-2525110.8	6636443.6	-5960.18	4311.03	-2455.25	7754.81	
DELTA	34.8	-10.4	54.3	-5.4	.00	.02	-.01	.01	
SDS LM	4234848.5	4463245.6	-2539165.6	6655964.6	-5970.14	4278.79	-2436.67	7738.73	1938.41
AGC LM	4234818.6	4463295.7	-2539139.9	6655969.4	-5970.12	4278.78	-2436.68	7738.71	
DELTA	29.9	-50.1	-25.7	-4.8	-.02	.02	.01	.02	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-22.50	-.81	26138.3	278217.7	254797.0	-.77	41.56	29379.0	-35.28
SDS LM	-22.56	-.61	280923.1	278230.0	277674.2				

FLAGWD 0 00310	FLAGWD 1 01124	FLAGWD 2 00404	FLAGWD 3 10014	FLAGWD 4 10000	FLAGWD 5 43201	FLAGWD 6 20000	FLAGWD 7 02100	
FLAGWD 8 50000	FLAGWD 9 00200							
RCSFLAGS 00011	VHFCNT 00001	TRKMKCNT 00000	RCSFLAGS 00011	RSBBQ 66102	RSBBQ+1 03304	CADRFLSH 56016	CADR+1 64051	
CADR+2 73045	FAILREG 00000	FAILRG+1 00000	FAILRG+2 00000	PIPA X 77756	PIPA Y 77766	PIPA Z 77362	OPTMODES 00120	
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00000	IMODE 30 36001	IMODE 33 26000	CHAN 11 01042	CHAN 12 00040	
CHAN 13 00101	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765	FLAG 10 20000	FLAG 11 00000	

CDUX	-9.678955	CDUY	50.97656	CDUZ	-7.382812	CDUT	-19.76440	ADOT/	-.5592406E-02		
ADOT/OBP	-.3040955E-01	ADOT/OBY	-.3614277E-01	AK	.2746582	AK1	-.5383301	AK2	-.3186035		
THETAD X	-9.481201	THETAD Y	50.35034	THETAD Z	-7.547607	TIG	2277.350	DELLT4	1272.880		
RTARG X	-6163842.	RTARG Y	2176718.	RTARG Z	-1237058.	VHFTIME	1828.500	MARKOBWN	404463.1		
MARKCDUY	6.888428	MARKCDUS	-1.274414	MARKCDUZ	2.131348	MARKCDUT	3.532104	MARKCDUX	45.00000		
RM	33395.56	TPI	2018630.	ECSTEER	1.000244	DELVTPF	.0000000	TPASS4	3550.230		
DELVSLVX	-.9272575	DELVSLVY	-.5054474E-02	DELVSLVZ	-3.109932	DELVSLVS	3.245229	RANGE	12236.00		
RRATE	-15.93809	ADOT/	-.7335842E-02	ADOT/OBP	-.4033372E-01	ADOT/OBY	-.3579408E-01	AK	.1757812		
AK1	-.5273437	AK2	-.4064941	THETAD X	-9.481201	THETAD Y	50.32837	THETAD Z	-7.547607		
ELEV	-41.07942	CENTANG	61.50000	DELTAR	88264.00	DELV3 X	1.797104	DELV3 Y	2.351093		
DELV3 Z	-1.332188	DELV3 S	3.245296	LEMMASS	.0000000	CSMMASS	26520.00	ERRORX	-.1867676		
ERRORY	.5383301	ERRORZ	.4064941	WBOD/OCR	.4256331E-02	WBOD/OCP	-.2840460E-01	WBOD/OCY	-.9996258E-02		
THETAD X	-9.481201	THETAD Y	50.48218	THETAD Z	-7.547607	GAMMAEI	-114.4775	RTHETA	32.56187	LAT(SPL)	27.92083
LNG(SPL)	-152.2167	VPRED	7701.699	GAMMAEI	-114.4775	S/C MASS	1788.571	X CG	8.466005		
Y CG	.3071489	Z CG	.5077438	JET FUEL	10.75769	SLOSH AR	-7.886368	IXX	31119.44		
IYY	79900.74	IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454		
WX DEG/S	-.6994114E-02	WY DEG/S	-.2098235E-01	WZ DEG/S	-.2098235E-01	CONFIG	1.000000	AXSCM/S2	-.9327403E-03		
AYSCM/S2	-.1235881E-02	AZSCM/S2	.6109449E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000		
AXSMM/S2	.4247561E-02	AYSMM/S2	-.5813599E-04	AZSMM/S2	.4672680E-02	ARSMM/S2	.6314990E-02				

PROGRAM 35 VERB NOUN R1 R2 R3 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

.00000000	.00000000	.00000000
.00000000	.00000000	.00000000
.00000000	.00000000	.00000000

S/C ATTITUDE MATRIX

.41418266	.84880590	-.32860374
.22124815	-.44408584	-.86823773
-.88289380	.28690577	-.37172985

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	AIG= 49.05	49.05	49.13	-.03	10.99	R ERROR	4.37	-4.26	88.34
Z= .000	AMG= -7.72	-7.72	-7.69	AGC TRUN	SDS TRUN	V ERROR	-.01	-.02	-.02
X= .000	AOG= -10.50	-10.50	-10.47	.01	69.81				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	3877876.5	4681483.6	-2663791.4	6637017.3	-6286.94	3943.95	-2245.76	7753.95	1997.41
AGC CM	3877841.8	4681492.7	-2663844.8	6637024.9	-6286.94	3943.93	-2245.74	7753.94	
DELTA	34.7	-9.2	53.5	-7.6	-.00	-.02	-.02	-.02	
SDS LM	3872923.3	4704995.7	-2676824.4	6655967.8	-6293.70	3912.92	-2227.89	7738.54	1997.41
AGC LM	3872894.6	4705044.7	-2676799.0	6655975.6	-6293.67	3912.90	-2227.90	7738.52	
DELTA	28.7	-49.0	-25.4	-7.8	-.02	.02	.01	.03	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-23.80	3.00	262309.4	277395.2	254965.4	-.88	43.80	27335.2	-33.98
SDS LM	-23.85	3.18	281274.0	277850.3	277409.5				

FLAGWD 0 00310	FLAGWD 1 01022	FLAGWD 2 00444	FLAGWD 3 10010	FLAGWD 4 00000	FLAGWD 5 43201	FLAGWD 6 20000	FLAGWD 7 02100	
FLAGWD 8 50000	FLAGWD 9 00200							
RCSFLAGS 00001	VHFCNT 00001	TRKMKCNT 00000	RCSFLAGS 00001	RSBBQ 66102	RSBBQ+1 03304	CADRFLSH 56016	CADR+1 76531	
CADR+2 73045	FAILREG 00000	FAILRG+1 00000	FAILRG+2 00000	PIPA X 77761	PIPA Y 77765	PIPA Z 77436	OPTMODES 00120	
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00000	IMODE 30 36001	IMODE 33 26000	CHAN 11 01002	CHAN 12 00040	
CHAN 13 00101	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765	FLAG 10 00000	FLAG 11 00000	

CDUX	-10.46997	CDUY	49.14185	CDUZ	-7.646484	CDUT	-19.76440	AOGT/	.9216741E-02		
AOGT/OBP	-.2743230E-01	AOGT/OBY	-.3608913E-01	AK	.3735352	AK1	-.3295898	AK2	-.5712891		
THETAD X	-10.15137	THETAD Y	48.64746	THETAD Z	-8.096924	TIG	2388.540	DELLT4	1161.690		
RTARG X	-6162462.	RTARG Y	2176106.	RTARG Z	-1228472.	VHFTIME	1828.500	MARKDOWN	404463.1		
MARKCDUY	6.888428	MARKCDUS	-1.274414	MARKCDUZ	-2.131348	MARKCDUT	3.532104	MARKCDUX	45.00000		
RM	33395.56	TPI	2018630.	ECSTEER	1.000244	DELVTPF	.0000000	TPASS4	3550.230		
DELVSLVX	-.9272575	DELVSLVY	-.5054474E-02	DELVSLVZ	-3.109932	DELVSLVS	3.245229	RANGE	12236.00		
RRATE	-15.93809	AOGT/	.8519367E-02	AOGT/OBP	-.2220199E-01	AOGT/OBY	-.3713519E-01	AK	.3735352		
AK1	-.3625488	AK2	-.5493164	THETAD X	-10.15137	THETAD Y	48.61450	THETAD Z	-8.096924		
ELEV	-41.07942	CENTANG	61.50000	DELTAR	88264.00	DELV3 X	1.797104	DELV3 Y	2.351093		
DELV3 Z	-1.332188	DELV3 S	3.245296	LEMMASS	.0000000	CSMMASS	26520.00	ERRORX	-.3735352		
ERRORY	.3625488	ERRORZ	.5493164	WBODOCP	.4221127E-02	WBODOCY	-.2608281E-01	WBODOCY	-.9848737E-02		
THETAD X	-10.15137	THETAD Y	48.65845	THETAD Z	-8.096924	RTHETA	32.56187	LAT(SPL)	27.92083		
LNG(SPL)	-152.2167	VPRED	7701.699	GAMMAEI	-114.4775	S/C MASS	1788.571	X CG	8.466005		
Y CG	.3071489	Z CG	.5077438	JET FUEL	10.90869	SLOSH AR	-7.886368	IXX	31119.44		
IYY	79900.74	IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454		
WX DEG/S	.0000000	WY DEG/S	-.3497057E-02	WZ DEG/S	-.3497057E-01	CONFIG	1.000000	AXSCM/S2	-.9327403E-03		
AYSCM/S2	-.1422429E-02	AZSCM/S2	.4605405E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000		
AXSMM/S2	.2968569E-02	AYSMM/S2	-.4287529E-03	AZSMM/S2	.3895112E-02	ARSMM/S2	.4916109E-02				

PROGRAM 41 VERB NOUN R1 R2 R3 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

.38452744	.86322689	-.32707357
.22891712	-.43241882	-.87213016
-.89427924	.26048470	-.36388469

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	AIG= 47.21	47.21	47.31	-.03	10.99	R ERROR	3.89	-5.24	86.97
Z= -.000	AMG= 8.21	-8.21	-8.20	AGC TRUN	SDS TRUN	V ERROR	-.01	-.02	-.03
X= .000	AOG= -10.88	-10.88	-10.84	.01	78.53				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	3491453.9	4906440.8	-2791870.9	6637616.7	-6588.52	3551.58	-2021.83	7753.07	2057.41
AGC CM	3491419.4	4906448.7	-2791923.3	6637626.4	-6588.51	3551.56	-2021.81	7753.05	
DELTA	34.5	-7.9	52.4	-9.8	-.01	.02	-.02	.02	
SDS LM	3486185.7	4928133.8	-2803857.6	6655945.6	-6592.32	3522.01	-2004.83	7738.39	2057.41
AGC LM	3486158.4	4928181.6	-2803832.8	6655956.2	-6592.30	3521.99	-2004.84	7738.36	
DELTA	27.2	-47.8	-24.8	-10.7	-.03	.02	.01	.03	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-25.02	6.95	263248.4	276610.5	255115.7	-1.02	46.26	25338.2	-32.57
SDS LM	-25.06	7.11	281588.9	277999.1	276635.8				

FLAGWD 0	00310	FLAGWD 1	02000	FLAGWD 2	00544	FLAGWD 3	10204	FLAGWD 4	00000	FLAGWD 5	43201	FLAGWD 6	20000	FLAGWD 7	00100
FLAGWD 8	50000	FLAGWD 9	00200												
RCSFLAGS	00001	RCSFLAGS	00001	RSBBQ	66102	RSBBQ+1	03304	CADRFLSH	56016	CADR+1	76531	CADR+2	10264	FAILREG	00000
FAILRG+1	00000	FAILRG+2	00000	PIPA X	77763	PIPA Y	77765	PIPAZ	77204	FLAG 10	20000	FLAG 11	00000	OPTMODES	00120
HOLDFLAG	77776	DAPDATR2	11103	DAPDATR1	11111	RENDCTR	00000	IMODE 30	36001	IMODE 33	26000	CHAN 11	01002	CHAN 12	00040
CHAN 13	00101	CHAN 14	00000	CHAN 30	37373	CHAN 31	37777	CHAN 32	77777	CHAN 33	67765				

CDUX	-10.81055	CDUY	47.34009	CDUZ	-8.184814	CDUT	-19.76440	ADOT/	-.5957857E-02
ADOT/OBP	-.5039201E-01	ADOT/OBY	-.1870841E-01	AK	.2856445	AK1	-.3845215	AK2	-.3295898
THETAD X	-10.59082	THETAD Y	46.86768	THETAD Z	-8.382568	TIG	2388.540	DELLT4	1163.690
RTARG X	-6163634.	RTARG Y	2176504.	RTARG Z	-1235646.	TGO	16972.80	PIPTIME1	2428.340
DELV X	.0000000	DELV Y	.0000000	DELV Z	1.998000	PACTOFF	-2.918175	YACTOFF	2.230150
PCMD	.0000000	YCMD	.0000000	CSTEER	.0000000	ADOT/	-.7701293E-02	ADOT/OBP	-.4638210E-01
ADOT/OBY	-.1731366E-01	AK	.2966309	AK1	-.3515625	AK2	-.3186035	THETAD X	-10.59082
THETAD Y	46.86768	THETAD Z	-8.382568	ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0
TEVENT	2372.820	PCMD	.0000000	YCMD	.0000000	LEMMASS	.0000000	CSMMASS	26520.00
ERRORX	-.3076172	ERRORY	.3405762	ERRORZ	.3076172	WBODY/OCR	.0000000	WBODY/OCP	.0000000
WBODY/OCY	.0000000	THETAD X	-10.59082	THETAD Y	46.86768	THETAD Z	-8.382568	VGTIG X	-2061.853
VGTIG Y	-752.9216	VGTIG Z	-596.0938	S/C MASS	1788.571	X CG	8.466005	Y CG	.3071489
Z CG	.5077438	JET FUEL	11.06421	SLOSH AR	-7.886368	IXX	31119.44	IYY	79900.74
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454	WX DEG/S	-.1049118E-01
WY DEG/S	-.2447946E-01	WZ DEG/S	.0000000	CONFIG	1.000000	AXSCM/S2	-.9327403E-03	AYSCM/S2	-.1422429E-02
AZSCM/S2	.6109449E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	.3960515E-02
AYSMM/S2	-.1053715E-03	AZSMM/S2	.4963360E-02	ARSMM/S2	.6350726E-02				

PROGRAM 41 VERB 16 NOUN 45 R1 +00127 R2 -00000 R3 +00001 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

.46433425	.78116560	-.41734052
.18048596	-.54479218	-.81891775
-.86707449	.30492687	-.39395547

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	AIG= 52.02	52.02	52.10	-.03	10.99	R ERROR	3.41	-6.22	85.12
Z= -.000	AMG= -1.36	-1.36	-1.36	AGC TRUN	SDS TRUN	V ERROR	-.01	-.02	-.03
X= .000	ABG= -11.02	-11.02	-10.95	.01	68.19				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	3074179.3	5113598.3	-2909781.4	6638244.8	-6866.06	3128.03	-1780.09	7752.16	2119.41
AGC CM	3074145.3	5113605.1	-2909832.4	6638256.6	-6866.05	3128.01	-1780.06	7752.14	
DELTA	34.0	-6.8	51.0	-11.8	-.01	.02	-.02	.02	
SDS LM	3068760.6	5133509.1	-2920744.6	6655896.4	-6867.17	3100.14	-1764.08	7738.27	2119.41
AGC LM	3068735.0	5133555.6	-2920720.4	6655909.8	-6867.14	3100.11	-1764.10	7738.24	
DELTA	25.6	-46.4	-24.1	-13.4	-.03	.02	.01	.03	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	+26.15	11.11	264203.0	275867.1	255249.2	-1.19	49.00	23366.5	-31.02
SDS LM	+26.18	11.26	281863.7	278136.6	275897.7				

FLAGWD 0 00310	FLAGWD 1 02000	FLAGWD 2 00574	FLAGWD 3 10004	FLAGWD 4 00200	FLAGWD 5 43203	FLAGWD 6 20000	FLAGWD 7 02100
FLAGWD 8 50000	FLAGWD 9 00204						
RCSFLAGS 00011	RCSFLAGS 00011	RSBBQ 66102	RSBBQ+1 03304	CADRFLSH 56016	CADR+1 76531	CADR+2 56016	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77767	PIPA Y 77764	PIPAZ 77245	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	RENDCTR 00000	IMODE 30 36001	IMODE 33 26000	CHAN 11 01020	CHAN 12 00040
CHAN 13 40101	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX	-10.89844	CDUY	52.09717	CDUZ	-1.329346	CDUT	-19.76440
ADOT/OBP	-.1341105E-01	ADOT/OBY	-.2044514E-01	AK	.2307129	AK1	-.5273437
THETAD X	-10.67871	THETAD Y	51.54785	THETAD Z	-1.175537	TIG	2388.540
RTARG X	-6163634.	RTARG Y	2176504.	RTARG Z	-1235646.	TGO	-177061.1
DELV X	.0000000	DELV Y	.0000000	DELV Z	1.989000	PACTOFF	-2.918175
PCMD	.0000000	YCMD	.0000000	CSTEER	.0000000	ADOT/	-.3694408E-01
ADOT/OBY	-.1939908E-01	AK	.2636719	AK1	-.5603027	AK2	-.1098633E-01
THETAD Y	51.54785	THETAD Z	-1.175537	ELEV	-41.07942	CENTANG	61.50000
TEVENT	2372.820	PCMD	.0000000	YCMD	.0000000	LEMMASS	.0000000
ERRORX	-.2856445	ERRORY	.5603027	ERRORZ	.0000000	WBODOCR	.0000000
WBODOCY	.0000000	THETAD X	-10.67871	THETAD Y	51.54785	THETAD Z	-1.175537
VGTIG Y	3.038359	VGTIG Z	-1.637220	S/C MASS	1788.571	X CG	8.466005
Z CG	.5077438	JET FUEL	14.71216	SLOSH AR	-7.886368	IXX	31119.44
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454
WY DEG/S	.0000000	WZ DEG/S	-.1398823E-01	CONFIG	1.000000	AXSCM/S2	-.9327403E-03
AZSCM/S2	.4605405E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000
AYSMM/S2	-.4941559E-03	AZSMM/S2	.3691636E-02	ARSMM/S2	.4913529E-02		

ADOT/	-.3589802E-01		
AK2	-.1318359		
DELLT4	1161.690		
PIPTIME1	2358.580		
YACTOFF	2.230150		
ADOT/OBP	-.1062155E-01		
THETAD X	-10.67871		
DELTAR	117620.0		
CSMMASS	26520.00		
WBOD/OCP	.0000000		
VGTIG X	1.773262		
Y CG	.3071489		
IYY	79900.74		
WX DEG/S	-.4196469E-01		
AYSCM/S2	-.1422429E-02		
AXSMM/S2	.3204747E-02		

PROGRAM 41 VERB 16 NOUN 45 R1 06900 R2 -03 31 R3 +35881 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

.46607971	.77722454	-.42271757
.17872310	-.55064511	-.81538177
-.86650229	.30448318	-.39555311

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	AIG= 52.13	52.13	52.21	-.03	10.99	R ERROR	2.94	-7.12	82.96
Z= -.000	AMG= -.98	-.98	-.99	AGC TRUN	SDS TRUN	V ERROR	-.01	-.02	-.04
X= .000	AOG= -11.11	-11.11	-11.10	.01	56.66				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	2662114.5	5285883.8	-3007804.6	6638848.5	-7096.71	2709.88	-1541.43	7751.30	2178.41
AGC CM	2662081.3	5285889.5	-3007854.3	6638862.2	-7096.69	2709.86	-1541.41	7751.28	
DELTA	33.3	-5.7	49.6	-13.7	-.01	.02	-.02	.02	
SDS LM	2656697.8	5304199.7	-3017853.5	6655825.8	-7095.59	2683.72	-1526.45	7738.20	2178.41
AGC LM	2656674.0	5304244.7	-3017830.3	6655841.7	-7095.55	2683.69	-1526.47	7738.17	
DELTA	23.8	-45.0	-23.2	-15.8	-.03	.03	.02	.04	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-27.09	15.15	265088.2	275232.6	255358.1	-1.39	51.81	21582.3	-29.46
SDS LM	-27.12	15.27	282072.4	278254.0	275262.8				

FLAGWD 0 00310	FLAGWD 1 02000	FLAGWD 2 00574	FLAGWD 3 10004	FLAGWD 4 00200	FLAGWD 5 43203	FLAGWD 6 20000	FLAGWD 7 02100
FLAGWD 8 50000	FLAGWD 9 00204						
RCSFLAGS 00011	RCSFLAGS 00011	RSBBQ 66102	KSBBQ+1 03304	CADRFLSH 56016	CADR+1 76531	CADR+2 56016	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77772	PIPA Y 77763	PIPAZ 77235	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	RENDCTR 00000	IMODE 30 36001	IMODE 33 26000	CHAN 11 01022	CHAN 12 00040
CHAN 13 00101	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX	-11.10718	CDUY	52.19604	CDUZ	-.9777832	CDUT	-19.76440
ADOT/OBP	-.1684428E-01	ADOT/OBY	-.1884252E-02	AK	.4394531	AK1	-.5603027
THETAD X	-10.67871	THETAD Y	51.54785	THETAD Z	-1.175537	TIG	2388.540
RTARG X	-6163634.	RTARG Y	2176504.	RTARG Z	-1235646.	TGO	-177061.1
DELV X	.0000000	DELV Y	.0000000	DELV Z	1.989000	PACTOFF	-2.918175
PCMD	.0000000	YCMD	.0000000	CSTEER	.0000000	ADOT/	.1674034E-01
ADOT/OBY	-.2930314E-02	AK	.4174805	AK1	-.5493164	AK2	-.3845215
THETAD Y	51.54785	THETAD Z	-1.175537	ELEV	-41.07942	CENTANG	61.50000
TEVENT	2372.820	PCMD	.0000000	YCMD	.0000000	LEMMASS	.0000000
ERRORX	-.4064941	ERRORY	.5603027	ERRORZ	.3845215	WBODY/OCP	.0000000
WBODY/OCY	.0000000	THETAD X	-10.67871	THETAD Y	51.54785	THETAD Z	-1.175537
VGTIG Y	3.038359	VGTIG Z	-1.637220	S/C MASS	1788.571	X CG	8.466005
Z CG	.5077438	JET FUEL	14.88818	SLOSH AR	-7.886368	IXX	31119.44
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454
WY DEG/S	-.3497057E-02	WZ DEG/S	.0000000	CONFIG	1.000000	AXSCM/S2	.0000000
AZSCM/S2	.4512131E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000
AYSMM/S2	-.7085324E-03	AZSMM/S2	.2921334E-02	ARSMM/S2	.4800265E-02		

ADOT/	.1813509E-01		
AK2	-.3845215		
DELLT4	1161.690		
PIPTIME1	2358.580		
YACTOFF	2.230150		
ADOT/OBP	-.1248569E-01		
THETAD X	-10.67871		
DELTAR	117620.0		
CSMMASS	26520.00		
WBODY/OCP	.0000000		
VGTIG X	1.773262		
Y CG	.3071489		
IYY	79900.74		
WX DEG/S	.1049118E-01		
AYSCM/S2	-.1608977E-02		
AXSMM/S2	.3742505E-02		

PROGRAM 41 VERB 16 NOUN 45 R1 +01 00 R2 -02 32 R3 +35881 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

.46594310	-.77735138	-.42263532
.17971683	-.55084205	-.81503010
-.86637068	.30380297	-.39636469

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	OIG= 52.12	52.12	52.19	-.03	10.99	R ERROR	2.45	-7.99	80.37
Z= -.000	OMG= -.99	-.99	-.98	AGC TRUN	SDS TRUN	V ERROR	-.01	-.02	-.05
X= .000	OOG= -11.17	-11.17	-11.13	.01	87.04				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	2230136.0	5435389.6	-3092821.5	6639466.2	-7296.68	2271.64	-1291.32	7750.45	2238.41
AGC CM	2230103.8	5435394.3	-3092869.6	6639481.7	-7296.66	2271.62	-1291.29	7750.42	
DELTA	32.3	-4.7	48.1	-15.4	-.02	.01	-.03	.03	
SDS LM	2224846.1	5452191.2	-3102004.1	6655731.3	-7293.63	2247.33	-1277.43	7738.18	2238.41
AGC LM	2224824.4	5452234.7	-3101982.1	6655749.4	-7293.59	2247.31	-1277.45	7738.14	
DELTA	21.7	-43.5	-22.0	-18.1	-.04	.03	.02	.04	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-27.92	19.32	265957.4	274665.7	255455.5	-1.64	54.92	19864.5	-27.79
SDS LM	-27.94	19.43	282227.3	278363.9	274690.6				

FLAGWD 0 00310	FLAGWD 1 02000	FLAGWD 2 00574	FLAGWD 3 10004	FLAGWD 4 00200	FLAGWD 5 43203	FLAGWD 6 20000	FLAGWD 7 02100
FLAGWD 8 50000	FLAGWD 9 00204						
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 66102	RSBBQ+1 03304	CADRFLSH 56016	CADR+1 76531	CADR+2 56016	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77775	PIPA Y 77763	PIPAZ 77207	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 77776	DAPDATR2 11103	DAPDATR1 11111	REDOCTR 00000	IMODE 30 36001	IMODE 33 26000	CHAN 11 01022	CHAN 12 00040
CHAN 13 00101	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX -11.10718	CDUY 52.20703	CDUZ -.9667969	CDUT -19.76440	AOGT/ -.4710630E-02			
AOGT/OBP -.1330376E-01	AOGT/OBY -.5666167E-02	AK .4284668	AK1 -.5493164	AK2 -.3955078			
THETAD X -10.67871	THETAD Y 51.54785	THETAD Z -1.175537	TIG 2388.540	DELLT4 1161.690			
RTARG X -6163634.	RTARG Y 2176504.	RTARG Z -1235646.	TGO -177061.1	PIPTIME1 2358.580			
DELV X .0000000	DELV Y .0000000	DELV Z 1.989000	PACTOFF -2.918175	YACTOFF 2.230150			
PCMD .0000000	YCMD .0000000	CSTEER .0000000	AOGT/ -.6279722E-02	AOGT/OBP -.1016558E-01			
AOGT/OBY -.5666167E-02	AK .4394531	AK1 -.5493164	AK2 -.4833984	THETAD X -10.67871			
THETAD Y 51.54785	THETAD Z -1.175537	ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0			
TEVENT 2372.820	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 26520.00			
ERRORX -.4504395	ERRORY .5163574	ERRORZ .4724121	WBODY/OCR .0000000	WBODY/OCP .0000000			
WBODY/OCY .0000000	THETAD X -10.67871	THETAD Y 51.54785	THETAD Z -1.175537	VGTIG X 1.773262			
VGTIG Y 3.038359	VGTIG Z -1.637220	S/C MASS 1788.571	X CG 8.466005	Y CG .3071489			
Z CG .5077438	JET FUEL 15.02454	SLOSH AR -7.886368	IXX 31119.44	IYY 79900.74			
IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454	WX DEG/S -.1748529E-01			
WY DEG/S .3497057E-02	WZ DEG/S .0000000	CONFIG 1.000000	AXSCM/S2 -.9327403E-03	AYSCM/S2 -.1422429E-02			
AZSCM/S2 .4605405E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 .3212014E-02			
AYSMM/S2 -.4868889E-03	AZSMM/S2 .3691636E-02	ARSMM/S2 .4917547E-02					

PRØGRAM 41 VERB 06 NØUN 85 R1 +00127 R2 -00001 R3 +00001 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

.46607900	.77728629	-.42260504
.17847395	-.55043912	-.81557536
-.86655426	.30469847	-.39527392

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LØS DR	LØS ALT	LØS CR
Y= .000	AIG= 52.13	52.13	52.21	-.02	10.99	R ERRØR	1.90	-8.79	77.42
Z= -.000	AMG= -.99	-.99	-.99	AGC TRUN	SDS TRUN	V ERRØR	-.01	-.02	-.05
X= .000	AØG= -11.09	-11.09	-11.05	.01	69.57				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	1787229.3	5558261.0	-3162637.6	6640085.1	-7460.84	1822.43	-1034.95	7749.61	2298.41
AGC CM	1787198.2	5558264.9	-3162684.0	6640102.2	-7460.81	1822.42	-1034.92	7749.58	
DELTA	31.1	-3.9	46.4	-17.0	-.02	.01	-.03	.03	
SDS LM	1782172.0	5573661.4	-3171020.5	6655614.8	-7456.19	1800.03	-1022.18	7738.20	2298.41
AGC LM	1782152.4	5573703.3	-3170999.8	6655634.9	-7456.15	1800.01	-1022.21	7738.16	
DELTA	19.6	-42.0	-20.7	-20.1	-.04	.03	.03	.04	

PØSITIØN	LAT	LØNG	ALT	APØGEE	PERIGEE	AZIMUTH	ELEVATIØN	RANGE	RANGE RATE
SDS CM	-28.60	23.65	266787.8	274179.8	255546.3	-1.96	58.28	18248.8	-26.05
SDS LM	-28.61	23.65	282320.5	278469.5	274196.3				

FLAGWD 0	00310	FLAGWD 1	02000	FLAGWD 2	00574	FLAGWD 3	10004	FLAGWD 4	00000	FLAGWD 5	43203	FLAGWD 6	20000	FLAGWD 7	02100
FLAGWD 8	50000	FLAGWD 9	00204												
RCSFLAGS	00001	RCSFLAGS	00001	RSBBQ	66102	RSBBQ+1	03304	CADRFLSH	56016	CADR+1	76531	CADR+2	56016	FAILREG	00000
FAILRG+1	00000	FAILRG+2	00000	PIPA X	00001	PIPA Y	77762	PIPAZ	76660	FLAG 10	00000	FLAG 11	00000	ØPTMØDES	00120
HØLDFLAG	77776	DAPDATR1	11103	DAPDATR2	11111	REDØCTR	00000	IMØDE 30	36001	IMØDE 33	26000	CHAN 11	01000	CHAN 12	00040
CHAN 13	00101	CHAN 14	00000	CHAN 30	37373	CHAN 31	37777	CHAN 32	77777	CHAN 33	67765				

CDUX	-11.05225	CDUY	52.19604	CDUZ	-.9777832	CDUT	-19.76440	ADØT/	.7657707E-02					
ADØT/ØBP	-.1703203E-01	ADØT/ØBY	-.5263836E-02	AK	.3735352	AK1	-.5273437	AK2	-.4833984					
THETAD X	-10.67871	THETAD Y	51.54785	THETAD Z	-1.175537	TIG	2385.540	DELLT4	1161.690					
RTARG X	-6163634.	RTARG Y	2176504.	RTARG Z	-1235646.	TGØ	-177061.1	PIPTIME1	2358.580					
DELV X	.0000000	DELV Y	.0000000	DELV Z	1.989000	PACTØFF	-2.918175	YACTØFF	2.230150					
PCMD	.0000000	YCMD	.0000000	CSTEER	.0000000	ADØT/	.5216897E-02	ADØT/ØBP	-.1162738E-01					
ADØT/ØBY	-.6484241E-02	AK	.3735352	AK1	-.5712891	AK2	-.3955078	THETAD X	-10.67871					
THETAD Y	51.54785	THETAD Z	-1.175537	ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0					
TEVENT	2372.820	PCMD	.0000000	YCMD	.0000000	LEMMASS	.0000000	CSMMASS	26520.00					
ERRØRX	-.3735352	ERRØRY	.5273437	ERRØRZ	.4724121	WBØD/ØCR	.0000000	WBØD/ØCP	.0000000					
WBØD/ØCY	.0000000	THETAD X	-10.67871	THETAD Y	51.54785	THETAD Z	-1.175537	VGTIG X	1.773262					
VGTIG Y	3.038359	VGTIG Z	-1.637220	S/C MASS	1788.571	X CG	8.466005	Y CG	.3071489					
Z CG	.5077438	JET FUEL	15.19202	SLØSH AR	-7.886368	IXX	31119.44	IYY	79900.74					
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454	WX DEG/S	-.3497057E-02					
WY DEG/S	.0000000	WZ DEG/S	-.3497057E-02	CØNFIG	1.000000	AXSCM/S2	.8861033E-03	AYSCM/S2	-.1608977E-02					
AZSCM/S2	.4605405E-02	XGYRØØUT	.0000000	YGYRØØUT	.0000000	ZGYRØØUT	.0000000	AXSMM/S2	.4385634E-02					
AYSMM/S2	-.7085324E-03	AZSMM/S2	.2241869E-02	ARSMM/S2	.4976121E-02									

PROGRAM 41 VERB NOUN R1 R2 R3 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

.46623492	.77745223	-.42212749
.17980123	-.55047917	-.81525683
-.86619592	.30420184	-.39643979

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LES DR	LES ALT	LES CR
Y= .000	AIG= 52.14	52.14	52.21	-.03	10.99	R ERROR	1.28	-9.50	74.17
Z= -.000	AMG= -1.02	-1.02	-1.01	AGC TRUN	SDS TRUN	V ERROR	-.01	-.02	-.06
X= .000	AOG= -11.16	-11.16	-11.16	.01	105.64				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	1343155.3	5652537.4	-3216139.4	6640692.5	-7586.57	1372.14	-777.97	7748.81	2357.41
AGC CM	1343125.4	5652840.7	-3216184.0	6640711.0	-7586.54	1372.13	-777.94	7748.78	
DELTA	29.9	-3.4	44.6	-18.4	-.03	-.01	-.03	.03	
SDS LM	1338410.6	5666672.0	-3223801.9	6655479.9	-7580.67	1351.64	-766.32	7738.27	2357.41
AGC LM	1338393.2	5666712.6	-3223782.9	6655501.7	-7580.63	1351.61	-766.35	7738.23	
DELTA	17.4	-40.6	-19.0	-21.8	-.04	.02	.03	.04	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-29.13	27.76	267560.2	273779.7	255638.3	-2.38	61.86	16763.5	-24.29
SDS LM	-29.13	27.84	282349.2	278575.5	273787.2				

FLAGWD 0 00310	FLAGWD 1 02000	FLAGWD 2 00574	FLAGWD 3 10004	FLAGWD 4 00000	FLAGWD 5 43203	FLAGWD 6 20000	FLAGWD 7 02100	
FLAGWD 8 50000	FLAGWD 9 00204							
RCSFLAGS 00010	RCSFLAGS 00010	RSBBQ 66102	RSBBQ+1 03304	CADRFLSH 56016	CADR+1 76531	CADR+2 50145	FAILREG 00000	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00004	PIPA Y 77761	PIPAZ 77211	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120	
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00000	IMODE 30 36001	IMODE 33 26000	CHAN 11 01000	CHAN 12 00040	
CHAN 13 00101	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765			

CDUX -11.16211	CDUY 52.19604	CDUZ -1.021729	CDUT -19.76440	AOGT/ .2264120E-01			
AOGT/OBP -.1418889E-01	AOGT/OBY -.2608449E-02	AK .4943848	AK1 -.5603027	AK2 -.3515625			
THETAD X -10.67871	THETAD Y 51.54785	THETAD Z -1.175537	TIG 2388.540	DELLT4 1161.690			
RTARG X -6163634.	RTARG Y 2176504.	RTARG Z -1235646.	TGO -17761.1	PIPTIME1 2358.580			
DELV X .0000000	DELV Y .0000000	DELV Z 1.989000	PACTOFF -2.918175	YACTOFF 2.230150			
PCMD .0000000	YCMD .0000000	CSTEER .0000000	AOGT/ .2072342E-01	AOGT/OBP -.2550781E-01			
AOGT/OBY .3553927E-03	AK .4833984	AK1 -.5712891	AK2 -.3515625	THETAD X -10.67871			
THETAD Y 51.54785	THETAD Z -1.175537	ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0			
TEVENT 2372.820	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 26520.00			
ERRORX -.4724121	ERRORY .5383301	ERRORZ .3625488	WBODY/OCR .0000000	WBODY/OCP .0000000			
WBODY/OCY .0000000	THETAD X -10.67871	THETAD Y 51.54785	THETAD Z -1.175537	VGTIG X 1.773262			
VGTIG Y 3.038359	VGTIG Z -1.637220	S/C MASS 1788.571	X CG 8.466005	Y CG .3071489			
Z CG .5077438	JET FUEL 15.32544	SLOSH AR -7.886368	IXX 31119.44	IYY 79900.74			
IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454	WX DEG/S .1049118E-01			
WY DEG/S -.3497057E-02	WZ DEG/S .6994114E-02	CONFIG 1.000000	AXSCM/S2 -.9327403E-03	AYSCM/S2 -.1235881E-02			
AZSCM/S2 .1504044E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 .7666684E-03			
AYSMM/S2 -.9047413E-03	AZSMM/S2 .1794949E-02	ARSMM/S2 .2151320E-02					

PROGRAM 41 VERB 37 NOUN XX R1 R2 R3 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

.46162915	.78532076	-.41251493
.18519378	-.54010153	-.82097054
-.86752582	.30258870	-.39476347

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= 51.85	51.85	51.90
Z= -.000	AMG= -1.72	-1.72	-1.66
X= .000	AOG= -11.13	-11.13	-11.09

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	90,6763.1	5718361.4	-3253411.8	6641277.3	-7674.29	929.71	-525.44	7748.24	2414.58
AGC CM	90,7184.0	5718546.0	-3253512.0	6641542.9	-7672.95	930.40	-525.90	7747.02	
DELTA	-420.9	-184.6	100.2	-265.6	-1.35	-.69	.46	1.22	
SDS LM	88,0683.7	5733922.2	-3261879.4	6655323.0	-7670.70	889.13	-502.41	7738.38	2417.41
AGC LM	88,0668.8	5733961.3	-3261862.2	6655346.4	-7670.66	889.10	-502.45	7738.34	
DELTA	14.9	-39.2	-17.2	-23.4	-.04	.02	.03	.04	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-29.51	32.09	268294.5	273752.3	256057.7	-.66	26.52	31527.3	-29.19
SDS LM	-29.51	32.15	282312.0	278692.7	273448.1				

FLAGWD 0	00310	FLAGWD 1	02005	FLAGWD 2	00474	FLAGWD 3	10004	FLAGWD 4	10000	FLAGWD 5	43203	FLAGWD 6	20000	FLAGWD 7	00140
FLAGWD 8	50000	FLAGWD 9	00204												
RCSFLAGS	00001	RCSFLAGS	00001	RSBBQ	66102	RSBBQ+1	03304	CADRFLSH	56016	CADR+1	76531	CADR+2	10004	FAILREG	00000
FAILRG+1	00000	FAILRG+2	00000	PIPA X	77777	PIPA Y	77777	PIPAZ	77777	FLAG 10	00000	FLAG 11	00000	OPTMODES	00120
HOLDFLAG	77776	DAPDATR1	11103	DAPDATR2	11111	RENDCTR	00000	IMODE 30	36000	IMODE 33	26000	CHAN 11	01420	CHAN 12	00040
CHAN 13	00101	CHAN 14	00000	CHAN 30	37373	CHAN 31	37777	CHAN 32	77777	CHAN 33	67765				

CDUX	-11.07422	CDUY	51.94336	CDUZ	-1.538086	CDUT	-19.76440	ADOT/	.4154072E-02
ADOT/OOP	-.2544076E-01	ADOT/OOY	-.8890853E-01	AK	.3955078	AK1	-.4724121	AK2	.2307129
THETAD X	-10.67871	THETAD Y	51.54785	THETAD Z	-1.175537	TIG	2388.540	DELLT4	1139.650
RTARG X	-6163634.	RTARG Y	2176504.	RTARG Z	-1235646.	TGO	-177061.1	PIPTIME1	2414.580
DELV X	.0000000	DELV Y	.0000000	DELV Z	.0000000	PACTOFF	-2.918175	YACTOFF	2.230150
PCMD	.0000000	YCMD	.0000000	CSTEER	.0000000	ADOT/	.2584979E-02	ADOT/OOP	-.1689792E-01
ADOT/OOY	-.1002409	AK	.3955078	AK1	-.4833984	AK2	.3405762	THETAD X	-10.67871
THETAD Y	51.54785	THETAD Z	-1.175537	ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0
TEVENT	2372.820	PCMD	.0000000	YCMD	.0000000	LEMMASS	.0000000	CSMMASS	26520.00
ERRORX	-.3955078	ERROORY	.4833984	ERROORZ	-.3735352	WBODY/OCR	.0000000	WBODY/OCP	.0000000
WBODY/OCY	.0000000	THETAD X	-10.67871	THETAD Y	51.54785	THETAD Z	-1.175537	VGTIG X	-.7448197E-01
VGTIG Y	1.955175	VGTIG Z	-1.050425	S/C MASS	1788.571	X CG	8.466005	Y CG	.3071489
Z CG	.5077438	JET FUEL	17.40625	SLOSH AR	-7.886368	IXX	31119.44	IYY	79900.74
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454	WX DEG/S	-.6994114E-02
WY DEG/S	.1049118E-01	WZ DEG/S	-.6644409E-01	CONFIG	1.000000	AXSCM/S2	.8861033E-03	AYSCM/S2	-.1608977E-02
AZSCM/S2	.4512131E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	.4294796E-02
AYSMM/S2	-.7339669E-03	AZSMM/S2	.2212801E-02	ARSMM/S2	.4886765E-02				

PROGRAM 20 VERB NOUN R1 R2 R3 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
-.412223O4	.79159081	-.45106113	.00000000	.00000000	.00000000	.27485657	.88624287	-.37286210
.00042095	-.49491686	-.86894023	.00000000	.00000000	.00000000	.14754653	-.42208242	-.89446998
-.91108286	-.35838706	.20368291	.00000000	.00000000	.00000000	-.95009708	.19083619	-.24677444

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	AIG= 4O.41	4O.41	4O.44	-.03	10.99	R ERROR	126.61	589.97	-98.01
Z= .000	AMG= -6.58	-6.58	-6.58	AGC TRUN	SDS TRUN	V ERROR	.53	1.98	-.02
X= .000	AOG= -6.91	-6.91	-6.88	.01	81.70				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	407041.3	5762244.8	-3278121.7	6641929.6	-7732.32	423.25	-236.41	7747.50	2479.42
AGC CM	407576.O	5762483.9	-3278258.3	6642237.3	-7730.57	424.11	-236.99	7745.82	
DELTA	-534.7	-239.1	136.6	-307.7	-1.75	-.86	.58	1.68	
SDS LM	403147.7	5774113.2	-3284507.8	6655141.1	-7724.53	406.58	-227.10	7738.56	2479.42
AGC LM	403145.6	5774072.9	-3284558.2	6655130.9	-7724.53	406.57	-227.07	7738.55	
DELTA	2.1	40.3	50.4	10.2	-.00	.02	-.03	.00	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-29.74	36.58	268991.1	273595.7	256280.9	-3.83	7O.33	14028.6	-2O.50
SDS LM	-29.74	36.63	282202.1	278833.4	273174.2				

FLAGWD 0 00310	FLAGWD 1 03124	FLAGWD 2 40474	FLAGWD 3 10004	FLAGWD 4 00001	FLAGWD 5 43203	FLAGWD 6 20000	FLAGWD 7 00100	
FLAGWD 8 50000	FLAGWD 9 00204							
RCSFLAGS 00001	VHFCNT 00000	TRKMKCNT 00000	RCSFLAGS 00001	RSBBQ 66102	RSBBQ+1 03304	CADRFLSH 56016	CADR+1 46347	
CADR+2 10132	FAILREG 00000	FAILRG+1 00000	FAILRG+2 00000	PIPA X 00002	PIPA Y 77775	PIPA Z 77665	OPTMODES 00120	
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00000	IMODE 30 36001	IMODE 33 26000	CHAN 11 01002	CHAN 12 00040	
CHAN 13 00101	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765	FLAG 10 00000	FLAG 11 00000	

CDUX	-6.866455	CDUY	4O.37476	CDUZ	-6.569824	CDUT	-19.76440	ADOT/	-.4630164E-02
ADOT/OBP	.3138856E-01	ADOT/OBY	.1729355E-01	AK	-.2636719	AK1	.1647949	AK2	.3625488
THETAD X	-7.108154	THETAD Y	4O.62744	THETAD Z	-6.251221	TIG	2388.540	DELLT4	1139.650
RTARG X	-6163634.	RTARG Y	2176504.	RTARG Z	-1235646.	VHFTIME	1828.500	MARKDOWN	404463.1
MARKCDUY	6.888428	MARKCDUS	-1.274414	MARKCDUZ	-2.131348	MARKCDUT	3.532104	MARKCDUX	.0000000
RM	.0000000	TPI	2018630.	ECSTEER	1.000244	DELVTPF	.0000000	TPASS4	3550.230
DELVSLVX	-1.173782	DELVSLVY	-.8001328E-01	DELVSLVZ	-3.697586	DELVSLVS	3.880246	RANGE	12236.00
RRATE	-15.93809	ADOT/	-.5850569E-02	ADOT/OBP	.3539846E-01	ADOT/OBY	.1729355E-01	AK	-.2526855
AK1	.9887696E-01	AK2	.3515625	THETAD X	-7.108154	THETAD Y	4O.61646	THETAD Z	-6.251221
ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0	DELV3 X	-.5540848E-01	DELV3 Y	1.954889
DELV3 Z	-1.023436	DELV3 S	2.207279	LEMMASS	.0000000	CSMMASS	26520.00	ERRORX	.2526855
ERRORY	-.6591797E-01	ERRORZ	-.3405762	WBOD/OCR	.1091324E-02	WBOD/OCP	-.2626889E-02	WBOD/OCY	-.1880900E-02
THETAD X	-7.108154	THETAD Y	4O.62744	THETAD Z	-6.251221	RTHETA	.1660515	LAT(SPL)	27.92083
LNG(SPL)	-152.2167	VPRED	7701.699	GAMMAEI	-114.4775	S/C MASS	1788.571	X CG	8.466005
Y CG	.3071489	Z CG	.5077438	JET FUEL	24.65796	SLOSH AR	-7.886368	IXX	31119.44
IYY	79900.74	IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454
WX DEG/S	-.6994114E-02	WY DEG/S	.6294703E-01	WZ DEG/S	.2797646E-01	CONFIG	1.000000	AXSCM/S2	-.9327403E-03
AYSCM/S2	-.1422429E-02	AZSCM/S2	.6016175E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000
AXSMM/S2	.3230181E-02	AYSMM/S2	-.5777264E-03	AZSMM/S2	.5337611E-02	ARSMM/S2	.6265614E-02		

PROGRAM	VERB	NOUN	R1	R2	R3	FLASH 0	DSPTAB +11 00000
PROGRAM	VERB	NOUN	R1	R2	R3	FLASH 0	DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

.28278065	.88927555	-.35947561
.15782142	-.41280079	-.89704347
-.94611120	.19693351	-.25707936

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	AIG= 40.91	40.91	40.98	-.03	10.99	R ERROR	168.78	701.11	-116.29
Z= -.000	AMG= -7.33	-7.33	-7.32	AGC TRUN	SDS TRUN	V ERROR	.62	1.94	-.06
X= .000	AOG= -7.27	-7.27	-7.24	.01	149.46				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-49768.6	5773564.2	-3284280.0	6642515.8	-7746.66	-39.67	27.72	7746.81	2538.42
AGC CM	-49132.0	5773855.4	-3284451.8	6642849.1	-7744.95	-38.76	27.11	7745.10	
DELTA	-636.6	-291.2	171.8	-333.3	-1.70	-.91	.61	1.71	
SDS LM	-53190.5	5784502.0	-3290147.6	6654950.3	-7738.49	-54.57	35.99	7738.77	2538.42
AGC LM	-53192.5	5784460.7	-3290196.3	6654938.5	-7738.49	-54.58	36.03	7738.77	
DELTA	2.0	41.3	48.8	11.8	-.00	.02	-.03	.00	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-29.80	40.87	269596.0	273393.1	256447.7	-5.25	74.95	12875.2	-18.60
SDS LM	-29.79	40.90	282029.6	278996.0	272978.1				

FLAGWD 0 00000	FLAGWD 1 00000	FLAGWD 2 00000	FLAGWD 3 00000	FLAGWD 4 00000	FLAGWD 5 00200	FLAGWD 6 00000	FLAGWD 7 00100	
FLAGWD 8 00000	FLAGWD 9 00000							
RCSFLAGS 00011	RCSFLAGS 00011	RSBBQ 66102	RSBBQ+1 03304	CADRFLSH 56016	CADR+1 73174	CADR+2 10132	FAILREG 00000	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00004	PIPA Y 77775	PIPA Z 77707	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120	
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	RENDCTR 00000	IMODE 30 36075	IMODE 33 26040	CHAN 11 00000	CHAN 12 00000	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765			

CDUX	-7.239990	CDUY	40.94604	CDUZ	-7.272949	CDUT	-19.76440	ADOT/	.2621860E-01		
ADOT/OOP	-.6765873E-02	ADOT/OBY	-.2033785E-01	AK	.2966309	AK1	-.5603027	AK2	.3735352		
THETAD X	-7.042236	THETAD Y	40.42969	THETAD Z	-6.668701	TIG	2388.540	BEST I	.0000000		
BEST J	.1666667	MRKTIME1	404463.1	STAR X1	.7653723E-01	STAR Y1	-.2367206E-01	STAR Z1	.0000000		
STAR RS1	.8011438E-01	MRKTIME2	2388.540	STAR X2	-.1515672E-03	STAR Y2	-.8804932	STAR Z2	.0000000		
STAR RS2	.8804932	HAPO	84000.00	HPER	.27093276 08	RSP-RREC	506002.0	VGTIG X	-9.606934		
VGTIG Y	-538.1073	VGTIG Z	-485.4254	ADOT/	.2621860E-01	ADOT/OOP	-.6765873E-02	ADOT/OBY	-.2033785E-01		
AK	.2966309	AK1	-.5603027	AK2	.3735352	THETAD X	-7.042236	THETAD Y	40.42969		
THETAD Z	-6.668701	OGC	.0000000	IGC	.0000000	MGC	.7655360E-01	TEVENT	2372.820		
LAUNCHAZ	147.5684	LEMMASS	.0000000	CSMMASS	26520.00	ERRORX	-.3076172	ERRORY	.5603027		
ERRORZ	-.3735352	WBOD/OCR	.1047738E-02	WBOD/OCP	.5599112E-03	WBOD/OCY	-.1394749E-02	THETAD X	-7.569580		
THETAD Y	40.08911	THETAD Z	-6.822510	S/C MASS	1788.571	X CG	8.466005	Y CG	.3071489		
Z CG	.5077438	JET FUEL	25.05579	SLOSH AR	-7.886368	IXX	31119.44	IYY	79900.74		
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454	WX DEG/S	.6994114E-02		
WY DEG/S	.3846763E-01	WZ DEG/S	-.1398823E-01	CONFIG	1.000000	AXSCM/S2	-.9327403E-03	AYSCM/S2	-.1329155E-02		
AZSCM/S2	.4418857E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	.2220068E-02		
AYSMM/S2	-.6358624E-03	AZSMM/S2	.4113122E-02	ARSMM/S2	.4717075E-02						

PROGRAM 30 VERB 06 NOUN 33 R1 +00000 R2 +00039 R3 -048XX FLASH 1 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

.00000000	.00000000	.00000000
.00000000	.00000000	.00000000
.00000000	.00000000	.00000000

S/C ATTITUDE MATRIX

.43680620	.84895086	-.29745817
.20236182	-.41493201	-.88706279
-.87649775	.32727981	-.35304093

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		L&S DR	L&S ALT	L&S CR
Y= .000	AIG= 50.62	50.62	50.42	-.03	10.99	R ERROR	222.63	803.35	-160.38
Z= .000	AMG= -9.29	-9.29	-9.26	AGC TRUN	SDS TRUN	V ERROR	.73	1.88	-.14
X= .000	A&G= -8.42	-8.42	-8.34	.01	149.21				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-5063432	5757570.3	-3274854.5	6643092.0	-7724.35	-502.27	291.65	7746.15	2597.42
AGC CM	-5056078	5757916.2	-3275063.0	6643438.6	-7722.70	-501.32	291.01	7744.43	
DELTA	-735.5	-345.9	208.5	-346.6	-1.65	-.95	.63	1.73	
SDS LM	-5092785	5767678.6	-3280263.3	6654743.2	-7716.05	-515.50	298.94	7739.03	2597.42
AGC LM	-5092804	5767636.3	-3280310.0	6654729.8	-7716.05	-515.52	298.98	7739.03	
DELTA	2.0	42.3	46.8	13.5	-.00	.02	-.04	-.00	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	29.70	45.15	270141.3	273238.2	256659.3	-8.17	79.90	11834.2	-16.69
SDS LM	29.70	45.17	281791.5	279197.7	272834.4				

FLAGWD 0 00000	FLAGWD 1 00120	FLAGWD 2 00400	FLAGWD 3 00000	FLAGWD 4 10040	FLAGWD 5 40200	FLAGWD 6 00000	FLAGWD 7 00100
FLAGWD 8 00000	FLAGWD 9 00000						
RCSFLAGS 00011	VHFCNT 00000	TRKMKCNT 00000	RCSFLAGS 00011	RSBBQ 66102	RSBBQ+1 03304	CADRFLSH 56016	CADR+1 73174
CADR+2 73647	FAILREG 00000	FAILRG+1 00000	FAILRG+2 00000	PIPA X 00007	PIPA Y 77774	PIPA Z 77755	OPTMODES 00120
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	RENDCTR 00000	IMODE 30 36001	IMODE 33 26000	CHAN 11 01040	CHAN 12 00000
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765	FLAG 10 00000	FLAG 11 00000

CDUX	-8.283691	CDUY	50.14160	CDUZ	-9.195557	CDUT	-19.76440	ADOT/	.2621860E-01
ADOT/OBP	-.6765873E-02	ADOT/OBY	-.2033785E-01	AK	.2966309	AK1	-.5603027	AK2	.3735352
THETAD X	-7.712402	THETAD Y	46.51611	THETAD Z	-8.569336	TIG	2388.540	DELLT4	1139.650
RTARG X	-6163634.	RTARG Y	2176504.	RTARG Z	-1235646.	VHFTIME	1828.500	MARKDOWN	404463.1
MARKCDUY	6.888428	MARKCDUS	-1.274414	MARKCDUZ	-2.131348	MARKCDUT	3.532104	MARKCDUX	.0000000
RM	.0000000	TPI	2018630.	ECSTEER	1.000244	DELVTPF	.0000000	TPASS4	3550.230
DELVSLVX	-1.173782	DELVSLVY	-.8001328E-01	DELVSLVZ	-3.697586	DELVSLVS	3.880246	RANGE	13110.00
RRATE	-19.55333	ADOT/	.2621860E-01	ADOT/OBP	-.6765873E-02	ADOT/OBY	-.2033785E-01	AK	.2966309
AK1	-.5603027	AK2	.3735352	THETAD X	-7.712402	THETAD Y	46.51611	THETAD Z	-8.569336
ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0	DELV3 X	-.5540848E-01	DELV3 Y	1.954889
DELV3 Z	-1.023436	DELV3 S	2.207279	LEMMASS	.0000000	CSMMASS	26520.00	ERRORX	-.3076172
ERRORY	.5603027	ERRORZ	-.3735352	WBOD/OCR	.0000000	WBOD/OCP	.0000000	WBOD/OCY	.0000000
THETAD X	-7.569580	THETAD Y	40.08911	THETAD Z	-6.822510	RTHETA	53.71069	LAT(SPL)	27.92083
LNG(SPL)	-152.2167	VPRED	7701.699	GAMMAEI	-114.4775	S/C MASS	1788.571	X CG	8.466005
Y CG	.3071489	Z CG	.5077438	JET FUEL	25.03699	SLOSH AR	-7.886368	IXX	31119.44
IYY	79900.74	IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454
WX DEG/S	-.9791760E-01	WY DEG/S	.2762675	WZ DEG/S	.0000000	CONFIG	1.000000	AXSCM/S2	-.9327403E-03
AYSCM/S2	-.1515703E-02	AZSCM/S2	.1504044E-02	XGYROBUT	.0000000	YGYROBUT	.0000000	ZGYROBUT	.0000000
AXSMM/S2	.6031609E-03	AYSMM/S2	-.1115485E-02	AZSMM/S2	.1951190E-02	ARSMM/S2	.2327069E-02		

PROGRAM 40 VERB 37 NOUN R1 10000 R2 R3 77 FLASH 1 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

.75986171	.64235210	-.09996271
.31116271	-.49439144	-.81163645
-.57077742	.58562660	-.57554603

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		L&S DR	L&S ALT	L&S CR
Y= .000	AIG= 75.70	75.70	75.28	-.03	10.99	R ERROR	293.68	864.70	-332.31
Z= -.000	AMG= -13.34	-13.34	-13.27	AGC TRUN	SDS TRUN	V ERROR	.84	1.75	-.45
X= .000	A&G= -12.47	-12.47	-12.39	.01	163.17				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-983513.7	5711423.2	-3248211.5	6643683.7	-7661.55	-985.68	567.42	7745.51	2659.42
AGC CM	-982678.7	5711829.5	-3248460.1	6644030.9	-7659.98	-984.68	566.76	7743.78	
DELTA	-835.0	406.3	248.6	347.2	-1.57	-1.00	.66	1.73	
SDS LM	-985936.3	5720762.3	-3253198.4	6654509.1	-7653.35	-997.28	573.75	7739.35	2659.42
AGC LM	-985938.3	5720719.0	-3253242.7	6654493.8	-7653.34	-997.30	573.79	7739.35	
DELTA	2.0	43.3	44.3	15.3	-.00	.02	-.04	-.00	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-29.43	49.64	270647.7	273115.4	256939.7	-18.74	85.37	10860.8	-14.71
SDS LM	-29.43	49.65	281472.2	279464.3	272726.4				

FLAGWD 0 00000	FLAGWD 1 00000	FLAGWD 2 00600	FLAGWD 3 10000	FLAGWD 4 10040	FLAGWD 5 40200	FLAGWD 6 00000	FLAGWD 7 00100
FLAGWD 8 50000	FLAGWD 9 00000						
RCSFLAGS 00011	RCSFLAGS 00011	RSBBQ 66102	RSBBQ+1 03304	CADRFLSH 56016	CADR+1 73174	CADR+2 10004	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00013	PIPA Y 77774	PIPAZ 77662	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00000	IMODE 30 36001	IMODE 33 26000	CHAN 11 01060	CHAN 12 00000
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX -12.30469	CDUY 74.73999	CDUZ -13.16162	CDUT -19.76440	ADOT/ .2621860E-01			
ADOT/OBP -.6765873E-02	ADOT/OBY -.2033785E-01	AK .2966309	AK1 -.5603027	AK2 .3735352			
THETAD X -11.33789	THETAD Y 68.59863	THETAD Z -12.07397	TIG 2388.540	DELLT4 1139.650			
RTARG X -6163634.	RTARG Y 2176504.	RTARG Z -1235646.	TGO -11013.16	PIPTIME1 2418.580			
DELV X .0000000	DELV Y .0000000	DELV Z -.4095000	PACTOFF -2.918175	YACTOFF 2.230150			
PCMD .0000000	YCMD .0000000	CSTEER .0000000	ADOT/ .2621860E-01	ADOT/OBP -.6765873E-02			
ADOT/OBY -.2033785E-01	AK .2966309	AK1 -.5603027	AK2 .3735352	THETAD X -11.33789			
THETAD Y 68.59863	THETAD Z -12.07397	ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0			
TEVENT 2372.820	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 26520.00			
ERRORX -.3076172	ERRORY .5603027	ERRORZ -.3735352	WBODOCR .0000000	WBODOCP .0000000			
WBODOCY .0000000	THETAD X -7.569580	THETAD Y 40.08911	THETAD Z -6.822510	VGTIG X -9.606934			
VGTIG Y -538.1073	VGTIG Z -485.4254	S/C MASS 1788.571	X CG 8.466005	Y CG .3071489			
Z CG .5077438	JET FUEL 25.03491	SLOSH AR -7.886368	IXX 31119.44	IYY 79900.74			
IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454	WX DEG/S -.1958352			
WY DEG/S .5175644	WZ DEG/S .2797646E-01	CONFIG 1.000000	AXSCM/S2 .0000000	AYSCM/S2 -.1235881E-02			
AZSCM/S2 .4698679E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 .4705382E-02			
AYSMM/S2 -.1853085E-03	AZSMM/S2 .1239024E-02	ARSMM/S2 .4869306E-02					

PROGRAM 40 VERB NOUN 99 R1 +99999 R2 +99007 R3 +04006 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

.93282056	.19146061	.30526924
.35012698	-.68187547	-.64222813
.08519411	.70596671	-.70310378

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	AIG= 113.41	113.41	112.76	-.03	10.99	R ERROR	377.45	-706.08	-737.18
Z= -.000	AMG= -21.08	-21.08	-20.96	AGC TRUN	SDS TRUN	V ERROR	.96	-1.04	-1.35
X= .000	AOG= -16.28	-16.28	-16.27	.01	126.40				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-1440427.6	5638367.2	-3206229.2	6644239.8	-7562.70	-1448.51	831.41	7744.93	2719.42
AGC CM	-1439501.2	5638834.3	-3206517.9	6644574.7	-7561.22	-1447.48	830.74	7743.22	
DELTA	-926.4	-467.1	288.7	-334.9	-1.48	-1.03	.68	1.71	
SDS LM	-1442365.6	5647054.0	-3210862.2	6654267.3	-7554.79	-1458.68	836.89	7739.70	2719.42
AGC LM	-1442367.6	5647009.7	-3210903.8	6654250.3	-7554.78	-1458.69	836.94	7739.70	
DELTA	2.0	44.3	41.6	17.1	-.00	.02	-.05	-.00	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-29.01	53.95	271071.4	273024.2	257276.0	-132.13	87.95	10034.0	-12.86
SDS LM	-29.01	53.95	281098.3	279787.5	272648.8				

FLAGWD 0 00200	FLAGWD 1 00000	FLAGWD 2 00734	FLAGWD 3 10000	FLAGWD 4 00000	FLAGWD 5 40202	FLAGWD 6 00000	FLAGWD 7 00100
FLAGWD 8 50000	FLAGWD 9 00000						
RCSFLAGS 00011	RCSFLAGS 00015	RSBBQ 66102	RSBBQ+1 03304	CADRFLSH 56016	CADR+1 73174	CADR+2 56016	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00020	PIPA Y 77773	PIPAZ 76607	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 00001	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00000	IMODE 30 36001	IMODE 33 26000	CHAN 11 01000	CHAN 12 00000
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX -16.21582	CDUY 112.0276	CDUZ -20.79712	CDUT -19.76440	ADOT/ .2621860E-01			
ADOT/OBP -.6765873E-02	ADOT/OBY -.2033785E-01	AK .2966309	AK1 -.5603027	AK2 .3735352			
THETAD X -12.53540	THETAD Y 76.16821	THETAD Z -13.41431	TIG 2388.540	DELLT4 1139.650			
RTARG X -6163634.	RTARG Y 2176504.	RTARG Z -1235646.	TGO -1110.440	PIPTIME1 2418.580			
DELV X .0000000	DELV Y .0000000	DELV Z -.4095000	PACTOFF -2.918175	YACTOFF 2.230150			
PCMD .0000000	YCMD .0000000	CSTEER .0000000	ADOT/ .2621860E-01	ADOT/OBP -.6765873E-02			
ADOT/OBY -.2033785E-01	AK .2966309	AK1 -.5603027	AK2 .3735352	THETAD X -12.53540			
THETAD Y 76.16821	THETAD Z -13.41431	ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0			
TEVENT 2372.820	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 26520.00			
ERRORX .0000000	ERRORY .0000000	ERRORZ .0000000	WBODYBCR .0000000	WBODYBCP .0000000			
WBODYBCY .0000000	THETAD X 43.71460	THETAD Y -49.92187	THETAD Z 40.05615	VGTIG X -37.72564			
VGTIG Y -10.34088	VGTIG Z -29.16908	S/C MASS 1788.571	X CG 8.466005	Y CG .3071489			
Z CG .5077438	JET FUEL 25.01196	SLOSH AR -7.886368	IXX 31119.44	IYY 79900.74			
IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454	WX DEG/S -.3007469			
WY DEG/S .7133996	WZ DEG/S .2797646E-01	CONFIG 1.000000	AXSCM/S2 .8861033E-03	AYSCM/S2 -.1329155E-02			
AZSCM/S2 .4418857E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 .3902379E-02			
AYSMM/S2 -.3669835E-03	AZSMM/S2 -.2637921E-02	ARSMM/S2 .4724602E-02					

PROGRAM	VERB 99	NOUN 99	R1 -99999	R2 -99999	R3 +999	FLASH 0	DSPTAB +11 00000
PROGRAM	VERB 99	NOUN 99	R1 -99999	R2 -99999	R3 +999	FLASH 0	DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.50900126	-.34853506	-.78704596
-.36043692	-.74402928	.56258821
-.78166676	.57003784	.25308704

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		L&S DR	L&S ALT	L&S CR
Y= .000	AIG= -56.00	-56.00	-13.75	-.04	10.99	R ERROR	601.75	-1175.09	-113.61
Z= -.000	AMG= 58.89	58.89	13.62	AGC TRUN	SDS TRUN	V ERROR	1.16	-1.37	-.29
X= .000	AEG= 103.52	103.52	13.74	.01	140.55				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2388867.2	5391014.6	-3064483.1	6645357.9	-7229.19	-2409.14	1379.22	7743.86	2847.42
AGC CM	-2387764.9	5391616.9	-3064860.0	6645624.2	-7227.93	-2408.07	1378.52	7742.23	
DELTA	-1102.3	602.2	376.9	266.3	-1.26	-1.07	.70	1.63	
SDS LM	-2389856.9	5398572.9	-3068516.3	6653705.6	-7222.39	-2416.73	1383.18	7740.59	2847.42
AGC LM	-2389858.3	5398526.6	-3068551.1	6653684.5	-7222.38	-2416.75	1383.23	7740.59	
DELTA	1.4	46.3	34.8	21.0	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-27.62	62.98	271756.4	272872.4	258230.3	-173.88	75.45	8624.0	-9.28
SDS LM	-27.62	62.96	280104.6	280733.9	272505.3				

FLAGWD 0 00000	FLAGWD 1 00000	FLAGWD 2 00000	FLAGWD 3 00000	FLAGWD 4 00000	FLAGWD 5 00200	FLAGWD 6 00000	FLAGWD 7 00100
FLAGWD 8 00000	FLAGWD 9 00000						
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 56016	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00025	PIPA Y 77772	PIPA Z 77772	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36075	IMODE 33 26040	CHAN 11 00000	CHAN 12 00000
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 47765		

CDUX	107.8857	CDUY	-55.50293	CDUZ	44.85718	CDUT	-19.76715	ADOT/	.1206995E-02
ADOT/OBP	.2156497E-01	ADOT/OBY	-.4846752E-01	AK	.5493165E-01	AK1	-.3735352	AK2	.1098633
THETAD X	108.0176	THETAD Y	-55.56885	THETAD Z	44.42871	TIG	2388.540	BEST I	.0000000
BEST J	.1666667	MRKTIME1	404463.1	STAR X1	.7653723E-01	STAR Y1	-.2367206E-01	STAR Z1	.0000000
STAR RS1	.8011438E-01	MRKTIME2	2388.540	STAR X2	-.1515672E-03	STAR Y2	-.8804932	STAR Z2	.0000000
STAR RS2	.8804932	HAPB	400616.0	HPER	267272.0	RSP-RREC	506002.0	VGTIG X	-37.72564
VGTIG Y	-10.34088	VGTIG Z	-29.16908	ADOT/	.1206995E-02	ADOT/OBP	.2156497E-01	ADOT/OBY	-.4846752E-01
AK	.5493165E-01	AK1	-.3735352	AK2	.1098633	THETAD X	108.0176	THETAD Y	-55.56885
THETAD Z	44.42871	OGC	.0000000	IGC	.0000000	MGC	.7655360E-01	TEVENT	2372.820
LAUNCHAZ	147.5684	LEMMASS	.0000000	CSMMASS	26520.00	ERRORX	-.5493165E-01	ERRORY	.3735352
ERRORZ	-.1208496	WBOD/OCR	.0000000	WBOD/OCP	.0000000	WBOD/OCY	.0000000	THETAD X	108.0176
THETAD Y	-55.56885	THETAD Z	44.42871	S/C MASS	1788.571	X CG	8.466005	Y CG	.3071489
Z CG	.5077438	JET FUEL	37.34412	SLOSH AR	-7.886368	IXX	31119.44	IYY	79900.74
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454	WX DEG/S	-.1363852
WY DEG/S	.3357175	WZ DEG/S	-.4196469E-01	CONFIG	1.000000	AXSCM/S2	-.9327403E-03	AYSCM/S2	-.1515703E-02
AZSCM/S2	.4512131E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	.3760672E-02
AYSMM/S2	-.2899533E-02	AZSMM/S2	.1057349E-02	ARSMM/S2	.4864970E-02				

PROGRAM	VERB 99	NOUN 99	R1 -99999	R2 -99999	R3 +999	FLASH 0	DSPTAB +11 00000
PROGRAM	VERB 99	NOUN 99	R1 -99999	R2 -99999	R3 +999	FLASH 0	DSPTAB +11 00000

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
-.4122230⁴	.79159081	-.45106113	-.412223⁰⁴	.79159081	-.45106113	-.49938631	-.35420275	.79066658
.00042095	-.49491686	-.86894023	.00042095	-.49491686	-.86894023	-.35738420	-.74712920	.56042290
-.91108286	-.3583706	.20368291	-.9110⁸285	-.3583⁸706	.20368291	-.78923321	.56243673	.24651933

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	AIG= -56.17	-56.17	-55.90	-.04	10.99	R ERROR	605.66	-1177.21	-112.28
Z= -.000	AMG= 59.56	59.56	59.27	AGC TRUN	SDS TRUN	V ERROR	1.16	-1.37	-.29
X= .000	AOG= 103.39	103.39	103.47	.01	151.79				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2403319.0	5386181.7	-3061716.3	6645374.5	-7222.68	-2423.78	1387.56	7743.85	2849.42
AGC CM	-2402214.2	5386786.1	-3062094.6	6645639.2	-7221.42	-2422.71	1386.87	7742.21	
DELTA	-1104.8	-604.4	378.3	-264.7	-1.26	-1.07	.70	1.63	
SDS LM	-2404295.2	5393724.8	-3065741.7	6653696.3	-7215.90	-2431.33	1391.50	7740.60	2849.42
AGC LM	-2404296.6	5393678.4	-3065776.3	6653675.2	-7215.89	-2431.35	1391.56	7740.61	
DELTA	1.4	46.4	34.7	21.1	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-27.59	63.12	271764.7	272870.1	258247.9	-173.97	75.24	8605.5	-9.23
SDS LM	-27.59	63.10	280087.1	280751.7	272502.8				

FLAGWD 0 00000	FLAGWD 1 00000	FLAGWD 2 00000	FLAGWD 3 00000	FLAGWD 4 00000	FLAGWD 5 00200	FLAGWD 6 00000	FLAGWD 7 00100
FLAGWD 8 00000	FLAGWD 9 00000						
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 56016	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00025	PIPA Y 77772	PIPA Z 00035	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	RCDOCTR 00001	IMODE 30 36075	IMODE 33 26040	CHAN 11 00000	CHAN 12 00000
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 47765		

CDUX 83.68286	CDUY -55.79956	CDUZ 58.91968	CDUT -19.76715	ADOT/ .1206995E-02			
ADOT/OBP .2156497E-01	ADOT/OBY -.4846752E-01	AK .5493165E-01	AK1 -.3735352	AK2 .1098633			
THETAD X 108.0176	THETAD Y -55.56885	THETAD Z 44.42871	TIG 2388.540	BEST I .0000000			
BEST J .1666667	MRKTIME1 404463.1	STAR X1 .7653723E-01	STAR Y1 -.2367206E-01	STAR Z1 .0000000			
STAR RS1 .8011438E-01	MRKTIME2 2388.540	STAR X2 -.1515672E-03	STAR Y2 -.8804932	STAR Z2 .0000000			
STAR RS2 .8804932	HAPO 400616.0	HPER 26727.0	RSP-RREC 506002.0	VGTIG X -37.72564			
VGTIG Y -10.34088	VGTIG Z -29.16908	ADOT/ .1206995E-02	ADOT/OBP .2156497E-01	ADOT/OBY -.4846752E-01			
AK .5493165E-01	AK1 -.3735352	AK2 .1098633	IGC .0000000	MGC .7655360E-01	TEVENT 2372.820		
THETAD Z 44.42871	OGC .0000000	LEMMASS .0000000	CSMMASS 26520.00	ERRORX -.5493165E-01	ERRORY .3735352		
LAUNCHAZ 147.5684	ERRORZ -.1208496	WBODY/OCR .0000000	WBODZ/OCP .0000000	WBOD/OCY .0000000	THETAD X 108.0176		
ERRORZ -.1208496	THETAD Y -55.56885	THETAD Z 44.42871	S/C MASS 1788.571	X CG 8.466005	Y CG .3071489		
THETAD Y -55.56885	Z CG .5077438	JET FUEL 37.34375	SLOSH AR -7.886368	IXX 31119.44	IYY 79900.74		
Z CG .5077438	IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454	WX DEG/S -.1328882		
WY DEG/S .3462086	WZ DEG/S -.2797646E-01	CONFIG 1.000000	YGYROOUT .0000000	AXSCM/S2 .8861033E-03	AYSCM/S2 -.1235881E-02		
AZSCM/S2 .4791953E-02	XGYROOUT .0000000	ZGYROOUT .0000000	ARSMM/S2 .5044157E-02	AXSMM/S2 .4283896E-02			
AYSMM/S2 -.1431599E-02	AZSMM/S2 .2245503E-02						

PROGRAM 40 VERB 50 NOUN 18 R1 +10230 R2 +30468 R3 +04427 FLASH 1 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.71660900	-.23073769	-.65820432
-.31397152	-.73595643	.59982467
-.62281156	.63649607	.45494771

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	AIG= -55.74	-55.74	-55.60	-.04	10.99	R ERROR	706.15	-1223.20	-88.66
Z= -.000	AMG= 43.30	43.30	43.96	AGC TRUN	SDS TRUN	V ERROR	1.22	-1.24	-.24
X= .000	AOG= 102.47	102.47	102.43	.01	145.03				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2760170.0	5255920.3	-2987165.9	6645780.4	-7047.32	-2785.20	1593.60	7743.49	2899.42
AGC CM	-2759004.9	5256578.1	-2987579.0	6646002.5	-7046.16	-2784.13	1592.91	7741.91	
DELTA	-1165.1	-657.9	413.1	-222.2	-1.16	-1.07	.69	1.58	
SDS LM	-2760821.4	5263106.2	-2991006.6	6653460.9	-7041.12	-2791.95	1597.07	7740.99	2899.42
AGC LM	-2760822.5	5263058.9	-2991038.2	6653438.2	-7041.11	-2791.96	1597.13	7741.00	
DELTA	1.1	47.2	31.6	22.7	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-26.86	66.57	271951.1	272810.7	258713.9	-175.59	69.98	8173.9	-8.06
SDS LM	-26.87	66.55	279632.8	281226.4	272435.1				

FLAGWD 0 00200	FLAGWD 1 00000	FLAGWD 2 00734	FLAGWD 3 10004	FLAGWD 4 10000	FLAGWD 5 40202	FLAGWD 6 20000	FLAGWD 7 00100
FLAGWD 8 50000	FLAGWD 9 00000						
RCSFLAGS 00011	RCSFLAGS 00011	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 56016	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00027	PIPA Y 77770	PIPAZ 00375	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 77776	DAPDATR2 11111	DAPDATR1 11103	REDOCTR 00001	IMODE 30 36001	IMODE 33 26000	CHAN 11 01040	CHAN 12 00040
CHAN 13 40100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67767		

CDUX	102.4255	CDUY	-55.74463	CDUZ	45.57129	CDUT	-19.76715	ADOT/	.1494560
ADOT/OBP	-2.060493	ADOT/OBY	.4023985E-01	AK	.2197266	AK1	-1.636963	AK2	-.1757812
THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	TIG	2388.540	DELLT4	1139.650
RTARG X	-6163634.	RTARG Y	2176504.	RTARG Z	-1235646.	TGO	-24187.24	PIPTIME1	2418.580
DELV X	.0000000	DELV Y	.0000000	DELV Z	-.4095000	PACTOFF	-2.918175	YACTOFF	2.230150
PCMD	.0000000	YCMD	.0000000	CSTEER	.0000000	ADOT/	.1452718	ADOT/OBP	-1.042380
ADOT/OBY	.4023985E-01	AK	.8789063E-01	AK1	.1318359	AK2	-.2197266	THETAD X	102.3047
THETAD Y	-55.30518	THETAD Z	44.27490	ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0
TEVENT	2372.820	PCMD	.0000000	YCMD	.0000000	LEMMASS	.0000000	CSMMASS	26520.00
ERRORX	-.3295899E-01	ERRORY	-.7141113	ERRORZ	.2416992	WBODY/OCR	.0000000	WBODY/OCP	.0000000
WBODY/OCY	.0000000	THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	VGTIG X	-37.76913
VGTIG Y	-10.61211	VGTIG Z	-29.01478	S/C MASS	1788.571	X CG	8.466005	Y CG	.3071489
Z CG	.5077438	JET FUEL	43.85583	SLOSH AR	-7.886368	IXX	31119.44	IYY	79900.74
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454	WX DEG/S	.1223970
WY DEG/S	-.2832616	WZ DEG/S	.5944997E-01	CONFIG	1.000000	AXSCM/S2	.0000000	AYSCM/S2	-.1065656E-01
AZSCM/S2	.5497338E-01	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	.3833342E-01
AYSMM/S2	-.3750135E-01	AZSMM/S2	.1663416E-01	ARSMM/S2	.5614711E-01				

PROGRAM 40 VERB 06 NOUN 40 R1 -00 15 R2 +01813 R3 +02085 FLASH 0 DSPTAB +11 00400

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.85982800	-.32344246	-.39507103
-.03081775	-.73947668	.67247629
-.50965309	.59038830	.62585449

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -71.33	-71.33	-69.70
Z= -.000	AMG= 30.20	30.20	32.04
X= .000	AOG= 104.64	104.64	105.18

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2670499.4	5290898.1	-3011030.1	6647666.7	-6982.64	-2776.17	1895.36	7749.63	2885.94
AGC CM	-2662982.0	5293796.0	-3008922.0	6646003.4	-7076.58	-2679.06	1518.48	7717.58	
DELTA	-7517.4	-2897.9	-2108.1	1663.3	93.94	-97.11	376.88	32.05	
SDS LM	-3169352.5	5086149.8	-2889808.4	6653172.7	-6804.29	-3205.25	1832.62	7741.48	2958.41
AGC LM	-3169353.3	5086101.4	-2889836.2	6653148.2	-6804.28	-3205.27	1832.69	7741.50	
DELTA	.8	48.3	27.8	24.5	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-25.89	70.58	272177.1	340067.3	265223.6	-.50	2.98	552694.4	-15.78
SDS LM	-25.89	70.55	279056.7	281859.5	272337.2				

FLAGWD 0	00200	FLAGWD 1	00001	FLAGWD 2	02334	FLAGWD 3	10004	FLAGWD 4	00000	FLAGWD 5	40302	FLAGWD 6	50000	FLAGWD 7	16140
FLAGWD 8	50000	FLAGWD 9	40000												
RCSFLAGS	00001	RCSFLAGS	00001	RSBBQ	42106	RSBBQ+1	03434	CADRFLSH	56016	CADR+1	73174	CADR+2	51273	FAILREG	01111
FAILRG+1	00000	FAILRG+2	00000	PIPA X	00034	PIPA Y	00060	PIPAZ	00061	FLAG 10	00000	FLAG 11	00000	6PTM6DES	00120
H6LDFLAG	77776	DAPDATR1	11103	DAPDATR2	11111	RED6CTR	00001	IM6DE 30	36000	IM6DE 33	26000	CHAN 11	11420	CHAN 12	02242
CHAN 13	00100	CHAN 14	00000	CHAN 30	37373	CHAN 31	37777	CHAN 32	77777	CHAN 33	67767				

CDUX	105.6665	CDUY	-67.97241	CDUZ	33.88184	CDUT	-19.76715	AD6T/	-10.98633
AD6T/6BP	-.1536939	AD6T/6BY	.1612175	AK	-3.186035	AK1	-.3076172	AK2	.2416992
THETAD X	37.06787	THETAD Y	38.66089	THETAD Z	-64.70947	TIG	2903.350	DELLT4	1139.650
RTARG X	-.6163634	RTARG Y	2.176504	RTARG Z	-.1235646	T66	15.41000	PIPTIME1	2887.940
DELV X	2.223000	DELV Y	3.685500	DELV Z	4.446000	PACT6FF	-1.399775	YACT6FF	1.115075
PCMD	-.8303750	YCMD	.9015500	CSTEER	.0000000	AD6T/	-10.10742	AD6T/6BP	-.1810458
AD6T/6BY	.1692507	AK	-2.691650	AK1	-.4614258	AK2	.2307129	THETAD X	37.06787
THETAD Y	38.66089	THETAD Z	-64.70947	ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0
TEVENT	2879.900	PCMD	-1.162525	YCMD	1.043900	LEMMASS	.0000000	CSMMASS	26216.00
ERR6RX	.0000000	ERR6RY	-13.35937	ERR6RZ	43.90137	WB6D/6CR	-.6040000E-02	WB6D/6CP	-.1587415
WB6D/6CY	.1879843	THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	VGTIG X	-52.07806
VGTIG Y	-17.36584	VGTIG Z	-6.392288	S/C MASS	1768.852	X CG	8.481789	Y CG	.3074074
Z CG	.5032310	JET FUEL	44.84058	SL6SH AR	-7.596171	IXX	30790.81	IYY	79483.03
IZZ	84564.21	IXY	2036.957	IXZ	235.5652	IYZ	1515.858	WX DEG/S	-1.440787
WY DEG/S	-1.622634	WZ DEG/S	1.888411	CONFIG	1.000000	AXSCM/S2	3.483458	AYSCM/S2	.1188311
AZSCM/S2	.1850790	XGYR6BUT	.0000000	YGYR6BUT	.0000000	ZGYR6BUT	.0000000	AXSMM/S2	.9350846
AYSMM/S2	1.575692	AZSMM/S2	2.981795	ARSMM/S2	3.499756				

PROGRAM	VERB 99	NOUN 99	R1 -99999	R2 -99999	R3 +999	FLASH 0	DSPTAB +11 00000
PROGRAM	VERB 99	NOUN 99	R1 -99999	R2 -99999	R3 +999	FLASH 0	DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.50900126	-.34853506	-.78704596
-.36043692	-.74402928	.56258821
-.78166676	.57003784	.25308704

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	AIG= -56.00	-56.00	-13.75	-.04	10.99	R ERROR	601.75	-1175.09	-113.61
Z= -.000	AMG= 58.89	58.89	13.62	AGC TRUN	SDS TRUN	V ERROR	1.16	-1.37	-.29
X= .000	AOG= 103.52	103.52	13.74	.01	140.55				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2388867.2	5391014.6	-3064483.1	6645357.9	-7229.19	-2409.14	1379.22	7743.86	2847.42
AGC CM	-2387764.9	5391616.9	-3064860.0	6645624.2	-7227.93	-2408.07	1378.52	7742.23	
DELTA	-1102.3	602.2	376.9	-266.3	-1.26	-1.07	.70	1.63	
SDS LM	-2389856.9	5398572.9	-3068516.3	6653705.6	-7222.39	-2416.73	1383.18	7740.59	2847.42
AGC LM	-2389858.3	5398526.6	-3068551.1	6653684.5	-7222.38	-2416.75	1383.23	7740.59	
DELTA	1.4	46.3	34.8	21.0	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-27.62	62.98	271756.4	272872.4	258230.3	-173.88	75.45	8624.0	-9.28
SDS LM	-27.62	62.96	280104.6	280733.9	272505.3				

FLAGWD 0 00000	FLAGWD 1 00000	FLAGWD 2 00000	FLAGWD 3 00000	FLAGWD 4 00000	FLAGWD 5 00200	FLAGWD 6 00000	FLAGWD 7 00100
FLAGWD 8 00000	FLAGWD 9 00000						
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 56016	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00025	PIPA Y 77772	PIPA Z 77772	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36075	IMODE 33 26040	CHAN 11 00000	CHAN 12 00000
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 47765		

CDUX	107.8857	CDUY	-55.50293	CDUZ	44.85718	CDUT	-19.76715
ADOT/OBP	.2156497E-01	ADOT/OBY	-.4846752E-01	AK	.5493165E-01	AK1	-.3735352
THETAD X	108.0176	THETAD Y	-55.56885	THETAD Z	44.42871	TIG	2388.540
BEST J	.1666667	MRKTIME1	404463.1	STAR X1	.7653723E-01	STAR Y1	-.2367206E-01
STAR RS1	.8011438E-01	MRKTIME2	2388.540	STAR X2	-.1515672E-03	STAR Y2	-.8804932
STAR RS2	.8804932	HAPO	400616.0	HPER	267272.0	RSP-RREC	506002.0
VGTIG Y	-10.34088	VGTIG Z	-29.16908	ADOT/OBP	.2156497E-01	ADOT/OBP	.2156497E-01
AK	.5493165E-01	AK1	-.3735352	AK2	.1098633	THETAD X	108.0176
THETAD Z	44.42871	OGC	.0000000	IGC	.0000000	MGC	.7655360E-01
LAUNCHAZ	147.5684	LEMMASS	.0000000	CSMMASS	26520.00	ERRORX	-.5493165E-01
ERRORZ	-.1208496	WBOD/OCP	.0000000	WBOD/OCP	.0000000	WBOD/OCY	.0000000
THETAD Y	-55.56885	THETAD Z	44.42871	S/C MASS	1788.571	X CG	8.466005
Z CG	.5077438	JET FUEL	37.34412	SLOSH AR	-7.886368	IXX	31119.44
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454
WY DEG/S	.3357175	WZ DEG/S	-.4196469E-01	CONFIG	1.000000	AXSCM/S2	-.9327403E-03
AZSCM/S2	.4512131E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000
AYSMM/S2	-.2899533E-02	AZSMM/S2	.1057349E-02	ARSMM/S2	.4864970E-02		

ADOT/	.1206995E-02		
AK2	.1098633		
BEST I	.0000000		
STAR Z1	.0000000		
STAR Z2	.0000000		
VGTIG X	-37.72564		
ADOT/OBY	-.4846752E-01		
THETAD Y	-55.56885		
TEVENT	2372.820		
ERRORY	.3735352		
THETAD X	108.0176		
Y CG	.3071489		
IYY	79900.74		
WX DEG/S	-.1363852		
AYSCM/S2	-.1515703E-02		
AXSMM/S2	.3760672E-02		

PROGRAM VERB 99 NOUN 99 R1 -99999 R2 -99999 R3 +999 FLASH 0 DSPTAB +11 00000
PROGRAM VERB 99 NOUN 99 R1 -99999 R2 -99999 R3 +999 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
-.41222304	.79159081	-.45106113	-.41222304	.79159081	-.45106113	-.49938631	-.35420275	-.79066658
.00042095	-.49491686	-.86894023	.00042095	-.49491686	-.86894023	-.35738420	-.74712920	.56042290
-.91108286	-.35838706	.20368291	-.91108285	-.35838706	.20368291	-.78923321	.56243873	.24651933

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		L&S DR	L&S ALT	L&S CR
Y= .000	AIG= -56.17	-56.17	-55.90	-.04	10.99	R ERROR	605.66	-1177.21	-112.28
Z= -.000	AMG= 59.56	59.56	59.27	AGC TRUN	SDS TRUN	V ERROR	1.16	-1.37	-.29
X= .000	A&G= 103.39	103.39	103.47	.01	151.79				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2403319.0	5386181.7	-3061716.3	6645374.5	-7222.68	-2423.78	1387.56	7743.85	2849.42
AGC CM	-2402214.2	5386786.1	-3062094.6	6645639.2	-7221.42	-2422.71	1386.87	7742.21	
DELTA	-1104.8	-604.4	378.3	-264.7	-1.26	-1.07	.70	1.63	
SDS LM	-2404295.2	5393724.8	-3065741.7	6653696.3	-7215.90	-2431.33	1391.50	7740.60	2849.42
AGC LM	-2404296.6	5393678.4	-3065776.3	6653675.2	-7215.89	-2431.35	1391.56	7740.61	
DELTA	1.4	46.4	34.7	21.1	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-27.59	63.12	271764.7	272870.1	258247.9	-173.97	75.24	8605.5	-9.23
SDS LM	-27.59	63.10	280087.1	280751.7	272502.8				

FLAGWD 0 00000	FLAGWD 1 00000	FLAGWD 2 00000	FLAGWD 3 00000	FLAGWD 4 00000	FLAGWD 5 00200	FLAGWD 6 00000	FLAGWD 7 00100
FLAGWD 8 00000	FLAGWD 9 00000						
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 56016	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00025	PIPA Y 77772	PIPA Z 00035	FLAG 10 00000	FLAG 11 00000	0PTM0DES 00120
H0LDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	RED0CTR 00001	IM0DE 30 36075	IM0DE 33 26040	CHAN 11 00000	CHAN 12 00000
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 47765		

CDUX 83.68286	CDUY -55.79956	CDUZ 58.91968	CDUT -19.76715	AD0T/ .1206995E-02			
AD0T/0BP .2156497E-01	AD0T/0BY -.4846752E-01	AK .5493165E-01	AK1 -.3735352	AK2 .1098633			
THETAD X 108.0176	THETAD Y -55.56885	THETAD Z 44.42871	TIG 2388.540	BEST I .0000000			
BEST J .1666667	MRKTIME1 40463.1	STAR X1 .7653723E-01	STAR Y1 -.2367206E-01	STAR Z1 .0000000			
STAR RS1 .8011438E-01	MRKTIME2 2388.540	STAR X2 -.1515672E-03	STAR Y2 -.8804932	STAR Z2 .0000000			
STAR RS2 .8804932	HAP0 400616.0	HPER 26727.0	RSP-RREC 506002.0	VGTIG X -37.72564			
VGTIG Y -10.34088	VGTIG Z -29.16908	AD0T/ .1206995E-02	AD0T/0BP .2156497E-01	AD0T/0BY -.4846752E-01			
AK .5493165E-01	AK1 -.3735352	AK2 .1098633	THETAD X 108.0176	THETAD Y -55.56885			
THETAD Z 44.42871	0GC .0000000	IGC .0000000	M0C .7655360E-01	TEVENT 2372.820			
LAUNCHAZ 147.5634	LEMMASS .0000000	CSMMASS 26520.00	ERR0RX -.5493165E-01	ERR0RY .3735352			
ERR0RZ -.1208496	WB0D/0CR .0000000	WB0D/0CP .0000000	WB0D/0CY .0000000	THETAD X 108.0176			
THETAD Y -55.56885	THETAD Z 44.42871	S/C MASS 1788.571	X CG 8.466005	Y CG .3071489			
Z CG .5077438	JET FUEL 37.34375	SLOSH AR 7.886368	IXX 31119.44	IYY 79900.74			
IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454	WX DEG/S -.1328882			
WY DEG/S .3462086	WZ DEG/S -.2797646E-01	CONFIG 1.000000	AXSCM/S2 .8861033E-03	AYSCM/S2 -.1235881E-02			
AZSCM/S2 .4791953E-02	XGYR0BUT .0000000	YGYR0BUT .0000000	ZGYR0BUT .0000000	AXSMM/S2 .4283896E-02			
AYSMM/S2 -.1431599E-02	AZSMM/S2 .2245503E-02	ARSMM/S2 .5044157E-02					

PROGRAM	VERB	NOUN	R1 -99999	R2 -99999	R3 +999	FLASH 0	DSPTAB +11 00000
PROGRAM	VERB	NOUN	R1	R2	R3	FLASH 0	DSPTAB +11 00000

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
-.41222304	.79159081	-.45106113	-.41222304	.79159081	-.45106113	-.48937154	-.36000657	-.79429936
.00042095	-.49491686	-.86894023	.00042095	-.49491686	-.86894023	-.35419464	-.75025749	.55826521
-.91108286	-.35838706	-.20368291	-.91108285	-.35838706	-.20368291	-.79690814	-.56453467	-.23964190

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		L/S DR	L/S ALT	L/S CR
Y= .000	AIG= -56.35	56.35	-56.06	-.04	10.99	R ERROR	609.58	-1179.30	-110.98
Z= -.000	AMG= 60.25	60.25	59.96	AGC TRUN	SDS TRUN	V ERROR	1.17	-1.36	-.29
X= .000	AOG= 103.27	103.27	103.37	.01	145.79				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2417757.9	5381319.5	-3058932.8	6645391.1	-7216.13	-2438.40	1395.90	7743.83	2851.42
AGC CM	-2416650.5	5381926.0	-3059312.6	6645654.3	-7214.88	-2437.33	1395.20	7742.20	
DELTA	-1107.3	-606.5	379.7	-263.2	-1.25	-1.07	.70	1.63	
SDS LM	-2418720.5	5388847.6	-3062950.3	6653687.1	-7209.38	-2445.92	1399.82	7740.62	2851.42
AGC LM	-2418721.9	5388801.2	-3062984.9	6653665.9	-7209.37	-2445.94	1399.88	7740.63	
DELTA	1.4	46.4	34.6	21.2	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-27.56	63.26	271773.0	272867.8	258265.5	-174.05	75.03	8587.1	-9.18
SDS LM	-27.56	63.24	280069.6	280769.6	272500.3				

FLAGWD 0 00000	FLAGWD 1 00000	FLAGWD 2 00000	FLAGWD 3 00000	FLAGWD 4 00000	FLAGWD 5 40200	FLAGWD 6 00000	FLAGWD 7 00100	
FLAGWD 8 00000	FLAGWD 9 00000							
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 56016	FAILREG 00000	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00025	PIPA Y 77772	PIPA Z 00075	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120	
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36075	IMODE 33 26040	CHAN 11 01000	CHAN 12 00000	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 47765			

CDUX	103.4253	CDUY	-55.97534	CDUZ	59.61182	CDUT	-19.76715	ADOT/	.1206995E-02
ADOT/OBP	.2156497E-01	ADOT/OBY	-.4846752E-01	AK	.5493165E-01	AK1	-.3735352	AK2	.1098633
THETAD X	108.0176	THETAD Y	-55.56885	THETAD Z	44.42871	TIG	2388.540	BEST I	.0000000
BEST J	.1666667	MRKTIME1	404463.1	STAR X1	.7653723E-01	STAR Y1	-.2367206E-01	STAR Z1	.0000000
STAR RS1	.8011438E-01	MRKTIME2	2388.540	STAR X2	-.1515672E-03	STAR Y2	-.8804932	STAR Z2	.0000000
STAR RS2	.8804932	HAPO	400616.0	HPER	267272.0	RSP-RREC	506002.0	VGTIG X	-37.72564
VGTIG Y	-10.34088	VGTIG Z	-29.16908	ADOT/	.1206995E-02	ADOT/OBP	-.2156497E-01	ADOT/OBY	-.4846752E-01
AK	.5493165E-01	AK1	-.3735352	AK2	.1098633	THETAD X	108.0176	THETAD Y	-55.56885
THETAD Z	44.42871	OGC	.0000000	IGC	.0000000	MGC	.7655360E-01	TEVENT	2372.820
LAUNCHAZ	147.5684	LEMMASS	.0000000	CSMMASS	26520.00	ERRORX	-.5493165E-01	ERROBY	.3735352
ERROBZ	-.1208496	WBODOCR	.0000000	WBODOCP	.0000000	WBODOCY	.0000000	THETAD X	108.0176
THETAD Y	-55.56885	THETAD Z	44.42871	S/C MASS	1788.571	X CG	8.466005	Y CG	.3071489
Z CG	.5077438	JET FUEL	37.34351	SLOSH AR	-7.886368	IXX	31119.44	IYY	79900.74
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454	WX DEG/S	-.1433793
WY DEG/S	.3462086	WZ DEG/S	-.4196469E-01	CONFIG	1.000000	AXSCM/S2	.0000000	AYSCM/S2	-.1515703E-02
AZSCM/S2	-.9327403E-04	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	.4712649E-02
AYSMM/S2	-.3626233E-02	AZSMM/S2	.2209168E-02	ARSMM/S2	.6343425E-02				

PROGRAM	VERB	NOUN	R1	R2	R3	FLASH 0	DSPTAB +11 00000
PROGRAM	VERB 99	NOUN 99	R1 -99999	R2 +99	R3	FLASH 0	DSPTAB +11 00000

SDS REFERENCE MATRIX

+.41222304	+.79159081	+.45106113
+.00042095	-.49491686	+.86894023
-.91108286	-.35838706	+.20368291

AGC REFERENCE MATRIX

+.41222304	+.79159081	+.45106113
+.00042095	-.49491686	+.86894023
+.91108285	-.35838706	+.20368291

S/C ATTITUDE MATRIX

-.47913766	-.36583805	-.79786611
-.35088801	-.75337338	+.55615330
-.80455279	+.54643512	+.23260117

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= +.000	AIG= -56.53	-56.53	-56.25	-.04	10.99	R ERROR	613.51	-1181.36	-109.73
Z= -.000	AMG= 60.95	60.95	60.63	AGC TRUN	SDS TRUN	V ERROR	1.17	-1.36	-.28
X= +.000	AOG= 103.16	103.16	103.25	.01	126.49				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2432183.5	5376428.1	-3056132.7	6645407.7	-7209.55	-2453.01	1404.23	7743.82	2853.42
AGC CM	-2431073.7	5377036.8	-3056513.8	6645669.3	-7208.30	-2451.94	1403.53	7742.19	
DELTA	-1109.8	-608.7	381.1	-261.6	-1.25	-1.07	.70	1.63	
SDS LM	-2433132.7	5383941.1	-3060142.4	6653677.8	-7202.81	-2460.50	1408.13	7740.63	2853.42
AGC LM	-2433134.1	5383894.7	-3060176.8	6653656.6	-7202.80	-2460.52	1408.19	7740.64	
DELTA	1.4	46.4	34.4	21.2	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-27.54	63.40	271781.3	272865.5	258283.3	-174.13	74.82	8568.8	-9.13
SDS LM	-27.54	63.38	280052.0	280787.5	272497.8				

FLAGWD 0 00000	FLAGWD 1 00000	FLAGWD 2 00000	FLAGWD 3 00000	FLAGWD 4 00000	FLAGWD 5 40200	FLAGWD 6 00000	FLAGWD 7 00100
FLAGWD 8 00000	FLAGWD 9 00000						
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 56016	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00025	PIPA Y 77771	PIPA Z 00132	FLAG 10 00000	FLAG 11 00000	6PTMODES 00120
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	RENDCTR 00001	IMODE 30 36075	IMODE 33 26040	CHAN 11 01000	CHAN 12 00000
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 47765		

CDUX 103.3044	CDUY -56.15112	CDUZ 60.29297	CDUT -19.76715	ADOT/ +.1206995E-02			
ADOT/OBP +.2156497E-01	ADOT/OBY +.4846752E-01	AK +.5493165E-01	AK1 +.3735352	AK2 +.1098633			
THETAD X 108.0176	THETAD Y -55.56885	THETAD Z 44.42871	TIG 2388.540	BEST I +.0000000			
BEST J +.1666667	MRKTIME1 404463.1	STAR X1 +.7653723E-01	STAR Y1 +.2367206E-01	STAR Z1 +.0000000			
STAR RS1 +.8011438E-01	MRKTIME2 2388.540	STAR X2 +.1515672E-03	STAR Y2 +.8804932	STAR Z2 +.0000000			
STAR RS2 +.8804932	HAPO 400616.0	HPER 267272.0	RSP-RREC 506002.0	VGTIG X -37.72564			
VGTIG Y -10.34088	VGTIG Z -29.16908	ADOT/ +.1206995E-02	ADOT/OBP +.2156497E-01	ADOT/OBY +.4846752E-01			
AK +.5493165E-01	AK1 +.3735352	AK2 +.1098633	THETAD X 108.0176	THETAD Y -55.56885			
THETAD Z 44.42871	OGC +.0000000	IGC +.0000000	MGC +.7655360E-01	TEVENT 2372.820			
LAUNCHAZ 147.5684	LEMMASS +.0000000	CSMMASS 26520.00	ERROBX +.5493165E-01	ERROBY +.3735352			
ERROBZ +.1208496	WBOD/OCR +.0000000	WBOD/OCP +.0000000	WBOD/OCY +.0000000	THETAD X 108.0176			
THETAD Y -55.56885	THETAD Z 44.42871	S/C MASS 1788.571	X CG 8.466005	Y CG +.3071489			
Z CG +.5077438	JET FUEL 37.34326	SLOSH AR 7.886368	IXX 31119.44	IYY 79900.74			
IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454	WX DEG/S +.1503734			
WY DEG/S +.3497057	WZ DEG/S +.2797646E-01	CONFIG 1.000000	AXSCM/S2 +.9327403E-03	AYSCM/S2 +.1515703E-02			
AZSCM/S2 +.1504044E-02	XGYROOUT +.0000000	YGYROOUT +.0000000	ZGYROOUT +.0000000	AXSMM/S2 +.1798583E-02			
AYSMM/S2 +.1366196E-02	AZSMM/S2 +.5631924E-03	ARSMM/S2 +.2327784E-02					

PROGRAM	VERB 99	NOUN	R1	R2	R3	FLASH 0	DSPTAB +11 00000
PROGRAM	VERB 21	NOUN	R1	R2	R3	FLASH 0	DSPTAB +11 00000

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
-.41222304	.79159081	-.45106113	-.41222304	.79159081	-.45106113	-.46851587	-.37180734	-.80140686
.00042095	-.49491686	-.86894023	.00042095	-.49491686	-.86894023	-.34733224	-.75655937	.55405593
-.91108286	-.35838706	.20368291	-.91108285	-.35838706	.20368291	-.81231356	.53793764	.22531915

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		L&S DR	L&S ALT	L&S CR
Y= .000	AIG= -56.74	-56.74	-56.46	-.04	10.99	R ERROR	617.45	-1183.41	-108.51
Z= -.000	AMG= 61.67	61.67	61.34	AGC TRUN	SDS TRUN	V ERROR	1.17	-1.35	-.28
X= .000	AOG= 103.05	103.05	103.14	.01	123.97				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2446596.0	5371507.5	-3053315.9	6645424.2	-7202.92	-2467.61	1412.55	7743.80	2855.42
AGC CM	-2445483.7	5372118.3	-3053698.4	6645684.3	-7201.68	-2466.54	1411.86	7742.18	
DELTA	-1112.3	-610.8	382.5	-260.1	-1.24	-1.07	.70	1.63	
SDS LM	-2447531.7	5379005.6	-3057317.8	6653668.5	-7196.21	-2475.06	1416.43	7740.65	2855.42
AGC LM	-2447533.1	5378959.1	-3057352.2	6653647.2	-7196.20	-2475.08	1416.49	7740.66	
DELTA	1.4	46.5	34.3	21.3	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-27.51	63.54	271789.4	272863.2	258301.1	-174.22	74.61	8550.6	-9.08
SDS LM	-27.51	63.52	280034.4	280805.6	272495.3				

FLAGWD 0	00000	FLAGWD 1	00000	FLAGWD 2	00000	FLAGWD 3	00000	FLAGWD 4	00000	FLAGWD 5	40200	FLAGWD 6	20000	FLAGWD 7	00100
FLAGWD 8	00000	FLAGWD 9	00000												
RCSFLAGS	00005	RCSFLAGS	20005	RSBBQ	42106	RSBBQ+1	03434	CADRFLSH	56016	CADR+1	73174	CADR+2	56016	FAILREG	00000
FAILRG+1	00000	FAILRG+2	00000	PIPA X	00025	PIPA Y	77771	PIPA Z	00166	FLAG 10	00000	FLAG 11	00000	SPTMODES	00120
HOLDFLAG	00001	DAPDATR1	11103	DAPDATR2	11111	REDOCTR	00001	IMODE 30	36075	IMODE 33	26040	CHAN 11	01000	CHAN 12	00000
CHAN 13	00100	CHAN 14	00000	CHAN 30	37373	CHAN 31	37777	CHAN 32	77777	CHAN 33	47765				

CDUX	103.1946	CDUY	-56.34888	CDUZ	60.99609	CDUT	-19.76715	ADOT/	.1206995E-02
ADOT/OBP	.2156497E-01	ADOT/OBY	-.4846752E-01	AK	.5493165E-01	AK1	-.3735352	AK2	.1098633
THETAD X	108.0176	THETAD Y	-55.56885	THETAD Z	44.42871	TIG	2388.540	BEST I	.0000000
BEST J	.1666667	MRKTIME1	404463.1	STAR X1	.7653723E-01	STAR Y1	-.2367206E-01	STAR Z1	.0000000
STAR RS1	.8011438E-01	MRKTIME2	2388.540	STAR X2	-.1515672E-03	STAR Y2	-.8804932	STAR Z2	.0000000
STAR RS2	.8804932	HAPO	400616.0	HPER	267272.0	RSP-RREC	506002.0	VGTIG X	-37.72564
VGTIG Y	-10.34088	VGTIG Z	-29.16908	ADOT/	.0000000	ADOT/OBP	.0000000	ADOT/OBY	.0000000
AK	.5493165E-01	AK1	-.3735352	AK2	.1098633	THETAD X	108.0176	THETAD Y	-55.56885
THETAD Z	44.42871	BGC	.0000000	IGC	.0000000	MGC	.7655360E-01	TEVENT	2372.820
LAUNCHAZ	147.5684	LEMMASS	.0000000	CSMMASS	26520.00	ERRORX	.0000000	ERRORY	.0000000
ERRORZ	.0000000	WBOD/OCR	.0000000	WBOD/OCP	.0000000	WBOD/OCY	.0000000	THETAD X	108.0176
THETAD Y	-55.56885	THETAD Z	44.42871	S/C MASS	1788.571	X CG	8.466005	Y CG	.3071489
Z CG	.5077438	JET FUEL	37.34314	SLOSH AR	-7.886368	IXX	31119.44	IYY	79900.74
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454	WX DEG/S	-.1538705
WY DEG/S	.3601969	WZ DEG/S	-.3497057E-01	CONFIG	1.000000	AXSCM/S2	.0000000	AYSCM/S2	-.1608977E-02
AZSCM/S2	.1504044E-02	XGYROBUT	.0000000	YGYROBUT	.0000000	ZGYROBUT	.0000000	AXSMM/S2	.2121964E-02
AYSMM/S2	-.5304909E-03	AZSMM/S2	-.2325440E-03	ARSMM/S2	.2199597E-02				

PROGRAM	VERB 21	NOUN	R1	R2	R3	FLASH 1	DSPTAB +11 00000
PROGRAM	VERB 21	NOUN 1	R1	R2	R3	FLASH 1	DSPTAB +11 00000

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
-.41222304	.79159081	-.45106113	-.41222304	.79159081	-.45106113	-.45764422	-.37783360	-.80486321
.00042095	-.49491686	-.86894023	.00042095	-.49491686	-.86894023	-.34355259	-.75977397	.55200982
-.91108286	-.35838706	.20368291	-.91108285	-.35838706	.20368291	-.82008219	.52913570	.21790051

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		L&S DR	L&S ALT	L&S CR
Y= .000	AIG= 56.96	-56.96	-56.67	-.04	10.99	R ERROR	621.40	-1185.43	-107.32
Z= -.000	AMG= 62.40	62.40	62.06	AGC TRUN	SDS TRUN	V ERROR	1.17	-1.35	-.28
X= .000	A&G= 102.94	102.94	103.04	.01	130.00				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2460995.2	5366557.7	-3050482.5	6645440.7	-7196.26	-2482.19	1420.87	7743.79	2857.42
AGC CM	-2459880.4	5367170.6	-3050866.4	6645699.2	-7195.01	-2481.12	1420.17	7742.16	
DELTA	-1114.8	-612.9	383.9	-258.5	-1.24	-1.07	.70	1.62	
SDS LM	-2461917.5	5374040.9	-3054476.7	6653659.2	-7189.56	-2489.61	1424.72	7740.66	2857.42
AGC LM	-2461918.8	5373994.4	-3054510.9	6653637.9	-7189.56	-2489.63	1424.78	7740.67	
DELTA	1.4	46.5	34.2	21.3	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-27.48	63.68	271797.5	272860.9	258319.0	-174.29	74.40	8532.4	-9.04
SDS LM	-27.48	63.65	280016.7	280823.7	272492.8				

FLAGWD 0 00000	FLAGWD 1 00000	FLAGWD 2 00000	FLAGWD 3 00000	FLAGWD 4 00000	FLAGWD 5 40200	FLAGWD 6 20000	FLAGWD 7 00100	
FLAGWD 8 00000	FLAGWD 9 00000							
RCSFLAGS 20005	RCSFLAGS 20005	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 56016	FAILREG 00000	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00025	PIPA Y 77771	PIPA Z 00220	FLAG 10 00000	FLAG 11 00000	&PTM&DES 00120	
M&LDFLAG 00001	DAPDATR1 11103	DAPDATR2 11111	RED&CTR 00001	IM&DE 30 36021	IM&DE 33 26000	CHAN 11 01040	CHAN 12 00000	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765			

CDUX	103.0957	CDUY	-56.54663	CDUZ	61.67725	CDUT	-19.76715	AD&T/	.0000000
AD&T/&BP	.0000000	AD&T/&BY	.0000000	AK	.5493165E-01	AK1	-.3735352	AK2	.1098633
THETAD X	108.0176	THETAD Y	-55.56885	THETAD Z	44.42871	TIG	2388.540	BEST I	.0000000
BEST J	.1666667	MRKTIME1	404463.1	STAR X1	.7653723E-01	STAR Y1	-.2367206E-01	STAR Z1	.0000000
STAR RS1	.8011438E-01	MRKTIME2	2388.540	STAR X2	-.1515672E-03	STAR Y2	-.8804932	STAR Z2	.0000000
STAR RS2	.8804932	HAP&	400616.0	HPER	267272.0	RSP=RREC	506002.0	VGTIG X	-37.72564
VGTIG Y	-10.34088	VGTIG Z	-29.16908	AD&T/	.0000000	AD&T/&BP	.0000000	AD&T/&BY	.0000000
AK	.5493165E-01	AK1	-.3735352	AK2	.1098633	THETAD X	108.0176	THETAD Y	-55.56885
THETAD Z	44.42871	&GC	.0000000	IGC	.0000000	M&C	.7655360E-01	TEVENT	2372.820
LAUNCHAZ	147.5684	LEMMASS	.0000000	CSMMASS	26520.00	ERR&RX	.0000000	ERR&RY	.0000000
ERR&RZ	.0000000	WB&D/&CR	.0000000	WB&D/&CP	.0000000	WB&D/&CY	.0000000	THETAD X	108.0176
THETAD Y	-55.56885	THETAD Z	44.42871	S/C MASS	1788.571	X CG	8.466005	Y CG	.3071489
Z CG	.5077438	JET FUEL	37.34302	SLOSH AR	-7.886368	IXX	31119.44	IYY	79900.74
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454	WX DEG/S	-.1573676
WY DEG/S	.3671910	WZ DEG/S	-.1748529E-01	CONFIG	1.000000	AXSCM/S2	-.9327403E-03	AYSCM/S2	-.1515703E-02
AZSCM/S2	.1504044E-02	XGYR&&UT	.0000000	YGYR&&UT	.0000000	ZGYR&&UT	.0000000	AXSMM/S2	.1824017E-02
AYSMM/S2	-.1355296E-02	AZSMM/S2	-.5159569E-03	ARSMM/S2	.2330252E-02				

PROGRAM	VERB 21	NOUN	R1	R2	R3 77	FLASH 1	DSPTAB +11 00000	
PROGRAM	VERB 21	NOUN	R1	R2	R3 77	FLASH 1	DSPTAB +11 00000	

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.45183945	-.38117695	-.80656481
-.33936405	-.76270223	.55056024
-.82502961	.52248335	.21526098

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT	R ERROR	LOS DR	LOS ALT	LOS CR
Y= .000	AIG= -57.11	-57.11	-56.88	-.04	10.99		625.36	-1187.44	-106.17
Z= -.000	AMG= 62.79	62.79	62.71	AGC TRUN	SDS TRUN	V ERROR	1.18	-1.34	-.28
X= .000	AOG= 102.77	102.77	102.92	.01	138.94				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-24753810	5361578.7	-3047632.5	6645457.2	-7189.55	-2496.76	1429.17	7743.77	2859.42
AGC CM	-2474263.8	5362193.8	-3048017.8	6645714.1	-7188.31	-2495.69	1428.48	7742.15	
DELTA	-1117.3	-615.1	385.3	-256.9	-1.24	-1.07	.70	1.62	
SDS LM	-2476289.9	5369047.1	-3051618.9	6653649.9	-7182.88	-2504.15	1433.01	7740.68	2859.42
AGC LM	-2476291.3	5369000.6	-3051653.0	6653628.5	-7182.88	-2504.17	1433.07	7740.69	
DELTA	1.3	46.5	34.1	21.4	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-27.45	63.81	271805.5	272858.6	258337.0	-174.37	74.19	8514.4	-8.99
SDS LM	-27.45	63.79	279998.9	280842.0	272490.2				

FLAGWD 0	00000	FLAGWD 1	00000	FLAGWD 2	00000	FLAGWD 3	00000	FLAGWD 4	00000	FLAGWD 5	40200	FLAGWD 6	20000	FLAGWD 7	00100
FLAGWD 8	00000	FLAGWD 9	00000												
RCSFLAGS	00011	RCSFLAGS	00011	RSBBQ	42106	RSBBQ+1	03434	CADRFLSH	56016	CADR+1	73174	CADR+2	56016	FAILREG	00000
FAILRG+1	00000	FAILRG+2	00000	PIPA X	00025	PIPA Y	77771	PIPA Z	00250	FLAG 10	00000	FLAG 11	00000	BPTMODES	00120
HOLDFLAG	00000	DAPDATR1	11103	DAPDATR2	11111	REDOCTR	00001	IMODE 30	36021	IMODE 33	26000	CHAN 11	01140	CHAN 12	00040
CHAN 13	00100	CHAN 14	00000	CHAN 30	37373	CHAN 31	37777	CHAN 32	77777	CHAN 33	67765				

CDUX	102.9858	CDUY	-56.76636	CDUZ	62.42432	CDUT	-19.76715	ADOT/	-.1520075
ADOT/OBP	.3815711	ADOT/OBY	.2736524E-01	AK	.0000000	AK1	.0000000	AK2	.0000000
THETAD X	108.0176	THETAD Y	-55.56885	THETAD Z	44.42871	TIG	2388.540	BEST I	.0000000
BEST J	.1666667	MRKTIME1	404463.1	STAR X1	.7653723E-01	STAR Y1	-.2367206E-01	STAR Z1	.0000000
STAR RS1	.8011438E-01	MRKTIME2	2388.540	STAR X2	-.1515672E-03	STAR Y2	-.8804932	STAR Z2	.0000000
STAR RS2	.8804932	HAPO	400616.0	HPER	267272.0	RSP-RREC	506002.0	VGTIG X	-37.72564
VGTIG Y	-10.34088	VGTIG Z	-29.16908	ADOT/	-.1378790	ADOT/OBP	.7856861E-01	ADOT/OBY	.2684221E-01
AK	.4394532E-01	AK1	-.9887696E-01	AK2	-.1098633E-01	THETAD X	102.9639	THETAD Y	-56.82129
THETAD Z	62.60010	BGC	.0000000	IGC	.0000000	MGC	.7655360E-01	TEVENT	2372.820
LAUNCHAZ	147.5684	LEMMASS	.0000000	CSMMASS	26520.00	ERRORX	-.1428223	ERRORY	.1428223
ERRORZ	.1098633E-01	WBOD/OCR	.0000000	WBOD/OCP	.0000000	WBOD/OCY	.0000000	THETAD X	108.0176
THETAD Y	-55.56885	THETAD Z	44.42871	S/C MASS	1788.571	X CG	8.466005	Y CG	.3071489
Z CG	.5077438	JET FUEL	37.54919	SLOSH AR	-7.886368	IXX	31119.44	IYY	79900.74
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454	WX DEG/S	-.1538705
WY DEG/S	.8742643E-01	WZ DEG/S	.3497057E-02	CONFIG	1.000000	AXSCM/S2	-.9327403E-03	AYSCM/S2	-.1422429E-02
AZSCM/S2	.6295997E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	.4919758E-02
AYSMM/S2	-.3506327E-02	AZSMM/S2	.2492581E-02	ARSMM/S2	.6535389E-02				

PROGRAM	VERB 21	NOUN	R1	R2	R3 77	FLASH 1	DSPTAB +11 00000
PROGRAM	VERB 21	NOUN	R1	R2	R3 77	FLASH 1	DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	-.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	-.20368291

S/C ATTITUDE MATRIX

-.44918871	-.38290763	-.80722547
-.33764553	-.76374650	.55016923
-.82717967	.51968479	.21377873

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	AIG= -57.21	-57.21	-56.98	-.04	10.99	R ERROR	629.32	-1189.42	-105.05
Z= -.000	AMG= 62.97	62.97	62.90	AGC TRUN	SDS TRUN	V ERROR	1.18	-1.34	-.27
X= .000	AOG= 102.74	102.74	102.77	.01	153.48				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2489753.4	5356570.6	-3044765.8	6645473.6	-7182.81	-2511.32	1437.47	7743.76	2861.42
AGC CM	-2488633.6	5357187.8	-3045152.5	6645728.9	-7181.57	-2510.25	1436.78	7742.14	
DELTA	-1119.7	-617.2	386.7	-255.3	-1.23	-1.07	.70	1.62	
SDS LM	-2490649.0	5364024.3	-3048744.6	6653640.6	-7176.16	-2518.67	1441.29	7740.69	2861.42
AGC LM	-2490650.3	5363977.7	-3048778.6	6653619.1	-7176.15	-2518.69	1441.35	7740.70	
DELTA	1.3	46.6	34.0	21.5	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-27.42	63.95	271813.5	272856.3	258355.0	-174.45	73.98	8496.5	-8.94
SDS LM	-27.43	63.93	279981.1	280860.3	272487.6				

FLAGWD 0	00000	FLAGWD 1	00000	FLAGWD 2	00000	FLAGWD 3	00000	FLAGWD 4	00000	FLAGWD 5	40200	FLAGWD 6	20000	FLAGWD 7	00100
FLAGWD 8	00000	FLAGWD 9	00000												
RCSFLAGS	00011	RCSFLAGS	00011	RSBBQ	42106	RSBBQ+1	03434	CADRFLSH	56016	CADR+1	73174	CADR+2	56016	FAILREG	00000
FAILRG+1	00000	FAILRG+2	00000	PIPA X	00025	PIPA Y	77771	PIPA Z	00276	FLAG 10	00000	FLAG 11	00000	BPTMODES	00120
HOLDFLAG	00000	DAPDATR2	11111	DAPDATR1	11103	REDOCTR	00001	IMODE 30	36001	IMODE 33	26000	CHAN 11	01040	CHAN 12	00040
CHAN 13	00100	CHAN 14	00000	CHAN 30	37373	CHAN 31	37777	CHAN 32	77777	CHAN 33	67765				

CDUX	102.8101	CDUY	-56.90918	CDUZ	62.79785	CDUT	-19.76715	ADOT/	-.1401454
ADOT/OBP	.8170680E-01	ADOT/OBY	.2509878E-01	AK	.2087402	AK1	-.1757812	AK2	-.2197266E-01
THETAD X	102.9639	THETAD Y	-56.82129	THETAD Z	62.60010	TIG	2388.540	BEST I	.0000000
BEST J	.1666667	MRKTIME1	404463.1	STAR X1	.7653723E-01	STAR Y1	-.2367206E-01	STAR Z1	.0000000
STAR RS1	.8011438E-01	MRKTIME2	2388.540	STAR X2	-.1515672E-03	STAR Y2	-.8804932	STAR Z2	.0000000
STAR RS2	.8804932	HAPO	400616.0	HPER	267272.0	RSP-RREC	506002.0	VGTIG X	-37.72564
VGTIG Y	-10.34088	VGTIG Z	-29.16908	ADOT/	-.3116057E-01	ADOT/OBP	.8397326E-01	ADOT/OBY	.2178625E-01
AK	.3076172	AK1	-.2746582	AK2	-.3295899E-01	THETAD X	102.9639	THETAD Y	-56.82129
THETAD Z	62.60010	OGC	.0000000	IGC	.0000000	MGC	.7655360E-01	TEVENT	2372.820
LAUNCHAZ	147.5684	LEMMASS	.0000000	CSMMASS	26520.00	ERROR X	-.3295898	ERRORY	.3186035
ERRORZ	.4394532E-01	WBOD/OCR	.0000000	WBOD/OCP	.0000000	WBOD/OCY	.0000000	THETAD X	108.0176
THETAD Y	-55.56885	THETAD Z	44.42871	S/C MASS	1788.571	X CG	8.466005	Y CG	.3071489
Z CG	.5077438	JET FUEL	37.58142	SLOSH AR	-7.886368	IXX	31119.44	IYY	79900.74
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454	WX DEG/S	-.2797646E-01
WY DEG/S	.9791760E-01	WZ DEG/S	.0000000	CONFIG	1.000000	AXSCM/S2	-.9327403E-03	AYSCM/S2	-.1142607E-02
AZSCM/S2	.6389271E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	.4781685E-02
AYSMM/S2	-.3564463E-02	AZSMM/S2	.2768727E-02	ARSMM/S2	.6575390E-02				

PROGRAM	VERB 21	NOUN	R1	R2	R3 77	FLASH 1	DSPTAB +11 00000
PROGRAM	VERB 21	NOUN	R1	R2	R3 77	FLASH 1	DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	-.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	-.20368291

S/C ATTITUDE MATRIX

-.44830465	-.38376403	-.80731034
-.33659363	-.76420069	-.55018330
-.82808757	-.51838398	-.21342206

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	AIG= -57.28	-57.28	-57.05	-.04	10.99	R ERROR	633.30	-1191.38	-103.96
Z= -.000	AMG= 63.03	63.03	63.02	AGC TRUN	SDS TRUN	V ERROR	1.18	-1.33	-.27
X= .000	A0G= 102.74	102.74	102.79	.01	146.45				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2504112.2	5351533.4	-3041882.6	6645490.0	-7176.03	-2525.86	1445.76	7743.74	2863.42
AGC CM	-2502990.0	5352152.8	-3042270.7	6645743.7	-7174.80	-2524.79	1445.07	7742.12	
DELTA	-1122.2	-619.4	388.1	-253.7	-1.23	-1.07	.70	1.62	
SDS LM	-2504994.6	5358972.4	-3045853.8	6653631.2	-7169.40	-2533.18	1449.56	7740.71	2863.42
AGC LM	-2504995.9	5358925.8	-3045887.6	6653609.7	-7169.39	-2533.20	1449.62	7740.72	
DELTA	1.3	46.6	33.9	21.5	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-27.40	64.09	271821.3	272854.0	258373.2	-174.52	73.77	8478.7	-8.89
SDS LM	-27.40	64.07	279963.3	280878.7	272485.0				

FLAGWD 0 00000	FLAGWD 1 00000	FLAGWD 2 00000	FLAGWD 3 00000	FLAGWD 4 00000	FLAGWD 5 40200	FLAGWD 6 20000	FLAGWD 7 00100
FLAGWD 8 00000	FLAGWD 9 00000						
RCSFLAGS 00011	RCSFLAGS 00010	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 56016	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00026	PIPA Y 77771	PIPA Z 00323	FLAG 10 00000	FLAG 11 00000	0PTM0DES 00120
H0LDFLAG 00000	DAPDATR1 11103	DAPDATR2 11111	RED0CTR 00001	IM0DE 30 36001	IM0DE 33 26000	CHAN 11 01040	CHAN 12 00040
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX	102.7771	CDUY	-57.00806	CDUZ	62.98462	CDUT	-19.76715
AD0T/0BP	.1852736E-01	AD0T/0BY	.1951978E-01	AK	.3405762	AK1	-.3625488
THETAD X	102.9639	THETAD Y	-56.82129	THETAD Z	62.60010	TIG	2388.540
BEST J	.1666667	MRKTIME1	404463.1	STAR X1	.7653723E-01	STAR Y1	-.2367206E-01
STAR RS1	.8011438E-01	MRKTIME2	2388.540	STAR X2	-.1515672E-03	STAR Y2	-.8804932
STAR RS2	.8804932	HAP0	400616.0	HPER	26727.0	RSP-RREC	506002.0
VGTIG Y	-10.34088	VGTIG Z	-29.16908	AD0T/	-.3534481E-01	AD0T/0BP	.2114252E-01
AK	.3735352	AK1	-.3955078	AK2	-.6591797E-01	THETAD X	102.9639
THETAD Z	62.60010	0GC	.0000000	IGC	.0000000	M0C	.7655360E-01
LAUNCHAZ	147.5684	LEMMASS	.0000000	CSMMASS	26520.00	ERR0RX	-.3955078
ERR0RZ	.6591797E-01	WB0D/0CR	.0000000	WB0D/0CP	.0000000	WB0D/0CY	.0000000
THETAD Y	-55.56885	THETAD Z	44.42871	S/C MASS	1788.571	X CG	8.466005
Z CG	.5077438	JET FUEL	37.62671	SL0SH AR	-7.886368	IXX	31119.44
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454
WY DEG/S	.4196469E-01	WZ DEG/S	.6994114E-02	C0NFIG	1.000000	AXSCM/S2	-.9327403E-03
AZSCM/S2	.6016175E-02	XGYR0BUT	.0000000	YGYR0BUT	.0000000	ZGYR0BUT	.0000000
AYSMM/S2	-.3393689E-02	AZSMM/S2	.2547083E-02	ARSMM/S2	.6212921E-02		

AD0T/	-.3412441E-01		
AK2	-.4394532E-01		
BEST I	.0000000		
STAR Z1	.0000000		
STAR Z2	.0000000		
VGTIG X	-37.72564		
AD0T/0BY	.1777635E-01		
THETAD Y	-56.82129		
TEVENT	2372.820		
ERR0RY	.4064941		
THETAD X	108.0176		
Y CG	.3071489		
IYY	79900.74		
WX DEG/S	-.3147352E-01		
AYSCM/S2	-.1142607E-02		
AXSMM/S2	.4538241E-02		

PROGRAM	VERB 21	NOUN	R1	R2	R3 77	FLASH 1	DSPTAB +11 00000
PROGRAM	VERB 21	NOUN	R1	R2	R3 77	FLASH 1	DSPTAB +11 00000

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
-.41222304	.79159081	-.45106113	-.41222304	.79159081	-.45106113	-.44755125	-.38465858	-.80730271
.00042095	-.49491686	-.86894023	.00042095	-.49491686	-.86894023	-.33585262	-.76437545	.55039406
-.91108286	-.35838706	.20368291	-.91108285	-.35838706	.20368291	-.82879591	.51746345	.21290827

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	AIG= 57.36	-57.36	-57.13	-.04	10.99	R ERROR	637.24	-1193.32	-102.91
Z= -.000	AMG= 63.09	63.09	63.07	AGC TRUN	SDS TRUN	V ERROR	1.18	-1.33	-.27
X= .000	AOG= 102.78	102.78	102.79	.01	129.56				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2518457.5	5346467.2	-3038982.8	6645506.4	-7169.20	-2540.39	1454.05	7743.73	2865.42
AGC CM	-2517332.8	5347088.7	-3039372.2	6645758.4	-7167.98	-2539.32	1453.35	7742.11	
DELTA	-1124.6	621.5	389.4	252.0	-1.23	-1.07	.69	1.62	
SDS LM	-2519326.6	5353891.6	-3042946.4	6653621.9	-7162.60	-2547.68	1457.82	7740.72	2865.42
AGC LM	-2519327.9	5353844.9	-3042980.1	6653600.3	-7162.60	-2547.69	1457.88	7740.73	
DELTA	1.3	46.6	33.7	21.6	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-27.37	64.23	271829.1	272851.6	258391.4	-174.59	73.56	8460.9	-8.84
SDS LM	-27.37	64.21	279945.3	280897.3	272482.4				

FLAGWD 0 00000	FLAGWD 1 00000	FLAGWD 2 00000	FLAGWD 3 00000	FLAGWD 4 00000	FLAGWD 5 40200	FLAGWD 6 20000	FLAGWD 7 00100
FLAGWD 8 00000	FLAGWD 9 00000						
RCSFLAGS 00010	RCSFLAGS 00010	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 56016	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00026	PIPA Y 77771	PIPA Z 00345	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 00000	DAPDATR1 11103	DAPDATR2 11111	RENDEZ 00001	IMODE 30 36001	IMODE 33 26000	CHAN 11 01040	CHAN 12 00040
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX	102.7771	CDUY	-57.07397	CDUZ	63.05054	CDUT	-19.76715	ADOT/	-.3534481E-01
ADOT/OOP	.2375767E-01	ADOT/OOY	.1603291E-01	AK	.4064941	AK1	-.4394531	AK2	-.7690430E-01
THETAD X	102.9639	THETAD Y	-56.82129	THETAD Z	62.60010	TIG	2388.540	BEST I	.0000000
BEST J	.1666667	MRKTIME1	4643.1	STAR X1	.7653723E-01	STAR Y1	-.2367206E-01	STAR Z1	.0000000
STAR RS1	.8011438E-01	MRKTIME2	2388.540	STAR X2	-.1515672E-03	STAR Y2	-.8804932	STAR Z2	.0000000
STAR RS2	.8804932	HAP0	400616.0	HPER	267272.0	RSP-RREC	506002.0	VGTIG X	-37.72564
VGTIG Y	-10.34088	VGTIG Z	-29.16908	ADOT/	.1787022E-02	ADOT/OOP	.5424768E-02	ADOT/OOY	.1498685E-01
AK	.4394531	AK1	-.4724121	AK2	-.8789063E-01	THETAD X	102.9639	THETAD Y	-56.82129
THETAD Z	62.60010	OOC	.0000000	IGC	.0000000	MGC	.7655360E-01	TEVENT	2372.820
LAUNCHAZ	147.5684	LEMMASS	.0000000	CSMMASS	26520.00	ERRORX	-.4394531	ERRORY	.4833984
ERRORZ	.9887696E-01	WOOD/OCR	.0000000	WOOD/OCP	.0000000	WOOD/OCY	.0000000	THETAD X	108.0176
THETAD Y	-55.56885	THETAD Z	44.42871	S/C MASS	1788.571	X CG	8.466005	Y CG	.3071489
Z CG	.5077438	JET FUEL	37.65039	SLOSH AR	7.886368	IXX	31119.44	IYY	79900.74
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454	WX DEG/S	-.3497057E-02
WY DEG/S	.1398823E-01	WZ DEG/S	.1398823E-01	CONFIG	1.000000	AXSCM/S2	.0000000	AYSCM/S2	-.9327403E-04
AZSCM/S2	.6109449E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	.4080420E-02
AYSMM/S2	-.2703324E-02	AZSMM/S2	.3691636E-02	ARSMM/S2	.6130739E-02				

PROGRAM	VERB 21	NOUN 1	R1	R2		R3		FLASH 1	DSPTAB +11 00000
PROGRAM	VERB 21	NOUN 1	R1	R2	9	R3	X	FLASH 1	DSPTAB +11 00000

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
-.41222304	.79159081	-.45106113	-.41222304	.79159081	-.45106113	-.44734931	-.38531613	-.80710101
.00042095	-.49491686	-.86894023	.00042095	-.49491686	-.86894023	-.33551168	-.76422548	.55080962
-.91108286	-.35838706	.20368291	-.91108285	-.35838706	.20368291	-.82904267	.51719499	.21259761

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		L&S DR	L&S ALT	L&S CR
Y= .000	AIG= -57.44	-57.44	-57.21	-.04	10.99	R ERROR	641.23	-1195.23	-101.88
Z= -.000	AMG= 63.10	63.09	AGC TRUN		SDS TRUN	V ERROR	1.19	-1.32	-.27
X= .000	AOG= 102.84	102.84	102.85	.01	161.69				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2532789.0	5341371.9	-3036066.4	6645522.8	-7162.34	-2554.91	1462.32	7743.71	2867.42
AGC CM	-2531661.9	5341995.5	-3036457.2	6645773.1	-7161.12	-2553.84	1461.63	7742.10	
DELTA	-1127.1	-623.6	390.8	-250.4	-1.22	-1.07	.69	1.61	
SDS LM	-2533644.9	5348781.7	-3040022.5	6653612.5	-7155.77	-2562.16	1466.08	7740.74	2867.42
AGC LM	-2533646.2	5348735.1	-3040056.1	6653590.8	-7155.76	-2562.18	1466.14	7740.75	
DELTA	1.3	46.7	33.6	21.7	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-27.34	64.37	271836.9	272849.3	258409.7	-174.66	73.35	8443.3	-8.79
SDS LM	-27.34	64.35	279927.4	280915.9	272479.8				

FLAGWD 0 00000	FLAGWD 1 00000	FLAGWD 2 00000	FLAGWD 3 00000	FLAGWD 4 00000	FLAGWD 5 40200	FLAGWD 6 20000	FLAGWD 7 00100
FLAGWD 8 00000	FLAGWD 9 00000						
RCSFLAGS 00011	RCSFLAGS 00011	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 56016	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00026	PIPA Y 77771	PIPA Z 00365	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 00000	DAPDATR1 11103	DAPDATR2 11111	RENDCTR 00001	IMODE 30 36001	IMODE 33 26000	CHAN 11 01040	CHAN 12 00040
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX 102.8101	CDUY -57.17285	CDUZ 63.09448	CDUT -19.76715	ADOT/ .1612679E-02			
ADOT/OBP -.6591529E-02	ADOT/OBY .1498685E-01	AK .4504395	AK1 -.4943848	AK2 -.9887696E-01			
THETAD X 102.9639	THETAD Y -56.82129	THETAD Z 62.60010	TIG 2388.540	BEST I .0000000			
BEST J .1666667	MRKTIME1 404463.1	STAR X1 .7653723E-01	STAR Y1 -.2367206E-01	STAR Z1 .0000000			
STAR RS1 .8011438E-01	MRKTIME2 2388.540	STAR X2 -.1515672E-03	STAR Y2 -.8804932	STAR Z2 .0000000			
STAR RS2 .8804932	HAPO 400616.0	HPER 267272.0	RSP-RREC 506002.0	VGTIG X -37.72564			
VGTIG Y -10.34088	VGTIG Z -29.16908	ADOT/ .1961366E-02	ADOT/OBP -.3104657E-02	THETAD X 102.9639	ADOT/OBY .1498685E-01		
AK .4504395	AK1 -.4943848	AK2 -.1208496	IGC .0000000	MGC .7655360E-01	THETAD Y -56.82129		
THETAD Z 62.60010	BGC .0000000	CSMMASS 26520.00	WB0D/0CP .0000000	ERR0RX -.4504395	TEVENT 2372.820		
LAUNCHAZ 147.5684	LEMMASS .0000000	WB0D/0CR .0000000	S/C MASS 1788.571	WB0D/0CY .0000000	ERR0RY .4943848		
ERR0RZ .1318359	WB0D/0CR .0000000	THETAD Z 44.42871	SLOSH AR -7.886368	X CG 8.466005	THETAD X 108.0176		
THETAD Y -55.56885	THETAD Z 44.42871	JET FUEL 37.65039	IXX 1119.44	Y CG .3071489			
Z CG .5077438	JET FUEL 37.65039	IXY 2036.133	IXZ 246.1853	IYX 1424.454	IYY 79200.74		
IZZ 84710.12	IXY 2036.133	WZ DEG/S .1049118E-01	CONFIG 1.000000	IYZ 1424.454	WX DEG/S -.3497057E-02		
WY DEG/S .2098235E-01	WZ DEG/S .1049118E-01	XGYR0OUT .0000000	YGYR0OUT .0000000	AXSCM/S2 -.9327403E-03	AYSCM/S2 -.1235881E-02		
AZSCM/S2 .1597318E-02	XGYR0OUT .0000000	AZSMM/S2 -.2289105E+03	ARSMM/S2 .2224874E-02	ZGYR0OUT .0000000	AXSMM/S2 .1696845E-02		
AYSMM/S2 -.1420699E-02	AZSMM/S2 -.2289105E+03						

PROGRAM	VERB 21	NOUN 1	R1	R2	R3 77	FLASH 1	DSPTAB +11 00000
PROGRAM	VERB 21	NOUN 1	R1 10	R2	R3 77	FLASH 1	DSPTAB +11 00000

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
+.41222304	+.79159081	+.45106113	+.41222304	+.79159081	+.45106113	+.44726586	+.38598251	+.80682874
+.00042095	+.49491686	+.86894023	+.00042095	+.49491686	+.86894023	+.33506489	+.76408458	+.55127692
+.91108286	+.35838706	+.20368291	+.91108285	+.35838706	+.20368291	+.82926869	+.51690602	+.21241975

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR.
Y= +.000	AIG= -57.53	-57.53	-57.29	+.04	10.99	R ERROR	645.23	-1197.13	-100.88
Z= +.000	AMG= 63.12	63.12	63.12	AGC TRUN	SDS TRUN	V ERROR	1.19	+1.32	+.27
X= +.000	AOG= 102.91	102.91	102.92	.01	140.23				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2547106.8	5336247.6	-3033133.5	6645539.1	-7155.45	+2569.41	1470.59	7743.70	2869.42
AGC CM	-2545977.3	5336873.3	-3033525.7	6645787.8	-7154.23	+2568.34	1469.89	7742.09	
DELTA	+1129.5	+625.8	392.2	+248.7	-1.22	-1.07	.69	1.61	
SDS LM	-2547949.6	5343642.9	-3037082.1	6653603.1	+7148.89	+2576.63	1474.33	7740.75	2869.42
AGC LM	-2547950.9	5343596.2	-3037115.6	6653581.4	-7148.88	-2576.64	1474.39	7740.76	
DELTA	1.3	46.7	33.5	21.7	+.01	.02	+.06	+.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-27.31	64.51	271844.5	272847.0	258428.1	-174.73	73.14	8425.8	+8.75
SDS LM	-27.31	64.48	279909.4	280934.6	272477.1				

FLAGWD 0 00000	FLAGWD 1 00000	FLAGWD 2 00000	FLAGWD 3 00000	FLAGWD 4 00000	FLAGWD 5 40200	FLAGWD 6 20000	FLAGWD 7 00100
FLAGWD 8 00000	FLAGWD 9 00000						
RCSFLAGS 00011	RCSFLAGS 00011	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 56016	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00026	PIPA Y 77771	PIPA Z 00403	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
H6LDFLAG 00000	DAPDATR1 11103	DAPDATR2 11111	RENDCTR 00001	IMODE 30 36001	IMODE 33 26000	CHAN 11 01040	CHAN 12 00040
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX 102.8870	CDUY -57.23877	CDUZ 63.10547	CDUT -19.76715	ADOT/ +.2135709E-02			
ADOT/OOP +.1408160E-03	ADOT/OOY +.1498685E-01	AK +.4394531	AK1 +.5053711	AK2 +.1428223			
THETAD X 102.9639	THETAD Y -56.82129	THETAD Z 62.60010	TIG 2388.540	BEST I +.0000000			
BEST J +.1666667	MRKTIME1 40.4463+1	STAR X1 +.7653723E-01	STAR Y1 +.2367206E-01	STAR Z1 +.0000000			
STAR RS1 +.8011438E-01	MRKTIME2 2388.540	STAR X2 +.1515672E-03	STAR Y2 +.8804932	STAR Z2 +.0000000			
STAR RS2 +.8804932	HAPO 400616.0	HPER 267272.0	RSP-RREC 506002.0	VGTIG X +37.72564			
VGTIG Y +10.34088	VGTIG Z -29.16908	ADOT/ +.1612679E-02	ADOT/OOP +.1128540E-01	ADOT/OOY +.1498685E-01			
AK +.4394531	AK1 +.5053711	AK2 +.1538086	THETAD X 102.9639	THETAD Y -56.82129			
THETAD Z 62.60010	OGC +.0000000	IGC +.0000000	MGC +.7655360E-01	TEVENT 2372.820			
LAUNCHAZ 147.5684	LEMMASS +.0000000	CSMMASS 26520.00	ERROR X +.4614258	ERROR Y +.5163574			
ERROR Z +.1647949	WBOD/OCR +.0000000	WBOD/OCP +.0000000	WBOD/OCY +.0000000	THETAD X 108.0176			
THETAD Y +55.56885	THETAD Z 44.42871	S/C MASS 1788.571	X CG 8.466005	Y CG +.3071489			
Z CG .5077438	JET FUEL 37.65698	SLOSH AR 7.886368	IXX 31119.44	IYY 79900.74			
IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454	WX DEG/S +.1049118E-01			
WY DEG/S +.1049118E-01	WZ DEG/S +.1398823E-01	CONFIG 1.000000	AXSCM/S2 +.9327403E-03	AYSCM/S2 +.1235881E-02			
AZSCM/S2 +.4512131E-02	XGYROOUT +.0000000	YGYROOUT +.0000000	ZGYROOUT +.0000000	AXSMM/S2 +.3615332E-02			
AYSMM/S2 +.2710591E-02	AZSMM/S2 +.1569672E-02	ARSMM/S2 +.4783492E-02					

PROGRAM	VERB 21	NOUN 1	R1 10000	R2	R3 77	FLASH 0	DSPTAB +11 00000		
PROGRAM	VERB 21	NOUN 1	R1 10000	R2	R3 77	FLASH 0	DSPTAB +11 00000		

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
+.41222304	+.79159081	+.45106113	+.41222304	+.79159081	+.45106113	+.44699478	+.38674974	+.80661154
+.00042095	+.49491686	+.86894023	+.00042095	+.49491686	+.86894023	+.33453155	+.76400757	+.55170703
+.91108286	+.35838706	+.20368291	+.91108285	+.35838706	+.20368291	+.82963014	+.51644635	+.21212745

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= +.000	AIG= -57.62	-57.62	-57.38	+.04	10.99	R ERROR	649.24	-1199.01	-99.91
Z= +.000	AMG= 63.14	63.14	63.12	AGC TRUN	SDS TRUN	V ERROR	1.19	+1.31	+.26
X= +.000	AOG= 102.97	102.97	102.99	.01	124.17				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	+2561410.8	5331094.3	-3030184.1	6645555.4	-7148.51	+2583.90	1478.85	7743.69	2871.42
AGC CM	+2560278.8	5331722.2	-3030577.7	6645802.4	-7147.29	+2582.82	1478.15	7742.07	
DELTA	+1132.0	+627.9	393.6	+247.0	+1.21	+1.07	.69	1.61	
SDS LM	-2562240.5	5338475.2	-3034125.2	6653593.7	-7141.98	+2591.08	1482.57	7740.77	2871.42
AGC LM	-2562241.7	5338428.5	-3034158.6	6653572.0	-7141.97	+2591.10	1482.63	7740.78	
DELTA	1.3	46.7	33.4	21.8	+.01	.02	+.06	+.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	+27.28	64.65	271852.1	272844.6	258446.6	-174.80	72.93	8408.3	+8.70
SDS LM	+27.28	64.62	279891.3	280953.4	272474.5				

FLAGWD 0	00000	FLAGWD 1	00000	FLAGWD 2	00000	FLAGWD 3	00000	FLAGWD 4	00000	FLAGWD 5	40200	FLAGWD 6	20000	FLAGWD 7	00100
FLAGWD 8	00000	FLAGWD 9	00000												
RCSFLAGS	00011	RCSFLAGS	00011	RSBBQ	42106	RSBBQ+1	03434	CADRFLSH	56016	CADR+1	73174	CADR+2	56016	FAILREG	00000
FAILRG+1	00000	FAILRG+2	00026	PIPA X	00026	PIPA Y	77771	PIPA Z	00417	FLAG 10	00000	FLAG 11	00000	OPTMODES	00120
H0LDFLAG	00000	DAPDATR1	11103	DAPDATR2	11111	RE0CTR	00001	IMODE 30	36001	IMODE 33	26000	CHAN 11	01000	CHAN 12	00040
CHAN 13	40100	CHAN 14	00000	CHAN 30	37373	CHAN 31	37777	CHAN 32	77777	CHAN 33	67765				

CDUX	102.9529	CDUY	-57.31567	CDUZ	63.11646	CDUT	-19.76715	AOGT/	.3922731E-03
AOGT/OBP	+.7624180E-02	AOGT/OBY	.1620725E-01	AK	.4504395	AK1	+.5273437	AK2	+.1757812
THETAD X	102.9639	THETAD Y	-56.82129	THETAD Z	62.60010	TIG	2388.540	BEST I	.0000000
BEST J	.1666667	MRKTIME1	404463.1	STAR X1	+.7653723E-01	STAR Y1	+.2367206E-01	STAR Z1	.0000000
STAR RS1	.8011438E-01	MRKTIME2	2388.540	STAR X2	+.1515672E-03	STAR Y2	+.8804932	STAR Z2	.0000000
STAR RS2	.8804932	HAP0	400616.0	HPER	267272.0	RSP-RREC	506002.0	VGTIG X	-37.72564
VGTIG Y	-10.34088	VGTIG Z	-29.16908	AOGT	+.1002476E-02	AOGT/OBP	+.4485995E-02	AOGT/OBY	.1777635E-01
AK	.4614258	AK1	+.5273437	AK2	+.1977539	THETAD X	102.9639	THETAD Y	-56.82129
THETAD Z	62.60010	0GC	.0000000	IGC	.0000000	MGC	.7655360E-01	TEVENT	2372.820
LAUNCHAZ	147.5684	LEMMASS	.0000000	CSMMASS	26520.00	ERR0RX	+.4724121	ERR0RY	.5383301
ERR0RZ	.2087402	WB0D/0CR	.0000000	WB0D/0CP	.0000000	WB0D/0CY	.0000000	THETAD X	108.0176
THETAD Y	-55.56885	THETAD Z	44.42871	S/C MASS	1788.571	X CG	8.466005	Y CG	.3071489
Z CG	.5077438	JET FUEL	37.65686	SL0SH AR	-7.886368	IXX	31119.44	IYY	79900.74
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454	WX DEG/S	+.6994114E-02
WY DEG/S	.2447940E-01	WZ DEG/S	.2098235E-01	CONFIG	1.000000	AXSCM/S2	+.9327403E-03	AYSCM/S2	+.1142607E-02
AZSCM/S2	.6202723E-02	XGYR0BUT	.0000000	YGYR0BUT	.0000000	ZGYR0BUT	.0000000	AXSMM/S2	.4665413E-02
AYSMM/S2	+.3462725E-02	AZSMM/S2	.2677889E-02	ARSMM/S2	.6397471E-02				

PROGRAM	VERB 3	NOUN 1	R1 10000	R2	R3 77	FLASH 1	DSPTAB +11 00000	
PROGRAM	VERB 37	NOUN	R1 10000	R2	R3 77	FLASH 1	DSPTAB +11 00000	

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.44680142	-.38754058	-.80633903
-.33389139	-.76394677	.55217886
-.82999206	.51594305	.21193600

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	AIG= -57.72	-57.72	-57.47	-.04	10.99	R ERROR	653.26	-1200.86	-98.96
Z= -.000	AMG= 63.16	63.16	63.14	AGC TRUN	SDS TRUN	V ERROR	1.19	-1.31	-.26
X= .000	AOG= 103.04	103.04	103.05	.01	131.27				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-25757700.8	5325912.0	-3027218.1	6645571.7	-7141.53	-2598.37	1487.10	7743.67	2873.42
AGC CM	-2574566.4	5326542.0	-3027613.1	6645817.0	-7140.32	-2597.30	1486.40	7742.06	
DELTA	-1134.4	-630.0	395.0	-245.3	-1.21	-1.07	.69	1.61	
SDS LM	-2576517.5	5333278.6	-3031151.8	6653584.3	-7135.02	-2605.52	1490.80	7740.79	2873.42
AGC LM	-2576518.7	5333231.8	-3031185.1	6653562.5	-7135.01	-2605.54	1490.86	7740.80	
DELTA	1.3	46.8	33.2	21.9	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-27.25	64.78	271859.6	272842.2	258465.2	-174.86	72.72	8391.0	-8.65
SDS LM	-27.26	64.76	279873.2	280972.3	272471.8				

FLAGWD 0	00000	FLAGWD 1	00000	FLAGWD 2	00000	FLAGWD 3	10000	FLAGWD 4	00000	FLAGWD 5	40200	FLAGWD 6	20000	FLAGWD 7	00100
FLAGWD 8	00000	FLAGWD 9	00000												
RCSFLAGS	00011	RCSFLAGS	00011	RSBBQ	42106	RSBBQ+1	03434	CADRFLSH	56016	CADR+1	73174	CADR+2	56016	FAILREG	00000
FAILRG+1	00000	FAILRG+2	00000	PIPA X	00026	PIPA Y	77771	PIPA Z	00432	FLAG 10	00000	FLAG 11	00000	OPTMODES	00120
HOLDFLAG	00000	DAPDATR1	11103	DAPDATR2	11111	REDOCTR	00001	IMODE 30	36001	IMODE 33	26000	CHAN 11	01040	CHAN 12	00040
CHAN 13	40100	CHAN 14	00000	CHAN 30	37373	CHAN 31	37777	CHAN 32	77777	CHAN 33	67765				

CDUX	103.0188	CDUY	-57.41455	CDUZ	63.12744	CDUT	-19.76715	ADOT/	-.2571568E-02		
ADOT/OBP	-.9991229E-03	ADOT/OBY	.1812503E-01	AK	.4614258	AK1	-.5383301	AK2	-.2087402		
THETAD X	102.9639	THETAD Y	-56.82129	THETAD Z	62.60010	TIG	2388.540	BEST I	.0000000		
BEST J	.1666667	MRKTIME1	404463.1	STAR X1	.7653723E-01	STAR Y1	-.2367206E-01	STAR Z1	.0000000		
STAR RS1	.8011438E-01	MRKTIME2	2388.540	STAR X2	-.1515672E-03	STAR Y2	-.8804932	STAR Z2	.0000000		
STAR RS2	.8804932	HAPO	400616.0	HPER	267272.0	RSP=RREC	506002.0	VGTIG X	-37.72564		
VGTIG Y	-10.34088	VGTIG Z	-29.16908	ADOT/	-.3791973E-02	ADOT/OBP	-.1318977E-01	ADOT/OBY	.1812503E-01		
AK	.4724121	AK1	-.5493164	AK2	-.2416992	THETAD X	102.9639	THETAD Y	-56.82129		
THETAD Z	62.60010	OGC	.0000000	IGC	.0000000	MGC	.7655360E-01	TEVENT	2372.820		
LAUNCHAZ	147.5684	LEMMASS	.0000000	CSMMASS	26520.00	ERRORX	-.4833984	ERRORY	.5493164		
ERRORZ	.2416992	WBOD/OCR	.0000000	WBOD/OCP	.0000000	WBOD/OCY	.0000000	THETAD X	108.0176		
THETAD Y	-55.56885	THETAD Z	44.42871	S/C MASS	1788.571	X CG	8.466005	Y CG	.3071489		
Z CG	.5077438	JET FUEL	37.66345	SLOSH AR	7.886368	IXX	31119.44	IYY	79900.74		
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454	WX DEG/S	-.1049118E-01		
WY DEG/S	.1748529E-01	WZ DEG/S	.2447940E-01	CONFIG	1.000000	AXSCM/S2	-.9327403E-03	AYSCM/S2	-.7695107E-03		
AZSCM/S2	.4698679E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	.3411856E-02		
AYSMM/S2	-.2834130E-02	AZSMM/S2	.2009326E-02	ARSMM/S2	.4869337E-02						

PROGRAM	VERB 37	NOUN 30	R1 10000	R2	R3 77	FLASH 1	DSPTAB +11 00000	
PROGRAM 30	VERB 06	NOUN 33	R1 +00000	R2 +00039	R3 +04854	FLASH 1	DSPTAB +11 00000	

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	-.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	-.20368291

S/C ATTITUDE MATRIX

-.44686365	-.38827062	-.80595350
-.33401775	-.76334143	.55293894
-.82990766	.51629019	.21142030

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	AIG= 57.83	57.83	57.57	-.04	10.99	R ERROR	657.28	1202.70	98.04
Z= -.000	AMG= 63.16	63.16	63.15	AGC TRUN	SDS TRUN	V ERROR	1.19	1.30	.26
X= .000	AOG= 103.17	103.17	103.14	.01	100.86				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2589976.9	5320700.8	-3024235.7	6645587.9	-7134.52	2612.83	1495.34	7743.66	2875.42
AGC CM	-2588840.1	5321333.0	-3024632.1	6645831.5	-7133.31	2611.76	1494.65	7742.05	
DELTA	1136.8	632.2	396.4	243.6	1.21	1.07	.69	1.61	
SDS LM	-2590780.5	5328053.1	-3028162.0	6653574.9	-7128.03	2619.95	1499.02	7740.80	2875.42
AGC LM	-2590781.8	5328006.3	-3028195.1	6653553.0	-7128.02	2619.97	1499.08	7740.81	
DELTA	1.2	46.8	33.1	21.9	.01	.02	.06	.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	27.22	64.92	271867.1	272839.9	258483.8	174.93	72.51	8373.7	8.60
SDS LM	-27.23	64.90	279855.0	280991.3	272469.1				

FLAGWD 0	00000	FLAGWD 1	00000	FLAGWD 2	00000	FLAGWD 3	10000	FLAGWD 4	00000	FLAGWD 5	40200	FLAGWD 6	20000	FLAGWD 7	00100
FLAGWD 8	00000	FLAGWD 9	00000												
RCSFLAGS	00011	RCSFLAGS	00001	RSBBQ	42106	RSBBQ+1	03434	CADRFLSH	56016	CADR+1	73174	CADR+2	73647	FAILREG	00000
FAILRG+1	00000	FAILRG+2	00000	PIPA X	00026	PIPA Y	77771	PIPA Z	00443	FLAG 10	00000	FLAG 11	00000	OPTMODES	00120
HOLDFLAG	00000	DAPDATR1	11103	DAPDATR2	11111	REDOCTR	00001	IMODE 30	36001	IMODE 33	26000	CHAN 11	01040	CHAN 12	00040
CHAN 13	00100	CHAN 14	00000	CHAN 30	37373	CHAN 31	37777	CHAN 32	77777	CHAN 33	67765				

CDUX	103.0847	CDUY	-57.51343	CDUZ	63.14941	CDUT	-19.76715	ADOT/	-.5012379E-02
ADOT/OBP	-.9528548E-02	ADOT/OBY	.1812503E-01	AK	.4833984	AK1	.5603027	AK2	.2416992
THETAD X	102.9639	THETAD Y	-56.82129	THETAD Z	62.60010	TIG	2388.540	BEST I	.0000000
BEST J	.1666667	MRKTIME1	404463.1	STAR X1	.7653723E-01	STAR Y1	-.2367206E-01	STAR Z1	.0000000
STAR RS1	.8011438E-01	MRKTIME2	2388.540	STAR X2	-.1515672E-03	STAR Y2	-.8804932	STAR Z2	.0000000
STAR RS2	.8804932	HAPO	400616.0	HPER	267272.0	RSP-RREC	506002.0	VGTIG X	-37.72564
VGTIG Y	-10.34088	VGTIG Z	-29.16908	ADOT/	.2950430E-01	ADOT/OBP	-.1910404E-01	ADOT/OBY	.1969412E-01
AK	.4724121	AK1	-.5712891	AK2	-.2746582	THETAD X	103.1506	THETAD Y	-57.56836
THETAD Z	63.14941	OGC	.0000000	IGC	.0000000	MGC	.7655360E-01	TEVENT	2372.820
LAUNCHAZ	147.5684	LEMMASS	.0000000	CSMMASS	26520.00	ERRORX	.1098633E-01	ERRORY	.0000000
ERRORZ	.0000000	WBOD/OCR	.0000000	WBOD/OCP	.0000000	WBOD/OCY	.0000000	THETAD X	108.0176
THETAD Y	-55.56885	THETAD Z	44.42871	S/C MASS	1788.571	X CG	8.466005	Y CG	.3071489
Z CG	.5077438	JET FUEL	37.67615	SLOSH AR	-7.886368	IXX	31119.44	IYY	79900.74
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454	WX DEG/S	.1398823E-01
WY DEG/S	.0000000	WZ DEG/S	.2447940E-01	CONFIG	1.000000	AXSCM/S2	-.9327403E-03	AYSCM/S2	-.1515703E-02
AZSCM/S2	.1504044E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	.1838551E-02
AYSMM/S2	-.1344395E-02	AZSMM/S2	-.4759884E-03	ARSMM/S2	.2326850E-02				

pR0GRAM 30 VERB 06 N0UN 33 R1 +00000 R2 +00039 R3 +04854 FLASH 1 DSPTAB +11 00000

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
-.41222304	.79159081	-.45106113	.00000000	.00000000	.00000000	-.44680095	-.38914752	-.80556512
.00042095	-.49491686	-.86894023	.00000000	.00000000	.00000000	-.33412719	.76269794	.55376005
-.91108286	-.35838706	.20368291	.00000000	.00000000	.00000000	-.82989717	.51658082	.21074939

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		L0S DR	L0S ALT	L0S CR
Y= .000	AIG= -57.95	-57.95	-57.69	-.04	10.99	R ERR0R	661.31	-1204.52	-97.14
Z= .000	AMG= 63.18	63.18	63.16	AGC TRUN	SDS TRUN	V ERR0R	1.20	-1.30	-.26
X= .000	A0G= 103.31	103.31	103.29	.01	139.50				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2604238.9	5315460.7	-3021236.8	6645604.1	-7127.46	-2627.27	1503.58	7743.64	2877.42
AGC CM	-2603099.7	5316095.0	-3021634.5	6645846.0	-7126.26	-2626.20	1502.88	7742.04	
DELTA	-1139.2	-634.3	397.8	-241.9	-1.20	-1.07	.69	1.60	
SDS LM	-2605029.6	5322798.8	-3025155.8	6653565.5	-7121.00	-2634.36	1507.24	7740.82	2877.42
AGC LM	-2605030.8	5322752.0	-3025188.8	6653543.5	-7120.99	-2634.38	1507.30	7740.83	
DELTA	1.2	46.8	33.0	22.0	-.01	.02	-.06	-.01	

p0SITI0N	LAT	L0NG	ALT	Ap0GEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	27.19	65.06	271874.5	272837.5	258502.6	-174.99	72.30	8356.6	-8.56
SDS LM	-27.20	65.03	279836.7	281010.3	272466.4				

FLAGWD 0 00000	FLAGWD 1 00120	FLAGWD 2 00400	FLAGWD 3 10000	FLAGWD 4 10000	FLAGWD 5 40200	FLAGWD 6 20000	FLAGWD 7 00100	
FLAGWD 8 00000	FLAGWD 9 00000							
RCSFLAGS 00001	VHFCNT 00000	TRKMKCNT 00000	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	
CADR+2 73662	FAILREG 00000	FAILRG+1 00000	FAILRG+2 00000	PIPA X 00026	PIPA Y 77771	PIPA Z 00452	0PTM0DES 00120	
H0LDFLAG 00000	DAPDATR1 11103	DAPDATR2 11111	RED0CTR 00001	IM0DE 30 36001	IM0DE 33 26000	CHAN 11 01040	CHAN 12 00040	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765	FLAG 10 00000	FLAG 11 00000	

CDUX 103.2166	CDUY -57.61230	CDUZ 63.14941	CDUT -19.76715	AD0T/ .2723784E-01				
AD0T/0BP -.1387373E-01	AD0T/0BY .2143756E-01	AK -.2197266E-01	AK1 .0000000	AK2 -.1098633E-01				
THETAD X 103.1506	THETAD Y -57.56836	THETAD Z 63.14941	TIG 2388.540	DELLT4 1139.650				
RTARG X -6163634.	RTARG Y 2176504.	RTARG Z -1235646.	VHFTIME 1828.500	MARKD0WN 404463.1				
MARKCDUY 6.888428	MARKCDUS -1.274414	MARKCDUZ -2.131348	MARKCDUT 3.532104	MARKCDUX .0000000				
RM .0000000	TPI 2018630.	ECSTEER 1.000244	DELVTPF .0000000	TPASS4 3550.230				
DELVSLVX 38.09338	DELVSLVY 30.47991	DELVSLVZ .9246826	DELVSLVS 48.79534	RANGE 13110.00				
RRATE -19.55333	AD0T/ .2584309E-01	AD0T/0BP -.8469075E-02	AD0T/0BY .2161190E-01	AK -.4394532E-01				
AK1 .0000000	AK2 -.4394532E-01	THETAD X 103.1506	THETAD Y -57.56836	THETAD Z 63.14941				
ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0	DELV3 X -37.67948	DELV3 Y -10.06985				
DELV3 Z -29.32339	DELV3 S 48.79555	LEMMASS .0000000	CSMMASS 26520.00	ERR0RX .5493165E-01				
ERR0RY .0000000	ERR0RZ .5493165E-01	WB0D/0CR .0000000	WB0D/0CP .0000000	WB0D/0CY .0000000				
THETAD X 108.0176	THETAD Y -55.56885	THETAD Z 44.42871	RTHETA 53.71069	LAT(SPL) 27.92083				
LNG(SPL) -152.2167	VPRED 7701.699	GAMMAEI -114.4775	S/C MASS 1788.571	X CG 8.466005				
Y CG .3071489	Z CG .5077438	JET FUEL 37.67590	SL0SH AR 7.886368	IXX 31119.44				
IYY 79900.74	IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454				
WX DEG/S .1049118E-01	WY DEG/S .1049118E-01	WZ DEG/S .2447940E-01	C0NFIG 1.000000	AXSCM/S2 .0000000				
AYSCM/S2 -.1608977E-02	AZSCM/S2 .1504044E-02	XGYR0UT .0000000	YGYR0UT .0000000	ZGYR0UT .0000000				
AXSMM/S2 .2132864E-02	AYSMM/S2 -.5014229E-03	AZSMM/S2 -.1889420E-03	ARSMM/S2 .2199144E-02					

TAPE WEDB RUN 6 VERIFICATION C4.18A TEST RUN DATE 10/23/68 EDIT DATE 230CT68 SDS TIME 2879 AGC TIME 2809.46 ID 775 PAGE 40

PROGRAM 30 VERB 06 NOUN 81 R1 +01250 R2 +01000 R3 +00030 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

.00000000	.00000000	.00000000
.00000000	.00000000	.00000000
.00000000	.00000000	.00000000

S/C ATTITUDE MATRIX

-.44643736	-.39018393	-.80526519
-.33414531	-.76212955	.55453181
-.83008575	.51663828	.20986509

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	AIG= -58.07	-58.07	-57.82	-.04	10.99	R ERROR	665.35	-1206.31	-96.27
Z= .000	AMG= 63.21	63.21	63.16	AGC TRUN	SDS TRUN	V ERROR	1.20	-1.29	-.26
X= .000	AOG= 103.44	103.44	103.43	.01	151.23				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2618486.7	5310191.7	-3018221.4	6645620.3	-7120.37	-2641.70	1511.80	7743.63	2879.42
AGC CM	-2617345.1	5310828.2	-3018620.6	6645860.5	-7119.17	-2640.63	1511.11	7742.03	
DELTA	-1141.6	-636.5	-399.2	-240.2	-1.20	-1.07	.69	1.60	
SDS LM	-2619264.5	5317515.7	-3022133.1	6653556.0	-7113.93	-2648.76	1515.45	7740.83	2879.42
AGC LM	-2619265.7	5317468.8	-3022165.9	6653534.0	-7113.92	-2648.78	1515.51	7740.84	
DELTA	1.2	46.9	32.9	22.0	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-27.17	65.20	271881.8	272835.1	258521.4	-175.05	72.09	8339.5	-8.51
SDS LM	-27.17	65.17	279818.5	281029.5	272463.6				

FLAGWD 0 00000	FLAGWD 1 00120	FLAGWD 2 00400	FLAGWD 3 10000	FLAGWD 4 10000	FLAGWD 5 40200	FLAGWD 6 20000	FLAGWD 7 00100
FLAGWD 8 00000	FLAGWD 9 00000						
RCSFLAGS 00001	VHFCNT 00000	TRKMKCNT 00000	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174
CADR+2 73662	FAILREG 00000	FAILRG+1 00000	FAILRG+2 00000	PIPA X 00027	PIPA Y 77771	PIPA Z 00460	OPTMODES 00120
HBLDFLAG 00000	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36001	IMODE 33 26000	CHAN 11 01002	CHAN 12 00040
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765	FLAG 10 20000	FLAG 11 00000

CDUX 103.3594	CDUY -57.74414	CDUZ 63.16040	CDUT -19.76715	ADOT/ .2427400E-01			
ADOT/OBP -.3761799E-02	ADOT/OBY .2178625E-01	AK -.6591797E-01	AK1 .0000000	AK2 -.6591797E-01			
THETAD X 103.1506	THETAD Y -57.56836	THETAD Z 63.14941	TIG 2388.540	DELLT4 1139.650			
RTARG X -6163634.	RTARG Y 2176504.	RTARG Z -1235646.	VHFTIME 1828.500	MARKD0WN 404463.1			
MARKCDUY 6.888428	MARKCDUS -1.274414	MARKCDUZ -2.131348	MARKCDUT 3.532104	MARKCDUX .0000000			
RM .0000000	TPI 201863.	ECSTEER 1.000244	DELVTPF .0000000	TPASS4 3550.230			
DELVSLVX 38.09338	DELVSLVY 30.47991	DELVSLVZ .9246826	DELVSLVS 48.79534	RANGE 13110.00			
RRATE -19.55333	ADOT/ -.2218187E-01	ADOT/OBP -.2749265E-03	ADOT/OBY -.2352968E-01	AK -.7690430E-01			
AK1 -.1098633E-01	AK2 -.9887696E-01	THETAD X 103.1506	THETAD Y -57.56836	THETAD Z 63.14941			
ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0	DELV3 X -37.67948	DELV3 Y -10.06985			
DELV3 Z -29.32339	DELV3 S 48.79555	LEMMASS .0000000	CSMMASS 26520.00	ERRORX .7690430E-01			
ERRORY .2197266E-01	ERRORZ .1098633	WBOD/OCR .0000000	WBOD/OCP .0000000	WBOD/OCY .0000000			
THETAD X 108.0176	THETAD Y -55.56885	THETAD Z 44.42871	RTHETA 53.71069	LAT(SPL) 27.92083			
LNG(SPL) -152.2167	VPRED 7701.699	GAMMAEI -114.4775	S/C MASS 1788.571	X CG 8.466005			
Y CG .3071489	Z CG .5077438	JET FUEL 37.67590	SLOSH AR -7.886368	IXX 31119.44			
IYY 79900.74	IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454			
WX DEG/S .1398823E-01	WY DEG/S .3147352E-01	WZ DEG/S .2098235E-01	CONFIG 1.000000	AXSCM/S2 .8861033E-03			
AYSCM/S2 -.1422429E-02	AZSCM/S2 .6389271E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000			
AXSMM/S2 .5442982E-02	AYSMM/S2 -.1838551E-02	AZSMM/S2 .3306485E-02	ARSMM/S2 .6628662E-02				

PROGRAM 30 VERB N0UN R1 R2 R3 FLASH 1 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

.00000000	.00000000	.00000000
.00000000	.00000000	.00000000
.00000000	.00000000	.00000000

S/C ATTITUDE MATRIX

-.44584751	-.39136362	-.80501962
-.33406234	-.76162076	.55527997
-.83043623	.51649618	.20882654

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	AIG= -58.21	-58.21	-57.96	-.04	10.99	R ERROR	669.39	-1208.09	-95.42
Z= .000	AMG= 63.26	63.25	63.20	AGC TRUN	SDS TRUN	V ERROR	1.20	-1.29	-.25
X= .000	AOG= 103.59	103.59	103.57	.01	162.02				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2632720.3	5304893.9	-3015189.6	6645636.4	-7113.24	-2656.12	1520.02	7743.62	2881.42
AGC CM	-2631576.3	5305532.5	-3015590.1	6645874.9	-7112.04	-2655.05	1519.33	7742.01	
DELTA	-1144.0	-638.6	400.6	-238.4	-1.19	-1.07	.69	1.60	
SDS LM	-2633485.3	5312203.8	-3019094.0	6653546.6	-7106.82	-2663.14	1523.65	7740.85	2881.42
AGC LM	-2633486.5	5312156.9	-3019126.7	6653524.5	-7106.81	-2663.16	1523.71	7740.86	
DELTA	1.2	46.9	32.8	22.1	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-27.14	65.33	271889.0	272832.7	258540.3	-175.11	71.88	8322.5	-8.46
SDS LM	-27.14	65.31	279800.1	281048.8	272460.9				

FLAGWD 0 00000	FLAGWD 1 00020	FLAGWD 2 00400	FLAGWD 3 10204	FLAGWD 4 00000	FLAGWD 5 40200	FLAGWD 6 20000	FLAGWD 7 00100
FLAGWD 8 50000	FLAGWD 9 00000						
RCSFLAGS 00001	VHFCNT 00000	TRKMKCNT 00000	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174
CADR+2 73662	FAILREG 00000	FAILRG+1 00000	FAILRG+2 00000	PIPA X 00027	PIPA Y 77771	PIPA Z 00463	OPTMODES 00120
HOLDFLAG 00000	DAPDATR1 11103	DAPDATR2 11111	RENDCTR 00001	IMODE 30 36001	IMODE 33 26000	CHAN 11 01040	CHAN 12 00040
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765	FLAG 10 00000	FLAG 11 00000

CDUX	103.4912	CDUY	-57.87598	CDUZ	63.18237	CDUT	-19.76715	ADOT/	.1904369E-01
ADOT/OBP	.2165884E-02	ADOT/OBY	.2527312E-01	AK	-.7690430E-01	AK1	-.3295899E-01	AK2	-.1318359
THETAD X	103.1506	THETAD Y	-57.56836	THETAD Z	63.14941	TIG	2388.540	DELLT4	1139.650
RTARG X	-6163634.	RTARG Y	2176504.	RTARG Z	-1235646.	VHFTIME	1828.500	MARKDOWN	404463.1
MARKCDUY	6.888428	MARKCDUS	-1.274414	MARKCDUZ	2.131348	MARKCDUT	3.532104	MARKCDLX	.0000000
RM	.0000000	TPI	2018630.	ECSTEER	1.000244	DELVTPF	.0000000	TPASS4	3550.230
DELVSLVX	38.09338	DELVSLVY	30.47991	DELVSLVZ	.9246826	DELVSLVS	48.79534	RANGE	13110.00
RRATE	-19.55333	ADOT/	.1607985E-01	ADOT/OBP	.6873161E-02	ADOT/OBY	.2649352E-01	AK	-.8789063E-01
AK1	-.5493165E-01	AK2	-.1647949	THETAD X	103.1506	THETAD Y	-57.56836	THETAD Z	63.14941
ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0	DELV3 X	-37.72545	DELV3 Y	-10.34079
DELV3 Z	-29.16918	DELV3 S	48.79531	LEMMASS	.0000000	CSMMASS	26520.00	ERRORX	.7690430E-01
ERRORY	.6591797E-01	ERRORZ	.1757812	WBODOBCR	.0000000	WBODOBCP	.0000000	WBODOBCY	.0000000
THETAD X	108.0176	THETAD Y	-55.56885	THETAD Z	44.42871	RTHETA	53.71069	LAT(SPL)	27.92083
LNG(SPL)	-152.2167	VPRED	7701.699	GAMMAEI	-114.4775	S/C MASS	1788.571	X CG	8.466005
Y CG	.3071489	Z CG	.5077438	JET FUEL	37.67566	SLOSH AR	-7.886368	IXX	31119.44
IYY	79900.74	IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454
WX DEG/S	.1049118E-01	WY DEG/S	.3846763E-01	WZ DEG/S	.2447940E-01	CONFIG	1.000000	AXSCM/S2	-.9327403E-03
AYSCM/S2	-.1329155E-02	AZSCM/S2	.6482545E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000
AXSMM/S2	.4996062E-02	AYSMM/S2	-.3542662E-02	AZSMM/S2	.2721491E-02	ARSMM/S2	.6702059E-02		

PROGRAM 30 VERB 99 NOUN 99 R1 +99962 R2 +01444 R3 +01601 FLASH 1 DSPTAB +11 00000

SDS REFERENCE MATRIX

+.41222304	+.79159081	+.45106113
+.00042095	+.49491686	+.86894023
+.91108286	+.35838706	+.20368291

AGC REFERENCE MATRIX

+.00000000	+.00000000	+.00000000
+.00000000	+.00000000	+.00000000
+.00000000	+.00000000	+.00000000

S/C ATTITUDE MATRIX

-.44496942	-.39270973	-.80485010
+.33387136	-.76118731	+.55598903
-.83098435	+.51611304	+.20759058

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= +000	AIG= -58.35	-58.35	-58.11	-.04	10.99	R ERROR	673.45	-1209.84	-94.59
Z= +000	AMG= 63.32	63.32	63.26	AGC TRUN	SDS TRUN	V ERROR	1.20	-1.28	-.25
X= +000	AOG= 103.73	103.73	103.70	.01	142.13				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2646939.6	5299567.3	-3012141.3	6645652.5	-7106.07	-2670.52	1528.23	7743.60	2883.42
AGC CM	-2645793.2	5300208.0	-3012543.3	6645889.2	-7104.88	-2669.45	1527.54	7742.00	
DELTA	-1146.4	-640.7	401.9	-236.7	-1.19	-1.07	.69	1.60	
SDS LM	-2647691.8	5306863.1	-3016038.5	6653537.1	-7099.67	-2677.51	1531.84	7740.86	2883.42
AGC LM	-2647693.0	5306816.2	-3016071.1	6653514.9	-7099.67	-2677.53	1531.90	7740.88	
DELTA	1.2	46.9	32.6	22.2	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-27.11	65.47	271896.2	272830.3	258559.2	-175.17	71.67	8305.6	-8.42
SDS LM	-27.11	65.45	279781.7	281068.1	272458.1				

FLAGWD 0 00000	FLAGWD 1 00020	FLAGWD 2 00400	FLAGWD 3 10004	FLAGWD 4 10000	FLAGWD 5 40200	FLAGWD 6 20000	FLAGWD 7 00100
FLAGWD 8 50000	FLAGWD 9 00000						
RCSFLAGS 00001	VHFCNT 00000	IRKMKCNT 00000	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174
CADR+2 73552	FAILREG 00000	FAILRG+1 00000	FAILRG+2 00000	PIPA X 00027	PIPA Y 77771	PIPA Z 00464	OPTMODES 00120
HBLDFLAG 00000	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36001	IMODE 33 26000	CHAN 11 01040	CHAN 12 00040
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765	FLAG 10 00000	FLAG 11 00000

CDUX 103.6340	CDUY -58.01880	CDUZ 63.23730	CDUT -19.76715	AODT/ +.1311601E-01			
AODT/OOP +.114061OE-01	AODT/OOY +.2684221E-01	AK -.8789063E-01	AK1 -.8789063E-01	AK2 -.1977539			
THETAD X 103.1506	THETAD Y -57.56836	THETAD Z 63.14941	TIG 2388.540	DELLT4 1139.650			
RTARG X -6163634.	RTARG Y 2176504.	RTARG Z -1235646.	VHFTIME 1828.500	MARKDOWN 404463.1			
MARKCDUY 6.888428	MARKCDUS -1.274414	MARKCDUZ -2.131348	MARKCDUT 3.532104	MARKCDUX .0000000			
RM .0000000	TPI 2018630.	ECSTEER 1.000244	DELVTPF .0000000	TPASS4 3550.230			
DELVSLVX 38.09338	DELVSLVY 30.47991	DELVSLVZ .9246826	DELVSLVS 48.79534	RANGE 13110.00			
RRATE -19.55333	AODT/ .1050085E-01	AODT/OOP .1698509E-01	AODT/OOY .2858565E-01	AK -.8789063E-01			
AK1 -.1208496	AK2 -.2197266	THETAD X 103.1506	THETAD Y -57.56836	THETAD Z 63.14941			
ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0	DELV3 X -37.72545	DELV3 Y -10.34079			
DELV3 Z -29.16918	DELV3 S 48.79531	LEMMASS .0000000	CSMMASS 26520.00	ERRORX .9887696E-01			
ERRORY .1318359	ERRORZ .2307129	WBODOCR .0000000	WBODOCP .0000000	WBODOCY .0000000			
THETAD X 108.0176	THETAD Y -55.56885	THETAD Z 44.42871	RTHETA 53.71069	LAT(SPL) 27.92083			
LNG(SPL) -152.2167	VPRED 7701.699	GAMMAEI -114.4775	SVC MASS 1788.571	X CG 8.466005			
Y CG .3071489	Z CG .5077438	JET FUEL 37.67529	SLOSH AR -7.886368	IXX 31119.44			
IYY 79900.74	IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454			
WX DEG/S .3497057E-02	WY DEG/S .4895880E-01	WZ DEG/S .2447940E-01	CONFIG 1.000000	AXSCM/S2 -.9327403E-03			
AYSCM/S2 -.1422429E-02	AZSCM/S2 .4791953E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000			
AXSMM/S2 .3953248E-02	AYSMM/S2 -.2783261E-02	AZSMM/S2 .1616908E-02	ARSMM/S2 .5097950E-02				

PROGRAM 30 VERB 16 NOUN 45 R1 +00 00 R2 +07 06 R3 +03861 FLASH 1 DSPTAB +11 00000

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
-.41222304	.79159081	-.45106113	.00000000	.00000000	.00000000	-.44383812	-.39425969	-.80471706
.00042095	-.49491686	-.86894023	.00000000	.00000000	.00000000	-.33353734	-.76080775	.55670762
-.91108286	-.35838706	.20368291	.00000000	.00000000	.00000000	-.83172250	.51549053	.20617557

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	AIG= 58.51	-58.51	-58.26	-.04	10.99	R ERROR	677.51	-1211.58	-93.78
Z= .000	AMG= 63.40	63.40	63.35	AGC TRUN	SDS TRUN	V ERROR	1.20	-1.28	-.25
X= .000	AOG= 103.87	103.87	103.84	.01	148.27				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2661144.6	5294211.8	-3009076.6	6645668.6	-7098.86	-2684.91	1536.43	7743.59	2885.42
AGC CM	-2659995.8	5294854.7	-3009480.0	6645903.5	-7097.67	-2683.84	1535.74	7741.99	
DELTA	-1148.7	-642.9	403.3	-234.9	-1.19	-1.07	.69	1.60	
SDS LM	-2661883.9	5301493.7	-3012966.6	6653527.6	-7092.49	-2691.87	1540.02	7740.88	2885.42
AGC LM	-2661885.1	5301446.8	-3012999.1	6653505.4	-7092.48	-2691.89	1540.08	7740.89	
DELTA	1.2	47.0	32.5	22.2	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-27.08	65.61	271903.3	272827.9	258578.3	-175.23	71.46	8288.8	-8.37
SDS LM	-27.08	65.59	279763.3	281087.6	272455.3				

FLAGWD 0 00000	FLAGWD 1 00020	FLAGWD 2 00400	FLAGWD 3 10004	FLAGWD 4 10000	FLAGWD 5 40200	FLAGWD 6 20000	FLAGWD 7 02100
FLAGWD 8 50000	FLAGWD 9 00000						
RCSFLAGS 00001	VHFCNT 00000	TRKMKCNT 00000	RCSFLAGS 00000	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174
CADR+2 10004	FAILREG 00000	FAILRG+1 00000	FAILRG+2 00000	PIPA X 00027	PIPA Y 77770	PIPA Z 00464	OPTMODES 00120
HOLDFLAG 00000	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36001	IMODE 33 26000	CHAN 11 01040	CHAN 12 00040
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765	FLAG 10 00000	FLAG 11 00000

CDUX 103.7769	CDUY -58.17261	CDUZ 63.29224	CDUT -19.76715	ADOT/ .8234382E-02			
ADOT/OOP .2169237E-01	ADOT/OOY .2910868E-01	AK -.8789063E-01	AK1 -.1538086	AK2 -.2526855			
THETAD X 103.1506	THETAD Y -57.56836	THETAD Z 63.14941	TIG 2388.540	DELLT4 1139.650			
RTARG X -6163634.	RTARG Y 2176504.	RTARG Z -1235646.	VHFTIME 1828.500	MARKDOWN 404463.1			
MARKCDUY 6.888428	MARKCDUS -1.274414	MARKCDUZ -2.131348	MARKCDUT 3.532104	MARKCDUX .0000000			
RM .0000000	TPI 2018630.	ECSTEER 1.000244	DELVTPF .0000000	TPASS4 3550.230			
DELVSLVX 38.09338	DELVSLVY 30.47991	DELVSLVZ .9246826	DELVSLVS 48.79534	RANGE 13110.00			
RRATE -19.55333	ADOT/ .5793572E-02	ADOT/OOP .2674833E-01	ADOT/OOY .2910868E-01	AK -.1098633E-01			
AK1 .0000000	AK2 .0000000	THETAD X 103.8318	THETAD Y -58.23853	THETAD Z 63.33618			
ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0	DELV3 X -37.72545	DELV3 Y -10.34079			
DELV3 Z -29.16918	DELV3 S 48.79531	LEMMASS .0000000	CSMMASS 26520.00	ERRORX .1098633E-01			
ERRORY .1098633E-01	ERRORZ .1098633E-01	WBODOOCR .0000000	WBODOOCP .0000000	WBODOOCY .0000000			
THETAD X 108.0176	THETAD Y -55.56885	THETAD Z 44.42871	RTHETA 53.71069	LAT(SPL) 27.92083			
LNG(SPL) -152.2167	VPRED 7701.699	GAMMAEI -114.4775	S/C MASS 1788.571	X CG 8.466005			
Y CG .3071489	Z CG .5077438	JET FUEL 37.67480	SLOSH AR -7.886368	IXX 31119.44			
IYY 79900.74	IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454			
WX DEG/S .3497057E-02	WY DEG/S .5595292E-01	WZ DEG/S .4196469E-01	CONFIG 1.000000	AXSCM/S2 -.9327403E-03			
AYSCM/S2 -.1422429E-02	AZSCM/S2 .6016175E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000			
AXSMM/S2 .4767151E-02	AYSMM/S2 -.3310118E-02	AZSMM/S2 .2376309E-02	ARSMM/S2 .6271320E-02				

PROGRAM 30 VERB 37 NOUN 40 R1 R2 R3 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

+.41222304	+.79159081	+.45106113
+.00042095	+.49491686	+.86894023
+.91108286	+.35838706	+.20368291

AGC REFERENCE MATRIX

+.00000000	+.00000000	+.00000000
+.00000000	+.00000000	+.00000000
+.00000000	+.00000000	+.00000000

S/C ATTITUDE MATRIX

+.44248557	+.39599228	+.80461121
+.33304763	+.76049137	+.55743337
+.83263946	+.51462889	+.20462203

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= +.000	AIG= +58.69	+58.69	+58.44	+.04	10.99	R ERROR	681.58	+1213.30	+92.99
Z= +.000	AMG= 63.50	63.50	63.45	AGC TRUN	SDS TRUN	V ERROR	1.21	+1.27	+.25
X= +.000	AOG= 104.03	104.03	104.01	.01	148.03				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	+2675335.0	5288827.6	-3005995.6	6645684.7	-7091.61	+2699.28	1544.62	7743.57	2887.42
AGC CM	+2674183.9	5289472.7	-3006400.3	6645917.8	-7090.43	+2698.21	1543.93	7741.98	
DELTA	+1151.1	+645.0	404.7	-233.1	-1.18	-1.07	.69	1.59	
SDS LM	+2676061.7	5296095.7	+3009878.4	6653518.1	+7085.27	+2706.21	1548.19	7740.90	2887.42
AGC LM	+2676062.9	5296048.7	+3009910.8	6653495.8	+7085.26	+2706.23	1548.26	7740.91	
DELTA	1.2	47.0	32.4	22.3	+.01	.02	+.06	+.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	+27.05	65.75	271910.4	272825.5	258597.4	+175.28	71.25	8272.2	+8.33
SDS LM	+27.05	65.72	279744.8	281107.1	272452.5				

FLAGWD 0 00000	FLAGWD 1 00020	FLAGWD 2 00600	FLAGWD 3 10004	FLAGWD 4 10000	FLAGWD 5 40200	FLAGWD 6 20000	FLAGWD 7 00100	
FLAGWD 8 50000	FLAGWD 9 00000							
RCSFLAGS 00000	VHFCNT 00000	TRKMKCNT 00000	RCSFLAGS 00000	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	
CADR+2 10264	FAILREG 00000	FAILRG+1 00000	FAILRG+2 00000	PIPA X 00027	PIPA Y 77770	PIPA Z 00464	OPTMODES 00120	
HOLDFLAG 00000	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36001	IMODE 33 26000	CHAN 11 01002	CHAN 12 00040	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765	FLAG 10 00000	FLAG 11 00000	

CDUX	103.9197	CDUY	-58.33740	CDUZ	63.39111	CDUT	+19.76715	ADOT/	+.4050136E-02
ADOT/OBP	+.3302470E-01	ADOT/OBY	+.2910868E-01	AK	+.1098633E-01	AK1	+.4394532E-01	AK2	+.3295899E-01
THETAD X	103.8318	THETAD Y	-58.23853	THETAD Z	63.33618	TIG	2388.540	DELLT4	1139.650
RTARG X	+6163634.	RTARG Y	2176504.	RTARG Z	+1235646.	VHFTIME	1828.500	MARKDOWN	404463.1
MARKCDUY	6.888428	MARKCDUS	-1.274414	MARKCDUZ	-2.131348	MARKCDUT	3.532104	MARKCDUX	.0000000
RM	.0000000	TPI	2018630.	ECSTEER	1.000244	DELVTPF	.0000000	TPASS4	3550.230
DELVSLVX	38.09338	DELVSLVY	30.47991	DELVSLVZ	.9246826	DELVSLVS	48.79534	RANGE	13110.00
RRATE	+19.55333	ADOT/	+.2655387E-02	ADOT/OBP	+.3912673E-01	ADOT/OBY	+.3085211E-01	AK	+.1098633E-01
AK1	+.9887696E-01	AK2	+.6591797E-01	THETAD X	103.8318	THETAD Y	+58.23853	THETAD Z	63.45703
ELEV	+41.07942	CENTANG	61.50000	DELTAR	117620.0	DELV3 X	+37.72545	DELV3 Y	+10.34079
DELV3 Z	+29.16918	DELV3 S	48.79531	LEMMASS	.0000000	CSMMASS	26520.00	ERRORX	.0000000
ERRORY	.0000000	ERRORZ	+.1098633E-01	WBODOCR	.0000000	WBODOCP	.0000000	WBODOCY	.0000000
THETAD X	108.0176	THETAD Y	-55.56885	THETAD Z	44.42871	RTHETA	53.71069	LAT(SPL)	27.92083
LNG(SPL)	+152.2167	VPRED	7701.699	GAMMAEI	-114.4775	S/C MASS	1788.571	X CG	8.466005
Y CG	+.3071489	Z CG	.5077438	JET FUEL	37.67456	SLOSH AR	+7.886368	IXX	31119.44
IYY	79900.74	IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454
WX DEG/S	+.3497057E-02	WY DEG/S	.6294703E-01	WZ DEG/S	.2098235E-01	CONFIG	1.000000	AXSCM/S2	+.9327403E-03
AYSCM/S2	+.1235881E-02	AZSCM/S2	.6016175E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000
AXSMM/S2	.4636345E-02	AYSMM/S2	+.3321019E-02	AZSMM/S2	.2510748E-02	ARSMM/S2	.6231269E-02		

PROGRAM 40 VERB 50 NOUN 18 R1 +10229 R2 +30468 R3 +04427 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
+.41222304	+.79159081	+.45106113	+.41222304	+.79159081	+.45106113	+.44088960	+.39783859	+.80457664
+.00042095	+.49491686	-.86894023	+.00042095	-.49491686	-.86894023	+.33254313	+.76020551	+.55812430
+.91108286	-.35838706	+.20368291	+.91108285	-.35838706	+.20368291	-.83368683	+.51362658	+.20286798

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= +.000	AIG= -58.87	-58.87	-58.61	-.04	10.99	R ERROR	685.65	-1215.00	-92.22
Z= -.000	AMG= 63.62	63.62	63.56	AGC TRUN	SDS TRUN	V ERROR	1.21	-1.27	-.25
X= +.000	AOG= 104.18	104.18	104.15	.01	159.75				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2689511.0	5283414.7	-3002898.2	6645700.7	-7084.33	-2713.63	1552.81	7743.56	2889.42
AGC CM	-2688357.5	5284061.9	-3003304.3	6645932.0	-7083.15	-2712.56	1552.12	7741.97	
DELTA	-1153.5	-647.2	406.1	-231.3	-1.18	-1.07	.69	1.59	
SDS LM	-2690225.0	5290668.9	-3006773.9	6653508.6	-7078.00	-2720.54	1556.36	7740.91	2889.42
AGC LM	-2690226.1	5290621.9	-3006806.1	6653486.3	-7078.00	-2720.55	1556.42	7740.92	
DELTA	1.2	47.0	32.3	22.4	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	+27.02	65.89	271917.3	272823.0	258616.6	-175.34	71.03	8255.5	+8.28
SDS LM	+27.02	65.86	279726.3	281126.8	272449.6				

FLAGWD 0 00200	FLAGWD 1 00000	FLAGWD 2 00730	FLAGWD 3 10004	FLAGWD 4 10000	FLAGWD 5 40202	FLAGWD 6 20000	FLAGWD 7 00100
FLAGWD 8 50000	FLAGWD 9 00000						
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 56016	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00027	PIPA Y 77770	PIPAZ 00461	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 00000	DAPDATR1 11103	DAPDATR2 11111	RECDCTR 00001	IMODE 30 36001	IMODE 33 06000	CHAN 11 01002	CHAN 12 00040
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX 104.0735	CDUY -58.50220	CDUZ 63.50098	CDUT -19.76715	ADOT/ .1260639E-02			
ADOT/OBP .4470572E-01	ADOT/OBY .3207252E-01	AK .0000000	AK1 -.1098633E-01	AK2 .0000000			
THETAD X 104.0625	THETAD Y -58.48022	THETAD Z 63.47900	TIG 2388.540	DELLT4 1139.650			
RTARG X +6163634.	RTARG Y 2176504.	RTARG Z -1235646.	TGO -123482.9	PIPTIME1 2418.580			
DELV X .0000000	DELV Y .0000000	DELV Z -.4095000	PACTOFF -2.918175	YACTOFF 2.230150			
PCMD .0000000	YCMD .0000000	CSTEER .0000000	ADOT/ -.4827977E-03	ADOT/OBP .4923866E-01			
ADOT/OBY .3207252E-01	AK .1098633E-01	AK1 -.6591797E-01	AK2 -.4394532E-01	THETAD X 104.0625			
THETAD Y -58.48022	THETAD Z 63.47900	ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0			
TEVENT 2372.820	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 26520.00			
ERRORX -.2197266E-01	ERRORY .8789063E-01	ERRORZ .5493165E-01	WBODOCR .0000000	WBODOCP .0000000			
WBODOCY .0000000	THETAD X 102.2937	THETAD Y -55.30518	THETAD Z 44.27490	VGTIG X -37.76913			
VGTIG Y -10.61211	VGTIG Z -29.01478	S/C MASS 1788.571	X CG 8.466005	Y CG .3071489			
Z CG .5077438	JET FUEL 37.67407	SLOSH AR -7.886368	IXX 31119.44	IYY 79900.74			
IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454	WX DEG/S -.1049118E-01			
WY DEG/S .6644409E-01	WZ DEG/S .2447940E-01	CONFIG 1.000000	AXSCM/S2 -.9327403E-03	AYSCM/S2 -.1235881E-02			
AZSCM/S2 .1410770E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 .1595107E-02			
AYSMM/S2 -.1318961E-02	AZSMM/S2 -.3342820E-03	ARSMM/S2 .2096608E-02					

PROGRAM 40 VERB NOUN R1 R2 R3 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

+.41222304	+.79159081	+.45106113
+.00042095	+.49491686	+.86894023
+.91108286	+.35838706	+.20368291

AGC REFERENCE MATRIX

+.41222304	+.79159081	+.45106113
+.00042095	+.49491686	+.86894023
+.91108285	+.35838706	+.20368291

S/C ATTITUDE MATRIX

+.44648910	+.39622855	+.80228043
+.33155131	+.75953031	+.55963111
+.83109832	+.51586509	+.20775223

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= +.000	AIG= +58.92	+58.92	+58.80	+.04	10.99	R ERROR	689.73	-1216.67	+91.48
Z= +.000	AMG= 63.26	63.26	63.67	AGC TRUN	SDS TRUN	V ERROR	1.21	+1.26	+.25
X= +.000	AOG= 104.22	104.22	104.30	.01	163.21				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	+2703672.3	5277973.1	+2999784.4	6645716.7	-7077.00	+2727.98	1560.99	7743.55	2891.42
AGC CM	+2702516.5	5278622.4	+3000191.9	6645946.2	-7075.83	+2726.91	1560.29	7741.96	
DELTA	+1155.8	+649.3	407.5	+229.5	-1.18	-1.07	.69	1.59	
SDS LM	+2704373.7	5285213.5	+3003653.0	6653499.1	-7070.70	+2734.85	1564.52	7740.93	2891.42
AGC LM	+2704374.8	5285166.4	+3003685.1	6653476.7	-7070.70	+2734.87	1564.58	7740.94	
DELTA	1.1	47.1	32.1	22.4	+.01	.02	+.06	+.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE-RATE
SDS CM	+26.99	66.02	271924.2	272820.6	258635.9	-175.39	70.82	8239.0	+8.23
SDS LM	+26.99	66.00	279707.7	281146.5	272446.7				

FLAGWD 0 00200	FLAGWD 1 00000	FLAGWD 2 00734	FLAGWD 3 10004	FLAGWD 4 00000	FLAGWD 5 40202	FLAGWD 6 20000	FLAGWD 7 00100
FLAGWD 8 50000	FLAGWD 9 00000						
RCSFLAGS 00001	RCSFLAGS 40001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 56016	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00027	PIPA Y 77770	PIPAZ 00453	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36001	IMODE 33 26000	CHAN 11 01000	CHAN 12 00040
CHAN 13 40100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX	104.2383	CDUY	-58.69995	CDUZ	63.61084	CDUT	-19.76715
ADOT/OBP	+.5307422E-01	ADOT/OBY	+.3207252E-01	AK	+.1098633E-01	AK1	+.1318359
THETAD X	104.0625	THETAD Y	+58.48022	THETAD Z	63.47900	TIG	2388.540
RTARG X	-6163634.	RTARG Y	2176504.	RTARG Z	-1235646.	TGO	+964698.0
DELV X	+.0000000	DELV Y	+.0000000	DELV Z	+4.095000	PACTOFF	-2.918175
PCMD	+.0000000	YCMD	+.0000000	CSTEER	+.0000000	ADOT/	+.5351007E-02
ADOT/OBY	+.3589467E-01	AK	-.2416992	AK1	5.811768	AK2	+.3295899E-01
THETAD Y	+58.41431	THETAD Z	62.42432	ELEV	-41.07942	CENTANG	61.50000
TEVENT	2372.820	PCMD	+.0000000	YCMD	+.0000000	LEMMASS	+.0000000
ERRORX	+.1757812	ERRORY	-4.262695	ERRORZ	+.1098633E-01	WBODY/OCR	+.1732539
WBODY/OCY	+.6408804E-02	THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490
VGTIG Y	+10.61211	VGTIG Z	-29.01478	S/C MASS	1788.571	X CG	8.466005
Z CG	+.5077438	JET FUEL	38.38831	SLOSH AR	-7.886368	IXX	31119.44
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454
WY DEG/S	+.8987436	WZ DEG/S	+.1293911	CONFIG	1.000000	AXSCM/S2	+.9327403E-03
AZSCM/S2	+.4822267E-01	XGYROOUT	+.0000000	YGYROOUT	+.0000000	ZGYROOUT	+.0000000
AYSMM/S2	+.1972264E-01	AZSMM/S2	-.2677526E-01	ARSMM/S2	+.4859748E-01		

ADOT/	+.8314848E-03		
AK2	+.7690430E-01		
DELLT4	1139.650		
PIPTIME1	2418.580		
YACTOFF	2.230150		
ADOT/OBP	+.1449198		
THETAD X	104.0405		
DELTAR	117620.0		
CSMMASS	26520.00		
WBODY/OCP	+3.996222		
VGTIG X	+37.76913		
Y CG	.3071489		
IYY	79900.74		
WX DEG/S	+.1049118E-01		
AYSCM/S2	+.4780294E-02		
AXSMM/S2	+.3543752E-01		

PROGRAM 40 VERB 06 NOUN 18 R1 +10230 R2 +30468 R3 +04427 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

+.4122230+	+.79159081	+.45106113
+.00042095	+.49491686	+.86894023
+.91108286	+.35838706	+.20368291

AGC REFERENCE MATRIX

+.4122230+	+.79159081	+.45106113
+.00042095	+.49491686	+.86894023
+.91108285	+.35838706	+.20368291

S/C ATTITUDE MATRIX

+.5013E044	+.36932945	+.78244638
+.32807302	+.75564027	+.56690001
+.80062103	+.54093075	+.25769663

REFSMMAT ER
Y= +.000
Z= +.000
X= +.000

GIMBAL ANGLES
AIG= +58.13
AMG= 59.60
AOG= 103.57

	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT
	+58.13	+58.41	+.04	10.99
	61.64	AGC TRUN	SDS TRUN	132.81
	103.57	103.95	.01	

	LOS DR	LOS ALT	LOS CR
R ERROR	693.82	+1218.33	+90.75
V ERROR	1.21	-1.25	+.24

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	+2717819.0	5272502.8	+2996654.2	6645732.7	-7069.64	-2742.30	1569.15	7743.53	2893.42
AGC CM	+2716660.8	5273154.3	+2997063.1	6645960.3	-7068.47	-2741.24	1568.46	7741.94	
DELTA	+1158.2	+651.4	408.9	+227.7	-1.17	-1.07	.69	1.59	
SDS LM	+2718507.8	5279729.5	+3000515.8	6653489.6	-7063.37	+2749.15	1572.67	7740.94	2893.42
AGC LM	+2718508.9	5279682.4	+3000547.8	6653467.1	-7063.36	+2749.16	1572.73	7740.96	
DELTA	1.1	47.1	32.0	22.5	+.01	.02	+.06	+.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	+26.96	66.16	271931.0	272818.1	258655.3	+175.44	70.61	8222.6	+8.19
SDS LM	+26.96	66.13	279689.0	281166.3	272443.9				

FLAGWD 0 00200	FLAGWD 1 00000	FLAGWD 2 00734	FLAGWD 3 10004	FLAGWD 4 00000	FLAGWD 5 40202	FLAGWD 6 20000	FLAGWD 7 00100	
FLAGWD 8 50000	FLAGWD 9 00000							
RCSFLAGS 40001	RCSFLAGS 40001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 56016	FAILREG 00000	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00027	PIPA Y 77770	PIPAZ 00443	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120	
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36001	IMODE 33 26000	CHAN 11 01000	CHAN 12 00040	
CHAN 13 40100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67767			

CDUX	104.2822	CDUY	-58.74390	CDUZ	63.18237	CDUT	-19.76715	ADOT/	+.5351007E-02		
ADOT/OBP	+1.104178	ADOT/OBY	.3971681E-01	AK	+.1098633	AK1	2.955322	AK2	.0000000		
THETAD X	103.4583	THETAD Y	-57.57935	THETAD Z	58.84277	TIG	2388.540	DELLT4	1139.650		
RTARG X	+6163634.	RTARG Y	2176504.	RTARG Z	+1235646.	TG0	-24187.24	PIPTIME1	2418.580		
DELV X	.0000000	DELV Y	.0000000	DELV Z	+.4095000	PACTOFF	-2.918175	YACTOFF	2.230150		
PCMD	.0000000	YCMD	.0000000	CSTEER	.0000000	ADOT/	+.1108423E-01	ADOT/OBP	+2.031150		
ADOT/OBY	.4545004E-01	AK	.8789063E-01	AK1	.7141113	AK2	.5493165E-01	THETAD X	103.0078		
THETAD Y	+56.83228	THETAD Z	54.86572	ELEV	+41.07942	CENTANG	61.50000	DELTAR	117620.0		
TEVENT	2372.820	PCMD	.0000000	YCMD	.0000000	LEMMASS	.0000000	CSMMASS	26520.00		
ERRORX	+.2197266	ERRORY	+.4174805	ERRORZ	+.1098633	WBOD/OCR	.1732539	WBOD/OCP	+3.996222		
WBOD/OCY	+.6408804E-02	THETAD X	102.3047	THETAD Y	+55.30518	THETAD Z	44.27490	VGTIG X	+37.76913		
VGTIG Y	+10.61211	VGTIG Z	-29.01478	S/C MASS	1788.571	X CG	8.466005	Y CG	.3071489		
Z CG	.5077438	JET FUEL	39.84460	SLOSH AR	+7.886368	IXX	31119.44	IYY	79900.74		
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454	WX DEG/S	.1398823		
WY DEG/S	+2.787154	WZ DEG/S	.3776821	CONFIG	1.000000	AXSCM/S2	+.8861033E-03	AYSCM/S2	+.7986589E-02		
AZSCM/S2	+.4680025E-01	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	+.3563736E-01		
AYSMM/S2	.2293102E-01	AZSMM/S2	+.2171380E-01	ARSMM/S2	.4761661E-01						

PROGRAM 40 VERB 06 NOUN 18 R1 +10230 R2 +30468 R3 +04427 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

+.41222304	+.79159081	+.45106113
+.00042095	+.49491686	+.86894023
+.91108286	+.35838706	+.20368291

AGC REFERENCE MATRIX

+.41222304	+.79159081	+.45106113
+.00042095	+.49491686	+.86894023
+.91108285	+.35838706	+.20368291

S/C ATTITUDE MATRIX

+.60537982	+.30919886	-.73343372
+.32235956	+.74726272	+.58110499
+.72774482	+.58821630	+.35270500

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= +000	AIG= +56.80	+56.81	+57.24	+.04	10.99	R ERROR	697.91	+1219.97	+90.03
Z= +.000	AMG= 52.19	52.19	55.84	AGC TRUN	SDS TRUN	V ERROR	1.21	+1.25	+.24
X= +000	AOG= 102.75	102.75	103.16	.01	131.25				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	+2731950.8	5267003.9	+2993507.8	6645748.6	-7062.24	+2756.62	1577.31	7743.52	2895.42
AGC CM	+2730790.4	5267657.5	+2993918.0	6645974.4	-7061.07	+2755.55	1576.62	7741.93	
DELTA	+1160.5	+653.6	410.3	-225.9	-1.17	-1.07	.69	1.59	
SDS LM	+2732627.1	5274217.0	+2997362.3	6653480.0	-7055.99	+2763.43	1580.81	7740.96	2895.42
AGC LM	+2732628.2	5274169.8	+2997394.2	6653457.5	-7055.98	+2763.44	1580.87	7740.97	
DELTA	1.1	47.2	31.9	22.6	+.01	.02	+.06	+.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	+26.93	66.30	271937.8	272815.6	258674.8	+175.49	70.40	8206.3	+8.14
SDS LM	+26.93	66.27	279670.3	281186.3	272440.9				

FLAGWD 0 00200	FLAGWD 1 00000	FLAGWD 2 00734	FLAGWD 3 10004	FLAGWD 4 00000	FLAGWD 5 40202	FLAGWD 6 20000	FLAGWD 7 00100	
FLAGWD 8 50000	FLAGWD 9 00000							
RCSFLAGS 40001	RCSFLAGS 40001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 56016	FAILREG 00000	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00026	PIPA Y 77771	PIPAZ 00425	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120	
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	RENDCTR 00001	IMODE 30 36001	IMODE 33 26000	CHAN 11 01000	CHAN 12 00040	
CHAN 13 40100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765			

CDUX 103.5791	CDUY -57.86499	CDUZ 59.22729	CDUT -19.76715	ADOT/ .1433808			
ADOT/OOP +2.990408	ADOT/OOY .3398359E-01	AK .2087402	AK1 -1.021729	AK2 .9887696E-01			
THETAD X 102.6672	THETAD Y -56.19507	THETAD Z 50.88867	TIG 2388.540	DELLT4 1139.650			
RTARG X +6163634.	RTARG Y 2176504.	RTARG Z -1235646.	TOO -24187.24	PIPTIME1 2418.580			
DELV X .0000000	DELV Y .0000000	DELV Z -.4095000	PACTOFF -2.918175	YACTOFF 2.230150			
PCMD .0000000	YCMD .0000000	CSTEER .0000000	ADOT/ .1510251	ADOT/OOP +3.942022			
ADOT/OOY .3398359E-01	AK .2526855	AK1 -1.735840	AK2 .6591797E-01	THETAD X 102.4255			
THETAD Y +55.64575	THETAD Z 46.92261	ELEV +41.07942	CENTANG 61.50000	DELTAR 117620.0			
TEVENT 2372.820	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 26520.00			
ERRORX +.2966309	ERROORY 1.713867	ERROORZ +.1208496	WBODY/OCR .1732539	WBODY/OCP +3.996222			
WBODY/OCY .6408804E-02	THETAD X 102.3047	THETAD Y +55.30518	THETAD Z 44.27490	VGTIG X +37.76913			
VGTIG Y +10.61211	VGTIG Z -29.01478	S/C MASS 1788.571	X CG 8.466005	Y CG .3071489			
Z CG .5077438	JET FUEL 41.01257	SLOSH AR -7.886368	IXX 31119.44	IYY 79900.74			
IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454	WX DEG/S .1398823			
WY DEG/S +4.161498	WZ DEG/S .5280556	CONFIG 1.000000	AXSCM/S2 +.9327403E-03	AYSCM/S2 +.4162354E-02			
AZSCM/S2 .5734021E-01	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 .3755585E-01			
AYSMM/S2 +.3455822E-01	AZSMM/S2 .2681886E-01	ARSMM/S2 .5765382E-01					

TAPE WEDB RUN 6 VERIFICATION C4.18A TEST RUN DATE 10/23/68 EDIT DATE 23OCT68 SDS TIME 2897 AGC TIME 2827.38 ID 774 PAGE 49

PROGRAM 40 VERB 50 NOUN 18 R1 +10230 R2 +30468 R3 +04427 FLASH 1 DSPTAB +11 00000

SDS RFFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
+.41222304	+.79159081	+.45106113	+.41222304	+.79159081	+.45106113	+.48649912	+.25329161	+.68158841
+.00042095	+.49491686	+.86894023	+.00042095	+.49491686	+.86894023	+.31591249	+.74037886	+.59332776
+.91108286	+.35838706	+.20368291	+.91108285	+.35838706	+.20368291	+.65491891	+.62264085	+.42825150

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		L&S DR	L&S ALT	L&S CR
Y= +.00Q	AIG= -55.97	-55.97	-56.05	+.04	10.99	R ERR&R	.702+05	-1221.59	+89.34
Z= +.000	AMG= 45.83	45.83	48.16	AGC TRUN	SDS TRUN	V ERR&R	1.21	-1.24	+.24
X= .000	A&G= 102.37	102.37	102.51	.01	158.11				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2746067.9	5261476.4	-2990345.0	6645764.5	-7054.80	-2770.92	1585.46	7743.51	2897.42
AGC CM	-2744905.1	5262132.1	-2990756.6	6645988.5	-7053.64	-2769.85	1584.77	7741.92	
DELTA	-1162.8	-655.7	411.7	-224.0	-1.16	-1.07	.69	1.58	
SDS LM	-2746731.7	5268675.8	-2994192.6	6653470.5	-7048.57	-2777.70	1588.94	7740.98	2897.42
AGC LM	-2746732.8	5268628.6	-2994224.3	6653447.8	-7048.56	-2777.71	1589.00	7740.99	
DELTA	1.1	47.2	31.8	22.6	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-26.89	66.43	271944.5	272813.2	258694.3	-175.54	70.19	8190.0	-8.10
SDS LM	-26.90	66.41	279651.6	281206.3	272438.0				

FLAGWD 0 00200	FLAGWD 1 00000	FLAGWD 2 00734	FLAGWD 3 10004	FLAGWD 4 10000	FLAGWD 5 40202	FLAGWD 6 20000	FLAGWD 7 00100	
FLAGWD 8 50000	FLAGWD 9 00000							
RCSFLAGS 00001	RCSFLAGS 00011	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 56016	FAILREG 00000	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00026	PIPA Y 77771	PIPAZ 00412	FLAG 10 00000	FLAG 11 00000	&PTM&DES 00120	
H&LDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	RE&CTR 00001	IM&DE 30 36001	IM&DE 33 26000	CHAN 11 01042	CHAN 12 00040	
CHAN 13 40100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765			

CDUX	102.7551	CDUY	-56.53564	CDUZ	51.70166	CDUT	-19.76715	AD&T/	.1508508		
AD&T/&BP	-4.121301	AD&T/&BY	.3971681E-01	AK	.5493164	AK1	-8.140869	AK2	.1098633E-01		
THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	TIG	2388.540	DELLT4	1139.650		
RTARG X	-6163634.	RTARG Y	2176504.	RTARG Z	-1235646.	T&G	-24187.24	PIPTIME1	2418.580		
DELV X	.0000000	DELV Y	.0000000	DELV Z	-.4095000	FACT&FF	-2.918175	YACT&FF	2.230150		
PCMD	.0000000	YCMD	.0000000	CSTEER	.0000000	AD&T/	.1511995	AD&T/&BP	-3.088021		
AD&T/&BY	.4023985E-01	AK	.3515625	AK1	-4.394531	AK2	-.1098633	THETAD X	102.3047		
THETAD Y	-55.30518	THETAD Z	44.27490	ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0		
TEVENT	2372.820	PCMD	.0000000	YCMD	.0000000	LEMMASS	.0000000	CSMMASS	26520.00		
ERR&RX	-.2856445	ERR&RY	2.625732	ERR&RZ	.1318359	WB&D/&CR	.0000000	WB&D/&CP	.0000000		
WB&D/&CY	.0000000	THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	VGTIG X	-37.76913		
VGTIG Y	-10.61211	VGTIG Z	-29.01478	S/C MASS	1788.571	X CG	8.466005	Y CG	.3071489		
Z CG	.5077438	JET FUEL	42.42078	SL&SH AR	-7.886368	IXX	31119.44	IYY	79900.74		
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454	WX DEG/S	.1258940		
WY DEG/S	-2.238116	WZ DEG/S	.3112381	CONFIG	1.000000	AXSCM/S2	-.9327403E-03	AYSCM/S2	-.7170441E-02		
AZSCM/S2	.5460029E-01	XGYR&&UT	.0000000	YGYR&&UT	.0000000	ZGYR&&UT	.0000000	AXSMM/S2	.3602252E-01		
AYSMM/S2	-.3686185E-01	AZSMM/S2	.1984254E-01	ARSMM/S2	.5522811E-01						

TAPE WEDB RUN 6 VERIFICATION C4.18A TEST RUN DATE 10/23/68 EDIT DATE 23OCT68 SDS TIME 2899 AGC TIME 2829.37 ID 774 PAGE 50

PROGRAM 40 VERB 50 NOUN 18 R1 +10230 R2 +30468 R3 +04427 FLASH 1 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.71660900	-.23073769	-.65820432
.31397152	-.73595643	.59982467
-.62281156	.63649607	.45494771

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	AIG= -55.74	-55.74	-55.60	-.04	10.99	R ERROR	706.15	-1223.20	-88.66
Z= -.000	AMG= 43.30	43.30	43.96	AGC TRUN	SDS TRUN	V ERROR	1.22	-1.24	-.24
X= .000	AOG= 102.47	102.47	102.43	.01	145.03				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2760170.0	5255920.3	-2987165.9	6645780.4	-7047.32	-2785.20	1593.60	7743.49	2899.42
AGC CM	-2759004.9	5256578.1	-2987579.0	6646002.5	-7046.16	-2784.13	1592.91	7741.91	
DELTA	-1165.1	-657.9	413.1	-222.2	-1.16	-1.07	.69	1.58	
SDS LM	-2760821.4	5263106.2	-2991006.6	6653460.9	-7041.12	-2791.95	1597.07	7740.99	2899.42
AGC LM	-2760822.5	5263058.9	-2991038.2	6653438.2	-7041.11	-2791.96	1597.13	7741.00	
DELTA	1.1	47.2	31.6	22.7	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-26.86	66.57	271951.1	272810.7	258713.9	-175.59	69.98	8173.9	-8.06
SDS LM	-26.87	66.55	279632.8	281226.4	272435.1				

FLAGWD 0 00200	FLAGWD 1 00000	FLAGWD 2 00734	FLAGWD 3 10004	FLAGWD 4 10000	FLAGWD 5 40202	FLAGWD 6 20000	FLAGWD 7 00100
FLAGWD 8 50000	FLAGWD 9 00000						
RCSFLAGS 00011	RCSFLAGS 00011	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 56016	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00027	PIPA Y 77770	PIPAZ 00375	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 77776	DAPDATR2 11111	DAPDATR1 11103	REDOCTR 00001	IMODE 30 36001	IMODE 33 26000	CHAN 11 01040	CHAN 12 00040
CHAN 13 40100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67767		

CDUX	102.4255	CDUY	-55.74463	CDUZ	45.57129	CDUT	-19.76715
ADOT/OBP	-2.060493	ADOT/OBY	.4023985E-01	AK	.2197266	AK1	-1.636963
THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	TIG	2388.540
RTARG X	-6163634.	RTARG Y	2176504.	RTARG Z	-1235646.	TGO	-24187.24
DELV X	.0000000	DELV Y	.0000000	DELV Z	-.4095000	PACTOFF	-2.918175
PCMD	.0000000	YCMD	.0000000	CSTEER	.0000000	ADOT/	.1452718
ADOT/OBY	.4023985E-01	AK	.8789063E-01	AK1	.1318359	AK2	-.2197266
THETAD Y	-55.30518	THETAD Z	44.27490	ELEV	-41.07942	CENTANG	61.50000
TEVENT	2372.820	PCMD	.0000000	YCMD	.0000000	LEMMASS	.0000000
ERRORX	-.3295899E-01	ERRORY	-.7141113	ERRORZ	.2416992	WBODY/OCR	.0000000
WBODY/OCY	.0000000	THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490
VGTIG Y	-10.61211	VGTIG Z	-29.01478	S/C MASS	1788.571	X CG	8.466005
Z CG	.5077438	JET FUEL	43.85583	SLOSH AR	-7.886368	IXX	31119.44
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454
WY DEG/S	-.2832616	WZ DEG/S	.5944997E-01	CONFIG	1.000000	AXSCM/S2	.0000000
AZSCM/S2	.5497338E-01	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000
AYSMM/S2	-.3750135E-01	AZSMM/S2	.1663416E-01	ARSMM/S2	.5614711E-01		

ADOT/	.1494560						
AK2	-.1757812						
DELLT4	1139.650						
PIPTIME1	2418.580						
YACTOFF	2.230150						
ADOT/OBP	-1.042380						
THETAD X	102.3047						
DELTAR	117620.0						
CSMMASS	26520.00						
WBODY/OCP	.0000000						
VGTIG X	-37.76913						
Y CG	.3071489						
IYY	79900.74						
WX DEG/S	.1223970						
AYSCM/S2	-.1065656E-01						
AXSMM/S2	.3833342E-01						

PROGRAM 40 VERB 50 NOUN 25 R1 00204 R2 R3 FLASH 1 DSPTAB +11 00000

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
+.41222304	+.79159081	+.45106113	+.41222304	+.79159081	+.45106113	+.71440768	+.23408580	+.65941310
+.00042095	+.49491686	+.86894023	+.00042095	+.49491686	+.86894023	+.31581283	+.73307204	+.60238504
+.91108286	+.35838706	+.20368291	+.91108285	+.35838706	+.20368291	+.62440681	+.63859868	+.44978452

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		L&S DR	L&S ALT	L&S CR
Y= +.000	AIG= -55.89	-55.89	-55.61	-.04	10.99	R ERROR	710.22	-1224.78	-88.00
Z= -.000	AMG= 43.51	43.51	43.34	AGC TRUN	SDS TRUN	V ERROR	1.22	-1.23	-.24
X= +.000	A&G= 102.81	102.81	102.70	.01	141.00				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2774257.2	5250335.6	-2983970.6	6645796.2	-7039.81	-2799.47	1601.74	7743.48	2901.42
AGC CM	-2773089.7	5250995.6	-2984385.0	6646016.4	-7038.65	-2798.40	1601.05	7741.90	
DELTA	-1167.4	-660.0	414.4	-220.3	-1.16	-1.07	.69	1.58	
SDS LM	-2774896.1	5257508.0	-2987804.3	6653451.3	-7033.63	-2806.19	1605.18	7741.01	2901.42
AGC LM	-2774897.2	5257466.8	-2987835.8	6653428.5	-7033.62	-2806.20	1605.24	7741.02	
DELTA	1.1	47.3	31.5	22.8	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-26.83	66.71	271957.7	272808.2	258733.7	-175.64	69.77	8157.8	-8.01
SDS LM	-26.84	66.68	279613.9	281246.5	272432.1				

FLAGWD 0 00200	FLAGWD 1 00000	FLAGWD 2 00734	FLAGWD 3 10004	FLAGWD 4 10000	FLAGWD 5 40202	FLAGWD 6 20000	FLAGWD 7 02100	
FLAGWD 8 50000	FLAGWD 9 00000							
RCSFLAGS 00011	RCSFLAGS 00011	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50063	FAILREG 00000	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00030	PIPA Y 77767	PIPAZ 00356	FLAG 10 00000	FLAG 11 00000	BPTMBDES 00120	
HBLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36001	IMODE 33 26000	CHAN 11 01040	CHAN 12 00040	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765			

CDUX 102.5134	CDUY -55.54687	CDUZ 43.37402	CDUT -19.76715	ADOT/ .1382980				
ADOT/OBP -.2897457E-01	ADOT/OBY .3901944E-01	AK -.2197266E-01	AK1 .9118652	AK2 -.2416992				
THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	TIG 2388.540	DELLT4 1139.650				
RTARG X -.6163634	RTARG Y 2.176504	RTARG Z -.1235646	TGO -24187.24	PIPTIME1 2418.580				
DELV X .0000000	DELV Y .0000000	DELV Z -.4095000	PACTOFF -2.918175	YACTOFF 2.230150				
PCMD .0000000	YCMD .0000000	CSTEER .0000000	ADOT/ .1358572	ADOT/OBP .2812900				
ADOT/OBY .3692732E-01	AK -.1538086	AK1 .9338379	AK2 -.2966309	THETAD X 102.3047				
THETAD Y -55.30518	THETAD Z 44.27490	ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0				
TEVENT 2372.820	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 26520.00				
ERRORX .2416992	ERRORY -.8239746	ERRORZ .3186035	WBODY/OCR .0000000	WBODY/OCP .0000000				
WBODY/OCY .0000000	THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	VGTIG X -37.76913				
VGTIG Y -10.61211	VGTIG Z -29.01478	S/C MASS 1788.571	X CG 8.466005	Y CG .3071489				
Z CG .5077438	JET FUEL 44.21191	SLOSH AR -7.886368	IXX 31119.44	IYY 79900.74				
IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454	WX DEG/S .1049118E-01				
WY DEG/S .1678587	WZ DEG/S .2447940E-01	CONFIG 1.000000	AXSCM/S2 -.9327403E-03	AYSCM/S2 -.1515703E-02				
AZSCM/S2 .1410770E-02	XGYROBUT .0000000	YGYROBUT .0000000	ZGYROBUT .0000000	AXSMM/S2 .1497002E-02				
AYSMM/S2 -.1406165E-02	AZSMM/S2 -.9737778E-03	ARSMM/S2 .2273006E-02						

PROGRAM 40 VERB N0UN R1 R2 R3 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.71086431	-.23860312	-.66161966
-.31542993	-.73263240	.60311985
-.62862992	.63743019	.44553947

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		L0S DR	L0S ALT	L0S CR
Y= .000	AIG= -56.07	-56.07	-55.78	-.04	10.99	R ERR0R	714.34	-1226.35	-87.35
Z= -.000	AMG= 43.84	43.84	43.69	AGC TRUN	SDS TRUN	V ERR0R	1.22	-1.23	-.24
X= .000	A0G= 102.95	102.95	102.93	.01	148.78				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2788329.2	5244722.4	-2980759.0	6645812.0	-7032.25	-2813.72	1609.86	7743.46	2903.42
AGC CM	-2787159.5	5245384.5	-2981174.8	6646030.4	-7031.10	-2812.65	1609.17	7741.89	
DELTA	1169.8	662.1	415.8	218.4	1.15	1.07	.69	1.58	
SDS LM	-2788955.9	5251881.4	-2984585.8	6653441.7	-7026.10	-2820.41	1613.29	7741.03	2903.42
AGC LM	-2788957.0	5251834.1	-2984617.2	6653418.9	-7026.09	-2820.42	1613.25	7741.04	
DELTA	1.1	47.3	31.4	22.8	-.01	.02	-.06	.01	

P0SITI0N	LAT	L0NG	ALT	AP0GEE	PERIGEE	AZIMUTH	ELEVATI0N	RANGE	RANGE RATE
SDS CM	-26.80	66.85	271964.2	272805.6	258753.4	-175.69	69.56	8141.8	-7.97
SDS LM	-26.81	66.82	279595.0	281266.8	272429.1				

FLAGWD 0	00200	FLAGWD 1	00000	FLAGWD 2	00734	FLAGWD 3	10004	FLAGWD 4	00000	FLAGWD 5	40202	FLAGWD 6	20000	FLAGWD 7	02100
FLAGWD 8	50000	FLAGWD 9	00000												
RCSFLAGS	00011	RCSFLAGS	00011	RSBBQ	42106	RSBBQ+1	03434	CADRFLSH	56016	CADR+1	73174	CADR+2	50063	FAILREG	00000
FAILRG+1	00000	FAILRG+2	00000	PIPA X	00030	PIPA Y	77767	PIPAZ	00336	FLAG 10	00000	FLAG 11	00000	0PTM0DES	00120
H0LDFLAG	77776	DAPDATR1	11103	DAPDATR2	11111	RED0CTR	00001	IM0DE 30	36001	IM0DE 33	26000	CHAN 11	01000	CHAN 12	02242
CHAN 13	00100	CHAN 14	00000	CHAN 30	37373	CHAN 31	37777	CHAN 32	77777	CHAN 33	67765				

CDUX	102.8650	CDUY	-55.68970	CDUZ	43.51685	CDUT	-19.76715	AD0T/	.2731160E-01
AD0T/0BP	.2493851	AD0T/0BY	.3692732E-01	AK	-.2856445	AK1	.7580566	AK2	-.3295898
THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	TIG	2388.540	DELLT4	1139.650
RTARG X	-.6163634	RTARG Y	2.176504	RTARG Z	-.1235646	TG0	-24187.24	PIPTIME1	2418.580
DELV X	.0000000	DELV Y	.0000000	DELV Z	-.4095000	PACT0FF	.2.918175	YACT0FF	2.230150
PCMD	.0000000	YCMD	.0000000	CSTEER	.0000000	AD0T/	.2539382E-01	AD0T/0BP	.2242796
AD0T/0BY	.3814772E-01	AK	-.3076172	AK1	.5822754	AK2	-.3845215	THETAD X	102.3047
THETAD Y	-55.30518	THETAD Z	44.27490	ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0
TEVENT	2372.820	PCMD	.0000000	YCMD	.0000000	LEMMASS	.0000000	CSMMASS	26520.00
ERR0RX	.3076172	ERR0RY	-.4504395	ERR0RZ	.4064941	WB0D/0CR	.0000000	WB0D/0CP	.0000000
WB0D/0CY	.0000000	THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	VGTIG X	-37.76913
VGTIG Y	-10.61211	VGTIG Z	-29.01478	S/C MASS	1788.571	X CG	8.466005	Y CG	.3071489
Z CG	.5077438	JET FUEL	44.21179	SL0SH AR	-7.886368	IXX	31119.44	IYY	79900.74
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454	WX DEG/S	.1049118E-01
WY DEG/S	.1853440	WZ DEG/S	.4196469E-01	C0NFIG	1.000000	AXSCM/S2	.8861033E-03	AYSCM/S2	-.1608977E-02
AZSCM/S2	.6109449E-02	XGYR0UT	.0000000	YGYR0UT	.0000000	ZGYR0UT	.0000000	AXSMM/S2	.4977894E-02
AYSMM/S2	-.3415490E-02	AZSMM/S2	.2140131E-02	ARSMM/S2	.6405089E-02				

PROGRAM 40 VERB NOUN R1 R2 R3 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

+.41222304	+.79159081	+.45106113
+.00042095	+.49491686	+.86894023
+.91108286	+.35838706	+.20368291

AGC REFERENCE MATRIX

+.41222304	+.79159081	+.45106113
+.00042095	+.49491686	+.86894023
+.91108285	+.35838706	+.20368291

S/C ATTITUDE MATRIX

+.70687413	+.24278378	+.66436815
+.31548762	+.73243475	+.60332942
+.63308477	+.63607717	+.44114399

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= +.000	AIG= -56.19	-56.19	-55.94	-.04	10.99	R ERROR	718.46	-1227.90	+86.72
Z= -.000	AMG= 44.20	44.20	44.06	AGC TRUN	SDS TRUN	V ERROR	1.22	-1.22	+.24
X= +.000	AOG= 103.05	103.05	103.05	.01	125.91				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	+28023861	52390807	-29775311	66458278	-70246.6	+2827.95	1617.98	7743.45	2905.42
AGC CM	-28012141	52397450	-29779483	66460442	-70235.1	+2826.89	1617.29	7741.88	
DELTA	-1172.0	+664.2	417.2	+216.5	-1.15	-1.07	.69	1.58	
SDS LM	-28030005	52462264	-29813512	66534321	-70185.3	+2834.62	1621.39	7741.04	2905.42
AGC LM	+28030016	52461791	+29813824	66534092	-70185.2	+2834.63	1621.45	7741.05	
DELTA	1.1	47.3	31.3	22.9	+.01	.02	+.06	+.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	+26.77	66.98	271970.6	272803.1	258773.3	-175.74	69.35	8125.9	+7.92
SDS LM	+26.77	66.96	279576.1	281287.2	272426.1				

FLAGWD 0 00200	FLAGWD 1 00000	FLAGWD 2 00734	FLAGWD 3 10004	FLAGWD 4 00000	FLAGWD 5 40202	FLAGWD 6 20000	FLAGWD 7 02100	
FLAGWD 8 50000	FLAGWD 9 00000							
RCSFLAGS 00011	RCSFLAGS 00011	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50063	FAILREG 00000	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00030	PIPA Y 77767	PIPAZ 00314	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120	
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	RECOCTR 00001	IMODE 30 36001	IMODE 33 26000	CHAN 11 01000	CHAN 12 02242	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765			

CDUX 102.9968	CDUY -55.86548	CDUZ 43.86841	CDUT -19.76715	AOST/ +.2260432E-01			
AOST/OBP +.2063222	AOST/OBY +.3954247E-01	AK +.3295898	AK1 +.3845215	AK2 +.4174805			
THETAD X 102.3047	THETAD Y +55.30518	THETAD Z 44.27490	TIG 2388.540	DELLT4 1139.650			
RTARG X +.6163634	RTARG Y 2.176504	RTARG Z +.1235646	TGO +24187.24	PIPTIME1 2418.580			
DELV X +.0000000	DELV Y +.0000000	DELV Z +.4095000	PACTOFF +2.918175	YACTOFF 2.230150			
PCMD +.0000000	YCMD +.0000000	CSTEER +.0000000	AOST/ +.1929179E-01	AOST/OBP +.1949899			
AOST/OBY +.9743125E-02	AK +.3186035	AK1 +.1977539	AK2 +.4614258	THETAD X 102.3047			
THETAD Y +55.30518	THETAD Z 44.27490	ELEV +41.07942	CENTANG 61.50000	DELTAR 117620.0			
TEVENT 2372.820	PCMD +.0000000	YCMD +.0000000	LEMMASS +.0000000	CSMMASS 26520.00			
ERRORX +.3186035	ERRORY +.8789063E+01	ERRORZ +.4724121	WBODOCR +.0000000	WBODOCP +.0000000			
WBODOCY +.0000000	THETAD X 102.3047	THETAD Y +55.30518	THETAD Z 44.27490	VGTIG X +37.76913			
VGTIG Y +10.61211	VGTIG Z -29.01478	S/C MASS 1788.571	X CG 8.466005	Y CG .3071489			
Z CG +.5077438	JET FUEL 44.22949	SLOSH AR +7.886368	IXX 31119.44	IYY 79900.74			
IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454	WX DEG/S +.1049118E-01			
WY DEG/S +.1853440	WZ DEG/S +.0000000	CONFIG 1.000000	AXSCM/S2 +.9327403E+03	AYSCM/S2 +.1329155E+02			
AZSCM/S2 +.6295997E+02	XGYROOUT +.0000000	YGYROOUT +.0000000	ZGYROOUT +.0000000	AXSMM/S2 +.4153090E+02			
AYSMM/S2 +.4857989E-02	AZSMM/S2 +.1322594E+02	ARSMM/S2 +.6526673E+02					

PROGRAM 40 VERB NOUN R1 R2 R3 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.70345092	-.24571538	-.66691923
.31589532	-.73247552	.60306692
-.63668466	.63490367	.43763971

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	AIG= -56.25	-56.25	-56.05	-.04	10.99	R ERROR	722.59	-1229.42	-86.10
Z= -.000	AMG= 44.49	44.49	44.42	AGC TRUN	SDS TRUN	V ERROR	1.22	-1.22	-.23
X= .000	AOG= 103.10	103.10	103.13	.01	111.50				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2816427.8	5233410.6	-2974287.1	6645843.5	-7017.03	-2842.18	1626.08	7743.44	2907.42
AGC CM	-2815253.5	5234077.0	-2974705.6	6646058.0	-7015.89	-2841.11	1625.39	7741.86	
DELTA	-1174.3	-666.4	418.6	-214.5	-1.14	-1.07	.69	1.57	
SDS LM	-2817030.0	5240543.0	-2978100.3	6653422.4	-7010.93	-2848.81	1629.47	7741.06	2907.42
AGC LM	-2817031.0	5240495.6	-2978131.4	6653399.5	-7010.92	-2848.82	1629.54	7741.07	
DELTA	1.0	47.4	31.1	22.9	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-26.74	67.12	271976.9	272800.6	258793.3	-175.78	69.14	8110.1	-7.88
SDS LM	-26.74	67.09	279557.1	281307.7	272423.0				

FLAGWD 0	00200	FLAGWD 1	00000	FLAGWD 2	00734	FLAGWD 3	10004	FLAGWD 4	00000	FLAGWD 5	40202	FLAGWD 6	20000	FLAGWD 7	02100
FLAGWD 8	50000	FLAGWD 9	00000												
RCSFLAGS	00011	RCSFLAGS	00010	RSBBQ	42106	RSBBQ+1	03434	CADRFLSH	56016	CADR+1	73174	CADR+2	50063	FAILREG	01703
FAILRG+1	00000	FAILRG+2	00000	PIPA X	00030	PIPA Y	77767	PIPAZ	00270	FLAG 10	20000	FLAG 11	00000	OPTMODES	00120
HOLDFLAG	77776	DAPDATR2	11111	DAPDATR1	11103	RED0CTR	00001	IMODE 30	36001	IMODE 33	26000	CHAN 11	01002	CHAN 12	02242
CHAN 13	00100	CHAN 14	00000	CHAN 30	37373	CHAN 31	37777	CHAN 32	77777	CHAN 33	67765				

CDUX	103.0957	CDUY	-55.99731	CDUZ	44.23096	CDUT	-19.76715	ADOT/	.1580492E-01
ADOT/OBP	.1880161	ADOT/OBY	.1270697E-01	AK	-.3186035	AK1	.1098633E-01	AK2	-.4833984
THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	TIG	2388.540	DELLT4	1139.650
RTARG X	-6163634.	RTARG Y	2176504.	RTARG Z	-1235646.	TGO	24187.24	PIPTIME1	2418.580
DELV X	.0000000	DELV Y	.0000000	DELV Z	-.4095000	PACTOFF	-2.918175	YACTOFF	2.230150
PCMD	.0000000	YCMD	.0000000	CSTEER	.0000000	ADOT/	.1231805E-01	ADOT/OBP	.1850523
ADOT/OBY	-.3553927E-03	AK	-.3186035	AK1	-.1538086	AK2	-.4943848	THETAD X	102.3047
THETAD Y	-55.30518	THETAD Z	44.27490	ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0
TEVENT	2372.820	PCMD	.0000000	YCMD	.0000000	LEMMASS	.0000000	CSMMASS	26520.00
ERRORX	.3295898	ERRORY	.2416992	ERRORZ	.5053711	WBODOCR	.0000000	WBODOCP	.0000000
WBODOCY	.0000000	THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	VGTIG X	-37.76913
VGTIG Y	-10.61211	VGTIG Z	-29.01478	S/C MASS	1788.571	X CG	8.466005	Y CG	.3071489
Z CG	.5077438	JET FUEL	44.34009	SLOSH AR	-7.886368	IXX	31119.44	IYY	79900.74
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454	WX DEG/S	.3497057E-02
WY DEG/S	.5595292E-01	WZ DEG/S	-.3497057E-02	CONFIG	1.000000	AXSCM/S2	-.9327403E-03	AYSCM/S2	-.5759671E-02
AZSCM/S2	.8161477E-04	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	.3840609E-02
AYSMM/S2	.2107430E-03	AZSMM/S2	-.4396534E-02	ARSMM/S2	.5841593E-02				

PROGRAM 40 VERB 06 NOUN 40 R1 +07 30 R2 +01601 R3 +00000 FLASH 0 DSPTAB +11 00400

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.70185637	-.24670959	-.66823030
-.31624699	-.73266053	.60265732
-.63826728	.63430429	.43620133

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	AIG= -56.25	-56.25	-56.06	-.04	10.99	R ERROR	724.65	-1230.18	-85.80
Z= -.000	AMG= 44.62	44.62	44.57	AGC TRUN	SDS TRUN	V ERROR	1.22	-1.21	-.23
X= .000	AOG= 103.09	103.09	103.14	.01	151.90				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2823443.0	5230564.9	-2972659.0	6645851.4	-7013.20	-2849.28	1630.13	7743.43	2908.42
AGC CM	-2822267.5	5231232.3	-2973078.2	6646064.9	-7012.06	-2848.21	1629.44	7741.86	
DELTA	-1175.5	667.4	419.3	213.6	-1.14	-1.07	.69	1.57	
SDS LM	-2824039.0	5237690.6	-2976468.8	6653417.6	-7007.11	-2855.90	1633.52	7741.07	2908.42
AGC LM	-2824040.0	5237643.2	-2976499.9	6653394.6	-7007.10	-2855.91	1633.58	7741.08	
DELTA	1.0	47.4	31.1	23.0	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	26.72	67.19	271980.1	272799.3	258803.3	175.81	69.03	8102.3	7.86
SDS LM	26.73	67.16	279547.6	281317.9	272421.5				

FLAGWD 0 00200	FLAGWD 1 00000	FLAGWD 2 00734	FLAGWD 3 10004	FLAGWD 4 00000	FLAGWD 5 40202	FLAGWD 6 20000	FLAGWD 7 02100
FLAGWD 8 50000	FLAGWD 9 00002						
RCSFLAGS 00010	RCSFLAGS 00010	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50063	FAILREG 01703
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00030	PIPA Y 77767	PIPAZ 00242	FLAG 10 20000	FLAG 11 00000	BPTMODES 00120
MODFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36001	IMODE 33 26000	CHAN 11 01002	CHAN 12 02242
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX 103.1396	CDUY -56.04126	CDUZ 44.51660	CDUT -19.76715	ADOT/ .8831174E-02			
ADOT/OBP .3897921E-01	ADOT/OBY -.1341776E-01	AK -.3295898	AK1 -.2636719	AK2 -.4943848			
THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	TIG 2388.540	DELLT4 1139.650			
RTARG X -.6163634	RTARG Y 2.176504	RTARG Z -.1235646	TGO -24187.24	PIPTIME1 2418.580			
DELV X .0000000	DELV Y .0000000	DELV Z -.4095000	RACTOFF -2.918175	YACTOFF 2.230150			
PCMD .0000000	YCMD .0000000	CSTEER .0000000	ADOT/ .5518646E-02	ADOT/OBP .4211739E-01			
ADOT/OBY -.1167432E-01	AK -.3186035	AK1 -.3295898	AK2 -.4943848	THETAD X 102.3047			
THETAD Y -55.30518	THETAD Z 44.27490	ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0			
TEVENT 2372.820	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 26520.00			
ERRORX .3186035	ERRORY .3625488	ERRORZ .4943848	WBODY/OCR .0000000	WBODY/OCP .0000000			
WBODY/OCY .0000000	THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	VGTIG X -37.76913			
VGTIG Y -10.61211	VGTIG Z -29.01478	S/C MASS 1788.571	X CG 8.466005	Y CG .3071489			
Z CG .5077438	JET FUEL 44.33923	SLOSH AR -7.886368	IXX 31119.44	IYY 79900.74			
IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454	WX DEG/S -.3497057E-02			
WY DEG/S .6994114E-01	WZ DEG/S -.1398823E-01	CONFIG 1.000000	AXSCM/S2 -.9327403E-03	AYSCM/S2 -.1235881E-02			
AZSCM/S2 -.1515703E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 -.3451825E-03			
AYSMM/S2 .5849934E-03	AZSMM/S2 -.2056561E-02	ARSMM/S2 .2165828E-02					

PROGRAM 40 VERB 06 NOUN 40 R1 +07 32 R2 +01601 R3 +00000 FLASH 0 DSPTAB +11 00400

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.70086050	-.24729848	-.66905785
-.31644011	-.73283005	.60235095
-.63926625	.63387990	.43535614

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	AIG= -56.24	-56.24	-56.05	-.04	10.99	R ERROR	728.79	-1231.68	-85.21
Z= -.000	AMG= 44.71	44.71	44.80	AGC TRUN	SDS TRUN	V ERROR	1.23	-1.21	-.23
X= .000	AOG= 103.08	103.08	103.14	.01	178.33				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2837461.7	5224852.1	-2969390.6	6645867.1	-7005.51	-2863.48	1638.23	7743.42	2910.42
AGC CM	-2836283.9	5225521.7	-2969811.2	6646078.7	-7004.38	-2862.41	1637.54	7741.85	
DELTA	-1177.7	-669.6	420.6	-211.6	-1.14	-1.07	.69	1.57	
SDS LM	-2838045.6	5231964.7	-2973193.7	6653408.0	-6999.45	-2870.07	1641.59	7741.08	2910.42
AGC LM	-2838046.6	5231917.2	-2973224.6	6653384.9	-6999.44	-2870.08	1641.66	7741.09	
DELTA	1.0	47.4	30.9	23.0	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-26.69	67.32	271986.3	272796.7	258823.3	-175.85	68.82	8086.6	-7.82
SDS LM	-26.70	67.30	279528.5	281338.5	272418.4				

FLAGWD 0 00200	FLAGWD 1 00000	FLAGWD 2 00734	FLAGWD 3 10004	FLAGWD 4 00000	FLAGWD 5 40202	FLAGWD 6 20000	FLAGWD 7 02100	
FLAGWD 8 50000	FLAGWD 9 00002							
RCSFLAGS 00010	RCSFLAGS 00011	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50063	FAILREG 01703	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00030	PIPA Y 77767	PIPAZ 00213	FLAG 10 20000	FLAG 11 00000	OPTMODES 00120	
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	RENDCTR 00001	IMODE 30 36001	IMODE 33 26000	CHAN 11 01022	CHAN 12 02242	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765			

CDUX 103.1506	CDUY -56.05225	CDUZ 44.63745	CDUT -19.76715	AOT/ .3775210E-02				
AOT/OOP .4595295E-01	AOT/OOY -.9930879E-02	AK -.3186035	AK1 -.3955078	AK2 -.4943848				
THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	TIG 2388.540	DELLT4 1139.650				
RTARG X -.6163634	RTARG Y 21765.4	RTARG Z -.1235646	TOO -24187.24	PIPTIME1 2418.580				
DELV X .0000000	DELV Y .0000000	DELV Z -.4095000	PACTOFF -2.918175	YACTOFF 2.230150				
PCMD .0000000	YCMD .0000000	CSTEER .0000000	AOT/ .2031774E-02	AOT/OOP .1332388E-01				
AOT/OOY -.8187444E-02	AK -.3186035	AK1 -.4504395	AK2 -.4943848	THETAD X 102.3047				
THETAD Y -55.30518	THETAD Z 44.27490	ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0				
TEVENT 2372.820	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 26520.00				
ERRORX .3186035	ERRORY .4614258	ERRORZ .4943848	WBODY/OCR .0000000	WBODZ/OCP .0000000				
WBODX/OCY .0000000	THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	VGTIG X -37.76913				
VGTIG Y -10.61211	VGTIG Z -29.01478	S/C MASS 1788.571	X CG 8.466005	Y CG .3071489				
Z CG .5077438	JET FUEL 44.37512	SLOSH AR -7.886368	IXX 31119.44	IYY 79900.74				
IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454	WX DEG/S -.3497057E-02				
WY DEG/S .1049118E-01	WZ DEG/S -.1049118E-01	CONFIG 1.000000	AXSCM/S2 -.9327403E-03	AYSCM/S2 -.1235881E-02				
AZSCM/S2 .5922901E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 .3898745E-02				
AYSMM/S2 -.4581843E-02	AZSMM/S2 .1253558E-02	ARSMM/S2 .6145315E-02						

PROGRAM 40 VERB 5 NOUN 9 R1 01703 R2 00000 R3 00000 FLASH 0 DSPTAB +11 00400

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
-.41222304	.79159081	-.45106113	-.41222304	.79159081	-.45106113	-.70047259	-.24743891	-.66941190
.00042095	-.49491686	-.86894023	.00042095	-.49491686	-.86894023	-.31648445	-.73300529	.60211396
-.91108286	-.35838706	.20368291	-.91108285	-.35838706	.20368291	-.63966846	.63362193	.43513894

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= .000	AIG= -56.23	-56.23	-56.05	-.04	10.99	R ERROR	.732.93	-1233.16	-84.63
Z= -.000	AMG= 44.74	44.74	44.74	AGC TRUN	SDS TRUN	V ERROR	1.23	-1.20	-.23
X= .000	AOG= 103.06	103.06	103.12	.01	126.28				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2851465.0	5219111.0	-2966106.1	6645882.7	-6997.79	-2877.66	1646.31	7743.41	2912.42
AGC CM	-2850285.0	5219782.7	-2966528.1	6646092.4	-6996.65	-2876.60	1645.62	7741.84	
DELTA	-1180.0	671.7	422.0	209.7	-1.13	-1.07	.69	1.67	
SDS LM	-2852036.8	5226210.4	-2969902.4	6653398.3	-6991.75	-2884.22	1649.66	7741.10	2912.42
AGC LM	-2852037.8	5226162.9	-2969933.3	6653375.2	-6991.74	-2884.24	1649.72	7741.11	
DELTA	1.0	47.5	30.8	23.1	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-26.66	67.46	271992.5	272794.1	258843.5	-175.89	68.61	8071.0	-7.77
SDS LM	-26.66	67.43	279509.4	281359.2	272415.3				

FLAGWD 0 00200	FLAGWD 1 00000	FLAGWD 2 00734	FLAGWD 3 10004	FLAGWD 4 00200	FLAGWD 5 40202	FLAGWD 6 20000	FLAGWD 7 02100	
FLAGWD 8 50000	FLAGWD 9 00000							
RCSFLAGS 00011	RCSFLAGS 00011	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50063	FAILREG 01703	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00030	PIPA Y 77766	PIPAZ 00161	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120	
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36001	IMODE 33 26000	CHAN 11 01020	CHAN 12 02242	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765			

CDUX 103.1287	CDUY -56.04126	CDUZ 44.71436	CDUT -19.76715	AODT/ -.6034971E-04				
AODT/OOP -.1105741E-01	AODT/OOY -.6444008E-02	AK -.3076172	AK1 -.4724121	AK2 .4724121				
THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	TIG 2879.890	DELLT4 1139.650				
RTARG X -6163634.	RTARG Y 2176504.	RTARG Z -1235646.	TOO -24187.24	PIPTIME1 2849.930				
DELV X .0000000	DELV Y .0000000	DELV Z -.4095000	PACTOFF -2.918175	YACTOFF 2.230150				
PCMD .0000000	YCMD .0000000	CSTEER .0000000	AOGT/ -.1978130E-02	AOGT/OOP -.4781038E-02				
AOGT/OOY -.6444008E-02	AK -.3076172	AK1 -.4833984	AK2 .4724121	THETAD X 102.3047				
THETAD Y -55.30518	THETAD Z 44.27490	ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0				
TEVENT 2372.820	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 26520.00				
ERRORX .2966309	ERRORZ .4943848	ERRORZ .4724121	WBODYOCR .0000000	WBODYOCP .0000000				
WBODYOCY .0000000	THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	VGTIG X -37.76913				
VGTIG Y -10.61211	VGTIG Z -29.01478	S/C MASS 1788.571	X CG 8.466005	Y CG .3071489				
Z CG .5077438	JET FUEL 44.37463	SLOSH AR -7.886368	IXX 31119.44	IYY 79900.74				
IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454	WX DEG/S -.6994114E-02				
WY DEG/S .1398823E-01	WZ DEG/S .0000000	CONFIG 1.000000	AXSCM/S2 -.9327403E-03	AYSCM/S2 -.1422429E-02				
AZSCM/S2 .6016175E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 .4084054E-02				
AYSMM/S2 -.4614544E-02	AZSMM/S2 .1169987E-02	ARSMM/S2 .6272350E-02						

PROGRAM 40 VERB NOUN R1 = 9999 R2 -99999 R3 9 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

+.41222304	+.79159081	+.45106113
+.00042095	+.49491686	+.86894023
+.91108286	+.35838706	+.20368291

AGC REFERENCE MATRIX

+.41222304	+.79159081	+.45106113
+.00042095	+.49491686	+.86894023
+.91108285	+.35838706	+.20368291

S/C ATTITUDE MATRIX

+.70021415	+.24750113	+.66965938
+.31644011	+.73322320	+.60187173
+.63997340	+.63334537	+.43509340

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= +.000	AIG= +56.22	+56.22	+56.04	+.04	10.99	R ERROR	737.07	+1234.63	+84.06
Z= +.000	AMG= 44.76	44.76	44.77	AGC TRUN	SDS TRUN	V ERROR	1.23	-1.20	+.23
X= +.000	AOG= 103.04	103.04	103.11	.01	133.55				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2865452.8	5213341.5	-2962805.4	6645898.3	+6990.03	+2891.83	1654.39	7743.39	2914.42
AGC CM	-2864270.5	5214015.3	-2963228.7	6646106.1	+6988.90	+2890.76	1653.70	7741.83	
DELTA	+1182.3	+673.8	423.4	+207.7	-1.13	-1.06	.69	1.57	
SDS LM	-2866012.5	5220427.8	-2966595.1	6653388.6	+6984.01	+2898.36	1657.72	7741.11	2914.42
AGC LM	-2866013.5	5220380.3	-2966625.7	6653365.5	+6984.00	+2898.38	1657.78	7741.13	
DELTA	1.0	47.5	30.7	23.2	+.01	.02	+.06	+.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	+26.63	67.60	271998.6	272791.5	258863.7	-175.94	68.40	8055.5	+7.73
SDS LM	+26.63	67.57	279490.2	281380.0	272412.2				

FLAGWD 0 00200	FLAGWD 1 00000	FLAGWD 2 00734	FLAGWD 3 10004	FLAGWD 4 00200	FLAGWD 5 40202	FLAGWD 6 20000	FLAGWD 7 02100
FLAGWD 8 50000	FLAGWD 9 00000						
RCSFLAGS 00011	RCSFLAGS 00011	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50145	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00030	PIPA Y 77766	PIPAZ 00132	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	RENDCTR 00001	IMODE 30 36001	IMODE 33 26000	CHAN 11 01000	CHAN 12 02242
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX 103.1067	CDUY -56.04126	CDUZ 44.74731	CDUT -19.76715	AOT/ +.3895909E-02			
AOT/OBP +.4492701E-03	AOT/OBY +.6444008E-02	AK +.2966309	AK1 +.5053711	AK2 +.4724121			
THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	TIG 2879.890	DELLT4 1139.650			
RTARG X -6163634.	RTARG Y 2176504.	RTARG Z -1235646.	TGO +24187.24	PIPTIME1 2849.930			
DELV X +.0000000	DELV Y +.0000000	DELV Z +.4095000	PACTOFF -2.918175	YACTOFF 2.230150			
PCMD +.0000000	YCMD +.0000000	CSTEER +.0000000	AOT/ +.4418940E-02	AOT/OBP +.9649247E-02			
AOT/OBY +.6444008E-02	AK +.2966309	AK1 +.5163574	AK2 +.4614258	THETAD X 102.3047			
THETAD Y +55.30518	THETAD Z 44.27490	ELEV +41.07942	CENTANG 61.50000	DELTAR 117620.0			
TEVENT 2372.820	PCMD +.0000000	YCMD +.0000000	LEMMASS +.0000000	CSMMASS 26520.00			
ERRORX +.2856445	ERRORY +.5273437	ERRORZ +.4614258	WBOD/OCR +.0000000	WBOD/OCP +.0000000			
WBOD/OCY +.0000000	THETAD X 102.3047	THETAD Y +55.30518	THETAD Z 44.27490	VGTIG X +37.76913			
VGTIG Y +10.61211	VGTIG Z +29.01478	S/C MASS 1788.571	X CG 8.466005	Y CG .3071489			
Z CG +.5077438	JET FUEL 44.38062	SLOSH AR +7.886368	IXX 31119.44	IYY 79900.74			
IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454	WX DEG/S +.6994114E-02			
WY DEG/S +.1049118E-01	WZ DEG/S +.0000000	CONFIG 1.000000	AXSCM/S2 +.9327403E-03	AYSCM/S2 +.1422429E-02			
AZSCM/S2 +.6016175E-02	XGYROOUT +.0000000	YGYROOUT +.0000000	ZGYROOUT +.0000000	AXSMM/S2 +.4084054E-02			
AYSMM/S2 +.4614544E-02	AZSMM/S2 +.1173621E-02	ARSMM/S2 +.6273029E-02					

PROGRAM 40 VERB NOUN R1 R2 R3 FLASH 0 DSPTAB +11 00006

SDS REFERENCE MATRIX

+.41222304	+.79159081	+.45106113
+.00042095	-.49491686	-.86894023
+.91108286	-.35838706	+.20368291

AGC REFERENCE MATRIX

+.41222304	+.79159081	+.45106113
+.00042095	-.49491686	-.86894023
-.91108285	-.35838706	+.20368291

S/C ATTITUDE MATRIX

-.70009589	-.24751735	-.66977692
-.31627536	-.73341616	+.60164976
-.64018393	+.63304567	+.43522000

REFSMMAT ER	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= +.000	AIG= -56.22	-56.22	-56.04	-.04	10.99	R ERROR	741.22	-1236.47	-83.50
Z= -.000	AMG= 44.77	44.77	44.79	AGC TRUN	SDS TRUN	V ERROR	1.23	-1.11	-.23
X= +.000	A&G= 103.02	103.02	103.07	.01	169.25				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2879425.1	5207543.7	-2959488.5	6645913.9	-6982.22	-2905.98	1662.45	7743.38	2916.42
AGC CM	-2878240.6	5208219.6	-2959913.3	6646119.7	-6981.10	-2904.91	1661.76	7741.82	
DELTA	-1184.5	-675.9	424.8	-205.7	-1.13	-1.06	.69	-1.56	
SDS LM	-2879972.8	5214617.0	-2963271.6	6653379.0	-6976.23	-2912.48	1665.77	7741.13	2916.42
AGC LM	-2879973.7	5214569.4	-2963302.1	6653355.7	-6976.22	-2912.50	1665.83	7741.14	
DELTA	1.0	47.5	30.5	23.2	-.01	.02	-.06	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	+26.60	67.73	272004.6	272788.9	258884.0	-175.98	68.19	8040.1	-7.69
SDS LM	+26.60	67.71	279471.0	281400.9	272409.0				

FLAGWD 0 00200	FLAGWD 1 00000	FLAGWD 2 00734	FLAGWD 3 10004	FLAGWD 4 00200	FLAGWD 5 40202	FLAGWD 6 20000	FLAGWD 7 02100	
FLAGWD 8 50000	FLAGWD 9 00000							
RCSFLAGS 00011	RCSFLAGS 00011	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50145	FAILREG 00010	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00031	PIPA Y 77766	PIPAZ 00077	FLAG 10 00000	FLAG 11 00000	BPTMODES 00120	
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36001	IMODE 33 26000	CHAN 11 01000	CHAN 12 02242	
CHAN 13 40100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765			

CDUX	103.0957	CDUY	-56.01929	CDUZ	44.78027	COUT	-19.76715	ADOT/	-.5116314E-02
ADOT/OBP	-.9320677E-03	ADOT/OBY	-.6444008E-02	AK	-.2856445	AK1	-.5273437	AK2	-.4614258
THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	TIG	2879.890	DELLT4	1139.650
RTARG X	-6163634.	RTARG Y	2176504.	RTARG Z	-1235646.	TGO	-24187.24	PIPTIME1	2849.930
DELV X	.0000000	DELV Y	.0000000	DELV Z	-.4095000	PACTOFF	-2.918175	YACTOFF	2.230150
PCMD	.0000000	YCMD	.0000000	CSTEER	.0000000	ADOT/	-.5290658E-02	ADOT/OBP	-.1103059E-01
ADOT/OBY	-.5920977E-02	AK	-.2746582	AK1	-.5493164	AK2	-.4614258	THETAD X	102.3047
THETAD Y	-55.30518	THETAD Z	44.27490	ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0
TEVENT	2372.820	PCMD	.0000000	YCMD	.0000000	LEMMASS	.0000000	CSMMASS	26520.00
ERRORX	.2746582	ERRORY	.5493164	ERRORZ	.4504395	WBODOCR	.0000000	WBODOCP	.0000000
WBODOCY	.0000000	THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	VGTIG X	-37.76913
VGTIG Y	-10.61211	VGTIG Z	-29.01478	S/C MASS	1788.571	X CG	8.466005	Y CG	.3071489
Z CG	.5077438	JET FUEL	44.38684	SLOSH AR	-7.886368	IXX	31119.44	IYY	79900.74
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454	WX DEG/S	-.6994114E-02
WY DEG/S	.6994114E-02	WZ DEG/S	-.3497057E-02	CONFIG	1.000000	AXSCM/S2	-.9327403E-03	AYSCM/S2	-.1142607E-02
AZSCM/S2	.6482545E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	.4145823E-02
AYSMM/S2	-.4985161E-02	AZSMM/S2	.1569672E-02	ARSMM/S2	.6671098E-02				

PROGRAM 40 VERB NOUN R1 R2 R3 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
+.41222304	+.79159081	-.45106113	+.41222304	+.79159081	-.45106113	-.69986010	-.24765372	-.66997290
+.00042095	+.49491686	+.86894023	+.00042095	+.49491686	+.86894023	+.31602144	+.73381376	+.60137105
+.91108286	+.35838706	+.20368291	+.91108285	+.35838706	+.20368291	+.64056706	+.63260078	+.43530321

REFSMMAT	GIMBAL ANGLES	SDS CDU	AGC CDU	AGC SHAFT	SDS SHAFT		LOS DR	LOS ALT	LOS CR
Y= +.000	AIG= -56.22	-56.22	-56.03	-.04	10.99	R ERROR	745.37	-1237.50	-82.96
Z= -.000	AMG= 44.78	44.78	44.79	AGC TRUN	SDS TRUN	V ERROR	1.23	-1.19	-.23
X= +.000	AOG= 102.99	102.99	103.05	.01	141.61				

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2893381.7	5201717.6	-2956155.6	6645929.5	-6974.39	+2920.11	1670.51	7743.37	2918.42
AGC CM	-2892194.9	5202395.6	-2956581.7	6646133.2	-6973.26	+2919.05	1669.82	7741.81	
DELTA	-1186.8	+678.1	426.1	-203.7	-1.12	-1.06	.69	1.56	
SDS LM	+2893917.4	5208777.9	+2959932.0	6653369.3	+6968.42	+2926.59	1673.81	7741.15	2918.42
AGC LM	-2893918.4	5208730.3	+2959962.4	6653346.0	-6968.41	+2926.60	1673.87	7741.16	
DELTA	1.0	47.6	30.4	23.3	-.01	.02	-.06	+.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	+26.56	67.87	272010.6	272786.3	258904.4	-176.02	67.97	8024.7	+7.65
SDS LM	+26.57	67.84	279451.7	281421.8	272405.9				

FLAGWD 0 00200	FLAGWD 1 00000	FLAGWD 2 00734	FLAGWD 3 10004	FLAGWD 4 00200	FLAGWD 5 40202	FLAGWD 6 20000	FLAGWD 7 02100
FLAGWD 8 50000	FLAGWD 9 00000						
RCSFLAGS 00011	RCSFLAGS 00011	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50145	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00031	PIPA Y 77766	PIPAZ 00041	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	RENDCTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 01000	CHAN 12 02242
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX 103.0627	CDUY -56.01929	CDUZ 44.79126	CDUT -19.76715	ADOT/ -.7034094E-02	
ADOT/OOP -.7543713E-02	ADOT/OOY -.4177541E-02	AK -.2636719	AK1 -.5493164	AK2 -.4504395	
THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	TIG 2879.890	DELLT4 1139.650	
RTARG X -.6163634	RTARG Y .2176504	RTARG Z -.1235646	TOO -24187.24	PIPTIME1 2849.930	
DELV X .0000000	DELV Y .0000000	DELV Z -.4095000	PACTOFF -2.918175	YACTOFF 2.230150	
PCMD .0000000	YCMD .0000000	CSTEER .0000000	ADOT/ -.8080155E-02	ADOT/OOP -.3010780E-02	
ADOT/OOY -.3131480E-02	AK -.2526855	AK1 -.5493164	AK2 -.4504395	THETAD X 102.3047	
THETAD Y -55.30518	THETAD Z 44.27490	ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0	
TEVENT 2372.820	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 26520.00	
ERRORX .2526855	ERRORY .5493164	ERRORZ .4504395	WBOD/OCR .0000000	WBOD/OCP .0000000	
WBOD/OCY .0000000	THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	VGTIG X -37.76913	
VGTIG Y -10.61211	VGTIG Z -29.01478	S/C MASS 1788.571	X CG 8.466005	Y CG .3071489	
Z CG .5077438	JET FUEL 44.38623	SLOSH AR -7.886368	IXX 31119.44	IYY 79900.74	
IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454	WX DEG/S -.1049118E-01	
WY DEG/S .2098235E-01	WZ DEG/S -.3497057E-02	CONFIG 1.000000	AXSCM/S2 .8861033E-03	AYSCM/S2 -.1142607E-02	
AZSCM/S2 .4791953E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 .3916913E-02	
AYSMM/S2 -.2496214E-02	AZSMM/S2 .1918488E-02	ARSMM/S2 .5025324E-02			

PROGRAM 40 VERB 06 NOUN 40 R1 +00 29 R2 +01601 R3 +00000 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.69977212	-.24767351	-.67005754
-.31565857	-.73423243	.60105085
-.64084220	.63210750	.43561482

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -56.21	-56.21	-56.03
Z= -.000	AMG= 44.79	44.79	44.80
X= .000	AOG= 102.95	102.95	103.03

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2406540.8	5385133.9	-3061116.8	6645415.1	-7221.27	-2427.05	1389.42	7743.89	2849.94
AGC CM	-2405890.0	5385606.0	-3061430.0	6645706.3	-7219.77	-2426.41	1388.97	7742.20	
DELTA	-650.8	-472.1	-313.2	-291.2	-1.50	-.64	.46	1.68	
SDS LM	-2907846.4	5202910.6	-2956576.4	6653359.6	-6960.56	-2940.68	1681.84	7741.16	2920.42
AGC LM	-2907847.4	5202863.0	-2956606.7	6653336.2	-6960.55	-2940.70	1681.90	7741.18	
DELTA	1.0	47.6	30.3	23.4	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-26.53	68.01	272016.5	272655.2	259052.8	-.02	3.20	543545.1	-12.01
SDS LM	-26.54	67.98	279432.4	281442.9	272402.7				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 00734	FLAGWD 3 10004	FLAGWD 4 00000	FLAGWD 5 40202	FLAGWD 6 20000	FLAGWD 7 02140	
FLAGWD 8 50000	FLAGWD 9 00000							
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50145	FAILREG 00000	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77777	PIPA Y 77777	PIPAZ 77737	FLAG 10 00000	FLAG 11 00000	BPTMODES 00120	
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 01402	CHAN 12 02242	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765			

CDUX 103.0408	CDUY -56.01929	CDUZ 44.79126	CDUT -19.76715	ADOT/ -.9300560E-02			
ADOT/OOP -.1616031E-02	ADOT/OOY -.3131480E-02	AK -.2416992	AK1 -.5493164	AK2 -.4504395			
THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	TIG 2879.890	DELLT4 1139.650			
RTARG X -.6163634	RTARG Y .2176504	RTARG Z -.1235646	TGO -24187.24	PIPTIME1 2849.940			
DELV X 1.462500	DELV Y -.5265000	DELV Z 1.930500	PACTOFF +2.918175	YACTOFF 2.230150			
PCMD .0000000	YCMD .0000000	CSTEER .0000000	ADOT/ -.9649247E-02	ADOT/OOP -.1485274E-01			
ADOT/OOY -.3131480E-02	AK -.2307129	AK1 -.5603027	AK2 -.4504395	THETAD X 102.3047			
THETAD Y -55.30518	THETAD Z 44.27490	ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0			
TEVENT 2372.820	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 26520.00			
ERRORX .2087402	ERROOY .5603027	ERROORZ .4504395	WBODOCR .0000000	WBODOCP .0000000			
WBODOCY .0000000	THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	VGTIG X -39.47468			
VGTIG Y -11.28292	VGTIG Z -28.63350	S/C MASS 1788.571	X CG 8.466005	Y CG .3071489			
Z CG .5077438	JET FUEL 44.39917	SLOSH AR -7.886368	IXX 31119.44	IYY 79900.74			
IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454	WX DEG/S -.2447940E-01			
WY DEG/S -.1049118E-01	WZ DEG/S .0000000	CONFIG 1.000000	AXSCM/S2 .0000000	AYSCM/S2 -.1608977E-02			
AZSCM/S2 .4791953E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 .3884211E-02			
AYSMM/S2 -.3077574E-02	AZSMM/S2 .1060982E-02	ARSMM/S2 .5067962E-02					

PROGRAM 40 VERB 06 NOUN 40 R1 -00 27 R2 +01642 R3 +00061 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.69984865	-.24760079	-.67000437
-.31517839	-.73470283	.60072756
-.64099431	.63158894	.43614221

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -56.21	-56.21	-56.03
Z= -.000	AMG= 44.78	44.78	44.81
X= .000	AOG= 102.90	102.90	102.99

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2420979.4	5380269.5	-3058328.8	6645435.7	-7219.63	-2432.96	1399.63	7746.06	2851.94
AGC CM	-2420322.0	5380740.0	-3058644.0	6645722.3	-7211.51	-2440.36	1396.92	7740.32	
DELTA	-657.4	-470.5	315.2	286.6	-8.13	7.40	2.71	5.73	
SDS LM	-2921690.1	5197044.7	-2953221.6	6653349.9	-6952.71	-2954.68	1689.82	7741.18	2922.41
AGC LM	-2921691.1	5196997.1	-2953251.7	6653326.5	-6952.70	-2954.70	1689.89	7741.19	
DELTA	1.0	47.6	30.2	23.4	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-26.50	68.14	272022.3	272656.6	259071.4	-.02	3.20	543442.8	-13.91
SDS LM	-26.50	68.11	279413.1	281463.9	272399.5				

FLAGWD 0	00200	FLAGWD 1	00001	FLAGWD 2	00734	FLAGWD 3	10004	FLAGWD 4	00000	FLAGWD 5	40202	FLAGWD 6	20000	FLAGWD 7	02140
FLAGWD 8	50000	FLAGWD 9	00000												
RCSFLAGS	00001	RCSFLAGS	00001	RSBBQ	42106	RSBBQ+1	03434	CADRFLSH	56016	CADR+1	73174	CADR+2	50145	FAILREG	00000
FAILRG+1	00000	FAILRG+2	00000	PIPA X	77777	PIPA Y	77777	PIPAZ	77736	FLAG 10	00000	FLAG 11	00000	OPTMODES	00120
HOLDFLAG	77776	DAPDATR1	11103	DAPDATR2	11111	REDOCTR	00001	IMODE 30	36000	IMODE 33	26000	CHAN 11	01402	CHAN 12	02242
CHAN 13	00100	CHAN 14	00000	CHAN 30	37373	CHAN 31	37777	CHAN 32	77777	CHAN 33	67765				

CDUX	102.9968	CDUY	-56.01929	CDUZ	44.81323	CDUT	-19.76715	ADOT/	-.1191572E-01
ADOT/OBP	-.2582297E-01	ADOT/OBY	-.3131480E-02	AK	-.1977539	AK1	-.5712891	AK2	-.4504395
THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	TIG	2879.890	DELLT4	1139.650
RTARG X	-6163634.	RTARG Y	2176504.	RTARG Z	-1235646.	TOO	-24187.24	PIPTIME1	2851.940
DELV X	.0000000	DELV Y	.0000000	DELV Z	-1.872000	PACTOFF	-2.918175	YACTOFF	2.230150
PCMD	.0000000	YCMD	.0000000	CSTEER	.0000000	ADOT/	-.1418219E-01	ADOT/OBP	-.1937226E-01
ADOT/OBY	-.1562387E-02	AK	-.1867676	AK1	-.5712891	AK2	-.4504395	THETAD X	102.3047
THETAD Y	-55.30518	THETAD Z	44.27490	ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0
TEVENT	2372.820	PCMD	.0000000	YCMD	.0000000	LEMMASS	.0000000	CSMMASS	26520.00
ERRORX	.1757812	ERRORY	.5712891	ERRORZ	.4504395	WBODYOCR	.0000000	WBODYOCP	.0000000
WBODYOCY	.0000000	THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	VGTIG X	-41.23354
VGTIG Y	-11.97472	VGTIG Z	-28.24030	S/C MASS	1788.571	X CG	8.466005	Y CG	.3071489
Z CG	.5077438	JET FUEL	44.42078	SLOSH AR	-7.886368	IXX	31119.44	IYY	79900.74
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454	WX DEG/S	-.2797646E-01
WY DEG/S	-.3497057E-01	WZ DEG/S	-.3497057E-02	CONFIG	1.000000	AXSCM/S2	.0000000	AYSCM/S2	-.1608977E-02
AZSCM/S2	.4885227E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	.3935080E-02
AYSMM/S2	-.3142977E-02	AZSMM/S2	.1104584E-02	ARSMM/S2	.5155896E-02				

PROGRAM 40 VERB 06 NOUN 40 R1 -00 25 R2 +01686 R3 +00126 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.70052218	-.24707127	-.66949658
-.31456709	-.73518515	.60045791
-.64055920	.63123465	.43729281

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -56.20	-56.20	-56.03
Z= -.000	AMG= 44.73	44.73	44.77
X= .000	AOG= 102.85	102.85	102.95

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2435405.2	5375376.5	-3055523.2	6645456.6	-7208.14	-2456.04	1406.58	7743.89	2853.94
AGC CM	-2434736.0	5375846.0	-3055842.0	6645737.7	-7203.16	-2454.27	1404.86	7738.38	
DELTA	669.2	469.5	318.8	281.2	4.98	1.77	1.73	5.51	
SDS LM	-2935587.6	5191121.3	-2949833.9	6653340.1	-6944.79	-2968.74	1697.83	7741.20	2924.41
AGC LM	-2935588.6	5191073.6	-2949864.0	6653316.7	-6944.78	-2968.76	1697.90	7741.21	
DELTA	.9	47.7	30.0	23.4	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-26.47	68.28	272028.1	272662.8	259088.6	-.02	3.20	543417.5	-11.91
SDS LM	-26.47	68.25	279393.7	281485.1	272396.2				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 00734	FLAGWD 3 10004	FLAGWD 4 00000	FLAGWD 5 40202	FLAGWD 6 20000	FLAGWD 7 02140
FLAGWD 8 50000	FLAGWD 9 00000						
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50145	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77777	PIPA Y 77777	PIPAZ 77734	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 01402	CHAN 12 02242
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX 102.9639	CDUY -56.01929	CDUZ 44.80225	CDUT -19.76715	ADOT/ -.1540259E-01			
ADOT/OBP -.5118326E-01	ADOT/OBY -.1562387E-02	AK -.1647949	AK1 -.5603027	AK2 -.4504395			
THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	TIG 2879.890	DELLT4 1139.650			
RTARG X -.6163634	RTARG Y .2176504	RTARG Z -.1235646	TGO -24187.24	PIPTIME1 2853.940			
DELV X .0000000	DELV Y .0000000	DELV Z -1.930500	PACTOFF -2.918175	YACTOFF 2.230150			
PCMD .0000000	YCMD .0000000	CSTEER .0000000	ADOT/ -.1662300E-01	ADOT/OBP -.4665033E-01			
ADOT/OBY -.8650125E-03	AK -.1538086	AK1 -.5932617	AK2 -.4394531	THETAD X 102.3047			
THETAD Y -55.30518	THETAD Z 44.27490	ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0			
TEVENT 2372.820	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 26520.00			
ERRORX .1428223	ERROBY .5163574	ERROBZ .4504395	WBODOCR .0000000	WBODOCP .0000000			
WBODOCY .0000000	THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	VGTIG X -41.23354			
VGTIG Y -12.70847	VGTIG Z -27.82335	S/C MASS 1788.571	X CG 8.466005	Y CG .3071489			
Z CG .5077438	JET FUEL 44.42004	SLOSH AR -7.886368	IXX 31119.44	IYY 79900.74			
IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454	WX DEG/S -.2447940E-01			
WY DEG/S -.2447940E-01	WZ DEG/S .0000000	CONFIG 1.000000	AXSCM/S2 .0000000	AYSCM/S2 -.1235881E-02			
AZSCM/S2 .4418857E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 .3400956E-02			
AYSMM/S2 -.2884999E-02	AZSMM/S2 .1148186E-02	ARSMM/S2 .4605220E-02					

PROGRAM 40 VERB 06 NOUN 40 R1 -00 23 R2 +01734 R3 +00192 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
-.41222304	.79159081	-.45106113	-.41222304	.79159081	-.45106113	-.70100498	-.24671626	-.66912103
.00042095	-.49491686	-.86894023	.00042095	-.49491686	-.86894023	-.31392121	-.73571324	.60014915
-.91108286	-.35838706	.20368291	-.91108285	-.35838706	.20368291	-.64034748	.63075829	.43828917

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -56.20	-56.20	-56.01
Z= -.000	AMG= 44.69	44.69	44.73
X= .000	AOG= 102.80	102.80	102.90

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2449814.9	5370449.3	-3052702.3	6645472.8	-7201.34	-2470.91	1414.82	7743.80	2855.54
AGC CM	-2449134.0	5370924.0	-3053024.0	6645753.3	-7194.66	-2468.13	1412.76	7736.32	
DELTA	-680.9	-474.7	321.7	280.5	-6.68	-2.78	2.06	7.47	
SDS LM	-2949469.2	5185169.8	-2946430.2	6653330.4	-6936.82	-2982.79	1705.84	7741.21	2926.41
AGC LM	-2949470.2	5185122.1	-2946460.2	6653306.9	-6936.81	-2982.80	1705.90	7741.23	
DELTA	.9	47.7	29.9	23.5	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-26.43	68.41	272033.8	272668.6	259107.1	-.02	3.20	543393.7	-11.78
SDS LM	-26.44	68.39	279374.3	281506.5	272393.0				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 00734	FLAGWD 3 10004	FLAGWD 4 00000	FLAGWD 5 40202	FLAGWD 6 20000	FLAGWD 7 02140
FLAGWD 8 50000	FLAGWD 9 00000						
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50145	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77777	PIPA Y 77777	PIPAZ 77733	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 01402	CHAN 12 02242
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX	102.9199	CDUY	-56.00830	CDUZ	44.74731	CDUT	-19.76715	ADOT/	-.1714603E-01
ADOT/OBP	-.4316345E-01	ADOT/OBY	.3553927E-03	AK	-.1208496	AK1	-.5053711	AK2	-.4504395
THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	TIG	2879.890	DELLT4	1139.650
RTARG X	-.6163634	RTARG Y	2.176504	RTARG Z	-1.235646	TGO	-24187.24	PIPTIME1	2855.940
DELV X	.0000000	DELV Y	.0000000	DELV Z	-2.047500	PACTOFF	-2.918175	YACTOFF	2.230150
PCMD	.0000000	YCMD	.0000000	CSTEER	.0000000	ADOT/	-.1819209E-01	ADOT/OBP	-.3950224E-01
ADOT/OBY	.3553927E-03	AK	-.1098633	AK1	-.4833984	AK2	-.4394531	THETAD X	102.3047
THETAD Y	-55.30518	THETAD Z	44.27490	ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0
TEVENT	2372.820	PCMD	.0000000	YCMD	.0000000	LEMMASS	.0000000	CSMMASS	26520.00
ERRORX	.9887696E-01	ERRORY	.4614258	ERRORZ	.4504395	WBODY/OCR	.0000000	WBODY/OCP	.0000000
WBODY/OCY	.0000000	THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	VGTIG X	-43.09893
VGTIG Y	-13.46321	VGTIG Z	-27.39449	S/C MASS	1788.571	X CG	8.466005	Y CG	.3071489
Z CG	.5077438	JET FUEL	44.41980	SLOSH AR	-7.886368	IXX	31119.44	IYY	79900.74
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454	WX DEG/S	-.2447940E-01
WY DEG/S	-.1049118E-01	WZ DEG/S	-.6994114E-02	CONFIG	1.000000	AXSCM/S2	-.9327403E-03	AYSCM/S2	-.1049333E-02
AZSCM/S2	.5922901E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	.3746138E-02
AYSMM/S2	-.4621611E-02	AZSMM/S2	.1398898E-02	ARSMM/S2	.6111596E-02				

PROGRAM 40 VERB 06 NOUN 40 R1 -00 21 R2 +01784 R3 +00261 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.4122230⁴	.7915908¹	-.4510611³
.0004209⁵	-.4949168⁶	-.8689402³
-.9110828⁶	-.3583870⁶	.2036829¹

AGC REFERENCE MATRIX

-.4122230⁴	.7915908¹	-.4510611³
.0004209⁵	-.4949168⁶	-.8689402³
-.9110828⁵	-.3583870⁶	.2036829¹

S/C ATTITUDE MATRIX

-.7013044⁴	-.2466003⁹	-.6688499⁵
-.3131456⁴	-.7363164⁴	.5998148⁹
-.6403996⁹	.6300995³	.4391598⁷

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -56.21	-56.21	-56.01
Z= -.000	AMG= 44.66	44.66	44.70
X= .000	A0G= 102.75	102.75	102.82

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2464210.9	5365492.3	-3049865.4	6645488.9	-7194.87	-2485.56	1422.94	7743.97	2857.94
AGC CM	-2463514.0	5365974.0	-3050190.0	6645768.4	-7186.07	-2481.96	1420.64	7734.21	
DELTA	-696.9	-481.7	324.6	-279.5	-8.80	-3.60	2.30	9.76	
SDS LM	-2963334.9	5179190.2	-2943010.6	6653320.6	-6928.82	-2996.81	1713.83	7741.23	2928.41
AGC LM	-2963335.8	5179142.4	-2943040.4	6653297.1	-6928.81	-2996.83	1713.90	7741.24	
DELTA	.9	47.7	29.8	23.6	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-26.40	68.55	272039.5	272674.4	259125.9	-.02	3.19	543370.2	-11.90
SDS LM	-26.40	68.52	279354.8	281527.9	272389.7				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 00734	FLAGWD 3 10004	FLAGWD 4 00000	FLAGWD 5 40202	FLAGWD 6 20000	FLAGWD 7 02140	
FLAGWD 8 50000	FLAGWD 9 00000							
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50145	FAILREG 00000	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77777	PIPA Y 77777	PIPAZ 77731	FLAG 10 00000	FLAG 11 00000	BPTMBDES 00120	
HBLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDBCTR 00001	IMBDE 30 36000	IMBDE 33 26000	CHAN 11 01402	CHAN 12 02242	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67767			

CDUX	102.8650	CDUY	-55.99731	CDUZ	44.70337	CDUT	-19.76715	ADOT/	-.1906381E-01
ADOT/OBP	-.3601537E-01	ADOT/OBY	.3553927E-03	AK	-.7690430E-01	AK1	-.4614258	AK2	-.4504395
THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	TIG	2879.890	DELLT4	1139.650
RTARG X	-.6163634	RTARG Y	2176504	RTARG Z	-.1235646	TGO	-24187.24	PIPTIME1	2857.940
DELV X	.0000000	DELV Y	.0000000	DELV Z	-2.106000	PACTOFF	-2.918175	YACTOFF	2.230150
PCMD	.0000000	YCMD	.0000000	CSTEER	.0000000	ADOT/	-.2167896E-01	ADOT/OBP	-.3095940E-01
ADOT/OBY	.3553927E-03	AK	-.3295899E-01	AK1	-.4614258	AK2	-.4504395	THETAD X	102.3047
THETAD Y	-55.30518	THETAD Z	44.27490	ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0
TEVENT	2372.820	PCMD	.0000000	YCMD	.0000000	LEMMASS	.0000000	CSMMASS	26520.00
ERRORX	.3295899E-01	ERRORY	.4614258	ERRORZ	.4504395	WBODOCR	.0000000	WBODOCP	.0000000
WBODOCY	.0000000	THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	VGTIG X	-45.01762
VGTIG Y	-14.25991	VGTIG Z	-26.94178	S/C MASS	1788.571	X CG	8.466005	Y CG	.3071489
Z CG	.5077438	JET FUEL	44.41943	SLOSH AR	-7.886368	IXX	31119.44	IYY	79900.74
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454	WX DEG/S	-.2797646E-01
WY DEG/S	-.6994114E-02	WZ DEG/S	.1049118E-01	CONFIG	1.000000	AXSCM/S2	-.9327403E-03	AYSCM/S2	-.9560588E-03
AZSCM/S2	.5922901E-02	XGYROBUT	.0000000	YGYROBUT	.0000000	ZGYROBUT	.0000000	AXSMM/S2	.3673468E-02
AYSMM/S2	-.4636345E-02	AZSMM/S2	.1460667E-02	ARSMM/S2	.6092915E-02				

PROGRAM 40 VERB 06 NOUN 40 R1 -00019 R2 +01839 R3 +00334 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
-.41222304	.79159081	-.45106113	-.41222304	.79159081	-.45106113	-.70143700	-.24661446	-.66870594
.00042095	-.49491686	.86894023	.00042095	-.49491686	.86894023	-.31228280	.73703480	.59938169
-.91108286	-.35838706	.20368291	-.91108285	-.35838706	.20368291	-.64067554	.62925315	.43997002

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= 56.22	56.22	56.02
Z= -.000	AMG= 44.65	44.65	44.69
X= .000	AOG= 102.68	102.68	102.78

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2478594.0	5360505.8	-3047012.4	6645504.9	-7187.44	-2500.44	1430.98	7743.33	2859.94
AGC CM	-2477878.0	5360996.0	-3047340.0	6645783.5	-7177.33	-2495.73	1428.49	7731.97	
DELTA	-716.0	-490.2	327.6	278.6	-10.11	-4.71	2.48	11.36	
SDS LM	-2977184.5	5173182.5	-2939574.9	6653310.9	-6920.78	-3010.83	1721.82	7741.25	2930.41
AGC LM	-2977185.4	5173134.7	-2939604.6	6653287.2	-6920.77	-3010.84	1721.88	7741.26	
DELTA	.9	47.8	29.7	23.6	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-26.37	68.69	272045.2	272680.8	259145.3	-.02	3.19	543346.4	-11.23
SDS LM	-26.37	68.66	279335.2	281549.4	272386.3				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 00734	FLAGWD 3 10004	FLAGWD 4 00000	FLAGWD 5 40202	FLAGWD 6 20000	FLAGWD 7 02140
FLAGWD 8 50000	FLAGWD 9 00000						
RCSFLAGS 00001	RCSFLAGS 00000	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50145	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77777	PIPA Y 77776	PIPAZ 77726	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 01402	CHAN 12 02242
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX 102.8101	CDUY -56.00830	CDUZ 44.70337	CDUT -19.76715	ADOT/ -.2394543E-01			
ADOT/OBP -.2398566E-01	ADOT/OBY .3553927E-03	AK -.1098633E-01	AK1 -.4614258	AK2 -.4614258			
THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	TIG 2879.890	DELLT4 1139.650			
RTARG X -6163634.	RTARG Y 2176504.	RTARG Z -1235646.	TOO -24187.24	PIPTIME1 2859.940			
DELV X .0000000	DELV Y .0000000	DELV Z -2.223000	PACTOFF -2.918175	YACTOFF 2.230150			
PCMD .0000000	YCMD .0000000	CSTEER .0000000	ADOT/ -.2568886E-01	ADOT/OBP -.1840666E-01			
ADOT/OBY .3553927E-03	AK .2197266E-01	AK1 -.4504395	AK2 -.4614258	THETAD X 102.3047			
THETAD Y -55.30518	THETAD Z 44.27490	ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0			
TEVENT 2372.820	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 26520.00			
ERRORX -.3295899E-01	ERROBY .4504395	ERROBZ .4614258	WBODOCR .0000000	WBODOCP .0000000			
WBODOBCY .0000000	THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	VGTIG X -47.04294			
VGTIG Y -14.25991	VGTIG Z -26.50414	S/C MASS 1788.571	X CG 8.466005	Y CG .3071489			
Z CG .5077438	JET FUEL 44.41931	SLOSH AR -7.886368	IXX 31119.44	IYY 79900.74			
IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454	WX DEG/S -.3846763E-01			
WY DEG/S .0000000	WZ DEG/S -.3497057E-02	CONFIG 1.000000	AXSCM/S2 .0000000	AYSCM/S2 -.1608377E-02			
AZSCM/S2 .4512131E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 .3709803E-02			
AYSMM/S2 -.2899533E-02	AZSMM/S2 .9483433E-03	ARSMM/S2 .4803049E-02					

PROGRAM 40 VERB 06 NOUN 40 R1 +00 17 R2 +01900 R3 +00413 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

+.41222304	+.79159081	+.45106113
+.00042095	+.49491686	+.86894023
+.91108286	+.35838706	+.20368291

AGC REFERENCE MATRIX

+.41222304	+.79159081	+.45106113
+.00042095	+.49491686	+.86894023
+.91108285	+.35838706	+.20368291

S/C ATTITUDE MATRIX

+.70146632	+.24670482	+.66864157
+.31132936	+.73786402	+.59885788
+.64110756	+.62824583	+.44078016

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= +.000	AIG= -56.23	-56.23	-56.03
Z= +.000	AMG= 44.65	44.65	44.68
X= +.000	AOG= 102.61	102.61	102.71

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2492961.5	5355489.6	-3044142.9	6645519.7	-7179.14	-2516.48	1438.40	7742.20	2861.94
AGC CM	-2492224.0	5355990.0	-3044476.0	6645798.9	-7168.40	-2509.39	1436.35	7729.56	
DELTA	+737.5	-500.4	333.1	+279.3	+10.74	-7.09	2.04	12.64	
SDS LM	-2991018.0	5167146.9	-2936123.3	6653301.1	-6912.70	-3024.82	1729.79	7741.26	2932.41
AGC LM	-2991018.9	5167099.0	-2936152.8	6653277.4	-6912.69	-3024.84	1729.86	7741.28	
DELTA	.9	47.8	29.5	23.7	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	+26.33	68.82	272050.7	272684.6	259164.0	-.02	3.19	543324.5	-10.09
SDS LM	+26.34	68.79	279315.6	281571.0	272383.0				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 00734	FLAGWD 3 10004	FLAGWD 4 00000	FLAGWD 5 40202	FLAGWD 6 20000	FLAGWD 7 02140
FLAGWD 8 50000	FLAGWD 9 00000						
RCSFLAGS 00000	RCSFLAGS 00000	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50145	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00001	PIPA Y 77777	PIPAZ 77727	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 01402	CHAN 12 02242
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX 102.7441	CDUY -56.00830	CDUZ 44.69238	CDUT -19.76715	ADOT/ +.2760664E-01			
ADOT/OBP +.1317636E-01	ADOT/OBY +.3553927E-03	AK .5493165E-01	AK1 +.4504395	AK2 +.4614258			
THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	TIG 2879.890	DELLT4 1139.650			
RTARG X -6163634.	RTARG Y 2176504.	RTARG Z -1235646.	TGO -24187.24	PIPTIME1 2861.940			
DELV X .0000000	DELV Y +.585C001E-01	DELV Z -2.398500	PACTOFF +2.918175	YACTOFF 2.230150			
PCMD .0000000	YCMD .0000000	CSTEER .0000000	ADOT/ +.2987311E-01	ADOT/OBP +.9515137E-02			
ADOT/OBY .8784235E-03	AK .8789063E-01	AK1 +.4394531	AK2 +.4724121	THETAD X 102.3047			
THETAD Y -55.30518	THETAD Z 44.27490	ELEV +41.07942	CENTANG 61.50000	DELTAR 117620.0			
TEVENT 2372.820	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 26520.00			
ERRORX +.1098633	ERRORY .4394531	ERRORZ .4724121	WBODOCR .0000000	WBODOCP .0000000			
WBODOCY .0000000	THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	VGTIG X -49.22810			
VGTIG Y -15.14845	VGTIG Z -26.00117	S/C MASS 1788.571	X CG 8.466005	Y CG .3071489			
Z CG .5077438	JET FUEL 44.41943	SLOSH AR -7.886368	IXX 31119.44	IYY 79900.74			
IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454	WX DEG/S +.4546174E-01			
WY DEG/S +.3497057E-02	WZ DEG/S +.3497057E-02	CONFIG 1.000000	AXSCM/S2 +.9327403E-03	AYSCM/S2 +.1235881E-02			
AZSCM/S2 +.1597318E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 +.1417065E-02			
AYSMM/S2 +.1580573E-02	AZSMM/S2 +.6649304E-03	ARSMM/S2 +.2224503E-02					

PROGRAM 40 VERB 06 NOUN 40 R1 +00 15 R2 +01960 R3 +00489 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

+.41222304	+.79159081	+.45106113
+.00042095	+.49491686	+.86894023
+.91108286	+.35838706	+.20368291

AGC REFERENCE MATRIX

+.41222304	+.79159081	+.45106113
+.00042095	+.49491686	+.86894023
+.91108285	+.35838706	+.20368291

S/C ATTITUDE MATRIX

+.70127153	+.24704623	+.66872001
+.31025934	+.73877597	+.59828854
+.64183927	+.62703872	+.44143391

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= +.000	AIG= +56.24	+56.24	+56.04
Z= +.000	AMG= 44.67	44.67	44.68
X= +.000	AOG= 102.54	102.54	102.63

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2507317.8	5350445.6	-3041256.2	6645536.1	-7177.19	+2527.71	1448.22	7745.89	2863.94
AGC CM	-2506552.0	5350958.0	-3041596.0	6645815.3	-7159.50	+2523.05	1444.14	7727.21	
DELTA	-765.8	+512.4	339.8	+279.2	-17.69	-4.66	4.08	18.68	
SDS LM	-3004835.3	5161083.2	-2932655.7	6653291.3	+6904.59	+3038.80	1737.76	7741.28	2934.41
AGC LM	-3004836.2	5161035.4	-2932685.1	6653267.5	+6904.58	+3038.82	1737.83	7741.29	
DELTA	.9	47.9	29.4	23.8	-.01	.02	-.07	+.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	+26.30	68.96	272056.2	272689.6	259183.0	-.02	3.19	543300.8	-13.62
SDS LM	+26.30	68.93	279296.0	281592.6	272379.6				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 00734	FLAGWD 3 10004	FLAGWD 4 00000	FLAGWD 5 40202	FLAGWD 6 20000	FLAGWD 7 02140
FLAGWD 8 50000	FLAGWD 9 00000						
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50145	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77777	PIPA Y 77777	PIPAZ 77724	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HBLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	RCSDCTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 01402	CHAN 12 02242
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX 102.6672	CDUY -56.01929	CDUZ 44.68140	CDUT -19.76715	ADOT/ +.3231392E-01			
ADOT/OOP +.7771701E-02	ADOT/OBY +.2621860E-02	AK .1318359	AK1 -.4394531	AK2 -.4724121			
THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	TIG 2879.890	DELLT4 1139.650			
RTARG X +.6163634	RTARG Y .2176504	RTARG Z +.1235646	TGO +24187.24	PIPTIME1 2863.940			
DELV X -.5850001E-01	DELV Y .0000000	DELV Z -2.340000	PACTOFF -2.918175	YACTOFF 2.230150			
PCMD .0000000	YCMD .0000000	CSTEER .0000000	ADOT/ +.3492907E-01	ADOT/OBP +.5156547E-02			
ADOT/OBY .4190952E-02	AK .1757812	AK1 -.4394531	AK2 -.4724121	THETAD X 102.3047			
THETAD Y -55.30518	THETAD Z 44.27490	DELV -41.07942	CENTANG 61.50000	DELTAR 117620.0			
TEVENT 2372.820	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 26520.00			
ERRORX +.2087402	ERROBY .4394531	ERROBZ .4833984	WBODOCR .0000000	WBODOCP .0000000			
WBODOCY .0000000	THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	VGTIG X +51.33591			
VGTIG Y -16.03336	VGTIG Z -26.00117	S/C MASS 1788.571	X CG 8.466005	Y CG .3071489			
Z CG .5077438	JET FUEL 44.42004	SLOSH AR -7.886368	IXX 31119.44	IYY 79900.74			
IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454	WX DEG/S +.4546174E-01			
WY DEG/S +.1398823E-01	WZ DEG/S .0000000	CONFIG 1.000000	AXSCM/S2 .0000000	AYSCM/S2 +.1608977E-02			
AZSCM/S2 +.4698679E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 +.3811541E-02			
AYSMM/S2 +.3033972E-02	AZSMM/S2 .1042815E-02	ARSMM/S2 .4981997E-02					

PROGRAM 40 VERB 06 NOUN 40 R1 =00 13 R2 +02026 R3 +00572 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.70089984	-.24758625	-.66890979
.30903888	-.73980713	.59764576
-.64283299	.62560821	.44201684

REFSMMAT FR	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -56.27	-56.27	-56.06
Z= -.000	AMG= 44.71	44.71	44.69
X= .000	AOG= 102.46	102.46	102.56

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-25216608	5345373.6	-30383518	66455529	-7167.65	-2543.95	1455.61	7743.75	2865.94
AGC CM	-25208620	5345898.0	-30387000	66458309	-7150.39	-2536.67	1451.91	7724.68	
DELTA	-798.8	-524.4	348.2	278.0	-17.26	-7.28	3.70	19.06	
SDS LM	-30186363	5154991.7	-29291723	66532815	-6896.43	-3052.76	1745.72	7741.30	2936.41
AGC LM	-30186372	5154943.8	-29292015	66532576	-6896.42	-3052.78	1745.79	7741.31	
DELTA	.9	47.9	29.3	23.8	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-26.27	69.09	272061.7	272696.0	259202.4	-.02	3.18	543277.2	-11.49
SDS LM	-26.27	69.06	279276.3	281614.4	272376.2				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 00734	FLAGWD 3 10004	FLAGWD 4 00000	FLAGWD 5 40202	FLAGWD 6 20000	FLAGWD 7 02140	
FLAGWD 8 50000	FLAGWD 9 00000							
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50145	FAILREG 00000	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77777	PIPA Y 77777	PIPAZ 77723	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120	
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	RENDCTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 01402	CHAN 12 02242	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765			

CDUX 102.5903	CDUY -56.04126	CDUZ 44.69238	CDUT -19.76715	ADOT/ -.3824160E-01			
ADOT/OBP -.3413111E-02	ADOT/OBY .4190952E-02	AK .2307129	AK1 -.4504395	AK2 -.4833984			
THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	TIG 2879.890	DELLT4 1139.650			
RTARG X -6163634.	RTARG Y 2176504.	RTARG Z -1235646.	TGO -24187.24	PIPTIME1 2865.940			
DELV X .0000000	DELV Y .0000000	DELV Z -2.515500	PACTOFF -2.918175	YACTOFF 2.230150			
PCMD .0000000	YCMD .0000000	CSTEER .0000000	ADOT/ -.3998504E-01	ADOT/OBP -.1669676E-02			
ADOT/OBY .4190952E-02	AK .2636719	AK1 -.4504395	AK2 -.4943848	THETAD X 102.3047			
THETAD Y -55.30518	THETAD Z 44.27490	ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0			
TEVENT 2372.820	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 26520.00			
ERRORX -.2856445	ERROBY .4504395	ERROBZ .4943848	WBODY/OCR .0000000	WBODY/OCP .0000000			
WBODY/OCY .0000000	THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	VGTIG X -53.62768			
VGTIG Y -16.93487	VGTIG Z -25.48885	S/C MASS 1788.571	X CG 8.466005	Y CG .3071489			
Z CG .5077438	JET FUEL 44.42078	SLOSH AR -7.886368	IXX 31119.44	IYY 79900.74			
IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454	WX DEG/S -.4546174E-01			
WY DEG/S .2447940E-01	WZ DEG/S .3497057E-02	CONFIG 1.000000	AXSCM/S2 .1818844E-02	AYSCM/S2 -.1235881E-02			
AZSCM/S2 .4605405E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 .4218493E-02			
AYSMM/S2 -.1718646E-02	AZSMM/S2 .2358141E-02	ARSMM/S2 .5129352E-02					

PROGRAM 40 VERB 06 NOUN 40 R1 -00 11 R2 +02094 R3 +00656 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.70034409	-.24804807	-.66932082
-.30789852	-.74098396	.59677553
-.64398503	.62403083	.44256997

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -56.28	-56.28	-56.09
Z= -.000	AMG= 44.75	44.76	44.73
X= .000	A0G= 102.36	102.36	102.47

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2535990.4	5340273.2	-3035430.3	6645570.1	-7160.69	-2557.63	1465.13	7743.61	2867.94
AGC CM	-2535154.0	5340812.0	-3035788.0	6645847.4	-7141.17	-2550.26	1459.66	7722.10	
DELTA	-836.4	-538.8	357.7	-277.2	-19.51	-7.37	5.48	21.51	
SDS LM	-3032421.0	5148872.2	-2925672.9	6653271.6	-6888.24	-3066.71	1753.67	7741.31	2938.41
AGC LM	-3032421.8	5148824.3	-2925702.0	6653247.8	-6888.23	-3066.73	1753.73	7741.33	
DELTA	.9	47.9	29.1	23.9	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	26.23	69.23	272067.1	272704.5	259222.3	-.02	3.18	543253.5	-11.31
SDS LM	26.24	69.20	279256.5	281636.2	272372.8				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 00734	FLAGWD 3 10004	FLAGWD 4 00000	FLAGWD 5 40202	FLAGWD 6 20000	FLAGWD 7 02140	
FLAGWD 8 50000	FLAGWD 9 00000							
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50145	FAILREG 00000	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77777	PIPA Y 77777	PIPAZ 77721	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120	
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	RED0CTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 01402	CHAN 12 02242	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765			

CDUX 102.5244	CDUY -56.06323	CDUZ 44.71436	CDUT -19.76715	AODT/ -.4137978E-01			
AODT/OBP .9454787E-03	AODT/OBY .4190952E-02	AK .3076172	AK1 -.4724121	AK2 -.4943848			
THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	TIG 2879.890	DELLT4 1139.650			
RTARG X -.6163634	RTARG Y .2176504	RTARG Z -.1235646	TOO -24187.24	PIPTIME1 2867.940			
DELV X .0000000	DELV Y .0000000	DELV Z -2.574000	FACTOFF 2.918175	YACTOFF 2.230150			
PCMD .0000000	YCMD .0000000	CSTEER .0000000	AOGT/ -.4260019E-01	AOGT/OBP .4955382E-02			
AOGT/OBY -.9743125E-02	AK .3625488	AK1 -.4833984	AK2 -.5053711	THETAD X 102.3047			
THETAD Y -55.30518	THETAD Z 44.27490	ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0			
TEVENT 2372.820	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 26520.00			
ERRORX -.3955078	ERRORY .5053711	ERRORZ .5053711	WBODY/OCR .0000000	WBODY/OCP .0000000			
WBODY/OCY .0000000	THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	VGTIG X -55.97277			
VGTIG Y -17.85736	VGTIG Z -24.96462	S/C MASS 1788.571	X CG 8.466005	Y CG .3071489			
Z CG .5077438	JET FUEL 44.43457	SLOSH AR -7.886368	IXX 31119.44	IYY 79900.74			
IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454	WX DEG/S -.5245586E-01			
WY DEG/S .1748529E-01	WZ DEG/S .0000000	CONFIG 1.000000	AXSCM/S2 -.9327403E-03	AYSCM/S2 -.1235881E-02			
AZSCM/S2 .6109449E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 .3964148E-02			
AYSMM/S2 -.4730816E-02	AZSMM/S2 .1402531E-02	ARSMM/S2 .6329469E-02					

PROGRAM 40 VERB 06 NOUN 40 R1 +00 09 R2 +02167 R3 +00745 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.70000219	-.24823880	-.66960716
-.30743170	-.74155974	.59629989
-.64457846	.62326956	.44277692

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -56.27	-56.27	-56.09
Z= -.000	AMG= 44.78	44.78	44.78
X= .000	AOG= 102.31	102.31	102.38

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2550305.0	5335141.5	-3032494.4	6645585.9	-7153.83	-2573.25	1471.88	7743.73	2869.94
AGC CM	-2549428.0	5335698.0	-3032860.0	6645863.1	-7131.82	-2563.79	1467.37	7719.40	
DELTA	-877.0	-556.5	365.6	-277.1	-22.01	-9.46	4.50	24.33	
SDS LM	-3046189.2	5142724.8	-2922157.6	6653261.8	-6880.02	-3080.64	1761.61	7741.33	2940.41
AGC LM	-3046190.1	5142676.9	-2922186.6	6653237.9	-6880.00	-3080.66	1761.67	7741.34	
DELTA	.9	48.0	29.0	23.9	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-26.20	69.36	272072.5	272712.8	259242.9	-.02	3.18	543230.7	-11.38
SDS LM	-26.20	69.33	279236.8	281658.2	272369.4				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 00734	FLAGWD 3 10004	FLAGWD 4 00000	FLAGWD 5 40202	FLAGWD 6 20000	FLAGWD 7 02140
FLAGWD 8 50000	FLAGWD 9 00000						
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50145	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77777	PIPA Y 77777	PIPAZ 77717	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 01402	CHAN 12 02242
CHAN 13 40100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX 102.4146	CDUY -56.07422	CDUZ 44.74731	CDUT -19.76715	ADOT/ -.4556403E-01
ADOT/OBP -.5317480E-02	ADOT/OBY -.7999689E-02	AK .4174805	AK1 -.5053711	AK2 -.5053711
THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	TIG 2879.890	DELLT4 1139.650
RTARG X -6163634.	RTARG Y 2176504.	RTARG Z -1235646.	TGO -24187.24	PIPTIME1 2869.940
DELV X .0000000	DELV Y .0000000	DELV Z +2.691000	PACTOFF -2.918175	YACTOFF 2.230150
PCMD .0000000	YCMD .0000000	CSTEER .0000000	ADOT/ -.1139604E-01	ADOT/OBP -.8717180E-04
ADOT/OBY -.6256253E-02	AK .4504395	AK1 -.5273437	AK2 -.4943848	THETAD X 102.3047
THETAD Y -55.30518	THETAD Z 44.27490	ELEV -41.07942	CENTANG 61.50000	DELTAR 11762.0
TEVENT 2372.820	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 26520.00
ERRORX -.4614258	ERROBY .5383301	ERRORZ .4943848	WBODYBCR .0000000	WBODYBCP .0000000
WBODYBCY .0000000	THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	VGTIG X -58.42447
VGTIG Y -18.82172	VGTIG Z -24.41654	S/C MASS 1788.571	X CG 8.466005	Y CG .3071489
Z CG .5077438	JET FUEL 44.44861	SLOSH AR -7.886368	IXX 31119.44	IYY 79900.74
IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454	WX DEG/S -.1398823E-01
WY DEG/S .1398823E-01	WZ DEG/S .0000000	CONFIG 1.000000	AXSCM/S2 .0000000	AYSCM/S2 -.1142607E-02
AZSCM/S2 .7531878E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 .5050564E-02
AYSMM/S2 -.5068732E-02	AZSMM/S2 .2663355E-02	ARSMM/S2 .7635031E-02		

PROGRAM 40 VERB 06 NOUN 40 R1 +00 07 R2 +02245 R3 +00837 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
+.41222304	+.79159081	-.45106113	+.41222304	+.79159081	-.45106113	+.69977260	-.24837732	-.66979599
+.00042095	+.49491686	+.86894023	+.00042095	+.49491686	+.86894023	+.30764747	+.74142599	+.59635520
+.91108286	+.35838706	+.20368291	-.91108285	+.35838706	+.20368291	+.64472508	+.62337375	+.44241691

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= +.000	AIG= -56.27	-56.27	-56.07
Z= -.000	AMG= 44.80	44.80	44.79
X= +.000	AOG= 102.32	102.32	102.37

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2564606.3	5329981.6	-3029541.5	6645602.4	-7146.49	-2587.37	1480.95	7743.38	2871.94
AGC CM	-2563682.0	5330556.0	-3029918.0	6645878.1	-7122.32	-2577.27	1475.06	7716.58	
DELTA	-924.3	-574.4	376.5	-275.7	-24.17	-10.10	5.89	26.81	
SDS LM	-3059941.0	5136549.7	-2918626.5	6653252.0	-6871.75	-3094.55	1769.53	7741.35	2942.41
AGC LM	-3059941.9	5136501.6	-2918655.3	6653228.0	-6871.74	-3094.57	1769.60	7741.36	
DELTA	.8	48.0	28.9	24.0	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-26.16	69.50	272077.8	272722.2	259263.8	-.02	3.17	543207.6	-10.99
SDS LM	-26.17	69.47	279216.9	281680.2	272365.9				

FLAGWD 0	00200	FLAGWD 1	00001	FLAGWD 2	00734	FLAGWD 3	10004	FLAGWD 4	00000	FLAGWD 5	40202	FLAGWD 6	20000	FLAGWD 7	02140
FLAGWD 8	50000	FLAGWD 9	00000												
RCSFLAGS	00001	RCSFLAGS	00001	RSBBQ	42106	RSBBQ+1	03434	CADRFLSH	56016	CADR+1	73174	CADR+2	50145	FAILREG	00000
FAILRG+1	00000	FAILRG+2	00000	PIPA X	77777	PIPA Y	77777	PIPAZ	77776	FLAG 10	00000	FLAG 11	00000	OPTMODES	00120
HOLDFLAG	77776	DAPDATR1	11103	DAPDATR2	11111	RED0CTR	00001	IMODE 30	36000	IMODE 33	26000	CHAN 11	01402	CHAN 12	02242
CHAN 13	00100	CHAN 14	00000	CHAN 30	37373	CHAN 31	37777	CHAN 32	77777	CHAN 33	67765				

CDUX	102.3706	CDUY	-56.07422	CDUZ	44.78027	CDUT	-19.76715	ADOT/	-.1383685E-01		
ADOT/OBP	-.9662658E-02	ADOT/OBY	-.4512817E-02	AK	.4724121	AK1	-.5383301	AK2	-.4943848		
THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	TIG	2879.890	DELLT4	1139.650		
RTARG X	-6163634.	RTARG Y	2176504.	RTARG Z	-1235646.	TGO	-2487.24	PIPTIME1	2871.940		
DELV X	.0000000	DELV Y	.0000000	DELV Z	-2.808000	PACTOFF	-2.918175	YACTOFF	2.230150		
PCMD	.0000000	YCMD	.0000000	CSTEER	.0000000	ADOT/	.2137721E-01	ADOT/OBP	-.5304069E-02		
ADOT/OBY	-.2943725E-02	AK	.4833984	AK1	-.5493164	AK2	-.4833984	THETAD X	102.3047		
THETAD Y	-55.30518	THETAD Z	44.27490	ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0		
TEVENT	2372.820	PCMD	.0000000	YCMD	.0000000	LEMMASS	.0000000	CSMMASS	26520.00		
ERRORX	-.4724121	ERRORY	.5603027	ERRORZ	.4943848	WBODOCR	.0000000	WBODOCP	.0000000		
WBODOCY	.0000000	THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	VGTIG X	-60.98270		
VGTIG Y	-19.82803	VGTIG Z	-23.84462	S/C MASS	1788.571	X CG	8.466005	Y CG	.3071489		
Z CG	.5077438	JET FUEL	44.46228	SLOSH AR	-7.886368	IXX	31119.44	IYY	79900.74		
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454	WX DEG/S	-.2098235E-01		
WY DEG/S	-.3497057E-02	WZ DEG/S	.0000000	CONFIG	1.000000	AXSCM/S2	-.9327403E-03	AYSCM/S2	-.1515703E-02		
AZSCM/S2	.1597318E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	.1627808E-02		
AYSMM/S2	-.1544238E-02	AZSMM/S2	-.8393384E-03	ARSMM/S2	.2395604E-02						

PROGRAM 40 VERB 06 NOUN 40 R1 +00 05 R2 +02325 R3 +00931 FLASH 1 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.69967914	-.24843550	-.66987252
-.30796266	-.74115014	.59653568
-.64467692	.62367868	.44205809

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -56.27	-56.27	-56.07
Z= -.000	AMG= 44.81	44.81	44.80
X= .000	AOG= 102.34	102.34	102.39

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2578891.5	5324792.3	-3026570.8	6645617.0	-7140.04	-2602.04	1488.86	7743.87	2873.94
AGC CM	-2577918.0	5325388.0	-3026960.0	6645893.9	-7112.72	-2590.71	1482.72	7713.70	
DELTA	973.5	-595.7	389.2	276.9	-27.32	-11.33	6.13	30.17	
SDS LM	-3073676.2	5130346.6	-2915079.5	6653242.1	-6863.45	-3108.45	1777.45	7741.36	2944.41
AGC LM	-3073677.0	5130298.6	-2915108.2	6653218.0	-6863.44	-3108.47	1777.52	7741.38	
DELTA	.8	48.0	28.7	24.1	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-26.13	69.63	272083.1	272729.2	259284.3	-.02	3.17	543186.3	-11.43
SDS LM	-26.14	69.60	279197.1	281702.3	272362.4				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 00334	FLAGWD 3 10004	FLAGWD 4 00000	FLAGWD 5 40202	FLAGWD 6 20000	FLAGWD 7 02140	
FLAGWD 8 50000	FLAGWD 9 00000							
RCSFLAGS 00011	RCSFLAGS 00011	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50145	FAILREG 00000	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77777	PIPA Y 77777	PIPAZ 77714	FLAG 10 00000	FLAG 11 00000	BPTM0DES 00120	
H0LDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	RED0CTR 00001	IM0DE 30 36000	IM0DE 33 26000	CHAN 11 01442	CHAN 12 02242	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765			

CDUX 102.3706	CDUY -56.06323	CDUZ 44.80225	CDUT -19.76715	AD0T/ .2015681E-01			
AD0T/0BP -.1575128E-01	AD0T/0BY -.2943725E-02	AK .4724121	AK1 -.5603027	AK2 -.4943848			
THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	TIG 2879.890	DELLT4 1139.650			
RTARG X -.6163634	RTARG Y .2176504	RTARG Z -.1235646	TG0 -24187.24	PIPTIME1 2873.940			
DELV X .0000000	DELV Y .0000000	DELV Z -2.866500	PACT0FF -2.918175	YACT0FF 2.230150			
PCMD .0000000	YCMD .0000000	CSTEER .0000000	AD0T/ .1998246E-01	AD0T/0BP -.1052097E-01			
AD0T/0BY -.2943725E-02	AK .4394531	AK1 -.5603027	AK2 -.4833984	THETAD X 102.3047			
THETAD Y -55.30518	THETAD Z 44.27490	ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0			
TEVENT 2372.820	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 26520.00			
ERR0RX -.4394531	ERR0RY .5603027	ERR0RZ .4833984	WB0D/0CR .0000000	WB0D/0CP .0000000			
WB0D/0CY .0000000	THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	VGTIG X -63.59425			
VGTIG Y -20.85533	VGTIG Z -23.26078	S/C MASS 1788.571	X CG 8.466005	Y CG .3071489			
Z CG .5077438	JET FUEL 44.46265	SL0SH AR -7.886368	IXX 31119.44	IYY 79900.74			
IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454	WX DEG/S .1049118E-01			
WY DEG/S .3497057E-02	WZ DEG/S -.3497057E-02	CONFIG 1.000000	AXSCM/S2 -.9327403E-03	AYSCM/S2 -.1142607E-02			
AZSCM/S2 .4512131E-02	XGYR00UT .0000000	YGYR00UT .0000000	ZGYR00UT .0000000	AXSMM/S2 .2997637E-02			
AYSMM/S2 -.3629866E-02	AZSMM/S2 .7376004E-03	ARSMM/S2 .4765061E-02					

PROGRAM 40 VERB 99 NOUN 99 R1 -99999 R2 -99999 R3 -99999 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.69970632	-.24841166	-.66985321
-.30820704	-.74091148	.59670615
-.64453077	.62397218	.44185781

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -56.27	-56.27	-56.07
Z= -.000	AMG= 44.81	44.81	44.80
X= .000	AOG= 102.37	102.37	102.41

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2593165.3	5319574.4	-3023585.1	6645633.5	-7133.23	-2616.98	1496.21	7744.04	2875.94
AGC CM	-2592134.0	5320194.0	-3023986.0	6645909.6	-7102.99	-2604.10	1490.36	7710.70	
DELTA	-1031.3	-619.6	400.9	-276.0	-30.25	-12.88	5.85	33.34	
SDS LM	-3087394.8	5124115.9	-2911516.6	6653232.2	-6855.11	-3122.33	1785.36	7741.38	2946.41
AGC LM	-3087395.6	5124067.2	-2911545.3	6653208.1	-6855.10	-3122.35	1785.43	7741.39	
DELTA	.8	48.1	28.6	24.1	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-26.10	69.77	272088.3	272738.2	259305.3	-.02	3.17	543163.1	-11.56
SDS LM	-26.10	69.74	279177.1	281724.5	272358.9				

FLAGWD 0	00200	FLAGWD 1	00001	FLAGWD 2	00334	FLAGWD 3	10004	FLAGWD 4	10000	FLAGWD 5	40202	FLAGWD 6	20000	FLAGWD 7	06140
FLAGWD 8	50000	FLAGWD 9	00000												
RCSFLAGS	00011	RCSFLAGS	00011	RSBBQ	42106	RSBBQ+1	03434	CADRFLSH	56016	CADR+1	73174	CADR+2	51273	FAILREG	00000
FAILRG+1	00000	FAILRG+2	00000	PIPA X	77777	PIPA Y	77777	PIPAZ	77713	FLAG 10	00000	FLAG 11	00000	BPTMBDES	00120
MBLDFLAG	77776	DAPDATR1	11103	DAPDATR2	11111	REDBCTR	00001	IMBDE 30	36000	IMBDE 33	26000	CHAN 11	01402	CHAN 12	02242
CHAN 13	00100	CHAN 14	00000	CHAN 30	37373	CHAN 31	37777	CHAN 32	77777	CHAN 33	67765				

CDUX	102.4146	CDUY	-56.06323	CDUZ	44.80225	CDUT	-19.76715	ADOT/	.1876206E-01
ADOT/BBP	-.6859750E-02	ADOT/BBY	-.2943725E-02	AK	.4284668	AK1	-.5603027	AK2	-.4833984
THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	TIG	2879.890	DELLT4	1139.650
RTARG X	.6163634	RTARG Y	2176504	RTARG Z	.1235646	TGO	-24187.24	PIPTIME1	2875.940
DELV X	.0000000	DELV Y	.0000000	DELV Z	-2.983500	PACTOFF	-2.918175	YACTOFF	2.230150
PCMD	.0000000	YCMD	.0000000	CSTEER	.0000000	ADOT/	.1789034E-01	ADOT/BBP	-.1817868E-01
ADOT/BBY	-.2943725E-02	AK	.4174805	AK1	-.5603027	AK2	-.4833984	THETAD X	102.3047
THETAD Y	-55.30518	THETAD Z	44.27490	ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0
TEVENT	2372.820	PCMD	.0000000	YCMD	.0000000	LEMMASS	.0000000	CSMMASS	26520.00
ERRORX	-.4064941	ERRORY	.5712891	ERRORZ	.4833984	WBOD/OCR	.0000000	WBOD/OCP	.0000000
WBOD/OCY	.0000000	THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	VGTIG X	-66.31241
VGTIG Y	-21.92450	VGTIG Z	-22.65310	S/C MASS	1788.571	X CG	8.466005	Y CG	.3071489
Z CG	.5077438	JET FUEL	44.47034	SLOSH AR	-7.886368	IXX	31119.44	IYY	79900.74
IZZ	84710.12	IXY	2036.133	IXZ	246.1853	IYZ	1424.454	WX DEG/S	.3497057E-02
WY DEG/S	.3497057E-02	WZ DEG/S	-.3497057E-02	CONFIG	1.000000	AXSCM/S2	.8861033E-03	AYSCM/S2	-.1608977E-02
AZSCM/S2	.6295997E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	.5068732E-02
AYSMM/S2	-.3488160E-02	AZSMM/S2	.2336340E-02	ARSMM/S2	.6581625E-02				

PROGRAM 40 VERB 06 NOUN 40 R1 -00 01 R2 +02496 R3 +01129 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.69984531	-.24832368	-.66974068
-.30832529	-.74075627	.59683847
-.64432335	.62419152	.44184995

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -56.27	-56.27	-56.07
Z= -.000	AMG= 44.79	44.79	44.81
X= .000	AOG= 102.38	102.38	102.43

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2607424.1	5314327.2	-3020583.1	6645649.5	-7125.61	-2631.28	1504.62	7743.50	2877.94
AGC CM	-2606330.0	5314972.0	-3020998.0	6645924.5	-7093.16	-2617.45	1497.97	7707.65	
DELTA	-1094.1	-644.8	414.9	-275.0	-32.46	-13.83	6.65	35.86	
SDS LM	-3101096.6	5117857.3	-2907938.0	6653222.3	-6846.73	-3136.19	1793.27	7741.40	2948.41
AGC LM	-3101097.4	5117869.2	-2907966.5	6653198.1	-6846.72	-3136.21	1793.33	7741.41	
DELTA	.8	48.1	28.5	24.2	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-26.06	69.91	272093.5	272747.2	259326.6	-.02	3.17	543140.7	-10.97
SDS LM	-26.07	69.87	279157.2	281746.8	272355.3				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 00334	FLAGWD 3 10004	FLAGWD 4 00000	FLAGWD 5 40202	FLAGWD 6 20000	FLAGWD 7 06140	
FLAGWD 8 50000	FLAGWD 9 00000							
RCSFLAGS 00011	RCSFLAGS 00011	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 51273	FAILREG 00000	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77777	PIPA Y 77776	PIPAZ 77710	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120	
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 11402	CHAN 12 02242	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765			

CDUX 102.4255	CDUY -56.06323	CDUZ 44.81323	CDUT -19.76715	AOST/ .1649559E-01			
AOST/OBP -.1329706E-01	AOST/OBY -.2943725E-02	AK .4064941	AK1 -.5712891	AK2 -.4833984			
THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	TIG 2879.890	DELLT4 1139.650			
RTARG X -6163634.	RTARG Y 2176504.	RTARG Z -1235646.	TGO -24187.24	PIPTIME1 2877.940			
DELV X .0000000	DELV Y .0000000	DELV Z -3.042000	PACTOFF -2.918175	YACTOFF 2.230150			
PCMD .0000000	YCMD .0000000	CSTEER .0000000	AOST/ .1370609E-01	AOST/OBP -.2287254E-01			
AOST/OBY -.1897663E-02	AK .4064941	AK1 -.5712891	AK2 -.4833984	THETAD X 102.3047			
THETAD Y -55.30518	THETAD Z 44.27490	ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0			
TEVENT 2372.820	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 26520.00			
ERRORX -.3955078	ERRORY .5712891	ERRORZ .4833984	WBODYOCR .0000000	WBODYOCP .0000000			
WBODYOCY .0000000	THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	VGTIG X -69.08388			
VGTIG Y -23.01464	VGTIG Z -22.03360	S/C MASS 1788.571	X CG 8.466005	Y CG .3071489			
Z CG .5077438	JET FUEL 44.47754	SLOSH AR -7.886368	IXX 31119.44	IYY 79900.74			
IZZ 84710.12	IXY 2036.133	IXZ 246.1853	IYZ 1424.454	WX DEG/S -.3497057E-02			
WY DEG/S .0000000	WZ DEG/S -.6994114E-02	CONFIG 1.000000	AXSCM/S2 .0000000	AYSCM/S2 -.1235881E-02			
AZSCM/S2 .6109449E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 .4327498E-02			
AYSMM/S2 -.4069520E-02	AZSMM/S2 .1954823E-02	ARSMM/S2 .6253763E-02					

PROGRAM 40 VERB 06 NOUN 40 R1 +00 01 R2 +02590 R3 +01234 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.65963244	-.25172186	-.70818162
.32684326	-.75241351	.57188010
-.67680001	.60869431	.41404271

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -54.36	-54.36	-55.01
Z= -.000	AMG= 47.70	47.70	46.48
X= .000	AOG= 100.68	100.68	101.50

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2624710.7	5308245.9	-3020032.6	6647343.7	-13204.08	-4256.86	-3424.64	14289.74	2879.94
AGC CM	-2620506.0	5309724.0	-3017994.0	6645939.2	-7083.13	-2630.70	1505.59	7704.42	
DELTA	-4204.7	-1478.1	-2038.6	1404.4	-6120.95	-1626.17	-4930.23	6585.32	
SDS LM	-3114781.7	5111571.1	-2904343.6	6653212.4	-6838.32	-3150.04	1801.16	7741.42	2950.41
AGC LM	-3114782.5	5111522.9	-2904371.9	6653188.2	-6838.31	-3150.05	1801.22	7741.43	
DELTA	.8	48.2	28.3	24.3	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-26.03	70.04	272099.5	277498.6	261661.1	-.30	2.98	540587.2	-5055.23
SDS LM	-26.03	70.01	279137.2	281769.2	272351.7				

FLAGWD 0	00200	FLAGWD 1	00001	FLAGWD 2	00334	FLAGWD 3	10004	FLAGWD 4	00000	FLAGWD 5	40302	FLAGWD 6	50000	FLAGWD 7	16140
FLAGWD 8	50000	FLAGWD 9	00000												
RCSFLAGS	00003	RCSFLAGS	00001	RSBBQ	42106	RSBBQ+1	03434	CADRFLSH	56016	CADR+1	73174	CADR+2	51273	FAILREG	00000
FAILRG+1	00000	FAILRG+2	00000	PIPA X	00037	PIPA Y	00060	PIPAZ	00037	FLAG 10	00000	FLAG 11	00000	BPTMODES	00120
HOLDFLAG	77776	DAPDATR1	11103	DAPDATR2	11111	REDOCTR	00001	IMODE 30	36000	IMODE 33	26000	CHAN 11	11402	CHAN 12	02242
CHAN 13	00100	CHAN 14	00000	CHAN 30	37373	CHAN 31	37777	CHAN 32	77777	CHAN 33	67767				

CDUX	102.4365	CDUY	-56.06323	CDUZ	44.81323	CDUT	-19.76715	ADOT/	.0000000
ADOT/OBP	.0000000	ADOT/OBY	.0000000	AK	.0000000	AK1	.0000000	AK2	.0000000
THETAD X	37.06787	THETAD Y	38.66089	THETAD Z	-64.70947	TIG	2879.890	DELLT4	1139.650
RTARG X	-6163634.	RTARG Y	2176504.	RTARG Z	-1235646.	TGO	-24187.24	PIPTIME1	2879.940
DELV X	.0000000	DELV Y	-.5850001E-01	DELV Z	-3.217500	PACTOFF	-2.918175	YACTOFF	2.230150
PCMD	-1.684475	YCMD	1.376050	CSTEER	.0000000	ADOT/	-11.42578	ADOT/OBP	.2163839
ADOT/OBY	-.1552798	AK	.9558105	AK1	-1.560059	AK2	1.186523	THETAD X	37.06787
THETAD Y	38.66089	THETAD Z	-64.70947	ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0
TEVENT	2879.900	PCMD	-.6405750	YCMD	.6405750	LEMMASS	.0000000	CSMMASS	26216.00
ERRORX	.0000000	ERRORY	79.69482	ERRORZ	43.90137	WBODY/OCR	.0000000	WBODY/OCP	.0000000
WBODY/OCY	.0000000	THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	VGTIG X	-72.01529
VGTIG Y	-24.19662	VGTIG Z	-21.42916	S/C MASS	1784.852	X CG	8.468556	Y CG	.3071966
Z CG	.5069036	JET FUEL	44.47827	SLOSH AR	-7.832068	IXX	31057.18	IYY	79825.40
IZZ	84687.23	IXY	2036.285	IXZ	244.4763	IYZ	1441.763	WX DEG/S	-.1748528
WY DEG/S	.7588613	WZ DEG/S	-.4441262	CONFIG	1.000000	AXSCM/S2	3.451885	AYSCM/S2	.1342796
AZSCM/S2	.1223522	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	1.330722
AYSMM/S2	2.462215	AZSMM/S2	2.044403	ARSMM/S2	3.465964				

PROGRAM 40 VERB N0UN 40 R1 +00 23 R2 +02430 R3 +01411 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.4122223C4	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.4122223C4	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.71853542	-.27308917	-.63963223
-.27318358	-.73494577	.62066507
-.63959193	.62070632	.45348096

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -59.36	-59.36	-55.25
Z= -.000	AMG= 43.68	43.68	47.24
X= .000	A0G= 104.06	104.06	101.32

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-26413C9.0	53015C5.2	-3019829.7	6648446.6	-6799.32	-2869.C1	1586.06	7548.34	2881.94
AGC CM	-2634670.0	5304448.0	-3014978.0	6645957.2	-7079.91	-2646.27	1510.29	7707.72	
DELTA	-6639.0	-2942.8	-4851.7	2489.4	280.60	-222.73	75.77	-159.38	
SDS LM	-3128449.9	5105257.2	-2900733.4	6653202.5	-6829.87	-3163.87	1809.04	7741.43	2952.41
AGC LM	-3128450.7	5105209.0	-2900761.6	6653178.2	-6829.86	-3163.88	1809.10	7741.45	
DELTA	.8	48.2	28.2	24.3	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-25.99	70.18	272110.6	288291.5	264393.8	-.68	2.85	538519.7	184.40
SDS LM	-26.00	70.14	279117.1	281791.6	272348.1				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 02334	FLAGWD 3 10004	FLAGWD 4 00000	FLAGWD 5 40302	FLAGWD 6 50000	FLAGWD 7 16140	
FLAGWD 8 50000	FLAGWD 9 00000							
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 51273	FAILREG 00000	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00043	PIPA Y 00107	PIPAZ 00075	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120	
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	RENDCTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 01420	CHAN 12 02242	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67767			

CDUX 100.6787	CDUY -54.17358	CDUZ 47.77954	CDUT -19.76715	ADOT/ -20.65430			
ADOT/OBP .4659668E-01	ADOT/OBY -.3439934E-01	AK 1.768799	AK1 -2.658691	AK2 1.933594			
THETAD X 37.06787	THETAD Y 38.66089	THETAD Z -64.70947	TIG 2905.640	DELLT4 1139.650			
RTARG X -6163634.	RTARG Y 2176504.	RTARG Z -1235646.	TGO 2370000	PIPTIME1 2881.940			
DELV X 2.281500	DELV Y 3.627000	DELV Z 3.276000	PACTOFF -2.918175	YACTOFF 2.230150			
PCMD .7117500	YCMD -1.613300	CSTEER .0000000	ADOT/ -3.515625	ADOT/OBP -.1787961			
ADOT/OBY .2393000	AK 1.076660	AK1 -3.471680	AK2 3.076172	THETAD X 37.06787			
THETAD Y 38.66089	THETAD Z -64.70947	ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0			
TEVENT 2879.900	PCMD .2372501E-01	YCMD -.4982250	LEMMASS .0000000	CSMMASS 26216.00			
ERRORX .0000000	ERRORY -110.6543	ERRORZ 43.90137	WBODOCR -.1368095E-01	WBODOCP -.1429316			
WBODOCY .2122700	THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	VGTIG X -68.09168			
VGTIG Y -23.03352	VGTIG Z -17.91563	S/C MASS 1780.852	X CG 8.471537	Y CG .3072491			
Z CG .5059943	JET FUEL 44.47839	SLOSH AR -7.773417	IXX 30990.59	IYY 79743.39			
IZZ 84659.58	IXY 2036.438	IXZ 242.4927	IYZ 1460.285	WX DEG/S .3497057E-02			
WY DEG/S -4.227942	WZ DEG/S 5.063738	CONFIG 1.000000	AXSCM/S2 3.455616	AYSCM/S2 .1186329			
AZSCM/S2 .2227967	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 1.310792			
AYSMM/S2 2.215432	AZSMM/S2 2.333070	ARSMM/S2 3.474123					

PROGRAM 40 VERB 06 NOUN 40 R1 -00 15 R2 +02205 R3 +01658 FLASH 0 DSPTAB +11 00400

SDS REFERENCE MATRIX

-,41222304	,79159081	-,45106113
,00042095	-,49491686	,86894023
-,91108286	-,35838706	,20368291

AGC REFERENCE MATRIX

-,41222304	,79159081	-,45106113
,00042095	-,49491686	-,86894023
-,91108285	-,35838706	,20368291

S/C ATTITUDE MATRIX

-,79305840	-,29945350	-,53045869
,17838478	-,71847796	,67228603
-,58244109	,62778738	,51637650

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= ,000	AIG= -65,49	-65,49	-63,92
Z= -,000	AMG= 37,50	37,50	39,25
X= ,000	A0G= 106,75	106,75	106,94

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2655882,9	5296434,3	-3015739,1	6648354,1	-7886,86	-1978,72	2550,66	8521,96	2883,94
AGC CM	-2648828,0	5299138,0	-3011954,0	6645977,7	-7078,33	-2663,02	1514,05	7712,77	
DELTA	-7054,9	-2703,7	-3785,1	2376,4	-808,52	684,30	1036,62	809,19	
SDS LM	-3142101,1	5098915,7	-2897107,4	6653192,6	-6821,38	-3177,68	1816,91	7741,45	2954,41
AGC LM	-3142101,9	5098867,4	-2897135,5	6653168,2	-6821,37	-3177,70	1816,98	7741,46	
DELTA	,8	48,2	28,1	24,4	-,01	,02	-,07	-,01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-25,96	70,31	272127,1	303090,9	265221,3	-,60	2,86	538047,6	-684,48
SDS LM	-25,96	70,28	279097,0	281814,2	272344,5				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 02334	FLAGWD 3 10004	FLAGWD 4 00000	FLAGWD 5 40302	FLAGWD 6 50000	FLAGWD 7 16140
FLAGWD 8 50000	FLAGWD 9 40000						
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 51273	FAILREG 01111
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00045	PIPA Y 00072	PIPAZ 00067	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	RENDEZTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 11400	CHAN 12 02242
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67767		

CDUX 104,5239	CDUY -59,74365	CDUZ 43,12134	CDUT -19,76715	ADOT/ 55,81055	
ADOT/OBP -,3671944	ADOT/OBY ,5346715	AK -2,175293	AK1 -1,362305	AK2 1,219482	
THETAD X 37,06787	THETAD Y 38,66089	THETAD Z -64,70947	TIG 2899,380	DELLT4 1139,650	
RTARG X -,6163634	RTARG Y 2,176504	RTARG Z -1,235646	TGO 15,44000	PIPTIME1 2883,940	
DELV X 2,457000	DELV Y 5,031000	DELV Z 5,031000	PACTOFF -,9727250	YACTOFF ,5694000	
PCMD -2,372500	YCMD 2,111525	CSTEER ,0000000	ADOT/ 68,11523	ADOT/OBP -,2210341	
ADOT/OBY ,2435714	AK -4,537354	AK1 -,8789063E-01	AK2 -,6921387	THETAD X 37,06787	
THETAD Y 38,66089	THETAD Z -64,70947	ELEV -41,07942	CENTANG 61,50000	DELTAR 117620,0	
TEVENT 2879,900	PCMD -1,091350	YCMD 1,542125	LEMMASS ,0000000	CSMMASS 26216,00	
ERRORX ,0000000	ERROBY -26,58691	ERRORZ 43,90137	WBODOCR -,8309819E-02	WBODOCP -,1708752	
WBODOCY ,1703186	THETAD X 102,3047	THETAD Y -55,30518	THETAD Z 44,27490	VGTIG X -62,49733	
VGTIG Y -20,68548	VGTIG Z -13,46054	S/C MASS 1776,853	X CG 8,474731	Y CG ,3073015	
Z CG ,5050793	JET FUEL 44,84009	SLOSH AR -7,714558	IXX 30923,99	IYY 79658,51	
IZZ 84630,01	IXY 2036,591	IXZ 240,3564	IYZ 1478,809	WX DEG/S -1,175011	
WY DEG/S -1,500237	WZ DEG/S 1,314893	CONFIG 1,000000	AXSCM/S2 3,464897	AYSCM/S2 ,9843908E-01	
AZSCM/S2 ,1661210	XGYROOUT ,0000000	AZSMM/S2 2,631144	YGYROOUT ,0000000	ARSMM/S2 3,479588	AXSMM/S2 1,148658
AYSMM/S2 1,966010			ZGYROOUT ,0000000		

PROGRAM 40 VERB 06 NOUN 40 R1 -00 15 R2 +01998 R3 +01882 FLASH 0 DSPTAB +11 00400

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.82770681	-.30555677	-.47067666
-.11311054	-.73069596	.67326736
-.54964280	.61050606	.57024002

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -67.91	-67.91	-66.49
Z= -.000	AMG= 34.05	34.05	35.47
X= .000	AOG= 105.64	105.64	106.20

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-26702891	52910437	-30115670	66479413	-7110.66	-2693.44	1986.16	7858.82	2885.94
AGC CM	-26629820	52937960	-30089220	66460034	-7076.58	-2679.06	1518.48	7717.58	
DELTA	-7307.1	-2752.3	-2645.0	1937.9	-34.09	-14.38	467.68	141.23	
SDS LM	-31557354	50925465	-28934658	66531827	-6812.86	-3191.47	1824.77	7741.47	2956.41
AGC LM	-31557362	50924982	-28934937	66531582	-6812.85	-3191.49	1824.84	7741.48	
DELTA	.8	48.3	27.9	24.4	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	+25.92	70.45	272149.5	320895.5	265288.4	-.53	2.90	537593.8	-120.49
SDS LM	+25.93	70.41	279076.9	281836.8	272340.8				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 02334	FLAGWD 3 10004	FLAGWD 4 00000	FLAGWD 5 40302	FLAGWD 6 50000	FLAGWD 7 16140	
FLAGWD 8 50000	FLAGWD 9 40000							
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 51273	FAILREG 01111	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00037	PIPA Y 00064	PIPAZ 00063	FLAG 10 00000	FLAG 11 00000	BPTMODES 00120	
HBLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 11400	CHAN 12 02242	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67767			

CDUX	106.7871	CDUY	-65.43457	CDUZ	37.25464	CDUT	-19.76715	ADOT/	.0000000		
ADOT/OBP	-.1850992	ADOT/OBY	.1462340	AK	-4.306641	AK1	-.2416992	AK2	-.6152344		
THETAD X	37.06787	THETAD Y	38.66089	THETAD Z	-64.70947	TIG	2901.460	DELLT4	1139.650		
RTARG X	-6163634.	RTARG Y	2176504.	RTARG Z	-1235646.	TGO	15.52000	PIPTIME1	2885.940		
DELV X	2.632500	DELV Y	4.095000	DELV Z	4.797000	PACTOFF	-1.352325	YACTOFF	1.043900		
PCMD	-1.494675	YCMD	.7829250	CSTEER	.0000000	ADOT/	-12.30469	ADOT/OBP	-.1653548		
ADOT/OBY	.1182452	AK	-3.713379	AK1	-.1538086	AK2	-.3295899E-01	THETAD X	37.06787		
THETAD Y	38.66089	THETAD Z	-64.70947	ELEV	-41.07942	CENTANG	61.50000	DELTAR	11762.0		
TEVENT	2879.900	PCMD	-1.304875	YCMD	.8541000	LEMMASS	.0000000	CSMMASS	26216.00		
ERRORX	.0000000	ERRORY	24.70825	ERRORZ	43.90137	WBODOCR	-.1289640E-01	WBODOCP	-.1350610		
WBODOCY	.1918718	THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	VGTIG X	-57.04346		
VGTIG Y	-19.02351	VGTIG Z	-9.691906	S/C MASS	1772.853	X CG	8.478141	Y CG	.3073540		
Z CG	.5041580	JET FUEL	44.84058	SLOSH AR	-7.655483	IXX	30857.40	IYY	79571.72		
IZZ	84597.59	IXY	2036.743	IXZ	238.0371	IYZ	1497.334	WX DEG/S	-1.440787		
WY DEG/S	-1.175011	WZ DEG/S	1.720552	CONFIG	1.000000	AXSCM/S2	3.476043	AYSCM/S2	.1234248		
AZSCM/S2	.1839713	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	1.066225		
AYSMM/S2	1.776501	AZSMM/S2	2.811453	ARSMM/S2	3.492429						

PROGRAM 40 VERB 06 NOUN 40 R1 -00 15 R2 +01813 R3 +02085 FLASH 0 DSPTAB +11 00400

SDS REFERENCE MATRIX

-,41222304	,79159081	-,45106113
,00042095	-,49491686	-,86894023
-,91108286	-,35838706	,20368291

AGC REFERENCE MATRIX

-,41222304	,79159081	-,45106113
,00042095	-,49491686	-,86894023
-,91108285	-,35838706	,20368291

S/C ATTITUDE MATRIX

-,85982800	-,32344246	-,39507103
-,03081775	-,73947668	,67247629
-,50965309	,59038830	,62585449

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= ,000	AIG= -71,33	-71,33	-69,70
Z= -,000	AMG= 30,20	30,20	32,04
X= ,000	AOG= 104,64	104,64	105,18

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2670499,4	5290898,1	-3011030,1	6647666,7	-6982,64	-2776,17	1895,36	7749,63	2885,94
AGC CM	-2662982,0	5293796,0	-3008922,0	6646003,4	-7076,58	-2679,06	1518,48	7717,58	
DELTA	-7517,4	-2897,9	-2108,1	1663,3	93,94	-97,11	376,88	32,05	
SDS LM	-3169352,5	5086149,8	-2889808,4	6653172,7	-6804,29	-3205,25	1832,62	7741,48	2958,41
AGC LM	-3169353,3	5086101,4	-2889836,2	6653148,2	-6804,28	-3205,27	1832,69	7741,50	
DELTA	,8	48,3	27,8	24,5	-,01	,02	-,07	-,01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-25,89	70,58	272177,1	340067,3	265223,6	-,50	2,98	552694,4	-15,78
SDS LM	-25,89	70,55	279056,7	281859,5	272337,2				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 02334	FLAGWD 3 10004	FLAGWD 4 00000	FLAGWD 5 40302	FLAGWD 6 50000	FLAGWD 7 16140
FLAGWD 8 50000	FLAGWD 9 40000						
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 51273	FAILREG 01111
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00034	PIPA Y 00060	PIPAZ 00061	FLAG 10 00000	FLAG 11 00000	BPTMODES 00120
HBLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 01420	CHAN 12 02242
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67767		

CDUX	105,6665	CDUY	-67,97241	CDUZ	33,88184	CDUT	-19,76715	ADOT/	-10,98633
ADOT/BBP	-,1536939	ADOT/BBY	,1612175	AK	-3,186035	AK1	-,3076172	AK2	,2416992
THETAD X	37,06787	THETAD Y	38,66089	THETAD Z	-64,70947	TIG	2903,350	DELLT4	1139,650
RTARG X	-6163634,	RTARG Y	2176504,	RTARG Z	-1235646,	TGO	15,41000	PIPTIME1	2887,940
DELV X	2,223000	DELV Y	3,685500	DELV Z	4,446000	PACTOFF	-1,399775	YACTOFF	1,115075
PCMD	-,8303750	YCMD	,9015500	CSTEER	,0000000	ADOT/	-10,10742	ADOT/BBP	-,1810458
ADOT/OBY	,1692507	AK	-2,691650	AK1	-,4614258	AK2	,2307129	THETAD X	37,06787
THETAD Y	38,66089	THETAD Z	-64,70947	ELEV	-41,07942	CENTANG	61,50000	DELTAR	117620,0
TEVENT	2879,900	PCMD	-1,162525	YCMD	1,043900	LEMMASS	,0000000	CSMMASS	26216,00
ERRORX	,0000000	ERRORY	-13,35937	ERRORZ	43,90137	WBOD/OCR	-,6040000E-02	WBOD/OCP	-,1587415
WBOD/OCY	,1879843	THETAD X	102,3047	THETAD Y	-55,30518	THETAD Z	44,27490	VGTIG X	-52,07806
VGTIG Y	-17,36584	VGTIG Z	-6,392288	S/C MASS	1768,852	X CG	8,481789	Y CG	,3074074
Z CG	,5032310	JET FUEL	44,84058	SLOSH AR	-7,596171	Ixx	30790,81	IYY	79483,03
IZZ	84564,21	IXY	2036,957	IXZ	235,5652	IYZ	1515,858	WX DEG/S	-1,440787
WY DEG/S	-1,622634	WZ DEG/S	1,888411	CONFIG	1,000000	AXSCM/S2	3,483458	AYSCM/S2	,1188311
AZSCM/S2	,1850790	XGYROOUT	,0000000	YGYROOUT	,0000000	ZGYROOUT	,0000000	AXSMM/S2	,9350846
AYSMM/S2	1,575692	AZSMM/S2	2,981795	ARSMM/S2	3,499756				

PROGRAM 40 VERB 5 NOUN 9 R1 01111 R2 00000 R3 00000 FLASH 0 DSPTAB +11 00400

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
-.41222304	.79159081	-.45106113	-.41222304	.79159081	-.45106113	-.88882446	-.33605242	-.31154490
.00042095	-.49491686	-.86894023	.00042095	-.49491686	-.86894023	.05007148	-.74701166	.66292238
-.91108286	-.35838706	.20368291	-.91108285	-.35838706	.20368291	-.45550418	.57362151	.68078828

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -74.47	-74.47	-72.98
Z= -.000	AMG= 25.89	25.89	27.84
X= .000	AOG= 103.26	103.26	103.99

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2684557.3	5285480.1	-3007104.6	6647242.0	-7025.31	-2726.86	1990.93	7794.52	2887.94
AGC CM	-2677132.0	5288422.0	-3005880.0	6646033.2	-7074.29	-2695.09	1523.37	7722.03	
DELTA	-7425.3	-2941.9	-1224.6	1208.8	48.98	-31.77	467.56	72.49	
SDS LM	-3182952.5	5079725.5	-2886135.3	6653162.8	-6795.70	-3219.01	1840.46	7741.50	2960.41
AGC LM	-3182953.3	5079677.1	-2886163.0	6653138.2	-6795.68	-3219.03	1840.53	7741.51	
DELTA	.7	48.4	27.7	24.6	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-25.85	70.72	272209.7	360754.6	264955.8	-.45	3.03	552599.6	-56.78
SDS LM	-25.86	70.68	279036.5	281882.3	272333.4				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 02334	FLAGWD 3 10004	FLAGWD 4 00200	FLAGWD 5 40302	FLAGWD 6 50000	FLAGWD 7 16140	
FLAGWD 8 50000	FLAGWD 9 40000							
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 51273	FAILREG 01111	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00030	PIPA Y 00052	PIPAZ 00065	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120	
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 11420	CHAN 12 02242	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67767			

CDUX 104.6118	CDUY -71.37817	CDUZ 29.97070	CDUT -19.76715	ADOT/ -10.98633			
ADOT/OBP -.1818739	ADOT/OBY .1700722	AK -2.120361	AK1 -.4174805	AK2 .1977539			
THETAD X 37.06787	THETAD Y 38.66089	THETAD Z -64.70947	TIG 2904.310	DELLT4 1139.650			
RTARG X -6163634.	RTARG Y 2176504.	RTARG Z -1235646.	TGO 14.37000	PIPTIME1 2889.940			
DELV X 2.047500	DELV Y 3.393000	DELV Z 4.446000	PACTOFF -1.328600	YACTOFF 1.067625			
PCMD -.9964500	YCMD 1.091350	CSTEER .0000000	ADOT/ -12.30469	ADOT/OBP -.2035897			
ADOT/OBY .1938365	AK -1.812744	AK1 -.3845215	AK2 .1098633	THETAD X 37.06787			
THETAD Y 38.66089	THETAD Z -64.70947	ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0			
TEVENT 2879.900	PCMD -1.209975	YCMD 1.067625	LEMMASS .0000000	CSMMASS 25912.00			
ERRORX .0000000	ERRORY 5.218506	ERRORZ 43.90137	WBOD/OCR -.7265434E-02	WBOD/OCP -.1709187			
WBOD/OCY .1812436	THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	VGTIG X -47.18475			
VGTIG Y -15.71407	VGTIG Z -3.425980	S/C MASS 1764.852	X CG 8.485651	Y CG .3074608			
Z CG .5022979	JET FUEL 44.84094	SLOSH AR -7.536638	IXX 30724.21	IYY 79391.48			
IZZ 84527.97	IXY 2037.140	IXZ 232.8796	IYZ 1534.386	WX DEG/S -1.479255			
WY DEG/S -1.738037	WZ DEG/S 1.776505	CONFIG 1.000000	AXSCM/S2 3.500154	AYSCM/S2 .1254769			
AZSCM/S2 .1942315	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 .7960379			
AYSMM/S2 1.335972	AZSMM/S2 3.154702	ARSMM/S2 3.517193					

PROGRAM 40 VERB 5 NOUN 9 R1 01111 R2 00000 R3 00000 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
-.41222304	.79159081	-.45106113	-.41222304	.79159081	-.45106113	-.81061163	-.34328485	-.23009157
.00042095	-.49491686	-.86894023	.00042095	-.49491686	-.86894023	.12314177	-.75686836	.64186215
-.91108286	-.35838706	.20368291	-.91108285	-.35838706	.20368291	-.39449048	.55615282	.73148513

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -77.10	-77.10	-75.88
Z= -.000	AMG= 21.68	21.68	23.52
X= .000	AOG= 101.36	101.36	102.34

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2698576.1	528009 7.9	-3003117.0	6646838.2	-6970.13	-2695.55	1979.81	7731.00	2889.94
AGC CM	-2691278.0	5283016.0	-3002828.0	6646067.4	-7071.89	-2711.10	1528.59	7726.47	
DELTA	-7298.1	-2918.1	-289.0	770.9	101.76	15.55	451.22	4.53	
SDS LM	-3196535.3	5073273.7	-2882446.5	6653152.8	-6787.06	-3232.76	1848.29	7741.52	2962.41
AGC LM	-3196536.0	5073225.3	-2882474.1	6653128.2	-6787.05	-3232.77	1848.36	7741.53	
DELTA	.7	48.4	27.5	24.6	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-25.82	70.85	27 2246.8	38 2709.5	26468 1.6	-.39	3.07	552540.5	7.37
SDS LM	-25.82	70.82	279016.2	281905.2	272329.7				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 02334	FLAGWD 3 10004	FLAGWD 4 00200	FLAGWD 5 40302	FLAGWD 6 50000	FLAGWD 7 16140	
FLAGWD 8 50000	FLAGWD 9 40000							
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 51273	FAILREG 00000	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00025	PIPA Y 00042	PIPAZ 00255	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120	
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	RENDEZTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 11420	CHAN 12 02242	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67767			

CDUX	103.2056	CDUY	-74.47632	CDUZ	25.67505	CDUT	-19.76715	ADOT/	-15.38086		
ADOT/OBP	-.1843281	ADOT/OBY	.1406886	AK	-1.087646	AK1	-.3186035	AK2	.9887696E-01		
THETAD X	37.06787	THETAD Y	38.66089	THETAD Z	-64.70947	TIG	2905.470	DELLT4	1139.650		
RTARG X	-.6163634.	RTARG Y	2.176504.	RTARG Z	.1235646.	TGO	13.53000	PIPTIME1	2891.940		
DELV X	1.755000	DELV Y	2.983500	DELV Z	4.563000	PACTOFF	-1.233700	YACTOFF	1.043900		
PCMD	-1.209975	YCMD	1.328600	CSTEER	.0000000	ADOT/	-16.69922	ADOT/OBP	-.2241287		
ADOT/OBY	.1463413	AK	-.2636719	AK1	-.2307129	AK2	.0000000	THETAD X	37.06787		
THETAD Y	38.66089	THETAD Z	-64.70947	ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0		
TEVENT	2879.900	PCMD	-1.162525	YCMD	1.043900	LEMMASS	.0000000	CSMMASS	25912.00		
ERRORX	.0000000	ERRORY	7.789307	ERRORZ	43.90137	WBODY/OCR	-.5451590E-02	WBODY/OCP	-.1732422		
WBODY/OCY	.1560409	THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	VGTIG X	-42.30537		
VGTIG Y	-13.99145	VGTIG Z	-.9712219	S/C MASS	1760.832	X CG	8.489776	Y CG	.3075142		
Z CG	.5013542	JET FUEL	44.84155	SLOSH AR	-7.476568	IXX	30657.28	IYY	79297.07		
IZZ	84489.82	IXY	2037.323	IXZ	230.0415	IYZ	1553.007	WX DEG/S	-1.535208		
WY DEG/S	-1.731043	WZ DEG/S	1.503734	CONFIG	1.000000	AXSCM/S2	3.497356	AYSCM/S2	.1273890		
AZSCM/S2	.1992450	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	.6618964		
AYSMM/S2	1.090173	AZSMM/S2	3.275207	ARSMM/S2	3.514764						

PROGRAM 40 VERB N0UN 9 R1 01111 R2 00000 R3 00000 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.91751552	-.33712697	-.21097636
.15023017	-.78498602	.60102224
-.36823416	.51975179	.77088332

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -77.26	-77.26	-77.77
Z= -.000	AMG= 20.47	20.47	20.15
X= .000	A0G= 98.20	98.20	99.98

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2712563.3	5274854.9	-2999119.1	6646563.7	-7095.20	-2384.89	2099.76	7774.22	2891.94
AGC CM	-2705420.0	5277578.0	-2997766.0	6646105.9	-7069.45	-2727.16	1534.31	7731.01	
DELTA	-7143.3	-2723.1	646.9	457.8	-25.76	342.27	565.45	43.21	
SDS LM	-3210100.8	5066794.5	-2878742.1	6653142.8	-6778.39	-3246.48	1856.12	7741.53	2964.41
AGC LM	-3210101.4	5066746.1	-2878769.5	6653118.1	-6778.38	-3246.50	1856.19	7741.55	
DELTA	.7	48.4	27.4	24.7	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-25.78	70.99	272288.1	405634.8	264497.5	-.31	3.09	552560.6	-13.92
SDS LM	-25.79	70.95	278995.9	281928.1	272325.9				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 02334	FLAGWD 3 10004	FLAGWD 4 00200	FLAGWD 5 40302	FLAGWD 6 50000	FLAGWD 7 16140	
FLAGWD 8 50000	FLAGWD 9 40000							
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 51273	FAILREG 00000	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00023	PIPA Y 00032	PIPAZ 00244	FLAG 10 00000	FLAG 11 00000	BPTMODES 00120	
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 11400	CHAN 12 02242	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67767			

CDUX 101.3049	CDUY -77.03613	CDUZ 21.48926	CDUT -19.76715	ADOT/ -20.21484			
ADOT/OBP -.1990769	ADOT/OBY .1580760	AK .7141113	AK1 -.1977539	AK2 .7690430E-01			
THETAD X 37.06787	THETAD Y 38.66089	THETAD Z -64.70947	TIG 2898.690	DELLT4 1139.650			
RTARG X -6163634.	RTARG Y 2176504.	RTARG Z -1235646.	TGO 4.750000	PIPTIME1 2893.940			
DELV X 1.521000	DELV Y 2.457000	DELV Z 11.75850	PACTOFF -1.186250	YACTOFF 1.043900			
PCMD -2.704650	YCMD 2.870725	CSTEER .0000000	ADOT/ -23.73047	ADOT/OBP .0000000			
ADOT/OBY .5223603E-02	AK 1.856689	AK1 .4943848	AK2 -.7360840	THETAD X 37.06787			
THETAD Y 38.66089	THETAD Z -64.70947	ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0			
TEVENT 2879.900	PCMD -1.209975	YCMD .9252750	LEMMASS .0000000	CSMMASS 25912.00			
ERRORX .0000000	ERROBY 64.54468	ERROBZ 43.90137	WBODOCR .6415509E-02	WBODOCP -.2689586E-01			
WBODOCY -.1406149E-01	THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	VGTIG X -30.96647			
VGTIG Y -9.765434	VGTIG Z -.5452156	S/C MASS 1756.832	X CG 8.494091	Y CG .3075676			
Z CG .5004096	JET FUEL 44.84192	SLOSH AR -7.416582	IXX 30590.68	IYY 79201.70			
IZZ 84448.81	IXY 2037.537	IXZ 227.0203	IYZ 1571.537	WX DEG/S -1.699570			
WY DEG/S .2902557	WZ DEG/S -.7903349	CONFIG 1.000000	AXSCM/S2 3.505704	AYSCM/S2 .1360868			
AZSCM/S2 .1468949	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 .6274363			
AYSMM/S2 1.074735	AZSMM/S2 3.293582	ARSMM/S2 3.520854					

PROGRAM 40 VERB NOUN 40 R1 -00 03 R2 +00693 R3 +03239 FLASH 0 DSPTAR +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.91809154	-.33115339	-.21782112
.14808702	-.79631734	.58647156
-.36766672	.50617743	.78013110

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -76.74	-76.74	-76.57
Z= -.000	AMG= 20.66	20.66	20.57
X= .000	AOG= 97.09	97.09	97.01

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-27263704.8	5269380.6	-2995913.8	6646398.2	-6874.46	-2678.39	1511.03	7530.95	2893.94
AGC CM	-27195620	5272106.0	-2996690.0	6646147.0	-7073.42	-2745.71	1542.05	7742.74	
DELTA	-6742.8	-2725.4	776.2	251.2	198.96	67.32	-31.01	-211.79	
SDS LM	-3223648.8	5060287.8	-2875022.1	6653132.8	-6769.68	-3260.19	1863.93	7741.55	2966.41
AGC LM	-3223649.5	5060239.4	-2875049.3	6653108.1	-6769.67	-3260.21	1864.00	7741.57	
DELTA	.7	48.5	27.3	24.8	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-25.75	71.12	272333.4	428722.8	264370.5	-.32	3.11	552888.5	202.93
SDS LM	-25.75	71.08	278975.6	281951.2	272322.1				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 00334	FLAGWD 3 10004	FLAGWD 4 00000	FLAGWD 5 40302	FLAGWD 6 50000	FLAGWD 7 16140
FLAGWD 8 50000	FLAGWD 9 40000						
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 51273	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00022	PIPA Y 00034	PIPAZ 00257	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	RENDCTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 11420	CHAN 12 02242
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67767		

CDUX	98.02002	CDUY	-77.01416	CDUZ	20.50049	CDUT	-19.76715	AOBT/	-39.11133
AOBT/OBP	.4579202E-01	AOBT/OBY	-.5982668E-01	AK	3.680420	AK1	-.3295899E-01	AK2	-.7690430E-01
THETAD X	37.06787	THETAD Y	38.66089	THETAD Z	-64.70947	TIG	2899.060	DELLT4	1139.650
RTARG X	-6163634.	RTARG Y	2176504.	RTARG Z	-1235646.	TGO	2.730000	PIPTIME1	2895.940
DELV X	1.345500	DELV Y	1.930500	DELV Z	11.11500	PACTOFF	-1.233700	YACTOFF	1.115075
PCMD	-1.281150	YCMD	.5456750	CSTEER	.0000000	AOBT/	-26.80664	AOBT/OBP	.0000000
AOBT/OBY	.0000000	AK	5.328369	AK1	-.2197266E-01	AK2	.2746582	THETAD X	37.06787
THETAD Y	38.66089	THETAD Z	-64.70947	ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0
TEVENT	2879.900	PCMD	-1.233700	YCMD	.8541000	LEMMASS	.0000000	CSMMASS	25912.00
ERRORX	.0000000	ERRORY	7.349854	ERRORZ	43.90137	WBOD/OCR	.0000000	WBOD/OCP	.0000000
WBOD/OCY	.0000000	THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	VGTIG X	-20.28599
VGTIG Y	-5.891609	VGTIG Z	-.5248070	S/C MASS	1752.832	X CG	8.498645	Y CG	.3076220
Z CG	.4994588	JET FUEL	45.42029	SLOSH AR	-7.356364	IXX	30524.08	IYY	79103.47
IZZ	84405.90	IXY	2037.750	IXZ	223.8464	IYZ	1590.069	WX DEG/S	.1049117
WY DEG/S	.1398823	WZ DEG/S	.5245586E-01	CONFIG	1.000000	AXSCM/S2	3.510368	AYSCM/S2	.1206383
AZSCM/S2	.1808117	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	.6759289
AYSMM/S2	1.059390	AZSMM/S2	3.295017	ARSMM/S2	3.526517				

TAPE WEDB RUN 6 VERIFICATION C4.18A TEST RUN DATE 10/23/68 EDIT DATE 23OCT68 SDS TIME 2969 AGC TIME 2899.08 ID 774 PAGE 85

PROGRAM 40 VERB 61 NOUN 40 R1 -00 03 R2 +00693 R3 +03239 FLASH 0 DSPTAB +11 00000

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
-.41222304	.79159081	-.45106113	-.41222304	.79159081	-.45106113	-.91672659	-.33460546	-.21829247
.00042095	-.49491686	-.86894023	.00042095	-.49491686	-.86894023	.14946532	-.79395628	.58931589
-.91108286	-.35838706	.20368291	-.91108285	-.35838706	.20368291	-.37050295	.50761390	.77785277

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -76.93	-76.93	-76.65
Z= -.000	AMG= 20.79	20.79	20.74
X= .000	AOG= 97.32	97.32	97.29

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2740086.1	5264037.0	-2992796.2	6646426.6	-6873.41	-2716.70	1556.76	7552.99	2895.94
AGC CM	-2733712.0	5266596.0	-2993598.0	6646190.2	-7076.70	-2763.89	1550.19	7753.82	
DELTA	-6374.1	-2559.0	801.8	236.5	203.29	47.19	6.58	-200.83	
SDS LM	-3237179.4	5053753.8	-2871286.4	6653122.8	-6760.93	-3273.88	1871.73	7741.57	2968.41
AGC LM	-3237180.1	5053765.2	-2871313.5	6653098.0	-6760.92	-3273.90	1871.80	7741.58	
DELTA	.6	48.5	27.1	24.8	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-25.71	71.26	272382.9	451747.3	264364.5	-.33	3.11	553249.9	179.90
SDS LM	-25.72	71.22	278955.2	281974.3	272318.3				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 00334	FLAGWD 3 10004	FLAGWD 4 00200	FLAGWD 5 40302	FLAGWD 6 50000	FLAGWD 7 16140	
FLAGWD 8 50000	FLAGWD 9 40000							
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 51273	FAILREG 01111	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00022	PIPA Y 00035	PIPAZ 00253	FLAG 10 00000	FLAG 11 00000	BPTMODES 00120	
HOLDFLAG 77776	DAPDATR1 11103	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 01400	CHAN 12 02242	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67767			

CDUX 97.15210	CDUY -76.54175	CDUZ 20.68726	CDUT -19.76715	ADOT/ 2.636719			
ADOT/OBP .0000000	ADOT/OBY .0000000	AK 5.339355	AK1 -.1428223	AK2 .3186035			
THETAD X 37.06787	THETAD Y 38.66089	THETAD Z -64.70947	TIG 2899.060	DELLT4 1139.650			
RTARG X -6163634.	RTARG Y 2176544.	RTARG Z -1235646.	TGO 2.730000	PIPTIME1 2897.940			
DELV X 1.345500	DELV Y .2.047500	DELV Z 11.75850	PACTOFF -1.233700	YACTOFF 1.115075			
PCMD -1.115075	YCMD 1.043900	CSTEER .0000000	ADOT/ 3.076172	ADOT/OBP .2724790E-01			
ADOT/OBY -.3439934E-02	AK 5.185547	AK1 -.1977539	AK2 .2416992	THETAD X 37.06787			
THETAD Y 38.66089	THETAD Z -64.70947	ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0			
TEVENT 2899.060	PCMD -1.043900	YCMD 1.091350	LEMMASS .0000000	CSMMASS 25940.00			
ERRORX .0000000	ERROBY -1.461182	ERRORZ 43.90137	WBOD/OCR .0000000	WBOD/OCP .0000000			
WBOD/OCY .0000000	THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	VGTIG X -9.019279			
VGTIG Y -1.729298	VGTIG Z -.5337715	S/C MASS 1749.757	X CG 8.502293	Y CG .3076639			
Z CG .4987240	JET FUEL 45.42041	SLOSH AR -7.309920	IXX 30473.22	IYY 79027.18			
IZZ 84372.52	IXY 2037.933	IXZ 221.3135	IYZ 1604.225	WX DEG/S .5245586E-01			
WY DEG/S .8392937E-01	WZ DEG/S .4546174E-01	CONFIG 1.000000	AXSCM/S2 -.9327403E-03	AYSCM/S2 -.1142607E-02			
AZSCM/S2 .1772207E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 .1246291E-02			
AYSMM/S2 -.1853085E-02	AZSMM/S2 -.6031609E-03	ARSMM/S2 .2313216E-02					

TAPE WEDB RUN 6 VERIFICATION C4.18A TEST RUN DATE 10/23/68 EDIT DATE 23OCT68 SDS TIME 2971 AGC TIME 2901.07 ID 774 PAGE 86

PROGRAM 40 VERB 06 NOUN 40 R1 +00 02 R2 +00078 R3 +03987 FLASH 1 DSPTAB +11 00400

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
-.41222304	.79159081	-.45106113	-.41222304	.79159081	-.45106113	-.91538525	-.33729839	-.21977425
.00042095	-.49491686	-.86894023	.00042095	-.49491686	-.86894023	.15015817	-.79258227	.59098721
-.91108286	-.35838706	.20368291	-.91108285	-.35838706	.20368291	-.37352800	.50797915	.77616572

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -77.04	-77.04	-76.76
Z= -.000	AMG= 20.95	20.95	20.89
X= .000	AOG= 97.46	97.46	97.47

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2747152.4	5260999.7	-2988505.8	6645008.0	-3988.12	-1671.82	2081.28	4799.14	2897.94
AGC CM	-2747870.0	5261050.0	-2990490.0	6646237.1	-7080.52	-2782.35	1558.34	7765.54	
DELTA	717.6	-50.3	1984.2	-1229.1	3092.40	1110.53	522.94	-2966.40	
SDS LM	-3250692.5	5047192.3	-2867535.2	6653112.8	-6752.15	-3287.55	1879.52	7741.59	2970.41
AGC LM	-3250693.2	5047143.8	-2867562.1	6653087.9	-6752.14	-3287.57	1879.59	7741.60	
DELTA	.6	48.5	27.0	24.9	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-25.68	71.39	272435.2	457506.2	262948.6	-.11	3.28	560267.9	3057.20
SDS LM	-25.68	71.35	278934.7	281997.5	272314.5				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 00334	FLAGWD 3 10004	FLAGWD 4 00000	FLAGWD 5 40202	FLAGWD 6 50000	FLAGWD 7 16140
FLAGWD 8 50000	FLAGWD 9 40000						
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 51273	FAILREG 01111
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77777	PIPA Y 77777	PIPAZ 00076	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 77776	DAPDATR1 11113	DAPDATR2 11111	RENDEZTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 01440	CHAN 12 00040
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX	97.39380	CDUY	-76.69556	CDUZ	20.81909	CDUT	-19.76715	ADOT/	3.515625
ADOT/OOP	.0000000	ADOT/OOY	.0000000	AK	5.042725	AK1	-.2746582	AK2	.1977539
THETAD X	37.06787	THETAD Y	38.66089	THETAD Z	-64.70947	TIG	2899.060	DELLT4	1139.650
RTARG X	.6163634	RTARG Y	2.176504	RTARG Z	-1.235646	TOO	2.730000	PIPTIME1	2899.940
DELV X	1.170000	DELV Y	1.813500	DELV Z	10.58850	PACTOFF	-1.233700	YACTOFF	1.115075
PCMD	-.9727250	YCMD	1.067625	CSTEER	.0000000	ADOT/	1.318359	ADOT/OOP	.3309176E-02
ADOT/OOY	.0000000	AK	4.965820	AK1	-.3625488	AK2	.1538086	THETAD X	37.06787
THETAD Y	38.66089	THETAD Z	-64.70947	ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0
TEVENT	2899.060	PCMD	-.9490000	YCMD	1.020175	LEMMASS	.0000000	CSMMASS	25940.00
ERRORX	.0000000	ERROORY	4.086914	ERROORZ	43.90137	WOOD/OCR	.0000000	WOOD/OCP	.0000000
WOOD/OCY	.0000000	THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	VGTIG X	1.109219
VGTIG Y	2.036858	VGTIG Z	-.5868912	S/C MASS	1749.757	X CG	8.502293	Y CG	.3076639
Z CG	.4987240	JET FUEL	45.42078	SLOSH AR	-7.309920	IXX	30473.22	IYY	79027.18
IZZ	84372.52	IXY	2037.933	IXZ	221.3135	IYZ	1604.225	WX DEG/S	.5245586E-01
WY DEG/S	.9092348E-01	WZ DEG/S	.4196469E-01	CONFIG	1.000000	AXSCM/S2	.0000000	AYSCM/S2	-.1608977E-02
AZSCM/S2	.6086130E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	.2786894E-02
AYSMM/S2	-.5472050E-02	AZSMM/S2	.1497002E-02	ARSMM/S2	.6320690E-02				

PROGRAM 40 VERB 16 NOUN 40 R1 +00 02 R2 +00187 R3 +04106 FLASH 1 DSPTAB +11 00400

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
-.41222304	.79159081	-.45106113	-.41222304	.79159081	-.45106113	-.91394329	-.34015846	-.22136092
.00042095	-.49491686	-.86894023	.00042095	-.49491686	-.86894023	.15096331	-.79123831	.59258056
-.91108286	-.35838706	.20368291	-.91108285	-.35838706	.20368291	-.37672067	.50816703	.77449822

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -77.16	-77.16	-76.87
Z= -.000	AMG= 21.12	21.12	21.07
X= .000	AOG= 97.59	97.59	97.61

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2774050.2	5250303.7	-2981951.0	6644778.0	-7097.32	-2824.46	1580.70	7800.53	2901.94
AGC CM	-2776196.0	5249852.0	-2984224.0	6646337.6	-7078.95	-2815.95	1575.41	7779.66	
DELTA	2145.8	451.7	2273.0	1559.6	-18.37	-8.51	5.29	20.87	
SDS LM	-3264188.0	5040603.5	-2863768.3	6653102.8	-6743.33	-3301.21	1887.30	7741.60	2972.41
AGC LM	-3264188.6	5040555.0	-2863795.2	6653077.8	-6743.32	-3301.23	1887.37	7741.62	
DELTA	.6	48.6	26.8	24.9	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-25.64	71.53	272488.1	457828.2	262670.7	-.06	3.26	546055.3	-68.30
SDS LM	-25.64	71.49	278914.3	282020.8	272310.6				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 00334	FLAGWD 3 10004	FLAGWD 4 10000	FLAGWD 5 40202	FLAGWD 6 30000	FLAGWD 7 14140	
FLAGWD 8 50000	FLAGWD 9 40000							
RCSFLAGS 00013	RCSFLAGS 00011	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50160	FAILREG 01111	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77777	PIPA Y 77777	PIPAZ 00002	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120	
HOLDFLAG 00000	DAPDATR1 11113	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 01440	CHAN 12 00040	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765			

CDUX 97.53662	CDUY -76.80542	CDUZ 20.97290	CDUT -19.76715	AOST/ .0000000			
AOST/OBP .0000000	AOST/OBY .0000000	AK .0000000	AK1 .0000000	AK2 .0000000			
THETAD X 37.06787	THETAD Y 38.66089	THETAD Z -64.70947	TIG 2899.060	DELLT4 1139.650			
RTARG X -6163634.	RTARG Y 2176504.	RTARG Z -1235646.	TGO 2.730000	PIPTIME1 2901.940			
DELV X .0000000	DELV Y .0000000	DELV Z 3.627000	PACTOFF -1.233700	YACTOFF 1.115075			
PCMD .0000000	YCMD .0000000	CSTEER .0000000	AOST/ .6719605E-01	AOST/OBP .8682311E-01			
AOST/OBY .6757156E-01	AK .0000000	AK1 .0000000	AK2 .0000000	THETAD X 97.61353			
THETAD Y -76.86035	THETAD Z 21.07178	ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0			
TEVENT 2899.060	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 25940.00			
ERRORX .2197266E-01	ERROROY .3295899E-01	ERROROZ .1098633E-01	WBODOCR .0000000	WBODOCP .0000000			
WBODOCY .0000000	THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	VGTIG X 4.413700			
VGTIG Y 3.336716	VGTIG Z -1.325607	S/C MASS 1749.757	X CG 8.502293	Y CG .3076639			
Z CG .4987240	JET FUEL 45.42139	SLASH AR -7.309920	IXX 30473.22	IYY 79027.18			
IZZ 84372.52	IXY 2037.933	IXZ 221.3135	IYZ 1604.225	WX DEG/S .4546174E-01			
WY DEG/S .9791760E-01	WZ DEG/S .5595292E-01	CONFIG 1.000000	AXSCM/S2 .8861033E-03	AYSCM/S2 -.1142607E-02			
AZSCM/S2 .6086130E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 .2547083E-02			
AYSMM/S2 -.5181370E-02	AZSMM/S2 .2485314E-02	ARSMM/S2 .6285779E-02					

TAPE WEDB RUN 6 VERIFICATION C4.18A TEST RUN DATE 10/23/68 EDIT DATE 238CT68 SDS TIME 2975 AGC TIME 2905.05 ID 774 PAGE 88

PROGRAM 40 VERB 16 NOUN 40 R1 +00 02 R2 +00190 R3 +04110 FLASH 1 DSPTAB +11 00400

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
-.41222304	.79159081	-.45106113	-.41222304	.79159081	-.45106113	-.91235781	-.34320164	-.22319579
.00042095	-.49491686	-.86894023	.00042095	-.49491686	-.86894023	.15181756	-.78994370	.59408760
-.91108286	-.35838706	.20368291	-.91108285	-.35838706	.20368291	-.38020372	.50813460	.77281499

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -77.28	-77.28	-76.98
Z= -.000	AMG= 21.31	21.31	21.27
X= .000	AOG= 97.72	97.72	97.73

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2774005.0	5250326.7	-2981962.9	6644782.7	-7097.25	-2823.32	1578.58	7799.62	2901.94
AGC CM	-2776196.0	5249852.0	-2984224.0	6646337.6	-7078.95	-2815.95	1575.41	7779.66	
DELTA	2191.0	474.7	2261.1	-1554.9	-18.30	-7.37	3.17	19.96	
SDS LM	-3277665.8	5033987.5	-2859986.0	6653092.7	-6734.48	-3314.85	1895.07	7741.62	2974.41
AGC LM	-3277666.4	5033938.9	-2860012.7	6653067.7	-6734.46	-3314.86	1895.14	7741.64	
DELTA	.6	48.6	26.7	25.0	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-25.60	71.66	272541.4	457913.5	262617.4	-.07	3.30	561565.0	-67.26
SDS LM	-25.61	71.62	278893.7	282044.2	272306.7				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 00334	FLAGWD 3 10004	FLAGWD 4 10000	FLAGWD 5 40202	FLAGWD 6 30000	FLAGWD 7 14140	
FLAGWD 8 50000	FLAGWD 9 40000							
RCSFLAGS 00011	RCSFLAGS 00011	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50160	FAILREG 01111	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77777	PIPA Y 77777	PIPAZ 77677	FLAG 10 00000	FLAG 11 00000	8PTMODES 00120	
HOLDFLAG 00000	DAPDATR1 11113	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 01440	CHAN 12 00040	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765			

CDUX 97.67944	CDUY -76.91528	CDUZ 21.17065	CDUT -19.76715	ADOT/ .6440655E-01				
ADOT/OOP .8839220E-01	ADOT/OBY .6669984E-01	AK -.4394532E-01	AK1 -.6591797E-01	AK2 -.4394532E-01				
THETAD X 97.61353	THETAD Y -76.86035	THETAD Z 21.07178	TIG 2899.060	DELLT4 1139.650				
RTARG X -6163634.	RTARG Y 2176504.	RTARG Z -1235646.	TGO 2.730000	PIPTIME1 2903.940				
DELV X .0000000	DELV Y .0000000	DELV Z .1170000	PACTOFF -1.233700	YACTOFF 1.115075				
PCMD .0000000	YCMD .0000000	CSTEER .0000000	ADOT/ .6091968E-01	ADOT/OOP .8978695E-01				
ADOT/OBY .6443337E-01	AK -.8789063E-01	AK1 -.1647949	AK2 -.9887696E-01	THETAD X 97.61353				
THETAD Y -76.86035	THETAD Z 21.07178	ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0				
TEVENT 2899.060	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 25940.00				
ERRORX .1098633	ERRORY .2307129	ERRORZ .1318359	WBODY/OCR .0000000	WBODY/OCP .0000000				
WBODY/OCY .0000000	THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	VGTIG X 4.520226				
VGTIG Y 3.378582	VGTIG Z -1.349354	S/C MASS 1749.757	X CG 8.502293	Y CG .3076639				
Z CG .4987240	JET FUEL 45.42151	SLOSH AR -7.309920	IXX 30473.22	IYY 79027.18				
IZZ 84372.52	IXY 2037.933	IXZ 221.3135	IYZ 1604.225	WX DEG/S .4546174E-01				
WY DEG/S .1084088	WZ DEG/S .4895880E-01	CONFIG 1.000000	AXSCM/S2 -.9327403E-03	AYSCM/S2 -.1142607E-02				
AZSCM/S2 .4687020E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 .1878520E-02				
AYSMM/S2 -.4541874E-02	AZSMM/S2 .3560830E-03	ARSMM/S2 .4927906E-02						

PRØGRAM 40 VERB 16 NØUN 40 R1 +00 02 R2 +00078 R3 +04233 FLASH 1 DSPTAB +11 00400

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.91066480	-.34637237	-.22520161
.15274620	-.78873754	.59545040
-.38387251	.50785661	.77118278

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -77.41	-77.41	-77.10
Z= -.000	AMG= 21.51	21.51	21.46
X= .000	AØG= 97.85	97.85	97.86

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-27881902	52446667	-29787965	66448297	-70887.72	-28375.55	1586.61	7798.65	2903.94
AGC CM	-27903460	52442660	-29810660	66463886	-7071.50	-28302.24	1583.55	7779.72	
DELTA	2155.8	460.7	2269.5	-1559.0	-17.22	-7.30	3.05	18.93	
SDS LM	-32911259	50273442	-28561880	66530827	-6725.58	-3328.47	1902.84	7741.64	2976.41
AGC LM	-32911261	50272955	-28562146	66530576	-6725.57	-3328.48	1902.91	7741.65	
DELTA	.5	48.6	26.6	25.1	-.01	.02	-.07	-.01	

PØSITIØN	LAT	LØNG	ALT	APØGEE	PERIGEE	AZIMUTH	ELEVATIØN	RANGE	RANGE RATE
SDS CM	-25.57	71.80	272595.2	457957.1	262604.3	-.07	3.30	561432.3	-66.21
SDS LM	-25.57	71.75	278873.2	282067.7	272302.8				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 00334	FLAGWD 3 10004	FLAGWD 4 10000	FLAGWD 5 40202	FLAGWD 6 30000	FLAGWD 7 14140	
FLAGWD 8 50000	FLAGWD 9 40000							
RCSFLAGS 00011	RCSFLAGS 00011	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50160	FAILREG 01111	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77777	PIPA Y 77777	PIPAZ 77701	FLAG 10 00000	FLAG 11 00000	ØPTMØDES 00120	
HØLDFLAG 00000	DAPDATR1 11113	DAPDATR2 11111	REDØCTR 00001	IMØDE 30 36000	IMØDE 33 26000	CHAN 11 01440	CHAN 12 00040	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765			

CDUX	97.80029	CDUY	-77.03613	CDUZ	21.35742	CDUT	-19.76715	ADØT/	.5673543E-01
ADØT/ØBP	.9187907E-01	ADØT/ØBY	.6181822E-01	AK	-.1318359	AK1	-.2746582	AK2	-.1428223
THETAD X	97.61353	THETAD Y	-76.86035	THETAD Z	21.07178	TIG	2899.060	DELLT4	1139.650
RTARG X	-6163634.	RTARG Y	2176504.	RTARG Z	-1235646.	TGØ	2.730000	PIPTIME1	2905.940
DELV X	.0000000	DELV Y	.0000000	DELV Z	-3.744000	RACTØFF	-1.233700	YACTØFF	1.115075
PCMD	.0000000	YCMD	.0000000	CSTEER	.0000000	ADØT/	.5202815E-01	ADØT/ØBP	.9327382E-01
ADØT/ØBY	.6007478E-01	AK	-.1647949	AK1	-.3515625	AK2	-.2087402	THETAD X	97.61353
THETAD Y	-76.86035	THETAD Z	21.07178	ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0
TEVENT	2899.060	PCMD	.0000000	YCMD	.0000000	LEMMASS	.0000000	CSMMASS	25940.00
ERRØRX	.1867676	ERRØRY	.4174805	ERRØRZ	.2416992	WBØD/ØCR	.0000000	WBØD/ØCP	.0000000
WBØD/ØCY	.0000000	THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	VGTIG X	1.109219
VGTIG Y	2.036858	VGTIG Z	-.5867958	S/C MASS	1749.757	X CG	8.502293	Y CG	.3076639
Z CG	.4987240	JET FUEL	45.42249	SLØSH AR	-7.309920	IXX	30473.22	IYY	79027.18
IZZ	84372.52	IXY	2037.933	IXZ	221.3135	IYZ	1604.225	WX DEG/S	.3846763E-01
WY DEG/S	.1154029	WZ DEG/S	.4196469E-01	CØNFIG	1.000000	AXSCM/S2	-.9327403E-03	AYSCM/S2	-.1422429E-02
AZSCM/S2	.6004516E-02	XGYRØØUT	.0000000	YGYRØØUT	.0000000	ZGYRØØUT	.0000000	AXSMM/S2	.2438078E-02
AYSMM/S2	-.5715495E-02	AZSMM/S2	.7266999E-03	ARSMM/S2	.6256133E-02				

PROGRAM 40 VERB 16 NOUN 40 R1 +00 02 R2 +00076 R3 +04352 FLASH 1 DSPTAB +11 00400

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.90887594	-.34962940	-.22738504
.15369511	-.78760743	.59670115
-.38771415	.50737882	.76957345

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -77.54	-77.54	-77.23
Z= -.000	AMG= 21.73	21.73	21.67
X= .000	AOG= 97.96	97.96	97.99

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-28023 59.6	5238977.5	-2975614.5	6644876.7	-7078.10	-2851.02	1595.73	7795.78	2905.94
AGC CM	-28044 78.0	5238532.0	-2977892.0	6646439.3	-7060.49	-2843.13	1590.91	7775.92	
DELTA	2118.4	445.5	2277.5	1562.6	-17.60	-7.89	4.82	19.85	
SDS LM	-33045 68.2	5020673.6	-2852374.6	6653072.6	-6716.66	-3342.07	1910.59	7741.66	2978.41
AGC LM	-33045 68.7	5020625.0	-2852401.0	6653047.5	-6716.64	-3342.09	1910.66	7741.67	
DELTA	.5	48.7	26.4	25.1	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-25.53	71.93	272649.5	458001.2	262590.9	-.08	3.29	561300.3	-63.28
SDS LM	-25.53	71.89	278852.6	282091.2	272298.8				

FLAGWD 0	00200	FLAGWD 1	00001	FLAGWD 2	00334	FLAGWD 3	10004	FLAGWD 4	10000	FLAGWD 5	40202	FLAGWD 6	30000	FLAGWD 7	14140
FLAGWD 8	50000	FLAGWD 9	40000												
RCSFLAGS	00011	RCSFLAGS	00010	RSBBQ	42106	RSBBQ+1	03434	CADRFLSH	56016	CADR+1	73174	CADR+2	50160	FAILREG	01111
FAILRG+1	00000	FAILRG+2	00000	PIPA X	77777	PIPA Y	77777	PIPAZ	77703	FLAG 10	00000	FLAG 11	00000	OPTMODES	00120
HOLDFLAG	00000	DAPDATR2	11111	DAPDATR1	11113	REDOCTR	00001	IMODE 30	36000	IMODE 33	26000	CHAN 11	01440	CHAN 12	00040
CHAN 13	00100	CHAN 14	00000	CHAN 30	37373	CHAN 31	37777	CHAN 32	77777	CHAN 33	67765				

CDUX	97.92114	CDUY	-77.15698	CDUZ	21.55518	CDUT	-19.76715	ADOT/	.4854128E-01
ADOT/OBP	.9484292E-01	ADOT/OBY	.5833135E-01	AK	-.1977539	AK1	-.4614258	AK2	-.2636719
THETAD X	97.61353	THETAD Y	-76.86035	THETAD Z	21.07178	TIG	2899.060	DELLT4	1139.650
RTARG X	-6163634.	RTARG Y	2176504.	RTARG Z	-1235646.	TGO	2.730000	PIPTIME1	2907.940
DELV X	.0000000	DELV Y	.0000000	DELV Z	-3.627000	ADOT/OFF	-1.115075	YACTOFF	1.115075
PCMD	.0000000	YCMD	.0000000	CSTEER	.0000000	AD0T/	.4557744E-01	ADOT/OBP	.9710938E-01
ADOT/OBY	.5693660E-01	AK	-.2416992	AK1	-.5712891	AK2	-.3186035	THETAD X	97.61353
THETAD Y	-76.86035	THETAD Z	21.07178	ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0
TEVENT	2899.060	PCMD	.0000000	YCMD	.0000000	LEMMASS	.0000000	CSMMASS	25940.00
ERRORX	.2636719	ERRORY	.6152344	ERRORZ	.3515625	WBODOCR	.0000000	WBODOCP	.0000000
WBODOCY	.0000000	THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	VGTIG X	-2.195263
VGTIG Y	.7369995	VGTIG Z	.1519203	S/C MASS	1749.757	X CG	8.502293	Y CG	.3076639
Z CG	.4987240	JET FUEL	45.42249	SLOSH AR	-7.309920	IXX	30473.22	IYY	79027.18
IZZ	84372.52	IXY	2037.933	IXZ	221.3135	IYZ	1604.225	WX DEG/S	.2797646E-01
WY DEG/S	.1154029	WZ DEG/S	.4895880E-01	CONFIG	1.000000	AXSCM/S2	-.9327403E-03	AYSCM/S2	-.1515703E-02
AZSCM/S2	.0000000	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	.1253558E-02
AYSMM/S2	-.1526070E-03	AZSMM/S2	-.1246291E-02	ARSMM/S2	.1774242E-02				

PROGRAM 40 VERB 16 NOUN 40 R1 +00 02 R2 +00180 R3 +04467 FLASH 1 DSPTAB +11 00000

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
-.41222304	.79159081	-.45106113	-.41222304	.79159081	-.45106113	-.90694928	-.35303807	-.22979760
.00042095	-.49491686	-.86894023	.00042095	-.49491686	-.86894023	.15469956	-.78655553	.59782743
-.91108286	-.35838706	.20368291	-.91108285	-.35838706	.20368291	-.39180422	.50664902	.76798081

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -77.67	-77.67	-77.37
Z= -.000	AMG= 21.96	21.96	21.88
X= .000	AOG= 98.07	98.07	98.09

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2816513.3	5233259.5	-2972416.3	6644923.7	-7073.23	-2866.53	1602.58	7798.45	2907.94
AGC CM	-2818588.0	5232832.0	-2974702.0	6646489.4	-7049.56	-2856.05	1598.27	7772.24	
DELTA	2074.7	427.5	2285.7	1565.7	23.67	10.48	4.31	26.21	
SDS LM	-3317992.5	5013975.9	-2848545.7	6653062.5	-6707.69	-3355.65	1918.33	7741.67	2980.41
AGC LM	-3317993.0	5013927.2	-2848572.0	6653037.3	-6707.68	-3355.67	1918.40	7741.69	
DELTA	.5	48.7	26.3	25.2	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-25.49	72.07	272704.2	458044.7	262577.2	-.09	3.29	561168.9	-65.83
SDS LM	-25.50	72.02	278831.9	282114.8	272294.8				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 00334	FLAGWD 3 10004	FLAGWD 4 10000	FLAGWD 5 40202	FLAGWD 6 30000	FLAGWD 7 14140
FLAGWD 8 50000	FLAGWD 9 40000						
RCSFLAGS 00010	RCSFLAGS 00010	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50160	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77777	PIPA Y 77777	PIPAZ 77705	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 00000	DAPDATR1 11113	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 01440	CHAN 12 00040
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX	98.05298	CDUY	-77.28882	CDUZ	21.77490	CDUT	-19.76715	ADOT/	.4278794E-01
ADOT/OOP	.9920151E-01	ADOT/OOY	.5693660E-01	AK	-.2636719	AK1	-.6701660	AK2	-.3955078
THETAD X	97.61353	THETAD Y	-76.86035	THETAD Z	21.07178	TIG	2899.060	DELLT4	1139.650
RTARG X	-6163634.	RTARG Y	2176504.	RTARG Z	-1235646.	TGO	2.730000	PIPTIME1	2909.940
DELV X	.0000000	DELV Y	.0000000	DELV Z	-3.510000	PACTOFF	-1.233700	YACTOFF	1.115075
PCMD	.0000000	YCMD	.0000000	CSTEER	.0000000	ADOT/	.3895239E-01	ADOT/OOP	.1016423
ADOT/OOY	.5745963E-01	AK	-.2966309	AK1	-.7910156	AK2	-.4284668	THETAD X	97.61353
THETAD Y	-76.86035	THETAD Z	21.07178	ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0
TEVENT	2899.060	PCMD	.0000000	YCMD	.0000000	LEMMASS	.0000000	CSMMASS	25940.00
ERRORX	.3076172	ERROOY	.8459473	ERROORZ	.4724121	WBODOCR	.0000000	WBODOCP	.0000000
WBODOCY	.0000000	THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	VGTIG X	-5.393124
VGTIG Y	-.5208969	VGTIG Z	.8667946	S/C MASS	1749.757	X CG	8.502293	Y CG	.3076639
Z CG	.4987240	JET FUEL	45.42261	SLOSH AR	-7.309920	IXX	30473.22	IYY	79027.18
IZZ	84372.52	IXY	2037.933	IXZ	221.3135	IYZ	1604.225	WX DEG/S	.2447940E-01
WY DEG/S	.1258940	WZ DEG/S	.5245586E-01	CONFIG	1.000000	AXSCM/S2	-.9327403E-03	AYSCM/S2	-.1422429E-02
AZSCM/S2	.2996428E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	.1816750E-02
AYSMM/S2	-.2932234E-02	AZSMM/S2	-.2216435E-03	ARSMM/S2	.3456545E-02				

PROGRAM 40 VERB 16 NOUN 40 R1 +00 02 R2 +00289 R3 +04578 FLASH 1 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.90487885	-.35660720	-.23243523
.15574145	-.78554296	.59888887
-.39615583	.50572109	.76635885

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -77.80	-77.80	-77.50
Z= -.000	AMG= 22.21	22.21	22.13
X= .000	AOG= 98.17	98.17	98.20

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2830652.5	5227514.1	-2969201.2	6644971.9	-7066.72	-2880.49	1611.41	7799.51	2909.94
AGC CM	-2832676.0	5227106.0	-2971498.0	6646539.8	-7038.69	-2868.99	1605.65	7768.68	
DELTA	2023.5	408.1	2296.8	-1567.8	-28.03	-11.50	5.76	30.83	
SDS LM	-3331398.9	5007251.0	-2844701.3	6653052.5	-6698.69	-3369.22	1926.06	7741.69	2982.41
AGC LM	-3331399.4	5007202.3	-2844727.5	6653027.2	-6698.68	-3369.24	1926.13	7741.70	
DELTA	.5	48.7	26.1	25.3	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-25.46	72.20	272759.3	458087.3	262564.3	-.09	3.28	561037.4	-66.78
SDS LM	-25.46	72.16	278811.3	282138.5	272290.8				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 00334	FLAGWD 3 10004	FLAGWD 4 10000	FLAGWD 5 40202	FLAGWD 6 30000	FLAGWD 7 14140	
FLAGWD 8 50000	FLAGWD 9 40000							
RCSFLAGS 00010	RCSFLAGS 00011	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50160	FAILREG 00000	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77777	PIPA Y 77777	PIPAZ 77710	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120	
HOLDFLAG 00000	DAPDATR1 11113	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 01440	CHAN 12 00040	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765			

CDUX 98.14087	CDUY -77.42065	CDUZ 22.00562	CDUT -19.76715	ADOT/ .3563986E-01			
ADOT/OOP .1046062	ADOT/OBY .5815700E-01	AK -.3295898	AK1 -.9008789	AK2 -.4943848			
THETAD X 97.61353	THETAD Y -76.86035	THETAD Z 21.07178	TIG 2899.060	DELLT4 1139.650			
RTARG X -6163634.	RTARG Y 2176504.	RTARG Z -1235646.	TGO 2.730000	PIPTIME1 2911.940			
DELV X .0000000	DELV Y .0000000	DELV Z -3.393000	PACTOFF -1.233700	YACTOFF 1.115075			
PCMD .0000000	YCMD .0000000	CSTEER .0000000	ADOT/ .3302470E-01	ADOT/OOP .1082674			
ADOT/OBY .5850569E-01	AK -.3515625	AK1 -1.021729	AK2 -.5493164	THETAD X 97.61353			
THETAD Y -76.86035	THETAD Z 21.07178	ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0			
TEVENT 2899.060	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 25940.00			
ERRORX .3515625	ERROBY 1.087646	ERROBZ .5822754	WBOD/OCR .0000000	WBOD/OCP .0000000			
WBOD/OCY .0000000	THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	VGTIG X -8.484364			
VGTIG Y -1.736832	VGTIG Z 1.557827	S/C MASS 1749.757	X CG 8.502293	Y CG .3076639			
Z CG .4987240	JET FUEL 45.42297	SLOSH AR -7.309920	IXX 30473.22	IYY 79027.18			
IZZ 84372.52	IXY 2037.933	IXZ 221.3135	IYZ 1604.225	WX DEG/S .2797646E-01			
WY DEG/S .1398823	WZ DEG/S .4196469E-01	CONFIG 1.000000	AXSCM/S2 -.9327403E-03	AYSCM/S2 -.1515703E-02			
AZSCM/S2 .6086130E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 .2587052E-02			
AYSMM/S2 -.5759097E-02	AZSMM/S2 .8066369E-03	ARSMM/S2 .6364801E-02					

PRØGRAM 40 VERB 16 NØUN 40 R1 +00 02 R2 +00393 R3 +04684 FLASH 1 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.90267086	-.36032295	-.23527217
.15681028	-.78454900	.59991169
-.40074420	.50462890	.76469135

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -77.94	-77.94	-77.62
Z= -.000	AMG= 22.48	22.48	22.39
X= .000	AØG= 98.27	98.27	98.29

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2844776.7	5221741.9	-2965969.3	6645022.0	-7059.86	-2894.21	1621.70	7800.51	2911.94
AGC CM	-2846742.0	5221356.0	-2968280.0	6646592.0	-7027.89	-2881.96	1613.05	7765.23	
DELTA	1965.3	385.9	2310.7	-1570.0	-31.97	-12.25	8.65	35.28	
SDS LM	-3344787.2	5000499.0	-2840841.5	6653042.4	-6689.65	-3382.77	1933.78	7741.71	2984.41
AGC LM	-3344787.7	5000450.3	-2840867.5	6653017.0	-6689.64	-3382.78	1933.85	7741.72	
DELTA	.4	48.8	26.0	25.3	-.01	.02	-.07	-.01	

PØSITIØN	LAT	LØNG	ALT	APØGEE	PERIGEE	AZIMUTH	ELEVATIØN	RANGE	RANGE RATE
SDS CM	-25.42	72.34	272814.9	458128.5	262552.4	-.10	3.28	560906.3	-67.69
SDS LM	-25.42	72.29	278790.5	282162.3	272286.8				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 00334	FLAGWD 3 10004	FLAGWD 4 10000	FLAGWD 5 40202	FLAGWD 6 30000	FLAGWD 7 14140
FLAGWD 8 50000	FLAGWD 9 40000						
RCSFLAGS 00011	RCSFLAGS 00011	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50160	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77777	PIPA Y 77777	PIPAZ 77712	FLAG 10 00000	FLAG 11 00000	BPTMBDES 00120
HØLDFLAG 00000	DAPDATR2 11111	DAPDATR1 11113	REDØCTR 00001	IMØDE 30 36000	IMØDE 33 26000	CHAN 11 01440	CHAN 12 00040
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX	98.25073	CDUY	-77.54150	CDUZ	22.24731	CDUT	-19.76715	ADØT/	.3128127E-01
ADØT/ØBP	.1121029	ADØT/ØBY	.5833135E-01	AK	-.3735352	AK1	-1.153564	AK2	-.6152344
THETAD X	97.61353	THETAD Y	-76.86035	THETAD Z	21.07178	TIG	2899.060	DELLT4	1139.650
RTARG X	-6163634.	RTARG Y	21765Ø4.	RTARG Z	-1235646.	TGØ	2.730000	PIPTIME1	2913.940
DELV X	.0000000	DELV Y	.0000000	DELV Z	-3.217500	RACTØFF	-1.233700	YACTØFF	1.115075
PCMD	.0000000	YCMD	.0000000	CSTEER	.0000000	ADØT/	.2971218E-01	ADØT/ØBP	.1171589
ADØT/ØBY	.5833135E-01	AK	-.3955078	AK1	-1.296387	AK2	-.6591797	THETAD X	97.61353
THETAD Y	-76.86035	THETAD Z	21.07178	ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0
TEVENT	2899.060	PCMD	.0000000	YCMD	.0000000	LEMMASS	.0000000	CSMMASS	25940.00
ERRØRX	.4064941	ERRØRY	1.362305	ERRØRZ	.6921387	WBØD/ØCP	.0000000	WBØD/ØCP	.0000000
WBØD/ØCY	.0000000	THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	VGTIG X	-11.41577
VGTIG Y	-2.889919	VGTIG Z	2.213097	S/C MASS	1749.757	X CG	8.502293	Y CG	.3076639
Z CG	.4987240	JET FUEL	45.42310	SLOSH AR	-7.309920	IXX	30473.22	IYY	79027.18
IZZ	84372.52	IXY	2037.933	IXZ	221.3135	IYZ	1604.225	WX DEG/S	.2447940E-01
WY DEG/S	.1538705	WZ DEG/S	.4196469E-01	CØNFIG	1.000000	AXSCM/S2	.0000000	AYSCM/S2	-.1515703E-02
AZSCM/S2	.6004516E-02	XGYRØUT	.0000000	YGYRØUT	.0000000	ZGYRØUT	.0000000	AXSMM/S2	.2761460E-02
AYSMM/S2	-.5308543E-02	AZSMM/S2	.1649609E-02	ARSMM/S2	.6207052E-02				

PROGRAM 40 VERB 16 NOUN 40 R1 +00 02 R2 +00494 R3 +04786 FLASH 1 DSPTAB +11 00000

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
-.41222304	.79159081	-.45106113	-.41222304	.79159081	-.45106113	-.90030861	-.36417389	-.23837399
.00042095	-.49491686	-.86894023	.00042095	-.49491686	-.86894023	.15789199	-.78362393	.60083652
-.91108286	-.35838706	.20368291	-.91108285	-.35838706	.20368291	-.40560460	.50329995	.76300263

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -78.09	-78.09	-77.76
Z= -.000	AMG= 22.77	22.77	22.68
X= .000	AOG= 98.37	98.37	98.40

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2858883.7	5215938.9	-2962722.1	6645070.1	-7050.76	-2908.72	1627.64	7798.92	2913.94
AGC CM	-2860788.0	5215580.0	-2965046.0	6646644.3	-7017.21	-2894.97	1620.47	7761.96	
DELTA	1904.3	358.9	2323.9	1574.2	33.56	13.74	7.17	36.96	
SDS LM	-3358157.5	4993720.0	-2836966.2	6653032.2	-6680.58	-3396.30	1941.49	7741.73	2986.41
AGC LM	-3358157.9	4993671.2	-2836992.1	6653006.9	-6680.56	-3396.31	1941.56	7741.74	
DELTA	.4	48.8	25.9	25.4	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-25.38	72.47	272871.0	458169.4	262538.6	-.11	3.27	560776.3	-65.99
SDS LM	-25.39	72.42	278769.8	282186.2	272282.7				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 00334	FLAGWD 3 10004	FLAGWD 4 10000	FLAGWD 5 40202	FLAGWD 6 30000	FLAGWD 7 14140
FLAGWD 8 50000	FLAGWD 9 40000						
RCSFLAGS 00011	RCSFLAGS 00011	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50160	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77777	PIPA Y 77777	PIPAZ 77716	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 00000	DAPDATR2 11111	DAPDATR1 11113	REDOCTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 01440	CHAN 12 00040
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX 98.34961	CDUY -77.68433	CDUZ 22.52197	CDUT -19.76715	ADOT/ .2866611E-01			
ADOT/OOP .1218662	ADOT/OOY .5815700E-01	AK -.4174805	AK1 -1.439209	AK2 -.7250977			
THETAD X 97.61353	THETAD Y -76.86035	THETAD Z 21.07178	TIG 2899.060	DELLT4 1139.650			
RTARG X -6163634.	RTARG Y 2176504.	RTARG Z -1235646.	TGO 2.730000	PIPTIME1 2915.940			
DELV X .0000000	DELV Y .0000000	DELV Z -3.100500	PACTOFF -1.233700	YACTOFF 1.115075			
PCMD .0000000	YCMD .0000000	CSTEER .0000000	ADOT/ .2831743E-01	ADOT/OOP .1269221			
ADOT/OOY .5815700E-01	AK -.4394531	AK1 -1.593018	AK2 -.7910156	THETAD X 97.61353			
THETAD Y -76.86035	THETAD Z 21.07178	ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0			
TEVENT 2899.060	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 25940.00			
ERRORX .4614258	ERRORY 1.658936	ERRORZ .8020020	WBODYOCR .0000000	WBODYOCP .0000000			
WBODYOCY .0000000	THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	VGTIG X -14.24055			
VGTIG Y -4.001045	VGTIG Z 2.844524	S/C MASS 1749.757	X CG 8.502293	Y CG .3076639			
Z CG .4987240	JET FUEL 45.42346	SLOSH AR -7.309920	IXX 30473.22	IYY 79027.18			
IZZ 84372.52	IXY 2037.933	IXZ 221.3135	IYZ 1604.225	WX DEG/S .2098235E-01			
WY DEG/S .1573676	WZ DEG/S .5245586E-01	CONFIG 1.000000	AXSCM/S2 .0000000	AYSCM/S2 -.1142607E-02			
AZSCM/S2 .4687020E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 .2125598E-02			
AYSMM/S2 -.4142190E-02	AZSMM/S2 .1318961E-02	ARSMM/S2 .4838962E-02					

PROGRAM 40 VERB 16 NOUN 40 R1 +00 02 R2 +00588 R3 +04880 FLASH 1 DSPTAB +11 00000

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
-.41222304	.79159081	-.45106113	-.41222304	.79159081	-.45106113	-.89779520	-.36820793	-.24163461
.00042095	-.49491686	-.86894023	.00042095	-.49491686	-.86894023	.15908027	-.78273416	.60168171
-.91108286	-.35838706	.20368291	-.91108285	-.35838706	.20368291	-.41067958	.50174689	.76130915

REFSMMAT FR	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= 78.23	78.23	77.90
Z= -.000	AMG= 23.07	23.07	22.96
X= .000	AOG= 98.46	98.46	98.49

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2872975.9	5210108.1	-2959458.9	6645119.6	-7042.86	-2922.67	1635.86	7798.71	2915.94
AGC CM	-2874812.0	5209778.0	-2961798.0	6646696.8	-7006.60	-2908.02	1627.91	7758.80	
DELTA	1836.1	330.1	2339.1	1577.2	-36.26	-14.65	7.95	39.91	
SDS LM	-3371509.5	4986913.9	-2833075.5	6653022.1	-6671.47	-3409.81	1949.19	7741.74	2988.41
AGC LM	-3371509.9	4986865.0	-2833101.3	6652996.7	-6671.45	-3409.83	1949.26	7741.76	
DELTA	.4	48.8	25.7	25.5	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	25.35	72.61	272927.5	458208.0	262525.6	-.11	3.27	560646.2	-65.68
SDS LM	25.35	72.56	278749.0	282210.2	272278.6				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 00334	FLAGWD 3 10004	FLAGWD 4 10000	FLAGWD 5 40202	FLAGWD 6 30000	FLAGWD 7 14140
FLAGWD 8 50000	FLAGWD 9 40000						
RCSFLAGS 00011	RCSFLAGS 00011	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50160	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 00001	PIPA Y 77777	PIPAZ 77721	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 00000	DAPDATR1 11113	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 01440	CHAN 12 00040
CHAN 13 40100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX 98.44849	CDUY -77.81616	CDUZ 22.81860	CDUT -19.76715	AODT/ .2744571E-01			
AODT/OBP .1323268	AODT/OBY .5815700E-01	AK -.4614258	AK1 -1.724854	AK2 -.8349609			
THETAD X 97.61353	THETAD Y -76.86035	THETAD Z 21.07178	TIG 2899.060	DELLT4 1139.650			
RTARG X -6163634.	RTARG Y 2176504.	RTARG Z -1235646.	TGO 2.730000	PIPTIME1 2917.940			
DELV X .0000000	DELV Y .0000000	DELV Z -2.866500	PACTOFF -1.233700	YACTOFF 1.115075			
PCMD .0000000	YCMD .0000000	CSTEER .0000000	AODT/ .2570227E-01	AODT/OBP .1372084			
AODT/OBY .5920306E-01	AK -.4833984	AK1 -1.878662	AK2 -.9118652	THETAD X 97.61353			
THETAD Y -76.86035	THETAD Z 21.07178	ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0			
TEVENT 2899.060	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 25940.00			
ERRORX .4943848	ERROBY 1.955566	ERROBZ .9338379	WBODOCR .0000000	WBODOCP .0000000			
WBODOCY .0000000	THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	VGTIG X -16.85209			
VGTIG Y -5.028343	VGTIG Z 3.428364	S/C MASS 1749.757	X CG 8.502293	Y CG .3076639			
Z CG .4987240	JET FUEL 45.42383	SLOSH AR -7.309920	IXX 30473.22	IYY 79027.18			
IZZ 84372.52	IXY 2037.933	IXZ 221.3135	IYZ 1604.225	WX DEG/S .1049118E-01			
WY DEG/S .1573676	WZ DEG/S .4546174E-01	CONFIG 1.000000	AXSCM/S2 -.9327403E-03	AYSCM/S2 -.1515703E-02			
AZSCM/S2 .1492385E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 .1595107E-02			
AYSMM/S2 -.1540604E-02	AZSMM/S2 -.7085324E-03	ARSMM/S2 .2328056E-02					

PRØGRAM 40 VERB 16 NØUN 40 R1 +00 02 R2 +00676 R3 +04968 FLASH 1 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.89514875	-.37234306	-.24509144
.16030669	-.78192353	.60240936
-.41594577	.49995542	.75962639

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -78.38	-78.38	-78.05
Z= -.000	AMG= 23.38	23.38	23.27
X= .000	AØG= 98.55	98.55	98.59

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2887053.2	5204249.3	-2956179.1	6645169.8	-7034.76	-2936.55	1643.83	7798.29	2917.94
AGC CM	-2888814.0	5203948.0	-2958534.0	6646746.9	-6996.16	-2921.13	1635.39	7755.88	
DELTA	1760.8	301.3	2354.9	1577.1	-38.60	-15.42	8.44	42.41	
SDS LM	-3384843.3	4980080.7	-2829169.5	6653012.0	-6662.32	-3423.30	1956.87	7741.76	2990.41
AGC LM	-3384843.7	4980031.9	-2829195.1	6652986.5	-6662.31	-3423.32	1956.94	7741.78	
DELTA	.4	48.9	25.6	25.5	-.01	.02	-.07	-.01	

PØSITIØN	LAT	LØNG	ALT	APØGEE	PERIGEE	AZIMUTH	ELEVATIØN	RANGE	RANGE RATE
SDS CM	-25.31	72.74	272984.4	458246.4	262513.0	-.12	3.26	560515.8	-65.16
SDS LM	-25.31	72.69	278728.1	282234.2	272274.5				

FLAGWD 0	00200	FLAGWD 1	00001	FLAGWD 2	00334	FLAGWD 3	10004	FLAGWD 4	10000	FLAGWD 5	40202	FLAGWD 6	30000	FLAGWD 7	14140
FLAGWD 8	50000	FLAGWD 9	40000												
RCSFLAGS	00011	RCSFLAGS	00011	RSBBQ	42106	RSBBQ+1	03434	CADRFLSH	56016	CADR+1	73174	CADR+2	50160	FAILREG	00000
FAILRG+1	00000	FAILRG+2	00000	PIPA X	77777	PIPA Y	77776	PIPAZ	77720	FLAG 10	00000	FLAG 11	00000	ØPTMØDES	00120
HØLDFLAG	00000	DAPDATR1	11113	DAPDATR2	11111	REDØCTR	00001	IMØDE 30	36000	IMØDE 33	26000	CHAN 11	01440	CHAN 12	00040
CHAN 13	40100	CHAN 14	00000	CHAN 30	37373	CHAN 31	37777	CHAN 32	77777	CHAN 33	67765				

CDUX	98.53638	CDUY	-77.95898	CDUZ	23.11523	CDUT	-19.76715	ADØT/	.2413318E-01
ADØT/ØBP	.1401722	ADØT/ØBY	.6024912E-01	AK	-.5053711	AK1	-2.021484	AK2	-.9667969
THETAD X	97.61353	THETAD Y	-76.86035	THETAD Z	21.07178	TIG	2899.060	DELLT4	1139.650
RTARG X	-6163634.	RTARG Y	2176504.	RTARG Z	-1235646.	TGØ	2.730000	PIPTIME1	2919.940
DELV X	.5850001E-01	DELV Y	.0000000	DELV Z	-2.691000	PACTØFF	-1.233700	YACTØFF	1.115075
PCMD	.0000000	YCMD	.0000000	CSTEER	.0000000	ADØT/	.2291278E-01	ADØT/ØBP	.1443565
ADØT/ØBY	.6059781E-01	AK	-.5273437	AK1	-2.197266	AK2	-1.021729	THETAD X	97.61353
THETAD Y	-76.86035	THETAD Z	21.07178	ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0
TEVENT	2899.060	PCMD	.0000000	YCMD	.0000000	LEMMASS	.0000000	CSMMASS	25940.00
ERRØRX	.5163574	ERRØRY	2.274170	ERRØRZ	1.054687	WBØD/ØCR	.0000000	WBØD/ØCP	.0000000
WBØD/ØCY	.0000000	THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	VGTIG X	-19.27977
VGTIG Y	-6.039047	VGTIG Z	4.002857	S/C MASS	1749.757	X CG	8.502293	Y CG	.3076639
Z CG	.4987240	JET FUEL	45.42346	SLOSH AR	-7.309920	IXX	30473.22	IYY	79027.18
IZZ	84372.52	IXY	2037.933	IXZ	221.3135	IYZ	1604.225	WX DEG/S	.1049118E-01
WY DEG/S	.1678587	WZ DEG/S	.3846763E-01	CØNFIG	1.000000	AXSCM/S2	.0000000	AYSCM/S2	-.1608977E-02
AZSCM/S2	.4593746E-02	XGYRØØUT	.0000000	YGYRØØUT	.0000000	ZGYRØØUT	.0000000	AXSMM/S2	.2565251E-02
AYSMM/S2	-.3971415E-02	AZSMM/S2	.1217223E-02	ARSMM/S2	.4882036E-02				

PROGRAM 40 VERB 16 NOUN 40 R1 +00 02 R2 +00766 R3 +05058 FLASH 1 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.4122230+	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.89235401	-.37660670	-.24874067
.16158414	-.78116798	.60304832
-.42142010	.49793959	.75793171

REFSMMAT ER		GIMBAL ANGLE	SDS CDU	AGC CDU
Y=	.000	AIG=	-78.54	-78.19
Z=	-.000	AMG=	23.71	23.59
X=	.000	AOG=	98.63	98.67

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2901115.2	5198361.9	-2952883.4	6645220.6	-7027.26	-2950.81	1651.81	7798.60	2919.94
AGC CM	-2902796.0	5198092.0	-2955256.0	6646798.0	-6985.87	-2934.23	1642.87	7753.14	
DELTA	1680.8	269.9	2372.6	-1577.4	-41.39	-16.57	8.95	45.46	
SDS LM	-3398158.8	4973220.7	-2825248.0	6653001.8	-6653.14	-3436.78	1964.55	7741.78	2992.41
AGC LM	-3398159.1	4973171.7	-2825273.5	6652976.3	-6653.12	-3436.79	1964.62	7741.79	
DELTA	.3	48.9	25.4	25.6	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-25.27	72.87	273041.8	458285.7	262500.6	-.12	3.26	560385.3	-65.36
SDS LM	-25.28	72.82	278707.3	282258.3	272270.3				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 00334	FLAGWD 3 10004	FLAGWD 4 10000	FLAGWD 5 40202	FLAGWD 6 30000	FLAGWD 7 14140
FLAGWD 8 50000	FLAGWD 9 40000						
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50160	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77777	PIPA Y 77777	PIPAZ 77730	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 00000	DAPDATR1 11113	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 01440	CHAN 12 00040
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX	98.63525	CDUY	-78.10181	CDUZ	23.43384	CDUT	-19.76715
ADOT/OOP	.1478434	ADOT/OBY	.6129519E-01	AK	-.5273437	AK1	-2.351074
THETAD X	97.61353	THETAD Y	-76.86035	THETAD Z	21.07178	TIG	2899.060
RTARG X	-6163634.	RTARG Y	2176504.	RTARG Z	-1235646.	TGO	2.730000
DELV X	.0000000	DELV Y	-.5850001E-01	DELV Z	-2.749500	PACTOFF	-1.233700
PCMD	.0000000	YCMD	.0000000	CSTEER	.0000000	ADOT/	.1890287E-01
ADOT/OBY	.6286428E-01	AK	-.5383301	AK1	-2.515869	AK2	-1.153564
THETAD Y	-76.86035	THETAD Z	21.07178	ELEV	-41.07942	CENTANG	61.50000
TEVENT	2899.060	PCMD	.0000000	YCMD	.0000000	LEMMASS	.0000000
ERRORX	.5383301	ERRORY	2.603760	ERRORZ	1.175537	WBODOCR	.0000000
WBODOCY	.0000000	THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490
VGTIG Y	-7.053375	VGTIG Z	4.512024	S/C MASS	1749.757	X CG	8.502293
Z CG	.4987240	JET FUEL	45.42346	SLOSH AR	-7.309920	IXX	30473.22
IZZ	84372.52	IXY	2037.933	IXZ	221.3135	IYZ	1604.225
WY DEG/S	.1818470	WZ DEG/S	.4196469E-01	CONFIG	1.000000	AXSCM/S2	.8861033E-03
AZSCM/S2	.4500472E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000
AYSMM/S2	-.3502694E-02	AZSMM/S2	.2042027E-02	ARSMM/S2	.4881136E-02		

ADOT/	.2134368E-01		
AK2	-1.087646		
DELLT4	1139.650		
PIPTIME1	2921.940		
YACTOFF	1.115075		
ADOT/OBP	.1515046		
THETAD X	97.61353		
DELTAR	117620.0		
CSMMASS	25940.00		
WBODOCP	.0000000		
VGTIG X	-21.78469		
Y CG	.3076639		
IYY	79027.18		
WX DEG/S	.1049118E-01		
AYSCM/S2	-.1608977E-02		
AXSMM/S2	.2717858E-02		

PROGRAM 40 VERB 16 NOUN 40 R1 +00 02 R2 +00840 R3 +051XX FLASH 1 DSPTAB +11 00000

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
-.41222304	.79159081	-.45106113	-.41222304	.79159081	-.45106113	-.88940048	-.38101506	-.25257635
.00042095	-.49491686	-.86894023	.00042095	-.49491686	-.86894023	.16294098	-.78047109	.60358524
-.91108286	-.35838706	.20368291	-.91108285	-.35838706	.20368291	-.42710328	.49567318	.75623369

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -78.70	-78.70	-78.33
Z= -.000	AMG= 24.06	24.06	23.94
X= .000	AOG= 98.70	98.70	98.75

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2915161.4	5192446.5	-2949571.8	6645272.0	-7019.15	-2965.03	1659.97	7798.42	2921.94
AGC CM	-2916758.0	5192210.0	-2951962.0	6646849.0	-6975.47	-2947.32	1650.40	7750.33	
DELTA	1596.6	236.5	2390.2	-1576.9	-43.68	-17.71	9.57	48.09	
SDS LM	-3411455.9	4966333.6	-2821311.3	6652991.7	-6643.92	-3450.23	1972.22	7741.80	2994.41
AGC LM	-3411456.2	4966284.7	-2821336.6	6652966.0	-6643.91	-3450.25	1972.29	7741.81	
DELTA	.3	48.9	25.3	25.6	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-25.24	73.01	273099.6	458325.6	262488.4	-.13	3.25	560255.3	-65.09
SDS LM	-25.24	72.95	278686.3	282282.5	272266.1				

FLAGWD 0	002CO	FLAGWD 1	00001	FLAGWD 2	00334	FLAGWD 3	10004	FLAGWD 4	10000	FLAGWD 5	40202	FLAGWD 6	30000	FLAGWD 7	14140
FLAGWD 8	50000	FLAGWD 9	40000												
RCSFLAGS	00001	RCSFLAGS	00001	RSBBQ	42106	RSBBQ+1	03434	CADRFLSH	56016	CADR+1	73174	CADR+2	50160	FAILREG	00000
FAILRG+1	00000	FAILRG+2	00000	PIPA X	77777	PIPA Y	77777	PIPAZ	77734	FLAG 10	00000	FLAG 11	00000	OPTMODES	00120
HOLDFLAG	00000	DAPDATR1	11113	DAPDATR2	11111	REDOCTR	00001	IMODE 30	36000	IMODE 33	26000	CHAN 11	01440	CHAN 12	00040
CHAN 13	00100	CHAN 14	00000	CHAN 30	37373	CHAN 31	37777	CHAN 32	77777	CHAN 33	67765				

CDUX	98.71216	CDUY	-78.25562	CDUZ	23.76343	CDUT	-19.76715	ADOT/	.1681075E-01
ADOT/OBP	.1555145	ADOT/OBY	.6303862E-01	AK	-.5493164	AK1	-2.691650	AK2	-1.197510
THETAD X	97.61353	THETAD Y	-76.86035	THETAD Z	21.07178	TIG	2899.060	DELLT4	1139.650
RTARG X	-6163634.	RTARG Y	2176504.	RTARG Z	-1235646.	TGO	2.730000	PIPTIME1	2923.940
DELV X	.0000000	DELV Y	.0000000	DELV Z	-2.281500	PACTOFF	-1.233700	YACTOFF	1.115075
PCMD	.0000000	YCMD	.0000000	CSTEER	.0000000	ADOT/	.1471863E-01	ADOT/OBP	.1607448
ADOT/OBY	.6338731E-01	AK	-.5493164	AK1	-2.878418	AK2	-1.263428	THETAD X	97.61353
THETAD Y	-76.86035	THETAD Z	21.07178	ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0
TEVENT	2899.060	PCMD	.0000000	YCMD	.0000000	LEMMASS	.0000000	CSMMASS	25940.00
ERRORX	.5383301	ERRORY	2.966309	ERRORZ	1.307373	WBODOCR	.0000000	WBODOCP	.0000000
WBODOCY	.0000000	THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	VGTIG X	-23.86332
VGTIG Y	-7.870960	VGTIG Z	4.976654	S/C MASS	1749.757	X CG	8.502293	Y CG	.3076639
Z CG	.4987240	JET FUEL	45.42334	SLOSH AR	-7.309920	IXX	30473.22	IYY	79027.18
IZZ	84372.52	IXY	2037.933	IXZ	221.3135	IYZ	1604.225	WX DEG/S	.6994114E-02
WY DEG/S	.1783499	WZ DEG/S	.5595292E-01	CONFIG	1.000000	AXSCM/S2	-.9327403E-03	AYSCM/S2	-.1235881E-02
AZSCM/S2	.6004516E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	.2376309E-02
AYSMM/S2	-.5650092E-02	AZSMM/S2	.1046448E-02	ARSMM/S2	.6218153E-02				

PRØGRAM 40 VERB 16 NØUN 40 R1 +00 02 R2 +00907 R3 +05200 FLASH 1 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.88625145	-.38560581	-.25664544
.16440082	-.77984643	.60399652
-.43304849	.49309897	.75453353

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -76.86	-78.86	-78.50
Z= -.000	AMG= 24.42	24.42	24.30
X= .000	AØG= 98.77	98.77	98.82

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2929191.2	5186502.6	-2946244.1	6645323.5	-7011.68	-2978.57	1668.48	7798.68	2923.94
AGC CM	-2930698.0	5186302.0	-2948654.0	6646900.0	-6965.45	-2960.59	1657.97	7748.00	
DELTA	1506.8	200.6	2409.9	-1576.5	-46.23	-17.98	10.51	50.68	
SDS LM	-3424734.4	4959419.7	-2817359.2	6652981.5	-6634.66	-3463.67	1979.88	7741.81	2996.41
AGC LM	-3424734.7	4959370.8	-2817384.3	6652955.8	-6634.65	-3463.69	1979.95	7741.83	
DELTA	.3	49.0	25.2	25.7	-.01	.02	-.07	-.01	

PØSITIØN	LAT	LØNG	ALT	APØGEE	PERIGEE	AZIMUTH	ELEVATIØN	RANGE	RANGE RATE
SDS CM	-25.20	73.14	273157.9	458365.9	262475.8	-.14	3.25	560126.0	-65.23
SDS LM	-25.20	73.09	278665.4	282306.7	272261.9				

FLAGWD C 00200	FLAGWD 1 00001	FLAGWD 2 00334	FLAGWD 3 10004	FLAGWD 4 10000	FLAGWD 5 40202	FLAGWD 6 30000	FLAGWD 7 14140	
FLAGWD 8 50000	FLAGWD 9 40000							
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50160	FAILREG 00000	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77777	PIPA Y 77777	PIPAZ 77740	FLAG 10 00000	FLAG 11 00000	ØPTMØDES 00120	
HØLDFLAG 00000	DAPDATR1 11113	DAPDATR2 11111	REDØCTR 00001	IMØDE 30 36000	IMØDE 33 26000	CHAN 11 01440	CHAN 12 00040	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765			

CDUX 98.77808	CDUY -78.40942	CDUZ 24.11499	CDUT -19.76715	AD8T/ .1262650E-01			
AD8T/ØBP .1666725	AD8T/ØBY .6338731E-01	AK -.5383301	AK1 -3.065186	AK2 -1.329346			
THETAD X 97.61353	THETAD Y -76.86035	THETAD Z 21.07178	TIG 2899.060	DELLT4 1139.650			
RTARG X -6163634.	RTARG Y 2176504.	RTARG Z -1235646.	TG8 2.730000	PIPTIME1 2925.940			
DELV X .0000000	DELV Y .0000000	DELV Z -2.047500	PACTØFF -1.233700	YACTØFF 1.115075			
PCMD .0000000	YCMD .0000000	CSTEER .0000000	AD8T/ .1070872E-01	AD8T/ØBP .1699850			
AD8T/ØBY .6460771E-01	AK -.5493164	AK1 -3.240967	AK2 -1.406250	THETAD X 97.61353			
THETAD Y -76.86035	THETAD Z 21.07178	ELEV -41.07942	CENTANG 61.50000	DELTAR 11762.0			
TEVENT 2899.060	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 25940.00			
ERRØRX .5383301	ERRØRY 3.339844	ERRØRZ 1.417236	WBØD/ØCR .0000000	WBØD/ØCP .0000000			
WBØD/ØCY .0000000	THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	VGTIG X -25.72870			
VGTIG Y -8.604717	VGTIG Z 5.393600	S/C MASS 1749.757	X CG 8.502293	Y CG .3076639			
Z CG .4987240	JET FUEL 45.42310	SLØSH AR -7.309920	IXX 30473.22	IYY 79027.18			
IZZ 84372.52	IXY 2037.933	IXZ 221.3135	IYZ 1604.225	WX DEG/S -.3497057E-02			
WY DEG/S .1958352	WZ DEG/S .3846763E-01	CØNFIG 1.000000	AXSCM/S2 -.9327403E-03	AYSCM/S2 -.1422429E-02			
AZSCM/S2 .6004516E-02	XGYRØØUT .0000000	YGYRØØUT .0000000	ZGYRØØUT .0000000	AXSMM/S2 .2561617E-02			
AYSMM/S2 -.5613757E-02	AZSMM/S2 .1042815E-02	ARSMM/S2 .6258083E-02					

TAPE WEDG RUN 6 VERIFICATION C4.18A TEST RUN DATE 10/23/68 EDIT DATE 23OCT68 SDS TIME 2999 AGC TIME 2928.95 ID 774 PAGE100

PROGRAM 40 VERB 16 NOUN 40 R1 +00 02 R2 +00967 R3 +05260 FLASH 1 DSPTAB +11 00000

SDS REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108286	-.35838706	.20368291

AGC REFERENCE MATRIX

-.41222304	.79159081	-.45106113
.00042095	-.49491686	-.86894023
-.91108285	-.35838706	.20368291

S/C ATTITUDE MATRIX

-.88299060	-.39023042	-.26085997
.16586280	-.77928185	.60432482
-.43910933	.49034548	.75282335

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -79.03	-79.03	-78.66
Z= -.000	AMG= 24.80	24.80	24.65
X= .000	AOG= 98.83	98.83	98.88

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2943205.3	5180531.1	-2942899.9	6645375.8	-7003.46	-2993.20	1675.54	7798.40	2925.94
AGC CM	-2944620.0	5180368.0	-2945330.0	6646951.8	-6955.61	-2973.93	1665.58	7745.90	
DELTA	1414.7	163.1	2430.1	-1576.0	-47.85	-19.27	9.96	52.51	
SDS LM	-3437994.5	4952479.0	-2813391.8	6652971.3	-6625.37	-3477.09	1987.52	7741.83	2998.41
AGC LM	-3437994.7	4952430.0	-2813416.8	6652945.6	-6625.36	-3477.11	1987.59	7741.85	
DELTA	.3	49.0	25.0	25.8	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-25.16	73.28	273216.6	458406.0	262463.6	-.14	3.24	559996.8	-64.85
SDS LM	-25.16	73.22	278644.4	282331.1	272257.7				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 00334	FLAGWD 3 10004	FLAGWD 4 10000	FLAGWD 5 40202	FLAGWD 6 30000	FLAGWD 7 14140	
FLAGWD 8 50000	FLAGWD 9 40000							
RCSFLAGS 00001	RCSFLAGS 00001	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50160	FAILREG 00000	
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77777	PIPA Y 77777	PIPAZ 77745	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120	
HOLDFLAG 00000	DAPDATR1 11113	DAPDATR2 11111	REDOCTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 01440	CHAN 12 00040	
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765			

CDUX 98.84399	CDUY -78.57422	CDUZ 24.46655	CDUT -19.76715	ADOT/ .8093566E-02			
ADOT/OBP .1738206	ADOT/OBY .6582812E-01	AK -.5273437	AK1 -3.416748	AK2 -1.472168			
THETAD X 97.61353	THETAD Y -76.86035	THETAD Z 21.07178	TIG 2899.060	DELLT4 1139.650			
RTARG X -6163634.	RTARG Y 2176504.	RTARG Z -1235646.	TGO 2.730000	PIPTIME1 2927.940			
DELV X .0000000	DELV Y .0000000	DELV Z -1.813500	PACTOFF -1.233700	YACTOFF 1.115075			
PCMD .0000000	YCMD .0000000	CSTEER .0000000	ADOT/ .4781038E-02	ADOT/OBP .1757383			
ADOT/OBY .6757156E-01	AK -.5273437	AK1 -3.603516	AK2 -1.527100	THETAD X 97.61353			
THETAD Y -76.86035	THETAD Z 21.07178	ELEV -41.07942	CENTANG 61.50000	DELTAR 117620.0			
TEVENT 2899.060	PCMD .0000000	YCMD .0000000	LEMMASS .0000000	CSMMASS 25940.00			
ERRORX .5163574	ERRORY 3.702393	ERRORZ 1.560059	WBOD/OCR .0000000	WBOD/OCP .0000000			
WBOD/OCY .0000000	THETAD X 102.3047	THETAD Y -55.30518	THETAD Z 44.27490	VGTIG X -27.38094			
VGTIG Y -9.254646	VGTIG Z 5.762959	S/C MASS 1749.757	X CG 8.502293	Y CG .3076639			
Z CG .4987240	JET FUEL 45.42334	SLOSH AR -7.309920	IXX 30473.22	IYY 79027.18			
IZZ 84372.52	IXY 2037.933	IXZ 221.3135	IYZ 1604.225	WX DEG/S -.3497057E-02			
WY DEG/S .2028293	WZ DEG/S .3846763E-01	CONFIG 1.000000	AXSCM/S2 -.9327403E-03	AYSCM/S2 -.1515703E-02			
AZSCM/S2 .4500472E-02	XGYROOUT .0000000	YGYROOUT .0000000	ZGYROOUT .0000000	AXSMM/S2 .2318173E-02			
AYSMM/S2 -.4240294E-02	AZSMM/S2 .4905224E-03	ARSMM/S2 .4857430E-02					

TAPE WEDB RUN 6 VERIFICATION C4.18A TEST RUN DATE 10/23/68 EDIT DATE 23OCT68 SDS TIME 3001 AGC TIME 2930.94 ID 774 PAGE101

PROGRAM 40 VERB 16 NOUN 40 R1 +00 02 R2 +01017 R3 +05310 FLASH 1 DSPTAB +11 00000

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
-.41222304	.79159081	-.45106113	-.41222304	.79159081	-.45106113	.87956047	-.39497948	-.26526308
.00042095	-.49491686	-.86894023	.00042095	-.49491686	-.86894023	.16733527	-.77871013	.60465550
-.91108286	-.35838706	.20368291	-.91108285	-.35838706	.20368291	-.44538951	.48744249	.75101686

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -79.20	-79.20	-78.84
Z= -.000	AMG= 25.19	25.19	25.04
X= .000	AOG= 98.90	98.90	98.94

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2957203.9	5174531.0	-2939540.0	6645428.6	-6994.50	-3006.93	1684.17	7797.51	2927.94
AGC CM	-2958522.0	5174406.0	-2941992.0	6647002.8	-6945.94	-2987.34	1673.22	7744.03	
DELTA	1318.1	125.0	2452.0	1574.3	48.55	19.60	10.95	53.48	
SDS LM	-3451235.9	4945511.4	-2809409.1	6652961.1	-6616.05	-3490.49	1995.16	7741.85	3000.41
AGC LM	-3451236.1	4945462.3	-2809434.0	6652935.3	-6616.03	-3490.51	1995.23	7741.86	
DELTA	.2	49.1	24.9	25.8	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-25.12	73.41	273275.7	458447.5	262451.5	-.15	3.23	559867.5	-63.86
SDS LM	-25.12	73.35	278623.4	282355.5	272253.4				

FLAGWD 0	00200	FLAGWD 1	00001	FLAGWD 2	00334	FLAGWD 3	10004	FLAGWD 4	10000
FLAGWD 5	40202	FLAGWD 6	30000	FLAGWD 7	14140	FLAGWD 8	50000	FLAGWD 9	40000
RCSFLAGS	00001	RCSFLAGS	00001	RSBBQ	42106	RSBBQ+1	03434	CADRFLSH	56016
CADR+1	73174	CADR+2	50160	FAILREG	00000	FAILRG+1	00000	FAILRG+2	00000
PIPA X	77777	PIPA Y	77777	PIPAZ	77752	FLAG 10	00000	FLAG 11	00000
OPTMODES	00120	HOLDFLAG	00000	DAPDATR1	11113	DAPDATR2	11111	REDOCTR	00001
IMODE 30	36000	IMODE 33	26000	CHAN 11	01440	CHAN 12	00040	CHAN 13	00100
CHAN 14	00000	CHAN 30	37373	CHAN 31	37777	CHAN 32	77777	CHAN 33	67765

CDUX	98.90991	CDUY	-78.73901	CDUZ	24.84009	CDUT	-19.76715	ADOT/	.2514571E-02
ADOT/OBP	.1785278	ADOT/OBY	.6879196E-01	AK	-.5163574	AK1	-3.790283	AK2	-1.604004
THETAD X	97.61353	THETAD Y	-76.86035	THETAD Z	21.07178	TIG	2899.060	DELLT4	1139.650
RTARG X	-6163634.	RTARG Y	2176504.	RTARG Z	-1235646.	TG8	2.730000	PIPTIME1	2929.940
DELV X	.0000000	DELV Y	.0000000	DELV Z	-1.521000	PACTOFF	-1.233700	YACTOFF	1.115075
PCMD	.0000000	YCMD	.0000000	CSTEER	.0000000	ADOT/	.4224480E-03	ADOT/OBP	.1820147
ADOT/OBY	.6983802E-01	AK	-.5053711	AK1	-3.999023	AK2	-1.669922	THETAD X	97.61353
THETAD Y	-76.86035	THETAD Z	21.07178	ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0
TEVENT	2899.060	PCMD	.0000000	YCMD	.0000000	LEMMASS	.0000000	CSMMASS	25940.00
ERRORX	.5053711	ERROBY	4.086914	ERROBZ	1.702881	WBODOCR	.0000000	WBODOCP	.0000000
WBODOCY	.0000000	THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	VGTIG X	-28.76663
VGTIG Y	-9.799671	VGTIG Z	6.072712	S/C MASS	1749.757	X CG	8.502293	Y CG	.3076639
Z CG	.4987240	JET FUEL	45.42297	SLOSH AR	-7.309920	IXX	30473.22	IYY	79027.18
IZZ	84372.52	IXY	2037.933	IXZ	221.3135	IYZ	1604.225	WX DEG/S	-.6994114E-02
WY DEG/S	.2063264	WZ DEG/S	.2447940E-01	CONFIG	1.000000	AXSCM/S2	-.9327403E-03	AYSCM/S2	-.1515703E-02
AZSCM/S2	.1492385E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	.1631442E-02
AYSMM/S2	-.1536971E-02	AZSMM/S2	-.6322289E-03	ARSMM/S2	.2328861E-02				

TAPE WEDB RUN 6 VERIFICATION C4.18A TEST RUN DATE 10/23/68 EDIT DATE 23OCT68 SDS TIME 3003 AGC TIME 2932.94 ID 774 PAGE102

PROGRAM 40 VERB 16 NOUN 40 R1 +00 02 R2 +01057 R3 +05350 FLASH 1 DSPTAB +11 00000

SDS REFERENCE MATRIX			AGC REFERENCE MATRIX			S/C ATTITUDE MATRIX		
-.41222304	.79159081	-.45106113	-.41222304	.79159081	-.45106113	-.87596083	-.39980245	-.26990867
.00042095	-.49491686	-.86894023	.00042095	-.49491686	-.86894023	.16879272	-.77819920	.60490847
-.91108286	-.35838706	.20368291	-.91108285	-.35838706	.20368291	-.45188665	.48431683	.74915576

REFSMMAT ER	GIMBAL ANGLE	SDS CDU	AGC CDU
Y= .000	AIG= -79.37	-79.37	-79.01
Z= -.000	AMG= 25.60	25.60	25.46
X= .000	AOG= 98.96	98.96	99.01

STATE VECT	RX	RY	RZ	RSS	VX	VY	VZ	RSS	TIME
SDS CM	-2971185.7	5168502.8	-2936164.4	6645481.6	-6987.43	-3021.58	1691.25	7798.36	2929.94
AGC CM	-2972404.0	5168418.0	-2938638.0	6647053.7	-6936.51	-3000.83	1680.92	7742.46	
DELTA	1218.3	84.8	2473.6	1572.1	50.92	20.75	10.33	55.90	
SDS LM	-3464458.6	4938517.0	-2805411.2	6652950.9	-6606.68	-3503.87	2002.78	7741.87	3002.41
AGC LM	-3464458.9	4938467.9	-2805435.9	6652925.0	-6606.67	-3503.89	2002.85	7741.88	
DELTA	.2	49.1	24.7	25.9	-.01	.02	-.07	-.01	

POSITION	LAT	LONG	ALT	APOGEE	PERIGEE	AZIMUTH	ELEVATION	RANGE	RANGE RATE
SDS CM	-25.08	73.54	273335.3	458488.5	262439.3	-.16	3.23	559739.3	-64.60
SDS LM	-25.09	73.49	278602.3	282380.0	272249.1				

FLAGWD 0 00200	FLAGWD 1 00001	FLAGWD 2 00334	FLAGWD 3 10004	FLAGWD 4 10000	FLAGWD 5 40202	FLAGWD 6 30000	FLAGWD 7 14140
FLAGWD 8 50000	FLAGWD 9 40000						
RCSFLAGS 00001	RCSFLAGS 00000	RSBBQ 42106	RSBBQ+1 03434	CADRFLSH 56016	CADR+1 73174	CADR+2 50160	FAILREG 00000
FAILRG+1 00000	FAILRG+2 00000	PIPA X 77777	PIPA Y 77777	PIPAZ 77760	FLAG 10 00000	FLAG 11 00000	OPTMODES 00120
HOLDFLAG 00000	DAPDATR1 11113	DAPDATR2 11111	RENDCTR 00001	IMODE 30 36000	IMODE 33 26000	CHAN 11 01440	CHAN 12 00040
CHAN 13 00100	CHAN 14 00000	CHAN 30 37373	CHAN 31 37777	CHAN 32 77777	CHAN 33 67765		

CDUX	98.97583	CDUY	-78.91479	CDUZ	25.23560	CDUT	-19.76715	ADOT/	-.6236136E-03
ADOT/OBP	.1868963	ADOT/OBY	.7070974E-01	AK	-.4943848	AK1	-4.207764	AK2	-1.735840
THETAD X	97.61353	THETAD Y	-76.86035	THETAD Z	21.07178	TIG	2899.060	DELLT4	1139.650
RTARG X	-.6163634.	RTARG Y	2176504.	RTARG Z	-1235646.	TGO	2.730000	PIPTIME1	2931.940
DELV X	.0000000	DELV Y	.0000000	DELV Z	-1.228500	PACTOFF	-1.233700	YACTOFF	1.115075
PCMD	.0000000	YCMD	.0000000	CSTEER	.0000000	ADOT/	-.2367050E-02	ADOT/OBP	.1914293
ADOT/OBY	.7088408E-01	AK	-.4833984	AK1	-4.416504	AK2	-1.812744	THETAD X	97.61353
THETAD Y	-76.86035	THETAD Z	21.07178	ELEV	-41.07942	CENTANG	61.50000	DELTAR	117620.0
TEVENT	2899.060	PCMD	.0000000	YCMD	.0000000	LEMMASS	.0000000	CSMMASS	25940.00
ERRORX	.4724121	ERRORY	4.504395	ERRORZ	1.834717	WBODOCR	.0000000	WBODOCP	.0000000
WBODOCY	.0000000	THETAD X	102.3047	THETAD Y	-55.30518	THETAD Z	44.27490	VGTIG X	-29.88586
VGTIG Y	-10.23989	VGTIG Z	6.322861	S/C MASS	1749.757	X CG	8.502293	Y CG	.3076639
Z CG	.4987240	JET FUEL	45.42249	SLOSH AR	-7.309920	IXX	30473.22	IYY	79027.18
IZZ	84372.52	IXY	2037.933	IXZ	221.3135	IYZ	1604.225	WX DEG/S	-.6994114E-02
WY DEG/S	.2168175	WZ DEG/S	.5595292E-01	CONFIG	1.000000	AXSCM/S2	.0000000	AYSCM/S2	-.1608977E-02
AZSCM/S2	.3089702E-02	XGYROOUT	.0000000	YGYROOUT	.0000000	ZGYROOUT	.0000000	AXSMM/S2	.2252770E-02
AYSMM/S2	-.2543450E-02	AZSMM/S2	.8102704E-03	ARSMM/S2	.3492942E-02				