PROJECT

LUNAR ORBITER MISSION A

PHOTOGRAPHIC SUPPORT DATA

FINAL

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Langley Research Center

Lunar Orbiter Project Office

FACILITY FORM 602

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LUNAR ORBITER MISSION A

PHOTOGRAPHIC SUPPORT DATA

FINAL

As Prepared by

The Boeing Company

March 7, 1967

Langley Research Center
Langley Station, Hampton, Virginia

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

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* PHOTO FRAME NUMBER 1 OF 16 * 5
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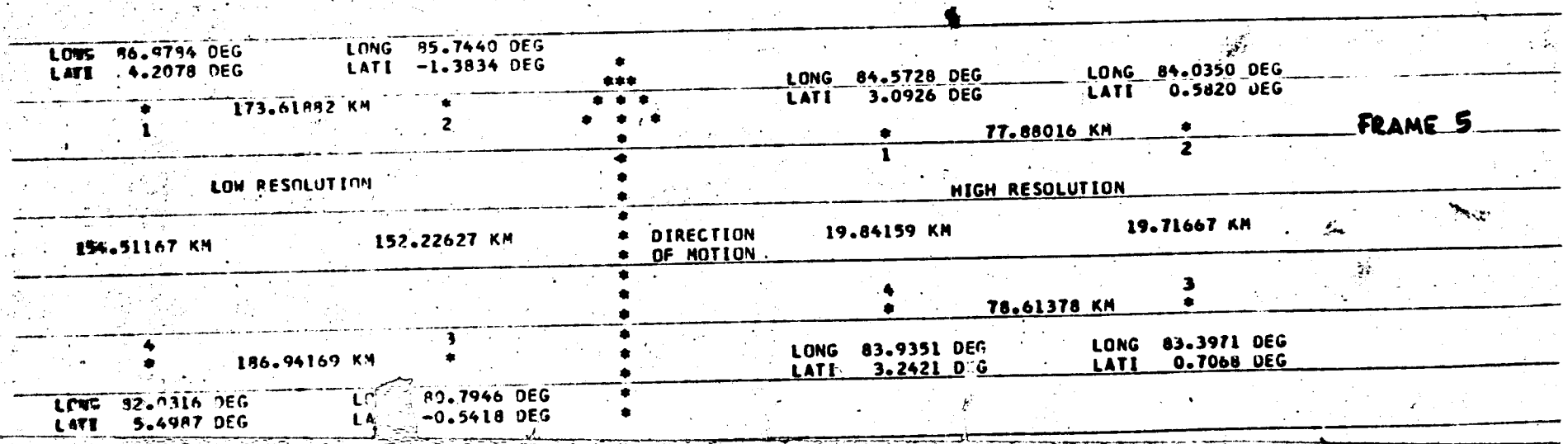
	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	18	14	42	49.898

LONGITUDE OF NADIR POINT	84.6046152	DEG	LATITUDE OF NADIR POINT	1.6567947	DEG
LONG OF CAMERA AXIS INTERSECT	83.9869747	DEG	LATI OF CAMERA AXIS INTERSECT	1.9010798	DEG
SPACECRAFT RADIUS	1954.4019165	KM	SPACECRAFT ALTITUDE	216.3129120	KM
MEAN ALTITUDE RATE	-0.0805703	KM/SEC	TIME FROM PERIAPSIS	-211.8984108	SEC
HORIZONTAL VELOCITY	1.7993762	KM/SEC	TRUE ANOMALY	348.7564430	DEG
SCALE FACTOR HIGH	0.0028200	M/KM	TILT DISTANCE HIGH	56.7639279	MM
SCALE FACTOR LOW	0.0003698	M/KM	TILT DISTANCE LOW	7.4444495	MM
IMAGE MOTION COMPENSATION V/H	0.0083184	RAD/SEC	SWING ANGLE	99.2062635	DEG
EMISSION ANGLE	5.9803087	DEG	INCIDENCE ANGLE	68.4239779	DEG
PHASE ANGLE	62.9162412	DEG	NORTH DEVIATION ANGLE	347.6924133	DEG
TILT ANGLE	5.3163840	DEG	RESOLUTION CONSTANT	4.6939902	MTR
TILT AZIMUTH	291.5982323	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	89.0706491	DEG
SUN ANGLE AT NADIR	67.8104906	DEG	SUN ARC AT NADIR	2057.0567322	KM
LONGITUDE DISTANCE TO TARGET	-5.3953848	DEG	LATITUDE DISTANCE TO TARGET	1.6567947	DEG
LONGITUDE ARC LENGTH TO TARGET	-163.6710262	KM	LATITUDE ARC LENGTH TO TARGET	50.2594895	KM
FORWARD OVERLAP RATIO	0.	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	0.	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.65059358	-0.73258078	-0.20013347	282.34492874
CAMERA AXIS	-0.00791008	-0.99995466	0.00530324	217.36466980
C1	-0.08834942	-0.98173927	0.16847078	221.19117737
C2	-0.01399901	-0.98415823	-0.17673887	219.82298279
C3	0.07279306	-0.98474563	-0.15804155	221.88560486
C4	-0.00155675	-0.98232668	0.18716808	223.28141785

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	183.6917992	1944.9294434	56.5066729	-1.7584282	0.0960991	-0.3780767



FRAME 5

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*   PHOTO FRAME NUMBER  2 OF 16     *  6
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	18	14	42	59.799

LONGITUDE OF NADIR POINT	85.1142101	DEG	LATITUDE OF NADIR POINT	1.5475865	DEG
LONG OF CAMERA AXIS INTERSECT	84.5629262	DEG	LATI OF CAMERA AXIS INTERSECT	1.7773979	DEG
SPACECRAFT RADIUS	1953.6225433	KM	SPACECRAFT ALTITUDE	215.5335388	KM
MEAN ALTITUDE RATE	-0.0768728	KM/SEC	TIME FROM PERIAPSIS	-202.0019112	SEC
HORIZONTAL VELOCITY	1.8000941	KM/SEC	TRUE ANOMALY	349.2786980	DEG
SCALE FACTOR HIGH	0.0028302	M/KM	TILT DISTANCE HIGH	51.2449245	MM
SCALE FACTOR LOW	0.0003712	M/KM	TILT DISTANCE LOW	6.7206458	MM
IMAGE MOTION COMPENSATION V/H	0.0083518	RAD/SEC	SWING ANGLE	100.2399292	DEG
EMISSION ANGLE	5.3991831	DEG	INCIDENCE ANGLE	67.8489523	DEG
PHASE ANGLE	62.9162431	DEG	NORTH DEVIATION ANGLE	347.6692238	DEG
TILT ANGLE	4.8020326	DEG	RESOLUTION CONSTANT	4.6770778	MTR
TILT AZIMUTH	232.6421776	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	89.0363464	DEG
SUN ANGLE AT NADIR	67.3015690	DEG	SUN ARC AT NADIR	2041.6184235	KM
LONGITUDE DISTANCE TO TARGET	-4.8857899	DEG	LATITUDE DISTANCE TO TARGET	1.5475885	DEG
LONGITUDE ARC LENGTH TO TARGET	-148.2122726	KM	LATITUDE ARC LENGTH TO TARGET	46.9466791	KM
FORWARD OVERLAP RATIO	9.4431629	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	9.9005699	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.61310167	-0.76569054	-0.19448487	271.29085159
CAMERA AXIS	-0.00793456	-0.99995446	0.00530285	216.38749695
C1	-0.08837350	-0.98173717	0.16847037	220.29745483
C2	-0.01402305	-0.98415782	-0.17673925	218.93498230
C3	0.07276958	-0.98474734	-0.15804192	220.78160095
C4	-0.00158086	-0.98232671	0.18716770	222.16876221

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	166.3288746	1945.8138123	52.7619667	-1.7595645	0.0834884	-0.3784326

```
LONG  87.5504 DEG          LONG  86.3160 DEG
LATI   4.0817 DEG          LATI  -1.5035 DEG
                                          *
                                         ***
                                        * * *
     *        173.43996 KM      *      *  *  *
     1                          2
                                          *
                                          *
            LOW RESOLUTION                *
                                          *
                                          *
  153.55621 KM              151.29513 KM  *
                                          *
                                          *
                                          *
                                          *
     4                          3         *
     *        185.35988 KM      *         *
                                          *
LONG  82.6299 DEG          LONG  81.4005 DEG
LATI   5.3437 DEG          LATI  -0.6450 DEG
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LONG  85.1465 DEG          LONG  84.6101 DEG
LATI   2.9641 DEG          LATI   0.4637 DEG
                                                FRAME6
     *        77.56552 KM       *
     1                          2

            HIGH RESOLUTION

DIRECTION      19.73110 KM              19.60725 KM
OF MOTION

                                4
                                *        78.22231 KM       *
                                3

LONG  84.5121 DEG          LONG  83.9760 DEG
LATI   3.1116 DEG          LATI   0.5891 DEG
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*   PHOTO FRAME NUMBER  3 OF 16     *
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	18	14	43	9.699

LONGITUDE OF NADIR POINT	85.6241484	DEG	LATITUDE OF NADIR POINT	1.4381731	DEG
LONG OF CAMERA AXIS INTERSECT	85.1383915	DEG	LATI OF CAMERA AXIS INTERSECT	1.6536246	DEG
SPACECRAFT RADIUS	1952.8798523	KM	SPACECRAFT ALTITUDE	214.7908478	KM
MEAN ALTITUDE RATE	-0.0731660	KM/SEC	TIME FROM PERIAPSIS	-192.1054916	SEC
HORIZONTAL VELOCITY	1.8007788	KM/SEC	TRUE ANOMALY	349.8013611	DEG
SCALE FACTOR HIGH	0.0028400	M/KM	TILT DISTANCE HIGH	45.7508378	MM
SCALE FACTOR LOW	0.0003725	M/KM	TILT DISTANCE LOW	6.0001099	MM
IMAGE MOTION COMPENSATION V/H	0.0083839	RAD/SEC	SWING ANGLE	101.5215816	DEG
EMISSION ANGLE	4.8204674	DEG	INCIDENCE ANGLE	67.2742567	DEG
PHASE ANGLE	62.9162464	DEG	NORTH DEVIATION ANGLE	347.6479530	DEG
TILT ANGLE	4.2892316	DEG	RESOLUTION CONSTANT	4.6609613	MTR
TILT AZIMUTH	293.9331398	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.9996271	DEG
SUN ANGLE AT NADIR	66.7923498	DEG	SUN ARC AT NADIR	2026.1710815	KM
LONGITUDE DISTANCE TO TARGET	-4.3758516	DEG	LATITUDE DISTANCE TO TARGET	1.4381731	DEG
LONGITUDE ARC LENGTH TO TARGET	-132.7431049	KM	LATITUDE ARC LENGTH TO TARGET	43.6275229	KM
FORWARD OVERLAP RATIO	8.9886014	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	9.8999262	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.57098293	-0.79917376	-0.18788234	260.87525940
CAMERA AXIS	-0.00795913	-0.99995427	0.00530250	215.46903992
C1	-0.08839766	-0.98173505	0.16847000	219.46272278
C2	-0.01404718	-0.98415741	-0.17673960	218.10556030
C3	0.07274543	-0.98474909	-0.15804224	219.73896790
C4	-0.00160503	-0.98232673	0.18716735	221.11793518

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	149.9553223	1946.5736389	49.0138550	-1.7605894	0.0708576	-0.3787646

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LONG  88.1232 DEG          LONG  86.8885 DEG
LATI   3.9561 DEG          LATI  -1.6245 DEG
                                                *
                                               ***                LONG  85.7200 DEG          LONG  85.1850 DEG
        *        173.30710 KM        *        * * *               LATI   2.8357 DEG          LATI   0.3450 DEG
        1                            2       * * *
                                                *                        *        77.27164 KM        *
                                                *                        1                           2
                                                *
            LOW RESOLUTION                      *                                HIGH RESOLUTION
                                                *
  152.67232 KM                150.43336 KM      *  DIRECTION      19.62841 KM                19.50554 KM
                                                *  OF MOTION
                                                *
                                                *                        4                           3
                                                *                        *        77.85259 KM        *
                                                *
        4                            3           *
        *        183.84454 KM        *           *                LONG  85.0888 DEG          LONG  84.5544 DEG
                                                *                LATI   2.9814 DEG          LATI   0.4709 DEG
LONG  83.2266 DEG          LONG  82.0047 DEG    *
LATI   5.1900 DEG          LATI  -0.7491 DEG    *
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FRAME 7

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*  PHOTO FRAME NUMBER  4 OF 16  *  8
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	18	14	43	19.499

LONGITUDE OF NADIR POINT	86.1292582	DEG	LATITUDE OF NADIR POINT	1.3296705	DEG
LONG OF CAMERA AXIS INTERSECT	85.7078876	DEG	LATI OF CAMERA AXIS INTERSECT	1.5310142	DEG
SPACECRAFT RADIUS	1952.1808319	KM	SPACECRAFT ALTITUDE	214.0918274	KM
MEAN ALTITUDE RATE	-0.0694880	KM/SEC	TIME FROM PERIAPSIS	-182.3089752	SEC
HORIZONTAL VELOCITY	1.8014238	KM/SEC	TRUE ANOMALY	350.3191261	DEG
SCALE FACTOR HIGH	0.0028492	M/KM	TILT DISTANCE HIGH	40.3438745	MM
SCALE FACTOR LOW	0.0003737	M/KM	TILT DISTANCE LOW	5.2909999	MM
IMAGE MOTION COMPENSATION V/H	0.0084143	RAD/SEC	SWING ANGLE	103.1321993	DEG
EMISSION ANGLE	4.2507895	DEG	INCIDENCE ANGLE	66.7056732	DEG
PHASE ANGLE	62.9162488	DEG	NORTH DEVIATION ANGLE	347.6287842	DEG
TILT ANGLE	3.7938889	DEG	RESOLUTION CONSTANT	4.6457926	MTR
TILT AZIMUTH	295.5520210	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.9608688	DEG
SUN ANGLE AT NADIR	66.2880068	DEG	SUN ARC AT NADIR	2010.8716278	KM
LONGITUDE DISTANCE TO TARGET	-3.8707418	DEG	LATITUDE DISTANCE TO TARGET	1.3296705	DEG
LONGITUDE ARC LENGTH TO TARGET	-117.4204092	KM	LATITUDE ARC LENGTH TO TARGET	40.3360534	KM
FORWARD OVERLAP RATIO	9.4891900	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	9.8001480	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.52432098	-0.83221713	-0.18028355	251.27345657
CAMERA AXIS	-0.00798348	-0.99995407	0.00530212	214.61740112
C1	-0.08942161	-0.98173296	0.16846962	218.69427490
C2	-0.01407111	-0.98415700	-0.17673998	217.34197998
C3	0.07272149	-0.98475079	-0.15804259	218.76683044
C4	-0.00162900	-0.98232675	0.18716699	220.13815308

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	131.7479458	1947.2030487	45.3004723	-1.7614938	0.0583360	-0.3790694

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LONG  88.6909 DEG          LONG  87.4557 DEG
LATI   3.8323 DEG          LATI  -1.7453 DEG        *
                                                   ***          LONG  86.2877 DEG          LONG  85.7538 DEG
        *        173.22124 KM        *            * * *          LATI   2.7089 DEG          LATI   0.2270 DEG
        1                            2          *  * *
                                                   *                   *        77.00109 KM        *
                                                   *                   1                           2
                LOW RESOLUTION                     *
                                                   *                        HIGH RESOLUTION
                                                   *
   151.86679 KM                149.64762 KM        *  DIRECTION      19.53435 KM                19.41237 KM
                                                   *  OF MOTION
                                                   *
                                                   *                   4                           3
                                                   *                   *        77.50786 KM        *
        4                            3             *
        *        182.40860 KM        *             *          LONG  85.6592 DEG          LONG  85.1265 DEG
                                                   *          LATI   2.8527 DEG          LATI   0.3536 DEG
LONG  93.8159 DEG          LONG  82.6011 DEG       *
LATI   5.0390 DEG          LATI  -0.8532 DEG       *
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FRAME 8

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*************************************
*  PHOTO FRAME NUMBER  5 OF 16      *
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	18	14	43	29.199

LONGITUDE OF NADIR POINT	86.6295223	DEG	LATITUDE OF NADIR POINT	1.2220984	DEG
LONG OF CAMERA AXIS INTERSECT	86.2713594	DEG	LATI OF CAMERA AXIS INTERSECT	1.4095794	DEG
SPACECRAFT RADIUS	1951.5245056	KM	SPACECRAFT ALTITUDE	213.4355011	KM
MEAN ALTITUDE RATE	-0.0658394	KM/SEC	TIME FROM PERIAPSIS	-172.6124325	SEC
HORIZONTAL VELOCITY	1.8020299	KM/SEC	TRUE ANOMALY	350.8319626	DEG
SCALE FACTOR HIGH	0.0028580	M/KM	TILT DISTANCE HIGH	35.0354190	MM
SCALE FACTOR LOW	0.0003748	M/KM	TILT DISTANCE LOW	4.5948091	MM
IMAGE MOTION COMPENSATION V/H	0.0084430	RAD/SEC	SWING ANGLE	105.2131882	DEG
EMISSION ANGLE	3.6913772	DEG	INCIDENCE ANGLE	66.1431723	DEG
PHASE ANGLE	62.9162517	DEG	NORTH DEVIATION ANGLE	347.6116753	DEG
TILT ANGLE	3.2871782	DEG	RESOLUTION CONSTANT	4.6315503	MTR
TILT AZIMUTH	297.6402473	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.9201174	DEG
SUN ANGLE AT NADIR	65.7885675	DEG	SUN ARC AT NADIR	1995.7209625	KM
LONGITUDE DISTANCE TO TARGET	-3.3704777	DEG	LATITUDE DISTANCE TO TARGET	1.2220984	DEG
LONGITUDE ARC LENGTH TO TARGET	-102.2447071	KM	LATITUDE ARC LENGTH TO TARGET	37.0728145	KM
FORWARD OVERLAP RATIO	10.0277636	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	9.6997261	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.47292893	-0.86422815	-0.17160400	242.54776573
CAMERA AXIS	-0.00800753	-0.99995389	0.00530175	213.83058167
C1	-0.08844525	-0.98173090	0.16846924	217.99024963
C2	-0.01409474	-0.98415659	-0.17674034	216.64231873
C3	0.07269784	-0.98475249	-0.15804295	217.86305237
C4	-0.00165267	-0.98232679	0.18716663	219.22723389

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	114.7078552	1947.7055817	41.6221676	-1.7622807	0.0459256	-0.3793477

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LONG  89.2537 DEG          LONG  88.0177 DEG
LATI   3.7103 DEG          LATI  -1.8658 DEG          *
                                                     ***          LONG  86.8495 DEG          LONG  86.3168 DEG
        *        173.18143 KM        *              * * *         LATI   2.5836 DEG          LATI   0.1099 DEG
        1                            2            * * *
                                                   *                     *        76.75321 KM        *
                                                   *                     1                           2
                LOW RESOLUTION                     *
                                                   *                          HIGH RESOLUTION
                                                   *
  151.13663 KM              148.93503 KM           *  DIRECTION      19.44863 KM                19.32745 KM
                                                   *  OF MOTION
                                                   *
                                                   *                     4                           3
                                                   *                     *        77.18737 KM        *
        4                            3             *
        *        181.04891 KM        *             *        .   LONG  86.2236 DEG          LONG  85.6925 DEG
                                                   *            LATI   2.7257 DEG          LATI   0.2370 DEG
LONG  84.3979 DEG          LONG  83.1899 DEG       *
LATI   4.8907 DEG          LATI  -0.9571 DEG       *
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FRAME 9

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*********************************
*   PHOTO FRAME NUMBER  6 OF 16  *
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	18	14	43	39.199

LONGITUDE OF NADIR POINT	87.1455107 DEG	LATITUDE OF NADIR POINT	1.1110378 DEG
LONG OF CAMERA AXIS INTERSECT	86.8520050 DEG	LATI OF CAMERA AXIS INTERSECT	1.2843300 DEG
SPACECRAFT RADIUS	1950.8850098 KM	SPACECRAFT ALTITUDE	212.7960052 KM
MEAN ALTITUDE RATE	-0.0620703 KM/SEC	TIME FROM PERIAPSIS	-162.6170502 SEC
HORIZONTAL VELOCITY	1.8026208 KM/SEC	TRUE ANOMALY	351.3609619 DEG
SCALE FACTOR HIGH	0.0028666 M/KM	TILT DISTANCE HIGH	29.6313355 MM
SCALE FACTOR LOW	0.0003759 M/KM	TILT DISTANCE LOW	3.8860768 MM
IMAGE MOTION COMPENSATION V/H	0.0084711 RAD/SEC	SWING ANGLE	108.1335335 DEG
EMISSION ANGLE	3.1218301 DEG	INCIDENCE ANGLE	65.5636044 DEG
PHASE ANGLE	62.9162540 DEG	NORTH DEVIATION ANGLE	347.5960007 DEG
TILT ANGLE	2.7810115 DEG	RESOLUTION CONSTANT	4.6176733 MTR
TILT AZIMUTH	300.5670700 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.8755913 DEG
SUN ANGLE AT NADIR	65.2735023 DEG	SUN ARC AT NADIR	1980.0962524 KM
LONGITUDE DISTANCE TO TARGET	-2.8544893 DEG	LATITUDE DISTANCE TO TARGET	1.1110378 DEG
LONGITUDE ARC LENGTH TO TARGET	-86.5920067 KM	LATITUDE ARC LENGTH TO TARGET	33.7037501 KM
FORWARD OVERLAP RATIO	6.8738425 PCT	SIDE OVERLAP RATIO	0. PCT
TIME BETWEEN PHOTOS	10.0003481 SEC		

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.41429833	-0.89572627	-0.16134232	234.45665550
CAMERA AXIS	-0.00803230	-0.99995369	0.00530138	213.07771301
C1	-0.08846961	-0.98172877	0.16846885	217.32327271
C2	-0.01411908	-0.98415618	-0.17674071	215.97944641
C3	0.07267348	-0.98475423	-0.15804330	216.99188232
C4	-0.00167704	-0.98232681	0.18716626	218.34918213

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	97.1350002	1948.0979614	37.8277798	-1.7629788	0.0331169	-0.3796103

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LONG  89.8346 DEG          LONG  88.5977 DEG
LATI   3.5851 DEG          LATI  -1.9910 DEG
                                                 *
                                                ***
                                                                 LONG  87.4285 DEG          LONG  86.8970 DEG
                                                                 LATI   2.4547 DEG          LATI  -0.0114 DEG
     *        173.18789 KM        *            * * *
     1                            2          *  *  *
                                                 *                    *        76.51837 KM        *
                                                 *                    1                           2
                                                 *
            LOW RESOLUTION                       *                                HIGH RESOLUTION
                                                 *
                                                 *
  150.45303 KM                148.26750 KM       *  DIRECTION      19.36788 KM                19.24743 KM
                                                 *  OF MOTION
                                                 *
                                                 *                    4                           3
                                                 *                    *        76.87845 KM        *
     4                            3              *
     *        179.71019 KM        *              *                 LONG  86.8051 DEG          LONG  86.2755 DEG
                                                 *                 LATI   2.5951 DEG          LATI   0.1165 DEG
LONG  84.9965 DEG          LONG  83.7953 DEG     *
LATI   4.7389 DEG          LATI  -1.0650 DEG     *
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FRAME 10

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*************************************
*   PHOTO FRAME NUMBER  7 OF 16     *
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	18	14	43	48.999

LONGITUDE OF NADIR POINT	87.6515608 DEG	LATITUDE OF NADIR POINT	1.0020195 DEG
LONG OF CAMERA AXIS INTERSECT	87.4209862 DEG	LATI OF CAMERA AXIS INTERSECT	1.1614950 DEG
SPACECRAFT RADIUS	1950.2947845 KM	SPACECRAFT ALTITUDE	212.2057800 KM
MEAN ALTITUDE RATE	-0.0583683 KM/SEC	TIME FROM PERIAPSIS	-152.8195534 SEC
HORIZONTAL VELOCITY	1.8031666 KM/SEC	TRUE ANOMALY	351.8798065 DEG
SCALE FACTOR HIGH	0.0028746 M/KM	TILT DISTANCE HIGH	24.4428422 MM
SCALE FACTOR LOW	0.0003770 M/KM	TILT DISTANCE LOW	3.2056186 MM
IMAGE MOTION COMPENSATION V/H	0.0084973 RAD/SEC	SWING ANGLE	112.2375221 DEG
EMISSION ANGLE	2.5749721 DEG	INCIDENCE ANGLE	64.9957657 DEG
PHASE ANGLE	62.9162564 DEG	NORTH DEVIATION ANGLE	347.5825615 DEG
TILT ANGLE	2.2946277 DEG	RESOLUTION CONSTANT	4.6048654 MTR
TILT AZIMUTH	304.6764412 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.8294382 DEG
SUN ANGLE AT NADIR	64.7684326 DEG	SUN ARC AT NADIR	1964.7747803 KM
LONGITUDE DISTANCE TO TARGET	-2.3484392 DEG	LATITUDE DISTANCE TO TARGET	1.0020195 DEG
LONGITUDE ARC LENGTH TO TARGET	-71.2407866 KM	LATITUDE ARC LENGTH TO TARGET	30.3966372 KM
FORWARD OVERLAP RATIO	8.3813092 PCT	SIDE OVERLAP RATIO	0. PCT
TIME BETWEEN PHOTOS	9.7995043 SEC		

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.35120951	-0.92421803	-0.14990970	227.51085854
CAMERA AXIS	-0.00805662	-0.99995350	0.00530101	212.39689636
C1	-0.08849351	-0.98172668	0.16846848	216.72729492
C2	-0.01414298	-0.98415577	-0.17674106	215.38710022
C3	0.07264957	-0.98475593	-0.15804363	216.19721985
C4	-0.00170096	-0.98232685	0.18716591	217.54821777

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	79.9039783	1948.3586121	34.1060848	-1.7635515	0.0205478	-0.3798435

```
LONG  90.4048 DEG          LONG  89.1667 DEG
LATI   3.4630 DEG          LATI  -2.1146 DEG
                                          *
                                         ***
                                        * * *
        *        173.24153 KM   *      *  *  *
        1                       2
                                          *
                                          *
            LOW RESOLUTION                *
                                          *
                                          *
  149.85030 KM              147.67853 KM  *  DIRECTION
                                          *  OF MOTION
                                          *
                                          *
                                          *
        4                       3         *
        *        178.45877 KM   *         *
                                          *
LONG  85.5821 DEG          LONG  84.3872 DEG
LATI   4.5914 DEG          LATI  -1.1717 DEG
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LONG  87.9961 DEG          LONG  87.4656 DEG
LATI   2.3285 DEG          LATI  -0.1306 DEG

        *        76.30852 KM      *
        1                         2

                HIGH RESOLUTION

  19.29616 KM                19.17635 KM

        4                         3
        *        76.59665 KM      *

LONG  87.3748 DEG          LONG  86.8466 DEG
LATI   2.4673 DEG          LATI  -0.0021 DEG
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FRAME 11

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*********************************
*   PHOTO FRAME NUMBER  8 OF 16   *
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12

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	18	14	43	58.898

LONGITUDE OF NADIR POINT	88.1629944	DEG	LATITUDE OF NADIR POINT	0.8917555	DEG
LONG OF CAMERA AXIS INTERSECT	87.9955807	DEG	LATI OF CAMERA AXIS INTERSECT	1.0373631	DEG
SPACECRAFT RADIUS	1949.7354889	KM	SPACECRAFT ALTITUDE	211.6464844	KM
MEAN ALTITUDE RATE	-0.0546219	KM/SEC	TIME FROM PERIAPSIS	-142.9231071	SEC
HORIZONTAL VELOCITY	1.8036841	KM/SEC	TRUE ANOMALY	352.4042053	DEG
SCALE FACTOR HIGH	0.0028822	M/KM	TILT DISTANCE HIGH	19.3980362	MM
SCALE FACTOR LOW	0.0003780	M/KM	TILT DISTANCE LOW	2.5440048	MM
IMAGE MOTION COMPENSATION V/H	0.0085222	RAD/SEC	SWING ANGLE	118.5772333	DEG
EMISSION ANGLE	2.0432874	DEG	INCIDENCE ANGLE	64.4224243	DEG
PHASE ANGLE	62.9162607	DEG	NORTH DEVIATION ANGLE	347.5709457	DEG
TILT ANGLE	1.8213954	DEG	RESOLUTION CONSTANT	4.5927287	MTR
TILT AZIMUTH	311.0206070	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.7802629	DEG
SUN ANGLE AT NADIR	64.2580824	DEG	SUN ARC AT NADIR	1949.2931061	KM
LONGITUDE DISTANCE TO TARGET	-1.8370056	DEG	LATITUDE DISTANCE TO TARGET	0.8917555	DEG
LONGITUDE ARC LENGTH TO TARGET	-55.7262559	KM	LATITUDE ARC LENGTH TO TARGET	27.0517371	KM
FORWARD OVERLAP RATIO	7.1407043	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	9.8999262	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.28203589	-0.94957964	-0.13694619	221.58047676
CAMERA AXIS	-0.00808110	-0.99995329	0.00530063	211.76652527
C1	-0.08851758	-0.98172458	0.16846810	216.18333435
C2	-0.01416704	-0.98415536	-0.17674144	214.84637451
C3	0.07262549	-0.98475766	-0.15804400	215.45385742
C4	-0.00172504	-0.98232688	0.18716554	216.79888916

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	62.4936466	1948.4972839	30.3446031	-1.7640174	0.0078390	-0.3800548

```
LONG  90.9818 DEG          LONG  89.7423 DEG
LATI   3.3402 DEG          LATI  -2.2406 DEG
                                          *
                                         ***
        *        173.34381 KM      *                 LONG  88.5695 DEG          LONG  88.0398 DEG
                                   * * *               LATI   2.2014 DEG          LATI  -0.2514 DEG
        1                          2        *  *  *
                                            *                  *        76.11697 KM      *
                                            *                  1                         2
                                            *
            LOW RESOLUTION                  *
                                            *                        HIGH RESOLUTION
                                            *
  149.30854 KM                147.14872 KM  *  DIRECTION      19.23115 KM                19.11189 KM
                                            *  OF MOTION
                                            *
                                            *                  4                         3
                                            *                  *        76.33303 KM      *
        4                                   *
        *        177.25474 KM      3        *                 LONG  87.9501 DEG          LONG  87.4232 DEG
                                            *                  LATI   2.3386 DEG          LATI  -0.1222 DEG
LONG  86.1724 DEG          LONG  84.9837 DEG *
LATI   4.4434 DEG          LATI  -1.2804 DEG *
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FRAME 12

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*************************************
*  PHOTO FRAME NUMBER  9 OF 16      *
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13

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	18	14	44	8.699

LONGITUDE OF NADIR POINT	88.6695042	DEG	LATITUDE OF NADIR POINT	0.7824741	DEG
LONG OF CAMERA AXIS INTERSECT	88.5642576	DEG	LATI OF CAMERA AXIS INTERSECT	0.9144360	DEG
SPACECRAFT RADIUS	1949.2183990	KM	SPACECRAFT ALTITUDE	211.1293945	KM
MEAN ALTITUDE RATE	-0.0509067	KM/SEC	TIME FROM PERIAPSIS	-133.1266804	SEC
HORIZONTAL VELOCITY	1.8041628	KM/SEC	TRUE ANOMALY	352.9235878	DEG
SCALE FACTOR HIGH	0.0028892	M/KM	TILT DISTANCE HIGH	14.7951614	MM
SCALE FACTOR LOW	0.0003789	M/KM	TILT DISTANCE LOW	1.9403490	MM
IMAGE MOTION COMPENSATION V/H	0.0085453	RAD/SEC	SWING ANGLE	128.9827785	DEG
EMISSION ANGLE	1.5582134	DEG	INCIDENCE ANGLE	63.8550863	DEG
PHASE ANGLE	62.9162636	DEG	NORTH DEVIATION ANGLE	347.5613785	DEG
TILT ANGLE	1.3894002	DEG	RESOLUTION CONSTANT	4.5815078	MTR
TILT AZIMUTH	321.4295959	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.7290268	DEG
SUN ANGLE AT NADIR	63.7527285	DEG	SUN ARC AT NADIR	1933.9629974	KM
LONGITUDE DISTANCE TO TARGET	-1.3304958	DEG	LATITUDE DISTANCE TO TARGET	0.7824741	DEG
LONGITUDE ARC LENGTH TO TARGET	-40.3610916	KM	LATITUDE ARC LENGTH TO TARGET	23.7366471	KM
FORWARD OVERLAP RATIO	7.8006070	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	9.8001480	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.20867232	-0.97025286	-0.12274060	216.87339020
CAMERA AXIS	-0.00810547	-0.99995311	0.00530026	211.19903564
C1	-0.08854153	-0.98172248	0.16846772	215.70227051
C2	-0.01419100	-0.98415495	-0.17674181	214.36808777
C3	0.07260150	-0.98475936	-0.15804435	214.77639771
C4	-0.00174901	-0.98232690	0.18716517	216.11599731

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	45.2554755	1948.5110016	26.6191707	-1.7643670	-0.0047520	-0.3802398

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LONG  91.5538 DEG          LONG  90.3127 DEG
LATI   3.2192 DEG          LATI  -2.3662 DEG
                                          *
                                         ***
     *        173.49317 KM     *        * * *
     1                         2      *  *  *
                                          *
                                          *
          LOW RESOLUTION                  *
                                          *
                                          *
  148.83806 KM              146.68914 KM  *  DIRECTION
                                          *  OF MOTION
                                          *
                                          *
                                          *
     4                         3          *
     *        176.12121 KM     *          *
                                          *
LONG  86.7555 DEG          LONG  85.5729 DEG
LATI   4.2981 DEG          LATI  -1.3887 DEG
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LONG  89.1371 DEG          LONG  88.6083 DEG
LATI   2.0759 DEG          LATI  -0.3715 DEG

     *        75.94756 KM      *
     1                         2

          HIGH RESOLUTION

  19.17410 KM               19.05531 KM

     4                         3
     *        76.09278 KM      *

LONG  88.5194 DEG          LONG  87.9937 DEG
LATI   2.2115 DEG          LATI  -0.2415 DEG
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FRAME 13

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*********************************
*  PHOTO FRAME NUMBER 10 OF 16  *
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14

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	18	14	44	18.499

LONGITUDE OF NADIR POINT	89.1762514 DEG	LATITUDE OF NADIR POINT	0.6730759 DEG
LONG OF CAMERA AXIS INTERSECT	89.1328602 DEG	LATI OF CAMERA AXIS INTERSECT	0.7914661 DEG
SPACECRAFT RADIUS	1948.7377319 KM	SPACECRAFT ALTITUDE	210.6487274 KM
MEAN ALTITUDE RATE	-0.0471855 KM/SEC	TIME FROM PERIAPSIS	-123.3302603 SEC
HORIZONTAL VELOCITY	1.8046082 KM/SEC	TRUE ANOMALY	353.4432411 DEG
SCALE FACTOR HIGH	0.0028958 M/KM	TILT DISTANCE HIGH	11.0788352 MM
SCALE FACTOR LOW	0.0003798 M/KM	TILT DISTANCE LOW	1.4529620 MM
IMAGE MOTION COMPENSATION V/H	0.0085669 RAD/SEC	SWING ANGLE	147.4243412 DEG
EMISSION ANGLE	1.1666542 DEG	INCIDENCE ANGLE	63.2879400 DEG
PHASE ANGLE	62.9162660 DEG	NORTH DEVIATION ANGLE	347.5537453 DEG
TILT ANGLE	1.0404930 DEG	RESOLUTION CONSTANT	4.5710773 MTR
TILT AZIMUTH	339.8736343 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.6752129 DEG
SUN ANGLE AT NADIR	63.2472382 DEG	SUN ARC AT NADIR	1918.6287689 KM
LONGITUDE DISTANCE TO TARGET	-0.8237486 DEG	LATITUDE DISTANCE TO TARGET	0.6730759 DEG
LONGITUDE ARC LENGTH TO TARGET	-24.9887230 KM	LATITUDE ARC LENGTH TO TARGET	20.4180090 KM
FORWARD OVERLAP RATIO	7.5495155 PCT	SIDE OVERLAP RATIO	0. PCT
TIME BETWEEN PHOTOS	9.8001480 SEC		

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.13127475	-0.98552506	-0.10727201	213.40176582
CAMERA AXIS	-0.00812981	-0.99995291	0.00529990	210.68769836
C1	-0.08856545	-0.98172039	0.16846735	215.27824402
C2	-0.01421493	-0.98415454	-0.17674217	213.94644165
C3	0.07257757	-0.98476107	-0.15804470	214.15681458
C4	-0.00177295	-0.98232693	0.18716482	215.49139404

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	28.0142655	1948.4017639	22.8920376	-1.7646053	-0.0173526	-0.3804008

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LONG  92.1269 DEG          LONG  90.8838 DEG
LATI   3.0989 DEG          LATI  -2.4928 DEG
                                          *
                                         ***
                                        * * *
        *        173.69102 KM      *   *  *  *
        1                          2  *   *
                                          *
                                          *
                                          
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*   PHOTO FRAME NUMBER 11 OF 16     *
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15

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	18	14	44	28.399

LONGITUDE OF NADIR POINT	89.6883955	DEG	LATITUDE OF NADIR POINT	0.5624533	DEG
LONG OF CAMERA AXIS INTERSECT	89.7072191	DEG	LATI OF CAMERA AXIS INTERSECT	0.6672070	DEG
SPACECRAFT RADIUS	1948.2892303	KM	SPACECRAFT ALTITUDE	210.2002258	KM
MEAN ALTITUDE RATE	-0.0434206	KM/SEC	TIME FROM PERIAPSIS	-113.4339352	SEC
HORIZONTAL VELOCITY	1.8050239	KM/SEC	TRUE ANOMALY	353.9684410	DEG
SCALE FACTOR HIGH	0.0029020	M/KM	TILT DISTANCE HIGH	9.3728060	MM
SCALE FACTOR LOW	0.0003806	M/KM	TILT DISTANCE LOW	1.2292204	MM
IMAGE MOTION COMPENSATION V/H	0.0085872	RAD/SEC	SWING ANGLE	177.7354622	DEG
EMISSION ANGLE	0.9968020	DEG	INCIDENCE ANGLE	62.7151875	DEG
PHASE ANGLE	62.9162683	DEG	NORTH DEVIATION ANGLE	347.5480003	DEG
TILT ANGLE	0.8802950	DEG	RESOLUTION CONSTANT	4.5613449	MIR
TILT AZIMUTH	10.1862798	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.6181993	DEG
SUN ANGLE AT NADIR	62.7364802	DEG	SUN ARC AT NADIR	1903.1347198	KM
LONGITUDE DISTANCE TO TARGET	-0.3116045	DEG	LATITUDE DISTANCE TO TARGET	0.5624533	DEG
LONGITUDE ARC LENGTH TO TARGET	-9.4526396	KM	LATITUDE ARC LENGTH TO TARGET	17.0622311	KM
FORWARD OVERLAP RATIO	6.3805815	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	9.8999262	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.05016363	-0.99462767	-0.09055064	211.21212387
CAMERA AXIS	-0.00815430	-0.99995271	0.00529954	210.22804260
C1	-0.08858951	-0.98171828	0.16846699	214.90788269
C2	-0.01423901	-0.98415413	-0.17674252	213.57807922
C3	0.07255346	-0.98476280	-0.15804505	213.58950806
C4	-0.00179703	-0.98232695	0.18716446	214.91947937

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	10.5951679	1948.1663971	19.1253936	-1.7647328	-0.0300899	-0.3805389

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LONG  92.7068 DEG          LONG  91.4615 DEG
LATI   2.9780 DEG          LATI  -2.6216 DEG        *
                                                   ***          LONG  90.2785 DEG          LONG  89.7510 DEG
        *        173.94076 KM        *            * * *         LATI   1.8243 DEG          LATI  -0.6139 DEG
        1                            2          *  *  *
                                                 *                    *        75.66778 KM        *
                                                 *                    1                           2
                LOW RESOLUTION                   *
                                                 *                          HIGH RESOLUTION
                                                 *
  148.08875 KM                145.95308 KM       *  DIRECTION      19.08127 KM                18.96319 KM
                                                 *  OF MOTION
                                                 *
                                                 *                    4                           3
                                                 *                    *        75.67184 KM        *
        4                            3           *
        *        174.01431 KM        *           *          LONG  89.6633 DEG          LONG  89.1398 DEG
                                                 *          LATI   1.9569 DEG          LATI  -0.4823 DEG
LONG  87.9247 DEG          LONG  86.7533 DEG     *
LATI   4.0092 DEG          LATI  -1.6089 DEG     *
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FRAME 15

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*************************************
*   PHOTO FRAME NUMBER 12 OF 16     * 16
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	18	14	44	38.099

LONGITUDE OF NADIR POINT	90.1903429	DEG	LATITUDE OF NADIR POINT	0.4539864	DEG
LONG OF CAMERA AXIS INTERSECT	90.2698946	DEG	LATI OF CAMERA AXIS INTERSECT	0.5454427	DEG
SPACECRAFT RADIUS	1947.8860016	KM	SPACECRAFT ALTITUDE	205.7969971	KM
MEAN ALTITUDE RATE	-0.0397269	KM/SEC	TIME FROM PERIAPSIS	-103.7385073	SEC
HORIZONTAL VELOCITY	1.8053979	KM/SEC	TRUE ANOMALY	354.4832039	DEG
SCALE FACTOR HIGH	0.0029076	M/KM	TILT DISTANCE HIGH	10.6943728	MM
SCALE FACTOR LOW	0.0003813	M/KM	TILT DISTANCE LOW	1.4025407	MM
IMAGE MOTION COMPENSATION V/H	0.0086055	RAD/SEC	SWING ANGLE	208.5650864	DEG
EMISSION ANGLE	1.1256576	DEG	INCIDENCE ANGLE	62.1542211	DEG
PHASE ANGLE	62.9162722	DEG	NORTH DEVIATION ANGLE	347.5443039	DEG
TILT ANGLE	1.0043929	DEG	RESOLUTION CONSTANT	4.5525948	MTR
TILT AZIMUTH	41.0164294	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.5597277	DEG
SUN ANGLE AT NADIR	62.2360058	DEG	SUN ARC AT NADIR	1887.9526520	KM
LONGITUDE DISTANCE TO TARGET	0.1903429	DEG	LATITUDE DISTANCE TO TARGET	0.4539864	DEG
LONGITUDE ARC LENGTH TO TARGET	5.7741235	KM	LATITUDE ARC LENGTH TO TARGET	13.7718494	KM
FORWARD OVERLAP RATIO	8.0952593	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	9.7003698	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	0.03075639	-0.99683127	-0.07335853	210.39166450
CAMERA AXIS	-0.00817832	-0.99995252	0.00529917	209.83314514
C1	-0.08861311	-0.98171621	0.16846662	214.60156250
C2	-0.01426263	-0.98415372	-0.17674289	213.27330017
C3	0.07252982	-0.98476447	-0.15804540	213.09065247
C4	-0.00182065	-0.98232698	0.18716411	214.41647339

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	-6.4709891	1947.8139648	15.4340236	-1.7647473	-0.0425749	-0.3806503

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LONG  93.2760 DEG          LONG  92.0284 DEG
LATI   2.8602 DEG          LATI  -2.7489 DEG          *
                                                     ***          LONG  90.8406 DEG          LONG  90.3136 DEG
        *       174.23466 KM       *                 * * *         LATI   1.7008 DEG          LATI  -0.7338 DEG
        1                          2               *  * *  *
                                                     *                   *       75.55987 KM       *
                                                     *                   1                         2
                LOW RESOLUTION                       *
                                                     *                        HIGH RESOLUTION
                                                     *
  147.81562 KM              145.68423 KM             *  DIRECTION     19.04623 KM              18.92839 KM
                                                     *  OF MOTION
                                                     *
                                                     *                   4                         3
                                                     *                   *       75.49490 KM       *
        4                          3                 *
        *       173.05949 KM       *                 *          LONG  90.2263 DEG          LONG  89.7038 DEG
                                                     *          LATI   1.8320 DEG          LATI  -0.6014 DEG
LONG  88.4989 DEG          LONG  87.3327 DEG         *
LATI   3.8686 DEG          LATI  -1.7184 DEG         *
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FRAME 16

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*   PHOTO FRAME NUMBER 13 OF 16     *  17
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	18	14	44	47.899

LONGITUDE OF NADIR POINT	90.6977501	DEG	LATITUDE OF NADIR POINT	0.3443004	DEG
LONG OF CAMERA AXIS INTERSECT	90.8384886	DEG	LATI OF CAMERA AXIS INTERSECT	0.4223789	DEG
SPACECRAFT RADIUS	1947.5149536	KM	SPACECRAFT ALTITUDE	209.4259491	KM
MEAN ALTITUDE RATE	-0.0359897	KM/SEC	TIME FROM PERIAPSIS	-93.9411736	SEC
HORIZONTAL VELOCITY	1.8057423	KM/SEC	TRUE ANOMALY	355.0035858	DEG
SCALE FACTOR HIGH	0.0029127	M/KM	TILT DISTANCE HIGH	14.2223854	MM
SCALE FACTOR LOW	0.0003820	M/KM	TILT DISTANCE LOW	1.8652309	MM
IMAGE MOTION COMPENSATION V/H	0.0086223	RAD/SEC	SWING ANGLE	228.5273685	DEG
EMISSION ANGLE	1.4966030	DEG	INCIDENCE ANGLE	61.5874953	DEG
PHASE ANGLE	62.9162755	DEG	NORTH DEVIATION ANGLE	347.5424957	DEG
TILT ANGLE	1.3356312	DEG	RESOLUTION CONSTANT	4.5445430	MTR
TILT AZIMUTH	60.9782672	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.4979782	DEG
SUN ANGLE AT NADIR	61.7302027	DEG	SUN ARC AT NADIR	1872.6089325	KM
LONGITUDE DISTANCE TO TARGET	0.6977501	DEG	LATITUDE DISTANCE TO TARGET	0.3443004	DEG
LONGITUDE ARC LENGTH TO TARGET	21.1665113	KM	LATITUDE ARC LENGTH TO TARGET	10.4444832	KM
FORWARD OVERLAP RATIO	6.9684646	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	9.8001480	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	0.11244521	-0.99210747	-0.05548721	210.91089630
CAMERA AXIS	-0.00820266	-0.99995232	0.00529880	209.48973083
C1	-0.08863702	-0.98171412	0.16846625	214.34889221
C2	-0.01428658	-0.98415331	-0.17674325	213.02180481
C3	0.07250587	-0.98476619	-0.15804575	212.64361572
C4	-0.00184457	-0.98232700	0.18716374	213.96568298

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	-23.7159212	1947.3352509	11.7028582	-1.7646508	-0.0551959	-0.3807387

```
LONG  93.8522 DEG          LONG  92.6020 DEG
LATI   2.7418 DEG          LATI  -2.8784 DEG        *
                                                   ***          LONG  91.4088 DEG          LONG  90.8822 DEG
        *        174.58183 KM      *              * * *          LATI   1.5764 DEG          LATI  -0.8554 DEG
        1                          2            *  *  *
                                                 *                     *        75.47084 KM      *
                                                 *                     1                         2
            LOW RESOLUTION                       *
                                                 *                          HIGH RESOLUTION
                                                 *
  147.60354 KM                145.47464 KM       *  DIRECTION      19.01796 KM                18.90028 KM
                                                 *  OF MOTION
                                                 *
                                                 *                     4                         3
                                                 *                     *        75.33634 KM      *
        4                          3             *
        *        172.14874 KM      *             *          LONG  90.7952 DEG          LONG  90.2736 DEG
                                                 *          LATI   1.7062 DEG          LATI  -0.7221 DEG
LONG  89.0782 DEG          LONG  87.9170 DEG     *
LATI   3.7275 DEG          LATI  -1.8298 DEG     *
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FRAME 17

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*********************************
*  PHOTO FRAME NUMBER 14 OF 16  *
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18

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	18	14	44	57.699

LONGITUDE OF NADIR POINT	91.2052298	DEG	LATITUDE OF NADIR POINT	0.2345683	DEG
LONG OF CAMERA AXIS INTERSECT	91.4070044	DEG	LATI OF CAMERA AXIS INTERSECT	0.2993271	DEG
SPACECRAFT RADIUS	1947.1806183	KM	SPACECRAFT ALTITUDE	209.0916138	KM
MEAN ALTITUDE RATE	-0.0322488	KM/SEC	TIME FROM PERIAPSIS	-84.1458445	SEC
HORIZONTAL VELOCITY	1.8060527	KM/SEC	TRUE ANOMALY	355.5240517	DEG
SCALE FACTOR HIGH	0.0029174	M/KM	TILT DISTANCE HIGH	18.7547374	MM
SCALE FACTOR LOW	0.0003826	M/KM	TILT DISTANCE LOW	2.4596377	MM
IMAGE MOTION COMPENSATION V/H	0.0086376	RAD/SEC	SWING ANGLE	239.7560215	DEG
EMISSION ANGLE	1.9729582	DEG	INCIDENCE ANGLE	61.0210142	DEG
PHASE ANGLE	62.9162798	DEG	NORTH DEVIATION ANGLE	347.5426445	DEG
TILT ANGLE	1.7610310	DEG	RESOLUTION CONSTANT	4.5372880	MTR
TILT AZIMUTH	72.2055035	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.4335299	DEG
SUN ANGLE AT NADIR	61.2244625	DEG	SUN ARC AT NADIR	1857.2670898	KM
LONGITUDE DISTANCE TO TARGET	1.2052298	DEG	LATITUDE DISTANCE TO TARGET	0.2345683	DEG
LONGITUDE ARC LENGTH TO TARGET	36.5610976	KM	LATITUDE ARC LENGTH TO TARGET	7.1157184	KM
FORWARD OVERLAP RATIO	6.8569198	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	9.7995043	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	0.19248477	-0.98058450	-0.03746528	212.77553558
CAMERA AXIS	-0.00822695	-0.99995212	0.00529844	209.20231628
C1	-0.08866087	-0.98171202	0.16846589	214.15354919
C2	-0.01431046	-0.98415290	-0.17674360	212.82720947
C3	0.07248196	-0.98476789	-0.15804610	212.25392151
C4	-0.00186844	-0.98232702	0.18716338	213.57264709

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	-40.9560518	1946.7333679	7.9716957	-1.7644424	-0.0678178	-0.3808029

```
LONG  94.4295 DEG          LONG  93.1764 DEG
LATI   2.6241 DEG          LATI  -3.0089 DEG
                                          *
                                         ***
     *        174.98009 KM     *        * * *
     1                         2      *  * *  *
                                          *
                                          *
          LOW RESOLUTION                  *
                                          *
 147.45567 KM              145.32744 KM   *  DIRECTION
                                          *  OF MOTION
                                          *
                                          *
     4                         3          *
     *        171.29178 KM     *          *
                                          *
LONG  89.6565 DEG          LONG  88.5002 DEG
LATI   3.5875 DEG          LATI  -1.9419 DEG
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LONG  91.9770 DEG          LONG  91.4509 DEG
LATI   1.4522 DEG          LATI  -0.9773 DEG

                 *        75.40199 KM      *
                 1                         2

                      HIGH RESOLUTION

 DIRECTION      18.99685 KM              18.87925 KM

                 4                         3
                 *        75.19810 KM      *

LONG  91.3639 DEG          LONG  90.8431 DEG
LATI   1.5807 DEG          LATI  -0.8431 DEG
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FRAME 18

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*************************************
*   PHOTO FRAME NUMBER 15 OF 16     *  19
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	18	14	45	7.399

LONGITUDE OF NADIR POINT	91.7077389 DEG	LATITUDE OF NADIR POINT	0.1258923 DEG
LONG OF CAMERA AXIS INTERSECT	91.9698372 DEG	LATI OF CAMERA AXIS INTERSECT	0.1775123 DEG
SPACECRAFT RADIUS	1946.8857727 KM	SPACECRAFT ALTITUDE	208.7967682 KM
MEAN ALTITUDE RATE	-0.0285420 KM/SEC	TIME FROM PERIAPSIS	-74.4495554 SEC
HORIZONTAL VELOCITY	1.8063266 KM/SEC	TRUE ANOMALY	356.0394173 DEG
SCALE FACTOR HIGH	0.0029215 M/KM	TILT DISTANCE HIGH	23.6739342 MM
SCALE FACTOR LOW	0.0003831 M/KM	TILT DISTANCE LOW	3.1047783 MM
IMAGE MOTION COMPENSATION V/H	0.0086511 RAD/SEC	SWING ANGLE	246.4106750 DEG
EMISSION ANGLE	2.4896680 DEG	INCIDENCE ANGLE	60.4603629 DEG
PHASE ANGLE	62.9162822 DEG	NORTH DEVIATION ANGLE	347.5447044 DEG
TILT ANGLE	2.2225182 DEG	RESOLUTION CONSTANT	4.5308898 MTR
TILT AZIMUTH	78.8577957 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.3670282 DEG
SUN ANGLE AT NADIR	60.7238154 DEG	SUN ARC AT NADIR	1842.0797882 KM
LONGITUDE DISTANCE TO TARGET	1.7077389 DEG	LATITUDE DISTANCE TO TARGET	0.1258923 DEG
LONGITUDE ARC LENGTH TO TARGET	51.8049011 KM	LATITUDE ARC LENGTH TO TARGET	3.8189914 KM
FORWARD OVERLAP RATIO	7.7003618 PCT	SIDE OVERLAP RATIO	0. PCT
TIME BETWEEN PHOTOS	9.7003698 SEC		

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	0.26871738	-0.96301529	-0.01981228	215.91269875
CAMERA AXIS	-0.00825094	-0.99995192	0.00529807	208.97286987
C1	-0.08868444	-0.98170996	0.16846552	214.01663208
C2	-0.01433408	-0.98415248	-0.17674397	212.69062805
C3	0.07245834	-0.98476958	-0.15804647	211.92440796
C4	-0.00189202	-0.98232704	0.18716303	213.24024963

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	-58.0194945	1946.0162048	4.2777227	-1.7641258	-0.0803141	-0.3808425

```
LONG  95.0022 DEG          LONG  93.7459 DEG
LATI   2.5083 DEG          LATI  -3.1391 DEG        *
                                                   ***          LONG  92.5398 DEG          LONG  92.0139 DEG
        *        175.42546 KM        *            * * *          LATI   1.3297 DEG          LATI  -1.0983 DEG
        1                            2          *  *  *
                                                 *                     *        75.35370 KM        *
                                                 *                     1                           2
                LOW RESOLUTION                   *
                                                 *                          HIGH RESOLUTION
                                                 *
  147.37247 KM              145.24310 KM         *  DIRECTION      18.98300 KM                18.86541 KM
                                                 *  OF MOTION
                                                 *
                                                 *                     4                           3
                                                 *                     *        75.08119 KM        *
        4                            3            *
        *        170.49551 KM        *            *          LONG  91.9269 DEG          LONG  91.4067 DEG
                                                 *          LATI   1.4568 DEG          LATI  -0.9632 DEG
LONG  90.2282 DEG          LONG  89.0764 DEG     *
LATI   3.4499 DEG          LATI  -2.0536 DEG     *
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FRAME 19

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*********************************
*  PHOTO FRAME NUMBER 16 OF 16  *20
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	18	14	45	17.199

LONGITUDE OF NADIR POINT	92.2156143 DEG	LATITUDE OF NADIR POINT	0.0160424 DEG
LONG OF CAMERA AXIS INTERSECT	92.5386152 DEG	LATI OF CAMERA AXIS INTERSECT	0.0544315 DEG
SPACECRAFT RADIUS	1946.6244202 KM	SPACECRAFT ALTITUDE	208.5354156 KM
MEAN ALTITUDE RATE	-0.0247931 KM/SEC	TIME FROM PERIAPSIS	-64.6523046 SEC
HORIZONTAL VELOCITY	1.8065696 KM/SEC	TRUE ANOMALY	356.5603027 DEG
SCALE FACTOR HIGH	0.0029252 M/KM	TILT DISTANCE HIGH	28.8608530 MM
SCALE FACTOR LOW	0.0003836 M/KM	TILT DISTANCE LOW	3.7850299 MM
IMAGE MOTION COMPENSATION V/H	0.0086631 RAD/SEC	SWING ANGLE	250.7783585 DEG
EMISSION ANGLE	3.0340990 DEG	INCIDENCE ANGLE	59.8939652 DEG
PHASE ANGLE	62.9162846 DEG	NORTH DEVIATION ANGLE	347.5487366 DEG
TILT ANGLE	2.7088080 DEG	RESOLUTION CONSTANT	4.5252185 MTR
TILT AZIMUTH	83.2221193 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.2970638 DEG
SUN ANGLE AT NADIR	60.2179589 DEG	SUN ARC AT NADIR	1826.7344360 KM
LONGITUDE DISTANCE TO TARGET	2.2156143 DEG	LATITUDE DISTANCE TO TARGET	0.0160424 DEG
LONGITUDE ARC LENGTH TO TARGET	67.2114925 KM	LATITUDE ARC LENGTH TO TARGET	0.4866524 KM
FORWARD OVERLAP RATIO	6.6713760 PCT	SIDE OVERLAP RATIO	0. PCT
TIME BETWEEN PHOTOS	9.8001480 SEC		

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	0.34156151	-0.93985616	-0.00247364	220.33150673
CAMERA AXIS	-0.00827534	-0.99995173	0.00529771	208.79673767
C1	-0.08870840	-0.98170786	0.16846516	213.93557739
C2	-0.01435807	-0.98415207	-0.17674433	212.60949707
C3	0.07243432	-0.98477129	-0.15804682	211.64830017
C4	-0.00191600	-0.98232707	0.18716267	212.96163940

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	-75.2567625	1945.1688995	0.5450208	-1.7636945	-0.0929406	-0.3808583

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LONG  95.5820 DEG          LONG  94.3223 DEG
LATI   2.3920 DEG          LATI  -3.2716 DEG
                                          *
                                         ***
                                        * * *
*          175.92795 KM    *          * * *
1                          2          *  *
                                      *
                                      *
                                      
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*************************************
*  PHOTO FRAME NUMBER  1 OF  4      *  21
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	18	14	46	42.699

LONGITUDE OF NADIR POINT	96.6497917	DEG	LATITUDE OF NADIR POINT	-0.9420427	DEG
LONG OF CAMERA AXIS INTERSECT	97.5084867	DEG	LATI OF CAMERA AXIS INTERSECT	-1.0180943	DEG
SPACECRAFT RADIUS	1945.9054260	KM	SPACECRAFT ALTITUDE	207.8164215	KM
MEAN ALTITUDE RATE	0.0079875	KM/SEC	TIME FROM PERIAPSIS	20.8119595	SEC
HORIZONTAL VELOCITY	1.8072424	KM/SEC	TRUE ANOMALY	1.1075337	DEG
SCALE FACTOR HIGH	0.0029353	M/KM	TILT DISTANCE HIGH	76.6737194	MM
SCALE FACTOR LOW	0.0003849	M/KM	TILT DISTANCE LOW	10.0555698	MM
IMAGE MOTION COMPENSATION V/H	0.0086963	RAD/SEC	SWING ANGLE	262.6963425	DEG
EMISSION ANGLE	8.0261377	DEG	INCIDENCE ANGLE	54.9545636	DEG
PHASE ANGLE	62.9163156	DEG	NORTH DEVIATION ANGLE	347.6664429	DEG
TILT ANGLE	7.1641997	DEG	RESOLUTION CONSTANT	4.5096163	MTR
TILT AZIMUTH	95.0692759	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	87.5627661	DEG
SUN ANGLE AT NADIR	55.8090305	DEG	SUN ARC AT NADIR	1692.9879303	KM
LONGITUDE DISTANCE TO TARGET	6.6497917	DEG	LATITUDE DISTANCE TO TARGET	-0.9420427	DEG
LONGITUDE ARC LENGTH TO TARGET	201.7239304	KM	LATITUDE ARC LENGTH TO TARGET	-28.5772202	KM
FORWARD OVERLAP RATIO	0.	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	0.	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	0.75268391	-0.64964910	0.10687843	299.33700943
CAMERA AXIS	-0.00848743	-0.99994997	0.00529451	209.64987183
C1	-0.08891654	-0.98168956	0.16846205	215.70016479
C2	-0.01456688	-0.98414844	-0.17674747	214.35565186
C3	0.07222538	-0.98478612	-0.15805000	211.66128540
C4	-0.00212426	-0.98232724	0.18715952	212.96998596

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	-225.3061504	1932.5529938	-31.9926705	-1.7551806	-0.2028747	-0.3799635

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LONG 100.7012 DEG          LONG  99.3994 DEG
LATI   1.4108 DEG          LATI  -4.4723 DEG        *
                                                   ***          LONG  98.0863 DEG        LONG  97.5581 DEG
        *        182.69040 KM      *              * * *          LATI   0.1432 DEG        LATI  -2.3042 DEG
        1                          2            *  *  *
                                                 *                    *        75.94517 KM      *
                                                 *                    1                         2
                                                 *
            LOW RESOLUTION                       *                              HIGH RESOLUTION
                                                 *
  149.95333 KM                 147.71507 KM      *  DIRECTION      19.22436 KM                19.10270 KM
                                                 *  OF MOTION
                                                 *
                                                 *                    4                         3
                                                 *                    *        74.98691 KM      *
        4                          3             *
        *        165.29359 KM      *             *          LONG  97.4633 DEG        LONG  96.9451 DEG
                                                 *          LATI   0.2593 DEG        LATI  -2.1579 DEG
LONG  95.8098 DEG          LONG  94.6914 DEG     *
LATI   2.1509 DEG          LATI  -3.1841 DEG     *
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FRAME 21

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*   PHOTO FRAME NUMBER  2 OF  4  * 22
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	18	14	46	52.798

LONGITUDE OF NADIR POINT	97.1738148 DEG	LATITUDE OF NADIR POINT	-1.0549790 DEG
LONG OF CAMERA AXIS INTERSECT	98.0971203 DEG	LATI OF CAMERA AXIS INTERSECT	-1.1445331 DEG
SPACECRAFT RADIUS	1946.0056763 KM	SPACECRAFT ALTITUDE	207.9166718 KM
MEAN ALTITUDE RATE	0.0118613 KM/SEC	TIME FROM PERIAPSIS	30.9085994 SEC
HORIZONTAL VELOCITY	1.8071500 KM/SEC	TRUE ANOMALY	1.6447812 DEG
SCALE FACTOR HIGH	0.0029339 M/KM	TILT DISTANCE HIGH	82.4511747 MM
SCALE FACTOR LOW	0.0003848 M/KM	TILT DISTANCE LOW	10.8132688 MM
IMAGE MOTION COMPENSATION V/H	0.0086917 RAD/SEC	SWING ANGLE	263.1900673 DEG
EMISSION ANGLE	8.6252561 DEG	INCIDENCE ANGLE	54.3709226 DEG
PHASE ANGLE	62.9163198 DEG	NORTH DEVIATION ANGLE	347.6900635 DEG
TILT ANGLE	7.6977806 DEG	RESOLUTION CONSTANT	4.5117917 MTR
TILT AZIMUTH	95.5497150 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	87.4605579 DEG
SUN ANGLE AT NADIR	55.2890577 DEG	SUN ARC AT NADIR	1677.2143707 KM
LONGITUDE DISTANCE TO TARGET	7.1738148 DEG	LATITUDE DISTANCE TO TARGET	-1.0549790 DEG
LONGITUDE ARC LENGTH TO TARGET	217.6203671 KM	LATITUDE ARC LENGTH TO TARGET	-32.0031857 KM
FORWARD OVERLAP RATIO	4.8063188 PCT	SIDE OVERLAP RATIO	0. PCT
TIME BETWEEN PHOTOS	10.0994825 SEC		

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	0.77885756	-0.61659555	0.11485142	311.96413422
CAMERA AXIS	-0.00851243	-0.99994975	0.00529415	210.03715515
C1	-0.08894107	-0.98168739	0.16846171	216.20701599
C2	-0.01459152	-0.98414800	-0.17674783	214.85812378
C3	0.07220074	-0.98478786	-0.15805037	211.95127869
C4	-0.00214880	-0.98232725	0.18715917	213.26150513

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	-242.9756241	1930.4446716	-35.8295269	-1.7536133	-0.2158098	-0.3797354

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LONG 101.3143 DEG          LONG 100.0060 DEG
LATI   1.2992 DEG          LATI  -4.6196 DEG
                                                  *
                                                 ***
                                                * * *
      *        183.79101 KM        *            *  *  *
      1                            2
                                                  *
                                                  *
                                                  *
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*********************************
*  PHOTO FRAME NUMBER  3 OF  4  *  23
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	18	14	47	2.999

LONGITUDE OF NADIR POINT	97.7029448	DEG	LATITUDE OF NADIR POINT	-1.1689177	DEG
LONG OF CAMERA AXIS INTERSECT	98.6919527	DEG	LATI OF CAMERA AXIS INTERSECT	-1.2721244	DEG
SPACECRAFT RADIUS	1946.1465912	KM	SPACECRAFT ALTITUDE	208.0575867	KM
MEAN ALTITUDE RATE	0.0157715	KM/SEC	TIME FROM PERIAPSIS	41.1041474	SEC
HORIZONTAL VELOCITY	1.8070199	KM/SEC	TRUE ANOMALY	2.1872245	DEG
SCALE FACTOR HIGH	0.0029319	M/KM	TILT DISTANCE HIGH	88.3046408	MM
SCALE FACTOR LOW	0.0003845	M/KM	TILT DISTANCE LOW	11.5809366	MM
IMAGE MOTION COMPENSATION V/H	0.0086852	RAD/SEC	SWING ANGLE	263.6240120	DEG
EMISSION ANGLE	9.2311754	DEG	INCIDENCE ANGLE	53.7814832	DEG
PHASE ANGLE	62.9163232	DEG	NORTH DEVIATION ANGLE	347.7159691	DEG
TILT ANGLE	8.2370147	DEG	RESOLUTION CONSTANT	4.5148496	MTR
TILT AZIMUTH	95.9691906	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	87.3538542	DEG
SUN ANGLE AT NADIR	54.7642798	DEG	SUN ARC AT NADIR	1661.2950287	KM
LONGITUDE DISTANCE TO TARGET	7.7029448	DEG	LATITUDE DISTANCE TO TARGET	-1.1689177	DEG
LONGITUDE ARC LENGTH TO TARGET	233.6717243	KM	LATITUDE ARC LENGTH TO TARGET	-35.4595575	KM
FORWARD OVERLAP RATIO	4.1614138	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	10.2005482	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	0.80206908	-0.58461720	0.12209802	325.16101837
CAMERA AXIS	-0.00853772	-0.99994954	0.00529376	210.49067688
C1	-0.08896587	-0.98168521	0.16846135	216.78428650
C2	-0.01461643	-0.98414758	-0.17674820	215.43051147
C3	0.07217581	-0.98478963	-0.15805076	212.30656433
C4	-0.00217362	-0.98232727	0.18715879	213.61875916

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	-260.8015976	1928.1837006	-39.7015181	-1.7519109	-0.2288544	-0.3794790

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LONG 101.9354 DEG          LONG 100.6201 DEG
LATI   1.1876 DEG          LATI  -4.7697 DEG      *
                                                 ***          LONG  99.2735 DEG          LONG  98.7437 DEG
        *        184.97201 KM      *            * * *         LATI  -0.1049 DEG          LATI  -2.5648 DEG
        1                          2          *  *  *
                                                 *                    *        76.32648 KM       *
                                                 *                    1                          2
            LOW RESOLUTION                       *
                                                 *                          HIGH RESOLUTION
                                                 *
 151.33090 KM              149.04500 KM          *  DIRECTION     19.36676 KM              19.24322 KM
                                                 *  OF MOTION
                                                 *
                                                 *                    4                          3
                                                 *                    *        75.21542 KM       *
        4                          3             *
        *        164.77228 KM      *             *          LONG  98.6454 DEG          LONG  98.1266 DEG
                                                 *          LATI   0.0092 DEG          LATI  -2.4156 DEG
LONG  96.9926 DEG          LONG  95.8787 DEG     *
LATI   1.8864 DEG          LATI  -3.4320 DEG     *
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FRAME 23

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*********************************
*  PHOTO FRAME NUMBER  4 OF  4  * 24
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	18	14	47	13.099

LONGITUDE OF NADIR POINT	98.2268391	DEG	LATITUDE OF NADIR POINT	-1.2816218	DEG
LONG OF CAMERA AXIS INTERSECT	99.2814102	DEG	LATI OF CAMERA AXIS INTERSECT	-1.3983702	DEG
SPACECRAFT RADIUS	1946.3254395	KM	SPACECRAFT ALTITUDE	208.2364349	KM
MEAN ALTITUDE RATE	0.0196414	KM/SEC	TIME FROM PERIAPSIS	51.1996269	SEC
HORIZONTAL VELOCITY	1.8068547	KM/SEC	TRUE ANOMALY	2.7242554	DEG
SCALE FACTOR HIGH	0.0029294	M/KM	TILT DISTANCE HIGH	94.1159770	MM
SCALE FACTOR LOW	0.0003842	M/KM	TILT DISTANCE LOW	12.3436036	MM
IMAGE MOTION COMPENSATION V/H	0.0086769	RAD/SEC	SWING ANGLE	264.0013847	DEG
EMISSION ANGLE	9.8320112	DEG	INCIDENCE ANGLE	53.1977358	DEG
PHASE ANGLE	62.9163275	DEG	NORTH DEVIATION ANGLE	347.7436447	DEG
TILT ANGLE	8.7712854	DEG	RESOLUTION CONSTANT	4.5187306	MTR
TILT AZIMUTH	96.3311987	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	87.2446842	DEG
SUN ANGLE AT NADIR	54.2449689	DEG	SUN ARC AT NADIR	1645.5415344	KM
LONGITUDE DISTANCE TO TARGET	8.2268391	DEG	LATITUDE DISTANCE TO TARGET	-1.2816218	DEG
LONGITUDE ARC LENGTH TO TARGET	249.5642567	KM	LATITUDE ARC LENGTH TO TARGET	-38.8784790	KM
FORWARD OVERLAP RATIO	5.4160703	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	10.1001263	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	0.82226939	-0.55438732	0.12856036	338.61777878
CAMERA AXIS	-0.00856274	-0.99994933	0.00529338	211.00196838
C1	-0.08899041	-0.98168305	0.16846099	217.42127991
C2	-0.01464109	-0.98414714	-0.17674858	216.06219482
C3	0.07215114	-0.98479138	-0.15805115	212.72052002
C4	-0.00219817	-0.98232729	0.18715841	214.03511047

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	-278.4350357	1925.8143768	-43.5328226	-1.7501068	-0.2417524	-0.3791993

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LONG 102.5525 DEG          LONG 101.2300 DEG
LATI   1.0781 DEG          LATI  -4.9195 DEG
                                                *
                                               ***
                                              * * *
        *        186.21200 KM        *       * * *
        1                            2
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* PHOTO FRAME NUMBER 25 *
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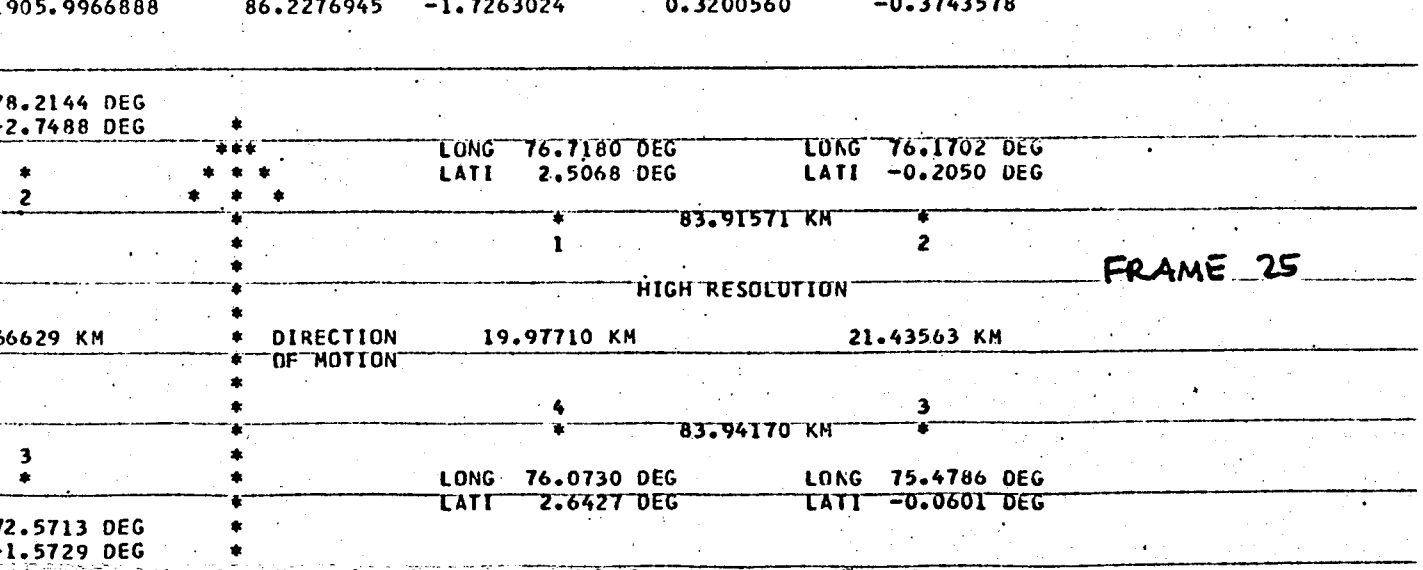
	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	18	21	56	24.999

LONGITUDE OF NADIR POINT	76.4050102	DEG	LATITUDE OF NADIR POINT	2.5178245	DEG
LONG OF CAMERA AXIS INTERSECT	76.1206713	DEG	LATI OF CAMERA AXIS INTERSECT	1.2721961	DEG
SPACECRAFT RADIUS	1962.8341827	KM	SPACECRAFT ALTITUDE	224.7441864	KM
MEAN ALTITUDE RATE	-0.1110453	KM/SEC	TIME FROM PERIAPSIS	-294.9112587	SEC
HORIZONTAL VELOCITY	1.7917500	KM/SEC	TRUE ANOMALY	344.4010277	DEG
SCALE FACTOR HIGH	0.0027142	M/KM	TILT DISTANCE HIGH	104.9853115	MM
SCALE FACTOR LOW	0.0003560	M/KM	TILT DISTANCE LOW	13.7685654	MM
IMAGE MOTION COMPENSATION V/H	0.0079724	RAD/SEC	SWING ANGLE	10.1264836	DEG
EMISSION ANGLE	11.0429735	DEG	INCIDENCE ANGLE	72.6132107	DEG
PHASE ANGLE	70.2735815	DEG	NORTH DEVIATION ANGLE	357.0871506	DEG
TILT ANGLE	9.7653394	DEG	RESOLUTION CONSTANT	4.8769488	MTR
TILT AZIMUTH	192.8567123	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	89.2424135	DEG
SUN ANGLE AT NADIR	72.3082132	DEG	SUN ARC AT NADIR	2153.4981079	KM
LONGITUDE DISTANCE TO TARGET	-3.1949902	DEG	LATITUDE DISTANCE TO TARGET	1.6178245	DEG
LONGITUDE ARC LENGTH TO TARGET	-96.9212828	KM	LATITUDE ARC LENGTH TO TARGET	49.0773430	KM
FORWARD OVERLAP RATIO	0.	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	0.	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.58271231	-0.77848607	-0.23325053	252.63377571
CAMERA AXIS	-0.19303640	-0.95878410	-0.20849456	228.48692322
C1	-0.27558510	-0.96020540	-0.04536999	224.97039795
C2	-0.18834452	-0.90435646	-0.38296963	241.39233398
C3	-0.10403527	-0.92531457	-0.36465000	241.46685791
C4	-0.19127585	-0.98116350	-0.02705036	225.03448486

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	460.9326019	1905.9966888	86.2276945	-1.7263024	0.3200560	-0.3743578



FRAME 25

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* PHOTO FRAME NUMBER 26 *
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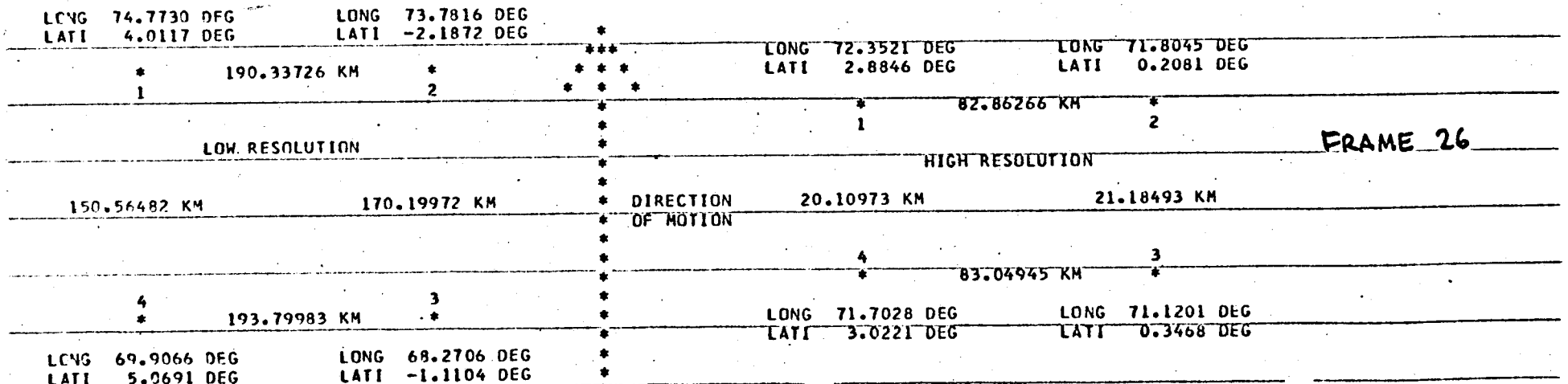
	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	19	5	11	16.200

LONGITUDE OF NADIR POINT	72.1038570	DEG	LATITUDE OF NADIR POINT	2.5484272	DEG
LONG OF CAMERA AXIS INTERSECT	71.7533426	DEG	LATI OF CAMERA AXIS INTERSECT	1.6525446	DEG
SPACECRAFT RADIUS	1963.8791656	KM	SPACECRAFT ALTITUDE	225.7891693	KM
MEAN ALTITUDE RATE	-0.1135087	KM/SEC	TIME FROM PERIAPSIS	-301.8869858	SEC
HORIZONTAL VELOCITY	1.7908576	KM/SEC	TRUE ANOMALY	344.0401764	DEG
SCALE FACTOR HIGH	0.0027016	M/KM	TILT DISTANCE HIGH	78.7459879	MM
SCALE FACTOR LOW	0.0003543	M/KM	TILT DISTANCE LOW	10.3273427	MM
IMAGE MOTION COMPENSATION V/H	0.0079315	RAD/SEC	SWING ANGLE	19.6006265	DEG
EMISSION ANGLE	8.3176658	DEG	INCIDENCE ANGLE	73.2766075	DEG
PHASE ANGLE	70.2735729	DEG	NORTH DEVIATION ANGLE	358.0779762	DEG
TILT ANGLE	7.3557341	DEG	RESOLUTION CONSTANT	4.8996249	MTR
TILT AZIMUTH	201.3615341	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	89.2274551	DEG
SUN ANGLE AT NADIR	72.9120665	DEG	SUN ARC AT NADIR	2211.8162231	KM
LONGITUDE DISTANCE TO TARGET	-2.0961428	DEG	LATITUDE DISTANCE TO TARGET	1.5484272	DEG
LONGITUDE ARC LENGTH TO TARGET	-63.5873156	KM	LATITUDE ARC LENGTH TO TARGET	46.9721479	KM
FORWARD OVERLAP RATIO	0.	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	0.	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.53843488	-0.80878305	-0.23655413	240.90748024
CAMERA AXIS	-0.25845487	-0.95213579	-0.16321309	227.90974426
C1	-0.33876634	-0.94087032	0.00064382	226.19058228
C2	-0.25248466	-0.90589937	-0.33999681	238.26010132
C3	-0.16950431	-0.93157524	-0.32161446	238.80003357
C4	-0.25578598	-0.96654619	0.01902617	226.67362976

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	602.8884735	1867.0086060	87.3215132	-1.6973266	0.4461999	-0.3742244



FRAME 26

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*   PHOTO FRAME NUMBER    27        *
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	19	8	48	44.600

LONGITUDE OF NADIR POINT	70.0930319	DEG	LATITUDE OF NADIR POINT	2.5340804	DEG
LONG OF CAMERA AXIS INTERSECT	69.7224607	DEG	LATI OF CAMERA AXIS INTERSECT	1.6789979	DEG
SPACECRAFT RADIUS	1964.0184479	KM	SPACECRAFT ALTITUDE	225.9284515	KM
MEAN ALTITUDE RATE	-0.1137616	KM/SEC	TIME FROM PERIAPSIS	-302.6223145	SEC
HORIZONTAL VELOCITY	1.7907450	KM/SEC	TRUE ANOMALY	344.0025635	DEG
SCALE FACTOR HIGH	0.0027000	M/KM	TILT DISTANCE HIGH	76.2404022	MM
SCALE FACTOR LOW	0.0003541	M/KM	TILT DISTANCE LOW	9.9987414	MM
IMAGE MOTION COMPENSATION V/H	0.0079262	RAD/SEC	SWING ANGLE	21.7896373	DEG
EMISSION ANGLE	8.0559626	DEG	INCIDENCE ANGLE	73.4585400	DEG
PHASE ANGLE	70.2735729	DEG	NORTH DEVIATION ANGLE	358.2035561	DEG
TILT ANGLE	7.1241288	DEG	RESOLUTION CONSTANT	4.9026474	MTR
TILT AZIMUTH	203.4236526	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	89.2163181	DEG
SUN ANGLE AT NADIR	73.0745544	DEG	SUN ARC AT NADIR	2216.7453613	KM
LONGITUDE DISTANCE TO TARGET	-3.7069683	DEG	LATITUDE DISTANCE TO TARGET	1.7340804	DEG
LONGITUDE ARC LENGTH TO TARGET	-112.4523401	KM	LATITUDE ARC LENGTH TO TARGET	52.6040106	KM
FORWARD OVERLAP RATIO	0.	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	0.	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.70035052	-0.67253777	-0.23916963	261.60880661
CAMERA AXIS	-0.28946680	-0.94413136	-0.15755934	227.91790771
C1	-0.36910102	-0.92936759	0.00635024	226.37535095
C2	-0.28229100	-0.89908361	-0.33460494	237.97648621
C3	-0.20015688	-0.92733666	-0.31620237	238.60978699
C4	-0.28696690	-0.95762065	0.02475280	226.94436646

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	668.0822296	1844.8559265	86.8364096	-1.6806078	0.5051129	-0.3743373

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LONG  72.7445 DEG          LONG  71.7425 DEG
LATI   4.0392 DEG          LATI  -2.1405 DEG        *
                                                   ***          LONG  70.3217 DEG          LONG  69.7737 DEG
        *        189.81442 KM      *              * * *          LATI   2.9112 DEG          LATI   0.2376 DEG
        1                          2            *  *  *
                                                 *                     *        82.78053 KM      *
                                                 *                     1                         2
            LOW RESOLUTION                       *                                                          FRAME 27
                                                 *                          HIGH RESOLUTION
                                                 *
  150.92199 KM              169.80742 KM         *  DIRECTION     20.13218 KM                21.16648 KM
                                                 *  OF MOTION
                                                 *
                                                 *                     4                         3
                                                 *                     *        82.99953 KM      *
        4                          3             *
        *        193.86823 KM      *             *          LONG  69.6717 DEG          LONG  69.0896 DEG
                                                 *          LATI   3.0492 DEG          LATI   0.3754 DEG
LONG  67.8678 DEG          LONG  66.2420 DEG     *
LATI   5.1058 DEG          LATI  -1.0787 DEG     *
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Not Supported by Post-Flight OD

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* PHOTO FRAME NUMBER 28 *
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	19	17	5	20.998

LONGITUDE OF NADIR POINT	-152.9693356	DEG	LATITUDE OF NADIR POINT	-9.4481211	DEG
LONG OF CAMERA AXIS INTERSECT	-154.3221931	DEG	LATI OF CAMERA AXIS INTERSECT	-10.4208364	DEG
SPACECRAFT RADIUS	3039.9348755	KM	SPACECRAFT ALTITUDE	1301.8448792	KM
MEAN ALTITUDE RATE	0.3377981	KM/SEC	TIME FROM PERIAPSIS	3393.1828613	SEC
HORIZONTAL VELOCITY	1.1570943	KM/SEC	TRUE ANOMALY	125.0168982	DEG
SCALE FACTOR HIGH	0.0004686	M/KM	TILT DISTANCE HIGH	23.4350586	MM
SCALE FACTOR LOW	0.0000614	M/KM	TILT DISTANCE LOW	3.0734503	MM
IMAGE MOTION COMPENSATION V/H	0.0008888	RAD/SEC	SWING ANGLE	228.7062664	DEG
EMISSION ANGLE	3.8252308	DEG	INCIDENCE ANGLE	67.3904772	DEG
PHASE ANGLE	70.2729959	DEG	NORTH DEVIATION ANGLE	174.9203796	DEG
TILT ANGLE	2.2001146	DEG	RESOLUTION CONSTANT	28.2500336	MTR
TILT AZIMUTH	233.7657433	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	275.3593712	DEG
SUN ANGLE AT NADIR	68.6206703	DEG	SUN ARC AT NADIR	2081.6350403	KM
LONGITUDE DISTANCE TO TARGET	-1.6393356	DEG	LATITUDE DISTANCE TO TARGET	0.1518790	DEG
LONGITUDE ARC LENGTH TO TARGET	-49.7298913	KM	LATITUDE ARC LENGTH TO TARGET	4.6073078	KM
FORWARD OVERLAP RATIO	0.	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	0.	SEC			

DIRECTION COSINES TO TARGET	X	Y	Z	MAGNITUDE KM
CAMERA AXIS	0.89567567	0.41474884	0.16046340	1303.47357178
C1	0.86727817	0.47724582	0.14165101	1303.40937805
C2	0.83969732	0.43986375	0.31847808	1331.68904114
C3	0.90672980	0.42080066	-0.02771086	1347.65164185
C4	0.86586943	0.49867550	-0.03991087	1355.21894836
	0.79883695	0.51773860	0.30627807	1339.00526428

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	-2671.1293640	-1362.8098755	-499.0188942	0.2016877	-1.1844173	0.0972256

LONG-140.6646 DEG
LATI 11.2394 DEG

LONG-132.4575 DEG
LATI -27.7565 DEG

* 1 — 1183.17378 KM — * 2

LOW RESOLUTION

1014.91839 KM — 1058.79854 KM

4 — 1261.63022 KM — 3

LONG-174.9901 DEG
LATI 8.1906 DEG

LONG-173.4175 DEG
LATI -2.4700 DEG

LONG-151.2295 DEG
LATI -17.9745 DEG

* 1 — 473.34381 KM — * 2

HIGH RESOLUTION

DIRECTION OF MOTION

118.78481 KM — 120.22605 KM

4 — 475.97854 KM — 3

LONG-157.3109 DEG
LATI -2.9322 DEG

LONG-155.3589 DEG
LATI -18.5557 DEG

FRAME 28

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* PHOTO FRAME NUMBER 29 *
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Not Supported by Post-Flight OD

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	19	23	18	31.798

LONGITUDE OF NADIR POINT	61.5688062	DEG	LATITUDE OF NADIR POINT	2.6574609	DEG
LONG OF CAMERA AXIS INTERSECT	61.0467732	DEG	LATI OF CAMERA AXIS INTERSECT	1.7734893	DEG
SPACECRAFT RADIUS	1965.4682312	KM	SPACECRAFT ALTITUDE	227.3782349	KM
MEAN ALTITUDE RATE	-0.1182634	KM/SEC	TIME FROM PERIAPSIS	-315.0568657	SEC
HORIZONTAL VELOCITY	1.7894517	KM/SEC	TRUE ANOMALY	343.3532867	DEG
SCALE FACTOR HIGH	0.0026829	M/KM	TILT DISTANCE HIGH	83.4247818	MM
SCALE FACTOR LOW	0.0003513	M/KM	TILT DISTANCE LOW	10.9409549	MM
IMAGE MOTION COMPENSATION V/H	0.0078699	RAD/SEC	SWING ANGLE	28.9486072	DEG
EMISSION ANGLE	8.8139856	DEG	INCIDENCE ANGLE	74.7404232	DEG
PHASE ANGLE	70.2735691	DEG	NORTH DEVIATION ANGLE	358.1600456	DEG
TILT ANGLE	7.7875692	DEG	RESOLUTION CONSTANT	4.9341077	MTR
TILT AZIMUTH	210.5556203	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	89.2045984	DEG
SUN ANGLE AT NADIR	74.2045364	DEG	SUN ARC AT NADIR	2251.0238037	KM
LONGITUDE DISTANCE TO TARGET	-3.6311936	DEG	LATITUDE DISTANCE TO TARGET	1.8574609	DEG
LONGITUDE ARC LENGTH TO TARGET	-110.1536865	KM	LATITUDE ARC LENGTH TO TARGET	56.3468080	KM
FORWARD OVERLAP RATIO	0.	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	0.	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.78345779	-0.56691914	-0.25455174	262.66196442
CAMERA AXIS	-0.40805253	-0.89838093	-0.16249567	229.77630615
C1	-0.48551144	-0.87422928	0.00134189	227.68623352
C2	-0.39473204	-0.85384538	-0.33931502	240.04151917
C3	-0.31695408	-0.89250335	-0.32090166	241.16899109
C4	-0.40773349	-0.91288725	0.01975524	228.69287109

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	934.7589569	1726.5532227	91.1285868	-1.5880634	0.7448560	-0.3733211

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LONG  64.0637 DEG          LONG  63.0756 DEG
LATI   4.1406 DEG          LATI  -2.0553 DEG        *
                                                    ***          LONG  61.6495 DEG          LONG  61.0988 DEG
        *        190.23247 KM        *             * * *         LATI   3.0155 DEG          LATI   0.3191 DEG
        1                            2            *  *  *
                                                  *                     *        83.47585 KM        *
                                                  *                     1                           2
                LOW RESOLUTION                    *                                                          FRAME 29
                                                  *                          HIGH RESOLUTION
                                                  *
   151.86479 KM                172.13291 KM       *  DIRECTION     20.28492 KM                21.39199 KM
                                                  *  OF MOTION
                                                  *
                                                  *                     4                           3
                                                  *                     *        83.86600 KM        *
        4                            3            *
        *        197.47703 KM        *            *          LONG  60.9944 DEG          LONG  60.4064 DEG
                                                  *          LATI   3.1546 DEG          LATI   0.4528 DEG
LONG  59.1609 DEG          LONG  57.4852 DEG      *
LATI   5.2370 DEG          LATI  -1.0576 DEG      *
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Not Supported by Post-Flight OD

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* PHOTO FRAME NUMBER 30 *
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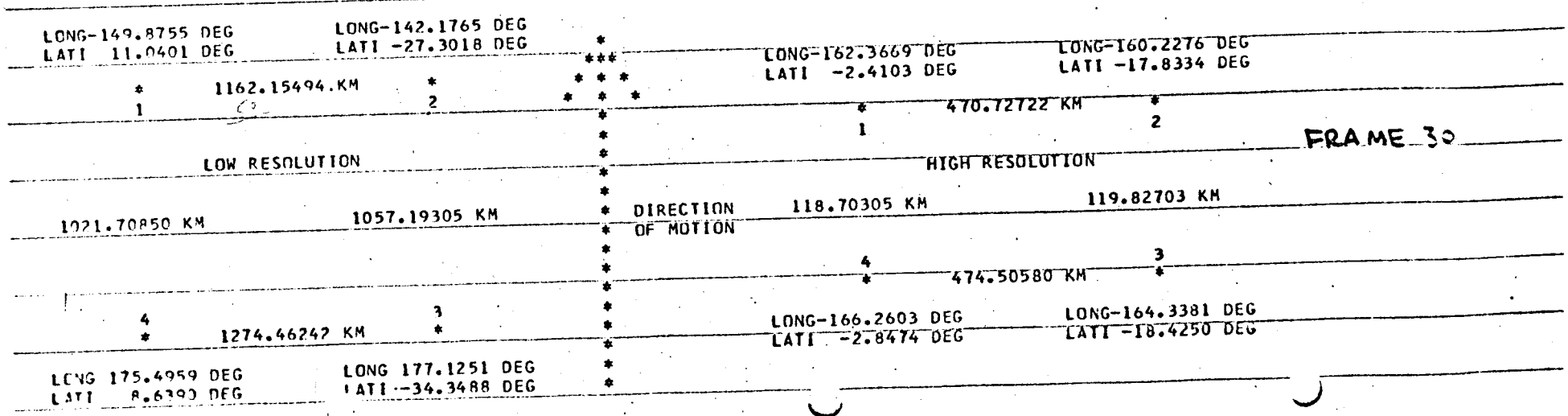
	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	20	7	35	0.799

LONGITUDE OF NADIR POINT	-161.2567825	DEG	LATITUDE OF NADIR POINT	-9.4516609	DEG
LONG OF CAMERA AXIS INTERSECT	-163.2710209	DEG	LATI OF CAMERA AXIS INTERSECT	-10.3293786	DEG
SPACECRAFT RADIUS	3033.4269714	KM	SPACECRAFT ALTITUDE	1295.3369751	KM
MEAN ALTITUDE RATE	0.3398079	KM/SEC	TIME FROM PERIAPSIS	3372.9222717	SEC
HORIZONTAL VELOCITY	1.1595040	KM/SEC	TRUE ANOMALY	124.5928268	DEG
SCALE FACTOR HIGH	0.0004709	M/KM	TILT DISTANCE HIGH	30.9601138	MM
SCALE FACTOR LOW	0.0000618	M/KM	TILT DISTANCE LOW	4.0603428	MM
IMAGE MOTION COMPENSATION V/H	0.0008951	RAD/SEC	SWING ANGLE	240.7326012	DEG
EMISSION ANGLE	5.0567355	DEG	INCIDENCE ANGLE	65.8554745	DEG
PHASE ANGLE	70.2730045	DEG	NORTH DEVIATION ANGLE	174.7299194	DEG
TILT ANGLE	2.9055132	DEG	RESOLUTION CONSTANT	28.1088121	MTR
TILT AZIMUTH	245.9752979	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	275.5435410	DEG
SUN ANGLE AT NADIR	67.7390089	DEG	SUN ARC AT NADIR	2054.8894958	KM
LONGITUDE DISTANCE TO TARGET	-1.2567825	DEG	LATITUDE DISTANCE TO TARGET	-0.0016608	DEG
LONGITUDE ARC LENGTH TO TARGET	-38.1249924	KM	LATITUDE ARC LENGTH TO TARGET	-0.0503817	KM
FORWARD OVERLAP RATIO	0.	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	0.	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	0.94304303	0.28936167	0.16413307	1296.28918457
CAMERA AXIS	0.92124467	0.36148786	0.14364812	1298.13578796
C1	0.88856129	0.32829288	0.32044128	1326.41513062
C2	0.95355968	0.30012160	-0.02551409	1338.70330811
C3	0.92313460	0.38259976	-0.03794661	1349.52656555
C4	0.85813621	0.41077104	0.30800877	1336.95898437

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	-2833.5621033	-961.4908752	-498.1354485	0.0276363	-1.2040154	0.0974801



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* PHOTO FRAME NUMBER 31 *
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Not Supported by Post-Flight OD

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	20	13	46	59.299

LONGITUDE OF NADIR POINT	= 48.9595900	DEG	LATITUDE OF NADIR POINT	= 3.5537841	DEG
LONG OF CAMERA AXIS INTERSECT	= 47.6846814	DEG	LATI OF CAMERA AXIS INTERSECT	= 2.7572073	DEG
SPACECRAFT RADIUS	= 1977.1700134	KM	SPACECRAFT ALTITUDE	= 239.0800171	KM
MEAN ALTITUDE RATE	= -0.1514901	KM/SEC	TIME FROM PERIAPSIS	= -408.2680817	SEC
HORIZONTAL VELOCITY	= 1.7786892	KM/SEC	TRUE ANOMALY	= 338.5026398	DEG
SCALE FACTOR (HIGH)	= 0.0025514	M/KM	TILT DISTANCE (HIGH)	= 115.9245367	MM
SCALE FACTOR (LOW)	= 0.0003346	M/KM	TILT DISTANCE (LOW)	= 15.2032179	MM
IMAGE MOTION COMPENSATION (V/H)	= 0.0074397	RAD/SEC	SWING ANGLE	= 57.0624595	DEG
EMISSION ANGLE	= 12.2618543	DEG	INCIDENCE ANGLE	= 80.7010775	DEG
PHASE ANGLE	= 70.2735472	DEG	NORTH DEVIATION ANGLE	= 358.6077766	DEG
TILT ANGLE	= 10.7601914	DEG	RESOLUTION CONSTANT	= 5.1880363	MTR
TILT AZIMUTH	= 237.9997025	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	= 89.1469479	DEG
SUN ANGLE AT NADIR	= 79.4149570	DEG	SUN ARC AT NADIR	= 2409.0839844	KM
LONGITUDE DISTANCE TO TARGET	= -11.0404100	DEG	LATITUDE DISTANCE TO TARGET	= 3.5537841	DEG
LONGITUDE ARC LENGTH TO TARGET	= -334.9151802	KM	LATITUDE ARC LENGTH TO TARGET	= 107.8054380	KM
FORWARD OVERLAP RATIO	= 0.	PCT	SIDE OVERLAP RATIO	= 0.	PCT
TIME BETWEEN PHOTOS	= 0.	SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.96044333	0.03787262	-0.27588817	444.22280884
CAMERA AXIS	-0.52036069	-0.83889180	-0.15964117	243.96656799
C1	-0.59392300	-0.80451111	0.00416508	240.56126404
C2	-0.50158090	-0.79694331	-0.33659760	253.71667480
C3	-0.42940485	-0.84523175	-0.31811127	257.51354980
C4	-0.52174693	-0.85279953	0.02265141	243.94422913

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1295.6958313	1488.4061737	122.5558176	-1.3985544	1.0465474	-0.3680616

```
LONG  50.7984 DEG          LONG  49.7908 DEG.
LATI   5.2294 DEG          LATI  -1.1122 DEG        *
                                                   ***          LONG  48.3214 DEG          LONG  47.7469 DEG
      *        194.67932 KM      *                 * * *         LATI   4.0765 DEG          LATI   1.2249 DEG
     (1)                        (2)               *  *  *
                                                   *                   *        88.22852 KM      *
                                                   *                  (1)                       (2)
            LOW RESOLUTION                         *
                                                   *                          HIGH RESOLUTION
                                                   *
  163.78900 KM                187.04115 KM         *  DIRECTION      21.77249 KM                23.00976 KM
                                                   *  OF MOTION
                                                   *
                                                   *                  (4)                       (3)
                                                   *                   *        89.54256 KM      *
     (4)                        (3)                *
      *        219.33089 KM      *                 *          LONG  47.6176 DEG          LONG  46.9969 DEG
                                                   *          LATI   4.2260 DEG          LATI   1.3397 DEG
LONG  45.5298 DEG          LONG  43.6568 DEG       *
LATI   6.5365 DEG          LATI  -0.4528 DEG       *
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FRAME 31

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*************************************
*   PHOTO FRAME NUMBER      32      *
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Not Supported by Post-Flight OD

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	20	13	47	33.199

LONGITUDE OF NADIR POINT	=	50.6726828 DEG	LATITUDE OF NADIR POINT	=	3.1983299 DEG
LONG OF CAMERA AXIS INTERSECT	=	49.6597147 DEG	LATI OF CAMERA AXIS INTERSECT	=	2.3759914 DEG
SPACECRAFT RADIUS	=	1972.2344818 KM	SPACECRAFT ALTITUDE	=	234.1444855 KM
MEAN ALTITUDE RATE	=	-0.1396672 KM/SEC	TIME FROM PERIAPSIS	=	-374.3888397 SEC
HORIZONTAL VELOCITY	=	1.7831365 KM/SEC	TRUE ANOMALY	=	340.2533302 DEG
SCALE FACTOR (HIGH)	=	0.0026052 M/KM	TILT DISTANCE (HIGH)	=	102.8341570 MM
SCALE FACTOR (LOW)	=	0.0003417 M/KM	TILT DISTANCE (LOW)	=	13.4864469 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0076155 RAD/SEC	SWING ANGLE	=	49.7701812 DEG
EMISSION ANGLE	=	10.8727936 DEG	INCIDENCE ANGLE	=	78.7305536 DEG
PHASE ANGLE	=	70.2735548 DEG	NORTH DEVIATION ANGLE	=	358.4555244 DEG
TILT ANGLE	=	9.5689846 DEG	RESOLUTION CONSTANT	=	5.0809353 MTR
TILT AZIMUTH	=	230.9223709 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	89.1711054 DEG
SUN ANGLE AT NADIR	=	77.7054377 DEG	SUN ARC AT NADIR	=	2357.2250366 KM
LONGITUDE DISTANCE TO TARGET	=	-9.3273172 DEG	LATITUDE DISTANCE TO TARGET	=	3.1983299 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-282.9478378 KM	LATITUDE ARC LENGTH TO TARGET	=	97.0225964 KM
FORWARD OVERLAP RATIO	=	-179.5980701 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	33.9001179 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.95932949	-0.04555261	-0.27858911	394.97493362
CAMERA AXIS	-0.52043095	-0.83884796	-0.15964248	237.90467834
C1	-0.59399080	-0.80446106	0.00416357	234.96189880
C2	-0.50164716	-0.79690108	-0.33659886	247.78492737
C3	-0.42947521	-0.84519558	-0.31811233	250.63951111
C4	-0.52181885	-0.85275557	0.02265010	237.50704956

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1247.9561005	1523.2221985	110.0357141	-1.4259133	1.0141642	-0.3705748

```
LONG  52.7221 DEG          LONG  51.7231 DEG
LATI   4.7986 DEG          LATI  -1.4593 DEG        *
                                                   ***          LONG  50.2819 DEG          LONG  49.7169 DEG
        *        192.13448 KM        *            * * *         LATI   3.6620 DEG          LATI   0.8779 DEG
       (1)                          (2)          *  *  *
                                                  *                     *        86.16654 KM        *
                                                  *                    (1)                         (2)
                LOW RESOLUTION                    *
                                                  *                          HIGH RESOLUTION
                                                  *
  158.58556 KM                180.53513 KM        *  DIRECTION     21.12780 KM                22.30950 KM
                                                  *  OF MOTION
                                                  *
                                                  *                    (4)                         (3)
                                                  *                     *        87.15443 KM        *
       (4)                          (3)           *
        *        210.58447 KM        *            *          LONG  49.5993 DEG          LONG  48.9914 DEG
                                                  *          LATI   3.8074 DEG          LATI   0.9990 DEG
LONG  47.6161 DEG          LONG  45.8189 DEG      *
LATI   6.0273 DEG          LATI  -0.6832 DEG      *
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FRAME 32

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*********************************
*  PHOTO FRAME NUMBER   33      *
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Not Supported by Post-Flight OD

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	20	13	49	31.799

LONGITUDE OF NADIR POINT	=	56.7181044 DEG	LATITUDE OF NADIR POINT	=	1.9213672 DEG
LONG OF CAMERA AXIS INTERSECT	=	56.5352240 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.9950143 DEG
SPACECRAFT RADIUS	=	1958.1853485 KM	SPACECRAFT ALTITUDE	=	220.0953522 KM
MEAN ALTITUDE RATE	=	-0.0969174 KM/SEC	TIME FROM PERIAPSIS	=	-255.8534908 SEC
HORIZONTAL VELOCITY	=	1.7959180 KM/SEC	TRUE ANOMALY	=	346.4404182 DEG
SCALE FACTOR (HIGH)	=	0.0027715 M/KM	TILT DISTANCE (HIGH)	=	79.2975569 MM
SCALE FACTOR (LOW)	=	0.0003635 M/KM	TILT DISTANCE (LOW)	=	10.3996797 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0081597 RAD/SEC	SWING ANGLE	=	9.3424435 DEG
EMISSION ANGLE	=	8.3509216 DEG	INCIDENCE ANGLE	=	71.8695402 DEG
PHASE ANGLE	=	70.2735825 DEG	NORTH DEVIATION ANGLE	=	358.0842361 DEG
TILT ANGLE	=	7.4066865 DEG	RESOLUTION CONSTANT	=	4.7760691 MTR
TILT AZIMUTH	=	191.1666260 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	89.0669909 DEG
SUN ANGLE AT NADIR	=	71.6691656 DEG	SUN ARC AT NADIR	=	2174.1123352 KM
LONGITUDE DISTANCE TO TARGET	=	-3.2818956 DEG	LATITUDE DISTANCE TO TARGET	=	1.9213672 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-99.5575953 KM	LATITUDE ARC LENGTH TO TARGET	=	58.2854290 KM
FORWARD OVERLAP RATIO	=	-954.2030182 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	118.6002007 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.81367953	-0.51958261	-0.26069051	251.84601974
CAMERA AXIS	-0.52067669	-0.83869457	-0.15964705	222.18527222
C1	-0.59422786	-0.80428600	0.00415834	220.65368652
C2	-0.50187898	-0.79675324	-0.33660328	232.66052246
C3	-0.42972143	-0.84506901	-0.31811611	232.61204529
C4	-0.52207031	-0.85260177	0.02264551	220.61036682

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1073.9669495	1636.0848694	65.6538677	-1.5146552	0.8934011	-0.3773183

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LONG  59.5034 DEG          LONG  58.5288 DEG
LATI   3.2989 DEG          LATI  -2.8042 DEG
                                   *
                                  ***                LONG  57.1214 DEG          LONG  56.5826 DEG
     *        187.39176 KM     *                     LATI   2.1950 DEG          LATI  -0.4174 DEG
    (1)                       (2)                  * * *
                                  *                  *        80.90809 KM       *
                                  *                 (1)                        (2)
            LOW RESOLUTION        *
                                  *                          HIGH RESOLUTION
                                  *
  146.51080 KM          165.93718 KM                *  DIRECTION     19.58901 KM          20.65484 KM
                                  *                  *  OF MOTION
                                  *
                                  *                 (4)                        (3)
                                  *                  *        80.89132 KM       *
     (4)                       (3)                  *
      *        187.08114 KM     *                    *          LONG  56.4893 DEG          LONG  55.9168 DEG
                                  *                  *          LATI   2.3296 DEG          LATI  -0.2751 DEG
LONG  54.7675 DEG          LONG  53.1741 DEG         *
LATI   4.3044 DEG          LATI  -1.6567 DEG         *
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FRAME 33

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* PHOTO FRAME NUMBER 34 *
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Not Supported by Post-Flight OD

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	20	13	49	57.000

LONGITUDE OF NADIR POINT	=	58.0115438 DEG	LATITUDE OF NADIR POINT	=	1.6445832 DEG
LONG OF CAMERA AXIS INTERSECT	=	57.9925408 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.6930507 DEG
SPACECRAFT RADIUS	=	1955.8602142 KM	SPACECRAFT ALTITUDE	=	217.7702179 KM
MEAN ALTITUDE RATE	=	-0.0875974 KM/SEC	TIME FROM PERIAPSIS	=	-230.6654072 SEC
HORIZONTAL VELOCITY	=	1.7980508 KM/SEC	TRUE ANOMALY	=	347.7656021 DEG
SCALE FACTOR (HIGH)	=	0.0028011 M/KM	TILT DISTANCE (HIGH)	=	80.7785740 MM
SCALE FACTOR (LOW)	=	0.0003674 M/KM	TILT DISTANCE (LOW)	=	10.5939114 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0082566 RAD/SEC	SWING ANGLE	=	359.1937103 DEG
EMISSION ANGLE	=	8.4951671 DEG	INCIDENCE ANGLE	=	70.4159660 DEG
PHASE ANGLE	=	70.2735891 DEG	NORTH DEVIATION ANGLE	=	358.0396500 DEG
TILT ANGLE	=	7.5434403 DEG	RESOLUTION CONSTANT	=	4.7256137 MTR
TILT AZIMUTH	=	181.1440544 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	89.0046816 DEG
SUN ANGLE AT NADIR	=	70.3776264 DEG	SUN ARC AT NADIR	=	2134.9329834 KM
LONGITUDE DISTANCE TO TARGET	=	-1.9884562 DEG	LATITUDE DISTANCE TO TARGET	=	1.6445832 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-60.3206024 KM	LATITUDE ARC LENGTH TO TARGET	=	49.8890772 KM
FORWARD OVERLAP RATIO	=	-126.3109093 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	25.2001057 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.71501854	-0.65630804	-0.24084900	233.05955887
CAMERA AXIS	-0.52072886	-0.83866200	-0.15964803	219.91322327
C1	-0.59427817	-0.80424884	0.00415724	218.65243530
C2	-0.50192822	-0.79672183	-0.33660422	230.55270386
C3	-0.42977372	-0.84504211	-0.31811692	229.93792725
C4	-0.52212366	-0.85256912	0.02264453	218.10328674

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1035.6869049	1658.1889191	56.1321630	-1.5319847	0.8663455	-0.3783240

```
LONG  60.9582 DEG          LONG  59.9875 DEG
LATI   2.9828 DEG          LATI  -3.1167 DEG        *
                                                   ***          LONG  58.5740 DEG          LONG  58.0393 DEG
        *        187.26743 KM      *              * * *          LATI   1.8817 DEG          LATI  -0.7079 DEG
       (1)                        (2)            *  *  *
                                                  *                     *        80.17503 KM      *
                                                  *                    (1)                       (2)
            LOW RESOLUTION                        *
                                                  *                          HIGH RESOLUTION
                                                  *
  145.07598 KM              164.31068 KM          *  DIRECTION      19.39659 KM                20.45172 KM
                                                  *  OF MOTION
                                                  *
                                                  *                    (4)                       (3)
                                                  *                     *        79.96229 KM      *
       (4)                        (3)             *
        *        183.33051 KM      *              *          LONG  57.9432 DEG          LONG  57.3813 DEG
                                                  *          LATI   2.0135 DEG          LATI  -0.5609 DEG
LONG  56.2644 DEG          LONG  54.7040 DEG      *
LATI   3.9491 DEG          LATI  -1.8926 DEG      *
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FRAME 34

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*********************************
*   PHOTO FRAME NUMBER    35    *
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Not Supported by Post-Flight OD

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	20	14	52	0.999

LONGITUDE OF NADIR POINT	=	-162.5855274 DEG	LATITUDE OF NADIR POINT	=	-9.0643225 DEG
LONG OF CAMERA AXIS INTERSECT	=	-162.7903748 DEG	LATI OF CAMERA AXIS INTERSECT	=	-9.3865939 DEG
SPACECRAFT RADIUS	=	3073.7521973 KM	SPACECRAFT ALTITUDE	=	1335.6622009 KM
MEAN ALTITUDE RATE	=	0.3290448 KM/SEC	TIME FROM PERIAPSIS	=	3492.5648193 SEC
HORIZONTAL VELOCITY	=	1.1442208 KM/SEC	TRUE ANOMALY	=	127.1963243 DEG
SCALE FACTOR (HIGH)	=	0.0004567 M/KM	TILT DISTANCE (HIGH)	=	5.2728354 MM
SCALE FACTOR (LOW)	=	0.0000599 M/KM	TILT DISTANCE (LOW)	=	0.6915194 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0008567 RAD/SEC	SWING ANGLE	=	207.0967045 DEG
EMISSION ANGLE	=	0.7540085 DEG	INCIDENCE ANGLE	=	69.8723717 DEG
PHASE ANGLE	=	70.2729712 DEG	NORTH DEVIATION ANGLE	=	174.9837074 DEG
TILT ANGLE	=	0.4952520 DEG	RESOLUTION CONSTANT	=	28.9838696 MTR
TILT AZIMUTH	=	212.1119900 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	274.9292336 DEG
SUN ANGLE AT NADIR	=	70.0463333 DEG	SUN ARC AT NADIR	=	2124.8830872 KM
LONGITUDE DISTANCE TO TARGET	=	-7.5855274 DEG	LATITUDE DISTANCE TO TARGET	=	-1.7643225 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-230.1099586 KM	LATITUDE ARC LENGTH TO TARGET	=	-53.5214157 KM
FORWARD OVERLAP RATIO	=	0. PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	0. SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	0.97258021	0.13113623	0.19207034	1371.36683655
CAMERA AXIS	0.94193979	0.30025826	0.15031441	1335.62971497
C1	0.90594966	0.26912871	0.32684088	1373.32275391
C2	0.97131801	0.23704744	-0.01870406	1379.29933167
C3	0.94644470	0.32135140	-0.03123645	1380.58230591
C4	0.88107634	0.35343268	0.31430849	1374.59004211

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	-2896.2405090	-908.4304733	-484.2486267	0.0044970	-1.1856150	0.1086679

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LONG-148.0613 DEG          LONG-139.4697 DEG
LATI  14.1126 DEG          LATI -27.0921 DEG          *
                                                     ***          LONG-161.9361 DEG          LONG-159.5155 DEG
      *        1246.89893 KM        *                * * *         LATI  -1.1667 DEG          LATI -17.0648 DEG
     (1)                            (2)             *  *  *
                                                     *                  *        486.05765 KM        *
                                                     *                 (1)                          (2)
              LOW RESOLUTION                         *
                                                     *                          HIGH RESOLUTION
                                                     *
 1051.57884 KM              1067.52412 KM            *  DIRECTION     121.99425 KM              122.52571 KM
                                                     *  OF MOTION
                                                     *
                                                     *                 (4)                          (3)
                                                     *                  *        486.50809 KM        *
     (4)                            (3)             *
      *        1260.41991 KM        *               *          LONG-165.9214 DEG          LONG-163.7017 DEG
                                                     *          LATI  -1.7211 DEG          LATI -17.6632 DEG
LONG 176.2521 DEG          LONG 179.5118 DEG        *
LATI   9.4117 DEG          LATI -32.9930 DEG        *
```

FRAME 35

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* PHOTO FRAME NUMBER 36 *
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Not Supported by Post-Flight OD

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	20	14	52	14.199

LONGITUDE OF NADIR POINT	=	-162.3057632 DEG	LATITUDE OF NADIR POINT	=	-9.0242797 DEG
LONG OF CAMERA AXIS INTERSECT	=	-162.2936993 DEG	LATI OF CAMERA AXIS INTERSECT	=	-9.3168261 DEG
SPACECRAFT RADIUS	=	3078.0874634 KM	SPACECRAFT ALTITUDE	=	1339.9974670 KM
MEAN ALTITUDE RATE	=	0.3278150 KM/SEC	TIME FROM PERIAPSIS	=	3505.7671204 SEC
HORIZONTAL VELOCITY	=	1.1426089 KM/SEC	TRUE ANOMALY	=	127.4775829 DEG
SCALE FACTOR (HIGH)	=	0.0004552 M/KM	TILT DISTANCE (HIGH)	=	4.0464927 MM
SCALE FACTOR (LOW)	=	0.0000597 M/KM	TILT DISTANCE (LOW)	=	0.5306876 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0006527 RAD/SEC	SWING ANGLE	=	172.6970024 DEG
EMISSION ANGLE	=	0.5037235 DEG	INCIDENCE ANGLE	=	70.3563042 DEG
PHASE ANGLE	=	70.2729673 DEG	NORTH DEVIATION ANGLE	=	175.0280590 DEG
TILT ANGLE	=	0.3800714 DEG	RESOLUTION CONSTANT	=	29.0779448 MTR
TILT AZIMUTH	=	177.6689510 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	274.8620300 DEG
SUN ANGLE AT NADIR	=	70.3200340 DEG	SUN ARC AT NADIR	=	2133.1858826 KM
LONGITUDE DISTANCE TO TARGET	=	-7.3057632 DEG	LATITUDE DISTANCE TO TARGET	=	-1.7242797 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-221.6232014 KM	LATITUDE ARC LENGTH TO TARGET	=	-52.3067031 KM
FORWARD OVERLAP RATIO	=	87.5768604 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	13.1996870 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	0.97126862	0.14227957	0.19077155	1373.14714050
CAMERA AXIS	0.94194953	0.30022743	0.15031490	1339.92848206
C1	0.90595828	0.26909911	0.32684135	1378.35763550
C2	0.97132579	0.23701560	-0.01870354	1384.36904907
C3	0.94645525	0.32132037	-0.03123597	1384.52574158
C4	0.88108774	0.35340389	0.31430891	1378.51232910

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	-2896.1709900	-923.9653854	-482.8071404	0.0108959	-1.1835775	0.1097432

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LONG-147.3902 DEG          LONG-138.6431 DEG
LATI  14.4237 DEG          LATI -27.1382 DEG
                                          *
                                         ***                 LONG-161.4429 DEG        LONG-158.9909 DEG
     *      1257.64806 KM      *        * * *                LATI  -1.0649 DEG        LATI -17.0183 DEG
    (1)                       (2)     *  *  *
                                          *                        *      487.84208 KM      *
                                          *                       (1)                      (2)
                                          *
          LOW RESOLUTION                  *                                HIGH RESOLUTION
                                          *
 1055.44354 KM            1071.49823 KM   *  DIRECTION     122.38542 KM              122.91923 KM
                                          *  OF MOTION
                                          *
                                          *                       (4)                      (3)
                                          *                        *      487.89707 KM      *
    (4)                       (3)         *
     *      1259.30457 KM      *         *                LONG-165.4391 DEG        LONG-163.1896 DEG
                                          *                LATI  -1.6329 DEG        LATI -17.6176 DEG
LONG 176.8009 DEG          LONG-179.8415 DEG  *
LATI   9.4391 DEG          LATI -32.9191 DEG  *
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FRAME 36

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*************************************
*   PHOTO FRAME NUMBER   37         *
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Not Supported by Post-Flight OD

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	20	14	54	9.899

LONGITUDE OF NADIR POINT	= -159.8893909 DEG		LATITUDE OF NADIR POINT	=	-8.6691722 DEG
LONG OF CAMERA AXIS INTERSECT	= -157.9463024 DEG		LATI OF CAMERA AXIS INTERSECT	=	-8.6772010 DEG
SPACECRAFT RADIUS	= 3115.3843689 KM		SPACECRAFT ALTITUDE	=	1377.2943726 KM
MEAN ALTITUDE RATE	= 0.3168552 KM/SEC		TIME FROM PERIAPSIS	=	3621.5236816 SEC
HORIZONTAL VELOCITY	= 1.1289271 KM/SEC		TRUE ANOMALY	=	129.9096489 DEG
SCALE FACTOR (HIGH)	= 0.0004429 M/KM		TILT DISTANCE (HIGH)	=	25.7879858 MM
SCALE FACTOR (LOW)	= 0.0000581 M/KM		TILT DISTANCE (LOW)	=	3.3820309 MM
IMAGE MOTION COMPENSATION (V/H)	= 0.0008197 RAD/SEC		SWING ANGLE	=	85.7717752 DEG
EMISSION ANGLE	= 4.3173755 DEG		INCIDENCE ANGLE	=	74.6037092 DEG
PHASE ANGLE	= 70.2729397 DEG		NORTH DEVIATION ANGLE	=	175.3944607 DEG
TILT ANGLE	= 2.4207598 DEG		RESOLUTION CONSTANT	=	29.8872876 MTR
TILT AZIMUTH	= 90.3776417 DEG		SUN AZIMUTH AT PRINCIPAL GND PT	=	274.3051605 DEG
SUN ANGLE AT NADIR	= 72.6878061 DEG		SUN ARC AT NADIR	=	2205.0132141 KM
LONGITUDE DISTANCE TO TARGET	= -4.8893909 DEG		LATITUDE DISTANCE TO TARGET	=	-1.3691722 DEG
LONGITUDE ARC LENGTH TO TARGET	= -148.3215961 KM		LATITUDE ARC LENGTH TO TARGET	=	-41.5343757 KM
FORWARD OVERLAP RATIO	= -5.8102429 PCT		SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	= 115.7001963 SEC				

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	0.95488209	0.23725238	0.17863796	1392.36241150
CAMERA AXIS	0.94203497	0.29995705	0.15031923	1379.37583923
C1	0.90603382	0.26883953	0.32684558	1424.62149048
C2	0.97139398	0.23673634	-0.01869888	1430.96855164
C3	0.94654773	0.32104823	-0.03123166	1420.87988281
C4	0.88118758	0.35315143	0.31431279	1414.65977478

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	-2892.0181885	-1058.9358826	-469.5785141	0.0658233	-1.1646535	0.1188418

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LONG-141.0859 DEG          LONG-130.7632 DEG
LATI  17.5140 DEG          LATI -27.6525 DEG        *
                                                   ***          LONG-157.1139 DEG        LONG-154.3831 DEG
      *      1365.53140 KM      *                 * * *          LATI  -0.1301 DEG        LATI -16.5926 DEG
     (1)                       (2)              * * *
                                                  *                  *      504.24150 KM      *
                                                  *                 (1)                      (2)
            LOW RESOLUTION                        *
                                                  *                          HIGH RESOLUTION
                                                  *
 1106.93231 KM              1126.04428 KM         *  DIRECTION     126.43607 KM              127.00223 KM
                                                  *  OF MOTION
                                                  *
                                                  *                 (4)                       (3)
                                                  *                  *      500.69999 KM      *
     (4)                       (3)                *
      *      1253.49054 KM      *                 *          LONG-161.2251 DEG        LONG-158.7135 DEG
                                                  *          LATI  -0.8219 DEG        LATI -17.1996 DEG
LONG-178.5348 DEG          LONG-174.3706 DEG      *
LATI   9.7765 DEG          LATI -32.3093 DEG      *
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FRAME 37

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* PHOTO FRAME NUMBER 38 *
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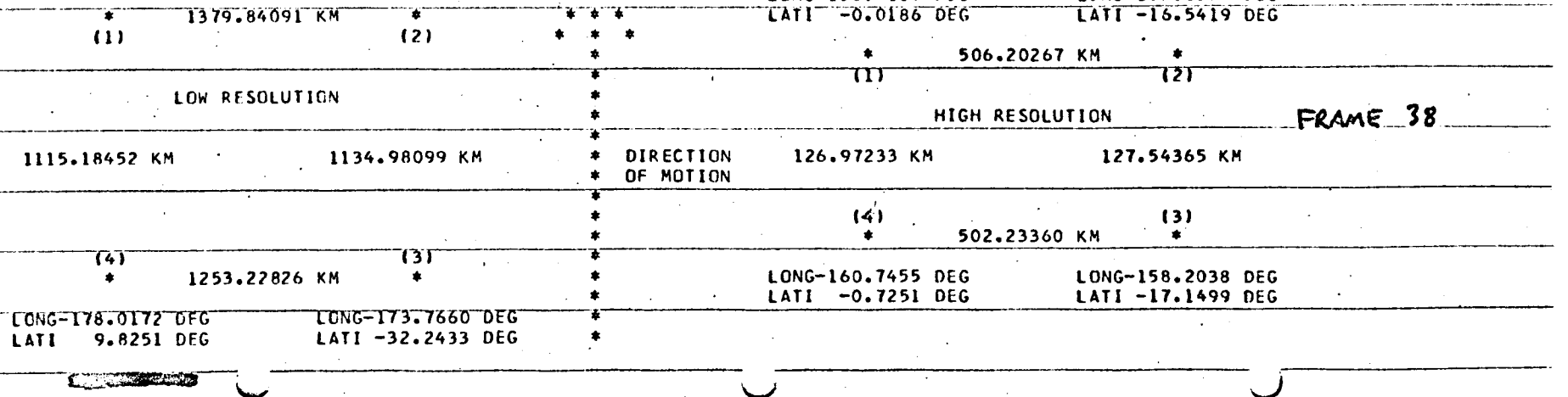
Not Supported by Post-Flight OD

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	20	14	54	23.099

LONGITUDE OF NADIR POINT	=	-159.6176701 DEG	LATITUDE OF NADIR POINT	=	-8.6282184 DEG
LONG OF CAMERA AXIS INTERSECT	=	-157.4505806 DEG	LATI OF CAMERA AXIS INTERSECT	=	-8.6010555 DEG
SPACECRAFT RADIUS	=	3119.5584717 KM	SPACECRAFT ALTITUDE	=	1381.4684753 KM
MEAN ALTITUDE RATE	=	0.3155853 KM/SEC	TIME FROM PERIAPSIS	=	3634.7199707 SEC
HORIZONTAL VELOCITY	=	1.1274162 KM/SEC	TRUE ANOMALY	=	130.1834450 DEG
SCALE FACTOR (HIGH)	=	0.0004416 M/KM	TILT DISTANCE (HIGH)	=	28.6738477 MM
SCALE FACTOR (LOW)	=	0.0000579 M/KM	TILT DISTANCE (LOW)	=	3.7605046 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0008161 RAD/SEC	SWING ANGLE	=	84.8629942 DEG
EMISSION ANGLE	=	4.8121392 DEG	INCIDENCE ANGLE	=	75.0893021 DEG
PHASE ANGLE	=	70.2729340 DEG	NORTH DEVIATION ANGLE	=	175.4337254 DEG
TILT ANGLE	=	2.6912820 DEG	RESOLUTION CONSTANT	=	29.9778657 MTR
TILT AZIMUTH	=	89.4286318 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	274.2451668 DEG
SUN ANGLE AT NADIR	=	72.9544706 DEG	SUN ARC AT NADIR	=	2213.1025696 KM
LONGITUDE DISTANCE TO TARGET	=	-4.6176701 DEG	LATITUDE DISTANCE TO TARGET	=	-1.3282184 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-140.0788364 KM	LATITUDE ARC LENGTH TO TARGET	=	-40.2920275 KM
FORWARD OVERLAP RATIO	=	87.9332218 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	13.1996880 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	0.95248535	0.24774962	0.17717725	1394.95050049
CAMERA AXIS	0.94204468	0.29992632	0.15031973	1384.08363342
C1	0.90604240	0.26881003	0.32684606	1430.15312195
C2	0.97140173	0.23670460	-0.01869834	1436.54212952
C3	0.94655824	0.32101730	-0.03123117	1425.23519897
C4	0.88119892	0.35312273	0.31431323	1418.98902893

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	-2891.1461792	-1074.1930542	-468.0032234	0.0719590	-1.1623773	0.1198433



FRAME 38

Not Supported by Post-Flight OD

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*************************************
*   PHOTO FRAME NUMBER        39    *
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	20	14	58	1.098

LONGITUDE OF NADIR POINT	= -155.2398224 DEG		LATITUDE OF NADIR POINT	=	-7.9408751 DEG
LONG OF CAMERA AXIS INTERSECT	= -149.2398624 DEG		LATI OF CAMERA AXIS INTERSECT	=	-7.2512702 DEG
SPACECRAFT RADIUS	= 3186.0313721 KM		SPACECRAFT ALTITUDE	=	1447.9413757 KM
MEAN ALTITUDE RATE	= 0.2941061 KM/SEC		TIME FROM PERIAPSIS	=	3852.7191162 SEC
HORIZONTAL VELOCITY	= 1.1038884 KM/SEC		TRUE ANOMALY	=	134.6040173 DEG
SCALE FACTOR (HIGH)	= 0.0004213 M/KM		TILT DISTANCE (HIGH)	=	75.8851032 MM
SCALE FACTOR (LOW)	= 0.0000552 M/KM		TILT DISTANCE (LOW)	=	9.9521447 MM
IMAGE MOTION COMPENSATION (V/H)	= 0.0007624 RAD/SEC		SWING ANGLE	=	79.8416328 DEG
EMISSION ANGLE	= 13.0694009 DEG		INCIDENCE ANGLE	=	83.1674623 DEG
PHASE ANGLE	= 70.2728882 DEG		NORTH DEVIATION ANGLE	=	176.0030738 DEG
TILT ANGLE	= 7.0912673 DEG		RESOLUTION CONSTANT	=	31.4203277 MTR
TILT AZIMUTH	= 83.7863827 DEG		SUN AZIMUTH AT PRINCIPAL GND PT	=	273.3503456 DEG
SUN ANGLE AT NADIR	= 77.2622128 DEG		SUN ARC AT NADIR	=	2343.7796326 KM
LONGITUDE DISTANCE TO TARGET	= -0.2398224 DEG		LATITUDE DISTANCE TO TARGET	=	-0.6408751 DEG
LONGITUDE ARC LENGTH TO TARGET	= -7.2751064 KM		LATITUDE ARC LENGTH TO TARGET	=	-19.4411983 KM
FORWARD OVERLAP RATIO	= -85.4486885 PCT		SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	= 217.9998627 SEC				

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	0.89967219	0.40946145	0.15143080	1448.21327209
CAMERA AXIS	0.94220538	0.29941702	0.15032791	1468.51760864
C1	0.90618441	0.26832119	0.32685403	1529.96426392
C2	0.97152995	0.23617847	-0.01868951	1537.18104553
C3	0.94673225	0.32050454	-0.03122306	1503.72291565
C4	0.88138671	0.35264727	0.31432048	1496.95823669

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	-2865.3934631	-1321.5820923	-440.1538239	0.1695062	-1.1216141	0.1353433

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LONG-120.8437 DEG          LONG-107.1172 DEG
LATI  29.4366 DEG          LATI -30.1018 DEG
                                   *
                                  ***
*        1763.83134 KM     *      * * *
(1)                        (2)   *  *  *
                                   *
                                   *
                                   
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*************************************
*   PHOTO FRAME NUMBER      40      *
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Not Supported by Post-Flight OD

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	20	14	58	9.499

LONGITUDE OF NADIR POINT	=	-155.0750504 DEG	LATITUDE OF NADIR POINT	=	-7.9140205 DEG
LONG OF CAMERA AXIS INTERSECT	=	-148.9216347 DEG	LATI OF CAMERA AXIS INTERSECT	=	-7.1957920 DEG
SPACECRAFT RADIUS	=	3188.4985962 KM	SPACECRAFT ALTITUDE	=	1450.4085999 KM
MEAN ALTITUDE RATE	=	0.2932610 KM/SEC	TIME FROM PERIAPSIS	=	3861.1208496 SEC
HORIZONTAL VELOCITY	=	1.1030340 KM/SEC	TRUE ANOMALY	=	134.7707310 DEG
SCALE FACTOR (HIGH)	=	0.0004206 M/KM	TILT DISTANCE (HIGH)	=	77.6840096 MM
SCALE FACTOR (LOW)	=	0.0000552 M/KM	TILT DISTANCE (LOW)	=	10.1880667 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0007605 RAD/SEC	SWING ANGLE	=	79.7712536 DEG
EMISSION ANGLE	=	13.3908848 DEG	INCIDENCE ANGLE	=	83.4818039 DEG
PHASE ANGLE	=	70.2728872 DEG	NORTH DEVIATION ANGLE	=	176.0274467 DEG
TILT ANGLE	=	7.2575985 DEG	RESOLUTION CONSTANT	=	31.4738665 MTR
TILT AZIMUTH	=	83.6936684 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	273.3192902 DEG
SUN ANGLE AT NADIR	=	77.4247484 DEG	SUN ARC AT NADIR	=	2348.7102051 KM
LONGITUDE DISTANCE TO TARGET	=	-0.0750504 DEG	LATITUDE DISTANCE TO TARGET	=	-0.6140205 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-2.2766820 KM	LATITUDE ARC LENGTH TO TARGET	=	-18.6265543 KM
FORWARD OVERLAP RATIO	=	92.7729225 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	8.4000359 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	0.89720107	0.41522546	0.15039300	1450.63096619
CAMERA AXIS	0.94221158	0.29939733	0.15032822	1472.04171753
C1	0.90618989	0.26830231	0.32685434	1534.16088867
C2	0.97153490	0.23615813	-0.01868917	1541.41563416
C3	0.94673898	0.32048472	-0.03122275	1507.00930786
C4	0.88139397	0.35262889	0.31432076	1500.22106934

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	-2863.9839172	-1330.9335022	-439.0144768	0.1731251	-1.1199306	0.1359026

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LONG-118.8096 DEG          LONG-104.6318 DEG
LATI  30.7799 DEG          LATI -30.4925 DEG          *
                                                     ***          LONG-148.0443 DEG          LONG-144.7162 DEG
        *       1810.31375 KM       *              * * *          LATI   2.0585 DEG          LATI -15.6142 DEG
      (1)                         (2)            *  *  *
                                                 *                    *       543.09207 KM       *
                                                 *                   (1)                        (2)
              LOW RESOLUTION                     *
                                                 *                          HIGH RESOLUTION
                                                 *
 1491.89334 KM              1487.28436 KM        *  DIRECTION     138.90659 KM              139.62523 KM
                                                 *  OF MOTION
                                                 *
                                                 *                   (4)                        (3)
                                                 *                    *       531.01949 KM       *
      (4)                         (3)            *
        *       1258.75294 KM       *            *          LONG-152.5189 DEG          LONG-149.4597 DEG
                                                 *          LATI   1.0726 DEG          LATI -16.2397 DEG
LONG-169.4813 DEG          LONG-163.8466 DEG     *
LATI  10.9259 DEG          LATI -31.1879 DEG     *
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FRAME 40

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* PHOTO FRAME NUMBER 41 *
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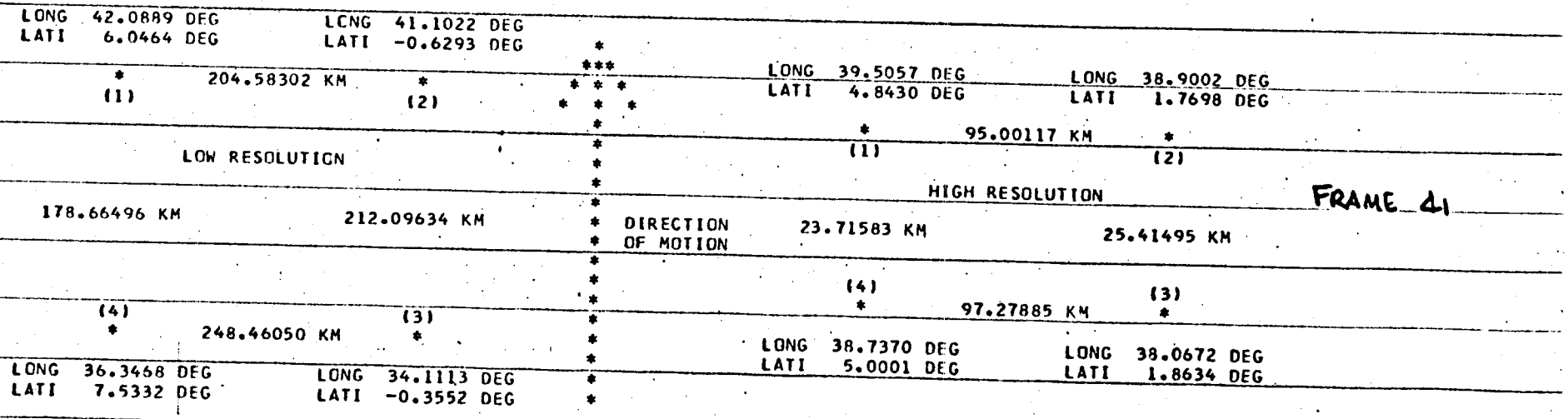
Not Supported by Post-Flight OD

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	20	21	0	36.899

LONGITUDE OF NADIR POINT	=	40.8431783 DEG	LATITUDE OF NADIR POINT	=	4.3626953 DEG
LONG OF CAMERA AXIS INTERSECT	=	38.8234391 DEG	LATI OF CAMERA AXIS INTERSECT	=	3.4216020 DEG
SPACECRAFT RADIUS	=	1990.3868561 KM	SPACECRAFT ALTITUDE	=	252.2968597 KM
MEAN ALTITUDE RATE	=	-0.1799661 KM/SEC	TIME FROM PERIAPSIS	=	-491.6242790 SEC
HORIZONTAL VELOCITY	=	1.7667593 KM/SEC	TRUE ANOMALY	=	334.2199211 DEG
SCALE FACTOR (HIGH)	=	0.0024178 M/KM	TILT DISTANCE (HIGH)	=	162.2345791 MM
SCALE FACTOR (LOW)	=	0.0003171 M/KM	TILT DISTANCE (LOW)	=	21.2766662 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0070027 RAD/SEC	SWING ANGLE	=	64.3863821 DEG
EMISSION ANGLE	=	17.1175113 DEG	INCIDENCE ANGLE	=	85.8575163 DEG
PHASE ANGLE	=	70.2735348 DEG	NORTH DEVIATION ANGLE	=	358.6081963 DEG
TILT ANGLE	=	14.8935201 DEG	RESOLUTION CONSTANT	=	5.4748418 MTR
TILT AZIMUTH	=	245.0373249 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.9696007 DEG
SUN ANGLE AT NADIR	=	83.8240519 DEG	SUN ARC AT NADIR	=	2542.8356018 KM
LONGITUDE DISTANCE TO TARGET	=	-2.8068218 DEG	LATITUDE DISTANCE TO TARGET	=	1.8226953 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-85.1460438 KM	LATITUDE ARC LENGTH TO TARGET	=	55.2921782 KM
FORWARD OVERLAP RATIO	=	0. PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	0. SEC			

DIRECTION COSINES TO TARGET	X	Y	Z	MAGNITUDE (KM)
CAMERA AXIS	-0.89201436	-0.36187734	-0.27084159	274.63196945
C1	-0.57033911	-0.80106740	-0.18167089	262.42211914
C2	-0.64383315	-0.76494924	-0.01820824	256.45585632
C3	-0.54648024	-0.75729913	-0.35757150	273.31680298
C4	-0.47778096	-0.81040914	-0.33906102	279.86912537
	-0.57513387	-0.81805925	0.00030223	262.15374756

STATE VECTOR	X	Y	Z	X DOT	Y DOT	Z DOT
	1501.3694305	1297.9231567	151.4084225	-1.2483585	1.2102369	-0.3616003



FRAME 41

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* PHOTO FRAME NUMBER 42 *
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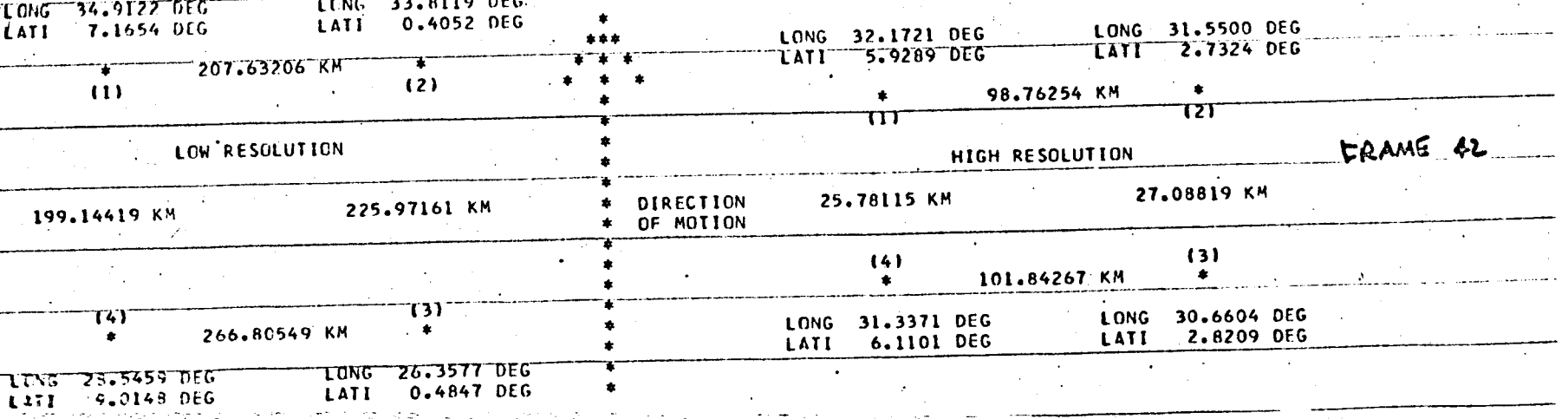
Not Supported by Post-Flight OD

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	21	4	14	40.800

LONGITUDE OF NADIR POINT	=	34.0573730 DEG	LATITUDE OF NADIR POINT	=	4.8891022 DEG
LONG OF CAMERA AXIS INTERSECT	=	31.4518163 DEG	LATI OF CAMERA AXIS INTERSECT	=	4.4345737 DEG
SPACECRAFT RADIUS	=	2000.6100616 KM	SPACECRAFT ALTITUDE	=	262.5200653 KM
MEAN ALTITUDE RATE	=	-0.1989948 KM/SEC	TIME FROM PERIAPSIS	=	-549.1519089 SEC
HORIZONTAL VELOCITY	=	1.7575911 KM/SEC	TRUE ANOMALY	=	331.2905579 DEG
SCALE FACTOR (HIGH)	=	0.0023236 M/KM	TILT DISTANCE (HIGH)	=	184.4775772 MM
SCALE FACTOR (LOW)	=	0.0003047 M/KM	TILT DISTANCE (LOW)	=	24.1937807 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0066951 RAD/SEC	SWING ANGLE	=	80.6429148 DEG
EMISSION ANGLE	=	19.4628940 DEG	INCIDENCE ANGLE	=	89.5095959 DEG
PHASE ANGLE	=	70.2735233 DEG	NORTH DEVIATION ANGLE	=	0.0501675 DEG
TILT ANGLE	=	16.8264852 DEG	RESOLUTION CONSTANT	=	5.6966854 MTR
TILT AZIMUTH	=	260.1799850 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.7660561 DEG
SUN ANGLE AT NADIR	=	86.9026852 DEG	SUN ARC AT NADIR	=	2636.2271423 KM
LONGITUDE DISTANCE TO TARGET	=	-2.5426269 DEG	LATITUDE DISTANCE TO TARGET	=	1.8291022 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-77.1315851 KM	LATITUDE ARC LENGTH TO TARGET	=	55.4865346 KM
FORWARD OVERLAP RATIO	=	0. PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	0. SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.91652123	-0.28945055	-0.27605655	281.55329895
CAMERA AXIS	-0.62689852	-0.76804788	-0.13076966	276.18438721
C1	-0.69239701	-0.72075068	0.03323904	271.64822388
C2	-0.60613002	-0.73289674	-0.30898021	283.67094421
C3	-0.54044535	-0.78967235	-0.29040727	292.58729553
C4	-0.62671234	-0.77752630	0.05181198	279.74985559

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1651.4290314	1116.3106537	170.5068150	-1.1057751	1.3336965	-0.3567089



FRAME 42

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* PHOTO FRAME NUMBER 44 *
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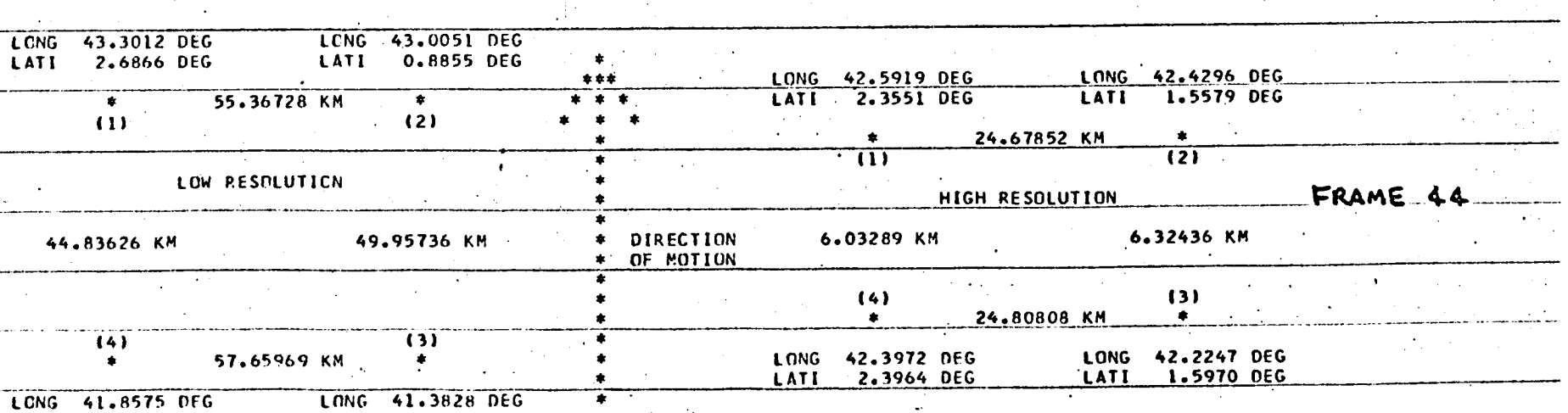
Not Supported by Post-Flight OD

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	21	11	28	0.300

LONGITUDE OF NADIR POINT	= 42.5890918	DEG	LATITUDE OF NADIR POINT	= 2.2359947	DEG
LONG OF CAMERA AXIS INTERSECT	= 42.4131718	DEG	LATI OF CAMERA AXIS INTERSECT	= 1.9861396	DEG
SPACECRAFT RADIUS	= 1805.6602478	KM	SPACECRAFT ALTITUDE	= 67.5702515	KM
MEAN ALTITUDE RATE	= -0.1020070	KM/SEC	TIME FROM PERIAPSIS	= -203.3075981	SEC
HORIZONTAL VELOCITY	= 1.8974448	KM/SEC	TRUE ANOMALY	= 347.6643753	DEG
SCALE FACTOR (HIGH)	= 0.0090276	M/KM	TILT DISTANCE (HIGH)	= 83.6342583	MM
SCALE FACTOR (LOW)	= 0.0011839	M/KM	TILT DISTANCE (LOW)	= 10.9684273	MM
IMAGE MOTION COMPENSATION (V/H)	= 0.0280811	RAD/SEC	SWING ANGLE	= 33.8123865	DEG
EMISSION ANGLE	= 8.1123910	DEG	INCIDENCE ANGLE	= 74.9440641	DEG
PHASE ANGLE	= 70.2736254	DEG	NORTH DEVIATION ANGLE	= 358.4270897	DEG
TILT ANGLE	= 7.8068827	DEG	RESOLUTION CONSTANT	= 1.4662744	MTR
TILT AZIMUTH	= 215.1338081	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	= 89.0610914	DEG
SUN ANGLE AT NADIR	= 74.7640343	DEG	SUN ARC AT NADIR	= 2267.9963989	KM
LONGITUDE DISTANCE TO TARGET	= -3.4909081	DEG	LATITUDE DISTANCE TO TARGET	= 1.3159947	DEG
LONGITUDE ARC LENGTH TO TARGET	= -105.8980722	KM	LATITUDE ARC LENGTH TO TARGET	= 39.9212174	KM
FORWARD OVERLAP RATIO	= 0.	PCT	SIDE OVERLAP RATIO	= 0.	PCT
TIME BETWEEN PHOTOS	= 0.	SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.91957390	0.23030262	-0.31834657	133.63273621
CAMERA AXIS	-0.67275509	-0.72457141	-0.14965575	68.22732544
C1	-0.73700064	-0.67573868	0.01439852	67.67060852
C2	-0.64776102	-0.68807222	-0.32705090	70.91958618
C3	-0.58602210	-0.74918468	-0.30870765	71.29423523
C4	-0.67526172	-0.73685113	0.03274177	68.01098633

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1328.3616028	1221.0245209	70.4488859	-1.3206858	1.3085842	-0.3925550



FRAME 44

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* PHOTO FRAME NUMBER 46 *
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Not Supported by Post-Flight OD

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	21	18	23	2.699

LONGITUDE OF NADIR POINT	=	27.5527017 DEG	LATITUDE OF NADIR POINT	=	4.5003458 DEG
LONG OF CAMERA AXIS INTERSECT	=	26.6432827 DEG	LATI OF CAMERA AXIS INTERSECT	=	4.0360057 DEG
SPACECRAFT RADIUS	=	1833.9821014 KM	SPACECRAFT ALTITUDE	=	95.8921051 KM
MEAN ALTITUDE RATE	=	-0.1934250 KM/SEC	TIME FROM PERIAPSIS	=	-397.5096436 SEC
HORIZONTAL VELOCITY	=	1.8680498 KM/SEC	TRUE ANOMALY	=	336.1241837 DEG
SCALE FACTOR (HIGH)	=	0.0063613 M/KM	TILT DISTANCE (HIGH)	=	196.0397720 MM
SCALE FACTOR (LOW)	=	0.0008343 M/KM	TILT DISTANCE (LOW)	=	25.7101340 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0194807 RAD/SEC	SWING ANGLE	=	62.2000675 DEG
EMISSION ANGLE	=	18.8350539 DEG	INCIDENCE ANGLE	=	87.1323261 DEG
PHASE ANGLE	=	70.2735939 DEG	NORTH DEVIATION ANGLE	=	358.1538429 DEG
TILT ANGLE	=	17.8161941 DEG	RESOLUTION CONSTANT	=	2.0808586 MTR
TILT AZIMUTH	=	242.9214859 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.7964134 DEG
SUN ANGLE AT NADIR	=	86.2155056 DEG	SUN ARC AT NADIR	=	2615.3812866 KM
LONGITUDE DISTANCE TO TARGET	=	-3.8472984 DEG	LATITUDE DISTANCE TO TARGET	=	1.4003458 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-116.7093086 KM	LATITUDE ARC LENGTH TO TARGET	=	42.4800415 KM
FORWARD OVERLAP RATIO	=	0. PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	0. SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.87585741	0.36716216	-0.31315449	159.37749863
CAMERA AXIS	-0.70576201	-0.67549682	-0.21355102	101.01110840
C1	-0.77496494	-0.62997831	-0.05056344	98.02105713
C2	-0.67007293	-0.63297325	-0.38774623	105.42272949
C3	-0.61296833	-0.69843621	-0.36940046	108.16679382
C4	-0.71786034	-0.69544126	-0.03221767	100.37762451

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1620.9691315	845.7191010	143.9036236	-0.9934538	1.5487039	-0.3762835

```
LONG  27.8766 DEG          LONG  27.5376 DEG
LATI   5.0453 DEG          LATI   2.5088 DEG        *
                                                   ***          LONG  26.9042 DEG          LONG  26.6780 DEG
        *          77.62200 KM      *            * * *          LATI   4.5853 DEG          LATI   3.3982 DEG
       (1)                         (2)          * * *
                                                  *                     *        36.65279 KM      *
                                                  *                    (1)                       (2)
                LOW RESOLUTION                    *
                                                  *                          HIGH RESOLUTION
                                                  *
   67.49371 KM                 81.55682 KM        *  DIRECTION      9.11670 KM                 9.87018 KM
                                                  *  OF MOTION
                                                  *
                                                  *                    (4)                       (3)
                                                  *                     *        37.61174 KM      *
       (4)                         (3)            *
        *          95.26148 KM      *             *          LONG  26.6081 DEG          LONG  26.3535 DEG
                                                  *          LATI   4.6422 DEG          LATI   3.4286 DEG
LONG  25.7090 DEG          LONG  24.8468 DEG      *
LATI   5.5863 DEG          LATI   2.5657 DEG      *
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FRAME 46

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*********************************
*   PHOTO FRAME NUMBER    47    *
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Not Supported by Post-Flight OD

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	21	18	23	9.600

LONGITUDE OF NADIR POINT	=	27.9482157 DEG	LATITUDE OF NADIR POINT	=	4.4220898 DEG
LONG OF CAMERA AXIS INTERSECT	=	27.0744891 DEG	LATI OF CAMERA AXIS INTERSECT	=	3.9612800 DEG
SPACECRAFT RADIUS	=	1832.6578827 KM	SPACECRAFT ALTITUDE	=	94.5678864 KM
MEAN ALTITUDE RATE	=	-0.1903467 KM/SEC	TIME FROM PERIAPSIS	=	-390.6120262 SEC
HORIZONTAL VELOCITY	=	1.8693976 KM/SEC	TRUE ANOMALY	=	336.5270233 DEG
SCALE FACTOR (HIGH)	=	0.0064504 M/KM	TILT DISTANCE (HIGH)	=	192.3500614 MM
SCALE FACTOR (LOW)	=	0.0008459 M/KM	TILT DISTANCE (LOW)	=	25.2262375 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0197678 RAD/SEC	SWING ANGLE	=	61.3702440 DEG
EMISSION ANGLE	=	18.4872518 DEG	INCIDENCE ANGLE	=	86.7029810 DEG
PHASE ANGLE	=	70.2735939 DEG	NORTH DEVIATION ANGLE	=	358.1023827 DEG
TILT ANGLE	=	17.5015209 DEG	RESOLUTION CONSTANT	=	2.0521231 MTR
TILT AZIMUTH	=	242.1615963 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.8212366 DEG
SUN ANGLE AT NADIR	=	85.8219309 DEG	SUN ARC AT NADIR	=	2603.4420471 KM
LONGITUDE DISTANCE TO TARGET	=	-3.4517844 DEG	LATITUDE DISTANCE TO TARGET	=	1.3220898 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-104.7112370 KM	LATITUDE ARC LENGTH TO TARGET	=	40.1061125 KM
FORWARD OVERLAP RATIO	=	-41.7162271 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	6.9001436 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.89186680	0.32171631	-0.31791862	148.81279564
CAMERA AXIS	-0.70577347	-0.67548475	-0.21355129	99.42773437
C1	-0.77497561	-0.62996517	-0.05056367	96.52088928
C2	-0.67008369	-0.63296170	-0.38774648	103.80433655
C3	-0.61298019	-0.69842563	-0.36940076	106.42224121
C4	-0.71787211	-0.69542910	-0.03221795	98.76966858

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1614.0983582	856.3609848	141.3042030	-1.0023067	1.5440476	-0.3770651

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LONG  28.2897 DEG          LONG  27.9540 DEG
LATI   4.9554 DEG          LATI   2.4522 DEG        *
                                                   ***
        *        76.60386 KM        *              * * *                LONG  27.3313 DEG        LONG  27.1081 DEG
       (1)                          (2)            * * *                LATI   4.5018 DEG        LATI   3.3331 DEG
                                                     *
                                                     *                        *        36.09001 KM      *
                                                     *                       (1)                       (2)
              LOW RESOLUTION                         *
                                                     *                                HIGH RESOLUTION
                                                     *
   66.25808 KM                 79.95224 KM           *  DIRECTION      8.95586 KM                9.69209 KM
                                                     *  OF MOTION
                                                     *
                                                     *                       (4)                       (3)
                                                     *                        *        37.00482 KM      *
       (4)                         (3)               *
        *        93.40725 KM        *               *                LONG  27.0406 DEG        LONG  26.7896 DEG
                                                     *                LATI   4.5580 DEG        LATI   3.3641 DEG
LONG  26.1616 DEG          LONG  25.3166 DEG         *
LATI   5.4846 DEG          LATI   2.5227 DEG         *
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FRAME 47

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* PHOTO FRAME NUMBER 48 *
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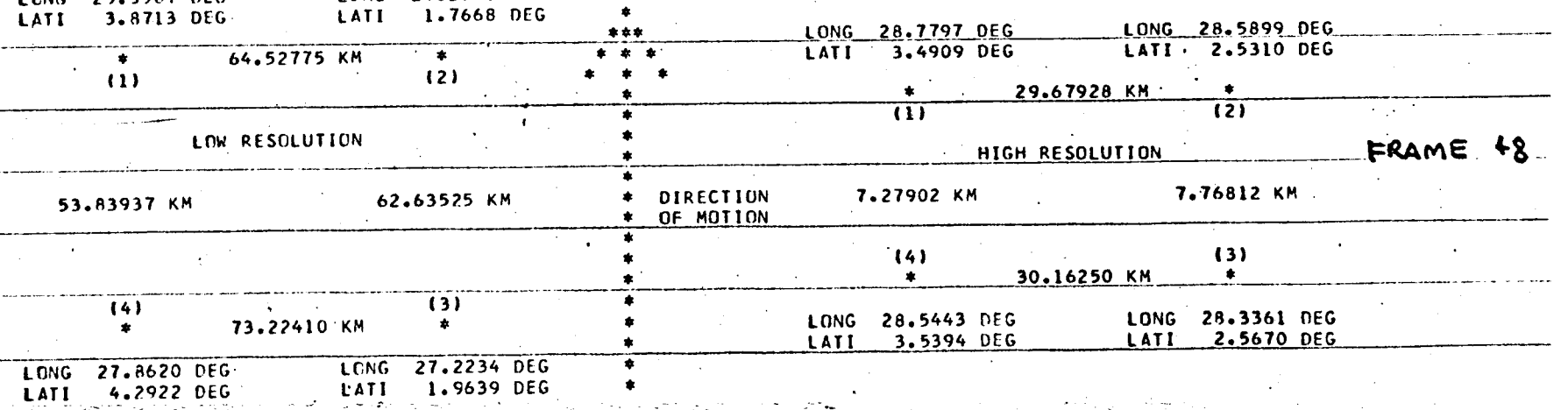
Not Supported by Post-Flight OD

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	1	22	50.900

LONGITUDE OF NADIR POINT	=	29.0753617 DEG	LATITUDE OF NADIR POINT	=	3.3977450 DEG
LONG OF CAMERA AXIS INTERSECT	=	28.5670016 DEG	LATI OF CAMERA AXIS INTERSECT	=	3.0474570 DEG
SPACECRAFT RADIUS	=	1817.7242737 KM	SPACECRAFT ALTITUDE	=	79.6342773 KM
MEAN ALTITUDE RATE	=	-0.1518599 KM/SEC	TIME FROM PERIAPSIS	=	-306.3337604 SEC
HORIZONTAL VELOCITY	=	1.8846067 KM/SEC	TRUE ANOMALY	=	341.4835396 DEG
SCALE FACTOR (HIGH)	=	0.0076600 M/KM	TILT DISTANCE (HIGH)	=	143.1178017 MM
SCALE FACTOR (LOW)	=	0.0010046 M/KM	TILT DISTANCE (LOW)	=	18.7695477 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0236658 RAD/SEC	SWING ANGLE	=	54.2301149 DEG
EMISSION ANGLE	=	13.8205811 DEG	INCIDENCE ANGLE	=	81.6771955 DEG
PHASE ANGLE	=	70.2736053 DEG	NORTH DEVIATION ANGLE	=	358.1128731 DEG
TILT ANGLE	=	13.2038810 DEG	RESOLUTION CONSTANT	=	1.7280638 MTR
TILT AZIMUTH	=	235.4032135 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	89.0128841 DEG
SUN ANGLE AT NADIR	=	81.1634407 DEG	SUN ARC AT NADIR	=	2462.1249084 KM
LONGITUDE DISTANCE TO TARGET	=	-7.1246381 DEG	LATITUDE DISTANCE TO TARGET	=	2.1477450 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-216.1286983 KM	LATITUDE ARC LENGTH TO TARGET	=	65.1526890 KM
FORWARD OVERLAP RATIO	=	0. PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	0. SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.75298045	0.59250620	-0.28628106	243.86873055
CAMERA AXIS	-0.75128999	-0.63287599	-0.18716659	81.90013123
C1	-0.81403890	-0.58032735	-0.02368219	80.21087646
C2	-0.71666514	-0.59563538	-0.36278033	85.38587952
C3	-0.66342852	-0.66427016	-0.34439477	86.77696228
C4	-0.76080228	-0.64896213	-0.00529662	81.43328857

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1585.8642273	881.7877426	107.7312317	-1.0101576	1.5508748	-0.3862298



FRAME 48

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* PHOTO FRAME NUMBER 49 *
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Not Supported by Post-Flight OD

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	1	23	4.000

LONGITUDE OF NADIR POINT	=	29.8377984 DEG	LATITUDE OF NADIR POINT	=	3.2412415 DEG
LONG OF CAMERA AXIS INTERSECT	=	29.3769453 DEG	LATI OF CAMERA AXIS INTERSECT	=	2.8936898 DEG
SPACECRAFT RADIUS	=	1815.7753143 KM	SPACECRAFT ALTITUDE	=	77.6853180 KM
MEAN ALTITUDE RATE	=	-0.1456809 KM/SEC	TIME FROM PERIAPSIS	=	-293.2428589 SEC
HORIZONTAL VELOCITY	=	1.8866260 KM/SEC	TRUE ANOMALY	=	342.2623596 DEG
SCALE FACTOR (HIGH)	=	0.0078522 M/KM	TILT DISTANCE (HIGH)	=	137.2087269 MM
SCALE FACTOR (LOW)	=	0.0010298 M/KM	TILT DISTANCE (LOW)	=	17.9945872 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0242855 RAD/SEC	SWING ANGLE	=	51.6689396 DEG
EMISSION ANGLE	=	13.2533810 DEG	INCIDENCE ANGLE	=	80.8694687 DEG
PHASE ANGLE	=	70.2736092 DEG	NORTH DEVIATION ANGLE	=	358.0400658 DEG
TILT ANGLE	=	12.6766936 DEG	RESOLUTION CONSTANT	=	1.6857714 MTR
TILT AZIMUTH	=	232.9512882 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	89.0296335 DEG
SUN ANGLE AT NADIR	=	80.4032154 DEG	SUN ARC AT NADIR	=	2439.0631714 KM
LONGITUDE DISTANCE TO TARGET	=	-6.3622015 DEG	LATITUDE DISTANCE TO TARGET	=	1.9912415 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-192.9998837 KM	LATITUDE ARC LENGTH TO TARGET	=	60.4050927 KM
FORWARD OVERLAP RATIO	=	-241.1058197 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	13.1000295 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.77218014	0.56352738	-0.29355533	220.56494713
CAMERA AXIS	-0.75131041	-0.63285160	-0.18716709	79.71655273
C1	-0.81405758	-0.58030114	-0.02368261	78.12463379
C2	-0.71668442	-0.59561189	-0.36278080	83.16151428
C3	-0.66345000	-0.66424841	-0.34439533	84.39755249
C4	-0.76082315	-0.64893765	-0.00529713	79.21109009

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1572.5517120	901.9870911	102.6642485	-1.0270175	1.5413544	-0.3873537

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LONG  30.3761 DEG          LONG  30.0712 DEG
LATI   3.6969 DEG          LATI   1.6386 DEG      *
                                                  ***          LONG  29.5841 DEG          LONG  29.3986 DEG
        *        63.11501 KM        *            * * *         LATI   3.3252 DEG          LATI   2.3905 DEG
       (1)                         (2)         *  *  *
                                               *                    *       28.90613 KM       *
                                               *                   (1)                       (2)
                LOW RESOLUTION                 *
                                               *                          HIGH RESOLUTION
                                               *
   52.24012 KM                60.69238 KM     *  DIRECTION      7.06841 KM                7.54022 KM
                                               *  OF MOTION
                                               *
                                               *                   (4)                       (3)
                                               *                    *       29.33548 KM       *
       (4)                         (3)         *
        *        70.83012 KM        *         *          LONG  29.3555 DEG          LONG  29.1525 DEG
                                               *          LATI   3.3724 DEG          LATI   2.4269 DEG
LONG  28.6983 DEG          LONG  28.0805 DEG   *
LATI   4.1012 DEG          LATI   1.8491 DEG   *
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FRAME 49

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* PHOTO FRAME NUMBER 50 *
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	8	24	13.099

LONGITUDE OF NADIR POINT	=	42.1144171 DEG	LATITUDE OF NADIR POINT	=	-0.0582675 DEG
LONG OF CAMERA AXIS INTERSECT	=	42.2893252 DEG	LATI OF CAMERA AXIS INTERSECT	=	-0.4400016 DEG
SPACECRAFT RADIUS	=	1792.7922516 KM	SPACECRAFT ALTITUDE	=	54.7022552 KM
MEAN ALTITUDE RATE	=	-0.0097455 KM/SEC	TIME FROM PERIAPSIS	=	-19.1070745 SEC
HORIZONTAL VELOCITY	=	1.9102168 KM/SEC	TRUE ANOMALY	=	358.8334427 DEG
SCALE FACTOR (HIGH)	=	0.0111513 M/KM	TILT DISTANCE (HIGH)	=	141.9197674 MM
SCALE FACTOR (LOW)	=	0.0014625 M/KM	TILT DISTANCE (LOW)	=	18.6124284 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0349203 RAD/SEC	SWING ANGLE	=	331.8831912 DEG
EMISSION ANGLE	=	13.5170771 DEG	INCIDENCE ANGLE	=	64.4676847 DEG
PHASE ANGLE	=	70.2736816 DEG	NORTH DEVIATION ANGLE	=	357.0813103 DEG
TILT ANGLE	=	13.0971771 DEG	RESOLUTION CONSTANT	=	1.1870389 MTR
TILT AZIMUTH	=	155.3836479 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.3156433 DEG
SUN ANGLE AT NADIR	=	64.6306705 DEG	SUN ARC AT NADIR	=	1960.5968323 KM
LONGITUDE DISTANCE TO TARGET	=	-0.0855827 DEG	LATITUDE DISTANCE TO TARGET	=	0.9417325 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-2.5961859 KM	LATITUDE ARC LENGTH TO TARGET	=	28.5678260 KM
FORWARD OVERLAP RATIO	=	0. PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	0. SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.68600879	-0.56370997	-0.46002502	61.97635889
CAMERA AXIS	-0.78596435	-0.58329034	-0.20501810	56.21115112
C1	-0.84755406	-0.52907318	-0.04163774	55.65066528
C2	-0.74680267	-0.54601903	-0.37966960	59.64559937
C3	-0.69810306	-0.61801048	-0.36154553	58.83799744
C4	-0.79885444	-0.60106462	-0.02351368	54.94863892

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1329.9052429	1202.2696838	-1.8231766	-1.2610845	1.3798352	-0.3933752

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LONG  43.0555 DEG          LONG  42.8314 DEG
LATI   0.1462 DEG          LATI  -1.4808 DEG        *
                                                   ***          LONG  42.4371 DEG          LONG  42.3028 DEG
        *          49.81963 KM        *            * * *        LATI  -0.1365 DEG          LATI  -0.8066 DEG
       (1)                           (2)          *  *  *
                                                   *                  *        20.73379 KM        *
                                                   *                 (1)                         (2)
                LOW RESOLUTION                     *
                                                   *                          HIGH RESOLUTION
                                                   *
   36.44868 KM                 42.87792 KM         *  DIRECTION      4.95967 KM                 5.32134 KM
                                                   *  OF MOTION
                                                   *
                                                   *                 (4)                         (3)
                                                   *                  *        20.45243 KM        *
       (4)                           (3)           *
        *          44.78142 KM        *            *          LONG  42.2772 DEG          LONG  42.1333 DEG
                                                   *          LATI  -0.1027 DEG          LATI  -0.7614 DEG
LONG  41.8730 DEG          LONG  41.4805 DEG       *
LATI   0.3592 DEG          LATI  -1.0639 DEG       *
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FRAME 50

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*  PHOTO FRAME NUMBER   51   **
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	8	24	19.799

LONGITUDE OF NADIR POINT	=	42.5136056 DEG	LATITUDE OF NADIR POINT	=	-0.1424880 DEG
LONG OF CAMERA AXIS INTERSECT	=	42.7011294 DEG	LATI OF CAMERA AXIS INTERSECT	=	-0.5268953 DEG
SPACECRAFT RADIUS	=	1792.7384033 KM	SPACECRAFT ALTITUDE	=	54.6484070 KM
MEAN ALTITUDE RATE	=	-0.0063284 KM/SEC	TIME FROM PERIAPSIS	=	-12.4067417 SEC
HORIZONTAL VELOCITY	=	1.9102736 KM/SEC	TRUE ANOMALY	=	359.2425003 DEG
SCALE FACTOR (HIGH)	=	0.0111623 M/KM	TILT DISTANCE (HIGH)	=	144.6972218 MM
SCALE FACTOR (LOW)	=	0.0014639 M/KM	TILT DISTANCE (LOW)	=	18.9766848 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0349557 RAD/SEC	SWING ANGLE	=	330.4639626 DEG
EMISSION ANGLE	=	13.7721214 DEG	INCIDENCE ANGLE	=	64.0580425 DEG
PHASE ANGLE	=	70.2736835 DEG	NORTH DEVIATION ANGLE	=	357.0906219 DEG
TILT ANGLE	=	13.3444108 DEG	RESOLUTION CONSTANT	=	1.1858704 MTR
TILT AZIMUTH	=	153.9964695 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.2689600 DEG
SUN ANGLE AT NADIR	=	64.2332201 DEG	SUN ARC AT NADIR	=	1948.5400238 KM
LONGITUDE DISTANCE TO TARGET	=	0.3136058 DEG	LATITUDE DISTANCE TO TARGET	=	0.8575120 DEG
LONGITUDE ARC LENGTH TO TARGET	=	9.5133548 KM	LATITUDE ARC LENGTH TO TARGET	=	26.0129642 KM
FORWARD OVERLAP RATIO	=	-148.6381531 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	6.6999435 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.55422914	-0.71804948	-0.42099287	61.46311808
CAMERA AXIS	-0.78597400	-0.58327724	-0.20501836	56.21463013
C1	-0.84756281	-0.52905913	-0.04163798	55.67280579
C2	-0.74681169	-0.54600651	-0.37966984	59.67098999
C3	-0.69811328	-0.61799877	-0.36154582	58.82078552
C4	-0.79886439	-0.60105139	-0.02351395	54.93374634

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1321.4535675	1211.4665527	-4.4583181	-1.2686156	1.3729788	-0.3933564

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LONG  43.4698 DEG          LONG  43.2457 DEG
LATI   0.0599 DEG          LATI  -1.5722 DEG
                                                 *
                                                ***
        *          49.97201 KM      *          * * *
       (1)                         (2)        * * *
                                                 *
                                                 *
                 LOW RESOLUTION                  *
                                                 *
                                                 *
   36.50116 KM                 42.96257 KM       *  DIRECTION
                                                 *  OF MOTION
                                                 *
                                                 *
                                                 *
       (4)                         (3)           *
        *          44.66618 KM      *           *
                                                 *
LONG  42.2853 DEG          LONG  41.8940 DEG     *
LATI   0.2714 DEG          LATI  -1.1481 DEG     *
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LONG  42.8490 DEG          LONG  42.7147 DEG
LATI  -0.2234 DEG          LATI  -0.8938 DEG

                 *          20.74264 KM      *
                (1)                         (2)

                          HIGH RESOLUTION

                 4.96533 KM                 5.32832 KM

                (4)                         (3)
                 *          20.44644 KM      *

LONG  42.6889 DEG          LONG  42.5451 DEG
LATI  -0.1895 DEG          LATI  -0.8480 DEG
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FRAME 51

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*********************************
*  PHOTO FRAME NUMBER  1 OF 16  *
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52

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	15	22	58.599

LONGITUDE OF NADIR POINT	= 40.8315234	DEG	LATITUDE OF NADIR POINT	= -0.6242383	DEG
LONG OF CAMERA AXIS INTERSECT	= 40.7867804	DEG	LATI OF CAMERA AXIS INTERSECT	= -0.6117040	DEG
SPACECRAFT RADIUS	= 1792.3464355	KM	SPACECRAFT ALTITUDE	= 52.8464355	KM
MEAN ALTITUDE RATE	= 0.0111395	KM/SEC	TIME FROM PERIAPSIS	= 21.8178732	SEC
HORIZONTAL VELOCITY	= 1.9105650	KM/SEC	TRUE ANOMALY	= 1.3326495	DEG
SCALE FACTOR (HIGH)	= 0.0115429	M/KM	TILT DISTANCE (HIGH)	= 16.2843282	MM
SCALE FACTOR (LOW)	= 0.0015138	M/KM	TILT DISTANCE (LOW)	= 2.1356496	MM
IMAGE MOTION COMPENSATION (V/H)	= 0.0361531	RAD/SEC	SWING ANGLE	= 93.7869787	DEG
EMISSION ANGLE	= 1.5756823	DEG	INCIDENCE ANGLE	= 62.4242711	DEG
PHASE ANGLE	= 60.9241228	DEG	NORTH DEVIATION ANGLE	= 348.1409492	DEG
TILT ANGLE	= 1.5291832	DEG	RESOLUTION CONSTANT	= 1.1467676	MTR
TILT AZIMUTH	= 285.6513519	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	= 87.9818811	DEG
SUN ANGLE AT NADIR	= 62.3799987	DEG	SUN ARC AT NADIR	= 1893.8569336	KM
LONGITUDE DISTANCE TO TARGET	= -1.5014768	DEG	LATITUDE DISTANCE TO TARGET	= 0.2090617	DEG
LONGITUDE ARC LENGTH TO TARGET	= -45.5848384	KM	LATITUDE ARC LENGTH TO TARGET	= 6.3471139	KM
FORWARD OVERLAP RATIO	= 0.	PCT	SIDE OVERLAP RATIO	= 0.	PCT
TIME BETWEEN PHOTOS	= 0.	SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.99662103	-0.00723991	-0.08181763	70.53274631
CAMERA AXIS	-0.73946214	-0.67295507	0.01808921	52.86582947
C1	-0.77857099	-0.60075504	0.18144032	53.74327087
C2	-0.73436396	-0.65861931	-0.16410417	53.70834351
C3	-0.67563609	-0.72266094	-0.14586656	53.84170532
C4	-0.71984312	-0.66479667	0.19967794	53.87680054

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1356.0722046	1171.8328247	-19.5272753	-1.2172744	1.4191431	-0.3932671

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LONG  41.5147 DEG          LONG  41.2241 DEG
LATI  -0.0446 DEG          LATI  -1.4227 DEG

*                 42.75632 KM   *
(1)                             (2)

LOW RESOLUTION

36.52836 KM                36.47410 KM

(4)                             (3)
*                 43.57754 KM   *

LONG  40.3401 DEG          LONG  40.0454 DEG
LATI   0.2162 DEG          LATI  -1.1886 DEG
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* * *
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*************************************
*   PHOTO FRAME NUMBER  2 OF 16     * 53
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	15	23	0.999

LONGITUDE OF NADIR POINT	=	40.9746685 DEG	LATITUDE OF NADIR POINT	=	-0.6544132 DEG
LONG OF CAMERA AXIS INTERSECT	=	40.9342642 DEG	LATI OF CAMERA AXIS INTERSECT	=	-0.6427908 DEG
SPACECRAFT RADIUS	=	1792.3746490 KM	SPACECRAFT ALTITUDE	=	52.8746490 KM
MEAN ALTITUDE RATE	=	0.0123653 KM/SEC	TIME FROM PERIAPSIS	=	24.2194927 SEC
HORIZONTAL VELOCITY	=	1.9105346 KM/SEC	TRUE ANOMALY	=	1.4793256 DEG
SCALE FACTOR (HIGH)	=	0.0115367 M/KM	TILT DISTANCE (HIGH)	=	14.7267357 MM
SCALE FACTOR (LOW)	=	0.0015130 M/KM	TILT DISTANCE (LOW)	=	1.9313752 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0361333 RAD/SEC	SWING ANGLE	=	94.1866980 DEG
EMISSION ANGLE	=	1.4250176 DEG	INCIDENCE ANGLE	=	62.2776465 DEG
PHASE ANGLE	=	60.9241228 DEG	NORTH DEVIATION ANGLE	=	348.1418114 DEG
TILT ANGLE	=	1.3829769 DEG	RESOLUTION CONSTANT	=	1.1473799 MTR
TILT AZIMUTH	=	286.0492935 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.9617891 DEG
SUN ANGLE AT NADIR	=	62.2376833 DEG	SUN ARC AT NADIR	=	1889.5362396 KM
LONGITUDE DISTANCE TO TARGET	=	-1.3583317 DEG	LATITUDE DISTANCE TO TARGET	=	0.1788868 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-41.2389531 KM	LATITUDE ARC LENGTH TO TARGET	=	5.4310033 KM
FORWARD OVERLAP RATIO	=	4.2421950 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.4004698 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.99578001	-0.05773592	-0.07133533	67.66141510
CAMERA AXIS	-0.73946612	-0.67295070	0.01808911	52.89051819
C1	-0.77857453	-0.60075048	0.18144025	53.77479553
C2	-0.73436785	-0.65861494	-0.16410426	53.73983765
C3	-0.67564037	-0.72265691	-0.14586666	53.86042786
C4	-0.71984705	-0.66479245	0.19967785	53.89553833

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1353.1536713	1175.2286682	-20.4714482	-1.2200344	1.4167517	-0.3932259

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LONG  41.6631 DEG          LONG  41.3722 DEG
LATI  -0.0749 DEG          LATI  -1.4549 DEG        *
                                                   ***          LONG  41.0756 DEG          LONG  40.9469 DEG
        *          42.81513 KM      *             * * *         LATI  -0.3529 DEG          LATI  -0.9648 DEG
       (1)                         (2)           *  *  *
                                                   *                    *        18.98356 KM      *
                                                   *                   (1)                       (2)
                LOW RESOLUTION                     *
                                                   *                          HIGH RESOLUTION
                                                   *
   36.54189 KM                36.48761 KM          *  DIRECTION      4.78132 KM                4.77821 KM
                                                   *  OF MOTION                                          FRAME 53
                                                   *
                                                   *                   (4)                       (3)
                                                   *                    *        19.02617 KM      *
       (4)                         (3)             *
        *          43.55775 KM      *              *          LONG  40.9216 DEG          LONG  40.7927 DEG
                                                   *          LATI  -0.3198 DEG          LATI  -0.9331 DEG
LONG  40.4878 DEG          LONG  40.1933 DEG       *
LATI   0.1848 DEG          LATI  -1.2194 DEG       *
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*********************************
*   PHOTO FRAME NUMBER  3 OF 16   *
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54

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	15	23	3.399

LONGITUDE OF NADIR POINT	=	41.1177492 DEG	LATITUDE OF NADIR POINT	=	-0.6845695 DEG
LONG OF CAMERA AXIS INTERSECT	=	41.0816851 DEG	LATI OF CAMERA AXIS INTERSECT	=	-0.6738538 DEG
SPACECRAFT RADIUS	=	1792.4057922 KM	SPACECRAFT ALTITUDE	=	52.9057922 KM
MEAN ALTITUDE RATE	=	0.0135904 KM/SEC	TIME FROM PERIAPSIS	=	26.6200442 SEC
HORIZONTAL VELOCITY	=	1.9105013 KM/SEC	TRUE ANOMALY	=	1.6259321 DEG
SCALE FACTOR (HIGH)	=	0.0115299 M/KM	TILT DISTANCE (HIGH)	=	13.1700269 MM
SCALE FACTOR (LOW)	=	0.0015121 M/KM	TILT DISTANCE (LOW)	=	1.7272166 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0361114 RAD/SEC	SWING ANGLE	=	94.6805410 DEG
EMISSION ANGLE	=	1.2744720 DEG	INCIDENCE ANGLE	=	62.1310983 DEG
PHASE ANGLE	=	60.9241233 DEG	NORTH DEVIATION ANGLE	=	348.1428185 DEG
TILT ANGLE	=	1.2368356 DEG	RESOLUTION CONSTANT	=	1.1480557 MTR
TILT AZIMUTH	=	286.5414162 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.9414949 DEG
SUN ANGLE AT NADIR	=	62.0954447 DEG	SUN ARC AT NADIR	=	1885.2178650 KM
LONGITUDE DISTANCE TO TARGET	=	-1.2152510 DEG	LATITUDE DISTANCE TO TARGET	=	0.1487315 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-36.8950224 KM	LATITUDE ARC LENGTH TO TARGET	=	4.5154887 KM
FORWARD OVERLAP RATIO	=	4.3249748 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.3998260 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.99187943	-0.11226907	-0.05975660	64.97971344
CAMERA AXIS	-0.73947011	-0.67294632	0.01808902	52.91848755
C1	-0.77857809	-0.60074590	0.18144017	53.80964661
C2	-0.73437177	-0.65861056	-0.16410435	53.77468872
C3	-0.67564466	-0.72265288	-0.14586677	53.88250732
C4	-0.71985097	-0.66478822	0.19967775	53.91763306

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1350.2298279	1178.6173859	-21.4151311	-1.2227871	1.4143547	-0.3931827

```
LONG  41.8116 DEG          LONG  41.5203 DEG
LATI  -0.1051 DEG          LATI  -1.4871 DEG
                                                *
                                               ***          LONG  41.2231 DEG          LONG  41.0943 DEG
        *          42.87669 KM      *          * * *        LATI  -0.3838 DEG          LATI  -0.9961 DEG
       (1)                         (2)        *  *  *
                                               *                    *        18.99587 KM      *
                                               *                   (1)                       (2)
                LOW RESOLUTION                 *
                                               *                        HIGH RESOLUTION
                                               *
   36.55803 KM                36.50376 KM      *  DIRECTION      4.78354 KM                4.78042 KM
                                               *  OF MOTION
                                               *
                                               *                   (4)                       (3)
                                               *                    *        19.03397 KM      *
       (4)                         (3)         *
        *          43.54072 KM      *          *          LONG  41.0690 DEG          LONG  40.9401 DEG
                                               *          LATI  -0.3508 DEG          LATI  -0.9643 DEG
LONG  40.6355 DEG          LONG  40.3411 DEG   *
LATI   0.1533 DEG          LATI  -1.2503 DEG   *
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FRAME 54

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*************************************
*   PHOTO FRAME NUMBER  4 OF 16     *  55
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	15	23	5.799

LONGITUDE OF NADIR POINT	=	41.2608256 DEG	LATITUDE OF NADIR POINT	=	-0.7147195 DEG
LONG OF CAMERA AXIS INTERSECT	=	41.2291055 DEG	LAT OF CAMERA AXIS INTERSECT	=	-0.7049225 DEG
SPACECRAFT RADIUS	=	1792.4398804 KM	SPACECRAFT ALTITUDE	=	52.9398804 KM
MEAN ALTITUDE RATE	=	0.0148154 KM/SEC	TIME FROM PERIAPSIS	=	29.0206513 SEC
HORIZONTAL VELOCITY	=	1.9104647 KM/SEC	TRUE ANOMALY	=	1.7725359 DEG
SCALE FACTOR (HIGH)	=	0.0115225 M/KM	TILT DISTANCE (HIGH)	=	11.6158801 MM
SCALE FACTOR (LOW)	=	0.0015111 M/KM	TILT DISTANCE (LOW)	=	1.5233941 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0360874 RAD/SEC	SWING ANGLE	=	95.3067722 DEG
EMISSION ANGLE	=	1.1241355 DEG	INCIDENCE ANGLE	=	61.9845610 DEG
PHASE ANGLE	=	60.9241242 DEG	NORTH DEVIATION ANGLE	=	348.1439819 DEG
TILT ANGLE	=	1.0909188 DEG	RESOLUTION CONSTANT	=	1.1487954 MTR
TILT AZIMUTH	=	287.1658096 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.9209890 DEG
SUN ANGLE AT NADIR	=	61.9532180 DEG	SUN ARC AT NADIR	=	1880.8998566 KM
LONGITUDE DISTANCE TO TARGET	=	-1.0721745 DEG	LATITUDE DISTANCE TO TARGET	=	0.1185605 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-32.5512218 KM	LATITUDE ARC LENGTH TO TARGET	=	3.6001037 KM
FORWARD OVERLAP RATIO	=	4.3743486 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.3998260 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.98417926	-0.17082178	-0.04702228	62.51053858
CAMERA AXIS	-0.73947413	-0.67294190	0.01808894	52.94976807
C1	-0.77858166	-0.60074127	0.18144011	53.84788513
C2	-0.73437572	-0.65860615	-0.16410442	53.81288147
C3	-0.67564898	-0.72264881	-0.14586685	53.90794373
C4	-0.71985494	-0.66478395	0.19967768	53.94308472

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1347.2993622	1182.0003357	-22.3587103	-1.2255337	1.4119509	-0.3931377

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LONG  41.9601 DEG          LONG  41.6684 DEG
LATI  -0.1353 DEG          LATI  -1.5194 DEG
                                          *
                                         ***                 LONG  41.3706 DEG          LONG  41.2417 DEG
        *          42.94106 KM     *    * * *                LATI  -0.4146 DEG          LATI  -1.0274 DEG
       (1)                        (2)  *  *  *
                                          *                        *          19.00937 KM      *
                                          *                       (1)                         (2)
                                          *
            LOW RESOLUTION                *                                HIGH RESOLUTION
                                          *
                                          *
   36.57685 KM                36.52255 KM  *  DIRECTION      4.78610 KM                 4.78297 KM
                                          *  OF MOTION
                                          *
                                          *                       (4)                         (3)
                                          *                        *          19.04296 KM      *
                                          *
       (4)                        (3)     *
        *          43.52647 KM      *     *                LONG  41.2164 DEG          LONG  41.0874 DEG
                                          *                LATI  -0.3817 DEG          LATI  -0.9955 DEG
LONG  40.7831 DEG          LONG  40.4888 DEG
LATI   0.1220 DEG          LATI  -1.2812 DEG
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FRAME 55

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*********************************
*  PHOTO FRAME NUMBER  5 OF 16  *  56
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	15	23	8.199

LONGITUDE OF NADIR POINT	=	41.4039001 DEG	LATITUDE OF NADIR POINT	=	-0.7448654 DEG
LONG OF CAMERA AXIS INTERSECT	=	41.3765254 DEG	LATI OF CAMERA AXIS INTERSECT	=	-0.7359802 DEG
SPACECRAFT RADIUS	=	1792.4769135 KM	SPACECRAFT ALTITUDE	=	52.9769135 KM
MEAN ALTITUDE RATE	=	0.0160402 KM/SEC	TIME FROM PERIAPSIS	=	31.4212193 SEC
HORIZONTAL VELOCITY	=	1.9104250 KM/SEC	TRUE ANOMALY	=	1.9191322 DEG
SCALE FACTOR (HIGH)	=	0.0115144 M/KM	TILT DISTANCE (HIGH)	=	10.0626134 MM
SCALE FACTOR (LOW)	=	0.0015101 M/KM	TILT DISTANCE (LOW)	=	1.3196870 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0360615 RAD/SEC	SWING ANGLE	=	96.1262932 DEG
EMISSION ANGLE	=	0.9739279 DEG	INCIDENCE ANGLE	=	61.8380404 DEG
PHASE ANGLE	=	60.9241252 DEG	NORTH DEVIATION ANGLE	=	348.1452980 DEG
TILT ANGLE	=	0.9450705 DEG	RESOLUTION CONSTANT	=	1.1495990 MTR
TILT AZIMUTH	=	287.9833984 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.9002714 DEG
SUN ANGLE AT NADIR	=	61.8110108 DEG	SUN ARC AT NADIR	=	1876.5824585 KM
LONGITUDE DISTANCE TO TARGET	=	-0.9291000 DEG	LATITUDE DISTANCE TO TARGET	=	0.0884346 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-28.2074792 KM	LATITUDE ARC LENGTH TO TARGET	=	2.6848744 KM
FORWARD OVERLAP RATIO	=	4.4297278 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.4004698 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.97187260	-0.23316804	-0.03311074	60.28008604
CAMERA AXIS	-0.73947811	-0.67293753	0.01808885	52.98434448
C1	-0.77858521	-0.60073670	0.18144004	53.88946533
C2	-0.73437962	-0.65860177	-0.16410451	53.85444641
C3	-0.67565326	-0.72264478	-0.14586695	53.93672180
C4	-0.71985886	-0.66477972	0.19967759	53.97186279

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1344.3623505	1185.3775635	-23.3021798	-1.2282742	1.4095403	-0.3930907

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LONG  42.1086 DEG          LONG  41.8165 DEG
LATI  -0.1655 DEG          LATI  -1.5517 DEG
                                  *
                                 ***
                                *  *  *
*          43.00822 KM     *    *  *  *
(1)                        (2)  *  *  *
                                  *
                                  *
                                
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*************************************
*   PHOTO FRAME NUMBER  6 OF 16     *
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57

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	15	23	10.699

LONGITUDE OF NADIR POINT	=	41.5529299 DEG	LATITUDE OF NADIR POINT	=	-0.7752595 DEG
LONG OF CAMERA AXIS INTERSECT	=	41.5300870 DEG	LATI OF CAMERA AXIS INTERSECT	=	-0.7583254 DEG
SPACECRAFT RADIUS	=	1792.5186005 KM	SPACECRAFT ALTITUDE	=	53.0136005 KM
MEAN ALTITUDE RATE	=	0.0173159 KM/SEC	TIME FROM PERIAPSIS	=	33.9218316 SEC
HORIZONTAL VELOCITY	=	1.9103804 KM/SEC	TRUE ANOMALY	=	2.0718303 DEG
SCALE FACTOR (HIGH)	=	0.0115054 M/KM	TILT DISTANCE (HIGH)	=	8.4491109 MM
SCALE FACTOR (LOW)	=	0.0015089 M/KM	TILT DISTANCE (LOW)	=	1.1080801 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0360323 RAD/SEC	SWING ANGLE	=	97.3302291 DEG
EMISSION ANGLE	=	0.8177501 DEG	INCIDENCE ANGLE	=	61.6854281 DEG
PHASE ANGLE	=	60.9241252 DEG	NORTH DEVIATION ANGLE	=	348.1468239 DEG
TILT ANGLE	=	0.7935532 DEG	RESOLUTION CONSTANT	=	1.1505036 MTR
TILT AZIMUTH	=	289.1551056 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.3734647 DEG
SUN ANGLE AT NADIR	=	61.6628971 DEG	SUN ARC AT NADIR	=	1872.0857239 KM
LONGITUDE DISTANCE TO TARGET	=	-0.7800703 DEG	LATITUDE DISTANCE TO TARGET	=	0.0570405 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-23.6829362 KM	LATITUDE ARC LENGTH TO TARGET	=	1.7317492 KM
FORWARD OVERLAP RATIO	=	0.5171873 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.4996042 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.95326536	-0.30163298	-0.01739803	58.24006224
CAMERA AXIS	-0.73948231	-0.67293292	0.01808877	53.02383423
C1	-0.77858894	-0.60073188	0.18143997	53.93634033
C2	-0.73438372	-0.65859716	-0.16410459	53.90129089
C3	-0.67565778	-0.72264055	-0.14586705	53.97026062
C4	-0.71986300	-0.66477527	0.19967751	54.00540161

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1341.2960205	1186.8892975	-24.2848356	-1.2311222	1.4070222	-0.3930397

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LONG  -42.2634 DEG          LONG  41.9708 DEG
LATI  -0.1968 DEG           LATI  -1.5854 DEG        *
                                                    ***          LONG  41.6718 DEG          LONG  41.5428 DEG
        *          43.08116 KM        *             * * *        LATI  -0.4776 DEG          LATI  -1.0913 DEG
       (1)                           (2)            *  *  *
                                                     *                   *        19.04059 KM        *
                                                     *                  (1)                        (2)
                LOW RESOLUTION                       *
                                                     *                          HIGH RESOLUTION
                                                     *
   36.42347 KM                 36.56913 KM           *  DIRECTION      4.79233 KM                4.78922 KM
                                                     *  OF MOTION
                                                     *
                                                     *                  (4)                        (3)
                                                     *                   *        19.06496 KM        *
       (4)                           (3)             *
        *          43.50589 KM        *              *          LONG  41.5174 DEG          LONG  41.3883 DEG
                                                     *          LATI  -0.4447 DEG          LATI  -1.0593 DEG
LONG  -41.0843 DEG          LONG  40.7903 DEG        *
LATI  0.0581 DEG            LATI  -1.3444 DEG        *
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FRAME 57

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*   PHOTO FRAME NUMBER  7 OF 16   *
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58

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	15	23	13.099

LONGITUDE OF NADIR POINT	=	41.6959901 DEG	LATITUDE OF NADIR POINT	=	-0.8063926 DEG
LONG OF CAMERA AXIS INTERSECT	=	41.6775045 DEG	LATI OF CAMERA AXIS INTERSECT	=	-0.7993729 DEG
SPACECRAFT RADIUS	=	1792.5616302 KM	SPACECRAFT ALTITUDE	=	53.0616302 KM
MEAN ALTITUDE RATE	=	0.0185405 KM/SEC	TIME FROM PERIAPSIS	=	36.3224216 SEC
HORIZONTAL VELOCITY	=	1.9103344 KM/SEC	TRUE ANOMALY	=	2.2184145 DEG
SCALE FACTOR (HIGH)	=	0.0114961 M/KM	TILT DISTANCE (HIGH)	=	6.9045313 MM
SCALE FACTOR (LOW)	=	0.0015077 M/KM	TILT DISTANCE (LOW)	=	0.9055123 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0360022 RAD/SEC	SWING ANGLE	=	98.9428272 DEG
EMISSION ANGLE	=	0.6682985 DEG	INCIDENCE ANGLE	=	61.5389371 DEG
PHASE ANGLE	=	60.9241252 DEG	NORTH DEVIATION ANGLE	=	348.1484489 DEG
TILT ANGLE	=	0.6484977 DEG	RESOLUTION CONSTANT	=	1.1514374 MTR
TILT AZIMUTH	=	290.7954941 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.8573112 DEG
SUN ANGLE AT NADIR	=	61.5207276 DEG	SUN ARC AT NADIR	=	1867.7694550 KM
LONGITUDE DISTANCE TO TARGET	=	-0.6370101 DEG	LATITUDE DISTANCE TO TARGET	=	0.0269074 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-19.3396280 KM	LATITUDE ARC LENGTH TO TARGET	=	0.8169085 KM
FORWARD OVERLAP RATIO	=	4.5662675 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.4004698 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.92905220	-0.36994658	-0.00123780	56.58235598
CAMERA AXIS	-0.73948633	-0.67292850	0.01808868	53.06513977
C1	-0.77859253	-0.60072726	0.18143989	53.98480225
C2	-0.73438767	-0.65859274	-0.16410469	53.94970703
C3	-0.67566211	-0.72263648	-0.14586716	54.00585937
C4	-0.71986696	-0.66477101	0.19967742	54.04104614

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1338.3457489	1192.2546234	-25.2280602	-1.2338500	1.4045980	-0.3929888

```
LONG  42.4120 DEG          LONG  42.1190 DEG
LATI  -0.2268 DEG          LATI  -1.6178 DEG
                                  *
                                 ***
*          43.15408 KM     *     * * *
(1)                        (2)  * * *
                                  *
                                  *
                                  
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*********************************
*   PHOTO FRAME NUMBER  8 OF 16  *
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59

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	15	23	15.499

LONGITUDE OF NADIR POINT	=	41.8390503 DEG	LATITUDE OF NADIR POINT	=	-0.8365189 DEG
LONG OF CAMERA AXIS INTERSECT	=	41.8249273 DEG	LATI OF CAMERA AXIS INTERSECT	=	-0.8304135 DEG
SPACECRAFT RADIUS	=	1792.6076050 KM	SPACECRAFT ALTITUDE	=	53.1076050 KM
MEAN ALTITUDE RATE	=	0.0197648 KM/SEC	TIME FROM PERIAPSIS	=	38.7229552 SEC
HORIZONTAL VELOCITY	=	1.9102851 KM/SEC	TRUE ANOMALY	=	2.3649880 DEG
SCALE FACTOR (HIGH)	=	0.0114861 M/KM	TILT DISTANCE (HIGH)	=	5.3713000 MM
SCALE FACTOR (LOW)	=	0.0015064 M/KM	TILT DISTANCE (LOW)	=	0.7044328 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0359701 RAD/SEC	SWING ANGLE	=	101.5286331 DEG
EMISSION ANGLE	=	0.5199707 DEG	INCIDENCE ANGLE	=	61.3924627 DEG
PHASE ANGLE	=	60.9241276 DEG	NORTH DEVIATION ANGLE	=	348.1502190 DEG
TILT ANGLE	=	0.5044998 DEG	RESOLUTION CONSTANT	=	1.1524350 MTR
TILT AZIMUTH	=	293.3791542 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.8359442 DEG
SUN ANGLE AT NADIR	=	61.3785806 DEG	SUN ARC AT NADIR	=	1863.4538727 KM
LONGITUDE DISTANCE TO TARGET	=	-0.4939499 DEG	LATITUDE DISTANCE TO TARGET	=	-0.0032189 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-14.9963199 KM	LATITUDE ARC LENGTH TO TARGET	=	-0.0977248 KM
FORWARD OVERLAP RATIO	=	4.6378539 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.3998260 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.89800231	-0.43970684	0.01580324	55.24598551
CAMERA AXIS	-0.73949029	-0.67292415	0.01808859	53.10972595
C1	-0.77859606	-0.60072271	0.18143982	54.03660583
C2	-0.73439156	-0.65858838	-0.16410476	54.00148010
C3	-0.67566637	-0.72263248	-0.14586725	54.04484558
C4	-0.71987087	-0.66476680	0.19967733	54.08003235

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1335.3888092	1195.6142120	-26.1711638	-1.2365717	1.4021670	-0.3929360

```
LONG  42.5607 DEG          LONG  42.2673 DEG
LATI  -0.2569 DEG          LATI  -1.6502 DEG
                                  *
                                 ***
                                                LONG  41.9669 DEG          LONG  41.8376 DEG
                                                LATI  -0.5391 DEG          LATI  -1.1540 DEG
      *        43.22981 KM     *          * * *
     (1)                       (2)        * * *
                                                  *        19.07599 KM      *
                                                 (1)                       (2)
                                  *
                                  *
                                  *
          LOW RESOLUTION                                HIGH RESOLUTION
                                  *
                                  *
   36.67983 KM              36.62544 KM   *  DIRECTION      4.79980 KM              4.79667 KM
                                  *      *  OF MOTION
                                  *
                                                 (4)                       (3)
                                  *                *        19.09131 KM      *
                                  *
     (4)                       (3)          *
      *        43.49679 KM      *           *
                                  *
                                                LONG  41.8122 DEG          LONG  41.6829 DEG
                                                LATI  -0.5064 DEG          LATI  -1.1218 DEG
LONG  41.3792 DEG          LONG  41.0854 DEG    *
LATI  -0.0042 DEG          LATI  -1.4065 DEG    *
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FRAME 59

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*********************************
*  PHOTO FRAME NUMBER  9 OF 16  *  60
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	15	23	18.000

LONGITUDE OF NADIR POINT	=	41.9880643 DEG	LATITUDE OF NADIR POINT	=	-0.8678933 DEG
LONG OF CAMERA AXIS INTERSECT	=	41.9784908 DEG	LATI OF CAMERA AXIS INTERSECT	=	-0.8627408 DEG
SPACECRAFT RADIUS	=	1792.6585999 KM	SPACECRAFT ALTITUDE	=	53.1585999 KM
MEAN ALTITUDE RATE	=	0.0210399 KM/SEC	TIME FROM PERIAPSIS	=	41.2235861 SEC
HORIZONTAL VELOCITY	=	1.9102305 KM/SEC	TRUE ANOMALY	=	2.5176643 DEG
SCALE FACTOR (HIGH)	=	0.0114751 M/KM	TILT DISTANCE (HIGH)	=	3.7969323 MM
SCALE FACTOR (LOW)	=	0.0015049 M/KM	TILT DISTANCE (LOW)	=	0.4979583 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0359346 RAD/SEC	SWING ANGLE	=	106.4416380 DEG
EMISSION ANGLE	=	0.3673747 DEG	INCIDENCE ANGLE	=	61.2398949 DEG
PHASE ANGLE	=	60.9241285 DEG	NORTH DEVIATION ANGLE	=	348.1522293 DEG
TILT ANGLE	=	0.3566318 DEG	RESOLUTION CONSTANT	=	1.1535416 MTR
TILT AZIMUTH	=	298.2892799 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.8134575 DEG
SUN ANGLE AT NADIR	=	61.2305264 DEG	SUN ARC AT NADIR	=	1858.9589539 KM
LONGITUDE DISTANCE TO TARGET	=	-0.3449359 DEG	LATITUDE DISTANCE TO TARGET	=	-0.0345933 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-10.4722545 KM	LATITUDE ARC LENGTH TO TARGET	=	-1.0502538 KM
FORWARD OVERLAP RATIO	=	0.7544347 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.5002480 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.85803909	-0.51244323	0.03421770	54.22136164
CAMERA AXIS	-0.73949448	-0.67291954	0.01808850	53.15965271
C1	-0.77859980	-0.60071789	0.18143974	54.09416199
C2	-0.73439568	-0.65858378	-0.16410486	54.05900574
C3	-0.67567088	-0.72262824	-0.14586736	54.08897400
C4	-0.71987501	-0.66476236	0.19967724	54.12419128

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1332.3018341	1199.1075439	-27.1534288	-1.2394000	1.3996278	-0.3928789

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LONG  42.7157 DEG          LONG  42.4217 DEG
LATI  -0.2881 DEG          LATI  -1.6841 DEG
                                  *
                                 ***
                                *** ***
*          43.31171 KM     *    *** *** ***
(1)                        (2)  *** *** ***
                                  *
                                  *
                                  *
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*   PHOTO FRAME NUMBER 10 OF 16 *
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61

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	15	23	20.399

LONGITUDE OF NADIR POINT	= 42.1311116 DEG		LATITUDE OF NADIR POINT	=	-0.8980042 DEG
LONG OF CAMERA AXIS INTERSECT	= 42.1259155 DEG		LATI OF CAMERA AXIS INTERSECT	=	-0.8937695 DEG
SPACECRAFT RADIUS	= 1792.7105713 KM		SPACECRAFT ALTITUDE	=	53.2105713 KM
MEAN ALTITUDE RATE	= 0.0222638 KM/SEC		TIME FROM PERIAPSIS	=	43.6241307 SEC
HORIZONTAL VELOCITY	= 1.9101751 KM/SEC		TRUE ANOMALY	=	2.6642214 DEG
SCALE FACTOR (HIGH)	= 0.0114639 M/KM		TILT DISTANCE (HIGH)	=	2.3441161 MM
SCALE FACTOR (LOW)	= 0.0015035 M/KM		TILT DISTANCE (LOW)	=	0.3074251 MM
IMAGE MOTION COMPENSATION (V/H)	= 0.0358984 RAD/SEC		SWING ANGLE	=	117.3390312 DEG
EMISSION ANGLE	= 0.2269589 DEG		INCIDENCE ANGLE	=	61.0934448 DEG
PHASE ANGLE	= 60.9241285 DEG		NORTH DEVIATION ANGLE	=	348.1543083 DEG
TILT ANGLE	= 0.2201759 DEG		RESOLUTION CONSTANT	=	1.1546694 MTR
TILT AZIMUTH	= 309.1839676 DEG		SUN AZIMUTH AT PRINCIPAL GND PT	=	87.7916517 DEG
SUN ANGLE AT NADIR	= 61.0884151 DEG		SUN ARC AT NADIR	=	1854.6444550 KM
LONGITUDE DISTANCE TO TARGET	= -0.2018886 DEG		LATITUDE DISTANCE TO TARGET	=	-0.0647042 DEG
LONGITUDE ARC LENGTH TO TARGET	= -6.1293372 KM		LATITUDE ARC LENGTH TO TARGET	=	-1.9644204 KM
FORWARD OVERLAP RATIO	= 4.8119169 PCT		SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	= 2.3998260 SEC				

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.81242032	-0.58073140	0.05219451	53.61010599
CAMERA AXIS	-0.73949847	-0.67291516	0.01808841	53.21096802
C1	-0.77860335	-0.60071330	0.18143967	54.15284729
C2	-0.73439959	-0.65857939	-0.16410495	54.11764526
C3	-0.67567517	-0.72262420	-0.14586747	54.13478088
C4	-0.71987893	-0.66475811	0.19967715	54.17001343

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1329.3317261	1202.4552460	-28.0962512	-1.2421089	1.3971833	-0.3928222

```
LONG  42.8645 DEG          LONG  42.5700 DEG
LATI  -0.3180 DEG          LATI  -1.7167 DEG
                                  *
                                 ***
*                 *                *  *  *
(1)   43.39325 KM (2)             *  *  *
                                  *
                                  *
                                
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*  PHOTO FRAME NUMBER 11 OF 16  *
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62

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	15	23	22.899

LONGITUDE OF NADIR POINT	= 42.2801156 DEG		LATITUDE OF NADIR POINT	=	-0.9293625 DEG
LONG OF CAMERA AXIS INTERSECT	= 42.2794876 DEG		LATI OF CAMERA AXIS INTERSECT	=	-0.9260840 DEG
SPACECRAFT RADIUS	= 1792.7678223 KM		SPACECRAFT ALTITUDE	=	53.2678223 KM
MEAN ALTITUDE RATE	= 0.0235365 KM/SEC		TIME FROM PERIAPSIS	=	46.1247463 SEC
HORIZONTAL VELOCITY	= 1.9101139 KM/SEC		TRUE ANOMALY	=	2.8168789 DEG
SCALE FACTOR (HIGH)	= 0.0114516 M/KM		TILT DISTANCE (HIGH)	=	1.1867449 MM
SCALE FACTOR (LOW)	= 0.0015018 M/KM		TILT DISTANCE (LOW)	=	0.1556387 MM
IMAGE MOTION COMPENSATION (V/H)	= 0.0358587 RAD/SEC		SWING ANGLE	=	157.3152256 DEG
EMISSION ANGLE	= 0.1149250 DEG		INCIDENCE ANGLE	=	60.9409080 DEG
PHASE ANGLE	= 60.9241295 DEG		NORTH DEVIATION ANGLE	=	348.1566315 DEG
TILT ANGLE	= 0.1114678 DEG		RESOLUTION CONSTANT	=	1.1559117 MTR
TILT AZIMUTH	= 349.1539268 DEG		SUN AZIMUTH AT PRINCIPAL GND PT	=	87.7687073 DEG
SUN ANGLE AT NADIR	= 60.9404068 DEG		SUN ARC AT NADIR	=	1850.1509094 KM
LONGITUDE DISTANCE TO TARGET	= -0.0528846 DEG		LATITUDE DISTANCE TO TARGET	=	-0.0960625 DEG
LONGITUDE ARC LENGTH TO TARGET	= -1.6055759 KM		LATITUDE ARC LENGTH TO TARGET	=	-2.9164571 KM
FORWARD OVERLAP RATIO	= 0.9457548 PCT		SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	= 2.4996042 SEC				

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.75790546	-0.64850868	0.07082226	53.37483501
CAMERA AXIS	-0.73950262	-0.67291062	0.01808833	53.26792908
C1	-0.77860704	-0.60070854	0.18143960	54.21755981
C2	-0.73440365	-0.65857484	-0.16410502	54.18231201
C3	-0.67567962	-0.72262003	-0.14586756	54.18601990
C4	-0.71988302	-0.66475373	0.19967707	54.22128296

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1326.2308655	1205.9362183	-29.0782247	-1.2449239	1.3946300	-0.3927611

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LONG  43.0195 DEG          LONG  42.7246 DEG
LATI  -0.3491 DEG          LATI  -1.7506 DEG
                                  *
                                 ***
                                *   *
*          43.48120 KM     *     *   *
(1)                        (2)  *   *   *
                                *
                                *
                                
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*   PHOTO FRAME NUMBER 12 OF 16   * 63
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	15	23	25.299

LONGITUDE OF NADIR POINT	= 42.4230909	DEG	LATITUDE OF NADIR POINT	= -0.9594461	DEG
LONG OF CAMERA AXIS INTERSECT	= 42.4268556	DEG	LATI OF CAMERA AXIS INTERSECT	= -0.9570862	DEG
SPACECRAFT RADIUS	= 1792.8257599	KM	SPACECRAFT ALTITUDE	= 53.3257599	KM
MEAN ALTITUDE RATE	= 0.0247614	KM/SEC	TIME FROM PERIAPSIS	= 48.5243201	SEC
HORIZONTAL VELOCITY	= 1.910052C	KM/SEC	TRUE ANOMALY	= 2.9633585	DEG
SCALE FACTOR (HIGH)	= 0.0114391	M/KM	TILT DISTANCE (HIGH)	= 1.5601746	MM
SCALE FACTOR (LOW)	= 0.0015002	M/KM	TILT DISTANCE (LOW)	= 0.2046131	MM
IMAGE MOTION COMPENSATION (V/H)	= 0.0358186	RAD/SEC	SWING ANGLE	= 226.0676880	DEG
EMISSION ANGLE	= 0.1513058	DEG	INCIDENCE ANGLE	= 60.7945447	DEG
PHASE ANGLE	= 60.9241314	DEG	NORTH DEVIATION ANGLE	= 348.1590195	DEG
TILT ANGLE	= 0.1465430	DEG	RESOLUTION CONSTANT	= 1.1571690	MTR
TILT AZIMUTH	= 57.9088144	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	= 87.7464666	DEG
SUN ANGLE AT NADIR	= 60.7983975	DEG	SUN ARC AT NADIR	= 1845.8395233	KM
LONGITUDE DISTANCE TO TARGET	= 0.0900908	DEG	LATITUDE DISTANCE TO TARGET	= -0.1261460	DEG
LONGITUDE ARC LENGTH TO TARGET	= 2.7351554	KM	LATITUDE ARC LENGTH TO TARGET	= -3.8297943	KM
FORWARD OVERLAP RATIO	= 5.0490684	PCT	SIDE OVERLAP RATIO	= 0.	PCT
TIME BETWEEN PHOTOS	= 2.4004698	SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.69987851	-0.70879507	0.08820222	53.53928232
CAMERA AXIS	-0.73950662	-0.67290621	0.01808824	53.32594299
C1	-0.77861061	-0.60070393	0.18143953	54.28311157
C2	-0.73440758	-0.65857045	-0.16410510	54.24781799
C3	-0.67568395	-0.72261598	-0.14586765	54.23860168
C4	-0.71988697	-0.66474947	0.19967698	54.27389526

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1323.2487793	1209.2705536	-30.0203822	-1.2476188	1.3921731	-0.3927004

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LONG  43.1684 DEG          LONG  42.8729 DEG
LATI  -0.3789 DEG          LATI  -1.7833 DEG
                                  *
                                 ***                    LONG  42.5694 DEG          LONG  42.4397 DEG
*          43.56853 KM     *    * * *                   LATI  -0.6644 DEG          LATI  -1.2821 DEG
(1)                        (2)  *  *  *
                                  *                          *        19.16300 KM     *
                                  *                         (1)                      (2)
                                  *
          LOW RESOLUTION          *                                HIGH RESOLUTION
                                  *
                                  *
36.82782 KM                36.77322 KM   *  DIRECTION      4.81916 KM                4.81603 KM
                                  *  OF MOTION
                                  *
                                  *                         (4)                      (3)
                                  *                          *        19.15975 KM     *
(4)                        (3)    *
*          43.51188 KM     *      *                   LONG  42.4140 DEG          LONG  42.2844 DEG
                                  *                   LATI  -0.6319 DEG          LATI  -1.2495 DEG
LONG  41.9810 DEG          LONG  41.6872 DEG        *
LATI  -0.1307 DEG          LATI  -1.5335 DEG        *
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FRAME 63

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*  PHOTO FRAME NUMBER 13 OF 16  *  64
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	15	23	27.799

LONGITUDE OF NADIR POINT	=	42.5720768 DEG	LATITUDE OF NADIR POINT	=	-0.9907881 DEG
LONG OF CAMERA AXIS INTERSECT	=	42.5804296 DEG	LATI OF CAMERA AXIS INTERSECT	=	-0.9893670 DEG
SPACECRAFT RADIUS	=	1792.8892517 KM	SPACECRAFT ALTITUDE	=	53.3892517 KM
MEAN ALTITUDE RATE	=	0.0260356 KM/SEC	TIME FROM PERIAPSIS	=	51.0249152 SEC
HORIZONTAL VELOCITY	=	1.9099842 KM/SEC	TRUE ANOMALY	=	3.1159941 DEG
SCALE FACTOR (HIGH)	=	0.0114255 M/KM	TILT DISTANCE (HIGH)	=	2.9476654 MM
SCALE FACTOR (LOW)	=	0.0014984 M/KM	TILT DISTANCE (LOW)	=	0.3865791 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0357747 RAD/SEC	SWING ANGLE	=	248.6370354 DEG
EMISSION ANGLE	=	0.2853910 DEG	INCIDENCE ANGLE	=	60.6420341 DEG
PHASE ANGLE	=	60.9241314 DEG	NORTH DEVIATION ANGLE	=	348.1616669 DEG
TILT ANGLE	=	0.2768647 DEG	RESOLUTION CONSTANT	=	1.1585467 MTR
TILT AZIMUTH	=	80.4752893 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.7230587 DEG
SUN ANGLE AT NADIR	=	60.6504345 DEG	SUN ARC AT NADIR	=	1841.3473511 KM
LONGITUDE DISTANCE TO TARGET	=	0.2390766 DEG	LATITUDE DISTANCE TO TARGET	=	-0.1574881 DEG
LONGITUDE ARC LENGTH TO TARGET	=	7.2583665 KM	LATITUDE ARC LENGTH TO TARGET	=	-4.7813384 KM
FORWARD OVERLAP RATIO	=	1.1678560 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.4996042 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.63489912	-0.76537075	0.10540739	54.11335421
CAMERA AXIS	-0.73951080	-0.67290162	0.01808815	53.38989258
C1	-0.77861433	-0.60069913	0.18143944	54.35498047
C2	-0.73441167	-0.65856586	-0.16410520	54.31962585
C3	-0.67568843	-0.72261176	-0.14586776	54.29696655
C4	-0.71989109	-0.66474503	0.19967689	54.33227539

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1320.1343079	1212.7389526	-31.0020461	-1.2504203	1.3896059	-0.3926352

```
LONG  43.3236 DEG          LONG  43.0275 DEG
LATI  -0.4099 DEG          LATI  -1.8173 DEG
                                      *
                                     ***
                                    * * *
*          43.66259 KM     *        * * *
(1)                        (2)          *
                                        *
                                        *
                                        
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*************************************
*   PHOTO FRAME NUMBER 14 OF 16     *
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65

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	15	23	30.199

LONGITUDE OF NADIR POINT	=	42.7151546 DEG	LATITUDE OF NADIR POINT	=	-1.0208802 DEG
LONG OF CAMERA AXIS INTERSECT	=	42.7279243 DEG	LATI OF CAMERA AXIS INTERSECT	=	-1.0204012 DEG
SPACECRAFT RADIUS	=	1792.9532318 KM	SPACECRAFT ALTITUDE	=	53.4532318 KM
MEAN ALTITUDE RATE	=	0.0272590 KM/SEC	TIME FROM PERIAPSIS	=	53.4264760 SEC
HORIZONTAL VELOCITY	=	1.9099158 KM/SEC	TRUE ANOMALY	=	3.2625753 DEG
SCALE FACTOR (HIGH)	=	0.0114118 M/KM	TILT DISTANCE (HIGH)	=	4.4336009 MM
SCALE FACTOR (LOW)	=	0.0014966 M/KM	TILT DISTANCE (LOW)	=	0.5814559 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0357306 RAD/SEC	SWING ANGLE	=	256.0179291 DEG
EMISSION ANGLE	=	0.4292710 DEG	INCIDENCE ANGLE	=	60.4955778 DEG
PHASE ANGLE	=	60.9241319 DEG	NORTH DEVIATION ANGLE	=	348.1643639 DEG
TILT ANGLE	=	0.4164298 DEG	RESOLUTION CONSTANT	=	1.1599351 MTR
TILT AZIMUTH	=	87.8535576 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.7003565 DEG
SUN ANGLE AT NADIR	=	60.5083547 DEG	SUN ARC AT NADIR	=	1837.0338135 KM
LONGITUDE DISTANCE TO TARGET	=	0.3821545 DEG	LATITUDE DISTANCE TO TARGET	=	-0.1875802 DEG
LONGITUDE ARC LENGTH TO TARGET	=	11.6022104 KM	LATITUDE ARC LENGTH TO TARGET	=	-5.6949345 KM
FORWARD OVERLAP RATIO	=	5.1953288 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.4004698 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.56974838	-0.81289848	0.12075942	55.03980684
CAMERA AXIS	-0.73951481	-0.67289722	0.01808807	53.45468140
C1	-0.77861790	-0.60069453	0.18143938	54.42749023
C2	-0.73441561	-0.65856145	-0.16410528	54.39207458
C3	-0.67569274	-0.72260769	-0.14586785	54.35641479
C4	-0.71989505	-0.66474078	0.19967681	54.39176941

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1317.1366272	1216.0639496	-31.9446733	-1.2531044	1.3871337	-0.3925707

```
LONG  43.4726 DEG          LONG  43.1760 DEG
LATI  -0.4397 DEG          LATI  -1.8501 DEG        *
                                                   ***          LONG  42.8708 DEG          LONG  42.7408 DEG
        *          43.75586 KM        *            * * *        LATI  -0.7269 DEG          LATI  -1.3463 DEG
       (1)                           (2)          *  *  *
                                                   *                    *        19.21397 KM        *
                                                   *                   (1)                         (2)
                LOW RESOLUTION                     *
                                                   *                          HIGH RESOLUTION
                                                   *
   36.91843 KM                36.86370 KM          *  DIRECTION      4.83092 KM                4.82779 KM
                                                   *  OF MOTION
                                                   *
                                                   *                   (4)                         (3)
                                                   *                    *        19.20136 KM        *
       (4)                           (3)           *
        *          43.53626 KM        *            *          LONG  42.7150 DEG          LONG  42.5852 DEG
                                                   *          LATI  -0.6945 DEG          LATI  -1.3135 DEG
LONG  42.2817 DEG          LONG  41.9879 DEG       *
LATI  -0.1936 DEG          LATI  -1.5972 DEG       *
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FRAME 65

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*********************************
*   PHOTO FRAME NUMBER 15 OF 16   *
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66

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	15	23	32.699

LONGITUDE OF NADIR POINT	=	42.8640633 DEG	LATITUDE OF NADIR POINT	=	-1.0521915 DEG
LONG OF CAMERA AXIS INTERSECT	=	42.8814435 DEG	LATI OF CAMERA AXIS INTERSECT	=	-1.0526739 DEG
SPACECRAFT RADIUS	=	1793.0229340 KM	SPACECRAFT ALTITUDE	=	53.5229340 KM
MEAN ALTITUDE RATE	=	0.0285321 KM/SEC	TIME FROM PERIAPSIS	=	55.9260588 SEC
HORIZONTAL VELOCITY	=	1.9098414 KM/SEC	TRUE ANOMALY	=	3.4151272 DEG
SCALE FACTOR (HIGH)	=	0.0113970 M/KM	TILT DISTANCE (HIGH)	=	6.0202116 MM
SCALE FACTOR (LOW)	=	0.0014947 M/KM	TILT DISTANCE (LOW)	=	0.7895360 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0356827 RAD/SEC	SWING ANGLE	=	259.7616959 DEG
EMISSION ANGLE	=	0.5829106 DEG	INCIDENCE ANGLE	=	60.3431544 DEG
PHASE ANGLE	=	60.9241338 DEG	NORTH DEVIATION ANGLE	=	348.1673317 DEG
TILT ANGLE	=	0.5654451 DEG	RESOLUTION CONSTANT	=	1.1614477 MTR
TILT AZIMUTH	=	91.5944471 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.6764927 DEG
SUN ANGLE AT NADIR	=	60.3604980 DEG	SUN ARC AT NADIR	=	1832.5448914 KM
LONGITUDE DISTANCE TO TARGET	=	0.5310631 DEG	LATITUDE DISTANCE TO TARGET	=	-0.2188915 DEG
LONGITUDE ARC LENGTH TO TARGET	=	16.1230762 KM	LATITUDE ARC LENGTH TO TARGET	=	-6.6455458 KM
FORWARD OVERLAP RATIO	=	1.4544890 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.4996042 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.50079255	-0.85492727	0.13530036	56.37459898
CAMERA AXIS	-0.73951901	-0.67289261	0.01808798	53.52561951
C1	-0.77862164	-0.60068969	0.18143930	54.50650024
C2	-0.73441973	-0.65855684	-0.16410537	54.47105408
C3	-0.67569725	-0.72260346	-0.14586795	54.42184448
C4	-0.71989918	-0.66473632	0.19967671	54.45722961

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1314.0097656	1219.5183563	-32.9256020	-1.2558911	1.3845537	-0.3925014

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LONG  43.6279 DEG          LONG  43.3307 DEG
LATI  -0.4706 DEG          LATI  -1.8842 DEG
                                                  *
                                                 ***
*          43.85601 KM     *                    * * *
(1)                        (2)                 *  *  *
                                                  *
                                                  *
                                                
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*   PHOTO FRAME NUMBER 16 OF 16     *  67
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	15	23	35.200

LONGITUDE OF NADIR POINT	=	43.0130305 DEG	LATITUDE OF NADIR POINT	=	-1.0835045 DEG
LONG OF CAMERA AXIS INTERSECT	=	43.0350366 DEG	LATI OF CAMERA AXIS INTERSECT	=	-1.0849542 DEG
SPACECRAFT RADIUS	=	1793.0958557 KM	SPACECRAFT ALTITUDE	=	53.5958557 KM
MEAN ALTITUDE RATE	=	0.0298054 KM/SEC	TIME FROM PERIAPSIS	=	58.4266634 SEC
HORIZONTAL VELOCITY	=	1.9097636 KM/SEC	TRUE ANOMALY	=	3.5677292 DEG
SCALE FACTOR (HIGH)	=	0.0113815 M/KM	TILT DISTANCE (HIGH)	=	7.6218966 MM
SCALE FACTOR (LOW)	=	0.0014926 M/KM	TILT DISTANCE (LOW)	=	0.9995930 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0356327 RAD/SEC	SWING ANGLE	=	261.9367676 DEG
EMISSION ANGLE	=	0.7380084 DEG	INCIDENCE ANGLE	=	60.1906857 DEG
PHASE ANGLE	=	60.9241338 DEG	NORTH DEVIATION ANGLE	=	348.1704597 DEG
TILT ANGLE	=	0.7158685 DEG	RESOLUTION CONSTANT	=	1.1630301 MTR
TILT AZIMUTH	=	93.7665977 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.6523819 DEG
SUN ANGLE AT NADIR	=	60.2126088 DEG	SUN ARC AT NADIR	=	1828.0549774 KM
LONGITUDE DISTANCE TO TARGET	=	0.6800303 DEG	LATITUDE DISTANCE TO TARGET	=	-0.2502045 DEG
LONGITUDE ARC LENGTH TO TARGET	=	20.6457229 KM	LATITUDE ARC LENGTH TO TARGET	=	-7.5962087 KM
FORWARD OVERLAP RATIO	=	1.5456406 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.5002480 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.43223855	-0.88948698	0.14826579	58.06238604
CAMERA AXIS	-0.73952310	-0.67288812	0.01808788	53.60017395
C1	-0.77862529	-0.60068499	0.18143922	54.58923340
C2	-0.73442373	-0.65855234	-0.16410546	54.55372620
C3	-0.67570166	-0.72259933	-0.14586806	54.49093628
C4	-0.71990322	-0.66473198	0.19967663	54.52635193

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1310.8745880	1222.9679108	-33.9067636	-1.2586723	1.3819655	-0.3924300

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LONG  43.7832 DEG          LONG  43.4854 DEG
LATI  -0.5014 DEG          LATI  -1.9185 DEG        *
                                                   ***          LONG  43.1783 DEG          LONG  43.0480 DEG
      *          43.95935 KM      *                * * *        LATI  -0.7906 DEG          LATI  -1.4118 DEG
     (1)                         (2)              *  *  *
                                                   *                    *        19.27107 KM        *
                                                   *                   (1)                         (2)
                LOW RESOLUTION                     *
                                                   *                          HIGH RESOLUTION
                                                   *
   37.02227 KM                36.96737 KM          *  DIRECTION      4.84436 KM                 4.84120 KM
                                                   *  OF MOTION
                                                   *
                                                   *                   (4)                         (3)
                                                   *                    *        19.24888 KM        *
     (4)                        (3)                *
      *          43.57258 KM      *                *                LONG  43.0221 DEG          LONG  42.8920 DEG
                                                   *                LATI  -0.7582 DEG          LATI  -1.3788 DEG
LONG  42.5884 DEG          LONG  42.2944 DEG       *
LATI  -0.2575 DEG          LATI  -1.6623 DEG       *
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FRAME 67

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*********************************
*   PHOTO FRAME NUMBER  1 OF 16   *
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68

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	18	50	45.199

LONGITUDE OF NADIR POINT	=	34.4522381 DEG	LATITUDE OF NADIR POINT	=	0.3037650 DEG
LONG OF CAMERA AXIS INTERSECT	=	34.4057422 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.3150203 DEG
SPACECRAFT RADIUS	=	1792.7507935 KM	SPACECRAFT ALTITUDE	=	51.7507935 KM
MEAN ALTITUDE RATE	=	-0.0275720 KM/SEC	TIME FROM PERIAPSIS	=	-54.0106335 SEC
HORIZONTAL VELOCITY	=	1.9100896 KM/SEC	TRUE ANOMALY	=	356.7010269 DEG
SCALE FACTOR (HIGH)	=	0.0117873 M/KM	TILT DISTANCE (HIGH)	=	17.1352549 MM
SCALE FACTOR (LOW)	=	0.0015459 M/KM	TILT DISTANCE (LOW)	=	2.2472466 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0369094 RAD/SEC	SWING ANGLE	=	91.6954231 DEG
EMISSION ANGLE	=	1.6568804 DEG	INCIDENCE ANGLE	=	67.0123348 DEG
PHASE ANGLE	=	65.4135075 DEG	NORTH DEVIATION ANGLE	=	348.0926819 DEG
TILT ANGLE	=	1.6090486 DEG	RESOLUTION CONSTANT	=	1.1229922 MTR
TILT AZIMUTH	=	283.6078796 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.5000439 DEG
SUN ANGLE AT NADIR	=	66.9661503 DEG	SUN ARC AT NADIR	=	2034.8456879 KM
LONGITUDE DISTANCE TO TARGET	=	-1.5477619 DEG	LATITUDE DISTANCE TO TARGET	=	0.4707650 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-47.0305758 KM	LATITUDE ARC LENGTH TO TARGET	=	14.3047502 KM
FORWARD OVERLAP RATIO	=	0. PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	0. SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.97090178	0.12731134	-0.20283382	71.87687397
CAMERA AXIS	-0.80885223	-0.58801050	0.00130625	51.77180481
C1	-0.84210508	-0.51348241	0.16490865	52.61810303
C2	-0.79966790	-0.57262554	-0.18064122	52.60174561
C3	-0.74856276	-0.64288379	-0.16233981	52.73936462
C4	-0.79099993	-0.58374067	0.18321006	52.75581360

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1478.2779541	1014.1790161	9.5045689	-1.0783978	1.5268355	-0.3937441

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LONG  35.1175 DEG          LONG  34.8333 DEG
LATI   0.8691 DEG          LATI  -0.4785 DEG
                                          *
                                         ***                LONG  34.5440 DEG          LONG  34.4180 DEG
        *          41.84652 KM     *      * * *             LATI   0.5984 DEG          LATI   0.0001 DEG
       (1)                        (2)    *  *  *
                                          *                      *        18.57836 KM      *
                                          *                     (1)                       (2)
                                          *
            LOW RESOLUTION                *                          HIGH RESOLUTION
                                          *
   35.75731 KM                35.73191 KM *  DIRECTION      4.67987 KM                4.67841 KM
                                          *  OF MOTION
                                          *
                                          *                     (4)                       (3)
                                          *                      *        18.62697 KM      *
       (4)                        (3)     *
        *          42.69349 KM     *      *                LONG  34.3934 DEG          LONG  34.2671 DEG
                                          *                LATI   0.6309 DEG          LATI   0.0310 DEG
LONG  33.9688 DEG          LONG  33.6797 DEG *
LATI   1.1252 DEG          LATI  -0.2498 DEG *
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FRAME 68

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*************************************
*   PHOTO FRAME NUMBER  2 OF 16     *
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69

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	18	50	47.599

LONGITUDE OF NADIR POINT	=	34.5952468 DEG	LATITUDE OF NADIR POINT	=	0.2735721 DEG
LONG OF CAMERA AXIS INTERSECT	=	34.5530682 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.2839164 DEG
SPACECRAFT RADIUS	=	1792.6860809 KM	SPACECRAFT ALTITUDE	=	51.6860809 KM
MEAN ALTITUDE RATE	=	-0.0263484 KM/SEC	TIME FROM PERIAPSIS	=	-51.6101594 SEC
HORIZONTAL VELOCITY	=	1.9101580 KM/SEC	TRUE ANOMALY	=	356.8475685 DEG
SCALE FACTOR (HIGH)	=	0.011802C M/KM	TILT DISTANCE (HIGH)	=	15.5758108 MM
SCALE FACTOR (LOW)	=	0.0015478 M/KM	TILT DISTANCE (LOW)	=	2.0427293 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0369569 RAD/SEC	SWING ANGLE	=	91.8669348 DEG
EMISSION ANGLE	=	1.5061182 DEG	INCIDENCE ANGLE	=	66.8655386 DEG
PHASE ANGLE	=	65.4135084 DEG	NORTH DEVIATION ANGLE	=	348.0911713 DEG
TILT ANGLE	=	1.4626793 DEG	RESOLUTION CONSTANT	=	1.1215879 MTR
TILT AZIMUTH	=	283.7800674 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.4862804 DEG
SUN ANGLE AT NADIR	=	66.8236475 DEG	SUN ARC AT NADIR	=	2030.5155792 KM
LONGITUDE DISTANCE TO TARGET	=	-1.4047532 DEG	LATITUDE DISTANCE TO TARGET	=	0.4405721 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-42.6850872 KM	LATITUDE ARC LENGTH TO TARGET	=	13.3873048 KM
FORWARD OVERLAP RATIO	=	2.1454988 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.4004698 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.97689717	0.07992870	-0.19820023	68.78926945
CAMERA AXIS	-0.80885573	-0.58800569	0.00130618	51.70341492
C1	-0.84210812	-0.51347743	0.16490860	52.55480957
C2	-0.79967132	-0.57262073	-0.18064129	52.53846741
C3	-0.74856660	-0.64287931	-0.16233989	52.66337585
C4	-0.79100340	-0.58373602	0.18320999	52.67977905

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1475.6926117	1017.8315201	8.5595572	-1.0814041	1.5247672	-0.3937621

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LONG  35.2645 DEG          LONG  34.9804 DEG
LATI   0.8377 DEG          LATI  -0.5092 DEG          *
                                                     ***
        *          41.82882 KM      *                * * *          LONG  34.6911 DEG          LONG  34.5653 DEG
       (1)                          (2)              *  *  *         LATI   0.5669 DEG          LATI  -0.0306 DEG
                                                     *
                                                     *                     *        18.55600 KM        *
                LOW RESOLUTION                       *                    (1)                        (2)
                                                     *
                                                     *                          HIGH RESOLUTION
                                                     *
   35.70614 KM                35.68079 KM           *  DIRECTION      4.67333 KM                 4.67188 KM
                                                     *  OF MOTION
                                                     *
                                                     *                    (4)                        (3)
                                                     *                     *        18.60012 KM        *
       (4)                          (3)              *
        *          42.59751 KM      *                *          LONG  34.5408 DEG          LONG  34.4147 DEG
                                                     *          LATI   0.5993 DEG          LATI   0.0003 DEG
LONG  34.1172 DEG          LONG  33.8288 DEG         *
LATI   1.0923 DEG          LATI  -0.2796 DEG         *
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FRAME 69

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*********************************
*  PHOTO FRAME NUMBER  3 OF 16  *
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70

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	18	50	49.999

LONGITUDE OF NADIR POINT	=	34.7383161 DEG	LATITUDE OF NADIR POINT	=	0.2433639 DEG
LONG OF CAMERA AXIS INTERSECT	=	34.7004442 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.2527998 DEG
SPACECRAFT RADIUS	=	1792.6242828 KM	SPACECRAFT ALTITUDE	=	51.6242828 KM
MEAN ALTITUDE RATE	=	-0.0251240 KM/SEC	TIME FROM PERIAPSIS	=	-49.2086811 SEC
HORIZONTAL VELOCITY	=	1.9102234 KM/SEC	TRUE ANOMALY	=	356.9941864 DEG
SCALE FACTOR (HIGH)	=	0.0118161 M/KM	TILT DISTANCE (HIGH)	=	14.0160486 MM
SCALE FACTOR (LOW)	=	0.0015497 M/KM	TILT DISTANCE (LOW)	=	1.8381703 MM
IMAGE MOTION COMPENSATION (V/F)	=	0.0370024 RAD/SEC	SWING ANGLE	=	92.0765800 DEG
EMISSION ANGLE	=	1.3552844 DEG	INCIDENCE ANGLE	=	66.7186947 DEG
PHASE ANGLE	=	65.4135094 DEG	NORTH DEVIATION ANGLE	=	348.0898132 DEG
TILT ANGLE	=	1.3162609 DEG	RESOLUTION CONSTANT	=	1.1202469 MTR
TILT AZIMUTH	=	283.9903870 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.4723186 DEG
SUN ANGLE AT NADIR	=	66.6810856 DEG	SUN ARC AT NADIR	=	2026.1836548 KM
LONGITUDE DISTANCE TO TARGET	=	-1.2616839 DEG	LATITUDE DISTANCE TO TARGET	=	0.4103639 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-38.3377581 KM	LATITUDE ARC LENGTH TO TARGET	=	12.4693924 KM
FORWARD OVERLAP RATIO	=	1.9781608 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.3998260 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.98086765	0.02807678	-0.19264050	65.86678410
CAMERA AXIS	-0.80885928	-0.58800080	0.00130609	51.63830566
C1	-0.84211121	-0.51347239	0.16490852	52.49482727
C2	-0.79967479	-0.57261586	-0.18064138	52.47851562
C3	-0.74857049	-0.64287475	-0.16234000	52.59074402
C4	-0.79100691	-0.58373127	0.18320990	52.60713196

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1473.0991669	1021.4804306	7.6141178	-1.0844065	1.5226906	-0.3937781

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LONG  35.4116 DEG          LONG  35.1276 DEG
LATI   0.8064 DEG          LATI  -0.5401 DEG
                                  *
                                 ***
                                *   *
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*   PHOTO FRAME NUMBER  4 OF 16     * 71
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	18	50	52.398

LONGITUDE OF NADIR POINT	=	34.8813410 DEG	LATITUDE OF NADIR POINT	=	0.2131642 DEG
LONG OF CAMERA AXIS INTERSECT	=	34.8477592 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.2216951 DEG
SPACECRAFT RADIUS	=	1792.5654449 KM	SPACECRAFT ALTITUDE	=	51.5654449 KM
MEAN ALTITUDE RATE	=	-0.0239000 KM/SEC	TIME FROM PERIAPSIS	=	-46.8083119 SEC
HORIZONTAL VELOCITY	=	1.9102857 KM/SEC	TRUE ANOMALY	=	357.1407471 DEG
SCALE FACTOR (HIGH)	=	0.0118296 M/KM	TILT DISTANCE (HIGH)	=	12.4564081 MM
SCALE FACTOR (LOW)	=	0.0015514 M/KM	TILT DISTANCE (LOW)	=	1.6336273 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0370458 RAD/SEC	SWING ANGLE	=	92.3388224 DEG
EMISSION ANGLE	=	1.2044930 DEG	INCIDENCE ANGLE	=	66.5719242 DEG
PHASE ANGLE	=	65.4135094 DEG	NORTH DEVIATION ANGLE	=	348.0886040 DEG
TILT ANGLE	=	1.1698368 DEG	RESOLUTION CONSTANT	=	1.1189701 MTR
TILT AZIMUTH	=	284.2530289 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.4581728 DEG
SUN ANGLE AT NADIR	=	66.5385857 DEG	SUN ARC AT NADIR	=	2021.8536224 KM
LONGITUDE DISTANCE TO TARGET	=	-1.1186590 DEG	LATITUDE DISTANCE TO TARGET	=	0.3801642 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-33.9917769 KM	LATITUDE ARC LENGTH TO TARGET	=	11.5517393 KM
FORWARD OVERLAP RATIO	=	1.8910914 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.3998260 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.98213771	-0.02840272	-0.18600751	63.13471889
CAMERA AXIS	-0.80886277	-0.58799601	0.00130599	51.57650757
C1	-0.84211425	-0.51346743	0.16490845	52.43818665
C2	-0.79967818	-0.57261109	-0.18064146	52.42190552
C3	-0.74857431	-0.64287029	-0.16234011	52.52151489
C4	-0.79101036	-0.58372663	0.18320981	52.53785706

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1470.4995575	1025.1229553	6.6690399	-1.0874028	1.5206071	-0.3937922

```
LONG  35.5587 DEG          LONG  35.2747 DEG
LATI   0.7751 DEG          LATI  -0.5709 DEG
                                          *
                                         ***          LONG  34.9855 DEG          LONG  34.8599 DEG
     *          41.80133 KM     *       * * *         LATI   0.5041 DEG          LATI  -0.0922 DEG
    (1)                        (2)     *  *  *
                                          *                  *        18.51483 KM      *
                                          *                 (1)                       (2)
                                          *
            LOW RESOLUTION                *                        HIGH RESOLUTION
                                          *
                                          *
   35.61174 KM                35.58648 KM  *  DIRECTION     4.66124 KM                4.65980 KM
                                          *  OF MOTION
                                          *
                                          *                 (4)                       (3)
                                          *                  *        18.55002 KM      *
    (4)                        (3)        *
     *          42.41426 KM     *        *          LONG  34.8355 DEG          LONG  34.7097 DEG
                                          *          LATI   0.5363 DEG          LATI  -0.0611 DEG
LONG  34.4139 DEG          LONG  34.1266 DEG         *
LATI   1.0266 DEG          LATI  -0.3394 DEG         *
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FRAME 71

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*   PHOTO FRAME NUMBER  5 OF 16   *  72
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	18	50	54.798

LONGITUDE OF NADIR POINT	=	35.0243750 DEG	LATITUDE OF NADIR POINT	=	0.1829611 DEG
LONG OF CAMERA AXIS INTERSECT	=	34.9950743 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.1905879 DEG
SPACECRAFT RADIUS	=	1792.5095673 KM	SPACECRAFT ALTITUDE	=	51.5095673 KM
MEAN ALTITUDE RATE	=	-0.0226757 KM/SEC	TIME FROM PERIAPSIS	=	-44.4078164 SEC
HORIZONTAL VELOCITY	=	1.9103448 KM/SEC	TRUE ANOMALY	=	357.2873268 DEG
SCALE FACTOR (HIGH)	=	0.0118425 M/KM	TILT DISTANCE (HIGH)	=	10.8975935 MM
SCALE FACTOR (LOW)	=	0.0015531 M/KM	TILT DISTANCE (LOW)	=	1.4291926 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0370872 RAD/SEC	SWING ANGLE	=	92.6760197 DEG
EMISSION ANGLE	=	1.0537379 DEG	INCIDENCE ANGLE	=	66.4251642 DEG
PHASE ANGLE	=	65.4135113 DEG	NORTH DEVIATION ANGLE	=	348.0875473 DEG
TILT ANGLE	=	1.0234749 DEG	RESOLUTION CONSTANT	=	1.1177576 MTR
TILT AZIMUTH	=	284.5906639 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.4438314 DEG
SUN ANGLE AT NADIR	=	66.3960810 DEG	SUN ARC AT NADIR	=	2017.5234680 KM
LONGITUDE DISTANCE TO TARGET	=	-0.9756250 DEG	LATITUDE DISTANCE TO TARGET	=	0.3499611 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-29.6455204 KM	LATITUDE ARC LENGTH TO TARGET	=	10.6339825 KM
FORWARD OVERLAP RATIO	=	1.7708762 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.3998260 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.97991805	-0.08959129	-0.17814042	60.61750984
CAMERA AXIS	-0.80886626	-0.58799122	0.00130590	51.51802063
C1	-0.84211729	-0.51346247	0.16490837	52.38493347
C2	-0.79968160	-0.57260630	-0.18064156	52.36866760
C3	-0.74857813	-0.64286580	-0.16234022	52.45567322
C4	-0.79101382	-0.58372197	0.18320971	52.47200012

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1467.8927612	1028.7605591	5.7239368	-1.0903941	1.5185160	-0.3938044

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LONG  35.7059 DEG          LONG  35.4219 DEG
LATI   0.7439 DEG          LATI  -0.6019 DEG
                                          *
                                         ***
                                        * * *
      *          41.79159 KM     *     * * *
     (1)                        (2)
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*   PHOTO FRAME NUMBER  6 OF 16  *
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	18	50	57.199

LONGITUDE OF NADIR POINT	=	35.1673603 DEG	LATITUDE OF NADIR POINT	=	0.1527683 DEG
LONG OF CAMERA AXIS INTERSECT	=	35.1423264 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.1534952 DEG
SPACECRAFT RADIUS	=	1792.4566345 KM	SPACECRAFT ALTITUDE	=	51.4566345 KM
MEAN ALTITUDE RATE	=	-0.0214517 KM/SEC	TIME FROM PERIAPSIS	=	-42.0083017 SEC
HORIZONTAL VELOCITY	=	1.9104008 KM/SEC	TRUE ANOMALY	=	357.4338455 DEG
SCALE FACTOR (HIGH)	=	0.0118546 M/KM	TILT DISTANCE (HIGH)	=	9.3399041 MM
SCALE FACTOR (LOW)	=	0.0015547 M/KM	TILT DISTANCE (LOW)	=	1.2249055 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0371264 RAD/SEC	SWING ANGLE	=	93.1254539 DEG
EMISSION ANGLE	=	0.9031171 DEG	INCIDENCE ANGLE	=	66.2784777 DEG
PHASE ANGLE	=	65.4135113 DEG	NORTH DEVIATION ANGLE	=	348.0866394 DEG
TILT ANGLE	=	0.8772054 DEG	RESOLUTION CONSTANT	=	1.1166090 MTR
TILT AZIMUTH	=	285.0405731 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.4293041 DEG
SUN ANGLE AT NADIR	=	66.2536373 DEG	SUN ARC AT NADIR	=	2013.1951294 KM
LONGITUDE DISTANCE TO TARGET	=	-0.8326397 DEG	LATITUDE DISTANCE TO TARGET	=	0.3197683 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-25.3007417 KM	LATITUDE ARC LENGTH TO TARGET	=	9.7165371 KM
FORWARD OVERLAP RATIO	=	1.6989923 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.4004698 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.97332017	-0.15531911	-0.16888995	58.34388161
CAMERA AXIS	-0.80886972	-0.58798646	0.00130581	51.46282959
C1	-0.84212030	-0.51345756	0.16490830	52.33502197
C2	-0.79968497	-0.57260156	-0.18064164	52.31877136
C3	-0.74858192	-0.64286137	-0.16234032	52.39323425
C4	-0.79101724	-0.58371736	0.18320962	52.40953064

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1465.2798462	1032.3916779	4.7792032	-1.0933792	1.5164181	-0.3938146

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LONG  35.8530 DEG          LONG  35.5691 DEG
LATI   0.7127 DEG          LATI  -0.6328 DEG
                                  *
                                 ***
                                * * *
*                 *                *  *
(1)  41.78451 KM  (2)              *
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*   PHOTO FRAME NUMBER  7 OF 16   *
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	18	50	59.599

LONGITUDE OF NADIR POINT	=	35.3104115 DEG	LATITUDE OF NADIR POINT	=	0.1225592 DEG
LONG OF CAMERA AXIS INTERSECT	=	35.2896371 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.1283871 DEG
SPACECRAFT RADIUS	=	1792.4066162 KM	SPACECRAFT ALTITUDE	=	51.4066162 KM
MEAN ALTITUDE RATE	=	-0.0202270 KM/SEC	TIME FROM PERIAPSIS	=	-39.6078086 SEC
HORIZONTAL VELOCITY	=	1.9104536 KM/SEC	TRUE ANOMALY	=	357.5804405 DEG
SCALE FACTOR (HIGH)	=	0.0118662 M/KM	TILT DISTANCE (HIGH)	=	7.7835391 MM
SCALE FACTOR (LOW)	=	0.0015562 M/KM	TILT DISTANCE (LOW)	=	1.0207920 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0371636 RAD/SEC	SWING ANGLE	=	93.7552395 DEG
EMISSION ANGLE	=	0.7526448 DEG	INCIDENCE ANGLE	=	66.1317415 DEG
PHASE ANGLE	=	65.4135113 DEG	NORTH DEVIATION ANGLE	=	348.0858841 DEG
TILT ANGLE	=	0.7310488 DEG	RESOLUTION CONSTANT	=	1.1155236 MTR
TILT AZIMUTH	=	285.6706390 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.4145746 DEG
SUN ANGLE AT NADIR	=	66.1111345 DEG	SUN ARC AT NADIR	=	2008.8650208 KM
LONGITUDE DISTANCE TO TARGET	=	-0.6895885 DEG	LATITUDE DISTANCE TO TARGET	=	0.2895592 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-20.9539633 KM	LATITUDE ARC LENGTH TO TARGET	=	8.7985988 KM
FORWARD OVERLAP RATIO	=	1.5535055 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.3998260 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.96139114	-0.22522473	-0.15811679	56.34143162
CAMERA AXIS	-0.80887318	-0.58798169	0.00130572	51.41093445
C1	-0.84212331	-0.51345262	0.16490823	52.28842163
C2	-0.79968835	-0.57259680	-0.18064173	52.27217102
C3	-0.74858572	-0.64285692	-0.16234043	52.33410645
C4	-0.79102068	-0.58371274	0.18320953	52.35038757

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1462.6587219	1036.0192413	3.8340338	-1.0963604	1.5143117	-0.3938230

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LONG  36.0002 DEG          LONG  35.7164 DEG
LATI   0.6815 DEG          LATI  -0.6638 DEG
                                          *
                                         ***
                                        * * *
        *          41.78009 KM          *
       (1)                             (2)
                                        *
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*   PHOTO FRAME NUMBER  8 OF 16   * 75
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	18	51	1.999

LONGITUDE OF NADIR POINT	=	35.4535265 DEG	LATITUDE OF NADIR POINT	=	0.0923356 DEG
LONG OF CAMERA AXIS INTERSECT	=	35.4370036 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.0972662 DEG
SPACECRAFT RADIUS	=	1792.3595276 KM	SPACECRAFT ALTITUDE	=	51.3595276 KM
MEAN ALTITUDE RATE	=	-0.0190015 KM/SEC	TIME FROM PERIAPSIS	=	-37.2062688 SEC
HORIZONTAL VELOCITY	=	1.9105034 KM/SEC	TRUE ANOMALY	=	357.7271042 DEG
SCALE FACTOR (HIGH)	=	0.0118771 M/KM	TILT DISTANCE (HIGH)	=	6.2266945 MM
SCALE FACTOR (LOW)	=	0.0015576 M/KM	TILT DISTANCE (LOW)	=	0.8166157 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0371986 RAD/SEC	SWING ANGLE	=	94.7010193 DEG
EMISSION ANGLE	=	0.6020249 DEG	INCIDENCE ANGLE	=	65.9849529 DEG
PHASE ANGLE	=	65.4135122 DEG	NORTH DEVIATION ANGLE	=	348.0852814 DEG
TILT ANGLE	=	0.5848376 DEG	RESOLUTION CONSTANT	=	1.1145017 MTR
TILT AZIMUTH	=	286.6162758 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.3996468 DEG
SUN ANGLE AT NADIR	=	65.9685736 DEG	SUN ARC AT NADIR	=	2004.5331421 KM
LONGITUDE DISTANCE TO TARGET	=	-0.5464735 DEG	LATITUDE DISTANCE TO TARGET	=	0.2593356 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-16.6052437 KM	LATITUDE ARC LENGTH TO TARGET	=	7.8802193 KM
FORWARD OVERLAP RATIO	=	1.4158988 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.3998260 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.94319888	-0.29855930	-0.14573339	54.64055538
CAMERA AXIS	-0.80887671	-0.58797684	0.00130562	51.36227417
C1	-0.84212638	-0.51344761	0.16490815	52.24513245
C2	-0.79969179	-0.57259197	-0.18064182	52.22889709
C3	-0.74858958	-0.64285239	-0.16234054	52.27833557
C4	-0.79102416	-0.58370803	0.18320943	52.29460144

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1460.0294800	1039.6432037	2.8884608	-1.0993377	1.5121971	-0.3938294

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LONG  36.1475 DEG          LONG  35.8637 DEG
LATI   0.6504 DEG          LATI  -0.6949 DEG        *
                                                   ***          LONG  35.5743 DEG          LONG  35.4491 DEG
     *          41.77836 KM      *                 * * *        LATI   0.3786 DEG          LATI  -0.2154 DEG
    (1)                         (2)               *  *  *
                                                   *                   *        18.44667 KM       *
                                                   *                  (1)                        (2)
            LOW RESOLUTION                         *
                                                   *                          HIGH RESOLUTION
                                                   *
  35.45476 KM                35.42963 KM           *  DIRECTION      4.64108 KM                 4.63963 KM
                                                   *  OF MOTION
                                                   *
                                                   *                  (4)                        (3)
                                                   *                   *        18.46413 KM       *
    (4)                         (3)                *
     *          42.08250 KM      *                 *          LONG  35.4249 DEG          LONG  35.2996 DEG
                                                   *          LATI   0.4104 DEG          LATI  -0.1842 DEG
LONG  35.0067 DEG          LONG  34.7217 DEG       *
LATI   0.8958 DEG          LATI  -0.4595 DEG       *
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FRAME 75

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*  PHOTO FRAME NUMBER  9 OF 16  * 76
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	18	51	4.399

LONGITUDE OF NADIR POINT	= 35.5965276 DEG	LATITUDE OF NADIR POINT	= 0.0621359 DEG
LONG OF CAMERA AXIS INTERSECT	= 35.5842433 DEG	LATI OF CAMERA AXIS INTERSECT	= 0.0661717 DEG
SPACECRAFT RADIUS	= 1792.3153992 KM	SPACECRAFT ALTITUDE	= 51.3153992 KM
MEAN ALTITUDE RATE	= -0.0177770 KM/SEC	TIME FROM PERIAPSIS	= -34.8068080 SEC
HORIZONTAL VELOCITY	= 1.9105499 KM/SEC	TRUE ANOMALY	= 357.8736496 DEG
SCALE FACTOR (HIGH)	= 0.0118873 M/KM	TILT DISTANCE (HIGH)	= 4.6770602 MM
SCALE FACTOR (LOW)	= 0.0015590 M/KM	TILT DISTANCE (LOW)	= 0.6133849 MM
IMAGE MOTION COMPENSATION (V/H)	= 0.0372315 RAD/SEC	SWING ANGLE	= 96.2745275 DEG
EMISSION ANGLE	= 0.4521910 DEG	INCIDENCE ANGLE	= 65.8382978 DEG
PHASE ANGLE	= 65.4135132 DEG	NORTH DEVIATION ANGLE	= 348.0848312 DEG
TILT ANGLE	= 0.4392960 DEG	RESOLUTION CONSTANT	= 1.1135442 MTR
TILT AZIMUTH	= 288.1903343 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	= 88.3845339 DEG
SUN ANGLE AT NADIR	= 65.8261337 DEG	SUN ARC AT NADIR	= 2000.2049255 KM
LONGITUDE DISTANCE TO TARGET	= -0.4034724 DEG	LATITUDE DISTANCE TO TARGET	= 0.2291359 DEG
LONGITUDE ARC LENGTH TO TARGET	= -12.2599866 KM	LATITUDE ARC LENGTH TO TARGET	= 6.9625664 KM
FORWARD OVERLAP RATIO	= 1.4063377 PCT	SIDE OVERLAP RATIO	= 0. PCT
TIME BETWEEN PHOTOS	= 2.4004698 SEC		

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.91798181	-0.37410340	-0.13174234	53.27198124
CAMERA AXIS	-0.80888024	-0.58797199	0.00130555	51.31694031
C1	-0.84212946	-0.51344260	0.16490810	52.20520020
C2	-0.79969525	-0.57258712	-0.18064190	52.18899536
C3	-0.74859344	-0.64284786	-0.16234063	52.22596741
C4	-0.79102766	-0.58370333	0.18320936	52.24218750

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1457.3952789	1043.2589874	1.9436834	-1.1023072	1.5100766	-0.3938338

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LONG  36.2948 DEG          LONG  36.0110 DEG
LATI   0.6193 DEG          LATI  -0.7260 DEG
                                  *
                                 ***
                                *   *
*                41.77929 KM   *     *                 LONG  35.7214 DEG          LONG  35.5963 DEG
(1)                            (2)   *                 LATI   0.3473 DEG          LATI  -0.2463 DEG
                                     *
                                     *                        *                18.43257 KM        *
                                     *                        (1)                          (2)
                                     *
                                     *
          LOW RESOLUTION             *                                HIGH RESOLUTION
                                     *
                                     *
35.42210 KM                35.39701 KM   DIRECTION                4.63687 KM                4.63543 KM
                                     *   OF MOTION
                                     *
                                     *                        (4)                          (3)
                                     *                        *                18.44563 KM        *
                                     *
(4)                          (3)     *
*                42.00673 KM        *                 LONG  35.5721 DEG          LONG  35.4470 DEG
                                     *                 LATI   0.3790 DEG          LATI  -0.2151 DEG
LONG  35.1548 DEG          LONG  34.8702 DEG         *
LATI   0.8633 DEG          LATI  -0.4896 DEG         *
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FRAME 76

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*********************************
*   PHOTO FRAME NUMBER 10 OF 16   *
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77

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	18	51	6.799

LONGITUDE OF NADIR POINT	=	35.7396574 DEG	LATITUDE OF NADIR POINT	=	0.0319089 DEG
LONG OF CAMERA AXIS INTERSECT	=	35.7316098 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.0350508 DEG
SPACECRAFT RADIUS	=	1792.2742004 KM	SPACECRAFT ALTITUDE	=	51.2742004 KM
MEAN ALTITUDE RATE	=	-0.0165512 KM/SEC	TIME FROM PERIAPSIS	=	-32.4053354 SEC
HORIZONTAL VELOCITY	=	1.9105935 KM/SEC	TRUE ANOMALY	=	358.0203247 DEG
SCALE FACTOR (HIGH)	=	0.0118968 M/KM	TILT DISTANCE (HIGH)	=	3.1319014 MM
SCALE FACTOR (LOW)	=	0.0015602 M/KM	TILT DISTANCE (LOW)	=	0.4107412 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0372623 RAD/SEC	SWING ANGLE	=	99.4137030 DEG
EMISSION ANGLE	=	0.3029351 DEG	INCIDENCE ANGLE	=	65.6915359 DEG
PHASE ANGLE	=	65.4135141 DEG	NORTH DEVIATION ANGLE	=	348.0845299 DEG
TILT ANGLE	=	0.2941691 DEG	RESOLUTION CONSTANT	=	1.1126501 MTR
TILT AZIMUTH	=	291.3296013 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.3692131 DEG
SUN ANGLE AT NADIR	=	65.6835804 DEG	SUN ARC AT NADIR	=	1995.8732758 KM
LONGITUDE DISTANCE TO TARGET	=	-0.2603426 DEG	LATITUDE DISTANCE TO TARGET	=	0.1989089 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-7.9108176 KM	LATITUDE ARC LENGTH TO TARGET	=	6.0440832 KM
FORWARD OVERLAP RATIO	=	1.2369210 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.3998260 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.88518072	-0.45050259	-0.11620031	52.25961208
CAMERA AXIS	-0.80888370	-0.58796721	0.00130545	51.27488708
C1	-0.84213249	-0.51343767	0.16490801	52.16860962
C2	-0.79969864	-0.57258237	-0.18064199	52.15240479
C3	-0.74859726	-0.64284341	-0.16234075	52.17692566
C4	-0.79103110	-0.58369870	0.18320926	52.19313049

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1454.7517700	1046.8728485	0.9980910	-1.1052743	1.5079469	-0.3938364

```
LONG  36.4422 DEG          LONG  36.1584 DEG
LATI   0.5882 DEG          LATI  -0.7572 DEG
                                  *
                                 ***
                                * * *
      *        41.78294 KM     *  *  *
     (1)                       (2)
                                  *
                                  *
                                  *
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*   PHOTO FRAME NUMBER 11 OF 16   *
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78

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	18	51	9.199

LONGITUDE OF NADIR POINT	=	35.8827381 DEG	LATITUDE OF NADIR POINT	=	0.0016908 DEG
LONG OF CAMERA AXIS INTERSECT	=	35.8789167 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.0039417 DEG
SPACECRAFT RADIUS	=	1792.2359467 KM	SPACECRAFT ALTITUDE	=	51.2359467 KM
MEAN ALTITUDE RATE	=	-0.0153257 KM/SEC	TIME FROM PERIAPSIS	=	-30.0048082 SEC
HORIZONTAL VELOCITY	=	1.9106339 KM/SEC	TRUE ANOMALY	=	358.1669464 DEG
SCALE FACTOR (HIGH)	=	0.0119057 M/KM	TILT DISTANCE (HIGH)	=	1.6211761 MM
SCALE FACTOR (LOW)	=	0.0015614 M/KM	TILT DISTANCE (LOW)	=	0.2126133 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0372909 RAD/SEC	SWING ANGLE	=	108.5837574 DEG
EMISSION ANGLE	=	0.1568617 DEG	INCIDENCE ANGLE	=	65.5448418 DEG
PHASE ANGLE	=	65.4135141 DEG	NORTH DEVIATION ANGLE	=	348.0843773 DEG
TILT ANGLE	=	0.1522727 DEG	RESOLUTION CONSTANT	=	1.1118200 MTR
TILT AZIMUTH	=	300.4990501 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.3537035 DEG
SUN ANGLE AT NADIR	=	65.5410862 DEG	SUN ARC AT NADIR	=	1991.5434265 KM
LONGITUDE DISTANCE TO TARGET	=	-0.1172619 DEG	LATITUDE DISTANCE TO TARGET	=	0.1686909 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-3.5631410 KM	LATITUDE ARC LENGTH TO TARGET	=	5.1258711 KM
FORWARD OVERLAP RATIO	=	1.1974657 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.3998260 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.84472380	-0.52590647	-0.09931805	51.62589121
CAMERA AXIS	-0.80888717	-0.58796246	0.00130536	51.23612976
C1	-0.84213549	-0.51343274	0.16490794	52.13536072
C2	-0.79970201	-0.57257763	-0.18064208	52.11917114
C3	-0.74860103	-0.64283897	-0.16234084	52.13125610
C4	-0.79103452	-0.58369409	0.18320917	52.14746094

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1452.1021881	1050.4801483	0.0528907	-1.1082349	1.5058104	-0.3938370

```
LONG  36.5897 DEG          LONG  36.3058 DEG
LATI   0.5572 DEG          LATI  -0.7885 DEG
                                          *
                                         ***
      *          41.78928 KM     *      * * *          LONG  36.0159 DEG          LONG  35.8910 DEG
     (1)                         (2)   *  *  *          LATI   0.2847 DEG          LATI  -0.3081 DEG
                                          *
                                          *                   *        18.40791 KM      *
                                          *                  (1)                        (2)
            LOW RESOLUTION                *
                                          *                          HIGH RESOLUTION
  35.36468 KM                35.33965 KM  *  DIRECTION      4.62943 KM                4.62799 KM
                                          *  OF MOTION
                                          *
                                          *                  (4)                        (3)
      (4)                        (3)      *                   *        18.41218 KM      *
       *          41.86366 KM      *     *
                                          *          LONG  35.8668 DEG          LONG  35.7419 DEG
LONG  35.4510 DEG          LONG  35.1674 DEG          LATI   0.3162 DEG          LATI  -0.2768 DEG
LATI   0.7983 DEG          LATI  -0.5499 DEG
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FRAME 78

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*  PHOTO FRAME NUMBER 12 OF 16  * 79
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	18	51	11.599

LONGITUDE OF NADIR POINT	=	36.0258179 DEG	LATITUDE OF NADIR POINT	=	-0.0285271 DEG
LONG OF CAMERA AXIS INTERSECT	=	36.0262170 DEG	LATI OF CAMERA AXIS INTERSECT	=	-0.0271671 DEG
SPACECRAFT RADIUS	=	1792.2006378 KM	SPACECRAFT ALTITUDE	=	51.2006378 KM
MEAN ALTITUDE RATE	=	-0.0141001 KM/SEC	TIME FROM PERIAPSIS	=	-27.6042681 SEC
HORIZONTAL VELOCITY	=	1.9106711 KM/SEC	TRUE ANOMALY	=	358.3135796 DEG
SCALE FACTOR (HIGH)	=	0.0119139 M/KM	TILT DISTANCE (HIGH)	=	0.5670926 MM
SCALE FACTOR (LOW)	=	0.0015625 M/KM	TILT DISTANCE (LOW)	=	0.0743728 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0373173 RAD/SEC	SWING ANGLE	=	184.4368801 DEG
EMISSION ANGLE	=	0.0550717 DEG	INCIDENCE ANGLE	=	65.3981581 DEG
PHASE ANGLE	=	65.4135151 DEG	NORTH DEVIATION ANGLE	=	348.0843811 DEG
TILT ANGLE	=	0.0532656 DEG	RESOLUTION CONSTANT	=	1.1110538 MTR
TILT AZIMUTH	=	16.3541198 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.3379955 DEG
SUN ANGLE AT NADIR	=	65.3985968 DEG	SUN ARC AT NADIR	=	1987.2137299 KM
LONGITUDE DISTANCE TO TARGET	=	0.0258179 DEG	LATITUDE DISTANCE TO TARGET	=	0.1384729 DEG
LONGITUDE ARC LENGTH TO TARGET	=	0.7845065 KM	LATITUDE ARC LENGTH TO TARGET	=	4.2076616 KM
FORWARD OVERLAP RATIO	=	1.1284182 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.3998260 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.79699444	-0.59847767	-0.08139010	51.38441658
CAMERA AXIS	-0.80889067	-0.58795762	0.00130527	51.20065308
C1	-0.84213856	-0.51342776	0.16490787	52.10545349
C2	-0.79970544	-0.57257281	-0.18064217	52.08927917
C3	-0.74860488	-0.64283446	-0.16234095	52.08894348
C4	-0.79103800	-0.58368941	0.18320908	52.10513306

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1449.4456635	1054.0821838	-0.8923096	-1.1111902	1.5036666	-0.3938356

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LONG  36.7371 DEG          LONG  36.4532 DEG
LATI   0.5262 DEG          LATI  -0.8197 DEG
                                  *
                                 ***
                                * * *
      *          41.79834 KM     *
     (1)                        (2)
                                 *
                                 *
                                 *
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*********************************
*  PHOTO FRAME NUMBER 13 OF 16  *
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80

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	18	51	14.000

LONGITUDE OF NADIR POINT	=	36.1689076 DEG	LATITUDE OF NADIR POINT	=	-0.0587473 DEG
LONG OF CAMERA AXIS INTERSECT	=	36.1735215 DEG	LATI OF CAMERA AXIS INTERSECT	=	-0.0582760 DEG
SPACECRAFT RADIUS	=	1792.1682739 KM	SPACECRAFT ALTITUDE	=	51.1682739 KM
MEAN ALTITUDE RATE	=	-0.0128744 KM/SEC	TIME FROM PERIAPSIS	=	-25.2037044 SEC
HORIZONTAL VELOCITY	=	1.9107052 KM/SEC	TRUE ANOMALY	=	358.4602165 DEG
SCALE FACTOR (HIGH)	=	0.0119214 M/KM	TILT DISTANCE (HIGH)	=	1.6980200 MM
SCALE FACTOR (LOW)	=	0.0015635 M/KM	TILT DISTANCE (LOW)	=	0.2226911 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0373416 RAD/SEC	SWING ANGLE	=	252.2531662 DEG
EMISSION ANGLE	=	0.1643245 DEG	INCIDENCE ANGLE	=	65.2514839 DEG
PHASE ANGLE	=	65.4135160 DEG	NORTH DEVIATION ANGLE	=	348.0845337 DEG
TILT ANGLE	=	0.1594904 DEG	RESOLUTION CONSTANT	=	1.1103515 MTR
TILT AZIMUTH	=	84.1682301 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.3220901 DEG
SUN ANGLE AT NADIR	=	65.2561102 DEG	SUN ARC AT NADIR	=	1982.8840942 KM
LONGITUDE DISTANCE TO TARGET	=	0.1689076 DEG	LATITUDE DISTANCE TO TARGET	=	0.1082527 DEG
LONGITUDE ARC LENGTH TO TARGET	=	5.1324584 KM	LATITUDE ARC LENGTH TO TARGET	=	3.2893860 KM
FORWARD OVERLAP RATIO	=	1.0602784 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.4004698 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.74289702	-0.66645306	-0.06280408	51.54065371
CAMERA AXIS	-0.80889417	-0.58795281	0.00130519	51.16847229
C1	-0.84214159	-0.51342278	0.16490780	52.07887268
C2	-0.79970886	-0.57256802	-0.18064225	52.06269836
C3	-0.74860872	-0.64282998	-0.16234105	52.05000305
C4	-0.79104146	-0.58368473	0.18320899	52.06614685

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1446.7819672	1057.6791840	-1.8375287	-1.1141403	1.5015153	-0.3938324

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LONG  36.8846 DEG          LONG  36.6006 DEG
LATI   0.4953 DEG          LATI  -0.8511 DEG
                                  *
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                                  *
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*   PHOTO FRAME NUMBER 14 OF 16   * 81
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	18	51	16.399

LONGITUDE OF NADIR POINT	=	36.3119974 DEG	LATITUDE OF NADIR POINT	=	-0.0889658 DEG
LONG OF CAMERA AXIS INTERSECT	=	36.3208222 DEG	LATI OF CAMERA AXIS INTERSECT	=	-0.0893824 DEG
SPACECRAFT RADIUS	=	1792.1388245 KM	SPACECRAFT ALTITUDE	=	51.1388245 KM
MEAN ALTITUDE RATE	=	-0.0116485 KM/SEC	TIME FROM PERIAPSIS	=	-22.8031681 SEC
HORIZONTAL VELOCITY	=	1.9107362 KM/SEC	TRUE ANOMALY	=	358.6068573 DEG
SCALE FACTOR (HIGH)	=	0.0119283 M/KM	TILT DISTANCE (HIGH)	=	3.2088568 MM
SCALE FACTOR (LOW)	=	0.0015644 M/KM	TILT DISTANCE (LOW)	=	0.4208337 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0373637 RAD/SEC	SWING ANGLE	=	260.7884026 DEG
EMISSION ANGLE	=	0.3105107 DEG	INCIDENCE ANGLE	=	65.1048203 DEG
PHASE ANGLE	=	65.4135170 DEG	NORTH DEVIATION ANGLE	=	348.0848351 DEG
TILT ANGLE	=	0.3013971 DEG	RESOLUTION CONSTANT	=	1.1097125 MTR
TILT AZIMUTH	=	92.7036190 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.3059864 DEG
SUN ANGLE AT NADIR	=	65.1136293 DEG	SUN ARC AT NADIR	=	1978.5546265 KM
LONGITUDE DISTANCE TO TARGET	=	0.3119974 DEG	LATITUDE DISTANCE TO TARGET	=	0.0780342 DEG
LONGITUDE ARC LENGTH TO TARGET	=	9.4804102 KM	LATITUDE ARC LENGTH TO TARGET	=	2.3711622 KM
FORWARD OVERLAP RATIO	=	1.0043663 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.3998260 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.68377854	-0.72836205	-0.04399586	52.09107494
CAMERA AXIS	-0.80889769	-0.58794798	0.00130509	51.13955688
C1	-0.84214466	-0.51341778	0.16490772	52.05561829
C2	-0.79971228	-0.57256319	-0.18064234	52.03947449
C3	-0.74861257	-0.64282547	-0.16234116	52.01437378
C4	-0.79104494	-0.58368005	0.18320890	52.03051758

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1444.1113281	1061.2709198	-2.7827009	-1.1170850	1.4993566	-0.3938272

```
LONG  37.0322 DEG          LONG  36.7481 DEG
LATI   0.4644 DEG          LATI  -0.8825 DEG        *
                                                   ***          LONG  36.4576 DEG          LONG  36.3329 DEG
        *          41.82457 KM        *            * * *        LATI   0.1909 DEG          LATI  -0.4010 DEG
       (1)                           (2)          * * *
                                                   *                     *        18.37976 KM        *
                                                   *                    (1)                        (2)
                                                   *
              LOW RESOLUTION                       *
                                                   *                          HIGH RESOLUTION
                                                   *
   35.29830 KM                35.27333 KM          *  DIRECTION      4.62075 KM                4.61931 KM
                                                   *  OF MOTION
                                                   *
                                                   *                    (4)                        (3)
                                                   *                     *        18.37089 KM        *
       (4)                           (3)           *
        *          41.67025 KM        *            *          LONG  36.3088 DEG          LONG  36.1842 DEG
                                                   *          LATI   0.2221 DEG          LATI  -0.3695 DEG
LONG  35.8949 DEG          LONG  35.6126 DEG       *
LATI   0.7013 DEG          LATI  -0.6407 DEG       *
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FRAME 81

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*   PHOTO FRAME NUMBER 15 OF 16   *  82
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	18	51	18.799

LONGITUDE OF NADIR POINT	=	36.4550352 DEG	LATITUDE OF NADIR POINT	=	-0.1191723 DEG
LONG OF CAMERA AXIS INTERSECT	=	36.4680657 DEG	LATI OF CAMERA AXIS INTERSECT	=	-0.1204760 DEG
SPACECRAFT RADIUS	=	1792.1123657 KM	SPACECRAFT ALTITUDE	=	51.1123657 KM
MEAN ALTITUDE RATE	=	-0.0104231 KM/SEC	TIME FROM PERIAPSIS	=	-20.4036000 SEC
HORIZONTAL VELOCITY	=	1.9107640 KM/SEC	TRUE ANOMALY	=	358.7534409 DEG
SCALE FACTOR (HIGH)	=	0.0119345 M/KM	TILT DISTANCE (HIGH)	=	4.7552503 MM
SCALE FACTOR (LOW)	=	0.0015652 M/KM	TILT DISTANCE (LOW)	=	0.6236394 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0373836 RAD/SEC	SWING ANGLE	=	263.7977104 DEG
EMISSION ANGLE	=	0.4597545 DEG	INCIDENCE ANGLE	=	64.9582281 DEG
PHASE ANGLE	=	65.4135170 DEG	NORTH DEVIATION ANGLE	=	348.0852928 DEG
TILT ANGLE	=	0.4466398 DEG	RESOLUTION CONSTANT	=	1.1091383 MTR
TILT AZIMUTH	=	95.7124758 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.2896929 DEG
SUN ANGLE AT NADIR	=	64.9712124 DEG	SUN ARC AT NADIR	=	1974.2271423 KM
LONGITUDE DISTANCE TO TARGET	=	0.4550352 DEG	LATITUDE DISTANCE TO TARGET	=	0.0478277 DEG
LONGITUDE ARC LENGTH TO TARGET	=	13.8267828 KM	LATITUDE ARC LENGTH TO TARGET	=	1.4533017 KM
FORWARD OVERLAP RATIO	=	0.9921870 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.3998260 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.62128074	-0.78317613	-0.02540450	53.02292681
CAMERA AXIS	-0.80890118	-0.58794317	0.00130501	51.11395264
C1	-0.84214769	-0.51341281	0.16490766	52.03575134
C2	-0.79971569	-0.57255841	-0.18064241	52.01959229
C3	-0.74861639	-0.64282098	-0.16234125	51.98216248
C4	-0.79104841	-0.58367539	0.18320882	51.99829102

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1441.4346924	1064.8560486	-3.7274715	-1.1200233	1.4971913	-0.3938201

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LONG  37.1798 DEG          LONG  36.8956 DEG
LATI   0.4335 DEG          LATI  -0.9139 DEG        *
                                                   ***          LONG  36.6048 DEG          LONG  36.4801 DEG
        *          41.84179 KM        *            * * *         LATI   0.1597 DEG          LATI  -0.4319 DEG
      (1)                           (2)          *  *  *
                                                   *                  *          18.37274 KM        *
                                                   *                 (1)                          (2)
                LOW RESOLUTION                     *
                                                   *                        HIGH RESOLUTION
                                                   *
   35.28143 KM                35.25648 KM          *  DIRECTION      4.61851 KM                4.61710 KM
                                                   *  OF MOTION
                                                   *
                                                   *                 (4)                          (3)
                                                   *                  *          18.35952 KM        *
      (4)                           (3)            *
        *          41.61143 KM        *            *          LONG  36.4560 DEG          LONG  36.3315 DEG
                                                   *          LATI   0.1908 DEG          LATI  -0.4004 DEG
LONG  36.0428 DEG          LONG  35.7609 DEG       *
LATI   0.6691 DEG          LATI  -0.6710 DEG       *
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FRAME 82

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*********************************
*  PHOTO FRAME NUMBER 16 OF 16  *
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83

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	22	18	51	21.199

LONGITUDE OF NADIR POINT	=	36.5981984 DEG	LATITUDE OF NADIR POINT	=	-0.1494044 DEG
LONG OF CAMERA AXIS INTERSECT	=	36.6154332 DEG	LATI OF CAMERA AXIS INTERSECT	=	-0.1515952 DEG
SPACECRAFT RADIUS	=	1792.0888062 KM	SPACECRAFT ALTITUDE	=	51.0888062 KM
MEAN ALTITUDE RATE	=	-0.0091965 KM/SEC	TIME FROM PERIAPSIS	=	-18.0020869 SEC
HORIZONTAL VELOCITY	=	1.9107888 KM/SEC	TRUE ANOMALY	=	358.9001503 DEG
SCALE FACTOR (HIGH)	=	0.0119400 M/KM	TILT DISTANCE (HIGH)	=	6.3076594 MM
SCALE FACTOR (LOW)	=	0.0015659 M/KM	TILT DISTANCE (LOW)	=	0.8272340 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0374013 RAD/SEC	SWING ANGLE	=	265.3273201 DEG
EMISSION ANGLE	=	0.6098559 DEG	INCIDENCE ANGLE	=	64.8115215 DEG
PHASE ANGLE	=	65.4135170 DEG	NORTH DEVIATION ANGLE	=	348.0858994 DEG
TILT ANGLE	=	0.5924416 DEG	RESOLUTION CONSTANT	=	1.1086271 MTR
TILT AZIMUTH	=	97.2417793 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.2731838 DEG
SUN ANGLE AT NADIR	=	64.8286839 DEG	SUN ARC AT NADIR	=	1969.8962250 KM
LONGITUDE DISTANCE TO TARGET	=	0.5981984 DEG	LATITUDE DISTANCE TO TARGET	=	0.0175956 DEG
LONGITUDE ARC LENGTH TO TARGET	=	18.1769662 KM	LATITUDE ARC LENGTH TO TARGET	=	0.5346628 KM
FORWARD OVERLAP RATIO	=	0.8633621 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.4004698 SEC			

DIRECTION COSINES TO TARGET	X	Y	Z	MAGNITUDE (KM)
CAMERA AXIS	-0.55702012	-0.83046611	-0.00739113	54.31801176
C1	-0.80890466	-0.58793839	0.00130492	51.09161377
C2	-0.84215073	-0.51340786	0.16490758	52.01918030
C3	-0.79971909	-0.57255364	-0.18064251	52.00303650
C4	-0.74862020	-0.64281652	-0.16234136	51.95323181
	-0.79105184	-0.58367074	0.18320873	51.96934509

STATE VECTOR	X	Y	Z	X DOT	Y DOT	Z DOT
	1438.7487946	1068.4390259	-4.6730205	-1.1229587	1.4950168	-0.3938111

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LONG  37.3275 DEG          LONG  37.0432 DEG
LATI   0.4027 DEG          LATI  -0.9454 DEG
                                          *
                                         ***
     *          41.86176 KM    *        * * *      LONG  36.7521 DEG        LONG  36.6275 DEG
    (1)                        (2)      *  *  *     LATI   0.1285 DEG        LATI  -0.4629 DEG
                                          *
                                          *                 *        18.36689 KM      *
            LOW RESOLUTION                *                (1)                      (2)
                                          *
                                          *                      HIGH RESOLUTION
  35.26718 KM                35.24223 KM  *  DIRECTION     4.61661 KM                4.61519 KM
                                          *  OF MOTION
                                          *
                                          *                 (4)                       (3)
     (4)                        (3)       *                  *        18.34930 KM      *
      *          41.55534 KM    *        *
                                          *        LONG  36.6034 DEG        LONG  36.4789 DEG
LONG  36.1907 DEG          LONG  35.9092 DEG       LATI   0.1596 DEG        LATI  -0.4314 DEG
LATI   0.6369 DEG          LATI  -0.7014 DEG       *
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FRAME 83

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*********************************
*   PHOTO FRAME NUMBER   84     *
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	23	1	44	26.300

LONGITUDE OF NADIR POINT	15.1311599	DEG	LATITUDE OF NADIR POINT	3.4893071	DEG
LONG OF CAMERA AXIS INTERSECT	14.5562944	DEG	LATI OF CAMERA AXIS INTERSECT	3.0461883	DEG
SPACECRAFT RADIUS	1816.3182831	KM	SPACECRAFT ALTITUDE	78.2282867	KM
MEAN ALTITUDE RATE	-0.1582728	KM/SEC	TIME FROM PERIAPSIS	-317.7328262	SEC
HORIZONTAL VELOCITY	1.8850806	KM/SEC	TRUE ANOMALY	340.7472839	DEG
SCALE FACTOR HIGH	0.0077977	M/KM	TILT DISTANCE HIGH	171.2069931	MM
SCALE FACTOR LOW	0.0010226	M/KM	TILT DISTANCE LOW	22.4533763	MM
IMAGE MOTION COMPENSATION V/H	0.0240972	RAD/SEC	SWING ANGLE	50.8485432	DEG
EMISSION ANGLE	16.4027743	DEG	INCIDENCE ANGLE	83.2843409	DEG
PHASE ANGLE	70.2736073	DEG	NORTH DEVIATION ANGLE	357.4574356	DEG
TILT ANGLE	15.6776890	DEG	RESOLUTION CONSTANT	1.6975538	MTR
TILT AZIMUTH	232.3457546	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.9316492	DEG
SUN ANGLE AT NADIR	82.7019196	DEG	SUN ARC AT NADIR	2508.7952881	KM
LONGITUDE DISTANCE TO TARGET	-0.8688401	DEG	LATITUDE DISTANCE TO TARGET	0.6893071	DEG
LONGITUDE ARC LENGTH TO TARGET	-26.3566062	KM	LATITUDE ARC LENGTH TO TARGET	20.9104006	KM
FORWARD OVERLAP RATIO	0.	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	0.	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.95191053	0.06175879	-0.30008698	85.44174957
CAMERA AXIS	-0.86215113	-0.45475344	-0.22337130	81.39562988
C1	-0.91695994	-0.39448830	-0.05969467	79.05929565
C2	-0.81559090	-0.42102592	-0.39692399	85.40933228
C3	-0.77852412	-0.49981802	-0.37958154	87.02990723
C4	-0.87989315	-0.47328039	-0.04235223	80.44032288

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1750.0975494	473.2337837	110.5452538	-0.6150291	1.7517658	-0.3628160

```
LONG  15.5468 DEG          LONG  15.2908 DEG
LATI   3.8750 DEG          LATI   1.7735 DEG        *
                                                   ***          LONG  14.7618 DEG        LONG  14.5857 DEG
      *        64.21582 KM      *                 * * *         LATI   3.4907 DEG        LATI   2.5274 DEG
      1                         2               *  *  *
                                                 *                    *        29.70473 KM      *
                                                 *                    1                         2
            LOW RESOLUTION                       *                                                          FRAME 84
                                                 *                          HIGH RESOLUTION
                                                 *
  52.94800 KM              64.03272 KM           *  DIRECTION      7.21380 KM                7.82440 KM
                                                 *  OF MOTION
                                                 *
                                                 *                    4                         3
                                                 *                    *        30.27270 KM      *
      4                         3                *
      *        74.56562 KM      *                *          LONG  14.5276 DEG        LONG  14.3291 DEG
                                                 *          LATI   3.5340 DEG        LATI   2.5560 DEG
LONG  13.8406 DEG          LONG  13.1822 DEG     *
LATI   4.2624 DEG          LATI   1.8937 DEG     *
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*********************************
*   PHOTO FRAME NUMBER  1 OF 16   *  85
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	23	8	46	21.299

LONGITUDE OF NADIR POINT	=	25.0300236 DEG	LATITUDE OF NADIR POINT	=	0.7562513 DEG
LONG OF CAMERA AXIS INTERSECT	=	25.0275188 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.7804550 DEG
SPACECRAFT RADIUS	=	1792.4302826 KM	SPACECRAFT ALTITUDE	=	53.9302826 KM
MEAN ALTITUDE RATE	=	-0.0448554 KM/SEC	TIME FROM PERIAPSIS	=	-87.6745663 SEC
HORIZONTAL VELOCITY	=	1.9100474 KM/SEC	TRUE ANOMALY	=	354.6391258 DEG
SCALE FACTOR (HIGH)	=	0.0113109 M/KM	TILT DISTANCE (HIGH)	=	8.3414255 MM
SCALE FACTOR (LOW)	=	0.0014834 M/KM	TILT DISTANCE (LOW)	=	1.0939575 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0354170 RAD/SEC	SWING ANGLE	=	162.9123631 DEG
EMISSION ANGLE	=	0.8077284 DEG	INCIDENCE ANGLE	=	69.2904863 DEG
PHASE ANGLE	=	69.2411690 DEG	NORTH DEVIATION ANGLE	=	347.8784790 DEG
TILT ANGLE	=	0.7834405 DEG	RESOLUTION CONSTANT	=	1.1702871 MTR
TILT AZIMUTH	=	355.0347252 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.6795692 DEG
SUN ANGLE AT NADIR	=	69.2889376 DEG	SUN ARC AT NADIR	=	2102.4030151 KM
LONGITUDE DISTANCE TO TARGET	=	0.1970236 DEG	LATITUDE DISTANCE TO TARGET	=	0.4232513 DEG
LONGITUDE ARC LENGTH TO TARGET	=	5.9781992 KM	LATITUDE ARC LENGTH TO TARGET	=	12.8425244 KM
FORWARD OVERLAP RATIO	=	0. PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	0. SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.82827660	-0.50496633	-0.24283092	55.81540060
CAMERA AXIS	-0.90558458	-0.42416468	0.00041813	53.93548584
C1	-0.92358109	-0.34617914	0.16479674	55.00534058
C2	-0.89424949	-0.40914296	-0.18143836	54.73854065
C3	-0.85731883	-0.48797214	-0.16397444	54.75807190
C4	-0.88665044	-0.42500830	0.18226066	55.02507019

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1623.9548035	758.2988281	23.6577175	-0.8284927	1.6799902	-0.3761995

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LONG  25.7754 DEG          LONG  25.4834 DEG
LATI   1.3739 DEG          LATI  -0.0460 DEG        *
                                                   ***          LONG  25.1698 DEG          LONG  25.0438 DEG
        *          43.98572 KM        *            * * *        LATI   1.0785 DEG          LATI   0.4524 DEG
       (1)                           (2)          *  *  *
                                                   *                    *        19.37892 KM       *
                                                   *                   (1)                        (2)
                LOW RESOLUTION                     *
                                                   *                        HIGH RESOLUTION
                                                   *
   37.43114 KM                37.01811 KM          *  DIRECTION      4.88460 KM                4.86091 KM
                                                   *  OF MOTION
                                                   *
                                                   *                   (4)                       (3)
                                                   *                    *        19.38586 KM       *
       (4)                           (3)           *
        *          44.10661 KM        *            *          LONG  25.0120 DEG          LONG  24.8867 DEG
                                                   *          LATI   1.1103 DEG          LATI   0.4838 DEG
LONG  24.5659 DEG          LONG  24.2868 DEG       *
LATI   1.6186 DEG          LATI   0.1920 DEG       *
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FRAME 85

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*********************************
*  PHOTO FRAME NUMBER  2 OF 16  *
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86

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	23	8	46	23.800

LONGITUDE OF NADIR POINT	=	25.1793258 DEG	LATITUDE OF NADIR POINT	=	0.7262275 DEG
LONG OF CAMERA AXIS INTERSECT	=	25.1816602 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.7494519 DEG
SPACECRAFT RADIUS	=	1792.3197174 KM	SPACECRAFT ALTITUDE	=	53.8197174 KM
MEAN ALTITUDE RATE	=	-0.0435817 KM/SEC	TIME FROM PERIAPSIS	=	-85.1747713 SEC
HORIZONTAL VELOCITY	=	1.9101643 KM/SEC	TRUE ANOMALY	=	354.7917633 DEG
SCALE FACTOR (HIGH)	=	0.0113341 M/KM	TILT DISTANCE (HIGH)	=	8.0380324 MM
SCALE FACTOR (LOW)	=	0.0014864 M/KM	TILT DISTANCE (LOW)	=	1.0541682 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0354919 RAD/SEC	SWING ANGLE	=	174.1052494 DEG
EMISSION ANGLE	=	0.7783977 DEG	INCIDENCE ANGLE	=	69.1369638 DEG
PHASE ANGLE	=	69.2411690 DEG	NORTH DEVIATION ANGLE	=	347.8765450 DEG
TILT ANGLE	=	0.7549487 DEG	RESOLUTION CONSTANT	=	1.1678879 MTR
TILT AZIMUTH	=	6.2285081 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.6687975 DEG
SUN ANGLE AT NADIR	=	69.1400347 DEG	SUN ARC AT NADIR	=	2097.8849182 KM
LONGITUDE DISTANCE TO TARGET	=	0.3463259 DEG	LATITUDE DISTANCE TO TARGET	=	0.3932275 DEG
LONGITUDE ARC LENGTH TO TARGET	=	10.5084099 KM	LATITUDE ARC LENGTH TO TARGET	=	11.9315258 KM
FORWARD OVERLAP RATIO	=	2.1192249 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.5002480 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.78592496	-0.57613472	-0.22447878	56.18859386
CAMERA AXIS	-0.90558755	-0.42415917	0.00041804	53.82453918
C1	-0.92358320	-0.34617355	0.16479667	54.89895630
C2	-0.89425199	-0.40913747	-0.18143845	54.63265991
C3	-0.85732181	-0.48796689	-0.16397455	54.63862610
C4	-0.88665301	-0.42500295	0.18226057	54.90498352

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1621.8842316	762.4861258	22.7171593	-0.8319359	1.6783765	-0.3762482

```
LONG  25.9285 DEG          LONG  25.6369 DEG
LATI   1.3423 DEG          LATI  -0.0761 DEG
                                                *
                                               ***
                                              * * *
        *          43.93662 KM        *
      (1)                            (2)      * * *
                                              *
                                              *
                                              *
                                              *
            LOW RESOLUTION                    *
                                              *
                                              *
   37.35339 KM                36.94126 KM    *
                                              *
                                              *
                                              *
                                              *
                                              *
                                              *
        (4)                            (3)    *
         *         43.97354 KM         *     *
                                              *
LONG  24.7213 DEG          LONG  24.4430 DEG  *
LATI   1.5851 DEG          LATI   0.1628 DEG  *
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LONG  25.3235 DEG          LONG  25.1977 DEG
LATI   1.0469 DEG          LATI   0.4220 DEG

                 *       19.34144 KM       *
                (1)                       (2)

                    HIGH RESOLUTION

DIRECTION      4.87452 KM                4.85087 KM
OF MOTION

                (4)                       (3)
                 *       17.94356 KM       *

LONG  25.1660 DEG          LONG  25.0409 DEG
LATI   1.0786 DEG          LATI   0.4534 DEG
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FRAME 86

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*********************************
*   PHOTO FRAME NUMBER  3 OF 16   *
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87

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	23	8	46	26.199

LONGITUDE OF NADIR POINT	=	25.3227241 DEG	LATITUDE OF NADIR POINT	=	0.6973862 DEG
LONG OF CAMERA AXIS INTERSECT	=	25.3296967 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.7196748 DEG
SPACECRAFT RADIUS	=	1792.2165527 KM	SPACECRAFT ALTITUDE	=	53.7165527 KM
MEAN ALTITUDE RATE	=	-0.0423580 KM/SEC	TIME FROM PERIAPSIS	=	-82.7739220 SEC
HORIZONTAL VELOCITY	=	1.9102736 KM/SEC	TRUE ANOMALY	=	354.9383736 DEG
SCALE FACTOR (HIGH)	=	0.0113559 M/KM	TILT DISTANCE (HIGH)	=	8.0494093 MM
SCALE FACTOR (LOW)	=	0.0014893 M/KM	TILT DISTANCE (LOW)	=	1.0556602 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0355621 RAD/SEC	SWING ANGLE	=	185.2451839 DEG
EMISSION ANGLE	=	0.7794026 DEG	INCIDENCE ANGLE	=	68.9895267 DEG
PHASE ANGLE	=	69.2411699 DEG	NORTH DEVIATION ANGLE	=	347.8748360 DEG
TILT ANGLE	=	0.7560171 DEG	RESOLUTION CONSTANT	=	1.1656492 MTR
TILT AZIMUTH	=	17.3687439 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.6582727 DEG
SUN ANGLE AT NADIR	=	68.9970160 DEG	SUN ARC AT NADIR	=	2093.5453491 KM
LONGITUDE DISTANCE TO TARGET	=	0.4897242 DEG	LATITUDE DISTANCE TO TARGET	=	0.3643862 DEG
LONGITUDE ARC LENGTH TO TARGET	=	14.8594794 KM	LATITUDE ARC LENGTH TO TARGET	=	11.0564063 KM
FORWARD OVERLAP RATIO	=	5.8172855 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.3998260 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.74084170	-0.63939139	-0.20574795	56.91300631
CAMERA AXIS	-0.90559010	-0.42415374	0.00041795	53.72137451
C1	-0.92358528	-0.34616805	0.16479659	54.80021667
C2	-0.89425444	-0.40913206	-0.18143854	54.53439331
C3	-0.85732473	-0.48796169	-0.16397466	54.52737427
C4	-0.88665557	-0.42499768	0.18226048	54.79313660

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1619.8877411	766.5036163	21.8137462	-0.8352390	1.6768181	-0.3762932

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LONG  26.0757 DEG          LONG  25.7842 DEG
LATI   1.3119 DEG          LATI  -0.1050 DEG        *
                                                   ***          LONG  25.4711 DEG          LONG  25.3455 DEG
        *        43.89217 KM        *             * * *         LATI   1.0166 DEG          LATI   0.3928 DEG
       (1)                         (2)          *  *  *
                                                   *                  *        19.30665 KM        *
                                                   *                 (1)                         (2)
            LOW RESOLUTION                         *
                                                   *                        HIGH RESOLUTION
                                                   *
   37.28147 KM                36.87018 KM         *  DIRECTION      4.86517 KM                 4.84156 KM
                                                   *  OF MOTION
                                                   *
                                                   *                 (4)                        (3)
                                                   *                  *        19.30416 KM        *
       (4)                         (3)             *
        *        43.84875 KM        *             *          LONG  25.3138 DEG          LONG  25.1890 DEG
                                                   *          LATI   1.0481 DEG          LATI   0.4242 DEG
LONG  24.8705 DEG          LONG  24.5929 DEG       *
LATI   1.5529 DEG          LATI   0.1347 DEG       *
```

FRAME 87

* PHOTO FRAME NUMBER 4 OF 16 * 88
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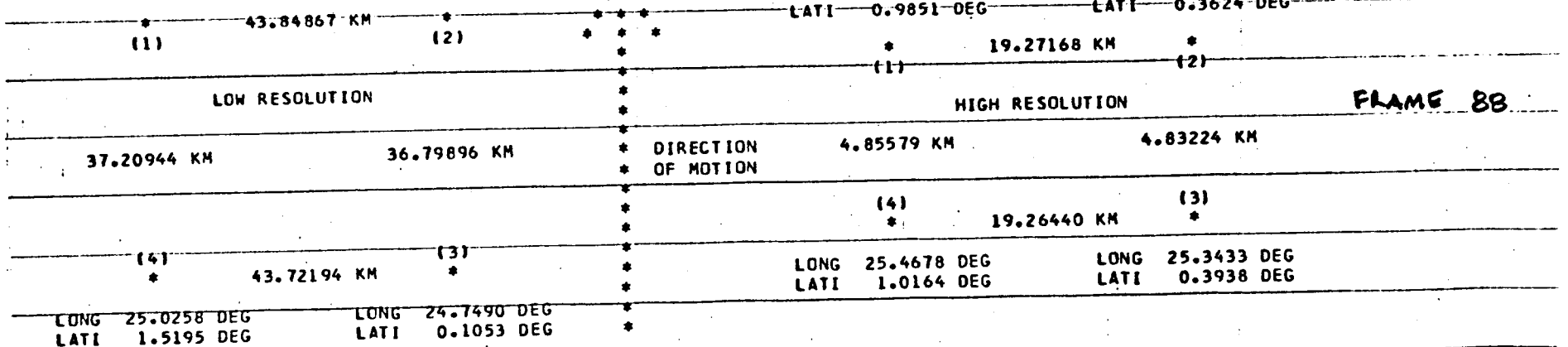
	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	23	8	46	28.699

LONGITUDE OF NADIR POINT	=	25.4720569 DEG	LATITUDE OF NADIR POINT	=	0.6673470 DEG
LONG OF CAMERA AXIS INTERSECT	=	25.4836311 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.6886649 DEG
SPACECRAFT RADIUS	=	1792.1122437 KM	SPACECRAFT ALTITUDE	=	53.6122437 KM
MEAN ALTITUDE RATE	=	-0.0410833 KM/SEC	TIME FROM PERIAPSIS	=	-80.2739811 SEC
HORIZONTAL VELOCITY	=	1.9103840 KM/SEC	TRUE ANOMALY	=	355.0910568 DEG
SCALE FACTOR (HIGH)	=	0.0113780 M/KM	TILT DISTANCE (HIGH)	=	8.3772535 MM
SCALE FACTOR (LOW)	=	0.0014922 M/KM	TILT DISTANCE (LOW)	=	1.0986562 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0356333 RAD/SEC	SWING ANGLE	=	196.3736858 DEG
EMISSION ANGLE	=	0.8110526 DEG	INCIDENCE ANGLE	=	68.8360195 DEG
PHASE ANGLE	=	69.2411709 DEG	NORTH DEVIATION ANGLE	=	347.8732109 DEG
TILT ANGLE	=	0.7868051 DEG	RESOLUTION CONSTANT	=	1.1633857 MTR
TILT AZIMUTH	=	28.4981606 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.6471243 DEG
SUN ANGLE AT NADIR	=	68.8480930 DEG	SUN ARC AT NADIR	=	2089.0266724 KM
LONGITUDE DISTANCE TO TARGET	=	0.6350569 DEG	LATITUDE DISTANCE TO TARGET	=	0.3343470 DEG
LONGITUDE ARC LENGTH TO TARGET	=	19.3906159 KM	LATITUDE ARC LENGTH TO TARGET	=	10.1449413 KM
FORWARD OVERLAP RATIO	=	1.7363027 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.4999261 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.69056719	-0.69905876	-0.18556347	58.03377008
CAMERA AXIS	-0.90559269	-0.42414819	0.00041785	53.61744690
C1	-0.92358740	-0.34616244	0.16479652	54.70095825
C2	-0.89425695	-0.40912654	-0.18143864	54.43560791
C3	-0.85732772	-0.48795640	-0.16397478	54.41510010
C4	-0.88665816	-0.42499230	0.18226037	54.68026733

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1617.8004303	770.6829453	20.8729599	-0.8386746	1.6751865	-0.3763380



FRAME 88

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*********************************
*   PHOTO FRAME NUMBER  5 OF 16   *  89
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	23	8	46	31.099

LONGITUDE OF NADIR POINT	=	25.6153660 DEG	LATITUDE OF NADIR POINT	=	0.6385134 DEG
LONG OF CAMERA AXIS INTERSECT	=	25.6313424 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.6589049 DEG
SPACECRAFT RADIUS	=	1792.0151672 KM	SPACECRAFT ALTITUDE	=	53.5151672 KM
MEAN ALTITUDE RATE	=	-0.0398597 KM/SEC	TIME FROM PERIAPSIS	=	-77.8750706 SEC
HORIZONTAL VELOCITY	=	1.9104867 KM/SEC	TRUE ANOMALY	=	355.2375870 DEG
SCALE FACTOR (HIGH)	=	0.0113986 M/KM	TILT DISTANCE (HIGH)	=	8.9626055 MM
SCALE FACTOR (LOW)	=	0.0014949 M/KM	TILT DISTANCE (LOW)	=	1.1754237 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0356999 RAD/SEC	SWING ANGLE	=	205.9502850 DEG
EMISSION ANGLE	=	0.8677013 DEG	INCIDENCE ANGLE	=	68.6887197 DEG
PHASE ANGLE	=	69.2411709 DEG	NORTH DEVIATION ANGLE	=	347.8717918 DEG
TILT ANGLE	=	0.8417746 DEG	RESOLUTION CONSTANT	=	1.1612791 MTR
TILT AZIMUTH	=	38.0756378 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.6362448 DEG
SUN ANGLE AT NADIR	=	68.7051764 DEG	SUN ARC AT NADIR	=	2084.6902161 KM
LONGITUDE DISTANCE TO TARGET	=	0.7823660 DEG	LATITUDE DISTANCE TO TARGET	=	0.3055134 DEG
LONGITUDE ARC LENGTH TO TARGET	=	23.7389801 KM	LATITUDE ARC LENGTH TO TARGET	=	9.2700551 KM
FORWARD OVERLAP RATIO	=	5.5363824 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.4001479 SEC			

DIRECTION COSINES TO TARGET	X	Y	Z	MAGNITUDE (KM)
CAMERA AXIS	-0.64038242	-0.74990738	-0.16597974	59.44138145
C1	-0.90559523	-0.42414279	0.00041777	53.52111816
C2	-0.92358945	-0.34615696	0.16479646	54.60913086
C3	-0.89425941	-0.40912116	-0.18143872	54.34419250
C4	-0.85733064	-0.48795124	-0.16397488	54.31085205
	-0.88666070	-0.42498706	0.18226029	54.57543945

STATE VECTOR	X	Y	Z	X DOT	Y DOT	Z DOT
	1615.7894287	774.6894608	19.9700768	-0.8419677	1.6736121	-0.3763791

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LONG  26.3760 DEG          LONG  26.0850 DEG
LATI   1.2500 DEG          LATI  -0.1643 DEG
                                  *
                                 ***
      *        43.80964 KM      *                      LONG  25.7723 DEG          LONG  25.6471 DEG
     (1)                       (2)                     LATI   0.9548 DEG          LATI   0.3332 DEG
                                 *
                                 *                          *        19.23932 KM      *
            LOW RESOLUTION       *                         (1)                       (2)
                                 *                                                          FRAME 89
                                 *                                  HIGH RESOLUTION
   37.14306 KM            36.73332 KM   *  DIRECTION      4.84713 KM                4.82363 KM
                                        *  OF MOTION
                                 *
                                 *                         (4)                       (3)
     (4)                        (3)      *                      19.22748 KM      *
      *        43.60325 KM       *      *
                                 *                      LONG  25.6156 DEG          LONG  25.4912 DEG
LONG  25.1748 DEG          LONG  24.8987 DEG            LATI   0.9860 DEG          LATI   0.3647 DEG
LATI   1.4875 DEG          LATI   0.0772 DEG
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*   PHOTO FRAME NUMBER  6 OF 16   *  90
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	23	8	46	33.599

LONGITUDE OF NADIR POINT	=	25.7647252 DEG	LATITUDE OF NADIR POINT	=	0.6084580 DEG
LONG OF CAMERA AXIS INTERSECT	=	25.7852743 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.6278899 DEG
SPACECRAFT RADIUS	=	1791.9171143 KM	SPACECRAFT ALTITUDE	=	53.4171143 KM
MEAN ALTITUDE RATE	=	-0.0385843 KM/SEC	TIME FROM PERIAPSIS	=	-75.3751783 SEC
HORIZONTAL VELOCITY	=	1.9105904 KM/SEC	TRUE ANOMALY	=	355.3902969 DEG
SCALE FACTOR (HIGH)	=	0.0114196 M/KM	TILT DISTANCE (HIGH)	=	9.8012381 MM
SCALE FACTOR (LOW)	=	0.0014976 M/KM	TILT DISTANCE (LOW)	=	1.2854083 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0357674 RAD/SEC	SWING ANGLE	=	214.4729881 DEG
EMISSION ANGLE	=	0.9488674 DEG	INCIDENCE ANGLE	=	68.5352268 DEG
PHASE ANGLE	=	69.2411709 DEG	NORTH DEVIATION ANGLE	=	347.8704758 DEG
TILT ANGLE	=	0.9205266 DEG	RESOLUTION CONSTANT	=	1.1591514 MTR
TILT AZIMUTH	=	46.5986586 DEG	SUN AZIMUTH AT PRINCIPAL GND. PT	=	88.6247177 DEG
SUN ANGLE AT NADIR	=	68.5562334 DEG	SUN ARC AT NADIR	=	2080.1708984 KM
LONGITUDE DISTANCE TO TARGET	=	0.9317253 DEG	LATITUDE DISTANCE TO TARGET	=	0.2754580 DEG
LONGITUDE ARC LENGTH TO TARGET	=	28.2709198 KM	LATITUDE ARC LENGTH TO TARGET	=	8.3580978 KM
FORWARD OVERLAP RATIO	=	1.3764980 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.4999261 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.58731295	-0.79612602	-0.14576302	61.22999001
CAMERA AXIS	-0.90559784	-0.42413721	0.00041767	53.42422485
C1	-0.92359158	-0.34615132	0.16479638	54.51699829
C2	-0.89426192	-0.40911561	-0.18143880	54.25250244
C3	-0.85733365	-0.48794591	-0.16397499	54.20576477
C4	-0.88666332	-0.42498164	0.18226020	54.46980286

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1613.6853790	778.8607178	19.0290804	-0.8453958	1.6719626	-0.3764200

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LONG  26.5293 DEG          LONG  26.2386 DEG
LATI   1.2185 DEG          LATI  -0.1946 DEG        *
                                                   ***          LONG  25.9260 DEG          LONG  25.8010 DEG
        *          43.77177 KM        *            * * *         LATI   0.9233 DEG          LATI   0.3027 DEG
      (1)                           (2)          *  *  *
                                                   *                   *       19.20686 KM        *
                                                   *                  (1)                        (2)
              LOW RESOLUTION                       *
                                                   *                        HIGH RESOLUTION
                                                   *
   37.07671 KM                36.66772 KM          *  DIRECTION      4.83846 KM                4.81500 KM
                                                   *  OF MOTION
                                                   *
                                                   *                  (4)                        (3)
                                                   *                   *       19.19027 KM        *
      (4)                           (3)            *
        *          43.48266 KM        *            *          LONG  25.7695 DEG          LONG  25.6454 DEG
                                                   *          LATI   0.9544 DEG          LATI   0.3342 DEG
LONG  25.3300 DEG          LONG  25.0546 DEG        *
LATI   1.4541 DEG          LATI   0.0477 DEG        *
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FRAME 90

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*   PHOTO FRAME NUMBER  7 OF 16   *
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91

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	23	8	46	35.999

LONGITUDE OF NADIR POINT	= 25.9081802	DEG	LATITUDE OF NADIR POINT	= 0.5795859	DEG
LONG OF CAMERA AXIS INTERSECT	= 25.9331050	DEG	LATI OF CAMERA AXIS INTERSECT	= 0.5980992	DEG
SPACECRAFT RADIUS	= 1791.8259430	KM	SPACECRAFT ALTITUDE	= 53.3259430	KM
MEAN ALTITUDE RATE	= -0.0373589	KM/SEC	TIME FROM PERIAPSIS	= -72.9742603	SEC
HORIZONTAL VELOCITY	= 1.9106868	KM/SEC	TRUE ANOMALY	= 355.5369797	DEG
SCALE FACTOR (HIGH)	= 0.0114391	M/KM	TILT DISTANCE (HIGH)	= 10.7785912	MM
SCALE FACTOR (LOW)	= 0.0015002	M/KM	TILT DISTANCE (LOW)	= 1.4135857	MM
IMAGE MOTION COMPENSATION (V/H)	= 0.0358303	RAD/SEC	SWING ANGLE	= 221.2701702	DEG
EMISSION ANGLE	= 1.0433336	DEG	INCIDENCE ANGLE	= 68.3878183	DEG
PHASE ANGLE	= 69.2411728	DEG	NORTH DEVIATION ANGLE	= 347.8693542	DEG
TILT ANGLE	= 1.0123009	DEG	RESOLUTION CONSTANT	= 1.1571729	MTR
TILT AZIMUTH	= 53.3963785	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	= 88.6134634	DEG
SUN ANGLE AT NADIR	= 68.4131823	DEG	SUN ARC AT NADIR	= 2075.8303528	KM
LONGITUDE DISTANCE TO TARGET	= 1.0751803	DEG	LATITUDE DISTANCE TO TARGET	= 0.2465859	DEG
LONGITUDE ARC LENGTH TO TARGET	= 32.6237106	KM	LATITUDE ARC LENGTH TO TARGET	= 7.4820458	KM
FORWARD OVERLAP RATIO	= 5.1237458	PCT	SIDE OVERLAP RATIO	= 0.	PCT
TIME BETWEEN PHOTOS	= 2.4001479	SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.53664000	-0.83422127	-0.12685566	63.23127890
CAMERA AXIS	-0.90560038	-0.42413179	0.00041759	53.33451843
C1	-0.92359366	-0.34614583	0.16479632	54.43191528
C2	-0.89426437	-0.40911020	-0.18143889	54.16781616
C3	-0.85733657	-0.48794074	-0.16397509	54.10827637
C4	-0.88666586	-0.42497638	0.18226011	54.37179565

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1611.6566467	782.8628082	18.1252575	-0.8486843	1.6703698	-0.3764574

```
LONG  26.6766 DEG          LONG  26.3861 DEG
LATI   1.1882 DEG          LATI  -0.2237 DEG
                                          *
                                         ***
        *          43.73810 KM     *    * * *
      (1)                        (2)  *  *  *
                                          *
                                          *
                                          *
            LOW RESOLUTION                *
                                          *
                                          *
   37.01570 KM                36.60739 KM *  DIRECTION
                                          *  OF MOTION
                                          *
                                          *
                                          *
      (4)                        (3)      *
        *          43.36980 KM     *     *
                                          *
LONG  25.4790 DEG          LONG  25.2043 DEG
LATI   1.4222 DEG          LATI   0.0195 DEG
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LONG  26.0736 DEG          LONG  25.9488 DEG
LATI   0.8930 DEG          LATI   0.2735 DEG

        *          19.17688 KM     *
      (1)                        (2)

            HIGH RESOLUTION

   4.83048 KM                 4.80705 KM

      (4)                        (3)
        *          19.15575 KM     *

LONG  25.9174 DEG          LONG  25.7935 DEG
LATI   0.9240 DEG          LATI   0.3049 DEG
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FRAME 91

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*********************************
*   PHOTO FRAME NUMBER  8 OF 16   *  92
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	23	8	46	38.499

LONGITUDE OF NADIR POINT	=	26.0575678 DEG	LATITUDE OF NADIR POINT	=	0.5495177 DEG
LONG OF CAMERA AXIS INTERSECT	=	26.0870366 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.5670782 DEG
SPACECRAFT RADIUS	=	1791.7341309 KM	SPACECRAFT ALTITUDE	=	53.2341309 KM
MEAN ALTITUDE RATE	=	-0.0360827 KM/SEC	TIME FROM PERIAPSIS	=	-70.4742680 SEC
HORIZONTAL VELOCITY	=	1.9107839 KM/SEC	TRUE ANOMALY	=	355.6897316 DEG
SCALE FACTOR (HIGH)	=	0.0114588 M/KM	TILT DISTANCE (HIGH)	=	11.9292613 MM
SCALE FACTOR (LOW)	=	0.0015028 M/KM	TILT DISTANCE (LOW)	=	1.5644933 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0358940 RAD/SEC	SWING ANGLE	=	227.0823458 DEG
EMISSION ANGLE	=	1.1546627 DEG	INCIDENCE ANGLE	=	68.2343365 DEG
PHASE ANGLE	=	69.2411728 DEG	NORTH DEVIATION ANGLE	=	347.8683472 DEG
TILT ANGLE	=	1.1203430 DEG	RESOLUTION CONSTANT	=	1.1551806 MTR
TILT AZIMUTH	=	59.2090631 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.6015549 DEG
SUN ANGLE AT NADIR	=	68.2642231 DEG	SUN ARC AT NADIR	=	2071.3105774 KM
LONGITUDE DISTANCE TO TARGET	=	1.2245679 DEG	LATITUDE DISTANCE TO TARGET	=	0.2165177 DEG
LONGITUDE ARC LENGTH TO TARGET	=	37.1565113 KM	LATITUDE ARC LENGTH TO TARGET	=	6.5697000 KM
FORWARD OVERLAP RATIO	=	1.0415842 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.4999261 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.48506143	-0.86779078	-0.10795643	65.58268356
CAMERA AXIS	-0.90560299	-0.42412621	0.00041749	53.24462891
C1	-0.92359579	-0.34614018	0.16479624	54.34687805
C2	-0.89426690	-0.40910465	-0.18143898	54.08317566
C3	-0.85733958	-0.48793542	-0.16397520	54.01036072
C4	-0.88666847	-0.42497095	0.18226002	54.27333069

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1609.5358429	787.0259781	17.1840844	-0.8521046	1.6687023	-0.3764944

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LONG  26.8301 DEG          LONG  26.5397 DEG
LATI   1.1568 DEG          LATI  -0.2541 DEG
                                          *
                                         ***
                                        * * *
        *          43.70588 KM          *
       (1)                            (2)      *  *  *
                                               *
                                               *
                                               
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*********************************
*   PHOTO FRAME NUMBER  9 OF 16   *
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93

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	23	8	46	40.899

LONGITUDE OF NADIR POINT	=	26.2009919 DEG	LATITUDE OF NADIR POINT	=	0.5206457 DEG
LONG OF CAMERA AXIS INTERSECT	=	26.2348094 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.5372943 DEG
SPACECRAFT RADIUS	=	1791.6490021 KM	SPACECRAFT ALTITUDE	=	53.1490021 KM
MEAN ALTITUDE RATE	=	-0.0348571 KM/SEC	TIME FROM PERIAPSIS	=	-68.0742798 SEC
HORIZONTAL VELOCITY	=	1.9108740 KM/SEC	TRUE ANOMALY	=	355.8363838 DEG
SCALE FACTOR (HIGH)	=	0.0114772 M/KM	TILT DISTANCE (HIGH)	=	13.1286743 MM
SCALE FACTOR (LOW)	=	0.0015052 M/KM	TILT DISTANCE (LOW)	=	1.7217934 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0359531 RAD/SEC	SWING ANGLE	=	231.6606541 DEG
EMISSION ANGLE	=	1.2706276 DEG	INCIDENCE ANGLE	=	68.0870028 DEG
PHASE ANGLE	=	69.2411747 DEG	NORTH DEVIATION ANGLE	=	347.8675232 DEG
TILT ANGLE	=	1.2329533 DEG	RESOLUTION CONSTANT	=	1.1533333 MTR
TILT AZIMUTH	=	63.7879066 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.5899382 DEG
SUN ANGLE AT NADIR	=	68.1212187 DEG	SUN ARC AT NADIR	=	2066.9714661 KM
LONGITUDE DISTANCE TO TARGET	=	1.3679919 DEG	LATITUDE DISTANCE TO TARGET	=	0.1876457 DEG
LONGITUDE ARC LENGTH TO TARGET	=	41.5083623 KM	LATITUDE ARC LENGTH TO TARGET	=	5.6936480 KM
FORWARD OVERLAP RATIO	=	4.8518120 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.3958260 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.43730400	-0.89472470	-0.09073545	68.07091808
CAMERA AXIS	-0.90560550	-0.42412086	0.00041740	53.16168213
C1	-0.92359783	-0.34613477	0.16479617	54.26866150
C2	-0.89426932	-0.40909932	-0.18143906	54.00532532
C3	-0.85734247	-0.48793031	-0.16397531	53.91978455
C4	-0.88667098	-0.42496576	0.18225993	54.18226624

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1607.4918976	791.0186615	16.2804575	-0.8553842	1.6670931	-0.3765281

```
LONG  26.9774 DEG          LONG  26.6872 DEG
LATI   1.1266 DEG          LATI  -0.2834 DEG
                                      *
                                     ***
                                    * * *
        *          43.67766 KM      *
       (1)                         (2)      * * *
                                      *
                                      *
                                      *
              LOW RESOLUTION          *
                                      *
                                      *
                                      *
   36.89949 KM                36.49241 KM   * DIRECTION
                                            * OF MOTION
                                      *
                                      *
                                      *
                                      *
       (4)                   (3)
        *         43.14845 KM   *
                                      *
                                      *
                                      *
LONG  25.7831 DEG          LONG  25.5097 DEG
LATI   1.3572 DEG          LATI  -0.0384 DEG
                                      *
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LONG  26.3749 DEG          LONG  26.2504 DEG
LATI   0.8313 DEG          LATI   0.2136 DEG
                                                  FRAME 93
        *          19.11936 KM      *
       (1)                         (2)

              HIGH RESOLUTION

   4.81522 KM                 4.79188 KM

       (4)                         (3)
        *         19.08900 KM      *
LONG  26.2192 DEG          LONG  26.0957 DEG
LATI   0.8620 DEG          LATI   0.2452 DEG
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*   PHOTO FRAME NUMBER 10 OF 16   * 94
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	23	8	46	43.399

LONGITUDE OF NADIR POINT	=	26.3504000 DEG	LATITUDE OF NADIR POINT	=	0.4905638 DEG
LONG OF CAMERA AXIS INTERSECT	=	26.3887365 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.5062673 DEG
SPACECRAFT RADIUS	=	1791.5634613 KM	SPACECRAFT ALTITUDE	=	53.0634613 KM
MEAN ALTITUDE RATE	=	-0.0335800 KM/SEC	TIME FROM PERIAPSIS	=	-65.5742645 SEC
HORIZONTAL VELOCITY	=	1.9109645 KM/SEC	TRUE ANOMALY	=	355.9891663 DEG
SCALE FACTOR (HIGH)	=	0.0114957 M/KM	TILT DISTANCE (HIGH)	=	14.4519116 MM
SCALE FACTOR (LOW)	=	0.0015076 M/KM	TILT DISTANCE (LOW)	=	1.8953327 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0360128 RAD/SEC	SWING ANGLE	=	235.5968285 DEG
EMISSION ANGLE	=	1.3986301 DEG	INCIDENCE ANGLE	=	67.9335337 DEG
PHASE ANGLE	=	69.2411747 DEG	NORTH DEVIATION ANGLE	=	347.8668213 DEG
TILT ANGLE	=	1.3571781 DEG	RESOLUTION CONSTANT	=	1.1514771 MTR
TILT AZIMUTH	=	67.7242594 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.5776463 DEG
SUN ANGLE AT NADIR	=	67.9722462 DEG	SUN ARC AT NADIR	=	2062.4512634 KM
LONGITUDE DISTANCE TO TARGET	=	1.5174000 DEG	LATITUDE DISTANCE TO TARGET	=	0.1575638 DEG
LONGITUDE ARC LENGTH TO TARGET	=	46.0417848 KM	LATITUDE ARC LENGTH TO TARGET	=	4.7808877 KM
FORWARD OVERLAP RATIO	=	0.7359359 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.5002480 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.38983336	-0.91791855	-0.07386135	70.87727165
CAMERA AXIS	-0.90560816	-0.42411517	0.00041731	53.07881165
C1	-0.92360000	-0.34612902	0.16479610	54.19076538
C2	-0.89427190	-0.40909366	-0.18143916	53.92778015
C3	-0.85734553	-0.48792488	-0.16397543	53.82902527
C4	-0.88667364	-0.42496024	0.18225983	54.09101868

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1605.3545380	795.1734924	15.3391036	-0.8587965	1.6654079	-0.3765611

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LONG  27.1310 DEG          LONG  26.8409 DEG
LATI   1.0952 DEG          LATI  -0.3139 DEG
                                          *
                                         ***
                                        * * *
*          43.65113 KM     *          * * *
(1)                        (2)        *  *  *
                                          *
                                          *
                                          
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*************************************
*   PHOTO FRAME NUMBER 11 OF 16     *  95
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	23	8	46	45.799

LONGITUDE OF NADIR POINT	= 26.4738548	DEG	LATITUDE OF NADIR POINT	= 0.4616807	DEG
LONG OF CAMERA AXIS INTERSECT	= 26.5365198	DEG	LATI OF CAMERA AXIS INTERSECT	= 0.4764800	DEG
SPACECRAFT RADIUS	= 1791.4843445	KM	SPACECRAFT ALTITUDE	= 52.9843445	KM
MEAN ALTITUDE RATE	= -0.0323538	KM/SEC	TIME FROM PERIAPSIS	= -63.1742716	SEC
HORIZONTAL VELOCITY	= 1.9110480	KM/SEC	TRUE ANOMALY	= 356.1358490	DEG
SCALE FACTOR (HIGH)	= 0.0115128	M/KM	TILT DISTANCE (HIGH)	= 15.7767351	MM
SCALE FACTOR (LOW)	= 0.0015099	M/KM	TILT DISTANCE (LOW)	= 2.0690800	MM
IMAGE MOTION COMPENSATION (V/F)	= 0.0360682	RAD/SEC	SWING ANGLE	= 238.7405568	DEG
EMISSION ANGLE	= 1.5267337	DEG	INCIDENCE ANGLE	= 67.7862120	DEG
PHASE ANGLE	= 69.2411747	DEG	NORTH DEVIATION ANGLE	= 347.8662949	DEG
TILT ANGLE	= 1.4815391	DEG	RESOLUTION CONSTANT	= 1.1497603	MTR
TILT AZIMUTH	= 70.8684063	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	= 88.5656614	DEG
SUN ANGLE AT NADIR	= 67.8292322	DEG	SUN ARC AT NADIR	= 2058.1118164	KM
LONGITUDE DISTANCE TO TARGET	= 1.6608548	DEG	LATITUDE DISTANCE TO TARGET	= 0.1286806	DEG
LONGITUDE ARC LENGTH TO TARGET	= 50.3945689	KM	LATITUDE ARC LENGTH TO TARGET	= 3.9044989	KM
FORWARD OVERLAP RATIO	= 4.5623542	PCT	SIDE OVERLAP RATIO	= 0.	PCT
TIME BETWEEN PHOTOS	= 2.3998260	SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.34669339	-0.93613832	-0.05872604	73.75461102
CAMERA AXIS	-0.90561061	-0.42410994	0.00041722	53.00260925
C1	-0.92360200	-0.34612372	0.16479602	54.11938477
C2	-0.89427426	-0.40908844	-0.18143924	53.85673523
C3	-0.85734836	-0.48791989	-0.16397553	53.74533081
C4	-0.88667610	-0.42495516	0.18225974	54.00688171

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1603.2944489	799.1584473	14.4353284	-0.8620687	1.6637814	-0.3765910

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LONG  27.2785 DEG          LONG  26.9885 DEG
LATI   1.0651 DEG          LATI  -0.3432 DEG        *
                                                   ***          LONG  26.6762 DEG          LONG  26.5521 DEG
        *          43.62840 KM      *            * * *          LATI   0.7697 DEG          LATI   0.1537 DEG
       (1)                         (2)          *  *  *
                                                 *                     *        19.06676 KM      *
                                                 *                    (1)                       (2)
            LOW RESOLUTION                       *
                                                 *                          HIGH RESOLUTION
                                                 *
   36.79439 KM                36.38839 KM        *  DIRECTION      4.80135 KM                4.77806 KM
                                                 *  OF MOTION
                                                 *
                                                 *                    (4)                       (3)
                                                 *                     *        19.02722 KM      *
       (4)                         (3)           *
        *          42.93912 KM      *            *          LONG  26.5209 DEG          LONG  26.3978 DEG
                                                 *          LATI   0.8002 DEG          LATI   0.1853 DEG
LONG  26.0870 DEG          LONG  25.8149 DEG     *
LATI   1.2923 DEG          LATI  -0.0964 DEG     *
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FRAME 95

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* PHOTO FRAME NUMBER 12 OF 16 * 96
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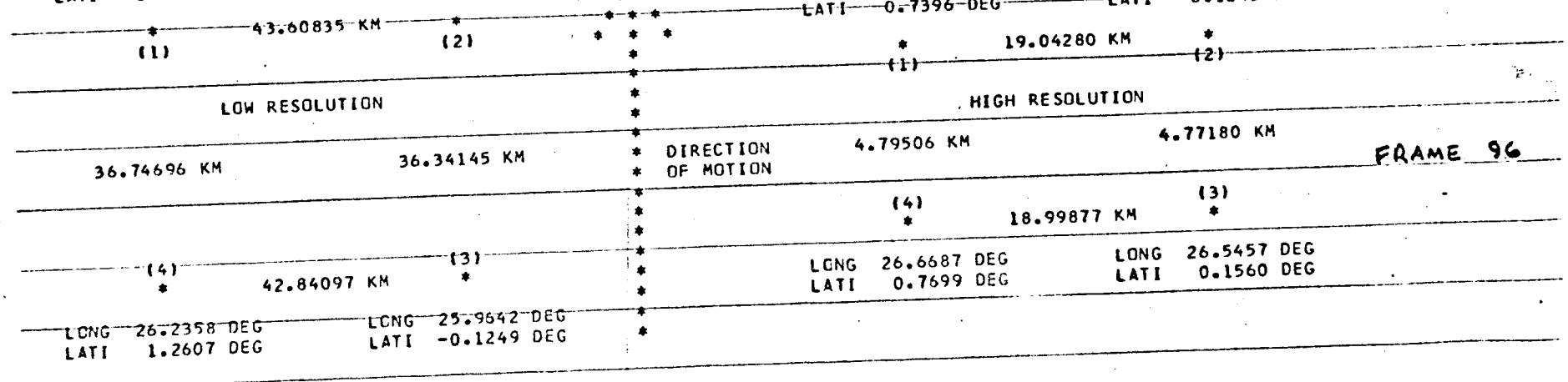
	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	65	8	23	8	46	48.199

LONGITUDE OF NADIR POINT	= 26.6372535 DEG	LATITUDE OF NADIR POINT	= 0.4328026 DEG
LONG OF CAMERA AXIS INTERSECT	= 26.6842356 DEG	LATI OF CAMERA AXIS INTERSECT	= 0.4467020 DEG
SPACECRAFT RADIUS	= 1791.4081879 KM	SPACECRAFT ALTITUDE	= 52.9081879 KM
MEAN ALTITUDE RATE	= -0.0311277 KM/SEC	TIME FROM PERIAPSIS	= -60.7752132 SEC
HORIZONTAL VELOCITY	= 1.9111286 KM/SEC	TRUE ANOMALY	= 356.2824860 DEG
SCALE FACTOR (HIGH)	= 0.0115294 M/KM	TILT DISTANCE (HIGH)	= 17.1399519 MM
SCALE FACTOR (LOW)	= 0.0015121 M/KM	TILT DISTANCE (LOW)	= 2.2478625 MM
IMAGE MOTION COMPENSATION (V/H)	= 0.0361216 RAD/SEC	SWING ANGLE	= 241.3904476 DEG
EMISSION ANGLE	= 1.6584889 DEG	INCIDENCE ANGLE	= 67.6389542 DEG
PHASE ANGLE	= 69.2411757 DEG	NORTH DEVIATION ANGLE	= 347.8659134 DEG
TILT ANGLE	= 1.6094895 DEG	RESOLUTION CONSTANT	= 1.1481077 MTR
TILT AZIMUTH	= 73.5183392 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	= 88.5534992 DEG
SUN ANGLE AT NADIR	= 67.6862679 DEG	SUN ARC AT NADIR	= 2053.7739258 KM
LONGITUDE DISTANCE TO TARGET	= 1.8042536 DEG	LATITUDE DISTANCE TO TARGET	= 0.0998026 DEG
LONGITUDE ARC LENGTH TO TARGET	= 54.7456527 KM	LATITUDE ARC LENGTH TO TARGET	= 3.0282657 KM
FORWARD OVERLAP RATIO	= 4.4772839 PCT	SIDE OVERLAP RATIO	= 0. PCT
TIME BETWEEN PHOTOS	= 2.4001479 SEC		

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.30607527	-0.95096017	-0.04463953	76.78951740
CAMERA AXIS	-0.90561313	-0.42410457	0.00041712	52.92970276
C1	-0.92360405	-0.34611829	0.16479595	54.05137634
C2	-0.89427668	-0.40908310	-0.18143934	53.78903198
C3	-0.85735125	-0.48791478	-0.16397564	53.66500854
C4	-0.88667862	-0.42494996	0.18225964	53.92610168

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1601.2275848	803.1377029	13.5318600	-0.8653356	1.6621475	-0.3766190



FRAME 96

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*********************************
*   PHOTO FRAME NUMBER 13 OF 16   *
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97

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	23	8	46	50.699

LONGITUDE OF NADIR POINT	=	26.7867012 DEG	LATITUDE OF NADIR POINT	=	0.4027045 DEG
LONG OF CAMERA AXIS INTERSECT	=	26.8381689 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.4156682 DEG
SPACECRAFT RADIUS	=	1791.3319702 KM	SPACECRAFT ALTITUDE	=	52.8319702 KM
MEAN ALTITUDE RATE	=	-0.0298496 KM/SEC	TIME FROM PERIAPSIS	=	-58.2751269 SEC
HORIZONTAL VELOCITY	=	1.9112092 KM/SEC	TRUE ANOMALY	=	356.4353104 DEG
SCALE FACTOR (HIGH)	=	0.0115460 M/KM	TILT DISTANCE (HIGH)	=	18.5953722 MM
SCALE FACTOR (LOW)	=	0.0015142 M/KM	TILT DISTANCE (LOW)	=	2.4387374 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0361752 RAD/SEC	SWING ANGLE	=	243.7332954 DEG
EMISSION ANGLE	=	1.7991524 DEG	INCIDENCE ANGLE	=	67.4855013 DEG
PHASE ANGLE	=	69.2411766 DEG	NORTH DEVIATION ANGLE	=	347.8656693 DEG
TILT ANGLE	=	1.7460762 DEG	RESOLUTION CONSTANT	=	1.1464537 MTR
TILT AZIMUTH	=	75.8613510 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.5406322 DEG
SUN ANGLE AT NADIR	=	67.5372810 DEG	SUN ARC AT NADIR	=	2049.2532959 KM
LONGITUDE DISTANCE TO TARGET	=	1.9537013 DEG	LATITUDE DISTANCE TO TARGET	=	0.0697045 DEG
LONGITUDE ARC LENGTH TO TARGET	=	59.2802768 KM	LATITUDE ARC LENGTH TO TARGET	=	2.1150131 KM
FORWARD OVERLAP RATIO	=	0.3208470 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.4999261 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.26642609	-0.96335544	-0.03103915	80.10160065
CAMERA AXIS	-0.90561577	-0.42409894	0.00041702	52.85726929
C1	-0.92360620	-0.34611259	0.16479588	53.98408508
C2	-0.89427923	-0.40907749	-0.18143942	53.72204590
C3	-0.85735428	-0.48790940	-0.16397575	53.58488464
C4	-0.88668126	-0.42494449	0.18225954	53.84556580

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1599.0653687	807.2802429	12.5902977	-0.8687359	1.6604359	-0.3766463

```
LONG  27.5796 DEG          LONG  27.2898 DEG
LATI   1.0038 DEG          LATI  -0.4033 DEG        *
                                                   ***          LONG  26.9776 DEG          LONG  26.8537 DEG
        *          43.59033 KM      *             * * *         LATI   0.7082 DEG          LATI   0.0937 DEG
      (1)                         (2)            *  *  *
                                                   *                  *        19.01909 KM      *
                                                   *                 (1)                       (2)
            LOW RESOLUTION                         *
                                                   *                          HIGH RESOLUTION
                                                   *
   36.70038 KM                36.29532 KM          *  DIRECTION      4.78886 KM                4.76562 KM
                                                   *  OF MOTION
                                                   *
                                                   *                  (4)                       (3)
                                                   *                   *       18.97040 KM       *
      (4)                         (3)              *
       *         42.74173 KM      *                *          LONG  26.8227 DEG          LONG  26.6999 DEG
                                                   *          LATI   0.7384 DEG          LATI   0.1254 DEG
LONG  26.3907 DEG          LONG  26.1197 DEG        *
LATI   1.2278 DEG          LATI  -0.1546 DEG        *
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FRAME 97

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*   PHOTO FRAME NUMBER 14 OF 16   * 98
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	23	8	46	53.099

LONGITUDE OF NADIR POINT	= 26.9301796	DEG	LATITUDE OF NADIR POINT	= 0.3738043	DEG
LONG OF CAMERA AXIS INTERSECT	= 26.9859495	DEG	LATI OF CAMERA AXIS INTERSECT	= 0.3858749	DEG
SPACECRAFT RADIUS	= 1791.2518103	KM	SPACECRAFT ALTITUDE	= 52.7618103	KM
MEAN ALTITUDE RATE	= -0.0286225	KM/SEC	TIME FROM PERIAPSIS	= -55.8750672	SEC
HORIZONTAL VELOCITY	= 1.9112833	KM/SEC	TRUE ANOMALY	= 356.5820312	DEG
SCALE FACTOR (HIGH)	= 0.0115614	M/KM	TILT DISTANCE (HIGH)	= 20.0178237	MM
SCALE FACTOR (LOW)	= 0.0015162	M/KM	TILT DISTANCE (LOW)	= 2.6252884	MM
IMAGE MOTION COMPENSATION (V/H)	= 0.0362247	RAD/SEC	SWING ANGLE	= 245.6595039	DEG
EMISSION ANGLE	= 1.9366156	DEG	INCIDENCE ANGLE	= 67.3381920	DEG
PHASE ANGLE	= 69.2411766	DEG	NORTH DEVIATION ANGLE	= 347.8655853	DEG
TILT ANGLE	= 1.8795498	DEG	RESOLUTION CONSTANT	= 1.1449313	MTR
TILT AZIMUTH	= 77.7875109	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	= 88.5280933	DEG
SUN ANGLE AT NADIR	= 67.3942509	DEG	SUN ARC AT NADIR	= 2044.9134064	KM
LONGITUDE DISTANCE TO TARGET	= 2.0971797	DEG	LATITUDE DISTANCE TO TARGET	= 0.0408043	DEG
LONGITUDE ARC LENGTH TO TARGET	= 63.6337771	KM	LATITUDE ARC LENGTH TO TARGET	= 1.2381063	KM
FORWARD OVERLAP RATIO	= 4.1894723	PCT	SIDE OVERLAP RATIO	= 0.	PCT
TIME BETWEEN PHOTOS	= 2.3998260	SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.23088244	-0.97279671	-0.01897056	83.40808105
CAMERA AXIS	-0.90561830	-0.42409353	0.00041694	52.79107666
C1	-0.92360826	-0.34610710	0.16479581	53.92291260
C2	-0.89428169	-0.40907210	-0.18143950	53.66114807
C3	-0.85735721	-0.48790424	-0.16397586	53.51141357
C4	-0.88668378	-0.42493923	0.18225946	53.77168274

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1596.9816742	811.2530365	11.6863103	-0.8719963	1.6587843	-0.3766705

```
LONG  27.7272 DEG          LONG  27.4375 DEG
LATI   0.9738 DEG          LATI  -0.4328 DEG      *
                                                  ***          LONG  27.1252 DEG          LONG  27.0015 DEG
        *          43.57581 KM        *           * * *        LATI   0.6780 DEG          LATI   0.0643 DEG
      (1)                            (2)          *  *  *
                                                  *                 *        18.99753 KM        *
                                                  *                (1)                        (2)
              LOW RESOLUTION                      *
                                                  *                      HIGH RESOLUTION
                                                  *
   36.65838 KM                36.25370 KM         *  DIRECTION      4.78325 KM                4.76005 KM
                                                  *  OF MOTION
                                                  *
                                                  *                 (4)                       (3)
                                                  *                  *        18.94438 KM        *
      (4)                          (3)            *
        *          42.64936 KM       *            *          LONG  26.9705 DEG          LONG  26.8478 DEG
                                                  *          LATI   0.7082 DEG          LATI   0.0960 DEG
LONG  26.5395 DEG          LONG  26.2690 DEG      *
LATI   1.1962 DEG          LATI  -0.1832 DEG      *
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FRAME 98

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*************************************
*   PHOTO FRAME NUMBER 15 OF 16     *
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99

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	23	8	46	55.499

LONGITUDE OF NADIR POINT	=	27.0737298 DEG	LATITUDE OF NADIR POINT	=	0.3448878 DEG
LONG OF CAMERA AXIS INTERSECT	=	27.1337960 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.3560671 DEG
SPACECRAFT RADIUS	=	1791.1945496 KM	SPACECRAFT ALTITUDE	=	52.6945496 KM
MEAN ALTITUDE RATE	=	-0.0273944 KM/SEC	TIME FROM PERIAPSIS	=	-53.4739604 SEC
HORIZONTAL VELOCITY	=	1.9113543 KM/SEC	TRUE ANOMALY	=	356.7288322 DEG
SCALE FACTOR (HIGH)	=	0.0115761 M/KM	TILT DISTANCE (HIGH)	=	21.4605644 MM
SCALE FACTOR (LOW)	=	0.0015182 M/KM	TILT DISTANCE (LOW)	=	2.8145002 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0362723 RAD/SEC	SWING ANGLE	=	247.3293991 DEG
EMISSION ANGLE	=	2.0760225 DEG	INCIDENCE ANGLE	=	67.1908245 DEG
PHASE ANGLE	=	69.2411776 DEG	NORTH DEVIATION ANGLE	=	347.8656464 DEG
TILT ANGLE	=	2.0149063 DEG	RESOLUTION CONSTANT	=	1.1434717 MTR
TILT AZIMUTH	=	79.4574165 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.5153666 DEG
SUN ANGLE AT NADIR	=	67.2511568 DEG	SUN ARC AT NADIR	=	2040.5715637 KM
LONGITUDE DISTANCE TO TARGET	=	2.2407258 DEG	LATITUDE DISTANCE TO TARGET	=	0.0118878 DEG
LONGITUDE ARC LENGTH TO TARGET	=	67.9894543 KM	LATITUDE ARC LENGTH TO TARGET	=	0.3607072 KM
FORWARD OVERLAP RATIO	=	4.0365887 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.4001479 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.19769499	-0.98023250	-0.00780750	86.82602119
CAMERA AXIS	-0.90562081	-0.42408816	0.00041685	52.72814941
C1	-0.92361031	-0.34610166	0.16479573	53.86503601
C2	-0.89428411	-0.40906676	-0.18143960	53.60354614
C3	-0.85736009	-0.48789911	-0.16397597	53.44123840
C4	-0.88668630	-0.42493402	0.18225937	53.70111084

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1594.8892822	815.2236176	10.7819066	-0.8752542	1.6571236	-0.3766930

```
LONG  27.8749 DEG          LONG  27.5853 DEG
LATI   0.9438 DEG          LATI  -0.4624 DEG
                                          *
                                         ***
                                        * * *
     *          43.56399 KM     *      * * *
    (1)                        (2)    *  *  *
                                          *
                                          *
                                          *
            LOW RESOLUTION                *
                                          *
                                          *
   36.61901 KM                36.21470 KM *
                                          *
                                          *
                                          *
                                          *
      (4)                      (3)        *
       *          42.55978 KM   *         *
                                          *
LONG  26.6882 DEG          LONG  26.4183 DEG
LATI   1.1647 DEG          LATI  -0.2118 DEG
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LONG  27.2729 DEG          LONG  27.1493 DEG
LATI   0.6479 DEG          LATI   0.0348 DEG
                                          *
                                          *
                                          *
                                          *
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*   PHOTO FRAME NUMBER 16 OF 16   *
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100

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	23	8	46	57.999

LONGITUDE OF NADIR POINT	=	27.2232103 DEG	LATITUDE OF NADIR POINT	=	0.3147752 DEG
LONG OF CAMERA AXIS INTERSECT	=	27.2877395 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.3250273 DEG
SPACECRAFT RADIUS	=	1791.1276703 KM	SPACECRAFT ALTITUDE	=	52.6276703 KM
MEAN ALTITUDE RATE	=	-0.0261155 KM/SEC	TIME FROM PERIAPSIS	=	-50.9737768 SEC
HORIZONTAL VELOCITY	=	1.9114250 KM/SEC	TRUE ANOMALY	=	356.8816986 DEG
SCALE FACTOR (HIGH)	=	0.0115909 M/KM	TILT DISTANCE (HIGH)	=	22.9797647 MM
SCALE FACTOR (LOW)	=	0.0015201 M/KM	TILT DISTANCE (LOW)	=	3.0137396 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0363198 RAD/SEC	SWING ANGLE	=	248.8444424 DEG
EMISSION ANGLE	=	2.2227494 DEG	INCIDENCE ANGLE	=	67.0373850 DEG
PHASE ANGLE	=	69.2411785 DEG	NORTH DEVIATION ANGLE	=	347.8658600 DEG
TILT ANGLE	=	2.1574118 DEG	RESOLUTION CONSTANT	=	1.1420204 MTR
TILT AZIMUTH	=	80.9722672 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.5019188 DEG
SUN ANGLE AT NADIR	=	67.1021595 DEG	SUN ARC AT NADIR	=	2036.0506134 KM
LONGITUDE DISTANCE TO TARGET	=	2.3902104 DEG	LATITUDE DISTANCE TO TARGET	=	-0.0182248 DEG
LONGITUDE ARC LENGTH TO TARGET	=	72.5250759 KM	LATITUDE ARC LENGTH TO TARGET	=	-0.5529857 KM
FORWARD OVERLAP RATIO	=	-0.0326213 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.4999261 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.16552608	-0.98620110	0.00291589	90.48833942
CAMERA AXIS	-0.90562345	-0.42408253	0.00041675	52.66612244
C1	-0.92361247	-0.34609597	0.16479565	53.80836487
C2	-0.89428665	-0.40906114	-0.18143970	53.54713440
C3	-0.85736313	-0.48789374	-0.16397608	53.37176514
C4	-0.88668894	-0.42492856	0.18225927	53.63125610

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1592.7023926	819.3536301	9.8401575	-0.8786422	1.6553858	-0.3767143

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LONG  28.0288 DEG          LONG  27.7392 DEG
LATI   0.9127 DEG          LATI  -0.4933 DEG        *
                                                   ***          LONG  27.4267 DEG          LONG  27.3032 DEG
        *        43.55459 KM        *             * * *          LATI   0.6166 DEG          LATI   0.0041 DEG
      (1)                         (2)           *  *  *
                                                 *                   *        18.95718 KM        *
                                                 *                  (1)                         (2)
            LOW RESOLUTION                       *
                                                 *                          HIGH RESOLUTION
                                                 *
   36.58085 KM                36.17686 KM        *  DIRECTION      4.77284 KM                4.74967 KM
                                                 *  OF MOTION
                                                 *
                                                 *                  (4)                         (3)
                                                 *                   *        18.89492 KM        *
      (4)                         (3)            *
       *        42.46952 KM        *             *          LONG  27.2723 DEG          LONG  27.1500 DEG
                                                 *          LATI   0.6465 DEG          LATI   0.0359 DEG
LONG  26.8431 DEG          LONG  26.5737 DEG     *
LATI   1.1319 DEG          LATI  -0.2416 DEG     *
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FRAME 100

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* PHOTO FRAME NUMBER 103 *
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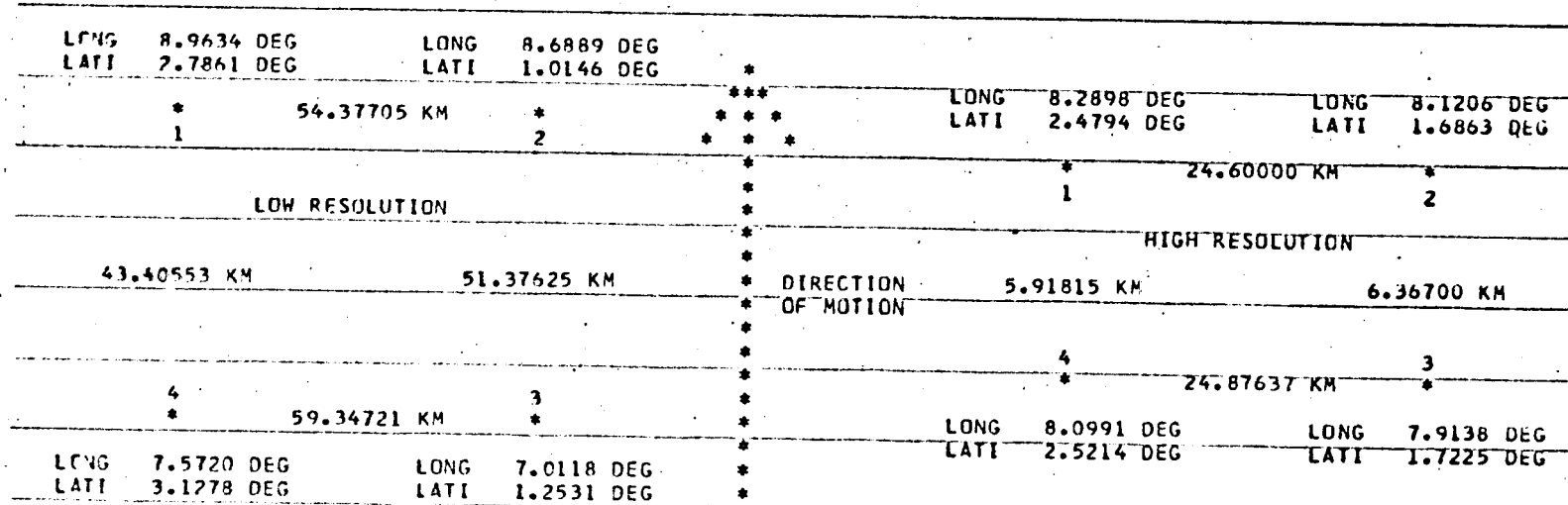
	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	23	22	39	56.799

LONGITUDE OF NADIR POINT	8.4377304	DEG	LATITUDE OF NADIR	2.4744673	DEG
LONG OF CAMERA AXIS INTERSECT	8.1097978	DEG	LATI OF CAMERA AXI	2.1169001	DEG
SPACECRAFT RADIUS	1803.8009644	KM	SPACECRAFT ALTITUD	65.7109680	KM
MEAN ALTITUDE RATE	-0.1229296	KM/SEC	TIME FROM PERIAPSIS	-242.7725735	SEC
HORIZONTAL VELOCITY	1.8976539	KM/SEC	TRUE ANOMALY	345.2022667	DEG
SCALE FACTOR HIGH	0.0092831	M/KM	TILT DISTANCE HIGH	136.4470596	MM
SCALE FACTOR LOW	0.0012174	M/KM	TILT DISTANCE LOW	17.8946962	MM
IMAGE MOTION COMPENSATION V/H	0.0288788	RAD/SEC	SWING ANGLE	40.7141862	DEG
EMISSION ANGLE	13.0935748	DEG	INCIDENCE ANGLE	79.1075335	DEG
PHASE ANGLE	70.2736197	DEG	NORTH DEVIATION ANGLE	357.5085030	DEG
TILT ANGLE	12.6085792	DEG	RESOLUTION CONSTANT	1.4259280	MTR
TILT AZIMUTH	222.5083084	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.9548550	DEG
SUN ANGLE AT NADIR	78.7731447	DEG	SUN ARC AT NADIR	2389.6143494	KM
LONGITUDE DISTANCE TO TARGET	3.1577305	DEG	LATITUDE DISTANCE TO TARGET	-0.0755327	DEG
LONGITUDE ARC LENGTH TO TARGET	95.7909956	KM	LATITUDE ARC LENGTH TO TARGET	-2.2913134	KM
FORWARD OVERLAP RATIO	0.	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	0.	SEC			

DIRECTION COSINES TO TARGET	X	Y	Z	MAGNITUDE KM
CAMERA AXIS	-0.45594987	-0.88999326	-0.00466010	117.58186150
C1	-0.93590572	-0.28794373	-0.20290124	67.39862061
C2	-0.97607349	-0.21358236	-0.04078131	65.86961365
C3	-0.88603274	-0.26879580	-0.37774968	70.76049805
C4	-0.86445441	-0.35268030	-0.35823900	71.55232239
	-0.95449518	-0.29746687	-0.02127064	66.55316162

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1782.6176862	264.4329491	77.8776617	-0.3757879	1.8171777	-0.4157534



FRAME 103

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*********************************
*   PHOTO FRAME NUMBER  1 OF  8  *  105
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	24	9	9	31.599

LONGITUDE OF NADIR POINT	=	11.6031297 DEG	LATITUDE OF NADIR POINT	=	0.4253927 DEG
LONG OF CAMERA AXIS INTERSECT	=	11.5504024 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.4361588 DEG
SPACECRAFT RADIUS	=	1790.9777679 KM	SPACECRAFT ALTITUDE	=	48.9777679 KM
MEAN ALTITUDE RATE	=	-0.0488861 KM/SEC	TIME FROM PERIAPSIS	=	-95.1755877 SEC
HORIZONTAL VELOCITY	=	1.9111882 KM/SEC	TRUE ANOMALY	=	354.1707039 DEG
SCALE FACTOR (HIGH)	=	0.0124546 M/KM	TILT DISTANCE (HIGH)	=	20.3777626 MM
SCALE FACTOR (LOW)	=	0.0016334 M/KM	TILT DISTANCE (LOW)	=	2.6724935 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0390215 RAD/SEC	SWING ANGLE	=	89.4478693 DEG
EMISSION ANGLE	=	1.9671467 DEG	INCIDENCE ANGLE	=	70.3709431 DEG
PHASE ANGLE	=	68.4547958 DEG	NORTH DEVIATION ANGLE	=	347.9138451 DEG
TILT ANGLE	=	1.9133209 DEG	RESOLUTION CONSTANT	=	1.0628176 MTR
TILT AZIMUTH	=	281.5402641 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.5500031 DEG
SUN ANGLE AT NADIR	=	70.3185062 DEG	SUN ARC AT NADIR	=	2137.9382629 KM
LONGITUDE DISTANCE TO TARGET	=	-1.2298702 DEG	LATITUDE DISTANCE TO TARGET	=	0.4253927 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-37.3925252 KM	LATITUDE ARC LENGTH TO TARGET	=	12.9334850 KM
FORWARD OVERLAP RATIO	=	0. PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	0. SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.88203205	0.42179089	-0.21002834	63.31044579
CAMERA AXIS	-0.97246039	-0.23306707	-0.00074124	49.00585937
C1	-0.97550021	-0.14919131	0.16168274	49.77917480
C2	-0.95708359	-0.22493828	-0.18273961	49.79208374
C3	-0.93691517	-0.30915234	-0.16314044	49.94686890
C4	-0.95533178	-0.23340537	0.18128192	49.93388367

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1754.3294220	360.2120285	13.2969879	-0.4197467	1.8167960	-0.4220133

```
LONG  12.2297 DEG          LONG  11.9431 DEG
LATI   0.9488 DEG          LATI  -0.3194 DEG
                                          *
                                         ***
                                        * * *
*          39.52838 KM     *          * * *
(1)                        (2)        *  *  *
                                        *
                                        *
                                        
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*  PHOTO FRAME NUMBER  2 OF  8  * 106
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	24	9	9	40.900

LONGITUDE OF NADIR POINT	=	12.1565187 DEG	LATITUDE OF NADIR POINT	=	0.2998777 DEG
LONG OF CAMERA AXIS INTERSECT	=	12.1157258 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.3070511 DEG
SPACECRAFT RADIUS	=	1790.5451660 KM	SPACECRAFT ALTITUDE	=	48.5451660 KM
MEAN ALTITUDE RATE	=	-0.0441324 KM/SEC	TIME FROM PERIAPSIS	=	-85.8807926 SEC
HORIZONTAL VELOCITY	=	1.9116458 KM/SEC	TRUE ANOMALY	=	354.7391472 DEG
SCALE FACTOR (HIGH)	=	0.0125656 M/KM	TILT DISTANCE (HIGH)	=	14.3201793 MM
SCALE FACTOR (LOW)	=	0.0016479 M/KM	TILT DISTANCE (LOW)	=	1.8780563 MM
IMAGE MOTION COMPENSATION (V/F)	=	0.0393787 RAD/SEC	SWING ANGLE	=	88.9362011 DEG
EMISSION ANGLE	=	1.3823046 DEG	INCIDENCE ANGLE	=	69.8038158 DEG
PHASE ANGLE	=	68.4547987 DEG	NORTH DEVIATION ANGLE	=	347.9068336 DEG
TILT ANGLE	=	1.3448117 DEG	RESOLUTION CONSTANT	=	1.0534301 MTR
TILT AZIMUTH	=	281.0323257 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.5027714 DEG
SUN ANGLE AT NADIR	=	69.7672253 DEG	SUN ARC AT NADIR	=	2121.1773376 KM
LONGITUDE DISTANCE TO TARGET	=	-0.6764812 DEG	LATITUDE DISTANCE TO TARGET	=	0.2998777 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-20.5674894 KM	LATITUDE ARC LENGTH TO TARGET	=	9.1173735 KM
FORWARD OVERLAP RATIO	=	-304.0340080 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	9.2995697 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.96729589	0.18387824	-0.17472107	53.63648756
CAMERA AXIS	-0.97246574	-0.23304473	-0.00074158	48.55891418
C1	-0.97550367	-0.14916900	0.16168245	49.34770203
C2	-0.95708872	-0.22491619	-0.18273994	49.36050415
C3	-0.93692224	-0.30913072	-0.16314082	49.46823120
C4	-0.95533717	-0.23338353	0.18128157	49.45536804

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1750.3699341	377.0532150	9.3714246	-0.4336185	1.8138752	-0.4221014

```
LONG  12.7951 DEG          LONG  12.5101 DEG
LATI   0.8168 DEG          LATI  -0.4442 DEG
                                                *
                                               ***                LONG  12.2533 DEG          LONG  12.1268 DEG
        *          39.30386 KM        *        * * *             LATI   0.5707 DEG          LATI   0.0116 DEG
      (1)                            (2)      *  *  *
                                                *                     *        17.42861 KM       *
                                                *                    (1)                        (2)
                                                *
            LOW RESOLUTION                      *                              HIGH RESOLUTION                    FRAME 106
                                                *
                                                *
   33.50132 KM                33.52119 KM      *  DIRECTION      4.38747 KM                 4.38861 KM
                                                *  OF MOTION
                                                *
                                                *                     (4)                        (3)
                                                *                      *        17.46664 KM       *
      (4)                            (3)        *
       *         39.96598 KM         *         *                LONG  12.1126 DEG          LONG  11.9858 DEG
                                                *                LATI   0.6031 DEG          LATI   0.0428 DEG
LONG  11.7227 DEG          LONG  11.4323 DEG    *
LATI   1.0705 DEG          LATI  -0.2115 DEG    *
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*   PHOTO FRAME NUMBER   3 OF   8   *
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107

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	24	9	9	50.100

LONGITUDE OF NADIR POINT	=	12.7040793 DEG	LATITUDE OF NADIR POINT	=	0.1756571 DEG
LONG OF CAMERA AXIS INTERSECT	=	12.6827615 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.1793386 DEG
SPACECRAFT RADIUS	=	1790.1608582 KM	SPACECRAFT ALTITUDE	=	48.1608582 KM
MEAN ALTITUDE RATE	=	-0.0394244 KM/SEC	TIME FROM PERIAPSIS	=	-76.6874933 SEC
HORIZONTAL VELOCITY	=	1.9120522 KM/SEC	TRUE ANOMALY	=	355.3016434 DEG
SCALE FACTOR (HIGH)	=	0.0126659 M/KM	TILT DISTANCE (HIGH)	=	8.3317788 MM
SCALE FACTOR (LOW)	=	0.0016611 M/KM	TILT DISTANCE (LOW)	=	1.0926923 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0397014 RAD/SEC	SWING ANGLE	=	87.6983013 DEG
EMISSION ANGLE	=	0.8042080 DEG	INCIDENCE ANGLE	=	69.2430773 DEG
PHASE ANGLE	=	68.4548016 DEG	NORTH DEVIATION ANGLE	=	347.9022789 DEG
TILT ANGLE	=	0.7825346 DEG	RESOLUTION CONSTANT	=	1.0450906 MTR
TILT AZIMUTH	=	279.7969437 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.4531546 DEG
SUN ANGLE AT NADIR	=	69.2218676 DEG	SUN ARC AT NADIR	=	2104.5964661 KM
LONGITUDE DISTANCE TO TARGET	=	-0.1289207 DEG	LATITUDE DISTANCE TO TARGET	=	0.1756571 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-3.9196572 KM	LATITUDE ARC LENGTH TO TARGET	=	5.3406143 KM
FORWARD OVERLAP RATIO	=	-302.9778786 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	9.2001515 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.98381755	-0.13915659	-0.11286475	48.62682056
CAMERA AXIS	-0.97247102	-0.23302266	-0.00074192	48.16548157
C1	-0.97550708	-0.14914696	0.16168215	48.97000122
C2	-0.95709379	-0.22489435	-0.18274029	48.98272705
C3	-0.93692921	-0.30910936	-0.16314121	49.04481506
C4	-0.95534251	-0.23336197	0.18128123	49.03205872

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1746.3274994	393.6825409	5.4882538	-0.4473161	1.8108532	-0.4221579

```
LONG  13.3549 DEG          LONG  13.0712 DEG
LATI   0.6866 DEG          LATI  -0.5684 DEG
                                                  *
                                                 ***          LONG  12.8153 DEG          LONG  12.6897 DEG
                                                * * *         LATI   0.4409 DEG          LATI  -0.1139 DEG
      *          39.11983 KM        *            * *  *
     (1)                           (2)           *
                                                  *                  *        17.29522 KM        *
                                                  *                 (1)                        (2)
                                                  *
            LOW RESOLUTION                        *
                                                  *                       HIGH RESOLUTION
                                                  *
  33.21965 KM                33.23935 KM          *  DIRECTION      4.35103 KM                 4.35216 KM
                                                  *  OF MOTION
                                                  *
                                                  *                  (4)                        (3)
                                                  *                   *        17.31714 KM       *
                                                  *
     (4)                           (3)            *
      *          39.50144 KM        *             *          LONG  12.6758 DEG          LONG  12.5500 DEG
                                                  *          LATI   0.4729 DEG          LATI  -0.0827 DEG
LONG  12.2905 DEG          LONG  12.0035 DEG      *
LATI   0.9339 DEG          LATI  -0.3332 DEG      *
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FRAME 107

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*   PHOTO FRAME NUMBER  4 OF  8     *
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108

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	24	9	9	59.199

LONGITUDE OF NADIR POINT	=	13.2459505 DEG	LATITUDE OF NADIR POINT	=	0.0527094 DEG
LONG OF CAMERA AXIS INTERSECT	=	13.2356939 DEG	LATI OF CAMERA AXIS INTERSECT	=	0.0529886 DEG
SPACECRAFT RADIUS	=	1789.8233032 KM	SPACECRAFT ALTITUDE	=	47.8233032 KM
MEAN ALTITUDE RATE	=	-0.0347614 KM/SEC	TIME FROM PERIAPSIS	=	-67.5927114 SEC
HORIZONTAL VELOCITY	=	1.9124088 KM/SEC	TRUE ANOMALY	=	355.8583298 DEG
SCALE FACTOR (HIGH)	=	0.0127553 M/KM	TILT DISTANCE (HIGH)	=	2.4323422 MM
SCALE FACTOR (LOW)	=	0.0016728 M/KM	TILT DISTANCE (LOW)	=	0.3189957 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0355891 RAD/SEC	SWING ANGLE	=	80.4579248 DEG
EMISSION ANGLE	=	0.2347983 DEG	INCIDENCE ANGLE	=	68.6985347 DEG
PHASE ANGLE	=	68.4548035 DEG	NORTH DEVIATION ANGLE	=	347.9001236 DEG
TILT ANGLE	=	0.2284626 DEG	RESOLUTION CONSTANT	=	1.0377657 MTR
TILT AZIMUTH	=	272.5578079 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.4012032 DEG
SUN ANGLE AT NADIR	=	68.6822882 DEG	SUN ARC AT NADIR	=	2088.1912842 KM
LONGITUDE DISTANCE TO TARGET	=	0.4129505 DEG	LATITUDE DISTANCE TO TARGET	=	0.0527094 DEG
LONGITUDE ARC LENGTH TO TARGET	=	12.5551970 KM	LATITUDE ARC LENGTH TO TARGET	=	1.6025581 KM
FORWARD OVERLAP RATIO	=	-301.5559692 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	9.0997658 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.68292700	-0.46833123	-0.03325300	49.51431894
CAMERA AXIS	-0.97247627	-0.23300078	-0.00074226	47.82369995
C1	-0.97551047	-0.14912511	0.16168187	48.64427185
C2	-0.95709881	-0.22487270	-0.18274061	48.65693665
C3	-0.93693614	-0.30908817	-0.16314159	48.67465210
C4	-0.95534780	-0.23334058	0.18128090	48.66198730

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1742.2051086	410.1049004	1.6464999	-0.4608424	1.8077337	-0.4221837

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LONG  13.9094 DEG          LONG  13.6267 DEG
LATI   0.5584 DEG          LATI  -0.6920 DEG      *
                                                 ***            LONG  13.3713 DEG          LONG  13.2466 DEG
        *          38.97531 KM      *          * * *           LATI   0.3128 DEG          LATI  -0.2383 DEG
       (1)                         (2)        *  *  *
                                                 *                     *        17.18018 KM      *
                                                 *                    (1)                       (2)
                LOW RESOLUTION                   *
                                                 *                          HIGH RESOLUTION
                                                 *
   32.97873 KM                32.59830 KM        *  DIRECTION       4.31974 KM                4.32086 KM
                                                 *  OF MOTION
                                                 *
                                                 *                    (4)                       (3)
                                                 *                     *        17.16644 KM      *
       (4)                         (3)           *
        *          39.08412 KM      *            *            LONG  13.2328 DEG          LONG  13.1080 DEG
                                                 *            LATI   0.3443 DEG          LATI  -0.2070 DEG
LONG  12.8518 DEG          LONG  12.5677 DEG     *
LATI   0.7996 DEG          LATI  -0.4542 DEG     *
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FRAME 108

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*   PHOTO FRAME NUMBER  5 OF  8   *
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109

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	24	9	10	8.300

LONGITUDE OF NADIR POINT	=	13.7880133 DEG	LATITUDE OF NADIR POINT	=	-0.0702903 DEG
LONG OF CAMERA AXIS INTERSECT	=	13.79662C8 DEG	LATI OF CAMERA AXIS INTERSECT	=	-0.073369C DEG
SPACECRAFT RADIUS	=	1789.5281982 KM	SPACECRAFT ALTITUDE	=	47.5281982 KM
MEAN ALTITUDE RATE	=	-0.0300933 KM/SEC	TIME FROM PERIAPSIS	=	-58.4974327 SEC
HORIZONTAL VELOCITY	=	1.9127201 KM/SEC	TRUE ANOMALY	=	356.4152412 DEG
SCALE FACTOR (HIGH)	=	0.0128345 M/KM	TILT DISTANCE (HIGH)	=	3.5719368 MM
SCALE FACTOR (LOW)	=	0.0016832 M/KM	TILT DISTANCE (LOW)	=	0.4684507 MM
IMAGE MOTION COMPENSATION (V/F)	=	0.0402435 RAD/SEC	SWING ANGLE	=	277.5796356 DEG
EMISSION ANGLE	=	0.3447046 DEG	INCIDENCE ANGLE	=	68.1341343 DEG
PHASE ANGLE	=	68.4548063 DEG	NORTH DEVIATION ANGLE	=	347.9002953 DEG
TILT ANGLE	=	0.3354993 DEG	RESOLUTION CONSTANT	=	1.0313619 MTR
TILT AZIMUTH	=	109.6795864 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.3463697 DEG
SUN ANGLE AT NADIR	=	68.1426497 DEG	SUN ARC AT NADIR	=	2071.7843018 KM
LONGITUDE DISTANCE TO TARGET	=	0.9550134 DEG	LATITUDE DISTANCE TO TARGET	=	-0.07029C3 DEG
LONGITUDE ARC LENGTH TO TARGET	=	29.0358794 KM	LATITUDE ARC LENGTH TO TARGET	=	-2.1370816 KM
FORWARD OVERLAP RATIO	=	-304.0958672 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	9.1004133 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.70557682	-0.70754603	0.03924232	55.94359446
CAMERA AXIS	-0.97248150	-0.23297893	-0.00074258	47.52903748
C1	-0.97551385	-0.14910330	0.16168159	48.36625671
C2	-0.95710383	-0.22485107	-0.18274093	48.37886047
C3	-0.93694305	-0.30906701	-0.16314196	48.35278320
C4	-0.95535307	-0.23331924	0.18128058	48.34019470

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1737.9600830	426.4984665	-2.1953568	-0.4743433	1.8044852	-0.4221795

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LONG  14.4645 DEG          LONG  14.1827 DEG
LATI   0.4307 DEG          LATI  -0.8163 DEG        *
                                                   ***          LONG  13.9275 DEG          LONG  13.8035 DEG
        *          38.86850 KM        *            * * *        LATI   0.1850 DEG          LATI  -0.3630 DEG
       (1)                           (2)          * * *
                                                   *                     *        17.08199 KM        *
                                                   *                    (1)                        (2)
                LOW RESOLUTION                     *
                                                   *                          HIGH RESOLUTION
                                                   *
   32.77519 KM                32.79465 KM          *  DIRECTION      4.29315 KM                4.29427 KM
                                                   *  OF MOTION
                                                   *
                                                   *                    (4)                        (3)
                                                   *                     *        17.07279 KM        *
       (4)                          (3)            *
        *          38.70830 KM       *             *          LONG  13.7898 DEG          LONG  13.6658 DEG
                                                   *          LATI   0.2160 DEG          LATI  -0.3317 DEG
LONG  13.4125 DEG          LONG  13.1311 DEG       *
LATI   0.6661 DEG          LATI  -0.5756 DEG       *
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FRAME 109

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*********************************
*   PHOTO FRAME NUMBER  6 OF  8   * 110
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	24	9	10	17.300

LONGITUDE OF NADIR POINT	=	14.3242872 DEG	LATITUDE OF NADIR POINT	=	-0.1919650 DEG
LONG OF CAMERA AXIS INTERSECT	=	14.3474430 DEG	LATI OF CAMERA AXIS INTERSECT	=	-0.1983308 DEG
SPACECRAFT RADIUS	=	1789.2781525 KM	SPACECRAFT ALTITUDE	=	47.2781525 KM
MEAN ALTITUDE RATE	=	-0.0254722 KM/SEC	TIME FROM PERIAPSIS	=	-49.5016866 SEC
HORIZONTAL VELOCITY	=	1.9125835 KM/SEC	TRUE ANOMALY	=	356.9662285 DEG
SCALE FACTOR (HIGH)	=	0.0129024 M/KM	TILT DISTANCE (HIGH)	=	9.4203241 MM
SCALE FACTOR (LOW)	=	0.0016921 M/KM	TILT DISTANCE (LOW)	=	1.2354524 MM
IMAGE MOTION COMPENSATION (V/F)	=	0.0404623 RAD/SEC	SWING ANGLE	=	273.2729416 DEG
EMISSION ANGLE	=	0.9087869 DEG	INCIDENCE ANGLE	=	67.5859556 DEG
PHASE ANGLE	=	68.4548092 DEG	NORTH DEVIATION ANGLE	=	347.9027634 DEG
TILT ANGLE	=	0.8847572 DEG	RESOLUTION CONSTANT	=	1.0259359 MTR
TILT AZIMUTH	=	105.3719893 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.2892790 DEG
SUN ANGLE AT NADIR	=	67.6089096 DEG	SUN ARC AT NADIR	=	2055.5566711 KM
LONGITUDE DISTANCE TO TARGET	=	1.4912872 DEG	LATITUDE DISTANCE TO TARGET	=	-0.1919650 DEG
LONGITUDE ARC LENGTH TO TARGET	=	45.3405538 KM	LATITUDE ARC LENGTH TO TARGET	=	-5.8364347 KM
FORWARD OVERLAP RATIO	=	-301.7433777 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	8.9999914 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.53107283	-0.84247240	0.09056434	66.19400692
CAMERA AXIS	-0.97248667	-0.23295734	-0.00074291	47.28393555
C1	-0.97551719	-0.14908176	0.16168132	48.13821411
C2	-0.95710879	-0.22482971	-0.18274125	48.15077209
C3	-0.93694589	-0.30904610	-0.16314233	48.08186340
C4	-0.95535829	-0.23329815	0.18128025	48.06933594

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1733.6414185	442.6824226	-5.9948167	-0.4876690	1.8011459	-0.4221460

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LONG  15.0143 DEG          LONG  14.7329 DEG
LATI   0.3048 DEG          LATI  -0.9400 DEG
                                          *
                                         ***
                                        * * *
*          38.80034 KM     *          * * * *
(1)                        (2)
                                          *
                                          *
                                          *
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*   PHOTO FRAME NUMBER  7 OF  8   *
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111

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	24	9	10	26.300

LONGITUDE OF NADIR POINT	=	14.8607042 DEG	LATITUDE OF NADIR POINT	=	-0.3136551 DEG
LONG OF CAMERA AXIS INTERSECT	=	14.8982905 DEG	LATI OF CAMERA AXIS INTERSECT	=	-0.3232805 DEG
SPACECRAFT RADIUS	=	1789.0697174 KM	SPACECRAFT ALTITUDE	=	47.0697174 KM
MEAN ALTITUDE RATE	=	-0.0208476 KM/SEC	TIME FROM PERIAPSIS	=	-40.5054798 SEC
HORIZONTAL VELOCITY	=	1.9132024 KM/SEC	TRUE ANOMALY	=	357.5173798 DEG
SCALE FACTOR (HIGH)	=	0.0129595 M/KM	TILT DISTANCE (HIGH)	=	15.2880937 MM
SCALE FACTOR (LOW)	=	0.0016556 M/KM	TILT DISTANCE (LOW)	=	2.0049959 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0406461 RAD/SEC	SWING ANGLE	=	272.2684784 DEG
EMISSION ANGLE	=	1.4744887 DEG	INCIDENCE ANGLE	=	67.0379019 DEG
PHASE ANGLE	=	68.4548111 DEG	NORTH DEVIATION ANGLE	=	347.9075127 DEG
TILT ANGLE	=	1.4356720 DEG	RESOLUTION CONSTANT	=	1.0214128 MTR
TILT AZIMUTH	=	104.3652830 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.2293119 DEG
SUN ANGLE AT NADIR	=	67.0751734 DEG	SUN ARC AT NADIR	=	2039.3291473 KM
LONGITUDE DISTANCE TO TARGET	=	2.0277042 DEG	LATITUDE DISTANCE TO TARGET	=	-0.3136551 DEG
LONGITUDE ARC LENGTH TO TARGET	=	61.6495805 KM	LATITUDE ARC LENGTH TO TARGET	=	-9.5362550 KM
FORWARD OVERLAP RATIO	=	-303.4268570 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	8.9999914 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.38571823	-0.91251209	0.12426330	78.81533718
CAMERA AXIS	-0.97249185	-0.23293572	-0.00074325	47.08489990
C1	-0.97552054	-0.14906018	0.16168104	47.95692444
C2	-0.95711376	-0.22480830	-0.18274159	47.96943665
C3	-0.93695673	-0.30902516	-0.16314272	47.85800171
C4	-0.95536350	-0.23327704	0.18127991	47.84555054

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1729.2033539	458.8357468	-9.7938545	-0.5009658	1.7976811	-0.4220831

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LONG  15.5647 DEG          LONG  15.2837 DEG
LATI   0.1795 DEG          LATI  -1.0644 DEG        *
                                                   ***          LONG  15.0281 DEG        LONG  14.9052 DEG
        *          38.76984 KM        *            * * *        LATI  -0.0671 DEG        LATI  -0.6105 DEG
      (1)                           (2)          *  *  *
                                                  *                   *        16.93743 KM       *
                                                  *                  (1)                        (2)
                LOW RESOLUTION                    *
                                                  *                          HIGH RESOLUTION
                                                  *
   32.48226 KM                 32.50160 KM        *  DIRECTION      4.25440 KM                4.25551 KM
                                                  *  OF MOTION
                                                  *
                                                  *                  (4)                        (3)
                                                  *                   *        16.89809 KM       *
      (4)                           (3)           *
        *          38.08518 KM        *           *          LONG  14.8915 DEG        LONG  14.7688 DEG
                                                  *          LATI  -0.0369 DEG        LATI  -0.5789 DEG
LONG  14.5203 DEG          LONG  14.2435 DEG      *
LATI   0.4042 DEG          LATI  -0.8175 DEG      *
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FRAME 111

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*************************************
*   PHOTO FRAME NUMBER   8 OF   8   *
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112

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	24	9	10	35.399

LONGITUDE OF NADIR POINT	=	15.4032629 DEG	LATITUDE OF NADIR POINT	=	-0.4367069 DEG
LONG OF CAMERA AXIS INTERSECT	=	15.4553735 DEG	LATI OF CAMERA AXIS INTERSECT	=	-0.4496126 DEG
SPACECRAFT RADIUS	=	1788.9012756 KM	SPACECRAFT ALTITUDE	=	46.9012756 KM
MEAN ALTITUDE RATE	=	-0.0161679 KM/SEC	TIME FROM PERIAPSIS	=	-31.4078710 SEC
HORIZONTAL VELOCITY	=	1.9133787 KM/SEC	TRUE ANOMALY	=	358.0748596 DEG
SCALE FACTOR (HIGH)	=	0.0130060 M/KM	TILT DISTANCE (HIGH)	=	21.2277670 MM
SCALE FACTOR (LOW)	=	0.0017057 M/KM	TILT DISTANCE (LOW)	=	2.7839694 MM
IMAGE MOTION COMPENSATIO (V/F)	=	0.0407559 RAD/SEC	SWING ANGLE	=	271.8173676 DEG
EMISSION ANGLE	=	2.0467566 DEG	INCIDENCE ANGLE	=	66.4838066 DEG
PHASE ANGLE	=	68.4548140 DEG	NORTH DEVIATION ANGLE	=	347.9146385 DEG
TILT ANGLE	=	1.9930670 DEG	RESOLUTION CONSTANT	=	1.0177577 MTR
TILT AZIMUTH	=	103.9108467 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.1657190 DEG
SUN ANGLE AT NADIR	=	66.5354748 DEG	SUN ARC AT NADIR	=	2022.9203491 KM
LONGITUDE DISTANCE TO TARGET	=	2.5702629 DEG	LATITUDE DISTANCE TO TARGET	=	-0.4367069 DEG
LONGITUDE ARC LENGTH TO TARGET	=	78.1453371 KM	LATITUDE ARC LENGTH TO TARGET	=	-13.2774781 KM
FORWARD OVERLAP RATIO	=	-309.2524109 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	9.0997656 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.28069128	-0.94853666	0.14659682	93.00887585
CAMERA AXIS	-0.97249710	-0.23291380	-0.00074361	46.93041992
C1	-0.97552392	-0.14903831	0.16168075	47.82115173
C2	-0.95711878	-0.22478660	-0.18274193	47.83366394
C3	-0.93696366	-0.30900393	-0.16314312	47.67942810
C4	-0.95536879	-0.23325565	0.18127956	47.66699219

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR.	1724.5943604	475.1381264	-13.6348059	-0.5143808	1.7940503	-0.4219897

```
LONG  16.1221 DEG          LONG  15.8412 DEG
LATI   0.0532 DEG          LATI  -1.1909 DEG
                                          *
                                         ***
                                        * * *
        *        38.77774 KM   *       *  *  *
      (1)                     (2)
                                          *
                                          *
                                          *
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*************************************
*   PHOTO FRAME NUMBER              *  113
*************************************
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#113

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	24	16	4	3.099

LONGITUDE OF NADIR POINT	=	-4.7835045	DEG	LATITUDE OF NADIR POINT	= 3.2086529 DEG
LONG OF CAMERA AXIS INTERSECT	=	-5.3500153	DEG	LATI OF CAMERA AXIS INTERSECT	= 2.8787599 DEG
SPACECRAFT RADIUS	=	1813.0960846	KM	SPACECRAFT ALTITUDE	= 75.0070801 KM
MEAN ALTITUDE RATE	=	-0.1553270	KM/SEC	TIME FROM PERIAPSIS	= -309.8368835 SEC
HORIZONTAL VELOCITY	=	1.8879766	KM/SEC	TRUE ANOMALY	= 341.1783752 DEG
SCALE FACTOR (HIGH)	=	0.0081326	M/KM	TILT DISTANCE (HIGH)	= 161.3136978 KM
SCALE FACTOR (LOW)	=	0.0010666	M/KM	TILT DISTANCE (LOW)	= 21.1558950 KM
IMAGE MOTION COMPENSATION (V/H)	=	0.0251706	RAD/SEC	SWING ANGLE	= 58.8991327 DEG
EMISSION ANGLE	=	15.4675845	DEG	INCIDENCE ANGLE	= 83.6964893 DEG
PHASE ANGLE	=	70.2736044	DEG	NORTH DEVIATION ANGLE	= 358.7966003 DEG
TILT ANGLE	=	14.8127078	DEG	RESOLUTION CONSTANT	= 1.6276536 MTR
TILT AZIMUTH	=	239.7671852	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	= 88.8638287 DEG
SUN ANGLE AT NADIR	=	83.1241522	DEG	SUN ARC AT NADIR	= 2521.6024170 KM
LONGITUDE DISTANCE TO TARGET	=	1.2164955	DEG	LATITUDE DISTANCE TO TARGET	= 0.4086529 DEG
LONGITUDE ARC LENGTH TO TARGET	=	36.9028487	KM	LATITUDE ARC LENGTH TO TARGET	= 12.3966395 KM
FORWARD OVERLAP RATIO	=	0.	PCT	SIDE OVERLAP RATIO	= 0. PCT
TIME BETWEEN PHOTOS	=	0.	SEC		

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.91250274	-0.35942204	-0.19533188	84.87051773
CAMERA AXIS	-0.97312891	-0.14022528	-0.18263897	77.70294189
C1	-0.99798797	-0.06010157	-0.02019467	75.87164307
C2	-0.92448423	-0.12950248	-0.35854989	81.00825500
C3	-0.91574212	-0.21566182	-0.33897840	82.59353638
C4	-0.98924585	-0.14626092	-0.00062318	77.25604248

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1803.9484406	-150.9585342	101.4831657	0.0217857	1.8488571	-0.4121107

```
LONG  -4.3757 DEG          LONG  -4.6904 DEG
LATI   3.6425 DEG          LATI   1.6690 DEG
                                   *
   *        60.61799 KM     *      ***
  (1)                      (2)   * * *
                                  *  *  *
                                  *
                                  *
        LOW RESOLUTION            *
                                  *
                                  *
  51.28840 KM          60.28307 KM *
                                  *
                                  *
                                  *
                                  *
  (4)                      (3)    *
   *        70.57335 KM     *     *
                                  *
LONG  -6.0140 DEG          LONG  -6.6710 DEG  *
LATI   4.0747 DEG          LATI   1.8425 DEG  *
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                    LONG  -5.1420 DEG        LONG  -5.3345 DEG
                    LATI   3.2967 DEG        LATI   2.3886 DEG
                          *      28.15744 KM      *
                         (1)                     (2)
                                HIGH RESOLUTION
DIRECTION        6.93704 KM                   7.43342 KM
OF MOTION
                         (4)                     (3)
                          *      28.70894 KM      *
                    LONG  -5.3658 DEG        LONG  -5.5773 DEG
                    LATI   3.3457 DEG        LATI   2.4232 DEG
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FRAME 113

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*********************************
*   PHOTO FRAME NUMBER [redacted]2   *  114
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114

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	24	16	4	9.799

LONGITUDE OF NADIR POINT	=	-4.3932495 DEG	LATITUDE OF NADIR POINT	=	3.1229818 DEG
LONG OF CAMERA AXIS INTERSECT	=	-4.9346135 DEG	LATI OF CAMERA AXIS INTERSECT	=	2.7946521 DEG
SPACECRAFT RADIUS	=	1812.0660400 KM	SPACECRAFT ALTITUDE	=	73.9770355 KM
MEAN ALTITUDE RATE	=	-0.1521469 KM/SEC	TIME FROM PERIAPSIS	=	-303.1471863 SEC
HORIZONTAL VELOCITY	=	1.8890484 KM/SEC	TRUE ANOMALY	=	341.5777054 DEG
SCALE FACTOR (HIGH)	=	0.0082458 M/KM	TILT DISTANCE (HIGH)	=	157.9928379 MM
SCALE FACTOR (LOW)	=	0.0010814 M/KM	TILT DISTANCE (LOW)	=	20.7203722 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0255356 RAD/SEC	SWING ANGLE	=	57.8196311 DEG
EMISSION ANGLE	=	15.1533245 DEG	INCIDENCE ANGLE	=	83.2824984 DEG
PHASE ANGLE	=	70.2736053 DEG	NORTH DEVIATION ANGLE	=	358.2563782 DEG
TILT ANGLE	=	14.5207851 DEG	RESOLUTION CONSTANT	=	1.6053017 MTR
TILT AZIMUTH	=	238.7444534 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.8738518 DEG
SUN ANGLE AT NADIR	=	82.7353134 DEG	SUN ARC AT NADIR	=	2509.8068542 KM
LONGITUDE DISTANCE TO TARGET	=	1.6067505 DEG	LATITUDE DISTANCE TO TARGET	=	0.3229818 DEG
LONGITUDE ARC LENGTH TO TARGET	=	48.7413862 KM	LATITUDE ARC LENGTH TO TARGET	=	9.7977754 KM
FORWARD OVERLAP RATIO	=	-81.3786039 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	6.6999435 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.86478029	-0.47793865	-0.15404446	89.68144703
CAMERA AXIS	-0.97313118	-0.14020919	-0.18263923	76.52749634
C1	-0.99798896	-0.06008501	-0.02019496	74.75003052
C2	-0.92448626	-0.12948725	-0.35855012	79.80868530
C3	-0.91574559	-0.21564674	-0.33897860	81.31066895
C4	-0.98924828	-0.14624450	-0.00062343	76.06188965

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1804.0586090	-139.6006393	98.7201777	0.0118629	1.8496543	-0.4126635

```
LONG  -3.9739 DEG          LONG  -4.2851 DEG
LATI   3.5474 DEG          LATI   1.5990 DEG
                                                  *
                                                 ***
      *        59.85129 KM        *              * * *
     (1)                         (2)            *  *  *
                                                  *
                                                  *
          LOW RESOLUTION                          *
                                                  *
                                                  *
                                                  *
  50.41360 KM                59.20317 KM          *
                                                  *
                                                  *
                                                  *
                                                  *
     (4)                         (3)              *
      *        69.27462 KM        *              *
                                                  *
LONG  -5.5846 DEG          LONG  -6.2293 DEG      *
LATI   3.9704 DEG          LATI   1.7792 DEG      *
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LONG  -4.7298 DEG          LONG  -4.9197 DEG
LATI   3.2062 DEG          LATI   2.3116 DEG

                 *        27.74048 KM        *
                (1)                          (2)

                        HIGH RESOLUTION

DIRECTION      6.82204 KM                7.30825 KM
OF MOTION

                (4)                          (3)
                 *        28.26299 KM        *

LONG  -4.9498 DEG          LONG  -5.1582 DEG
LATI   3.2545 DEG          LATI   2.3464 DEG
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FRAME 114

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*********************************
*   PHOTO FRAME NUMBER          *  115
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#115

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	25	0	5	55.000

LONGITUDE OF NADIR POINT	=	144.1516132	DEG	LATITUDE OF NADIR POINT	= -8.4291030 DEG
LONG OF CAMERA AXIS INTERSECT	=	144.2366886	DEG	LATI OF CAMERA AXIS INTERSECT	= -7.6175058 DEG
SPACECRAFT RADIUS	=	3116.6583557	KM	SPACECRAFT ALTITUDE	= 1378.5693512 KM
MEAN ALTITUDE RATE	=	0.3457801	KM/SEC	TIME FROM PERIAPSIS	= 3516.5403022 SEC
HORIZONTAL VELOCITY	=	1.0983159	KM/SEC	TRUE ANOMALY	= 134.0035458 DEG
SCALE FACTOR (HIGH)	=	0.0004425	M/KM	TILT DISTANCE (HIGH)	= 10.9547117 KM
SCALE FACTOR (LOW)	=	0.0000580	M/KM	TILT DISTANCE (LOW)	= 1.4364835 KM
IMAGE MOTION COMPENSATION (V/H)	=	0.0007967	RAD/SEC	SWING ANGLE	= 0.6466024 DEG
EMISSION ANGLE	=	1.7869144	DEG	INCIDENCE ANGLE	= 70.3116388 DEG
PHASE ANGLE	=	70.2729559	DEG	NORTH DEVIATION ANGLE	= 174.7154732 DEG
TILT ANGLE	=	1.0288382	DEG	RESOLUTION CONSTANT	= 29.9149547 MTP
TILT AZIMUTH	=	5.9301451	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	= 274.6701546 DEG
SUN ANGLE AT NADIR	=	70.2922707	DEG	SUN ARC AT NADIR	= 2132.3424693 KM
LONGITUDE DISTANCE TO TARGET	=	-3.8483868	DEG	LATITUDE DISTANCE TO TARGET	= -2.4291030 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-116.7422590	KM	LATITUDE ARC LENGTH TO TARGET	= -73.6877537 KM
FORWARD OVERLAP RATIO	=	0.	PCT	SIDE OVERLAP RATIO	= 0. PCT
TIME BETWEEN PHOTOS	=	0.	SEC		

DIRECTION COSINES TO TARGET	X	Y	Z	MAGNITUDE (KM)
CAMERA AXIS	0.74280896	-0.63959836	0.19786052	1390.76304626
C1	0.79847599	-0.57919339	0.16422886	1378.84167480
C2	0.75260925	-0.56358282	0.34051978	1431.04100037
C3	0.76428219	-0.64487529	-0.00293155	1414.53053284
C4	0.81765292	-0.57544387	-0.01755155	1413.39520264
	0.80597998	-0.49415141	0.32589973	1429.86735535

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	-2498.9796753	1805.5309448	-456.8568840	-0.9332361	-0.6616534	0.1309465

LONG 159.9668 DEG
LATI 18.7011 DEG

LONG 168.2961 DEG
LATI -24.9179 DEG

(1) * 1312.49899 KM * (2)

LONG 144.9095 DEG
LATI 1.0035 DEG

LONG 147.7870 DEG
LATI -15.3810 DEG

LOW RESOLUTION

(1) * 502.69661 KM * (2)

HIGH RESOLUTION

FRAME 115

1125.27451 KM

1079.54193 KM

DIRECTION OF MOTION 127.0092

125.54481 KM

(4) * 1299.59012 KM * (3)

(4) * 502.28791 KM * (3)

LONG 121.3244 DEG
LATI 12.9331 DEG

LONG 127.6793 DEG
LATI -31.4439 DEG

LONG 140.7[illegible] DEG
LATI 0.3012 DEG

LONG 143.5496 DEG
LATI -16.0886 DEG

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*********************************
*   PHOTO FRAME NUMBER <======  *  116
*********************************
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#116

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	25	0	9	40.900

LONGITUDE OF NADIR POINT	=	148.5464611 DEG	LATITUDE OF NADIR POINT	=	-7.6606043 DEG
LONG OF CAMERA AXIS INTERSECT	=	152.3321266 DEG	LATI OF CAMERA AXIS INTERSECT	=	-6.1157410 DEG
SPACECRAFT RADIUS	=	3191.7358093 KM	SPACECRAFT ALTITUDE	=	1453.6469048 KM
MEAN ALTITUDE RATE	=	0.3187965 KM/SEC	TIME FROM PERIAPSIS	=	3742.5002136 SEC
HORIZONTAL VELOCITY	=	1.0724912 KM/SEC	TRUE ANOMALY	=	138.4553337 DEG
SCALE FACTOR (HIGH)	=	0.0004196 M/KM	TILT DISTANCE (HIGH)	=	51.5323758 KM
SCALE FACTOR (LOW)	=	0.0000550 M/KM	TILT DISTANCE (LOW)	=	6.7583444 KM
IMAGE MOTION COMPENSATION (V/H)	=	0.0007378 RAD/SEC	SWING ANGLE	=	63.2617283 DEG
EMISSION ANGLE	=	8.8789953 DEG	INCIDENCE ANGLE	=	78.2719841 DEG
PHASE ANGLE	=	70.2729025 DEG	NORTH DEVIATION ANGLE	=	175.3036735 DEG
TILT ANGLE	=	4.8288419 DEG	RESOLUTION CONSTANT	=	31.5441353 MTR
TILT AZIMUTH	=	67.8870745 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	273.7066498 DEG
SUN ANGLE AT NADIR	=	74.6078072 DEG	SUN ARC AT NADIR	=	2263.2559899 KM
LONGITUDE DISTANCE TO TARGET	=	0.5464611 DEG	LATITUDE DISTANCE TO TARGET	=	-1.6606043 DEG
LONGITUDE ARC LENGTH TO TARGET	=	16.5771031 KM	LATITUDE ARC LENGTH TO TARGET	=	-50.3750558 KM
FORWARD OVERLAP RATIO	=	-86.8047361 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	225.9000015 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	0.84686568	-0.50473727	0.16750758	1455.41963196
CAMERA AXIS	0.79815139	-0.57363839	0.16423673	1463.07171631
C1	0.75229280	-0.56400059	0.34052736	1531.01812744
C2	0.76392142	-0.64530265	-0.00292321	1512.45024109
C3	0.81733102	-0.57590123	-0.01754364	1491.00830078
C4	0.80570240	-0.49459916	0.32590691	1508.80545044

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	-2698.4533691	1650.6057129	-425.4735995	-0.8419286	-0.7221862	0.1465334

```
LONG 175.5334 DEG          LONG-175.6369 DEG
LATI  28.3358 DEG          LATI -25.6882 DEG
                                          *
                                         ***
      *      1596.68443 KM      *       * * *
     (1)                        (2)    *  *  *
                                          *
                                          *
                                          *
          LOW RESOLUTION                  *
                                          *
                                          *
 1323.29022 KM            1230.92192 KM   *
                                          *
                                          *
                                          *
                                          *
     (4)                        (3)      *
      *      1297.92657 KM      *       *
                                          *
LONG 129.9245 DEG          LONG 137.3564 DEG
LATI  33.9124 DEG          LATI -30.2589 DEG
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```
LONG 153.0283 DEG          LONG 156.3853 DEG
LATI   3.1623 DEG          LATI -14.3200 DEG

                *      537.68658 KM      *
               (1)                      (2)

                    HIGH RESOLUTION

DIRECTION     136.75881 KM            135.04183 KM
OF MOTION

                (4)                      (3)
                 *      529.95753 KM      *

LONG 148.6213 DEG          LONG 151.8461 DEG
LATI   2.1847 DEG          LATI -15.0608 DEG
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FRAME 116

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************************************
*  PHOTO FRAME NUMBER  1 OF 16     *  118
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	25	13	2	4.999

LONGITUDE OF NADIR POINT	-2.5122528	DEG	LATITUDE OF NADIR POINT	0.2479401	DEG
LONG OF CAMERA AXIS INTERSECT	-2.5605218	DEG	LATI OF CAMERA AXIS INTERSECT	0.2629111	DEG
SPACECRAFT RADIUS	1789.8106995	KM	SPACECRAFT ALTITUDE	48.8106995	KM
MEAN ALTITUDE RATE	-0.0440628	KM/SEC	TIME FROM PERIAPSIS	-85.5737915	SEC
HORIZONTAL VELOCITY	1.9123270	KM/SEC	TRUE ANOMALY	354.7539711	DEG
SCALE FACTOR HIGH	0.0124973	M/KM	TILT DISTANCE HIGH	19.1934204	MM
SCALE FACTOR LOW	0.0016390	M/KM	TILT DISTANCE LOW	2.5171699	MM
IMAGE MOTION COMPENSATION V/H	0.0391784	RAD/SEC	SWING ANGLE	95.1656857	DEG
EMISSION ANGLE	1.8527288	DEG	INCIDENCE ANGLE	70.3143339	DEG
PHASE ANGLE	68.5610332	DEG	NORTH DEVIATION ANGLE	347.9449081	DEG
TILT ANGLE	1.8021956	DEG	RESOLUTION CONSTANT	1.0591922	MTR
TILT AZIMUTH	287.2287788	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.4790936	DEG
SUN ANGLE AT NADIR	70.2664709	DEG	SUN ARC AT NADIR	2135.1298218	KM
LONGITUDE DISTANCE TO TARGET	-1.1792528	DEG	LATITUDE DISTANCE TO TARGET	0.6646401	DEG
LONGITUDE ARC LENGTH TO TARGET	-35.8329906	KM	LATITUDE ARC LENGTH TO TARGET	20.1958761	KM
FORWARD OVERLAP RATIO	0.	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	0.	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.74128872	0.59114595	-0.31786399	64.20027828
CAMERA AXIS	-0.99989228	0.01380394	0.00498938	48.83552551
C1	-0.98125520	0.09405413	0.16820243	49.64288330
C2	-0.98400183	0.01988924	-0.17704467	49.59167480
C3	-0.98510703	-0.06690764	-0.15839044	49.73620605
C4	-0.98236039	0.00725725	0.18685666	49.78773499

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1788.0737305	-78.4517899	7.7451460	0.0396691	1.8697128	-0.4019160

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LONG  -1.8873 DEG          LONG  -2.1612 DEG
LATI   0.7825 DEG          LATI  -0.4856 DEG
                                          *
                                         ***          LONG  -2.4290 DEG          LONG  -2.5502 DEG
      *        39.41934 KM      *       * * *         LATI   0.5297 DEG          LATI  -0.0341 DEG
      1                         2     *  *  *
                                          *                  *        17.52161 KM      *
                                          *                  1                         2
                                          *
            LOW RESOLUTION                *                          HIGH RESOLUTION
                                          *
  33.75384 KM              33.67428 KM    *  DIRECTION      4.41638 KM                4.41181 KM
                                          *  OF MOTION
                                          *
                                          *                  4                         3
                                          *                  *        17.57271 KM      *
      4                         3         *
      *        40.30995 KM      *         *          LONG  -2.5709 DEG          LONG  -2.6923 DEG
                                          *          LATI   0.5611 DEG          LATI  -0.0044 DEG
LONG  -2.9703 DEG          LONG  -3.2476 DEG          *
LATI   1.0303 DEG          LATI  -0.2670 DEG          *
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FRAME 118

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*************************************
*   PHOTO FRAME NUMBER  2 OF 16     *
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119

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	25	13	2	7.199

LONGITUDE OF NADIR POINT	-2.3809624	DEG	LATITUDE OF NADIR POINT	0.2196597	DEG
LONG OF CAMERA AXIS INTERSECT	-2.4254514	DEG	LATI OF CAMERA AXIS INTERSECT	0.2338076	DEG
SPACECRAFT RADIUS	1789.7150421	KM	SPACECRAFT ALTITUDE	48.7150421	KM
MEAN ALTITUDE RATE	-0.0429366	KM/SEC	TIME FROM PERIAPSIS	-83.3779678	SEC
HORIZONTAL VELOCITY	1.9124284	KM/SEC	TRUE ANOMALY	354.8884010	DEG
SCALE FACTOR HIGH	0.0125218	M/KM	TILT DISTANCE HIGH	17.7657883	MM
SCALE FACTOR LOW	0.0016422	M/KM	TILT DISTANCE LOW	2.3299395	MM
IMAGE MOTION COMPENSATION V/H	0.0392575	RAD/SEC	SWING ANGLE	95.5765524	DEG
EMISSION ANGLE	1.7149060	DEG	INCIDENCE ANGLE	70.1797771	DEG
PHASE ANGLE	68.5610332	DEG	NORTH DEVIATION ANGLE	347.9435501	DEG
TILT ANGLE	1.6682246	DEG	RESOLUTION CONSTANT	1.0571164	MTR
TILT AZIMUTH	287.6400032	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.4681911	DEG
SUN ANGLE AT NADIR	70.1356754	DEG	SUN ARC AT NADIR	2131.1554565	KM
LONGITUDE DISTANCE TO TARGET	-1.0479624	DEG	LATITUDE DISTANCE TO TARGET	0.6363597	DEG
LONGITUDE ARC LENGTH TO TARGET	-31.8435757	KM	LATITUDE ARC LENGTH TO TARGET	19.3365428	KM
FORWARD OVERLAP RATIO	4.7837509	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	2.1996260	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.77339277	0.54914076	-0.31671444	61.64268970
CAMERA AXIS	-0.99989220	0.01380935	0.00498930	48.73626709
C1	-0.98125470	0.09405944	0.16820235	49.54733276
C2	-0.98400171	0.01989455	-0.17704475	49.49623108
C3	-0.98510736	-0.06690232	-0.15839051	49.62963867
C4	-0.98236036	0.00726256	0.18685658	49.68104553

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1788.1567993	-74.3505688	6.8613199	0.0363158	1.8698556	-0.4019297

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LONG  -1.7531 DEG          LONG  -2.0266 DEG
LATI   0.7527 DEG          LATI  -0.5138 DEG        *
                                                   ***            LONG  -2.2942 DEG          LONG  -2.4152 DEG
        *          39.37151 KM      *            * * *            LATI   0.5001 DEG          LATI  -0.0626 DEG
        1                           2          *  *  *
                                                 *                     *        17.48789 KM      *
                                                 *                     1                         2
                LOW RESOLUTION                   *
                                                 *                                HIGH RESOLUTION
                                                 *
   33.68133 KM                33.60196 KM        *  DIRECTION       4.40706 KM                4.40250 KM
                                                 *  OF MOTION
                                                 *
                                                 *                     4                         3
                                                 *                     *        17.53506 KM      *
        4                           3            *
        *          40.19270 KM      *            *            LONG  -2.4358 DEG          LONG  -2.5570 DEG
                                                 *            LATI   0.5313 DEG          LATI  -0.0329 DEG
LONG  -2.8340 DEG          LONG  -3.1105 DEG    *
LATI   0.9989 DEG          LATI  -0.2946 DEG    *
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FRAME 119

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*********************************
*   PHOTO FRAME NUMBER  3 OF 16  *  120
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	25	13	2	9.499

LONGITUDE OF NADIR POINT	-2.2435722	DEG	LATITUDE OF NADIR POINT	0.1900611	DEG
LONG OF CAMERA AXIS INTERSECT	-2.2841211	DEG	LATI OF CAMERA AXIS INTERSECT	0.2033544	DEG
SPACECRAFT RADIUS	1789.6175995	KM	SPACECRAFT ALTITUDE	48.6175995	KM
MEAN ALTITUDE RATE	-0.0417578	KM/SEC	TIME FROM PERIAPSIS	-81.0802517	SEC
HORIZONTAL VELOCITY	1.9125319	KM/SEC	TRUE ANOMALY	355.0290871	DEG
SCALE FACTOR HIGH	0.0125469	M/KM	TILT DISTANCE HIGH	16.2720528	MM
SCALE FACTOR LOW	0.0016455	M/KM	TILT DISTANCE LOW	2.1340397	MM
IMAGE MOTION COMPENSATION V/H	0.0393383	RAD/SEC	SWING ANGLE	96.0836468	DEG
EMISSION ANGLE	1.5707066	DEG	INCIDENCE ANGLE	70.0389900	DEG
PHASE ANGLE	68.5610342	DEG	NORTH DEVIATION ANGLE	347.9422760	DEG
TILT ANGLE	1.5280310	DEG	RESOLUTION CONSTANT	1.0550019	MTR
TILT AZIMUTH	288.1473999	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.4566126	DEG
SUN ANGLE AT NADIR	69.9988060	DEG	SUN ARC AT NADIR	2126.9964905	KM
LONGITUDE DISTANCE TO TARGET	-0.9105722	DEG	LATITUDE DISTANCE TO TARGET	0.6067611	DEG
LONGITUDE ARC LENGTH TO TARGET	-27.6688137	KM	LATITUDE ARC LENGTH TO TARGET	18.4371536	KM
FORWARD OVERLAP RATIO	0.1521286	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	2.3000479	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.80717850	0.49963460	-0.31436943	59.16057396
CAMERA AXIS	-0.99989212	0.01381498	0.00498921	48.63537598
C1	-0.98125418	0.09406497	0.16820226	49.45036316
C2	-0.98400158	0.01990008	-0.17704484	49.39933777
C3	-0.98510773	-0.06689679	-0.15839060	49.52117920
C4	-0.98236034	0.00726810	0.18685649	49.57244873

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1788.2359314	-70.0587254	5.9364656	0.0328062	1.8699968	-0.4019422

```
LONG  -1.6126 DEG          LONG  -1.8858 DEG
LATI   0.7216 DEG          LATI  -0.5434 DEG        *
                                                   ***          LONG  -2.1531 DEG          LONG  -2.2739 DEG
        *        39.32376 KM       *             * * *          LATI   0.4691 DEG          LATI  -0.0925 DEG
        1                          2           *  *  *
                                                 *                     *        17.45366 KM       *
                                                 *                     1                          2
                LOW RESOLUTION                   *
                                                 *                              HIGH RESOLUTION
                                                 *
   33.60783 KM                33.52867 KM        *  DIRECTION      4.39760 KM                4.39305 KM
                                                 *  OF MOTION
                                                 *
                                                 *                     4                          3
                                                 *                     *        17.49673 KM       *
        4                          3             *
        *        40.07363 KM       *             *          LONG  -2.2945 DEG          LONG  -2.4154 DEG
                                                 *          LATI   0.5002 DEG          LATI  -0.0628 DEG
LONG  -2.6914 DEG          LONG  -2.9671 DEG     *
LATI   0.9662 DEG          LATI  -0.3235 DEG     *
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FRAME 120

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*************************************
*   PHOTO FRAME NUMBER  4 OF 16     *
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121

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	25	13	2	11.799

LONGITUDE OF NADIR POINT	-2.1062851 DEG	LATITUDE OF NADIR POINT	0.1604847 DEG
LONG OF CAMERA AXIS INTERSECT	-2.1429206 DEG	LATI OF CAMERA AXIS INTERSECT	0.1729276 DEG
SPACECRAFT RADIUS	1789.5229492 KM	SPACECRAFT ALTITUDE	48.5229492 KM
MEAN ALTITUDE RATE	-0.0405797 KM/SEC	TIME FROM PERIAPSIS	-78.7845640 SEC
HORIZONTAL VELOCITY	1.9126321 KM/SEC	TRUE ANOMALY	355.1696587 DEG
SCALE FACTOR HIGH	0.0125714 M/KM	TILT DISTANCE HIGH	14.7820270 MM
SCALE FACTOR LOW	0.0016487 M/KM	TILT DISTANCE LOW	1.9386265 MM
IMAGE MOTION COMPENSATION V/H	0.0394171 RAD/SEC	SWING ANGLE	96.6926699 DEG
EMISSION ANGLE	1.4268875 DEG	INCIDENCE ANGLE	69.8983345 DEG
PHASE ANGLE	68.5610342 DEG	NORTH DEVIATION ANGLE	347.9411354 DEG
TILT ANGLE	1.3881673 DEG	RESOLUTION CONSTANT	1.0529480 MTR
TILT AZIMUTH	288.7566376 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.4448738 DEG
SUN ANGLE AT NADIR	69.8620443 DEG	SUN ARC AT NADIR	2122.8408508 KM
LONGITUDE DISTANCE TO TARGET	-0.7732851 DEG	LATITUDE DISTANCE TO TARGET	0.5771847 DEG
LONGITUDE ARC LENGTH TO TARGET	-23.4971817 KM	LATITUDE ARC LENGTH TO TARGET	17.5384390 KM
FORWARD OVERLAP RATIO	-0.0338031 PCT	SIDE OVERLAP RATIO	0. PCT
TIME BETWEEN PHOTOS	2.3000479 SEC		

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.84042834	0.44408458	-0.31059472	56.90439463
CAMERA AXIS	-0.99989204	0.01382070	0.00498914	48.53759766
C1	-0.98125367	0.09407061	0.16820218	49.35653687
C2	-0.98400147	0.01990570	-0.17704491	49.30560303
C3	-0.98510811	-0.06689116	-0.15839067	49.41592407
C4	-0.98236030	0.00727373	0.18685643	49.46707153

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1788.3068542	-65.7704201	5.0123946	0.0292991	1.8701295	-0.4019530

```
LONG -1.4722 DEG          LONG  -1.7451 DEG        .
LATI  0.6906 DEG          LATI  -0.5729 DEG        *
                                                  ***          LONG  -2.0122 DEG          LONG  -2.1327 DEG
        *        39.27845 KM      *              * * *         LATI   0.4382 DEG          LATI  -0.1223 DEG
        1                         2            *  *  *
                                                 *                    *        17.42054 KM       *
                                                 *                    1                          2
                LOW RESOLUTION                   *
                                                 *                          HIGH RESOLUTION
                                                 *
   33.53682 KM                33.45785 KM        *  DIRECTION      4.38845 KM                4.38392 KM
                                                 *  OF MOTION
                                                 *
                                                 *                    4                          3
                                                 *                    *        17.45954 KM       *
        4                         3              *
        *        39.95739 KM      *              *          LONG  -2.1532 DEG          LONG  -2.2739 DEG
                                                 *          LATI   0.4692 DEG          LATI  -0.0926 DEG
LONG  -2.5489 DEG          LONG  -2.8239 DEG     *
LATI   0.9335 DEG          LATI  -0.3524 DEG     *
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FRAME 121

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*************************************
*   PHOTO FRAME NUMBER  5 OF 16     *
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122

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	25	13	2	14.099

LONGITUDE OF NADIR POINT	-1.9688721 DEG	LATITUDE OF NADIR POINT	0.1308784 DEG
LONG OF CAMERA AXIS INTERSECT	-2.0016006 DEG	LATI OF CAMERA AXIS INTERSECT	0.1424726 DEG
SPACECRAFT RADIUS	1789.4309235 KM	SPACECRAFT ALTITUDE	48.4309235 KM
MEAN ALTITUDE RATE	-0.0394001 KM/SEC	TIME FROM PERIAPSIS	-76.4868317 SEC
HORIZONTAL VELOCITY	1.9127298 KM/SEC	TRUE ANOMALY	355.3103790 DEG
SCALE FACTOR HIGH	0.0125953 M/KM	TILT DISTANCE HIGH	13.2918534 MM
SCALE FACTOR LOW	0.0016518 M/KM	TILT DISTANCE LOW	1.7431939 MM
IMAGE MOTION COMPENSATION V/H	0.0394940 RAD/SEC	SWING ANGLE	57.4387388 DEG
EMISSION ANGLE	1.2829844 DEG	INCIDENCE ANGLE	69.7575693 DEG
PHASE ANGLE	68.5610352 DEG	NORTH DEVIATION ANGLE	347.9401436 DEG
TILT ANGLE	1.2482731 DEG	RESOLUTION CONSTANT	1.0509510 MTR
TILT AZIMUTH	289.5028610 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.4329500 DEG
SUN ANGLE AT NADIR	69.7251606 DEG	SUN ARC AT NADIR	2118.6814880 KM
LONGITUDE DISTANCE TO TARGET	-0.6358721 DEG	LATITUDE DISTANCE TO TARGET	0.5475784 DEG
LONGITUDE ARC LENGTH TO TARGET	-19.3217244 KM	LATITUDE ARC LENGTH TO TARGET	16.6388161 KM
FORWARD OVERLAP RATIO	-0.2546782 PCT	SIDE OVERLAP RATIO	0. PCT
TIME BETWEEN PHOTOS	2.3000479 SEC		

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.87229121	0.38212957	-0.30509841	54.89803076
CAMERA AXIS	-0.99989197	0.01382644	0.00498905	48.44273376
C1	-0.98125314	0.09407623	0.16820209	49.26564026
C2	-0.98400133	0.01991133	-0.17704500	49.21482849
C3	-0.98510848	-0.06688552	-0.15839075	49.31365967
C4	-0.98236029	0.00727937	0.18685634	49.36470032

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1788.3698578	-61.4782166	4.0874917	0.0257884	1.8702538	-0.4019618

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LONG  -1.3316 DEG          LONG  -1.6042 DEG
LATI   0.6596 DEG          LATI  -0.6025 DEG        *
                                                   ***          LONG  -1.8711 DEG          LONG  -1.9914 DEG
        *        39.23545 KM       *             * * *          LATI   0.4072 DEG          LATI  -0.1522 DEG
        1                          2           *  *  *
                                               *                     *        17.38847 KM       *
                                               *                     1                          2
                LOW RESOLUTION                 *
                                               *                          HIGH RESOLUTION
                                               *
   33.46816 KM                33.38938 KM      *  DIRECTION      4.37960 KM                4.37508 KM
                                               *  OF MOTION
                                               *
                                               *                     4                          3
                                               *                     *        17.42341 KM       *
        4                          3           *
        *        39.84375 KM       *           *          LONG  -2.0119 DEG          LONG  -2.1323 DEG
                                               *          LATI   0.4381 DEG          LATI  -0.1225 DEG
LONG  -2.4064 DEG          LONG  -2.6806 DEG   *
LATI   0.9009 DEG          LATI  -0.3814 DEG   *
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FRAME 122

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*********************************
*   PHOTO FRAME NUMBER  6 OF 16   *
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123

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	25	13	2	16.299

LONGITUDE OF NADIR POINT	-1.8375282 DEG	LATITUDE OF NADIR POINT	0.1025809 DEG
LONG OF CAMERA AXIS INTERSECT	-1.8665472 DEG	LATI OF CAMERA AXIS INTERSECT	0.1133692 DEG
SPACECRAFT RADIUS	1789.3455353 KM	SPACECRAFT ALTITUDE	48.3455353 KM
MEAN ALTITUDE RATE	-0.0382725 KM/SEC	TIME FROM PERIAPSIS	-74.2909746 SEC
HORIZONTAL VELOCITY	1.9128204 KM/SEC	TRUE ANOMALY	355.4448662 DEG
SCALE FACTOR HIGH	0.0126175 M/KM	TILT DISTANCE HIGH	11.8716868 MM
SCALE FACTOR LOW	0.0016548 M/KM	TILT DISTANCE LOW	1.5569425 MM
IMAGE MOTION COMPENSATION V/H	0.0395656 RAD/SEC	SWING ANGLE	98.3266563 DEG
EMISSION ANGLE	1.1459017 DEG	INCIDENCE ANGLE	69.6230516 DEG
PHASE ANGLE	68.5610361 DEG	NORTH DEVIATION ANGLE	347.9393272 DEG
TILT ANGLE	1.1149372 DEG	RESOLUTION CONSTANT	1.0490981 MTR
TILT AZIMUTH	290.3908577 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.4213915 DEG
SUN ANGLE AT NADIR	69.5943375 DEG	SUN ARC AT NADIR	2114.7062378 KM
LONGITUDE DISTANCE TO TARGET	-0.5045282 DEG	LATITUDE DISTANCE TO TARGET	0.5192809 DEG
LONGITUDE ARC LENGTH TO TARGET	-15.3306866 KM	LATITUDE ARC LENGTH TO TARGET	15.7789642 KM
FORWARD OVERLAP RATIO	4.0039810 PCT	SIDE OVERLAP RATIO	0. PCT
TIME BETWEEN PHOTOS	2.2002697 SEC		

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.90041034	0.31696320	-0.29798581	53.24208927
CAMERA AXIS	-0.99989188	0.01383185	0.00498898	48.35493469
C1	-0.98125265	0.09408156	0.16820201	49.18168640
C2	-0.98400120	0.01991665	-0.17704507	49.13096619
C3	-0.98510883	-0.06688019	-0.15839082	49.21887207
C4	-0.98236025	0.00728471	0.18685626	49.26979065

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1788.4225159	-57.3758388	3.2035766	0.0224326	1.8703648	-0.4019686

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LONG  -1.1972 DEG          LONG  -1.4695 DEG
LATI   0.6300 DEG          LATI  -0.6309 DEG        *
                                                   ***          LONG  -1.7363 DEG          LONG  -1.8564 DEG
        *          39.19662 KM        *            * * *        LATI   0.3777 DEG          LATI  -0.1808 DEG
        1                             2          *  *  *
                                                   *                     *        17.35884 KM       *
                                                   *                     1                          2
                LOW RESOLUTION                     *
                                                   *                          HIGH RESOLUTION
                                                   *
   33.40483 KM                33.32621 KM          *  DIRECTION      4.37143 KM                4.36691 KM
                                                   *  OF MOTION
                                                   *
                                                   *                     4                          3
                                                   *                     *        17.38991 KM       *
        4                             3            *
        *          39.73770 KM        *            *          LONG  -1.8768 DEG          LONG  -1.9970 DEG
                                                   *          LATI   0.4084 DEG          LATI  -0.1511 DEG
LONG  -2.2702 DEG          LONG  -2.5437 DEG        *
LATI   0.8698 DEG          LATI  -0.4091 DEG        *
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FRAME 123

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*********************************
*  PHOTO FRAME NUMBER  7 OF 16  *
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124

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	25	13	2	18.599

LONGITUDE OF NADIR POINT	-1.7001457 DEG	LATITUDE OF NADIR POINT	0.0729806 DEG
LONG OF CAMERA AXIS INTERSECT	-1.7252921 DEG	LATI OF CAMERA AXIS INTERSECT	0.0829279 DEG
SPACECRAFT RADIUS	1789.2588654 KM	SPACECRAFT ALTITUDE	48.2588654 KM
MEAN ALTITUDE RATE	-0.0370927 KM/SEC	TIME FROM PERIAPSIS	-71.9941883 SEC
HORIZONTAL VELOCITY	1.9129122 KM/SEC	TRUE ANOMALY	355.5855522 DEG
SCALE FACTOR HIGH	0.0126402 M/KM	TILT DISTANCE HIGH	10.3891697 MM
SCALE FACTOR LOW	0.0016577 M/KM	TILT DISTANCE LOW	1.3625141 MM
IMAGE MOTION COMPENSATION V/H	0.0396386 RAD/SEC	SWING ANGLE	99.5148735 DEG
EMISSION ANGLE	1.0028087 DEG	INCIDENCE ANGLE	69.4823656 DEG
PHASE ANGLE	68.5610361 DEG	NORTH DEVIATION ANGLE	347.9386101 DEG
TILT ANGLE	0.9757345 DEG	RESOLUTION CONSTANT	1.0472174 MTR
TILT AZIMUTH	291.5790977 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.4091330 DEG
SUN ANGLE AT NADIR	69.4574986 DEG	SUN ARC AT NADIR	2110.5482483 KM
LONGITUDE DISTANCE TO TARGET	-0.3671457 DEG	LATITUDE DISTANCE TO TARGET	0.4896806 DEG
LONGITUDE ARC LENGTH TO TARGET	-11.1561567 KM	LATITUDE ARC LENGTH TO TARGET	14.8795232 KM
FORWARD OVERLAP RATIO	-0.5963231 PCT	SIDE OVERLAP RATIO	0. PCT
TIME BETWEEN PHOTOS	2.3000479 SEC		

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.92619678	0.24289960	-0.28837353	51.81075382
CAMERA AXIS	-0.99989181	0.01383754	0.00498889	48.26606750
C1	-0.98125212	0.09408715	0.16820192	49.09683228
C2	-0.98400109	0.01992224	-0.17704516	49.04618835
C3	-0.98510920	-0.06687459	-0.15839090	49.12275696
C4	-0.98236024	0.00729030	0.18685617	49.17355347

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1788.4697418	-53.0848670	2.2790396	0.0189220	1.8704727	-0.4019740

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LONG  -1.0567 DEG          LONG  -1.3287 DEG
LATI   0.5991 DEG          LATI  -0.6606 DEG
                                          *
                                         ***
                                        * * *
     *          39.15833 KM     *      * * *
     1                          2       *
                                        *
                                        *
                                        
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*************************************
*   PHOTO FRAME NUMBER  8 OF 16     *
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125

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	25	13	2	20.799

LONGITUDE OF NADIR POINT	-1.5687180	DEG	LATITUDE OF NADIR POINT	0.0446643	DEG
LONG OF CAMERA AXIS INTERSECT	-1.5901739	DEG	LATI OF CAMERA AXIS INTERSECT	0.0538116	DEG
SPACECRAFT RADIUS	1789.1785126	KM	SPACECRAFT ALTITUDE	48.1785126	KM
MEAN ALTITUDE RATE	-0.0359639	KM/SEC	TIME FROM PERIAPSIS	-69.7972412	SEC
HORIZONTAL VELOCITY	1.9129974	KM/SEC	TRUE ANOMALY	355.7201347	DEG
SCALE FACTOR HIGH	0.0126612	M/KM	TILT DISTANCE HIGH	8.9755920	MM
SCALE FACTOR LOW	0.0016605	M/KM	TILT DISTANCE LOW	1.1771268	MM
IMAGE MOTION COMPENSATION V/H	0.0397064	RAD/SEC	SWING ANGLE	101.0181456	DEG
EMISSION ANGLE	0.8664036	DEG	INCIDENCE ANGLE	69.3478012	DEG
PHASE ANGLE	68.5610361	DEG	NORTH DEVIATION ANGLE	347.9380569	DEG
TILT ANGLE	0.8429942	DEG	RESOLUTION CONSTANT	1.0454737	MTR
TILT AZIMUTH	293.0822983	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.3972435	DEG
SUN ANGLE AT NADIR	69.3266029	DEG	SUN ARC AT NADIR	2106.5708313	KM
LONGITUDE DISTANCE TO TARGET	-0.2357180	DEG	LATITUDE DISTANCE TO TARGET	0.4613643	DEG
LONGITUDE ARC LENGTH TO TARGET	-7.1625686	KM	LATITUDE ARC LENGTH TO TARGET	14.0191002	KM
FORWARD OVERLAP RATIO	3.6040177	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	2.1996260	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.94624335	0.16708367	-0.27695953	50.75293541
CAMERA AXIS	-0.99989174	0.01384291	0.00498880	48.18386841
C1	-0.98125163	0.09409243	0.16820183	49.01853943
C2	-0.98400095	0.01992752	-0.17704523	48.96797180
C3	-0.98510953	-0.06686931	-0.15839098	49.03370667
C4	-0.98236021	0.00729559	0.18685609	49.08439636

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1788.5074158	-48.9800425	1.3946988	0.0155634	1.8705680	-0.4019774

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LONG  -0.9221 DEG          LONG  -1.1939 DEG
LATI   0.5695 DEG          LATI  -0.6891 DEG        *
                                                   ***          LONG  -1.4603 DEG          LONG  -1.5800 DEG
        *        39.12394 KM      *               * * *          LATI   0.3172 DEG          LATI  -0.2394 DEG
        1                         2             *  *  *
                                                  *                    *        17.30125 KM      *
                                                  *                    1                         2
                                                  *
              LOW RESOLUTION                      *
                                                  *                          HIGH RESOLUTION
                                                  *
   33.28208 KM                33.20378 KM         *  DIRECTION      4.35557 KM                4.35107 KM
                                                  *  OF MOTION
                                                  *
                                                  *                    4                         3
                                                  *                    *        17.32448 KM      *
        4                         3               *
        *        39.52833 KM      *               *          LONG  -1.6004 DEG          LONG  -1.7201 DEG
                                                  *          LATI   0.3477 DEG          LATI  -0.2097 DEG
LONG  -1.9916 DEG          LONG  -2.2637 DEG      *
LATI   0.8062 DEG          LATI  -0.4659 DEG      *
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FRAME 125

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************************************
*  PHOTO FRAME NUMBER 13 OF 16     *
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130

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	25	13	2	32.099

LONGITUDE OF NADIR POINT	-0.8935013 DEG	LATITUDE OF NADIR POINT	-0.1008196 DEG
LONG OF CAMERA AXIS INTERSECT	-0.8962028 DEG	LATI OF CAMERA AXIS INTERSECT	-0.0957405 DEG
SPACECRAFT RADIUS	1788.8049011 KM	SPACECRAFT ALTITUDE	47.8049011 KM
MEAN ALTITUDE RATE	-0.0301615 KM/SEC	TIME FROM PERIAPSIS	-58.5127010 SEC
HORIZONTAL VELOCITY	1.9133930 KM/SEC	TRUE ANOMALY	356.4115906 DEG
SCALE FACTOR HIGH	0.0127602 M/KM	TILT DISTANCE HIGH	2.2363786 MM
SCALE FACTOR LOW	0.0016735 M/KM	TILT DISTANCE LOW	0.2932956 MM
IMAGE MOTION COMPENSATION V/H	0.0400250 RAD/SEC	SWING ANGLE	139.8520355 DEG
EMISSION ANGLE	0.2159133 DEG	INCIDENCE ANGLE	68.6567774 DEG
PHASE ANGLE	68.5610399 DEG	NORTH DEVIATION ANGLE	347.9372711 DEG
TILT ANGLE	0.2100565 DEG	RESOLUTION CONSTANT	1.0373663 MTR
TILT AZIMUTH	331.9149017 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.3336468 DEG
SUN ANGLE AT NADIR	68.6542158 DEG	SUN ARC AT NADIR	2086.1395569 KM
LONGITUDE DISTANCE TO TARGET	0.4394987 DEG	LATITUDE DISTANCE TO TARGET	0.3158804 DEG
LONGITUDE ARC LENGTH TO TARGET	13.3546884 KM	LATITUDE ARC LENGTH TO TARGET	9.5984004 KM
FORWARD OVERLAP RATIO	2.8659312 PCT	SIDE OVERLAP RATIO	0. PCT
TIME BETWEEN PHOTOS	2.1996260 SEC		

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.95009934	-0.24899053	-0.18792275	50.62820244
CAMERA AXIS	-0.99989136	0.01387079	0.00498840	47.80523682
C1	-0.98124908	0.09411982	0.16820143	48.66047668
C2	-0.98400034	0.01995492	-0.17704564	48.61026001
C3	-0.98511133	-0.06684188	-0.15839136	48.62092590
C4	-0.98236008	0.00732301	0.18685570	48.67115784

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1788.5846100	-27.8941121	-3.1476195	-0.0016941	1.8709359	-0.4019684

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LONG  -0.2306 DEG          LONG  -0.5014 DEG
LATI   0.4181 DEG          LATI  -0.8359 DEG
                                          *
                                         ***
                                        * * *
        *          38.98206 KM          *
        1                               2  *  *  *
                                          *
                                          *
                                          
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************************************
*   PHOTO FRAME NUMBER 14 OF 16    *
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131

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	25	13	2	34.299

LONGITUDE OF NADIR POINT	-0.7619476	DEG	LATITUDE OF NADIR POINT	-0.1291623	DEG
LONG OF CAMERA AXIS INTERSECT	-0.7610333	DEG	LATI OF CAMERA AXIS INTERSECT	-0.1248670	DEG
SPACECRAFT RADIUS	1788.7397461	KM	SPACECRAFT ALTITUDE	47.7397461	KM
MEAN ALTITUDE RATE	-0.0290305	KM/SEC	TIME FROM PERIAPSIS	-56.3146133	SEC
HORIZONTAL VELOCITY	1.9134618	KM/SEC	TRUE ANOMALY	356.5463066	DEG
SCALE FACTOR HIGH	0.0127776	M/KM	TILT DISTANCE HIGH	1.7126515	MM
SCALE FACTOR LOW	0.0016757	M/KM	TILT DISTANCE LOW	0.2246100	MM
IMAGE MOTION COMPENSATION V/H	0.0400811	RAD/SEC	SWING ANGLE	179.8832874	DEG
EMISSION ANGLE	0.1655110	DEG	INCIDENCE ANGLE	68.5222054	DEG
PHASE ANGLE	68.5610409	DEG	NORTH DEVIATION ANGLE	347.9375191	DEG
TILT ANGLE	0.1608647	DEG	RESOLUTION CONSTANT	1.0359525	MTR
TILT AZIMUTH	11.9458069	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.3207626	DEG
SUN ANGLE AT NADIR	68.5232401	DEG	SUN ARC AT NADIR	2082.1596985	KM
LONGITUDE DISTANCE TO TARGET	0.5710524	DEG	LATITUDE DISTANCE TO TARGET	0.2875377	DEG
LONGITUDE ARC LENGTH TO TARGET	17.3521016	KM	LATITUDE ARC LENGTH TO TARGET	8.7371733	KM
FORWARD OVERLAP RATIO	2.6409651	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	2.2002697	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.93130629	-0.32364364	-0.16710293	51.64166546
CAMERA AXIS	-0.99989127	0.01387619	0.00498833	47.73994446
C1	-0.98124857	0.09412512	0.16820135	48.59927368
C2	-0.98400021	0.01996023	-0.17704571	48.54913330
C3	-0.98511168	-0.06683656	-0.15839144	48.54917908
C4	-0.98236006	0.00732832	0.18685563	48.59931946

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1788.5769958	-23.7865584	-4.0323370	-0.0050568	1.8709838	-0.4019615

```
LONG  -0.0958 DEG          LONG  -0.3664 DEG
LATI   0.3887 DEG          LATI  -0.8646 DEG        *
                                                   ***
   *          38.96121 KM      *                  * * *
   1                           2                *  *  *
                                                   *
                                                   *
              LOW RESOLUTION                       *
                                                   *
                                                   *
                                                   *
   32.96900 KM                32.89152 KM          *  DIRECTION
                                                   *  OF MOTION
                                                   *
                                                   *
                                                   *
   4                          3                    *
   *          38.96146 KM     *                    *
                                                   *
LONG  -1.1566 DEG          LONG  -1.4248 DEG        *
LATI   0.6167 DEG          LATI  -0.6372 DEG        *
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LONG  -0.6323 DEG          LONG  -0.7510 DEG
LATI   0.1363 DEG          LATI  -0.4156 DEG

*          17.15327 KM      *
1                           2

                HIGH RESOLUTION

4.31492 KM                 4.31047 KM

4                          3
*          17.15328 KM      *

LONG  -0.7711 DEG          LONG  -0.8897 DEG
LATI   0.1662 DEG          LATI  -0.3858 DEG
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FRAME 131

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*************************************
*   PHOTO FRAME NUMBER 15 OF 16     *
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132

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	25	13	2	36.599

LONGITUDE OF NADIR POINT	-0.6245308 DEG	LATITUDE OF NADIR POINT	-0.1587677 DEG
LONG OF CAMERA AXIS INTERSECT	-0.6198465 DEG	LATI OF CAMERA AXIS INTERSECT	-0.1552895 DEG
SPACECRAFT RADIUS	1788.6743622 KM	SPACECRAFT ALTITUDE	47.6743622 KM
MEAN ALTITUDE RATE	-0.0278489 KM/SEC	TIME FROM PERIAPSIS	-54.0186820 SEC
HORIZONTAL VELOCITY	1.9135310 KM/SEC	TRUE ANOMALY	356.6870346 DEG
SCALE FACTOR HIGH	0.0127951 M/KM	TILT DISTANCE HIGH	2.2720453 MM
SCALE FACTOR LOW	0.0016780 M/KM	TILT DISTANCE LOW	0.2979731 MM
IMAGE MOTION COMPENSATION V/H	0.0401375 RAD/SEC	SWING ANGLE	221.3100300 DEG
EMISSION ANGLE	0.2192854 DEG	INCIDENCE ANGLE	68.3816481 DEG
PHASE ANGLE	68.5610409 DEG	NORTH DEVIATION ANGLE	347.9379196 DEG
TILT ANGLE	0.2134066 DEG	RESOLUTION CONSTANT	1.0345336 MTR
TILT AZIMUTH	53.3718958 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.3071327 DEG
SUN ANGLE AT NADIR	68.3864288 DEG	SUN ARC AT NADIR	2078.0025024 KM
LONGITUDE DISTANCE TO TARGET	0.7084692 DEG	LATITUDE DISTANCE TO TARGET	0.2579323 DEG
LONGITUDE ARC LENGTH TO TARGET	21.5276747 KM	LATITUDE ARC LENGTH TO TARGET	7.8375766 KM
FORWARD OVERLAP RATIO	-1.8362228 PCT	SIDE OVERLAP RATIO	0. PCT
TIME BETWEEN PHOTOS	2.3000479 SEC		

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.90664422	-0.39608423	-0.14530504	53.02899313
CAMERA AXIS	-0.99989120	0.01388191	0.00498823	47.67469788
C1	-0.98124805	0.09413074	0.16820125	48.53839111
C2	-0.98400007	0.01996586	-0.17704580	48.48831177
C3	-0.98511205	-0.06683093	-0.15839152	48.47727966
C4	-0.98236003	0.00733395	0.18685553	48.52732849

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1788.5612183	-19.4961076	-4.9564304	-0.0085694	1.8710257	-0.4019525

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LONG   0.0451 DEG          LONG  -0.2254 DEG
LATI   0.3580 DEG          LATI  -0.8947 DEG        *
                                                   ***          LONG  -0.4913 DEG          LONG  -0.6098 DEG
        *        38.94187 KM       *             * * *          LATI   0.1056 DEG          LATI  -0.4456 DEG
        1                          2           *  *  *
                                                 *                     *        17.13178 KM       *
                                                 *                     1                          2
                LOW RESOLUTION                   *
                                                 *                          HIGH RESOLUTION
                                                 *
   32.92391 KM                 32.84654 KM       *  DIRECTION      4.30904 KM                 4.30459 KM
                                                 *  OF MOTION
                                                 *
                                                 *                     4                          3
                                                 *                     *        17.12788 KM       *
        4                          3             *
        *        38.87400 KM       *             *          LONG  -0.6299 DEG          LONG  -0.7483 DEG
                                                 *          LATI   0.1353 DEG          LATI  -0.4158 DEG
LONG  -1.0145 DEG          LONG  -1.2821 DEG     *
LATI   0.5846 DEG          LATI  -0.6665 DEG     *
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FRAME 132

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*********************************
*   PHOTO FRAME NUMBER 16 OF 16   *
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133

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	25	13	2	38.699

LONGITUDE OF NADIR POINT	-0.4990082 DEG	LATITUDE OF NADIR POINT	-0.1858127 DEG
LONG OF CAMERA AXIS INTERSECT	-0.4908823 DEG	LATI OF CAMERA AXIS INTERSECT	-0.1830781 DEG
SPACECRAFT RADIUS	1788.6170197 KM	SPACECRAFT ALTITUDE	47.6170197 KM
MEAN ALTITUDE RATE	-0.0267693 KM/SEC	TIME FROM PERIAPSIS	-51.9214664 SEC
HORIZONTAL VELOCITY	1.9135914 KM/SEC	TRUE ANOMALY	356.8155899 DEG
SCALE FACTOR HIGH	0.0128105 M/KM	TILT DISTANCE HIGH	3.3384339 MM
SCALE FACTOR LOW	0.0016801 M/KM	TILT DISTANCE LOW	0.4378274 MM
IMAGE MOTION COMPENSATION V/H	0.0401871 RAD/SEC	SWING ANGLE	239.3144398 DEG
EMISSION ANGLE	0.3222614 DEG	INCIDENCE ANGLE	68.2532663 DEG
PHASE ANGLE	68.5610418 DEG	NORTH DEVIATION ANGLE	347.9384041 DEG
TILT ANGLE	0.3135676 DEG	RESOLUTION CONSTANT	1.0332893 MTR
TILT AZIMUTH	71.3757725 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.2945271 DEG
SUN ANGLE AT NADIR	68.2614594 DEG	SUN ARC AT NADIR	2074.2051697 KM
LONGITUDE DISTANCE TO TARGET	0.8339918 DEG	LATITUDE DISTANCE TO TARGET	0.2308873 DEG
LONGITUDE ARC LENGTH TO TARGET	25.3418276 KM	LATITUDE ARC LENGTH TO TARGET	7.0157827 KM
FORWARD OVERLAP RATIO	6.8675397 PCT	SIDE OVERLAP RATIO	0. PCT
TIME BETWEEN PHOTOS	2.0998478 SEC		

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.88067456	-0.45673008	-0.12573756	54.56833601
CAMERA AXIS	-0.99989112	0.01388717	0.00498817	47.61775208
C1	-0.98124757	0.09413590	0.16820120	48.48542786
C2	-0.98399997	0.01997102	-0.17704586	48.43540955
C3	-0.98511239	-0.06682575	-0.15839158	48.41429138
C4	-0.98236000	0.00733911	0.18685547	48.46427917

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1788.5397339	-15.5770545	-5.8005211	-0.0117782	1.8710565	-0.4019427

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LONG   0.1738 DEG          LONG  -0.0965 DEG
LATI   0.3301 DEG          LATI  -0.9222 DEG
                                          *
                                         ***
                                        * * *
*          38.92626 KM     *          *  *  *
1                          2        *  *  *
                                          *
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*   PHOTO FRAME NUMBER.  134.       *
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Not Supported by Post-Flight OD

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	25	19	55	0.799

LONGITUDE OF NADIR POINT	=	-15.1863213 DEG	LATITUDE OF NADIR POINT	=	2.0340482 DEG
LONG OF CAMERA AXIS INTERSECT	=	-15.4907629 DEG	LATI OF CAMERA AXIS INTERSECT	=	1.8054025 DEG
SPACECRAFT RADIUS	=	1795.5077820 KM	SPACECRAFT ALTITUDE	=	57.4177856 KM
MEAN ALTITUDE RATE	=	-0.1323840 KM/SEC	TIME FROM PERIAPSIS	=	-260.3311234 SEC
HORIZONTAL VELOCITY	=	1.8995697 KM/SEC	TRUE ANOMALY	=	344.0137291 DEG
SCALE FACTOR (HIGH)	=	0.0106239 M/KM	TILT DISTANCE (HIGH)	=	122.5799208 MM
SCALE FACTOR (LOW)	=	0.0013933 M/KM	TILT DISTANCE (LOW)	=	16.0760550 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0330833 RAD/SEC	SWING ANGLE	=	52.1555524 DEG
EMISSION ANGLE	=	11.7429101 DEG	INCIDENCE ANGLE	=	79.7071352 DEG
PHASE ANGLE	=	70.2736177 DEG	NORTH DEVIATION ANGLE	=	358.5299072 DEG
TILT ANGLE	=	11.3622984 DEG	RESOLUTION CONSTANT	=	1.2459659 MTR
TILT AZIMUTH	=	233.0825272 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.8368368 DEG
SUN ANGLE AT NADIR	=	79.3981791 DEG	SUN ARC AT NADIR	=	2408.5750122 KM
LONGITUDE DISTANCE TO TARGET	=	0.2136787 DEG	LATITUDE DISTANCE TO TARGET	=	0.3340482 DEG
LONGITUDE ARC LENGTH TO TARGET	=	6.4820279 KM	LATITUDE ARC LENGTH TO TARGET	=	10.1334844 KM
FORWARD OVERLAP RATIO	=	0. PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	0. SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.96701188	0.14811769	-0.20724183	58.70473194
CAMERA AXIS	-0.98277634	0.10355135	-0.15306132	58.60473633
C1	-0.98274896	0.18462864	0.01080572	57.66897583
C2	-0.93800890	0.10502318	-0.33031718	60.95381165
C3	-0.94995353	0.01901277	-0.31181214	61.74475098
C4	-0.99469358	0.09861822	0.02931076	58.37506104

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1731.7151947	-470.0524788	63.7286782	0.3726724	1.8250667	-0.3951425

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LONG -14.7480 DEG          LONG -14.9874 DEG
LATI   2.3949 DEG          LATI   0.8834 DEG        *
                                                   ***          LONG -15.3371 DEG          LONG -15.4765 DEG
      *          46.42157 KM      *               * * *         LATI   2.1218 DEG          LATI   1.4372 DEG
     (1)                         (2)             *  *  *
                                                   *                  *        21.19295 KM       *
                                                   *                 (1)                        (2)
                LOW RESOLUTION                     *
                                                   *                          HIGH RESOLUTION
                                                   *
   38.50645 KM                43.90183 KM          *  DIRECTION      5.19960 KM                 5.50395 KM
                                                   *  OF MOTION
                                                   *
                                                   *                 (4)                        (3)
                                                   *                  *        21.46696 KM       *
      (4)                         (3)              *
      *          51.29112 KM      *                *          LONG -15.5048 DEG          LONG -15.6556 DEG
                                                   *          LATI   2.1577 DEG          LATI   1.4663 DEG
LONG -15.9822 DEG          LONG -16.4235 DEG        *
LATI   2.6967 DEG          LATI   1.0643 DEG        *
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FRAME 134

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*********************************
*   PHOTO FRAME NUMBER    135   *
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Not Supported by Post-Flight OD

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	25	23	21	38.799

LONGITUDE OF NADIR POINT	=	-16.0110779 DEG	LATITUDE OF NADIR POINT	=	1.7946083 DEG
LONG OF CAMERA AXIS INTERSECT	=	-16.2791271 DEG	LATI OF CAMERA AXIS INTERSECT	=	1.4402478 DEG
SPACECRAFT RADIUS	=	1793.4542847 KM	SPACECRAFT ALTITUDE	=	55.3642883 KM
MEAN ALTITUDE RATE	=	-0.1240188 KM/SEC	TIME FROM PERIAPSIS	=	-243.3522720 SEC
HORIZONTAL VELOCITY	=	1.9017817 KM/SEC	TRUE ANOMALY	=	345.0460167 DEG
SCALE FACTOR (HIGH)	=	0.0110179 M/KM	TILT DISTANCE (HIGH)	=	148.3461552 MM
SCALE FACTOR (LOW)	=	0.0014450 M/KM	TILT DISTANCE (LOW)	=	19.4552336 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0343503 RAD/SEC	SWING ANGLE	=	34.9598107 DEG
EMISSION ANGLE	=	14.1127149 DEG	INCIDENCE ANGLE	=	78.7538977 DEG
PHASE ANGLE	=	70.2736273 DEG	NORTH DEVIATION ANGLE	=	357.0659599 DEG
TILT ANGLE	=	13.6684495 DEG	RESOLUTION CONSTANT	=	1.2014050 MTR
TILT AZIMUTH	=	217.0988789 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.8164921 DEG
SUN ANGLE AT NADIR	=	78.4784441 DEG	SUN ARC AT NADIR	=	2380.6744995 KM
LONGITUDE DISTANCE TO TARGET	=	-0.4510779 DEG	LATITUDE DISTANCE TO TARGET	=	0.4346083 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-13.6836265 KM	LATITUDE ARC LENGTH TO TARGET	=	13.1840127 KM
FORWARD OVERLAP RATIO	=	0. PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	0. SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.83778717	0.48313405	-0.25435045	58.63112831
CAMERA AXIS	-0.96716967	0.12924509	-0.21881163	57.03172302
C1	-0.97561904	0.21218076	-0.05609649	55.50372314
C2	-0.91078968	0.12741169	-0.39271928	60.18693542
C3	-0.92639176	0.04198929	-0.37421279	60.81234741
C4	-0.99122112	0.12675837	-0.03759000	56.03363037

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1723.0378265	-494.4333611	56.1651144	0.4059260	1.8194419	-0.3962446

```
LONG -15.5679 DEG          LONG -15.7739 DEG
LATI   2.0140 DEG          LATI   0.4964 DEG        *
                                                   ***          LONG -16.1303 DEG          LONG -16.2666 DEG
        *        46.45904 KM        *             * * *         LATI   1.7491 DEG          LATI   1.0724 DEG
      (1)                         (2)            * * *
                                                   *                  *        20.94080 KM       *
                                                   *                 (1)                        (2)
              LOW RESOLUTION                       *
                                                   *                        HIGH RESOLUTION
                                                   *
  36.29191 KM                43.87645 KM           *  DIRECTION      4.97968 KM                5.40772 KM
                                                   *  OF MOTION
                                                   *
                                                   *                 (4)                        (3)
                                                   *                  *        21.16053 KM       *
      (4)                         (3)              *
        *        50.42397 KM        *             *          LONG -16.2912 DEG          LONG -16.4425 DEG
                                                   *          LATI   1.7823 DEG          LATI   1.1014 DEG
LONG -16.7347 DEG          LONG -17.2076 DEG       *
LATI   2.2824 DEG          LATI   0.6887 DEG       *
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FRAME 135

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*************************************
*   PHOTO FRAME NUMBER   136        *
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Not Supported by Post-Flight OD

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	26	3	48	35.700

LONGITUDE OF NADIR POINT	=	129.2654305 DEG	LATITUDE OF NADIR POINT	=	-7.9153686 DEG
LONG OF CAMERA AXIS INTERSECT	=	128.6372604 DEG	LATI OF CAMERA AXIS INTERSECT	=	-7.9473117 DEG
SPACECRAFT RADIUS	=	3058.8024902 KM	SPACECRAFT ALTITUDE	=	1320.7124939 KM
MEAN ALTITUDE RATE	=	0.3553355 KM/SEC	TIME FROM PERIAPSIS	=	3392.4820862 SEC
HORIZONTAL VELOCITY	=	1.1150041 KM/SEC	TRUE ANOMALY	=	132.2282333 DEG
SCALE FACTOR (HIGH)	=	0.0004619 M/KM	TILT DISTANCE (HIGH)	=	8.7284067 MM
SCALE FACTOR (LOW)	=	0.0000606 M/KM	TILT DISTANCE (LOW)	=	1.1447091 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0008442 RAD/SEC	SWING ANGLE	=	262.2076912 DEG
EMISSION ANGLE	=	1.3731432 DEG	INCIDENCE ANGLE	=	68.8422155 DEG
PHASE ANGLE	=	70.2729940 DEG	NORTH DEVIATION ANGLE	=	175.1678047 DEG
TILT ANGLE	=	0.8197815 DEG	RESOLUTION CONSTANT	=	28.6594608 MTR
TILT AZIMUTH	=	267.0395813 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	274.6266937 DEG
SUN ANGLE AT NADIR	=	69.4603701 DEG	SUN ARC AT NADIR	=	2107.1076660 KM
LONGITUDE DISTANCE TO TARGET	=	-0.5545692 DEG	LATITUDE DISTANCE TO TARGET	=	-0.0553686 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-16.8230760 KM	LATITUDE ARC LENGTH TO TARGET	=	-1.6796283 KM
FORWARD OVERLAP RATIO	=	0. PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	0. SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	0.61695568	-0.77463444	0.13895024	1320.89942932
CAMERA AXIS	0.63794619	-0.75780305	0.13696425	1320.83021545
C1	0.59941772	-0.73611990	0.31436586	1360.56420898
C2	0.58685157	-0.80910414	-0.03091508	1359.19883728
C3	0.65515071	-0.75415593	-0.04501551	1362.38981628
C4	0.66771686	-0.68117169	0.30026542	1363.76429749

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	-1917.5139160	2345.6299438	-421.2283287	-1.0905109	-0.4054786	0.1259787

```
LONG 142.7896 DEG          LONG 150.9671 DEG
LATI  15.4922 DEG          LATI -24.8264 DEG        *
                                                   ***          LONG 129.3470 DEG        LONG 131.9506 DEG
     *      1220.22183 KM      *                  * * *         LATI   0.2138 DEG        LATI -15.4577 DEG
    (1)                       (2)               *  *  *
                                                 *                  *      480.22211 KM      *
                                                 *                 (1)                      (2)
            LOW RESOLUTION                       *
                                                 *                        HIGH RESOLUTION
                                                 *
 1048.22018 KM              1044.58817 KM        *  DIRECTION     120.98295 KM              120.86114 KM
                                                 *  OF MOTION
                                                 *
                                                 *                 (4)                       (3)
                                                 *                  *      481.35058 KM      *
    (4)                       (3)                *
     *      1253.66144 KM      *                 *          LONG 125.4035 DEG        LONG 127.8667 DEG
                                                 *          LATI  -0.3869 DEG        LATI -16.1192 DEG
LONG 107.0648 DEG          LONG 111.8048 DEG     *
LATI  10.6113 DEG          LATI -31.4233 DEG     *
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FRAME 136

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*************************************
*   PHOTO FRAME NUMBER      137     *
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Not Supported by Post-Flight OD

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	26	6	14	30.900

LONGITUDE OF NADIR POINT	=	-19.0700760 DEG	LATITUDE OF NADIR POINT	=	1.6123421 DEG
LONG OF CAMERA AXIS INTERSECT	=	-20.8071327 DEG	LATI OF CAMERA AXIS INTERSECT	=	1.3744321 DEG
SPACECRAFT RADIUS	=	1792.5005188 KM	SPACECRAFT ALTITUDE	=	54.4105225 KM
MEAN ALTITUDE RATE	=	-0.1189093 KM/SEC	TIME FROM PERIAPSIS	=	-233.1536713 SEC
HORIZONTAL VELOCITY	=	1.9028730 KM/SEC	TRUE ANOMALY	=	345.6701698 DEG
SCALE FACTOR (HIGH)	=	0.0112111 M/KM	TILT DISTANCE (HIGH)	=	587.2085953 MM
SCALE FACTOR (LOW)	=	0.0014703 M/KM	TILT DISTANCE (LOW)	=	77.0109634 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0349725 RAD/SEC	SWING ANGLE	=	76.0887613 DEG
EMISSION ANGLE	=	45.6620803 DEG	INCIDENCE ANGLE	=	79.7863150 DEG
PHASE ANGLE	=	34.5874915 DEG	NORTH DEVIATION ANGLE	=	351.7089653 DEG
TILT ANGLE	=	43.9093847 DEG	RESOLUTION CONSTANT	=	1.1807083 MTR
TILT AZIMUTH	=	262.2218475 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	88.7882967 DEG
SUN ANGLE AT NADIR	=	78.0450487 DEG	SUN ARC AT NADIR	=	2367.5272827 KM
LONGITUDE DISTANCE TO TARGET	=	-0.6500759 DEG	LATITUDE DISTANCE TO TARGET	=	0.4923421 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-19.7203085 KM	LATITUDE ARC LENGTH TO TARGET	=	14.9353911 KM
FORWARD OVERLAP RATIO	=	0. PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	0. SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.74642155	0.60613219	-0.27469738	59.92808390
CAMERA AXIS	-0.90263916	-0.41500039	-0.11409312	76.65298462
C1	-0.93583326	-0.34844677	0.05292395	71.55363464
C2	-0.87420422	-0.38750214	-0.29259027	78.13673401
C3	-0.83927348	-0.46768223	-0.27729651	85.87207031
C4	-0.90090253	-0.42862686	0.06821770	77.94422913

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1693.4568176	-585.4214935	50.4355640	0.5063816	1.7946884	-0.3971604

```
LONG -19.8084 DEG          LONG -20.0115 DEG
LATI   2.0585 DEG          LATI   0.4875 DEG        *
                                                   ***                LONG -20.5690 DEG          LONG -20.7496 DEG
     *          48.05122 KM      *                 * * *              LATI   1.7877 DEG          LATI   0.9090 DEG
    (1)                         (2)              *  *  *
                                                   *                     *        27.21306 KM       *
                                                   *                    (1)                        (2)
            LOW RESOLUTION                         *
                                                   *                          HIGH RESOLUTION
                                                   *
  75.15598 KM                115.18810 KM          *  DIRECTION      9.20891 KM                10.61734 KM
                                                   *  OF MOTION
                                                   *
                                                   *                    (4)                        (3)
                                                   *                     *        29.95864 KM       *
     (4)                        (3)                *
      *         111.00991 KM     *                 *                LONG -20.8685 DEG          LONG -21.0982 DEG
                                                   *                LATI   1.8382 DEG          LATI   0.8777 DEG
LONG -22.1683 DEG          LONG -23.6744 DEG       *
LATI   2.8201 DEG          LATI  -0.5160 DEG       *
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FRAME 137

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* PHOTO FRAME NUMBER 138 *
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Not Supported by Post-Flight OD

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	26	9	41	35.899

LONGITUDE OF NADIR POINT	-18.2777519	DEG	LATITUDE OF NADIR POINT	1.0265484	DEG
LONG OF CAMERA AXIS INTERSECT	-18.4314735	DEG	LATI OF CAMERA AXIS INTERSECT	0.7187784	DEG
SPACECRAFT RADIUS	1787.8383307	KM	SPACECRAFT ALTITUDE	49.8083344	KM
MEAN ALTITUDE RATE	-0.0969380	KM/SEC	TIME FROM PERIAPSIS	-189.1225662	SEC
HORIZONTAL VELOCITY	1.9078187	KM/SEC	TRUE ANOMALY	348.3573914	DEG
SCALE FACTOR HIGH	0.0122469	M/KM	TILT DISTANCE HIGH	127.7277813	MM
SCALE FACTOR LOW	0.0016062	M/KM	TILT DISTANCE LOW	16.7511845	MM
IMAGE MOTION COMPENSATION V/H	0.0383032	RAD/SEC	SWING ANGLE	24.3226273	DEG
EMISSION ANGLE	12.1703073	DEG	INCIDENCE ANGLE	75.6741381	DEG
PHASE ANGLE	70.2736368	DEG	NORTH DEVIATION ANGLE	357.2876205	DEG
TILT ANGLE	11.8262901	DEG	RESOLUTION CONSTANT	1.0808408	MTR
TILT AZIMUTH	206.5404453	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.6955242	DEG
SUN ANGLE AT NADIR	75.5132456	DEG	SUN ARC AT NADIR	2290.7240295	KM
LONGITUDE DISTANCE TO TARGET	-0.8377519	DEG	LATITUDE DISTANCE TO TARGET	0.5265484	DEG
LONGITUDE ARC LENGTH TO TARGET	-25.4135323	KM	LATITUDE ARC LENGTH TO TARGET	15.9730523	KM
FORWARD OVERLAP RATIO	0.	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	0.	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.67311738	0.68077358	-0.28889500	58.37398052
CAMERA AXIS	-0.95484378	0.21893181	-0.20085371	50.92053223
C1	-0.95269928	0.30155773	-0.03777614	49.82243347
C2	-0.90197983	0.21268870	-0.37576041	53.69204712
C3	-0.92507175	0.12898789	-0.35721754	53.97132874
C4	-0.97579119	0.21785692	-0.01923326	50.06224060

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1697.4216614	-560.6371994	32.0314550	0.4999472	1.8000195	-0.3989386

```
LONG -17.7849 DEG          LONG -17.9795 DEG
LATI   1.2337 DEG          LATI  -0.1388 DEG
                                                 *
                                                ***
                                               * * *
        *          42.05242 KM        *        * * *
        1                             2        * * *
                                                 *
                                                 *
                                                 *
              LOW RESOLUTION                     *
                                                 *
                                                 *
                                                 *
   32.43325 KM                38.52877 KM        *
                                                 *
                                                 *
                                                 *
                                                 *
        4                             3          *
        *          43.80067 KM        *          *
                                                 *
                                                 *
LONG -18.8286 DEG          LONG -19.2306 DEG     *
LATI   1.4670 DEG          LATI   0.0802 DEG     *
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LONG -18.2982 DEG          LONG -18.4210 DEG
LATI   0.9939 DEG          LATI   0.3908 DEG

                 *        18.66988 KM        *
                 1                           2

                          HIGH RESOLUTION

DIRECTION        4.44063 KM                4.78761 KM
OF MOTION

                 4                           3
                 *        18.76754 KM        *

LONG -18.4414 DEG          LONG -18.5760 DEG
LATI   1.0242 DEG          LATI   0.4204 DEG
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FRAME 138

Not Supported by Post-Flight OD

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* PHOTO FRAME NUMBER 139 *
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	26	16	34	38.999

LONGITUDE OF NADIR POINT	-20.6653519	DEG	LATITUDE OF NADIR POINT	0.6983834	DEG
LONG OF CAMERA AXIS INTERSECT	-20.7842379	DEG	LATI OF CAMERA AXIS INTERSECT	0.3711661	DEG
SPACECRAFT RADIUS	1786.2852173	KM	SPACECRAFT ALTITUDE	48.1952209	KM
MEAN ALTITUDE RATE	-0.0860998	KM/SEC	TIME FROM PERIAPSIS	-167.7393456	SEC
HORIZONTAL VELOCITY	1.9096365	KM/SEC	TRUE ANOMALY	349.6697273	DEG
SCALE FACTOR HIGH	0.0126569	M/KM	TILT DISTANCE HIGH	133.5816593	MM
SCALE FACTOR LOW	0.0016599	M/KM	TILT DISTANCE LOW	17.5189064	MM
IMAGE MOTION COMPENSATION V/H	0.0396229	RAD/SEC	SWING ANGLE	17.3863070	DEG
EMISSION ANGLE	12.7001554	DEG	INCIDENCE ANGLE	74.5385818	DEG
PHASE ANGLE	70.2736425	DEG	NORTH DEVIATION ANGLE	356.9833641	DEG
TILT ANGLE	12.3520089	DEG	RESOLUTION CONSTANT	1.0458363	MTR
TILT AZIMUTH	199.9683590	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.6158113	DEG
SUN ANGLE AT NADIR	74.4115648	DEG	SUN ARC AT NADIR	2257.3040771	KM
LONGITUDE DISTANCE TO TARGET	-1.2153518	DEG	LATITUDE DISTANCE TO TARGET	0.2383834	DEG
LONGITUDE ARC LENGTH TO TARGET	-36.8681750	KM	LATITUDE ARC LENGTH TO TARGET	7.2314546	KM
FORWARD OVERLAP RATIO	0.	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	0.	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.52711019	0.84021071	-0.12728239	61.42682981
CAMERA AXIS	-0.93741909	0.27549676	-0.21294834	49.37014771
C1	-0.93216810	0.35853525	-0.05015102	48.23204041
C2	-0.88299967	0.26531852	-0.38719204	52.25636292
C3	-0.91133597	0.18324953	-0.36862767	52.41304016
C4	-0.96050440	0.27646625	-0.03158665	48.36514282

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1671.2272797	-630.3491974	21.7726843	0.5830626	1.7760373	-0.3998184

```
LONG -20.1565 DEG          LONG -20.3412 DEG
LATI   0.8707 DEG          LATI  -0.4780 DEG        *
                                                   ***          LONG -20.6550 DEG          LONG -20.7745 DEG
        *        41.29569 KM      *            * * *            LATI   0.6380 DEG          LATI   0.0507 DEG
        1                         2          *  *  *
                                                   *                     *        18.17971 KM      *
                                                   *                     1                         2
                LOW RESOLUTION                     *                                                          FRAME 139
                                                   *                           HIGH RESOLUTION
                                                   *
   31.23163 KM                37.53210 KM          *  DIRECTION      4.29029 KM                4.64921 KM
                                                   *  OF MOTION
                                                   *
                                                   *                     4                         3
                                                   *                     *        18.23470 KM      *
        4                         3                *
        *        42.28307 KM      *                *          LONG -20.7934 DEG          LONG -20.9248 DEG
                                                   *          LATI   0.6674 DEG          LATI   0.0808 DEG
LONG -21.1623 DEG          LONG -21.5565 DEG       *
LATI   1.0912 DEG          LATI  -0.2458 DEG       *
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*********************************
*   PHOTO FRAME NUMBER    140   *
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	26	20	1	11.499

LONGITUDE OF NADIR POINT	-20.0835152	DEG	LATITUDE OF NADIR POINT	0.0855865	DEG
LONG OF CAMERA AXIS INTERSECT	-20.1348679	DEG	LATI OF CAMERA AXIS INTERSECT	-0.2385879	DEG
SPACECRAFT RADIUS	1783.7478333	KM	SPACECRAFT ALTITUDE	45.6578369	KM
MEAN ALTITUDE RATE	-0.0644466	KM/SEC	TIME FROM PERIAPSIS	-125.3301725	SEC
HORIZONTAL VELOCITY	1.9124576	KM/SEC	TRUE ANOMALY	352.2775955	DEG
SCALE FACTOR HIGH	0.0133602	M/KM	TILT DISTANCE HIGH	132.9381409	MM
SCALE FACTOR LOW	0.0017522	M/KM	TILT DISTANCE LOW	17.4345102	MM
IMAGE MOTION COMPENSATION V/H	0.0418867	RAD/SEC	SWING ANGLE	6.1695338	DEG
EMISSION ANGLE	12.6225326	DEG	INCIDENCE ANGLE	72.1581564	DEG
PHASE ANGLE	70.2736530	DEG	NORTH DEVIATION ANGLE	356.9592323	DEG
TILT ANGLE	12.2943180	DEG	RESOLUTION CONSTANT	0.9907751	MTR
TILT AZIMUTH	189.0025673	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.4287548	DEG
SUN ANGLE AT NADIR	72.0976353	DEG	SUN ARC AT NADIR	2187.1101379	KM
LONGITUDE DISTANCE TO TARGET	0.2964849	DEG	LATITUDE DISTANCE TO TARGET	-0.1344135	DEG
LONGITUDE ARC LENGTH TO TARGET	8.9939874	KM	LATITUDE ARC LENGTH TO TARGET	-4.0774853	KM
FORWARD OVERLAP RATIO	0.	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	0.	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.98419009	0.15495849	0.08577716	46.74103117
CAMERA AXIS	-0.92879988	0.30411258	-0.21176950	46.75869751
C1	-0.92154460	0.38528065	-0.04810815	45.75737000
C2	-0.87432350	0.29420082	-0.38601076	49.59355164
C3	-0.90500917	0.21277926	-0.36835226	49.54737854
C4	-0.95223026	0.30385910	-0.03044965	45.71817017

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1675.2818298	-612.5193405	2.6644731	0.5836007	1.7822100	-0.3805065

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LONG -19.5386 DEG          LONG -19.7011 DEG
LATI   0.2426 DEG          LATI  -1.0565 DEG        *
                                                   ***          LONG -20.0150 DEG          LONG -20.1226 DEG
        *        39.71625 KM       *             * * *          LATI   0.0153 DEG          LATI  -0.5432 DEG
        1                          2            *  *  *
                                                 *                     *        17.25405 KM       *
                                                 *                     1                          2
            LOW RESOLUTION                       *                                                          FRAME 140
                                                 *                          HIGH RESOLUTION
                                                 *
   29.55122 KM              35.51843 KM          *  DIRECTION      4.06105 KM                 4.40140 KM
                                                 *  OF MOTION
                                                 *
                                                 *                     4                          3
                                                 *                     *        17.23784 KM       *
        4                          3             *
        *        39.42542 KM       *             *          LONG -20.1462 DEG          LONG -20.2647 DEG
                                                 *          LATI   0.0419 DEG          LATI  -0.5138 DEG
LONG -20.4936 DEG          LONG -20.8471 DEG     *
LATI   0.4348 DEG          LATI  -0.8159 DEG     *
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*   PHOTO FRAME NUMBER  1 OF  8     *
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141

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	26	23	32	24.699

LONGITUDE OF NADIR POINT	=	-4.1089478 DEG	LATITUDE OF NADIR POINT	=	-3.5072022 DEG
LONG OF CAMERA AXIS INTERSECT	=	-4.1193963 DEG	LATI OF CAMERA AXIS INTERSECT	=	-3.5084299 DEG
SPACECRAFT RADIUS	=	1787.2938385 KM	SPACECRAFT ALTITUDE	=	44.2938385 KM
MEAN ALTITUDE RATE	=	0.0868788 KM/SEC	TIME FROM PERIAPSIS	=	169.6945801 SEC
HORIZONTAL VELOCITY	=	1.9086732 KM/SEC	TRUE ANOMALY	=	10.4406550 DEG
SCALE FACTOR (HIGH)	=	0.0137717 M/KM	TILT DISTANCE (HIGH)	=	4.4041111 MM
SCALE FACTOR (LOW)	=	0.0018061 M/KM	TILT DISTANCE (LOW)	=	0.5775883 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0430912 RAD/SEC	SWING ANGLE	=	71.8421822 DEG
EMISSION ANGLE	=	0.4241119 DEG	INCIDENCE ANGLE	=	54.5470467 DEG
PHASE ANGLE	=	54.1234074 DEG	NORTH DEVIATION ANGLE	=	348.5486641 DEG
TILT ANGLE	=	0.4136600 DEG	RESOLUTION CONSTANT	=	0.9611763 MTR
TILT AZIMUTH	=	263.2932281 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	85.6223574 DEG
SUN ANGLE AT NADIR	=	54.5365477 DEG	SUN ARC AT NADIR	=	1659.0611877 KM
LONGITUDE DISTANCE TO TARGET	=	-1.2756478 DEG	LATITUDE DISTANCE TO TARGET	=	0.4927578 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-38.8065939 KM	LATITUDE ARC LENGTH TO TARGET	=	14.9914463 KM
FORWARD OVERLAP RATIO	=	0. PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	0. SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.69569575	0.68570846	-0.20057359	61.07281780
CAMERA AXIS	-0.99610060	0.06437192	0.06033119	44.29501343
C1	-0.96455377	0.13951525	0.22399002	45.03503418
C2	-0.98974179	0.07414052	-0.12212449	45.07135010
C3	-0.99435184	-0.01292308	-0.10534426	45.10009766
C4	-0.96916382	0.05245163	0.24077024	45.06373596

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1779.3610077	-127.8252201	-109.3359385	0.1986684	1.8645445	-0.3668595

```
LONG  -3.5149 DEG          LONG  -3.7388 DEG
LATI  -3.0220 DEG          LATI  -4.1858 DEG          *
                                                     ***                LONG  -4.0051 DEG          LONG  -4.1044 DEG
      *          36.05141 KM      *                 * * *               LATI  -3.2643 DEG          LATI  -3.7778 DEG
     (1)                         (2)               *  *  *
                                                     *                        *          15.90985 KM      *
                                                     *                       (1)                         (2)
                                                     *                                                          FRAME 141
            LOW RESOLUTION                           *                                HIGH RESOLUTION
                                                     *
                                                     *
   30.51823 KM                30.57434 KM           *  DIRECTION      3.99984 KM                 4.00307 KM
                                                     *  OF MOTION
                                                     *
                                                     *                       (4)                         (3)
                                                     *                        *          15.91999 KM      *
     (4)                        (3)                  *
      *          36.22782 KM      *                  *                LONG  -4.1344 DEG          LONG  -4.2339 DEG
                                                     *                LATI  -3.2391 DEG          LATI  -3.7529 DEG
LONG  -4.5007 DEG          LONG  -4.7286 DEG         *
LATI  -2.8288 DEG          LATI  -3.9978 DEG         *
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*   PHOTO FRAME NUMBER  2 OF  8     *
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142

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	26	23	32	33.399

LONGITUDE OF NADIR POINT	=	-3.5868073 DEG	LATITUDE OF NADIR POINT	=	-3.6080346 DEG
LONG OF CAMERA AXIS INTERSECT	=	-3.5839061 DEG	LATI OF CAMERA AXIS INTERSECT	=	-3.6118936 DEG
SPACECRAFT RADIUS	=	1788.0686951 KM	SPACECRAFT ALTITUDE	=	45.0686951 KM
MEAN ALTITUDE RATE	=	0.0912472 KM/SEC	TIME FROM PERIAPSIS	=	178.3851128 SEC
HORIZONTAL VELOCITY	=	1.9078428 KM/SEC	TRUE ANOMALY	=	10.9721419 DEG
SCALE FACTOR (HIGH)	=	0.0135349 M/KM	TILT DISTANCE (HIGH)	=	1.9883204 MM
SCALE FACTOR (LOW)	=	0.0017751 M/KM	TILT DISTANCE (LOW)	=	0.2607633 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0423319 RAD/SEC	SWING ANGLE	=	311.7483788 DEG
EMISSION ANGLE	=	0.1914140 DEG	INCIDENCE ANGLE	=	54.0209585 DEG
PHASE ANGLE	=	54.1234107 DEG	NORTH DEVIATION ANGLE	=	348.5808716 DEG
TILT ANGLE	=	0.1867573 DEG	RESOLUTION CONSTANT	=	0.9779907 MTR
TILT AZIMUTH	=	143.1676273 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	85.4884806 DEG
SUN ANGLE AT NADIR	=	54.0235758 DEG	SUN ARC AT NADIR	=	1643.4560242 KM
LONGITUDE DISTANCE TO TARGET	=	-0.7535073 DEG	LATITUDE DISTANCE TO TARGET	=	0.3919654 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-22.9225113 KM	LATITUDE ARC LENGTH TO TARGET	=	11.9240159 KM
FORWARD OVERLAP RATIO	=	-307.6179466 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	8.7000132 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.85232967	0.49323010	-0.17394883	52.09257752
CAMERA AXIS	-0.99609923	0.06439330	0.06033092	45.06893921
C1	-0.96455083	0.13953596	0.22398975	45.84193420
C2	-0.98974016	0.07416175	-0.12212475	45.87895203
C3	-0.99435209	-0.01290175	-0.10534452	45.86869812
C4	-0.96916277	0.05247245	0.24076997	45.83171082

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1781.0290070	-111.6408568	-112.5240202	0.1854139	1.8654312	-0.3660306

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LONG  -2.9670 DEG          LONG  -3.1949 DEG
LATI  -3.1149 DEG          LATI  -4.3032 DEG        *
                                                   ***                LONG  -3.4677 DEG          LONG  -3.5685 DEG
        *          36.80463 KM      *             * * *               LATI  -3.3633 DEG          LATI  -3.8860 DEG
       (1)                          (2)           *  *  *
                                                   *                        *        16.19492 KM      *
                                                   *                       (1)                       (2)
              LOW RESOLUTION                       *
                                                   *                                HIGH RESOLUTION
                                                   *
   31.05242 KM                31.10957 KM          *  DIRECTION      4.06967 KM                 4.07295 KM
                                                   *  OF MOTION
                                                   *
                                                   *                       (4)                       (3)
                                                   *                        *        16.19130 KM      *
       (4)                          (3)             *
        *          36.74175 KM      *               *                LONG  -3.5993 DEG          LONG  -3.7003 DEG
                                                   *                LATI  -3.3380 DEG          LATI  -3.8606 DEG
LONG  -3.9710 DEG          LONG  -4.2015 DEG       *
LATI  -2.9229 DEG          LATI  -4.1086 DEG       *
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FRAME 142

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*************************************
*   PHOTO FRAME NUMBER  3 OF  8     *
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143

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	26	23	32	42.199

LONGITUDE OF NADIR POINT	=	-3.0590858 DEG	LATITUDE OF NADIR POINT	=	-3.7096182 DEG
LONG OF CAMERA AXIS INTERSECT	=	-3.0421969 DEG	LATI OF CAMERA AXIS INTERSECT	=	-3.7162154 DEG
SPACECRAFT RADIUS	=	1788.8905607 KM	SPACECRAFT ALTITUDE	=	45.8905607 KM
MEAN ALTITUDE RATE	=	0.0956536 KM/SEC	TIME FROM PERIAPSIS	=	187.1750658 SEC
HORIZONTAL VELOCITY	=	1.9069623 KM/SEC	TRUE ANOMALY	=	11.5092295 DEG
SCALE FACTOR (HIGH)	=	0.0132924 M/KM	TILT DISTANCE (HIGH)	=	7.3171076 MM
SCALE FACTOR (LOW)	=	0.0017433 M/KM	TILT DISTANCE (LOW)	=	0.9596207 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0415542 RAD/SEC	SWING ANGLE	=	280.0044058 DEG
EMISSION ANGLE	=	0.7053357 DEG	INCIDENCE ANGLE	=	53.4892368 DEG
PHASE ANGLE	=	54.1234145 DEG	NORTH DEVIATION ANGLE	=	348.6152840 DEG
TILT ANGLE	=	0.6872447 DEG	RESOLUTION CONSTANT	=	0.9958338 MTR
TILT AZIMUTH	=	111.3904486 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	85.3496208 DEG
SUN ANGLE AT NADIR	=	53.5054908 DEG	SUN ARC AT NADIR	=	1627.6953125 KM
LONGITUDE DISTANCE TO TARGET	=	-0.2257859 DEG	LATITUDE DISTANCE TO TARGET	=	0.2903818 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-6.8686515 KM	LATITUDE ARC LENGTH TO TARGET	=	8.8137293 KM
FORWARD OVERLAP RATIO	=	-304.8643913 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	8.7957913 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.97254784	0.19713411	-0.12364800	47.26803780
CAMERA AXIS	-0.99609786	0.06441494	0.06033065	45.89434814
C1	-0.96454787	0.13955691	0.22398949	46.70217896
C2	-0.98973852	0.07418325	-0.12212501	46.73992920
C3	-0.99435234	-0.01288015	-0.10534479	46.68881226
C4	-0.96916170	0.05249351	0.24076971	46.65115356

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1782.5990448	-95.2652149	-115.7409344	0.1720146	1.8662041	-0.3651691

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LONG  -2.4120 DEG          LONG  -2.6441 DEG
LATI  -3.2080 DEG          LATI  -4.4224 DEG        *
                                                   ***                LONG  -2.9239 DEG          LONG  -3.0263 DEG
        *          37.60674 KM      *             * * *              LATI  -3.4629 DEG          LATI  -3.9955 DEG
       (1)                         (2)           *  *  *
                                                   *                        *        16.49883 KM      *
                                                   *                       (1)                       (2)
        |        LOW RESOLUTION                    *
                                                   *                                                          FRAME 143
                                                   *                                HIGH RESOLUTION
                                                   *
   31.62641 KM                 31.68468 KM         *  DIRECTION       4.14453 KM                4.14788 KM
                                                   *  OF MOTION
                                                   *
                                                   *                       (4)                       (3)
                                                   *                        *        16.48079 KM      *
       (4)                         (3)             *
        *          37.29296 KM      *             *                LONG  -3.0580 DEG          LONG  -3.1605 DEG
                                                   *                LATI  -3.4375 DEG          LATI  -3.9695 DEG
LONG  -3.4355 DEG          LONG  -3.6688 DEG       *
LATI  -3.0171 DEG          LATI  -4.2207 DEG       *
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*   PHOTO FRAME NUMBER   4 OF   8   *
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144

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	26	23	32	51.059

LONGITUDE OF NADIR POINT	=	-2.5280838 DEG	LATITUDE OF NADIR POINT	=	-3.8114905 DEG
LONG OF CAMERA AXIS INTERSECT	=	-2.4965912 DEG	LATI OF CAMERA AXIS INTERSECT	=	-3.8209324 DEG
SPACECRAFT RADIUS	=	1789.7580719 KM	SPACECRAFT ALTITUDE	=	46.7580719 KM
MEAN ALTITUDE RATE	=	0.1000779 KM/SEC	TIME FROM PERIAPSIS	=	196.0264645 SEC
HORIZONTAL VELOCITY	=	1.9060349 KM/SEC	TRUE ANOMALY	=	12.0495567 DEG
SCALE FACTOR (HIGH)	=	0.0130459 M/KM	TILT DISTANCE (HIGH)	=	13.0213102 MM
SCALE FACTOR (LOW)	=	0.0017109 M/KM	TILT DISTANCE (LOW)	=	1.7077128 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0407638 RAD/SEC	SWING ANGLE	=	275.3754272 DEG
EMISSION ANGLE	=	1.2557169 DEG	INCIDENCE ANGLE	=	52.9540539 DEG
PHASE ANGLE	=	54.1234169 DEG	NORTH DEVIATION ANGLE	=	348.6517868 DEG
TILT ANGLE	=	1.2228735 DEG	RESOLUTION CONSTANT	=	1.0146502 MTR
TILT AZIMUTH	=	106.7272387 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	85.2062283 DEG
SUN ANGLE AT NADIR	=	52.9845729 DEG	SUN ARC AT NADIR	=	1611.8484192 KM
LONGITUDE DISTANCE TO TARGET	=	0.3052162 DEG	LATITUDE DISTANCE TO TARGET	=	0.1885095 DEG
LONGITUDE ARC LENGTH TO TARGET	=	9.2850089 KM	LATITUDE ARC LENGTH TO TARGET	=	5.7346632 KM
FORWARD OVERLAP RATIO	=	-300.0510254 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	8.8596582 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.98728112	-0.14939082	-0.05439081	48.04375601
CAMERA AXIS	-0.99609645	0.06443680	0.06033038	46.76901245
C1	-0.96454486	0.13957808	0.22398923	47.61352539
C2	-0.98973686	0.07420497	-0.12212529	47.65205383
C3	-0.99435260	-0.01285833	-0.10534506	47.55821228
C4	-0.96916060	0.05251477	0.24076945	47.51582117

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1784.0613098	-78.7697754	-118.9723940	0.1585304	1.8668568	-0.3642783

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LONG  -1.8523 DEG          LONG  -2.0888 DEG
LATI  -3.3009 DEG          LATI  -4.5428 DEG        *
                                                   ***            LONG  -2.3761 DEG          LONG  -2.4802 DEG
        *        38.45599 KM      *               * * *           LATI  -3.5626 DEG          LATI  -4.1057 DEG
      (1)                        (2)             *  *  *
                                                   *                     *        16.82079 KM        *
                                                   *                    (1)                         (2)
            LOW RESOLUTION                         *                                                          FRAME 144
                                                   *                              HIGH RESOLUTION
                                                   *
   32.23902 KM                32.29849 KM          *  DIRECTION      4.22428 KM                 4.22770 KM
                                                   *  OF MOTION
                                                   *
                                                   *                    (4)                         (3)
                                                   *                     *        16.78758 KM        *
      (4)                        (3)               *
        *        37.87976 KM      *               *                 LONG  -2.5129 DEG          LONG  -2.6170 DEG
                                                   *                 LATI  -3.5370 DEG          LATI  -4.0790 DEG
LONG  -2.8966 DEG          LONG  -3.1329 DEG       *
LATI  -3.1110 DEG          LATI  -4.3337 DEG       *
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*   PHOTO FRAME NUMBER   5 OF   8   *
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145

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	26	23	33	0.198

LONGITUDE OF NADIR POINT	=	-1.9807320 DEG	LATITUDE OF NADIR POINT	=	-3.9161333 DEG
LONG OF CAMERA AXIS INTERSECT	=	-1.9335685 DEG	LATI OF CAMERA AXIS INTERSECT	=	-3.9286044 DEG
SPACECRAFT RADIUS	=	1790.6935730 KM	SPACECRAFT ALTITUDE	=	47.6935730 KM
MEAN ALTITUDE RATE	=	0.1046281 KM/SEC	TIME FROM PERIAPSIS	=	205.1582108 SEC
HORIZONTAL VELOCITY	=	1.9050354 KM/SEC	TRUE ANOMALY	=	12.6064320 DEG
SCALE FACTOR (HIGH)	=	0.0127900 M/KM	TILT DISTANCE (HIGH)	=	18.9374094 MM
SCALE FACTOR (LOW)	=	0.0016774 M/KM	TILT DISTANCE (LOW)	=	2.4835947 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0399432 RAD/SEC	SWING ANGLE	=	273.5334587 DEG
EMISSION ANGLE	=	1.8268536 DEG	INCIDENCE ANGLE	=	52.4022374 DEG
PHASE ANGLE	=	54.1234217 DEG	NORTH DEVIATION ANGLE	=	348.6913795 DEG
TILT ANGLE	=	1.7781726 DEG	RESOLUTION CONSTANT	=	1.0349505 MTR
TILT AZIMUTH	=	104.8489046 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	85.0544968 DEG
SUN ANGLE AT NADIR	=	52.4480290 DEG	SUN ARC AT NADIR	=	1595.5261841 KM
LONGITUDE DISTANCE TO TARGET	=	0.8525680 DEG	LATITUDE DISTANCE TO TARGET	=	0.0838667 DEG
LONGITUDE ARC LENGTH TO TARGET	=	25.9360480 KM	LATITUDE ARC LENGTH TO TARGET	=	2.5513168 KM
FORWARD OVERLAP RATIO	=	-304.4536055 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	9.1356809 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.89587797	-0.44410798	0.01306775	54.49000025
CAMERA AXIS	-0.99609501	0.06445938	0.06033012	47.71717834
C1	-0.96454176	0.13959993	0.22398897	48.60125732
C2	-0.98973515	0.07422741	-0.12212555	48.64064026
C3	-0.99435286	-0.01283579	-0.10534533	48.50091553
C4	-0.96915548	0.05253673	0.24076919	48.46177673

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1785.4450073	-61.7476277	-122.2975950	0.1446302	1.8673984	-0.3633351

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LONG  -1.2740 DEG          LONG  -1.5153 DEG
LATI  -3.3957 DEG          LATI  -4.6676 DEG          *
                                                     ***                    LONG  -1.8107 DEG          LONG  -1.9166 DEG
        *          39.37639 KM      *                * * *                  LATI  -3.6648 DEG          LATI  -4.2192 DEG
       (1)                          (2)              * * *
                                                      *                          *        17.16975 KM        *
                                                      *                         (1)                         (2)
            LOW RESOLUTION                            *
                                                      *                                HIGH RESOLUTION
                                                      *                                                          FRAME 145
   32.90776 KM                 32.96858 KM            *  DIRECTION      4.31116 KM                  4.31465 KM
                                                      *  OF MOTION
                                                      *
                                                      *                         (4)                         (3)
                                                      *                          *        17.12045 KM        *
       (4)                         (3)                *
        *          38.51822 KM      *                *                    LONG  -1.9504 DEG          LONG  -2.0562 DEG
                                                      *                    LATI  -3.6391 DEG          LATI  -4.1919 DEG
LONG  -2.3409 DEG          LONG  -2.5804 DEG          *
LATI  -3.2070 DEG          LATI  -4.4504 DEG          *
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*   PHOTO FRAME NUMBER  6 OF  8     *
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146

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	26	23	33	9.498

LONGITUDE OF NADIR POINT	=	-1.4241867 DEG	LATITUDE OF NADIR POINT	=	-4.0221369 DEG
LONG OF CAMERA AXIS INTERSECT	=	-1.3604200 DEG	LATI OF CAMERA AXIS INTERSECT	=	-4.0377969 DEG
SPACECRAFT RADIUS	=	1791.6882172 KM	SPACECRAFT ALTITUDE	=	48.6882172 KM
MEAN ALTITUDE RATE	=	0.1092435 KM/SEC	TIME FROM PERIAPSIS	=	214.4513912 SEC
HORIZONTAL VELOCITY	=	1.9039740 KM/SEC	TRUE ANOMALY	=	13.1725389 DEG
SCALE FACTOR (HIGH)	=	0.0125287 M/KM	TILT DISTANCE (HIGH)	=	24.9652882 MM
SCALE FACTOR (LOW)	=	0.0016431 M/KM	TILT DISTANCE (LOW)	=	3.2741362 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0391054 RAD/SEC	SWING ANGLE	=	272.5564156 DEG
EMISSION ANGLE	=	2.4091191 DEG	INCIDENCE ANGLE	=	51.8409843 DEG
PHASE ANGLE	=	54.1234241 DEG	NORTH DEVIATION ANGLE	=	348.7336540 DEG
TILT ANGLE	=	2.3436194 DEG	RESOLUTION CONSTANT	=	1.0565343 MTR
TILT AZIMUTH	=	103.8338566 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	84.8960571 DEG
SUN ANGLE AT NADIR	=	51.9029374 DEG	SUN ARC AT NADIR	=	1578.9438934 KM
LONGITUDE DISTANCE TO TARGET	=	1.4091133 DEG	LATITUDE DISTANCE TO TARGET	=	-0.0221369 DEG
LONGITUDE ARC LENGTH TO TARGET	=	42.8667607 KM	LATITUDE ARC LENGTH TO TARGET	=	-0.6734294 KM
FORWARD OVERLAP RATIO	=	-302.9611588 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	9.2999657 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.76836283	-0.63693728	0.06268539	65.19650841
CAMERA AXIS	-0.99609355	0.06448220	0.06032982	48.73011780
C1	-0.96453863	0.13962202	0.22398870	49.55634155
C2	-0.98973341	0.07425010	-0.12212583	49.69664001
C3	-0.99435313	-0.01281299	-0.10534563	49.50822449
C4	-0.96915834	0.05255891	0.24076891	49.46824646

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1786.7231903	-44.4209847	-125.6724014	0.1304975	1.8678127	-0.3623501

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LONG  -0.6844 DEG          LONG  -0.9308 DEG
LATI  -3.4912 DEG          LATI  -4.7950 DEG        *
                                                   ***              LONG  -1.2351 DEG          LONG  -1.3429 DEG
        *          40.35993 KM      *             * * *             LATI  -3.7682 DEG          LATI  -4.3347 DEG
      (1)                          (2)           *  *  *
                                                   *                        *        17.54250 KM      *
                                                   *                       (1)                       (2)
            LOW RESOLUTION                         *
                                                   *                                HIGH RESOLUTION
                                                   *
   33.62717 KM                33.68945 KM         *  DIRECTION      4.40443 KM                 4.40801 KM
                                                   *  OF MOTION
                                                   *
                                                   *                       (4)                       (3)
                                                   *                        *        17.47602 KM      *
      (4)                          (3)             *
        *          39.20228 KM      *             *                LONG  -1.3778 DEG          LONG  -1.4854 DEG
                                                   *                LATI  -3.7422 DEG          LATI  -4.3066 DEG
LONG  -1.7757 DEG          LONG  -2.0186 DEG       *
LATI  -3.3036 DEG          LATI  -4.5693 DEG       *
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FRAME 146

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************************************
*   PHOTO FRAME NUMBER   7 OF   8   *
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147

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	26	23	33	19.198

LONGITUDE OF NADIR POINT	=	-0.8442955 DEG	LATITUDE OF NADIR POINT	=	-4.1321560 DEG
LONG OF CAMERA AXIS INTERSECT	=	-0.7624540 DEG	LATI OF CAMERA AXIS INTERSECT	=	-4.1512600 DEG
SPACECRAFT RADIUS	=	1792.7711487 KM	SPACECRAFT ALTITUDE	=	49.7711487 KM
MEAN ALTITUDE RATE	=	0.1140401 KM/SEC	TIME FROM PERIAPSIS	=	224.1438370 SEC
HORIZONTAL VELOCITY	=	1.9028199 KM/SEC	TRUE ANOMALY	=	13.7622788 DEG
SCALE FACTOR (HIGH)	=	0.0122561 M/KM	TILT DISTANCE (HIGH)	=	31.2539372 MM
SCALE FACTOR (LOW)	=	0.0016074 M/KM	TILT DISTANCE (LOW)	=	4.0988770 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0382314 RAD/SEC	SWING ANGLE	=	271.9392662 DEG
EMISSION ANGLE	=	3.0168716 DEG	INCIDENCE ANGLE	=	51.2559571 DEG
PHASE ANGLE	=	54.1234283 DEG	NORTH DEVIATION ANGLE	=	348.7798576 DEG
TILT ANGLE	=	2.9330397 DEG	RESOLUTION CONSTANT	=	1.0800339 MTR
TILT AZIMUTH	=	103.1760758 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	84.7264166 DEG
SUN ANGLE AT NADIR	=	51.3354721 DEG	SUN ARC AT NADIR	=	1561.6809845 KM
LONGITUDE DISTANCE TO TARGET	=	1.9890045 DEG	LATITUDE DISTANCE TO TARGET	=	-0.1321560 DEG
LONGITUDE ARC LENGTH TO TARGET	=	60.5076823 KM	LATITUDE ARC LENGTH TO TARGET	=	-4.0203280 KM
FORWARD OVERLAP RATIO	=	-310.7950897 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	9.7003698 SEC			

DIRECTION COSINES TO TARGET	X	Y	Z	MAGNITUDE (KM)
CAMERA AXIS	-0.64925621	-0.75446582	0.09616499	78.99516392
	-0.99609202	0.06450612	0.06032952	49.83830261
C1	-0.96453534	0.13964517	0.22398841	50.81062317
C2	-0.98973159	0.07427390	-0.12212614	50.85191345
C3	-0.99435339	-0.01278909	-0.10534593	50.61038208
C4	-0.96915715	0.05258217	0.24076861	50.56948853

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1787.9167175	-26.34792C9	-129.1821022	0.1157746	1.8680980	-0.3612962

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LONG  -0.0684 DEG          LONG  -0.3203 DEG
LATI  -3.5896 DEG          LATI  -4.9284 DEG          *
                                                     ***
      *          41.43688 KM      *                 * * *          LONG  -0.6343 DEG          LONG  -0.7442 DEG
     (1)                         (2)               *  *  *         LATI  -3.8753 DEG          LATI  -4.4551 DEG
                                                     *                                                  *
                                                     *                  *          17.95029 KM          *
                                                     *                 (1)                            (2)
                LOW RESOLUTION                       *
                                                     *                                HIGH RESOLUTION
                                                     *
   34.41977 KM                34.48368 KM           *  DIRECTION      4.50699 KM                  4.51066 KM
                                                     *  OF MOTION
                                                     *
                                                     *                 (4)                            (3)
                                                     *                  *          17.86507 KM          *
      (4)                        (3)                 *
       *          39.95232 KM      *                 *                LONG  -0.7805 DEG          LONG  -0.8901 DEG
                                                     *                LATI  -3.8491 DEG          LATI  -4.4261 DEG
LONG  -1.1865 DEG          LONG  -1.4332 DEG         *
LATI  -3.4033 DEG          LATI  -4.6934 DEG         *
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FRAME 147

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*************************************
*   PHOTO FRAME NUMBER   8 OF   8   *
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148

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	26	23	33	28.898

LONGITUDE OF NADIR POINT	=	-0.2649612 DEG	LATITUDE OF NADIR POINT	=	-4.2416148 DEG
LONG OF CAMERA AXIS INTERSECT	=	-0.1642148 DEG	LATI OF CAMERA AXIS INTERSECT	=	-4.2642915 DEG
SPACECRAFT RADIUS	=	1793.9005280 KM	SPACECRAFT ALTITUDE	=	50.9005280 KM
MEAN ALTITUDE RATE	=	0.1186187 KM/SEC	TIME FROM PERIAPSIS	=	233.8370552 SEC
HORIZONTAL VELOCITY	=	1.9016178 KM/SEC	TRUE ANOMALY	=	14.3513335 DEG
SCALE FACTOR (HIGH)	=	0.0119842 M/KM	TILT DISTANCE (HIGH)	=	37.5445113 MM
SCALE FACTOR (LOW)	=	0.0015717 M/KM	TILT DISTANCE (LOW)	=	4.9238704 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0372595 RAD/SEC	SWING ANGLE	=	271.5289612 DEG
EMISSION ANGLE	=	3.6250066 DEG	INCIDENCE ANGLE	=	50.6712327 DEG
PHASE ANGLE	=	54.1234331 DEG	NORTH DEVIATION ANGLE	=	348.8281898 DEG
TILT ANGLE	=	3.5220195 DEG	RESOLUTION CONSTANT	=	1.1045415 MTR
TILT AZIMUTH	=	102.7240238 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	84.5521975 DEG
SUN ANGLE AT NADIR	=	50.7690759 DEG	SUN ARC AT NADIR	=	1544.4505920 KM
LONGITUDE DISTANCE TO TARGET	=	2.5683388 DEG	LATITUDE DISTANCE TO TARGET	=	-0.2416148 DEG
LONGITUDE ARC LENGTH TO TARGET	=	78.1316614 KM	LATITUDE ARC LENGTH TO TARGET	=	-7.3501859 KM
FORWARD OVERLAP RATIO	=	-301.3108555 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	9.6997261 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.55492558	-0.82353935	0.11764399	94.31766891
CAMERA AXIS	-0.99609049	0.06453001	0.06032924	50.99966431
C1	-0.96453205	0.13966826	0.22398815	52.02037048
C2	-0.98572977	0.07429766	-0.12212642	52.06268311
C3	-0.99435367	-0.01276522	-0.10534623	51.76548767
C4	-0.96915556	0.05260538	0.24076834	51.72364807

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1788.9679413	-8.2727600	-132.6814404	0.1010698	1.8682339	-0.3602152

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LONG   0.5489 DEG          LONG   0.2911 DEG
LATI  -3.6869 DEG          LATI  -5.0624 DEG          *
                                                     ***          LONG  -0.0332 DEG          LONG  -0.1453 DEG
      *          42.56704 KM      *                 * * *         LATI  -3.9817 DEG          LATI  -4.5754 DEG
     (1)                         (2)               *  *  *
                                                     *                     *        18.37767 KM      *
                                                     *                    (1)                       (2)
            LOW RESOLUTION                           *                                                          FRAME 148
                                                     *                          HIGH RESOLUTION
                                                     *
   35.25428 KM                35.32194 KM           *  DIRECTION      4.61502 KM                4.61878 KM
                                                     *  OF MOTION
                                                     *
                                                     *                    (4)                       (3)
                                                     *                     *        18.27280 KM      *
     (4)                        (3)                  *
      *          40.73955 KM      *                  *          LONG  -0.1829 DEG          LONG  -0.2946 DEG
                                                     *          LATI  -3.9553 DEG          LATI  -4.5455 DEG
LONG  -0.5975 DEG          LONG  -0.8481 DEG         *
LATI  -3.5018 DEG          LATI  -4.8175 DEG         *
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*   PHOTO FRAME NUMBER   149        *
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	27	2	53	37.100

LONGITUDE OF NADIR POINT	-24.2688065	DEG	LATITUDE OF NADIR POINT	0.1379903	DEG
LONG OF CAMERA AXIS INTERSECT	-24.3365099	DEG	LATI OF CAMERA AXIS INTERSECT	-0.1040588	DEG
SPACECRAFT RADIUS	1784.7057800	KM	SPACECRAFT ALTITUDE	46.6157837	KM
MEAN ALTITUDE RATE	-0.0688034	KM/SEC	TIME FROM PERIAPSIS	-134.0083389	SEC
HORIZONTAL VELOCITY	1.9115276	KM/SEC	TRUE ANOMALY	351.7477913	DEG
SCALE FACTOR HIGH	0.0130857	M/KM	TILT DISTANCE HIGH	99.7355127	MM
SCALE FACTOR LOW	0.0017162	M/KM	TILT DISTANCE LOW	13.0800673	MM
IMAGE MOTION COMPENSATION V/H	0.0410060	RAD/SEC	SWING ANGLE	13.9423188	DEG
EMISSION ANGLE	9.5370891	DEG	INCIDENCE ANGLE	72.8641109	DEG
PHASE ANGLE	70.2736435	DEG	NORTH DEVIATION ANGLE	358.1166115	DEG
TILT ANGLE	9.2857461	DEG	RESOLUTION CONSTANT	1.0115625	MTR
TILT AZIMUTH	195.6284485	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.4488649	DEG
SUN ANGLE AT NADIR	72.7897177	DEG	SUN ARC AT NADIR	2208.1047058	KM
LONGITUDE DISTANCE TO TARGET	0.2311935	DEG	LATITUDE DISTANCE TO TARGET	0.0709903	DEG
LONGITUDE ARC LENGTH TO TARGET	7.0133470	KM	LATITUDE ARC LENGTH TO TARGET	2.1535189	KM
FORWARD OVERLAP RATIO	0.	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	0.	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.96151441	0.27052949	-0.04799827	47.20495510
CAMERA AXIS	-0.91720420	0.36584886	-0.15776902	47.25170898
C1	-0.89660452	0.44277997	0.00680068	46.64739990
C2	-0.87230337	0.35641541	-0.33474602	49.54275513
C3	-0.90714549	0.27668891	-0.31706516	49.59960937
C4	-0.93144663	0.36305347	0.02448155	46.69770813

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1626.9817200	-733.5440063	4.2982279	0.7080510	1.7356054	-0.3808012

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LONG -23.7261 DEG          LONG -23.9110 DEG
LATI   0.3850 DEG          LATI  -0.8935 DEG        *
                                                   ***          LONG -24.2148 DEG          LONG -24.3237 DEG
        *        39.18881 KM        *             * * *         LATI   0.1521 DEG          LATI  -0.4050 DEG
        1                           2            * * *
                                                   *                     *        17.22144 KM        *
                                                   *                     1                           2
                LOW RESOLUTION                     *                                                          FRAME 149
                                                   *                          HIGH RESOLUTION
                                                   *
   30.50534 KM                35.00449 KM          *  DIRECTION      4.14416 KM                4.40158 KM
                                                   *  OF MOTION
                                                   *
                                                   *                     4                           3
                                                   *                     *        17.24117 KM        *
        4                           3              *
        *        39.53821 KM        *              *          LONG -24.3487 DEG          LONG -24.4660 DEG
                                                   *          LATI   0.1794 DEG          LATI  -0.3767 DEG
LONG -24.7111 DEG          LONG -25.0436 DEG       *
LATI   0.5880 DEG          LATI  -0.6722 DEG       *
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*   PHOTO FRAME NUMBER    150       *
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	27	6	18	38.300

LONGITUDE OF NADIR POINT	-30.6661339	DEG	LATITUDE OF NADIR POINT	1.0403249	DEG
LONG OF CAMERA AXIS INTERSECT	-30.8886695	DEG	LATI OF CAMERA AXIS INTERSECT	0.7700534	DEG
SPACECRAFT RADIUS	1791.6260834	KM	SPACECRAFT ALTITUDE	53.5360870	KM
MEAN ALTITUDE RATE	-0.1070883	KM/SEC	TIME FROM PERIAPSIS	-210.2814388	SEC
HORIZONTAL VELOCITY	1.9041674	KM/SEC	TRUE ANOMALY	347.0862617	DEG
SCALE FACTOR HIGH	0.0113942	M/KM	TILT DISTANCE HIGH	120.9318218	MM
SCALE FACTOR LOW	0.0014943	M/KM	TILT DISTANCE LOW	15.8599111	MM
IMAGE MOTION COMPENSATION V/H	0.0355679	RAD/SEC	SWING ANGLE	38.0376692	DEG
EMISSION ANGLE	11.5635115	DEG	INCIDENCE ANGLE	77.6561899	DEG
PHASE ANGLE	70.2736263	DEG	NORTH DEVIATION ANGLE	358.0286255	DEG
TILT ANGLE	11.2134275	DEG	RESOLUTION CONSTANT	1.1617331	MTR
TILT AZIMUTH	219.4661140	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.6714687	DEG
SUN ANGLE AT NADIR	77.4273272	DEG	SUN ARC AT NADIR	2348.7884216	KM
LONGITUDE DISTANCE TO TARGET	0.5538661	DEG	LATITUDE DISTANCE TO TARGET	-0.0896751	DEG
LONGITUDE ARC LENGTH TO TARGET	16.8017473	KM	LATITUDE ARC LENGTH TO TARGET	-2.7203298	KM
FORWARD OVERLAP RATIO	0.	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	0.	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.97277601	0.22965525	0.03106929	56.25507450
CAMERA AXIS	-0.90429278	0.39250532	-0.16791106	54.61108398
C1	-0.88291301	0.46952371	-0.00348172	53.60166931
C2	-0.85806058	0.38093120	-0.34441759	57.16677856
C3	-0.89544576	0.30236708	-0.32672781	57.69081116
C4	-0.92029817	0.39095958	0.01420805	54.06112671

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1540.8201599	-913.6405182	32.5289664	0.8656801	1.6564135	-0.3797551

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LONG -30.2009 DEG          LONG -30.4052 DEG
LATI   1.3273 DEG          LATI  -0.1122 DEG        *
                                                   ***          LONG -30.7482 DEG.        LONG -30.8734 DEG
        *        44.10399 KM       *             * * *          LATI   1.0662 DEG         LATI   0.4233 DEG
        1                          2           *  *  *
                                                   *                   *        19.87035 KM       *
                                                   *                   1                          2
                LOW RESOLUTION                     *                                                          FRAME 150
                                                   *                          HIGH RESOLUTION
                                                   *
  35.31444 KM                41.02890 KM           *  DIRECTION      4.80145 KM                 5.12566 KM
                                                   *  OF MOTION
                                                   *
                                                   *                   4                          3
                                                   *                   *        20.05253 KM       *
        4                          3               *
        *        47.35003 KM       *               *          LONG -30.9034 DEG         LONG -31.0401 DEG
                                                   *          LATI   1.0977 DEG         LATI   0.4510 DEG
LONG -31.3372 DEG          LONG -31.7447 DEG       *
LATI   1.5820 DEG          LATI   0.0752 DEG       *
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*   PHOTO FRAME NUMBER      151     *
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	27	9	47	24.900

LONGITUDE OF NADIR POINT	-23.6254196	DEG	LATITUDE OF NADIR POINT	-0.7935493	DEG
LONG OF CAMERA AXIS INTERSECT	-23.6151841	DEG	LATI OF CAMERA AXIS INTERSECT	-0.4207226	DEG
SPACECRAFT RADIUS	1781.4877167	KM	SPACECRAFT ALTITUDE	43.3977203	KM
MEAN ALTITUDE RATE	-0.0321843	KM/SEC	TIME FROM PERIAPSIS	-62.4846773	SEC
HORIZONTAL VELOCITY	1.9150968	KM/SEC	TRUE ANOMALY	356.1484680	DEG
SCALE FACTOR HIGH	0.0140560	M/KM	TILT DISTANCE HIGH	158.8956814	MM
SCALE FACTOR LOW	0.0018434	M/KM	TILT DISTANCE LOW	20.8387780	MM
IMAGE MOTION COMPENSATION V/H	0.0441290	RAD/SEC	SWING ANGLE	188.7375526	DEG
EMISSION ANGLE	14.9731975	DEG	INCIDENCE ANGLE	68.6513910	DEG
PHASE ANGLE	70.2736120	DEG	NORTH DEVIATION ANGLE	7.1136817	DEG
TILT ANGLE	14.6002272	DEG	RESOLUTION CONSTANT	0.9417305	MTR
TILT AZIMUTH	1.5714983	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.0544538	DEG
SUN ANGLE AT NADIR	68.6737986	DEG	SUN ARC AT NADIR	2083.2467041	KM
LONGITUDE DISTANCE TO TARGET	0.8745804	DEG	LATITUDE DISTANCE TO TARGET	-0.6935493	DEG
LONGITUDE ARC LENGTH TO TARGET	26.5307398	KM	LATITUDE ARC LENGTH TO TARGET	-21.0390904	KM
FORWARD OVERLAP RATIO	0.	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	0.	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.91177008	-0.12478027	0.39128659	55.30314350
CAMERA AXIS	-0.88054709	0.39271208	0.26535644	44.88391113
C1	-0.79369110	0.44126779	0.41873281	47.82916260
C2	-0.90699869	0.41235822	0.08552242	43.51716614
C3	-0.93796998	0.33102959	0.10311028	43.69563293
C4	-0.82466240	0.35993916	0.43632067	48.04541016

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1632.0158844	-713.8723297	-24.6 29181	0.7178280	1.7345263	-0.3804910

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LONG -22.9289 DEG          LONG -23.2811 DEG
LATI   0.1363 DEG          LATI  -1.0595 DEG          *
                                                     ***                LONG -23.4895 DEG          LONG -23.6049 DEG
        *          37.81296 KM        *             * * *               LATI  -0.1531 DEG          LATI  -0.6907 DEG
        1                             2            * * *
                                                     *                          *        16.67783 KM        *
                                                     *                          1                           2
                LOW RESOLUTION                       *                                                          FRAME 151
                                                     *                                HIGH RESOLUTION
                                                     *
   34.77764 KM                27.98537 KM           *  DIRECTION       4.26162 KM                 3.87573 KM
                                                     *  OF MOTION
                                                     *
                                                     *                          4                           3
                                                     *                          *        16.75470 KM        *
        4                             3              *
        *          39.20689 KM        *              *                LONG -23.6265 DEG          LONG -23.7300 DEG
                                                     *                LATI  -0.1223 DEG          LATI  -0.6648 DEG
LONG -24.0439 DEG          LONG -24.1865 DEG         *
LATI   0.4030 DEG          LATI  -0.8816 DEG         *
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*************************************
*   PHOTO FRAME NUMBER   153        *
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	27	23	30	54.698

LONGITUDE OF NADIR POINT	-36.8924942	DEG	LATITUDE OF NADIR POINT	0.3422420	DEG
LONG OF CAMERA AXIS INTERSECT	-37.0299554	DEG	LAT OF CAMERA AXIS INTERSECT	0.4148887	DEG
SPACECRAFT RADIUS	1788.2784576	KM	SPACECRAFT ALTITUDE	50.1884613	KM
MEAN ALTITUDE RATE	-0.0814903	KM/SEC	TIME FROM PERIAPSIS	-159.6942654	SEC
HORIZONTAL VELOCITY	1.9080955	KM/SEC	TRUE ANOMALY	350.1894150	DEG
SCALE FACTOR HIGH	0.0121542	M/KM	TILT DISTANCE HIGH	57.3184385	MM
SCALE FACTOR LOW	0.0015940	M/KM	TILT DISTANCE LOW	7.5171723	MM
IMAGE MOTION COMPENSATION V/H	0.0380186	RAD/SEC	SWING ANGLE	119.9329796	DEG
EMISSION ANGLE	5.5235029	DEG	INCIDENCE ANGLE	75.0701361	DEG
PHASE ANGLE	70.2736120	DEG	NORTH DEVIATION ANGLE	2.1812850	DEG
TILT ANGLE	5.3680164	DEG	RESOLUTION CONSTANT	1.0890896	MTR
TILT AZIMUTH	297.8555870	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.5131979	DEG
SUN ANGLE AT NADIR	74.9345903	DEG	SUN ARC AT NADIR	2273.1702881	KM
LONGITUDE DISTANCE TO TARGET	1.4275060	DEG	LATITUDE DISTANCE TO TARGET	0.7622420	DEG
LONGITUDE ARC LENGTH TO TARGET	43.3039551	KM	LATITUDE ARC LENGTH TO TARGET	23.1229105	KM
FORWARD OVERLAP RATIO	0.	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	0.	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.94168109	-0.05894059	-0.33130459	70.69791508
CAMERA AXIS	-0.84610385	0.53167862	0.03776392	50.41595459
C1	-0.78469109	0.58637762	0.20105024	51.33171082
C2	-0.83353132	0.53320663	-0.14462448	50.83895874
C3	-0.87923482	0.45520776	-0.12678469	51.26539612
C4	-0.83039459	0.51237875	0.21889003	51.76661682

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1430.1740723	-1073.5118408	10.681790	1.0586943	1.5423567	-0.3844108

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LONG -36.3447 DEG          LONG -36.6209 DEG
LATI   0.9513 DEG          LATI  -0.3344 DEG
                                   *
                                  ***                 LONG -36.8960 DEG          LONG -37.0164 DEG
        *          39.89301 KM     *                   LATI   0.6923 DEG          LATI   0.1097 DEG
        1                          2                  * * *
                                   *                        *          18.04648 KM      *
                                   *                        1                           2
                                   *
            LOW RESOLUTION         *                                                                  FRAME 153
                                   *                                HIGH RESOLUTION
                                   *
   35.39499 KM                34.61186 KM             *  DIRECTION       4.59741 KM                 4.55268 KM
                                   *                   *  OF MOTION
                                   *
                                   *                        4                           3
                                   *                        *          18.19874 KM      *
        4                          3                   *
        *          42.54878 KM     *                   *                 LONG -37.0439 DEG          LONG -37.1638 DEG
                                   *                   *                 LATI   0.7257 DEG          LATI   0.1379 DEG
LONG -37.4773 DEG          LONG -37.7459 DEG           *
LATI   1.2325 DEG          LATI  -0.1442 DEG           *
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*   PHOTO FRAME NUMBER   154    *
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	27	23	31	4.699

LONGITUDE OF NADIR POINT	-36.2948990	DEG	LATITUDE OF NADIR POINT	0.2191611	DEG
LONG OF CAMERA AXIS INTERSECT	-36.4130492	DEG	LATI OF CAMERA AXIS INTERSECT	0.2871061	DEG
SPACECRAFT RADIUS	1787.4886627	KM	SPACECRAFT ALTITUDE	49.3986664	KM
MEAN ALTITUDE RATE	-0.0764631	KM/SEC	TIME FROM PERIAPSIS	-149.7063637	SEC
HORIZONTAL VELOCITY	1.9089435	KM/SEC	TRUE ANOMALY	350.8002625	DEG
SCALE FACTOR HIGH	0.0123485	M/KM	TILT DISTANCE HIGH	51.0512934	MM
SCALE FACTOR LOW	0.0016195	M/KM	TILT DISTANCE LOW	6.6952516	MM
IMAGE MOTION COMPENSATION V/H	0.0386436	RAD/SEC	SWING ANGLE	121.9844666	DEG
EMISSION ANGLE	4.9202784	DEG	INCIDENCE ANGLE	74.4553528	DEG
PHASE ANGLE	70.2736158	DEG	NORTH DEVIATION ANGLE	2.1687955	DEG
TILT ANGLE	4.7839723	DEG	RESOLUTION CONSTANT	1.0719510	MTR
TILT AZIMUTH	299.9019737	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.4780054	DEG
SUN ANGLE AT NADIR	74.3390341	DEG	SUN ARC AT NADIR	2255.1038513	KM
LONGITUDE DISTANCE TO TARGET	2.0251012	DEG	LATITUDE DISTANCE TO TARGET	0.6391611	DEG
LONGITUDE ARC LENGTH TO TARGET	61.4322405	KM	LATITUDE ARC LENGTH TO TARGET	19.3892043	KM
FORWARD OVERLAP RATIO	-324.4142036	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	10.0003481	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.94105963	-0.23929505	-0.23904946	81.89936829
CAMERA AXIS	-0.84609076	0.53169947	0.03776358	49.57629395
C1	-0.78467645	0.58639737	0.20104969	50.50160217
C2	-0.83351840	0.53322672	-0.14462484	50.01683044
C3	-0.87922370	0.45922902	-0.12678481	50.38598633
C4	-0.83038177	0.51239967	0.21888972	50.87808228

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1440.6713715	-1058.0807037	6.8372492	1.0464169	1.5514799	-0.3844921

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LONG -35.7371 DEG          LONG -36.0098 DEG
LATI   0.8168 DEG          LATI  -0.4522 DEG        *
                                                   ***          LONG -36.2813 DEG          LONG -36.3998 DEG
        *        39.37264 KM        *             * * *         LATI   0.5601 DEG          LATI  -0.0131 DEG
        1                           2           *  *  *
                                                 *                    *        17.75464 KM        *
                                                 *                    1                           2
            LOW RESOLUTION                       *                                                          FRAME 154
                                                 *                          HIGH RESOLUTION
                                                 *
   34.75361 KM              33.98732 KM          *  DIRECTION      4.51623 KM                 4.47240 KM
                                                 *  OF MOTION
                                                 *
                                                 *                    4                           3
                                                 *                    *        17.88644 KM        *
        4                           3            *
        *        41.67074 KM        *            *          LONG -36.4266 DEG          LONG -36.5446 DEG
                                                 *          LATI   0.5925 DEG          LATI   0.0148 DEG
LONG -36.8504 DEG          LONG -37.1137 DEG     *
LATI   1.0876 DEG          LATI  -0.2607 DEG     *
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[redacted]

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*   PHOTO FRAME NUMBER      55      *
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	27	23	31	14.599

LONGITUDE OF NADIR POINT	-35.7027321 DEG	LATITUDE OF NADIR POINT	0.0971671 DEG
LONG OF CAMERA AXIS INTERSECT	-35.8024168 DEG	LATI OF CAMERA AXIS INTERSECT	0.1606401 DEG
SPACECRAFT RADIUS	1786.7563019 KM	SPACECRAFT ALTITUDE	48.6663055 KM
MEAN ALTITUDE RATE	-0.0714730 KM/SEC	TIME FROM PERIAPSIS	-139.8180389 SEC
HORIZONTAL VELOCITY	1.9097308 KM/SEC	TRUE ANOMALY	351.4055367 DEG
SCALE FACTOR HIGH	0.0125343 M/KM	TILT DISTANCE HIGH	44.9335365 MM
SCALE FACTOR LOW	0.0016438 M/KM	TILT DISTANCE LOW	5.8929229 MM
IMAGE MOTION COMPENSATION V/H	0.0392413 RAD/SEC	SWING ANGLE	124.5735817 DEG
EMISSION ANGLE	4.3310822 DEG	INCIDENCE ANGLE	73.8469009 DEG
PHASE ANGLE	70.2736177 DEG	NORTH DEVIATION ANGLE	2.1589515 DEG
TILT ANGLE	4.2128864 DEG	RESOLUTION CONSTANT	1.0560588 MTR
TILT AZIMUTH	302.4848213 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.4402132 DEG
SUN ANGLE AT NADIR	73.7489643 DEG	SUN ARC AT NADIR	2237.2038574 KM
LONGITUDE DISTANCE TO TARGET	2.6172681 DEG	LATITUDE DISTANCE TO TARGET	0.5171671 DEG
LONGITUDE ARC LENGTH TO TARGET	79.3958569 KM	LATITUDE ARC LENGTH TO TARGET	15.6884680 KM
FORWARD OVERLAP RATIO	-327.1931839 PCT	SIDE OVERLAP RATIO	0. PCT
TIME BETWEEN PHOTOS	9.8999262 SEC		

DIRECTION COSINES TO TARGET	X	Y	Z	MAGNITUDE KM
CAMERA AXIS	-0.91560101	-0.3665966	-0.16532034	55.39572430
C1	-0.84607776	0.5317018	0.03776325	48.80186462
C2	-0.78466194	0.5864697	0.20104916	49.73687744
C3	-0.83350556	0.5332669	-0.14462519	49.25944519
C4	-0.87921265	0.4592014	-0.12678494	49.57406616
	-0.83036903	0.5124043	0.21888942	50.05773926

STATE VECTOR	X	Y	Z	X DOT	Y DOT	Z DOT
	1450.9436035	-1042.7134552	3.0301026	1.0341573	1.5603936	-0.3845400

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LONG -35.1349 DEG          LONG -35.4044 DEG
LATI   0.6842 DEG          LATI  -0.5695 DEG
                                   *
                                  ***
                                 * * *
*          38.89891 KM     *    * * *
1                          2
                                   *
                                   *
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*   PHOTO FRAME NUMBER   156        *
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	27	23	31	24.598

LONGITUDE OF NADIR POINT	-35.1042252 DEG	LATITUDE OF NADIR POINT	-0.0261460 DEG
LONG OF CAMERA AXIS INTERSECT	-35.1858726 DEG	LATI OF CAMERA AXIS INTERSECT	0.0329838 DEG
SPACECRAFT RADIUS	1786.0668945 KM	SPACECRAFT ALTITUDE	47.9768982 KM
MEAN ALTITUDE RATE	-0.0664214 KM/SEC	TIME FROM PERIAPSIS	-129.8325100 SEC
HORIZONTAL VELOCITY	1.9104727 KM/SEC	TRUE ANOMALY	352.0172501 DEG
SCALE FACTOR HIGH	0.0127144 M/KM	TILT DISTANCE HIGH	38.8817515 MM
SCALE FACTOR LOW	0.0016675 M/KM	TILT DISTANCE LOW	5.0992461 MM
IMAGE MOTION COMPENSATION V/H	0.0398207 RAD/SEC	SWING ANGLE	128.0052624 DEG
EMISSION ANGLE	3.7479665 DEG	INCIDENCE ANGLE	73.2326565 DEG
PHASE ANGLE	70.2736187 DEG	NORTH DEVIATION ANGLE	2.1515681 DEG
TILT ANGLE	3.6471321 DEG	RESOLUTION CONSTANT	1.0410987 MTR
TILT AZIMUTH	305.9089622 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.3990402 DEG
SUN ANGLE AT NADIR	73.1526766 DEG	SUN ARC AT NADIR	2219.1152344 KM
LONGITUDE DISTANCE TO TARGET	3.2157750 DEG	LATITUDE DISTANCE TO TARGET	0.3938540 DEG
LONGITUDE ARC LENGTH TO TARGET	97.5517998 KM	LATITUDE ARC LENGTH TO TARGET	11.9477171 KM
FORWARD OVERLAP RATIO	-338.2154541 PCT	SIDE OVERLAP RATIO	0. PCT
TIME BETWEEN PHOTOS	9.9997044 SEC		

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.88269105	-0.45740842	-0.10786127	110.56543827
CAMERA AXIS	-0.84606469	0.53174102	0.03776291	48.07696533
C1	-0.78464734	0.58643669	0.20104863	49.02215576
C2	-0.83349266	0.53326678	-0.14462554	48.55155945
C3	-0.87920153	0.45927139	-0.12678506	48.81306458
C4	-0.83035623	0.51244131	0.21888911	49.28883362

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1461.1943054	-1027.1052551	-0.8150219	1.0216730	1.5692736	-0.3845554

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LONG -34.5261 DEG          LONG -34.7926 DEG
LATI   0.5509 DEG          LATI  -0.6887 DEG        *
                                                   ***          LONG -35.0581 DEG          LONG -35.1731 DEG
        *        38.46267 KM        *             * * *         LATI   0.2980 DEG          LATI  -0.2583 DEG
        1                           2            *  *  *
                                                 *                     *        17.23452 KM        *
                                                 *                     1                           2
                LOW RESOLUTION                   *                                                              FRAME 156
                                                 *                          HIGH RESOLUTION
                                                 *
   33.62126 KM                32.88418 KM        *  DIRECTION      4.37243 KM                 4.33018 KM
                                                 *  OF MOTION
                                                 *
                                                 *                     4                           3
                                                 *                     *        17.32788 KM        *
        4                           3            *
        *        40.08926 KM        *            *          LONG -35.1989 DEG          LONG -35.3132 DEG
                                                 *          LATI   0.3288 DEG          LATI  -0.2309 DEG
LONG -35.6056 DEG          LONG -35.8592 DEG     *
LATI   0.8025 DEG          LATI  -0.4945 DEG     *
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*   PHOTO FRAME NUMBE   1 OF 16   *
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157

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	28		28	18.300

LONGITUDE OF NADIR POINT	=	-23.1952324 DEG	LATITUDE OF NADIR POINT	=	-3.2467679 DEG
LONG OF CAMERA AXIS INTERSECT	=	-23.1810434 DEG	LATI OF CAMERA AXIS INTERSECT	=	-3.2914775 DEG
SPACECRAFT RADIUS	=	1786.4337616 KM	SPACECRAFT ALTITUDE	=	45.9337616 KM
MEAN ALTITUDE RATE	=	0.0657972 KM/SEC	TIME FROM PERIAPSIS	=	128.6944790 SEC
HORIZONTAL VELOCITY	=	1.9102653 KM/SEC	TRUE ANOMALY	=	7.9098105 DEG
SCALE FACTOR (HIGH)	=	0.0132800 M/KM	TILT DISTANCE (HIGH)	=	18.9199550 MM
SCALE FACTOR (LOW)	=	0.0017416 M/KM	TILT DISTANCE (LOW)	=	2.4813056 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0415874 RAD/SEC	SWING ANGLE	=	329.8386116 DEG
EMISSION ANGLE	=	1.8234358 DEG	INCIDENCE ANGLE	=	57.8705645 DEG
PHASE ANGLE	=	58.3193197 DEG	NORTH DEVIATION ANGLE	=	347.4173317 DEG
TILT ANGLE	=	1.7765347 DEG	RESOLUTION CONSTANT	=	0.9967626 MTR
TILT AZIMUTH	=	162.4292526 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	86.1535368 DEG
SUN ANGLE AT NADIR	=	57.8816800 DEG	SUN ARC AT NADIR	=	1758.2981873 KM
LONGITUDE DISTANCE TO TARGET	=	-0.4452324 DEG	LATITUDE DISTANCE TO TARGET	=	0.5032321 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-13.5250273 KM	LATITUDE ARC LENGTH TO TARGET	=	15.2869096 KM
FORWARD OVERLAP RATIO	=	0. PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	0. SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.74936668	0.61261826	-0.25129355	50.36674976
CAMERA AXIS	-0.91510427	0.40230539	0.02710274	45.95643616
C1	-0.86438730	0.46507370	0.19115718	46.55743408
C2	-0.90061093	0.40600523	-0.15511193	47.02719116
C3	-0.93523303	0.32608965	-0.13785764	46.96180725
C4	-0.89900940	0.38515812	0.20841148	46.49337769

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1639.3973083	-702.4849167	-101.17 3062	0.7792259	1.7049432	-0.3733881

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LONG -22.5526 DEG          LONG -22.7812 DEG
LATI  -2.7901 DEG          LATI  -4.0107 DEG
                                   *
                                  ***
      *        37.72199 KM       * * *
     (1)                        (2)
                                  *
                                  *
            LOW RESOLUTION        *
                                  *
                                  *
  31.34240 KM              32.06746 KM
                                  *
                                  *
                                  *
                                  *
                                  *
     (4)                        (3)
      *        37.32361 KM       *
                                  *
LONG -23.5671 DEG          LONG -23.8178 DEG
LATI  -2.5961 DEG          LATI  -3.7990 DEG
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LONG -23.0617 DEG          LONG -23.1666 DEG
LATI  -3.0391 DEG          LATI  -3.5731 DEG
                                  *                 *
                              16.53042 KM           *
                                (1)                (2)
                                HIGH RESOLUTION
  DIRECTION          4.13129 KM                4.17295 KM
  OF MOTION
                                (4)                (3)
                                  *   16.50753 KM    *
LONG -23.1953 DEG          LONG -23.3015 DEG
LATI  -3.0131 DEG          LATI  -3.5461 DEG
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FRAME 157

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*   PHOTO FRAME NUMBER  2 OF 16   *
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158

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	28	6	28	20.500

LONGITUDE OF NADIR POINT	=	-23.0630722 DEG	LATITUDE OF NADIR POINT	=	-3.2728934 DEG
LONG OF CAMERA AXIS INTERSECT	=	-23.0453243 DEG	LATI OF CAMERA AXIS INTERSECT	=	-3.3184371 DEG
SPACECRAFT RADIUS	=	1786.5797882 KM	SPACECRAFT ALTITUDE	=	46.0797882 KM
MEAN ALTITUDE RATE	=	0.0669092 KM/SEC	TIME FROM PERIAPSIS	=	130.8908024 SEC
HORIZONTAL VELOCITY	=	1.9101093 KM/SEC	TRUE ANOMALY	=	8.0443616 DEG
SCALE FACTOR (HIGH)	=	0.0132379 M/KM	TILT DISTANCE (HIGH)	=	19.6515968 KM
SCALE FACTOR (LOW)	=	0.0017361 M/KM	TILT DISTANCE (LOW)	=	2.5772596 KM
IMAGE MOTION COMPENSATION (V/H)	=	0.0414522 RAD/SEC	SWING ANGLE	=	326.1651497 DEG
EMISSION ANGLE	=	1.8940322 DEG	INCIDENCE ANGLE	=	57.7369003 DEG
PHASE ANGLE	=	58.3193226 DEG	NORTH DEVIATION ANGLE	=	347.4251404 DEG
TILT ANGLE	=	1.8451873 DEG	RESOLUTION CONSTANT	=	0.9999314 MTR
TILT AZIMUTH	=	158.7500286 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	86.1239939 DEG
SUN ANGLE AT NADIR	=	57.7514801 DEG	SUN ARC AT NADIR	=	1754.3430481 KM
LONGITUDE DISTANCE TO TARGET	=	-0.3130722 DEG	LATITUDE DISTANCE TO TARGET	=	0.4771066 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-0.5103370 KM	LATITUDE ARC LENGTH TO TARGET	=	14.4932846 KM
FORWARD OVERLAP RATIO	=	-0.9176572 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.1999478 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.80006038	0.54981327	-0.24001824	49.30969000
CAMERA AXIS	-0.91510207	0.40231037	0.02710267	46.10432434
C1	-0.86438476	0.46507846	0.19115710	46.71238708
C2	-0.90060873	0.40601008	-0.15511199	47.18380737
C3	-0.93523127	0.32609469	-0.13785768	47.10784912
C4	-0.89900729	0.38516306	0.20841143	46.63796997

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1641.1048737	-698.7404480	-101.9989204	0.7761294	1.7062656	-0.3731964

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LONG -22.4143 DEG          LONG -22.6437 DEG
LATI  -2.8150 DEG          LATI  -4.0406 DEG        *
                                                   ***          LONG -22.9256 DEG          LONG -23.0308 DEG
      *        37.87578 KM      *                 * * *         LATI  -3.0652 DEG          LATI  -3.6010 DEG
     (1)                       (2)              *  *  *
                                                 *                     *        16.58546 KM       *
                                                 *                    (1)                        (2)
            LOW RESOLUTION                       *                                                          FRAME 158
                                                 *                              HIGH RESOLUTION
                                                 *
  31.44537 KM              32.17298 KM           *  DIRECTION      4.14476 KM              4.18656 KM
                                                 *  OF MOTION
                                                 *
                                                 *                    (4)                        (3)
                                                 *                     *        16.55887 KM       *
     (4)                       (3)               *
      *        37.41299 KM      *                *          LONG -23.0597 DEG          LONG -23.1661 DEG
                                                 *          LATI  -3.0392 DEG          LATI  -3.5738 DEG
LONG -23.4324 DEG          LONG -23.6835 DEG     *
LATI  -2.4214 DEG          LATI  -3.8272 DEG     *
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*   PHOTO FRAME NUMB R  3 OF 16   *
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159

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	28	6	28	22.700

LONGITUDE OF NADIR POINT	=	-22.9309883 DEG	LATITUDE OF NADIR POINT	=	-3.2989864 DEG
LONG OF CAMERA AXIS INTERSECT	=	-22.9096560 DEG	LATI OF CAMERA AXIS INTERSECT	=	-3.3453702 DEG
SPACECRAFT RADIUS	=	1786.7282104 KM	SPACECRAFT ALTITUDE	=	46.2282104 KM
MEAN ALTITUDE RATE	=	0.0680201 KM/SEC	TIME FROM PERIAPSIS	=	133.0860481 SEC
HORIZONTAL VELOCITY	=	1.9099509 KM/SEC	TRUE ANOMALY	=	8.1788236 DEG
SCALE FACTOR (HIGH)	=	0.0131954 M/KM	TILT DISTANCE (HIGH)	=	20.4569223 KM
SCALE FACTOR (LOW)	=	0.0017305 M/KM	TILT DISTANCE (LOW)	=	7.6823750 KM
IMAGE MOTION COMPENSATION (V/H)	=	0.0413157 RAD/SEC	SWING ANGLE	=	322.7700343 DEG
EMISSION ANGLE	=	1.9717924 DEG	INCIDENCE ANGLE	=	57.6033111 DEG
PHASE ANGLE	=	58.3193216 DEG	NORTH DEVIATION ANGLE	=	347.4330635 DEG
TILT ANGLE	=	1.9207479 DEG	RESOLUTION CONSTANT	=	1.0031522 MTR
TILT AZIMUTH	=	155.3490391 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	86.0942669 DEG
SUN ANGLE AT NADIR	=	57.6213756 DEG	SUN ARC AT NADIR	=	1750.3907928 KM
LONGITUDE DISTANCE TO TARGET	=	-0.1809883 DEG	LATITUDE DISTANCE TO TARGET	=	0.4510136 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-5.4979644 KM	LATITUDE ARC LENGTH TO TARGET	=	13.7006445 KM
FORWARD OVERLAP RATIO	=	-0.5382340 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.1999478 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.84695760	0.48090688	-0.22669669	48.58650637
CAMERA AXIS	-0.91509988	0.40231537	0.02710260	46.25498281
C1	-0.86438221	0.46508323	0.19115701	46.97008667
C2	-0.90060653	0.40601494	-0.15511207	47.34320068
C3	-0.93522950	0.32609975	-0.13785772	47.25660706
C4	-0.89900517	0.38516803	0.20841136	46.78524730

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1642.8048553	-694.9949112	-102.8197451	0.7730320	1.7075801	-0.3730032

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LONG -22.2761 DEG          LONG -22.5062 DEG
LATI  -2.8398 DEG          LATI  -4.0705 DEG        *
                                                   ***                LONG -22.7895 DEG        LONG -22.8950 DEG
      *          38.03203 KM      *               * * *               LATI  -3.0913 DEG        LATI  -3.6289 DEG
     (1)                         (2)             *  *  *
                                                   *                        *        16.64147 KM      *
                                                   *                      (1)                       (2)
                LOW RESOLUTION                     *                                                          FRAME 159
                                                   *                                HIGH RESOLUTION
                                                   *
  31.55042 KM                 32.28067 KM          *  DIRECTION      4.15849 KM                4.20045 KM
                                                   *  OF MOTION
                                                   *
                                                   *                      (4)                       (3)
                                                   *                       *        16.61114 KM      *
     (4)                         (3)               *
      *          37.50442 KM      *                *                LONG -22.9241 DEG        LONG -23.0308 DEG
                                                   *                LATI  -3.0652 DEG        LATI  -3.6016 DEG
LONG -23.2978 DEG          LONG -23.5494 DEG       *
LATI  -2.6466 DEG          LATI  -3.8554 DEG       *
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*   PHOTO FRAME NUMBER  4 OF 16   *
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160

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	28	6	28	24.800

LONGITUDE OF NADIR POINT	=	-22.8049736 DEG	LATITUDE OF NADIR POINT	=	-3.3238611 DEG
LONG OF CAMERA AXIS INTERSECT	=	-22.7802069 DEG	LATI OF CAMERA AXIS INTERSECT	=	-3.3710509 DEG
SPACECRAFT RADIUS	=	1786.8720856 KM	SPACECRAFT ALTITUDE	=	46.3720856 KM
MEAN ALTITUDE RATE	=	0.0690794 KM/SEC	TIME FROM PERIAPSIS	=	135.1805878 SEC
HORIZONTAL VELOCITY	=	1.9097973 KM/SEC	TRUE ANOMALY	=	8.3070058 DEG
SCALE FACTOR (HIGH)	=	0.0131545 M/KM	TILT DISTANCE (HIGH)	=	21.2878678 KM
SCALE FACTOR (LOW)	=	0.0017252 M/KM	TILT DISTANCE (LOW)	=	2.7918515 KM
IMAGE MOTION COMPENSATION (V/H)	=	0.0411842 RAD/SEC	SWING ANGLE	=	319.7800674 DEG
EMISSION ANGLE	=	2.0519971 DEG	INCIDENCE ANGLE	=	57.4759658 DEG
PHASE ANGLE	=	58.3193226 DEG	NORTH DEVIATION ANGLE	=	347.4407349 DEG
TILT ANGLE	=	1.9987052 DEG	RESOLUTION CONSTANT	=	1.0062743 MTR
TILT AZIMUTH	=	152.3536892 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	86.0657177 DEG
SUN ANGLE AT NADIR	=	57.4972749 DEG	SUN ARC AT NADIR	=	1746.6209412 KM
LONGITUDE DISTANCE TO TARGET	=	-0.0549736 DEG	LATITUDE DISTANCE TO TARGET	=	0.4261389 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-1.6699582 KM	LATITUDE ARC LENGTH TO TARGET	=	12.9450148 KM
FORWARD OVERLAP RATIO	=	4.3742874 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.0998478 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.88688330	0.41038559	-0.21218316	48.22093534
CAMERA AXIS	-0.91509779	0.40232012	0.02710254	46.40107727
C1	-0.86437978	0.46508776	0.19115692	47.02313232
C2	-0.90060443	0.40601956	-0.15511212	47.49789429
C3	-0.93522782	0.32610455	-0.13785775	47.40107727
C4	-0.89900317	0.38517275	0.20841131	46.92828369

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1644.4204865	-691.4185028	-103.6024752	0.7700744	1.7088273	-0.3728175

```
LONG -22.1442 DEG          LONG -22.3750 DEG
LATI  -2.8634 DEG          LATI  -4.0991 DEG          *
                                                     ***          LONG -22.6597 DEG          LONG -22.7655 DEG
      *        38.18345 KM      *                   * * *         LATI  -3.1161 DEG          LATI  -3.6555 DEG
     (1)                       (2)                *  *  *
                                                     *                     *        16.69583 KM      *
                                                     *                    (1)                       (2)
            LOW RESOLUTION                           *
                                                     *                          HIGH RESOLUTION
                                                     *
  31.65266 KM                32.38545 KM             *  DIRECTION      4.17185 KM                4.21395 KM
                                                     *  OF MOTION
                                                     *
                                                     *                    (4)                       (3)
                                                     *                     *        16.66195 KM      *
     (4)                       (3)                   *
      *       37.59357 KM      *                     *          LONG -22.7947 DEG          LONG -22.9017 DEG
                                                     *          LATI  -3.0900 DEG          LATI  -3.6280 DEG
LONG -23.1694 DEG          LONG -23.4214 DEG         *
LATI  -2.5707 DEG          LATI  -3.8824 DEG         *
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FRAME 160

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*******************************************
*   PHOTO FRAME NUMBER  5 OF 16           *  161
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	28	6	28	27.000

LONGITUDE OF NADIR POINT	= -22.6728592	DEG	LATITUDE OF NADIR POINT	= -3.3499226	DEG
LONG OF CAMERA AXIS INTERSECT	= -22.6444604	DEG	LATI OF CAMERA AXIS INTERSECT	= -3.3979636	DEG
SPACECRAFT RADIUS	= 1787.0253754	KM	SPACECRAFT ALTITUDE	= 46.5253754	KM
MEAN ALTITUDE RATE	= 0.0701897	KM/SEC	TIME FROM PERIAPSIS	= 137.3768978	SEC
HORIZONTAL VELOCITY	= 1.9096337	KM/SEC	TRUE ANOMALY	= 8.4415790	DEG
SCALE FACTOR (HIGH)	= 0.0131111	M/KM	TILT DISTANCE (HIGH)	= 22.2160938	KM
SCALE FACTOR (LOW)	= 0.0017195	M/KM	TILT DISTANCE (LOW)	= 2.9135861	KM
IMAGE MOTION COMPENSATION (V/H)	= 0.0410450	RAD/SEC	SWING ANGLE	= 316.8934593	DEG
EMISSION ANGLE	= 2.1415573	DEG	INCIDENCE ANGLE	= 57.3422437	DEG
PHASE ANGLE	= 58.3193240	DEG	NORTH DEVIATION ANGLE	= 347.4488945	DEG
TILT ANGLE	= 2.0857804	DEG	RESOLUTION CONSTANT	= 1.0096006	MTR
TILT AZIMUTH	= 149.4613380	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	= 86.0355954	DEG
SUN ANGLE AT NADIR	= 57.3671832	DEG	SUN ARC AT NADIR	= 1742.6690826	KM
LONGITUDE DISTANCE TO TARGET	= 0.0771408	DEG	LATITUDE DISTANCE TO TARGET	= 0.4000774	DEG
LONGITUDE ARC LENGTH TO TARGET	= 2.3433415	KM	LATITUDE ARC LENGTH TO TARGET	= 12.1533345	KM
FORWARD OVERLAP RATIO	= 0.0701796	PCT	SIDE OVERLAP RATIO	= 0.	PCT
TIME BETWEEN PHOTOS	= 2.2002697	SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.92254887	0.33280111	-0.19531259	48.18586111
CAMERA AXIS	-0.91509561	0.40232509	0.02710247	46.55703735
C1	-0.86437725	0.46509252	0.19115683	47.18640137
C2	-0.90060224	0.40602440	-0.15511220	47.66290283
C3	-0.93522605	0.32610959	-0.13785780	47.55529785
C4	-0.89900106	0.38517769	0.20841123	47.08097839

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1646.1079559	-687.6656342	-104.4228401	0.7669708	1.7101278	-0.3726213

```
LONG -22.0058 DEG          LONG -22.2374 DEG
LATI  -2.8881 DEG          LATI  -4.1291 DEG
                                                  *
                                                 ***          LONG -22.5236 DEG          LONG -22.6296 DEG
   *          38.34474 KM        *              * * *         LATI  -3.1422 DEG          LATI  -3.6934 DEG
  (1)                          (2)             *  *  *
                                                  *                        *        16.75382 KM        *
                                                  *                       (1)                        (2)
          LOW RESOLUTION                          *                                                   *
                                                  *                                HIGH RESOLUTION    *
                                                  *                                                   *
  31.76196 KM                32.49750 KM          *  DIRECTION      4.18612 KM                4.22837 KM
                                                  *  OF MOTION
                                                  *
                                                  *                       (4)                        (3)
                                                  *                        *        16.71616 KM        *
   (4)                         (3)                *
    *          37.68908 KM       *               *          LONG -22.6591 DEG          LONG -22.7663 DEG
                                                  *          LATI  -3.1160 DEG          LATI  -3.6558 DEG
LONG -23.0347 DEG          LONG -23.2872 DEG      *
LATI  -2.6958 DEG          LATI  -3.9106 DEG      *
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FRAME 161

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*********************************
*   PHOTO FRAME NUMBER  6 OF 16   *
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162

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	28	6	28	29.200

LONGITUDE OF NADIR POINT	=	-22.5408211 DEG	LATITUDE OF NADIR POINT	=	-3.3759507 DEG
LONG OF CAMERA AXIS INTERSECT	=	-22.5087686 DEG	LATI OF CAMERA AXIS INTERSECT	=	-3.4248489 DEG
SPACECRAFT RADIUS	=	1787.1809998 KM	SPACECRAFT ALTITUDE	=	46.6809998 KM
MEAN ALTITUDE RATE	=	0.0712989 KM/SEC	TIME FROM PERIAPSIS	=	139.5722332 SEC
HORIZONTAL VELOCITY	=	1.9094675 KM/SEC	TRUE ANOMALY	=	8.5759790 DEG
SCALE FACTOR (HIGH)	=	0.0130674 M/KM	TILT DISTANCE (HIGH)	=	23.1957703 KM
SCALE FACTOR (LOW)	=	0.0017138 M/KM	TILT DISTANCE (LOW)	=	3.0420682 KM
IMAGE MOTION COMPENSATION (V/H)	=	0.0409046 RAD/SEC	SWING ANGLE	=	314.2461128 DEG
EMISSION ANGLE	=	2.2361043 DEG	INCIDENCE ANGLE	=	57.2086954 DEG
PHASE ANGLE	=	58.3193240 DEG	NORTH DEVIATION ANGLE	=	347.4571724 DEG
TILT ANGLE	=	2.1776717 DEG	RESOLUTION CONSTANT	=	1.0129777 MTR
TILT AZIMUTH	=	146.8078651 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	86.0052691 DEG
SUN ANGLE AT NADIR	=	57.2371860 DEG	SUN ARC AT NADIR	=	1738.7200928 KM
LONGITUDE DISTANCE TO TARGET	=	0.2091789 DEG	LATITUDE DISTANCE TO TARGET	=	0.3740493 DEG
LONGITUDE ARC LENGTH TO TARGET	=	6.3543236 KM	LATITUDE ARC LENGTH TO TARGET	=	11.3626653 KM
FORWARD OVERLAP RATIO	=	0.4575690 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.1999478 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.95106008	0.25320465	-0.17712181	48.50759411
CAMERA AXIS	-0.91509341	0.40233012	0.02710242	46.71563721
C1	-0.86437469	0.46509731	0.19115675	47.35234070
C2	-0.90060002	0.40602930	-0.15511226	47.83061218
C3	-0.93522427	0.32611467	-0.13785783	47.71215820
C4	-0.89899894	0.38518269	0.20841117	47.23628235

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1647.7877808	-683.9116745	-105.2423925	0.7638663	1.7114202	-0.3724237

```
LONG -21.8674 DEG          LONG -22.0998 DEG
LATI  -2.9128 DEG          LATI  -4.1591 DEG        *
                                                   ***
     *          38.50845 KM      *              * * *
    (1)                         (2)            *  *  *
                                                *
                                                *
            LOW RESOLUTION                      *
                                                *
                                                *
  31.87333 KM                 32.61168 KM       *
                                                *
                                                *
                                                *
                                                *
    (4)                         (3)             *
     *          37.78657 KM      *              *
                                                *
LONG -22.9002 DEG          LONG -23.1532 DEG    *
LATI  -2.7209 DEG          LATI  -3.9389 DEG    *
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LONG -22.3875 DEG          LONG -22.4938 DEG
LATI  -3.1681 DEG          LATI  -3.7113 DEG

                 *        16.81276 KM      *
                (1)                        (2)

                        HIGH RESOLUTION

DIRECTION     4.20066 KM                 4.24306 KM
OF MOTION

                (4)                        (3)
                 *        16.77130 KM      *

LONG -22.5235 DEG          LONG -22.6310 DEG
LATI  -3.1420 DEG          LATI  -3.6836 DEG
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FRAME 162

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*****************************************
*   PHOTO FRAME NUMBER  7 OF 16         *
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163

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	28	6	28	31.500

LONGITUDE OF NADIR POINT	=	-22.4027939 DEG	LATITUDE OF NADIR POINT	=	-3.4031374 DEG
LONG OF CAMERA AXIS INTERSECT	=	-22.3668919 DEG	LATI OF CAMERA AXIS INTERSECT	=	-3.4529397 DEG
SPACECRAFT RADIUS	=	1787.3463287 KM	SPACECRAFT ALTITUDE	=	46.8463287 KM
MEAN ALTITUDE RATE	=	0.0724579 KM/SEC	TIME FROM PERIAPSIS	=	141.8673782 SEC
HORIZONTAL VELOCITY	=	1.9092911 KM/SEC	TRUE ANOMALY	=	8.7164624 DEG
SCALE FACTOR (HIGH)	=	0.0130213 M/KM	TILT DISTANCE (HIGH)	=	24.2684968 MM
SCALE FACTOR (LOW)	=	0.0017077 M/KM	TILT DISTANCE (LOW)	=	3.1827537 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0407565 RAD/SEC	SWING ANGLE	=	311.7125015 DEG
EMISSION ANGLE	=	2.3396282 DEG	INCIDENCE ANGLE	=	57.0690875 DEG
PHASE ANGLE	=	58.3193240 DEG	NORTH DEVIATION ANGLE	=	347.4659500 DEG
TILT ANGLE	=	2.2782779 DEG	RESOLUTION CONSTANT	=	1.0165653 MTP
TILT AZIMUTH	=	144.2679520 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	85.9733582 DEG
SUN ANGLE AT NADIR	=	57.1013160 DEG	SUN ARC AT NADIR	=	1734.5927124 KM
LONGITUDE DISTANCE TO TARGET	=	0.3472061 DEG	LATITUDE DISTANCE TO TARGET	=	0.3468626 DEG
LONGITUDE ARC LENGTH TO TARGET	=	10.5472385 KM	LATITUDE ARC LENGTH TO TARGET	=	10.5368029 KM
FORWARD OVERLAP RATIO	=	-3.6998134 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.3000479 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.97287446	0.16974609	-0.15716733	49.21771717
CAMERA AXIS	-0.91509113	0.40233528	0.02710234	46.88438416
C1	-0.86437206	0.46510223	0.19115666	47.52885437
C2	-0.90059774	0.40603432	-0.15511233	48.00901794
C3	-0.93522245	0.32611990	-0.13785788	47.87910461
C4	-0.89899675	0.38518781	0.20841110	47.40156555

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1649.5368042	-679.9838409	-106.987282	0.7606180	1.7127636	-0.3722155

```
LONG -21.7226 DEG          LONG -21.9559 DEG
LATI  -2.9385 DEG          LATI  -4.1905 DEG        *
                                                   ***          LONG -22.2452 DEG        LONG -22.3519 DEG
      *        38.68235 KM        *                * * *        LATI  -3.1952 DEG        LATI  -3.7405 DEG
     (1)                         (2)              *  *  *
                                                   *                     *        16.87545 KM        *
                                                   *                    (1)                         (2)
            LOW RESOLUTION                         *
                                                   *                                HIGH RESOLUTION
                                                   *
  31.99208 KM                 32.73345 KM          *  D RECTION     4.21615 KM                 4.25872 KM
                                                   *  O  MOTION
                                                   *
                                                   *                    (4)                         (3)
                                                   *                     *        16.82998 KM        *
     (4)                         (3)               *
      *        37.89071 KM        *                *          LONG -22.3817 DEG        LONG -22.4895 DEG
                                                   *          LATI  -3.1691 DEG        LATI  -3.7126 DEG
LONG -22.7595 DEG          LONG -23.0130 DEG       *
LATI  -2.7470 DEG          LATI  -3.9685 DEG       *
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FRAME 163

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*********************************
*   PHOTO FRAME NUMBER  8 OF 16   *
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164

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	28	6	28	33.700

LONGITUDE OF NADIR POINT	=	-22.2708473 DEG	LATITUDE OF NADIR POINT	=	-3.4291067 DEG
LONG OF CAMERA AXIS INTERSECT	=	-22.2312374 DEG	LATI OF CAMERA AXIS INTERSECT	=	-3.4797790 DEG
SPACECRAFT RADIUS	=	1787.5068665 KM	SPACECRAFT ALTITUDE	=	47.0068665 KM
MEAN ALTITUDE RATE	=	0.0735654 KM/SEC	TIME FROM PERIAPSIS	=	144.0616493 SEC
HORIZONTAL VELOCITY	=	1.9091199 KM/SEC	TRUE ANOMALY	=	8.8507476 DEG
SCALE FACTOR (HIGH)	=	0.0129768 M/KM	TILT DISTANCE (HIGH)	=	25.3339691 KM
SCALE FACTOR (LOW)	=	0.0017019 M/KM	TILT DISTANCE (LOW)	=	3.3224877 KM
IMAGE MOTION COMPENSATION (V/H)	=	0.0406136 RAD/SEC	SWING ANGLE	=	309.4949417 DEG
EMISSION ANGLE	=	2.4424529 DEG	INCIDENCE ANGLE	=	56.9356241 DEG
PHASE ANGLE	=	58.3193259 DEG	NORTH DEVIATION ANGLE	=	347.4744644 DEG
TILT ANGLE	=	2.3791899 DEG	RESOLUTION CONSTANT	=	1.0200490 MTR
TILT AZIMUTH	=	142.0443153 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	85.9426441 DEG
SUN ANGLE AT NADIR	=	56.9714518 DEG	SUN ARC AT NADIR	=	1730.6477661 KM
LONGITUDE DISTANCE TO TARGET	=	0.4791527 DEG	LATITUDE DISTANCE TO TARGET	=	0.3208933 DEG
LONGITUDE ARC LENGTH TO TARGET	=	14.5554394 KM	LATITUDE ARC LENGTH TO TARGET	=	9.7479234 KM
FORWARD OVERLAP RATIO	=	1.2064373 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.1999478 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.98624159	0.09149082	-0.13769423	50.23913813
CAMERA AXIS	-0.91508896	0.40234023	0.02710227	47.04847717
C1	-0.86436953	0.46510696	-0.19115656	47.70045471
C2	-0.90059555	0.40603914	-0.15511241	48.18244934
C3	-0.93522069	0.32612491	-0.13785793	48.04153442
C4	-0.89899466	0.38519273	0.20841104	47.56237793

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1651.2020721	-676.2257462	-106.9170084	0.7575100	1.7140404	-0.3720149

```
LONG -21.5842 DEG          LONG -21.8183 DEG
LATI  -2.9631 DEG          LATI  -4.2205 DEG
                                   *
                                  ***
                                 * * *
                                *  *  *
      *        38.85122 KM       *
     (1)                        (2)
                                   *
                                   *
                                   *
```

[redacted]

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*****************************************
*   PHOTO FRAME NUMBER  9 OF 16         *  165
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	28	6	28	35.900

LONGITUDE OF NADIR POINT	=	-22.1387939 DEG	LATITUDE OF NADIR POINT	=	-3.4550759 DEG
LONG OF CAMERA AXIS INTERSECT	=	-22.0954499 DEG	LATI OF CAMERA AXIS INTERSECT	=	-3.5066276 DEG
SPACECRAFT RADIUS	=	1787.6700134 KM	SPACECRAFT ALTITUDE	=	47.1700134 KM
MEAN ALTITUDE RATE	=	0.0746733 KM/SEC	TIME FROM PERIAPSIS	=	146.2580261 SEC
HORIZONTAL VELOCITY	=	1.9089458 KM/SEC	TRUE ANOMALY	=	8.9851378 DEG
SCALE FACTOR (HIGH)	=	0.0129319 M/KM	TILT DISTANCE (HIGH)	=	26.4363468 KM
SCALE FACTOR (LOW)	=	0.0016960 M/KM	TILT DISTANCE (LOW)	=	3.4670619 KM
IMAGE MOTION COMPENSATION (V/H)	=	0.0404695 RAD/SEC	SWING ANGLE	=	307.4573746 DEG
EMISSION ANGLE	=	2.5488521 DEG	INCIDENCE ANGLE	=	56.8020544 DEG
PHASE ANGLE	=	58.3193259 DEG	NORTH DEVIATION ANGLE	=	347.4831085 DEG
TILT ANGLE	=	2.4815473 DEG	RESOLUTION CONSTANT	=	1.0235893 MTR
TILT AZIMUTH	=	140.0007706 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	85.9116983 DEG
SUN ANGLE AT NADIR	=	56.8415084 DEG	SUN ARC AT NADIR	=	1776.7004080 KM
LONGITUDE DISTANCE TO TARGET	=	0.6112061 DEG	LATITUDE DISTANCE TO TARGET	=	0.2949241 DEG
LONGITUDE ARC LENGTH TO TARGET	=	18.5668850 KM	LATITUDE ARC LENGTH TO TARGET	=	8.9590441 KM
FORWARD OVERLAP RATIO	=	1.4691256 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.1999478 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.99285360	0.01613261	-0.11824320	51.57639456
CAMERA AXIS	-0.91508678	0.40234520	0.02710220	47.21549988
C1	-0.86436701	0.46511170	0.19115647	47.87506104
C2	-0.90059337	0.40604397	-0.15511248	48.35893250
C3	-0.93521893	0.32612993	-0.13785798	48.20687866
C4	-0.89899257	0.38519765	0.20841098	47.72607427

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1652.8612537	-672.4613876	-117.7355871	0.7543970	1.7153108	-0.3718126

```
LONG -21.4455 DEG          LONG -21.6805 DEG
LATI  -2.9876 DEG          LATI  -4.2507 DEG          *
                                                      **
        *          39.02282 KM        *              * * *
       (1)                           (2)            *  *  *
                                                     *
                                                     *
            LOW RESOLUTION                           *
                                                     *
                                                     *
   32.22584 KM                32.97316 KM           *
                                                     *
                                                     *
                                                     *
       (4)                           (3)             *
        *          38.09614 KM        *             *
                                                     *
LONG -22.4905 DEG          LONG -22.7450 DEG         *
LATI  -2.7969 DEG          LATI  -4.0250 DEG         *
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LONG -21.9729 DEG          LONG -22.0802 DEG
LATI  -3.2470 DEG          LATI  -3.7963 DEG
                                  *        16.99842 KM        *
                                 (1)                         (2)
                                          HIGH RESOLUTION
DIRECTION        4.24662 KM                          4.28952 KM
 OF MOTION
                                 (4)                         (3)
                                  *        16.94520 KM        *
LONG -22.1104 DEG          LONG -22.2189 DEG
LATI  -3.2208 DEG          LATI  -3.7630 DEG
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FRAME 165

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*************************************
*   PHOTO FRAME NUMBER 10 OF 16     *
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166

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	28	6	28	38.100

LONGITUDE OF NADIR POINT	=	-22.0068779 DEG	LATITUDE OF NADIR POINT	=	-3.4809999 DEG
LONG OF CAMERA AXIS INTERSECT	=	-21.9597750 DEG	LATI OF CAMERA AXIS INTERSECT	=	-3.5334344 DEG
SPACECRAFT RADIUS	=	1787.8354340 KM	SPACECRAFT ALTITUDE	=	47.3354340 KM
MEAN ALTITUDE RATE	=	0.0757795 KM/SEC	TIME FROM PERIAPSIS	=	148.4523830 SEC
HORIZONTAL VELOCITY	=	1.9087694 KM/SEC	TRUE ANOMALY	=	9.1193781 DEG
SCALE FACTOR (HIGH)	=	0.0128867 M/KM	TILT DISTANCE (HIGH)	=	27.5679276 MM
SCALE FACTOR (LOW)	=	0.0016901 M/KM	TILT DISTANCE (LOW)	=	3.6154659 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0403243 RAD/SEC	SWING ANGLE	=	305.5869217 DEG
EMISSION ANGLE	=	2.6580659 DEG	INCIDENCE ANGLE	=	56.6686182 DEG
PHASE ANGLE	=	58.3193278 DEG	NORTH DEVIATION ANGLE	=	347.4918556 DEG
TILT ANGLE	=	2.5876260 DEG	RESOLUTION CONSTANT	=	1.0271789 MTR
TILT AZIMUTH	=	138.1240559 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	85.8805771 DEG
SUN ANGLE AT NADIR	=	56.7117195 DEG	SUN ARC AT NADIR	=	1722.7577667 KM
LONGITUDE DISTANCE TO TARGET	=	0.7431221 DEG	LATITUDE DISTANCE TO TARGET	=	0.2690001 DEG
LONGITUDE ARC LENGTH TO TARGET	=	22.5741587 KM	LATITUDE ARC LENGTH TO TARGET	=	8.1715389 KM
FORWARD OVERLAP RATIO	=	1.9121862 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.1999478 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.99353429	-0.05510294	-0.09926366	53.20338774
CAMERA AXIS	-0.91508461	0.40235014	0.02710214	47.38507080
C1	-0.86436449	0.46511642	0.19115639	48.05229187
C2	-0.90059119	0.40604878	-0.15511255	48.53805542
C3	-0.93521719	0.32613493	-0.13785802	48.37481689
C4	-0.89899047	0.38520256	0.20841092	47.89234924

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1654.5135345	-668.6976624	-108.5529823	0.7512844	1.7165727	-0.3716090

```
LONG -21.3070 DEG          LONG -21.5428 DEG
LATI  -3.0121 DEG          LATI  -4.2808 DEG          *
                                                     ***
      *        39.19684 KM      *                   * * *
     (1)                       (2)                 *  *  *
                                                    *
                                                    *
                LOW RESOLUTION                      *
                                                    *
                                                    *
  32.34591 KM                33.09630 KM           *
                                                    *
                                                    *
                                                    *
                                                    *
     (4)                       (3)                  *
      *        38.20186 KM      *                   *
                                                    *
LONG -22.3560 DEG          LONG -22.6111 DEG        *
LATI  -2.8218 DEG          LATI  -4.0533 DEG        *
```

```
LONG -21.8368 DEG          LONG -21.9444 DEG
LATI  -3.2729 DEG          LATI  -3.8242 DEG

                    *        17.06136 KM      *
                   (1)                        (2)

                          HIGH RESOLUTION

DIRECTION      4.26226 KM                  4.30533 KM
 OF MOTION

                   (4)                        (3)
                    *        17.00423 KM      *

LONG -21.9749 DEG          LONG -22.0836 DEG
LATI  -3.2466 DEG          LATI  -3.7958 DEG
```

FRAME 166

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*****************************************
*   PHOTO FRAME NUMBER 11 OF 16         *
*****************************************
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167

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	28	6	28	40.400

LONGITUDE OF NADIR POINT	=	-21.8688622 DEG	LATITUDE OF NADIR POINT	=	-3.5081012 DEG
LONG OF CAMERA AXIS INTERSECT	=	-21.8177924 DEG	LATI OF CAMERA AXIS INTERSECT	=	-3.5614680 DEG
SPACECRAFT RADIUS	=	1788.0111389 KM	SPACECRAFT ALTITUDE	=	47.5111389 KM
MEAN ALTITUDE RATE	=	0.0769364 KM/SEC	TIME FROM PERIAPSIS	=	150.7485409 SEC
HORIZONTAL VELOCITY	=	1.9085819 KM/SEC	TRUE ANOMALY	=	9.2598218 DEG
SCALE FACTOR (HIGH)	=	0.0128391 M/KM	TILT DISTANCE (HIGH)	=	28.7810352 MM
SCALE FACTOR (LOW)	=	0.0016838 M/KM	TILT DISTANCE (LOW)	=	3.7745620 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0401713 RAD/SEC	SWING ANGLE	=	303.7891579 DEG
EMISSION ANGLE	=	2.7751192 DEG	INCIDENCE ANGLE	=	56.5290046 DEG
PHASE ANGLE	=	58.3193278 DEG	NORTH DEVIATION ANGLE	=	347.5011368 DEG
TILT ANGLE	=	2.7013276 DEG	RESOLUTION CONSTANT	=	1.0309917 MTR
TILT AZIMUTH	=	136.3197365 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	85.8477955 DEG
SUN ANGLE AT NADIR	=	56.5759521 DEG	SUN ARC AT NADIR	=	1718.6334991 KM
LONGITUDE DISTANCE TO TARGET	=	0.8811378 DEG	LATITUDE DISTANCE TO TARGET	=	0.2418988 DEG
LONGITUDE ARC LENGTH TO TARGET	=	26.7667260 KM	LATITUDE ARC LENGTH TO TARGET	=	7.3482702 KM
FORWARD OVERLAP RATIO	=	-2.2433357 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.3000479 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.98896851	-0.12453411	-0.08020308	55.18909407
CAMERA AXIS	-0.91508234	0.40235531	0.02710207	47.56542969
C1	-0.86436184	0.46512135	0.19115629	48.24075317
C2	-0.90058891	0.40605382	-0.15511262	48.72854614
C3	-0.93521535	0.32614017	-0.13785806	48.55349731
C4	-0.89898828	0.38520771	0.20841085	48.06924438

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1656.2344208	-664.7564011	-101.4078102	0.7480251	1.7178851	-0.3713944

```
LONG -21.1619 DEG          LONG -21.3986 DEG
LATI  -3.0376 DEG          LATI  -4.3123 DEG        *
                                                   ***
      *        39.38170 KM      *                 * *
     (1)                       (2)              *  *  *
                                                 *
                                                 *
            LOW RESOLUTION                       *
                                                 *
                                                 *
  32.47386 KM              33.22756 KM           *
                                                 *
                                                 *
                                                 *
                                                 *
     (4)                       (3)               *
      *        38.31466 KM      *                *
                                                 *
LONG -22.2154 DEG          LONG -22.4710 DEG     *
LATI  -2.8477 DEG          LATI  -4.0829 DEG     *
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```
LONG -21.6944 DEG          LONG -21.8023 DEG
LATI  -3.2999 DEG          LATI  -3.8533 DEG
                 *        17.12830 KM      *
                (1)                       (2)
                          HIGH RESOLUTION
DIRECTION      4.27890 KM                4.32217 KM
OF MOTION
                (4)                       (3)
                 *        17.06704 KM      *
LONG -21.8330 DEG          LONG -21.9420 DEG
LATI  -3.2736 DEG          LATI  -3.8248 DEG
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FRAME 167

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*************************************
*   PHOTO FRAME NUMBER 12 OF 16     *
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160

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	28	6	28	42.600

LONGITUDE OF NADIR POINT	=	-21.7369881 DEG	LATITUDE OF NADIR POINT	=	-3.5339765 DEG
LONG OF CAMERA AXIS INTERSECT	=	-21.6820970 DEG	LATI OF CAMERA AXIS INTERSECT	=	-3.5882407 DEG
SPACECRAFT RADIUS	=	1788.1815338 KM	SPACECRAFT ALTITUDE	=	47.6815338 KM
MEAN ALTITUDE RATE	=	0.0780414 KM/SEC	TIME FROM PERIAPSIS	=	152.9429035 SEC
HORIZONTAL VELOCITY	=	1.9084002 KM/SEC	TRUE ANOMALY	=	9.3940130 DEG
SCALE FACTOR (HIGH)	=	0.0127932 M/KM	TILT DISTANCE (HIGH)	=	29.9644871 KM
SCALE FACTOR (LOW)	=	0.0016778 M/KM	TILT DISTANCE (LOW)	=	3.9297688 KM
IMAGE MOTION COMPENSATION (V/H)	=	0.0400239 RAD/SEC	SWING ANGLE	=	302.2083473 DEG
EMISSION ANGLE	=	2.8893407 DEG	INCIDENCE ANGLE	=	56.3955932 DEG
PHASE ANGLE	=	58.3193283 DEG	NORTH DEVIATION ANGLE	=	347.5101280 DEG
TILT ANGLE	=	2.8122291 DEG	RESOLUTION CONSTANT	=	1.0346893 MTR
TILT AZIMUTH	=	134.7328243 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	85.9162594 DEG
SUN ANGLE AT NADIR	=	56.4462433 DEG	SUN ARC AT NADIR	=	1714.6932831 KM
LONGITUDE DISTANCE TO TARGET	=	1.0130119 DEG	LATITUDE DISTANCE TO TARGET	=	0.2160235 DEG
LONGITUDE ARC LENGTH TO TARGET	=	30.7727253 KM	LATITUDE ARC LENGTH TO TARGET	=	6.5622436 KM
FORWARD OVERLAP RATIO	=	2.6528699 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.1999478 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.98060028	-0.18562958	-0.06296641	57.33003664
CAMERA AXIS	-0.91508014	0.40236033	0.02710200	47.74061584
C1	-0.86435930	0.46512613	0.19115620	48.42375183
C2	-0.90058669	0.40605870	-0.15511269	49.91349792
C3	-0.93521357	0.32614525	-0.13785811	48.72706604
C4	-0.89898618	0.38521268	0.20841078	48.24107361

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1657.8719940	-660.9871750	-110.2242784	0.7449081	1.7191317	-0.3711878

```
LONG -21.0233 DEG          LONG -21.2608 DEG
LATI  -3.0619 DEG          LATI  -4.3425 DEG
                                                  *
                                                 ***
        *          39.56101 KM        *          * * *
       (1)                           (2)        *  *  *
                                                  *
                                                  *
            LOW RESOLUTION                        *
                                                  *
                                                  *
  32.59837 KM                33.35529 KM         *
                                                  *
                                                  *
                                                  *
                                                  *
                                                  *
      (4)                          (3)            *
       *          38.42454 KM       *            *
                                                  *
LONG -22.0810 DEG          LONG -22.3372 DEG      *
LATI  -2.8724 DEG          LATI  -4.1113 DEG      *
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LONG -21.5582 DEG          LONG -21.6665 DEG
LATI  -3.3256 DEG          LATI  -3.8812 DEG

                  *        17.19330 KM        *
                 (1)                          (2)

                       HIGH RESOLUTION

DIRECTION      4.29511 KM                 4.33854 KM
OF MOTION

                 (4)                          (3)
                  *        17.12805 KM        *

LONG -21.6974 DEG          LONG -21.8068 DEG
LATI  -3.2993 DEG          LATI  -3.8525 DEG
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FRAME 168

[redacted]

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*****************************************
*   PHOTO FRAME NUMBER 13 OF 16         *
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FRAME 169

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	28	6	28	44.900

LONGITUDE OF NADIR POINT	=	-21.5990067 DEG	LATITUDE OF NADIR POINT	=	-3.5610275 DEG
LONG OF CAMERA AXIS INTERSECT	=	-21.5400906 DEG	LATI OF CAMERA AXIS INTERSECT	=	-3.6162393 DEG
SPACECRAFT RADIUS	=	1788.3624420 KM	SPACECRAFT ALTITUDE	=	47.8624420 KM
MEAN ALTITUDE RATE	=	0.0791970 KM/S C	TIME FROM PERIAPSIS	=	155.2390785 SEC
HORIZONTAL VELOCITY	=	1.9082073 KM/S C	TRUE ANOMALY	=	9.5343999 DEG
SCALE FACTOR (HIGH)	=	0.0127449 M/KM	TILT DISTANCE (HIGH)	=	31.2253382 KM
SCALE FACTOR (LOW)	=	0.0016715 M/KM	TILT DISTANCE (LOW)	=	4.0951263 KM
IMAGE MOTION COMPENSATION (V/H)	=	0.0398686 RAD/ EC	SWING ANGLE	=	300.6839256 DEG
EMISSION ANGLE	=	3.0110260 DEG	INCIDENCE ANGLE	=	56.2560067 DEG
PHASE ANGLE	=	58.3193302 DEG	NORTH DEVIATION ANGLE	=	347.5196609 DEG
TILT ANGLE	=	2.9303605 DEG	RESOLUTION CONSTANT	=	1.0386150 MTR
TILT AZIMUTH	=	133.2017326 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	85.7830391 DEG
SUN ANGLE AT NADIR	=	56.3105602 DEG	SUN ARC AT NADIR	=	1710.5715637 KM
LONGITUDE DISTANCE TO TARGET	=	1.1509933 DEG	LATITUDE DISTANCE TO TARGET	=	0.1889725 DEG
LONGITUDE ARC LENGTH TO TARGET	=	34.9642496 KM	LATITUDE ARC LENGTH TO TARGET	=	5.7405038 KM
FORWARD OVERLAP RATIO	=	-1.4635183 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.3000479 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.96868417	-0.24398101	-0.04608962	59.79671717
CAMERA AXIS	-0.91507787	0.40236550	0.02710193	47.92683411
C1	-0.86435666	0.46513107	0.19115612	48.61825562
C2	-0.90058441	0.40606374	-0.15511276	49.11007690
C3	-0.93521174	0.32615048	-0.13785815	48.91165161
C4	-0.89898399	0.38521782	0.20841072	48.42382812

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1659.5782776	-657.0400620	-111.0781374	0.7416441	1.7204281	-0.3709699

```
LONG -20.8781 DEG          LONG -21.1166 DEG
LATI  -3.0873 DEG          LATI  -4.3741 DEG
                                                                  *
                                                                 ***
      *          39.75143 KM        *                          * * *
     (1)                            (2)                       *   *
                                                              *
                                                              *
                                                              
```

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*************************************
*   PHOTO FRAME NUMBER 14 OF 16     *
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170

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	28	6	28	47.200

LONGITUDE OF NADIR POINT	=	-21.4611778 DEG	LATITUDE OF NADIR POINT	=	-3.5890281 DEG
LONG OF CAMERA AXIS INTERSECT	=	-21.3982036 DEG	LATI OF CAMERA AXIS INTERSECT	=	-3.6441936 DEG
SPACECRAFT RADIUS	=	1788.5458374 KM	SPACECRAFT ALTITUDE	=	48.0458374 KM
MEAN ALTITUDE RATE	=	0.0803508 KM/SEC	TIME FROM PERIAPSIS	=	157.5332680 SEC
HORIZONTAL VELOCITY	=	1.9080117 KM/SEC	TRUE ANOMALY	=	9.6746380 DEG
SCALE FACTOR (HIGH)	=	0.0126962 M/KM	TILT DISTANCE (HIGH)	=	32.5055776 KM
SCALE FACTOR (LOW)	=	0.0016651 M/KM	TILT DISTANCE (LOW)	=	4.2630266 KM
IMAGE MOTION COMPENSATION (V/H)	=	0.0397123 RAD/SEC	SWING ANGLE	=	299.2799339 DEG
EMISSION ANGLE	=	3.1345733 DEG	INCIDENCE ANGLE	=	56.1165547 DEG
PHASE ANGLE	=	58.3193302 DEG	NORTH DEVIATION ANGLE	=	347.5293121 DEG
TILT ANGLE	=	3.0502829 DEG	RESOLUTION CONSTANT	=	1.0425947 MTR
TILT AZIMUTH	=	131.7910118 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	85.7496262 DEG
SUN ANGLE AT NADIR	=	56.1750374 DEG	SUN ARC AT NADIR	=	1706.4547272 KM
LONGITUDE DISTANCE TO TARGET	=	1.2888222 DEG	LATITUDE DISTANCE TO TARGET	=	0.1619719 DEG
LONGITUDE ARC LENGTH TO TARGET	=	39.1511383 KM	LATITUDE ARC LENGTH TO TARGET	=	4.9202950 KM
FORWARD OVERLAP RATIO	=	-0.9676452 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.3000479 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.95447305	-0.29673674	-0.03047146	62.46520329
CAMERA AXIS	-0.91507555	0.40237075	0.02710186	48.11589050
C1	-0.86435398	0.46513608	0.19115602	48.81567383
C2	-0.90058210	0.40606886	-0.15511283	49.30961609
C3	-0.93520988	0.32615581	-0.13785820	49.09909058
C4	-0.89898176	0.38522303	0.20841066	48.60937500

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1661.2754974	-653.0936050	-111.9307394	0.7383808	1.7217152	-0.3707507

```
LONG -20.7330 DEG          LONG -20.9724 DEG
LATI  -3.1127 DEG          LATI  -4.4058 DEG
                                              *
                                             ***
      *          39.94453 KM      *         * * *          LONG -21.2734 DEG          LONG -21.3824 DEG
     (1)                          (2)       *  *           LATI  -3.3794 DEG          LATI  -3.9396 DEG
                                             *  *
                                             *                        *        17.33250 KM      *
                                             *                       (1)                       (2)
            LOW RESOLUTION                   *
                                             *                                HIGH RESOLUTION
                                             *
   32.86589 KM                33.62975 KM   *  DIRECTION      4.32988 KM                4.37371 KM
                                             *  OF MOTION
                                             *
                                             *                       (4)                       (3)
                                             *                        *        17.25882 KM      *
     (4)                        (3)          *
      *          38.66093 KM      *         *          LONG -21.4137 DEG          LONG -21.5237 DEG
                                             *          LATI  -3.3531 DEG          LATI  -3.9105 DEG
LONG -21.7998 DEG          LONG -22.0572 DEG *
LATI  -2.9240 DEG          LATI  -4.1705 DEG *
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FRAME 170

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*****************************************
*   PHOTO FRAME NUMBER 15 OF 16         *
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171

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	28	6	28	49.500

LONGITUDE OF NADIR POINT	=	-21.3232346	DEG	LATITUDE OF NADIR POINT	= -3.6150253 DEG
LONG OF CAMERA AXIS INTERSECT	=	-21.2561665	DEG	LATI OF CAMERA AXIS INTERSECT	= -3.6721530 DEG
SPACECRAFT RADIUS	=	1788.7320557	KM	SPACECRAFT ALTITUDE	= 48.2320557 KM
MEAN ALTITUDE RATE	=	0.0815049	KM/SEC	TIME FROM PERIAPSIS	= 159.8294716 SEC
HORIZONTAL VELOCITY	=	1.9078133	KM/SEC	TRUE ANOMALY	= 9.8149710 DEG
SCALE FACTOR (HIGH)	=	0.0126472	M/K	TILT DISTANCE (HIGH)	= 33.8048806 MM
SCALE FACTOR (LOW)	=	0.0016586	M/K	TILT DISTANCE (LOW)	= 4.4334270 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0395549	RAD/SEC	SWING ANGLE	= 297.9818611 DEG
EMISSION ANGLE	=	3.2599517	DEG	INCIDENCE ANGLE	= 55.9769964 DEG
PHASE ANGLE	=	58.3193312	DEG	NORTH DEVIATION ANGLE	= 347.5390968 DEG
TILT ANGLE	=	3.1719637	DEG	RESOLUTION CONSTANT	= 1.0466356 MTR
TILT AZIMUTH	=	130.4862423	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	= 85.7159557 DEG
SUN ANGLE AT NADIR	=	56.0394425	DEG	SUN ARC AT NADIR	= 1702.3356934 KM
LONGITUDE DISTANCE TO TARGET	=	1.4267654	DEG	LATITUDE DISTANCE TO TARGET	= 0.1349747 DEG
LONGITUDE ARC LENGTH TO TARGET	=	43.3415041	KM	LATITUDE ARC LENGTH TO TARGET	= 4.1001894 KM
FORWARD OVERLAP RATIO	=	-0.6592003	PCT	SIDE OVERLAP RATIO	= 0. PCT
TIME BETWEEN PHOTOS	=	2.3000479	SEC		

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.93871755	-0.34431188	-0.01608440	65.31540108
CAMERA AXIS	-0.91507332	0.40237584	0.02710178	48.30810547
C1	-0.86435140	0.46514093	0.19115592	49.01635742
C2	-0.90057985	0.40607381	-0.15511291	49.51245117
C3	-0.93520807	0.32616095	-0.13785826	49.28970337
C4	-0.89897962	0.38522808	0.20841058	48.79811096

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1667.9668579	-649.1404572	-1 2.7835865	0.7351120	1.7229954	-0.3705296

```
LONG -20.5977 DEG          LONG -20.8281 DEG
LATI  -3.1380 DEG          LATI  -4.4375 DEG        *
                                                    ***
     *        40.14068 KM      *                   * * *
    (1)                       (2)                 *  *  *
                                                   *
                                                   *
          LOW RESOLUTION                           *
                                                   *
                                                   *
  33.00331 KM                33.77077 KM           *
                                                   *
                                                   *
                                                   *
                                                   *
    (4)                       (3)                  *
     *        38.78251 KM      *                   *
                                                   *
LONG -21.6592 DEG          LONG -21.9173 DEG       *
LATI  -2.2497 DEG          LATI  -4.2002 DEG       *
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```
LONG -21.1309 DEG          LONG -21.2402 DEG
LATI  -3.4063 DEG          LATI  -3.9687 DEG

                 *        17.40378 KM      *
                (1)                        (2)

                      HIGH RESOLUTION

DIRECTION      4.34773 KM                 4.39175 KM
OF MOTION

                (4)                        (3)
                 *        17.32582 KM      *

LONG -21.2718 DEG          LONG -21.3822 DEG
LATI  -3.3799 DEG          LATI  -3.9395 DEG
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FRAME 171

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*************************************
*   PHOTO FRAME NUMBER 16 OF 16     *
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172

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	28	6	28	51.800

LONGITUDE OF NADIR POINT	=	-21.1853828 DEG	LATITUDE OF NADIR POINT	=	-3.6419849 DEG
LONG OF CAMERA AXIS INTERSECT	=	-21.1141872 DEG	LATI OF CAMERA AXIS INTERSECT	=	-3.7000941 DEG
SPACECRAFT RADIUS	=	1788.9208374 KM	SPACECRAFT ALTITUDE	=	48.4208374 KM
MEAN ALTITUDE RATE	=	0.0826578 KM/SEC	TIME FROM PERIAPSIS	=	162.1246815 SEC
HORIZONTAL VELOCITY	=	1.9076120 KM/SEC	TRUE ANOMALY	=	9.9552119 DEG
SCALE FACTOR (HIGH)	=	0.0125979 M/KM	TILT DISTANCE (HIGH)	=	35.1200089 MM
SCALE FACTOR (LOW)	=	0.0016522 M/KM	TILT DISTANCE (LOW)	=	4.6059028 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0393965 RAD/SEC	SWING ANGLE	=	296.7810898 DEG
EMISSION ANGLE	=	3.3868866 DEG	INCIDENCE ANGLE	=	55.8375125 DEG
PHASE ANGLE	=	58.3193316 DEG	NORTH DEVIATION ANGLE	=	347.5490074 DEG
TILT ANGLE	=	3.2950973 DEG	RESOLUTION CONSTANT	=	1.0507322 MTR
TILT AZIMUTH	=	129.2785110 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	85.6820755 DEG
SUN ANGLE AT NADIR	=	55.9039521 DEG	SUN ARC AT NADIR	=	1698.2198486 KM
LONGITUDE DISTANCE TO TARGET	=	1.5646172 DEG	LATITUDE DISTANCE TO TARGET	=	0.1080151 DEG
LONGITUDE ARC LENGTH TO TARGET	=	47.5290885 KM	LATITUDE ARC LENGTH TO TARGET	=	3.2812245 KM
FORWARD OVERLAP RATIO	=	0.1948557 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.2997260 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.92205751	-0.38704202	-0.00290691	68.32078934
CAMERA AXIS	-0.91507103	0.40238106	0.02710173	48.50326538
C1	-0.86434873	0.46514591	0.19115584	49.22004700
C2	-0.90057754	0.40607889	-0.15511297	49.71832275
C3	-0.93520622	0.32616624	-0.13785829	49.48326111
C4	-0.89897741	0.38523326	0.20841052	48.98973083

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1664.6498413	-645.1863098	-113.6355429	0.7318425	1.7242666	-0.3703070

```
LONG -20.4424 DEG          LONG -20.6837 DEG
LATI  -3.1632 DEG          LATI  -4.4692 DEG
                                                  *
                                                 ***
     *          40.33961 KM      *              * * *
    (1)                         (2)            *  *  *
                                                 *
                                                 *
          LOW RESOLUTION                         *
                                                 *
                                                 *
  33.14308 KM                33.91419 KM         *
                                                 *
                                                 *
                                                 *
                                                 *
                                                 *
    (4)                        (3)               *
     *          38.90622 KM      *               *
                                                 *
LONG -21.5187 DEG          LONG -21.7774 DEG     *
LATI  -2.9754 DEG          LATI  -4.2299 DEG     *
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[redacted]

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*   PHOTO FRAME NUMBER  173             *
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	28	13	21	58.598

LONGITUDE OF NADIR POINT	-22.9224777	DEG	LATITUDE OF NADIR POINT	-4.0715141	DEG
LONG OF CAMERA AXIS INTERSECT	-22.3923137	DEG	LATI OF CAMERA AXIS INTERSECT	-4.6792822	DEG
SPACECRAFT RADIUS	1792.2837067	KM	SPACECRAFT ALTITUDE	54.1937103	KM
MEAN ALTITUDE RATE	0.0986529	KM/SEC	TIME FROM PERIAPSIS	194.3273849	SEC
HORIZONTAL VELOCITY	1.9041533	KM/SEC	TRUE ANOMALY	11.9143707	DEG
SCALE FACTOR HIGH	0.0112559	M/KM	TILT DISTANCE HIGH	274.1568298	MM
SCALE FACTOR LOW	0.0014762	M/KM	TILT DISTANCE LOW	35.9549937	MM
IMAGE MOTION COMPENSATION V/H	0.0351361	RAD/SEC	SWING ANGLE	313.8259468	DEG
EMISSION ANGLE	25.0064213	DEG	INCIDENCE ANGLE	53.7164879	DEG
PHASE ANGLE	70.2737646	DEG	NORTH DEVIATION ANGLE	357.4440956	DEG
TILT ANGLE	24.2009344	DEG	RESOLUTION CONSTANT	1.1760035	MTR
TILT AZIMUTH	139.0046234	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	85.1664715	DEG
SUN ANGLE AT NADIR	54.1890888	DEG	SUN ARC AT NADIR	1643.8473358	KM
LONGITUDE DISTANCE TO TARGET	-0.5924778	DEG	LATITUDE DISTANCE TO TARGET	0.4284859	DEG
LONGITUDE ARC LENGTH TO TARGET	-17.9730470	KM	LATITUDE ARC LENGTH TO TARGET	12.9982874	KM
FORWARD OVERLAP RATIO	0.	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	0.	SEC			

	X	Y	Z	MAGNITUDE KM
DIRECTION COSINES TO TARGET	-0.74634884	0.64717326	-0.15533893	58.67202044
CAMERA AXIS	-0.75345991	0.61059709	-0.24386340	59.60386658
C1	-0.72135655	0.68777955	-0.08126520	58.79876709
C2	-0.70220113	0.57763484	-0.41623498	64.94345093
C3	-0.76037817	0.51300485	-0.39831024	62.63758850
C4	-0.77953359	0.62314955	-0.06334046	56.90928650

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1646.5858002	-696.3061142	-127.2549181	0.7952355	1.6936594	-0.3669477

```
LONG -21.5171 DEG          LONG -21.6623 DEG
LATI  -4.0524 DEG          LATI  -6.0351 DEG          *
                                                     ***
        *        60.30037 KM        *                * * *
        1                           2              *  *  *
                                                     *
                                                     *
                LOW RESOLUTION                       *
                                                     *
                                                     *
   40.09673 KM                52.43723 KM           *  DIRECTION
                                                     *  OF MOTION
                                                     *
                                                     *
                                                     *
        4                           3                *
        *        44.87392 KM        *                *
                                                     *
LONG -22.8283 DEG          LONG -23.2283 DEG         *
LATI  -3.8622 DEG          LATI  -5.2868 DEG         *
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LONG -22.2372 DEG          LONG -22.3668 DEG
LATI  -4.3566 DEG          LATI  -5.0927 DEG

                  *        22.67045 KM        *
                  1                           2

                          HIGH RESOLUTION

   5.47246 KM                          6.11423 KM

                  4                           3
                  *        21.84810 KM        *
LONG -22.4139 DEG          LONG -22.5570 DEG
LATI  -4.3178 DEG          LATI  -5.0238 DEG
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FRAME 173

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* PHOTO FRAME NUMBER 174 *
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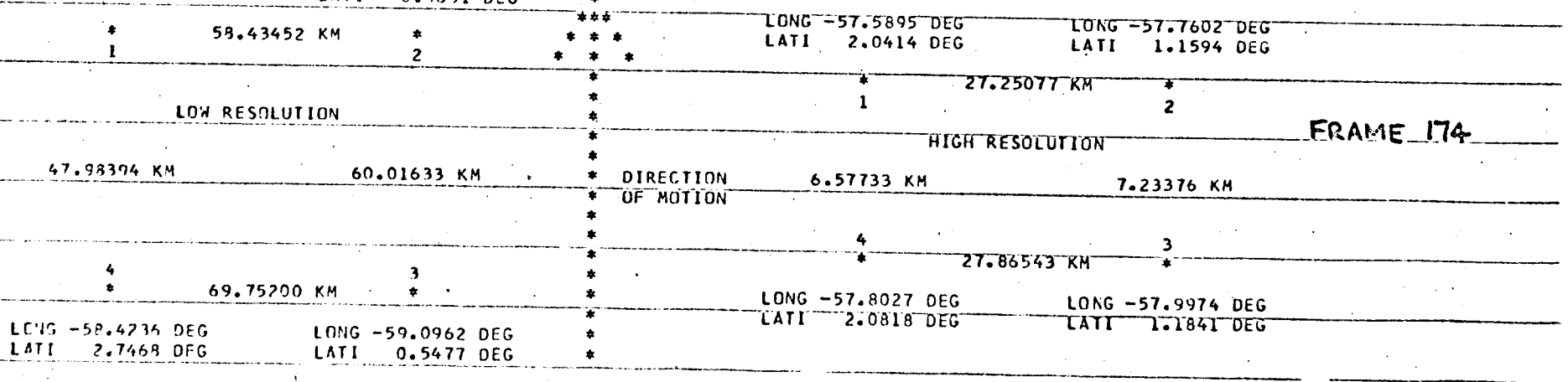
	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	28	20	6	0.799

LONGITUDE OF NADIR POINT	-57.1777039	DEG	LATITUDE OF NADIR POINT	2.0961082	DEG
LONG OF CAMERA AXIS INTERSECT	-57.7816749	DEG	LATI OF CAMERA AXIS INTERSECT	1.6369479	DEG
SPACECRAFT RADIUS	1808.4836426	KM	SPACECRAFT ALTITUDE	70.3936462	KM
MEAN ALTITUDE RATE	-0.1578987	KM/SEC	TIME FROM PERIAPSIS	-317.2117767	SEC
HORIZONTAL VELOCITY	1.8869724	KM/SEC	TRUE ANOMALY	340.6760750	DEG
SCALE FACTOR HIGH	0.0086656	M/KM	TILT DISTANCE HIGH	198.9366264	MM
SCALE FACTOR LOW	0.0011365	M/KM	TILT DISTANCE LOW	26.0900493	MM
IMAGE MOTION COMPENSATION V/H	0.0268060	RAD/SEC	SWING ANGLE	51.4085803	DEG
EMISSION ANGLE	18.8209140	DEG	INCIDENCE ANGLE	85.3357983	DEG
PHASE ANGLE	70.2736111	DEG	NORTH DEVIATION ANGLE	357.2710648	DEG
TILT ANGLE	18.0624740	DEG	RESOLUTION CONSTANT	1.5275421	MTR
TILT AZIMUTH	232.7523460	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	88.6612482	DEG
SUN ANGLE AT NADIR	84.7213469	DEG	SUN ARC AT NADIR	2570.0554199	KM
LONGITUDE DISTANCE TO TARGET	-1.7777038	DEG	LATITUDE DISTANCE TO TARGET	0.6361082	DEG
LONGITUDE ARC LENGTH TO TARGET	-53.9273429	KM	LATITUDE ARC LENGTH TO TARGET	19.2965915	KM
FORWARD OVERLAP RATIO	0.	PCT	SIDE OVERLAP RATIO	0.	PCT
TIME BETWEEN PHOTOS	0.	SEC			

DIRECTION COSINES TO TARGET	X	Y	Z	MAGNITUDE KM
CAMERA AXIS	0.07693838	0.96796007	-0.23902674	91.46233749
C1	-0.71866708	0.65885913	-0.22231127	74.20271301
C2	-0.67938614	0.73139306	-0.05914947	71.55647278
C3	-0.67221469	0.62556390	-0.39597628	78.22978210
C4	-0.73392588	0.56430221	-0.37804209	79.96591187
	-0.74109732	0.67013136	-0.04121529	73.00004578

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	979.6061172	-1518.7525024	66.1468258	1.4759621	1.1234415	-0.3808056



FRAME 174

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*************************************
*   PHOTO FRAME NUMBER    175       *
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	3	5	35.900

LONGITUDE OF NADIR POINT	=	-35.6386986 DEG	LATITUDE OF NADIR POINT	=	-2.7828794 DEG
LONG OF CAMERA AXIS INTERSECT	=	-35.3386364 DEG	LATI OF CAMERA AXIS INTERSECT	=	-3.2622229 DEG
SPACECRAFT RADIUS	=	1786.9405670 KM	SPACECRAFT ALTITUDE	=	48.8515625 KM
MEAN ALTITUDE RATE	=	0.0555688 KM/SEC	TIME FROM PERIAPSIS	=	108.9778776 SEC
HORIZONTAL VELOCITY	=	1.9101449 KM/SEC	TRUE ANOMALY	=	6.6896090 DEG
SCALE FACTOR (HIGH)	=	0.0124868 M/KM	TILT DISTANCE (HIGH)	=	213.7529984 MM
SCALE FACTOR (LOW)	=	0.0016376 M/KM	TILT DISTANCE (LOW)	=	28.0331800 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0391010 RAD/SEC	SWING ANGLE	=	323.4796582 DEG
EMISSION ANGLE	=	19.8765042 DEG	INCIDENCE ANGLE	=	59.5504532 DEG
PHASE ANGLE	=	70.2737236 DEG	NORTH DEVIATION ANGLE	=	356.9908028 DEG
TILT ANGLE	=	19.3112135 DEG	RESOLUTION CONSTANT	=	1.0600789 MTR
TILT AZIMUTH	=	147.9983845 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	86.6127005 DEG
SUN ANGLE AT NADIR	=	59.8199186 DEG	SUN ARC AT NADIR	=	1814.6597290 KM
LONGITUDE DISTANCE TO TARGET	=	-0.8056984 DEG	LATITUDE DISTANCE TO TARGET	=	0.7171206 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-24.4411635 KM	LATITUDE ARC LENGTH TO TARGET	=	21.7541225 KM
FORWARD OVERLAP RATIO	=	0. PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	0. SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.44971451	0.83086301	-0.32775527	59.03627348
CAMERA AXIS	-0.67502856	0.69960208	-0.23429337	51.85363770
C1	-0.63186546	0.77173267	-0.07193556	51.02690125
C2	-0.63012430	0.66110444	-0.40728895	55.97438049
C3	-0.69562819	0.60408663	-0.38881971	54.62506104
C4	-0.69736934	0.71471487	-0.05346631	49.90647888

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1450.5472717	-1039.9721527	-86.7583447	1.1197702	1.4988256	-0.3890738

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LONG -34.6148 DEG          LONG -34.7838 DEG
LATI  -2.7253 DEG          LATI  -4.3385 DEG        *
                                                   ***          LONG -35.2024 DEG          LONG -35.3241 DEG
     *          49.20380 KM      *              * * *           LATI  -2.9823 DEG          LATI  -3.6139 DEG
    (1)                        (2)            *  *  *
                                                 *                     *        19.51040 KM       *
                                                 *                    (1)                        (2)
            LOW RESOLUTION                       *
                                                 *                          HIGH RESOLUTION
                                                 *                                                  FRAME 175
  33.65952 KM                42.33293 KM         *  DIRECTION      4.61841 KM                 5.09150 KM
                                                 *  OF MOTION
                                                 *
                                                 *                    (4)                        (3)
                                                 *                     *        19.03221 KM       *
     (4)                        (3)              *
      *         40.43836 KM      *               *          LONG -35.3512 DEG          LONG -35.4842 DEG
                                                 *          LATI  -2.9492 DEG          LATI  -3.5624 DEG
LONG -35.7099 DEG          LONG -36.0826 DEG     *
LATI  -2.5395 DEG          LATI  -3.8196 DEG     *
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*********************************
*   PHOTO FRAME NUMBER  3 OF  8   *  178
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	6	32	3.600

LONGITUDE OF NADIR POINT	= -36.8442689 DEG		LATITUDE OF NADIR POINT	=	-2.9403725 DEG
LONG OF CAMERA AXIS INTERSECT	= -36.8445086 DEG		LATI OF CAMERA AXIS INTERSECT	=	-2.9352430 DEG
SPACECRAFT RADIUS	= 1787.7691956 KM		SPACECRAFT ALTITUDE	=	49.7691956 KM
MEAN ALTITUDE RATE	= 0.0608313 KM/SEC		TIME FROM PERIAPSIS	=	119.4423208 SEC
HORIZONTAL VELOCITY	= 1.9093124 KM/SEC		TRUE ANOMALY	=	7.3286916 DEG
SCALE FACTOR (HIGH)	= 0.0122566 M/KM		TILT DISTANCE (HIGH)	=	1.9202258 MM
SCALE FACTOR (LOW)	= 0.0016074 M/KM		TILT DISTANCE (LOW)	=	0.2518329 MM
IMAGE MOTION COMPENSATION (V/H)	= 0.0383633 RAD/SEC		SWING ANGLE	=	166.0915604 DEG
EMISSION ANGLE	= 0.1857066 DEG		INCIDENCE ANGLE	=	59.2897778 DEG
PHASE ANGLE	= 59.2924161 DEG		NORTH DEVIATION ANGLE	=	348.8496094 DEG
TILT ANGLE	= 0.1803614 DEG		RESOLUTION CONSTANT	=	1.0799915 MTR
TILT AZIMUTH	= 357.2428627 DEG		SUN AZIMUTH AT PRINCIPAL GND PT	=	86.4744177 DEG
SUN ANGLE AT NADIR	= 59.2858464 DEG		SUN ARC AT NADIR	=	1798.4876862 KM
LONGITUDE DISTANCE TO TARGET	= -0.3442688 DEG		LATITUDE DISTANCE TO TARGET	=	0.0596275 DEG
LONGITUDE ARC LENGTH TO TARGET	= -10.4429886 KM		LATITUDE ARC LENGTH TO TARGET	=	1.8087310 KM
FORWARD OVERLAP RATIO	= 2.4201413 PCT		SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	= 2.3000479 SEC				

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.66039195	0.75077784	0.01466629	50.91372824
CAMERA AXIS	-0.79917282	0.59863296	0.05441862	49.76545496
C1	-0.73122516	0.64662441	0.21722485	50.66680508
C2	-0.78905708	0.60081215	-0.12811591	50.61004639
C3	-0.84040738	0.53063164	-0.11020660	50.61370850
C4	-0.78257547	0.57644390	0.23513416	50.67048645

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1428.8115234	-1070.6100922	-91.7066069	1.1540808	1.4718936	-0.3883317

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LONG -36.1536 DEG          LONG -36.4253 DEG
LATI  -2.3930 DEG          LATI  -3.7041 DEG          *
                                                     ***
      *        40.61349 KM      *                   * * *
     (1)                       (2)                 * * *
                                                     *
                                                     *
                LOW RESOLUTION                       *
                                                     *
                                                     *
  34.38006 KM                34.29229 KM             *  DIRECTION
                                                     *  OF MOTION
                                                     *
                                                     *
                                                     *
     (4)                       (3)                   *
      *        40.63604 KM      *                    *
                                                     *
LONG -37.2645 DEG          LONG -37.5347 DEG         *
LATI  -2.1638 DEG          LATI  -3.4760 DEG         *
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LONG -36.7122 DEG          LONG -36.8315 DEG
LATI  -2.6614 DEG          LATI  -3.2387 DEG

      *        17.88223 KM      *
     (1)                       (2)

                HIGH RESOLUTION

   4.49866 KM                 4.49362 KM

     (4)                       (3)
      *        17.88353 KM      *

LONG -36.8576 DEG          LONG -36.5768 DEG
LATI  -2.6314 DEG          LATI  -3.2088 DEG
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FRAME 178

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* PHOTO FRAME NUMBER 4 OF 8 * 179
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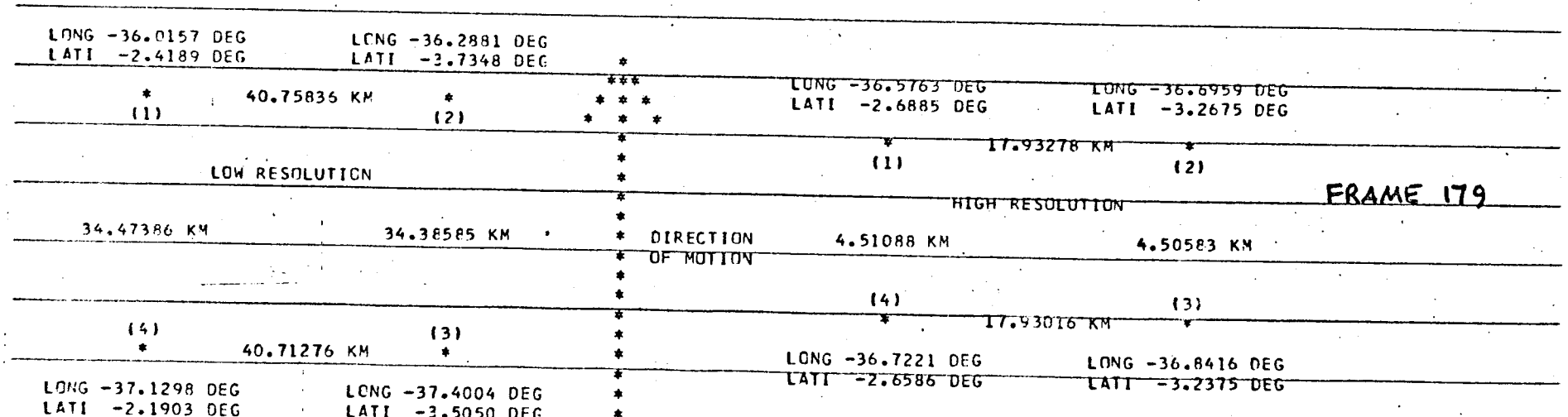
	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	6	32	5.799

LONGITUDE OF NADIR POINT	=	-36.7125359 DEG	LATITUDE OF NADIR POINT	=	-2.9675703 DEG
LONG OF CAMERA AXIS INTERSECT	=	-36.7089844 DEG	LATI OF CAMERA AXIS INTERSECT	=	-2.9632083 DEG
SPACECRAFT RADIUS	=	1787.9043121 KM	SPACECRAFT ALTITUDE	=	49.9043121 KM
MEAN ALTITUDE RATE	=	0.0619408 KM/SEC	TIME FROM PERIAPSIS	=	121.6388788 SEC
HORIZONTAL VELOCITY	=	1.9091692 KM/SEC	TRUE ANOMALY	=	7.4630909 DEG
SCALE FACTOR (HIGH)	=	0.0122234 M/KM	TILT DISTANCE (HIGH)	=	2.0916080 MM
SCALE FACTOR (LOW)	=	0.0016031 M/KM	TILT DISTANCE (LOW)	=	0.2743092 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0382566 RAD/SEC	SWING ANGLE	=	207.9038620 DEG
EMISSION ANGLE	=	0.2021046 DEG	INCIDENCE ANGLE	=	59.1561050 DEG
PHASE ANGLE	=	59.2924161 DEG	NORTH DEVIATION ANGLE	=	348.8564415 DEG
TILT ANGLE	=	0.1964587 DEG	RESOLUTION CONSTANT	=	1.0829236 MTR
TILT AZIMUTH	=	39.0440564 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	86.4465971 DEG
SUN ANGLE AT NADIR	=	59.1599069 DEG	SUN ARC AT NADIR	=	1794.5461426 KM
LONGITUDE DISTANCE TO TARGET	=	-0.2125359 DEG	LATITUDE DISTANCE TO TARGET	=	0.0324297 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-6.4470250 KM	LATITUDE ARC LENGTH TO TARGET	=	0.9837166 KM
FORWARD OVERLAP RATIO	=	6.8701821 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.1999478 SEC			

DIRECTION COSINES TO TARGET	X	Y	Z	MAGNITUDE (KM)
CAMERA AXIS	-0.71820008	0.69510922	0.03180888	50.33957155
C1	-0.79916956	0.59863731	0.05441854	49.90460205
C2	-0.73122160	0.64662847	0.21722473	50.81004333
C3	-0.78905386	0.60081637	-0.12811599	50.75311279
C4	-0.84040453	0.53063614	-0.11020663	50.74569702
	-0.78257228	0.57644825	0.23513409	50.80261230

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1431.3423920	-1067.3766937	-92.5611372	1.1513878	1.4739073	-0.3881588



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*   PHOTO FRAME NUMBER  5 OF  8   *
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180

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	6	32	8.099

LONGITUDE OF NADIR POINT	=	-36.5748901 DEG	LATITUDE OF NADIR POINT	=	-2.9959719 DEG
LONG OF CAMERA AXIS INTERSECT	=	-36.5673566 DEG	LATI OF CAMERA AXIS INTERSECT	=	-2.9924142 DEG
SPACECRAFT RADIUS	=	1788.0480957 KM	SPACECRAFT ALTITUDE	=	50.0480957 KM
MEAN ALTITUDE RATE	=	0.0630997 KM/SEC	TIME FROM PERIAPSIS	=	123.9341869 SEC
HORIZONTAL VELOCITY	=	1.9090166 KM/SEC	TRUE ANOMALY	=	7.6035134 DEG
SCALE FACTOR (HIGH)	=	0.0121883 M/KM	TILT DISTANCE (HIGH)	=	3.0810299 MM
SCALE FACTOR (LOW)	=	0.0015985 M/KM	TILT DISTANCE (LOW)	=	0.4040695 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0381436 RAD/SEC	SWING ANGLE	=	233.5312424 DEG
EMISSION ANGLE	=	0.2978050 DEG	INCIDENCE ANGLE	=	59.0164337 DEG
PHASE ANGLE	=	59.2924180 DEG	NORTH DEVIATION ANGLE	=	348.8637161 DEG
TILT ANGLE	=	0.2893910 DEG	RESOLUTION CONSTANT	=	1.0860437 MTR
TILT AZIMUTH	=	64.6680593 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	86.4173164 DEG
SUN ANGLE AT NADIR	=	59.0241570 DEG	SUN ARC AT NADIR	=	1790.4283142 KM
LONGITUDE DISTANCE TO TARGET	=	-0.0748901 DEG	LATITUDE DISTANCE TO TARGET	=	0.0040281 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-2.2717041 KM	LATITUDE ARC LENGTH TO TARGET	=	0.1221871 KM
FORWARD OVERLAP RATIO	=	2.9577146 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.3000479 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.77428047	0.63088204	0.04977561	50.10109234
CAMERA AXIS	-0.79916615	0.59864186	0.05441847	50.04875183
C1	-0.73121788	0.64663271	0.21722463	50.96269226
C2	-0.78905049	0.60082078	-0.12811606	50.90557861
C3	-0.84040155	0.53064086	-0.11020666	50.88652039
C4	-0.78256896	0.57645280	0.23513403	50.94360352

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1433.9808044	-1063.5530725	-93.4537039	1.1485692	1.4760046	-0.3875764

```
LONG -35.8715 DEG          LONG -36.1448 DEG
LATI  -2.4460 DEG          LATI  -3.7668 DEG
                                   *
                                  ***
*          40.91240 KM     *      * * *
(1)                        (2)   *  *  *
                                   *
                                   *
                                   *
          LOW RESOLUTION           *
                                   *
                                   *
34.57421 KM                34.48594 KM   *  DIRECTION
                                   *  OF MOTION
                                   *
                                   *
(4)                        (3)     *
*          40.79514 KM     *       *
                                   *
LONG -36.9892 DEG          LONG -37.2601 DEG
LATI  -2.2180 DEG          LATI  -3.5354 DEG

LONG -36.4343 DEG          LONG -36.5542 DEG
LATI  -2.7169 DEG          LATI  -3.2977 DEG

*          17.98666 KM     *
(1)                        (2)
                                   HIGH RESOLUTION

4.52395 KM                 4.51889 KM

(4)                        (3)
*          17.97992 KM     *

LONG -36.5806 DEG          LONG -36.7003 DEG
LATI  -2.6869 DEG          LATI  -3.2675 DEG
```

FRAME 180

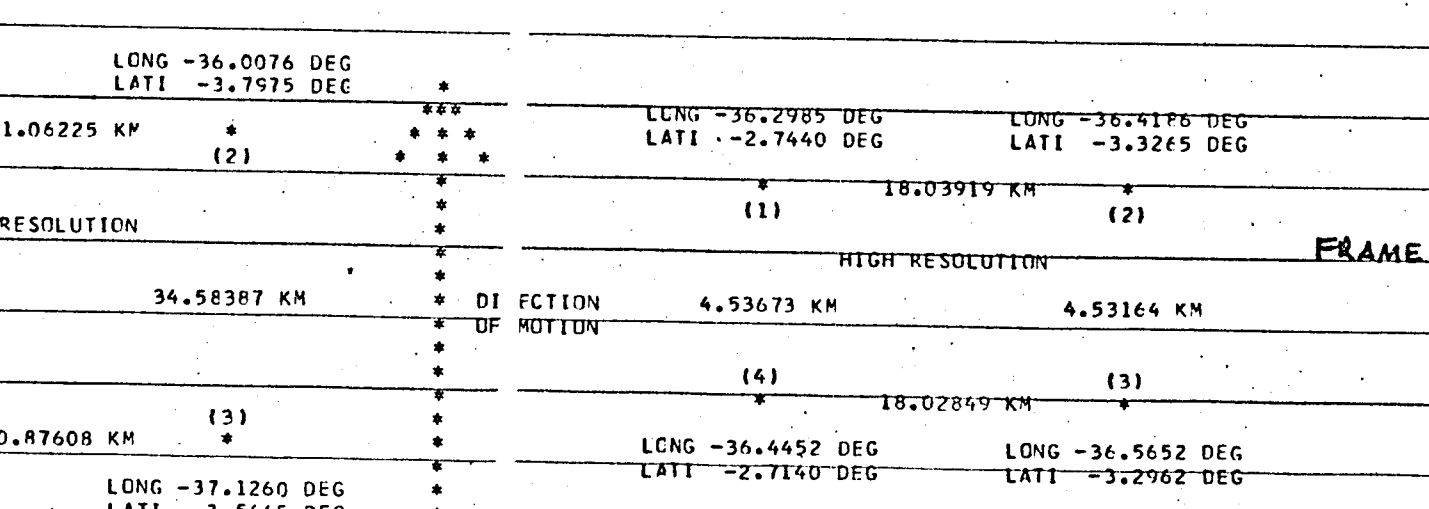
****
* PHOTO FRAME NUMBI 6 OF 8 *
********** 181

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29		32	10.300

LONGITUDE OF NADIR POINT	=	-36.4432583	DEG	LATITUDE OF NADIR POINT	= -3.0231057 DEG
LONG OF CAMERA AXIS INTERSECT	=	-36.4319348	DEG	LATI OF CAMERA AXIS INTERSECT	= -3.0203198 DEG
SPACECRAFT RADIUS	=	1788.1880798	KM	SPACECRAFT ALTITUDE	= 50.1880798 KM
MEAN ALTITUDE RATE	=	0.0642071	KM/SEC	TIME FROM PERIAPSIS	= 126.1286793 SEC
HORIZONTAL VELOCITY	=	1.9088680	KM/SEC	TRUE ANOMALY	= 7.7377467 DEG
SCALE FACTOR (HIGH)	=	0.0121543	M/KM	TILT DISTANCE (HIGH)	= 4.3112183 MM
SCALE FACTOR (LOW)	=	0.0015940	M/KM	TILT DISTANCE (LOW)	= 0.5654057 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0380343	RAD/SEC	SWING ANGLE	= 245.0713596 DEG
EMISSION ANGLE	=	0.4167820	DEG	INCIDENCE ANGLE	= 58.8829112 DEG
PHASE ANGLE	=	59.2924180	DEG	NORTH DEVIATION ANGLE	= 348.8707924 DEG
TILT ANGLE	=	0.4049352	DEG	RESOLUTION CONSTANT	= 1.0890813 MTR
TILT AZIMUTH	=	76.2003754	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	= 86.3891220 DEG
SUN ANGLE AT NADIR	=	58.8944030	DEG	SUN ARC AT NADIR	= 1786.4923859 KM
LONGITUDE DISTANCE TO TARGET	=	0.0567017	DEG	LATITUDE DISTANCE TO TARGET	= -0.0231057 DEG
LONGITUDE ARC LENGTH TO TARGET	=	1.7199781	KM	LATITUDE ARC LENGTH TO TARGET	= -0.7008845 KM
FORWARD OVERLAP RATIO	=	7.4755308	PCT	SIDE OVERLAP RATIO	= 0. PCT
TIME BETWEEN PHOTOS	=	2.1999478	SEC		

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.82250413	56484186	0.06663804	50.22327757
CAMERA AXIS	-0.79916296	59864614	0.05441842	50.18936157
C1	-0.73121440	64663669	0.21722454	51.11152649
C2	-0.78904732	60082492	-0.12811612	51.05424500
C3	-0.84039877	53064528	-0.11020668	51.02400208
C4	-0.78256583	57645705	0.23513398	51.08122253

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1436.4973602	-1060.7534027	-94.31 6721	1.1458699	1.4780032	-0.3878004



FRAME 181

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*********************************
*   PHOTO FRAME NUMBER  7 OF  8   *
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182

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	6	32	12.600

LONGITUDE OF NADIR POINT	=	-36.3056259 DEG	LATITUDE OF NADIR POINT	=	-3.0514758 DEG
LONG OF CAMERA AXIS INTERSECT	=	-36.2902322 DEG	LATI OF CAMERA AXIS INTERSECT	=	-3.0455018 DEG
SPACECRAFT RADIUS	=	1788.3371429 KM	SPACECRAFT ALTITUDE	=	50.3371429 KM
MEAN ALTITUDE RATE	=	0.0653654 KM/SEC	TIME FROM PERIAPSIS	=	128.4249763 SEC
HORIZONTAL VELOCITY	=	1.9087100 KM/SEC	TRUE ANOMALY	=	7.8781846 DEG
SCALE FACTOR (HIGH)	=	0.0121183 M/KM	TILT DISTANCE (HIGH)	=	5.6974490 MM
SCALE FACTOR (LOW)	=	0.0015893 M/KM	TILT DISTANCE (LOW)	=	0.7472064 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0379185 RAD/SEC	SWING ANGLE	=	251.5594482 DEG
EMISSION ANGLE	=	0.5506748 DEG	INCIDENCE ANGLE	=	58.7432055 DEG
PHASE ANGLE	=	59.2924185 DEG	NORTH DEVIATION ANGLE	=	348.8783264 DEG
TILT ANGLE	=	0.5351316 DEG	RESOLUTION CONSTANT	=	1.0923160 MTR
TILT AZIMUTH	=	82.6808434 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	86.3594084 DEG
SUN ANGLE AT NADIR	=	58.7586641 DEG	SUN ARC AT NADIR	=	1782.3749084 KM
LONGITUDE DISTANCE TO TARGET	=	0.1943741 DEG	LATITUDE DISTANCE TO TARGET	=	-0.0514758 DEG
LONGITUDE ARC LENGTH TO TARGET	=	5.8961090 KM	LATITUDE ARC LENGTH TO TARGET	=	-1.5614567 KM
FORWARD OVERLAP RATIO	=	3.4744628 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.3000479 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.86632607	0.49243584	0.08358270	50.71498565
CAMERA AXIS	-0.79915952	0.59865075	0.05441834	50.33940125
C1	-0.73121063	0.64664058	0.21722442	51.27024841
C2	-0.78904390	0.60082939	-0.12811620	51.21278381
C3	-0.84039575	0.53065004	-0.11020672	51.17077637
C4	-0.78256248	0.57646163	0.23513390	51.22814941

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1439.1242218	-1057.3590658	-95.1987867	1.1430414	1.4800873	-0.3876145

```
LONG -35.5891 DEG          LONG -35.8642 DEG
LATI  -2.4987 DEG          LATI  -3.8297 DEG        *
                                                   ***          LONG -36.1564 DEG          LONG -36.2769 DEG
      *          41.22169 KM        *             * * *         LATI  -2.7723 DEG          LATI  -3.3566 DEG
     (1)                           (2)           *  *  *
                                                   *                  *          18.09520 KM        *
                                                   *                 (1)                          (2)
            LOW RESOLUTION                         *                                                          FRAME 182
                                                   *                          HIGH RESOLUTION
                                                   *
   34.77747 KM                34.68866 KM          *  DIRECTION      4.55039 KM                 4.54529 KM
                                                   *  OF MOTION
                                                   *
                                                   *                 (4)                          (3)
                                                   *                  *          18.08035 KM        *
     (4)                          (3)              *
      *          40.96301 KM        *              *          LONG -36.3036 DEG          LONG -36.4238 DEG
                                                   *          LATI  -2.7423 DEG          LATI  -3.3261 DEG
LONG -36.7140 DEG          LONG -36.9857 DEG        *
LATI  -2.2720 DEG          LATI  -3.5949 DEG        *
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*******************  ***************
*   PHOTO FRAME NUM ER  8 OF  8   *  183
*******************  ***************
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	6	32	14.900

LONGITUDE OF NADIR POINT	=	-36.1680832 DEG	LATITUDE OF NADIR POINT	=	-3.0797980 DEG
LONG OF CAMERA AXIS INTERSECT	=	-36.1486354 DEG	LATI OF CAMERA AXIS INTERSECT	=	-3.0786394 DEG
SPACECRAFT RADIUS	=	1788.4887543 KM	SPACECRAFT ALTITUDE	=	50.4887543 KM
MEAN ALTITUDE RATE	=	0.0665220 KM/SEC	TIME FROM PERIAPSIS	=	130.7192612 SEC
HORIZONTAL VELOCITY	=	1.9085491 KM/SEC	TRUE ANOMALY	=	8.0184745 DEG
SCALE FACTOR (HIGH)	=	0.0120819 M/KM	TILT DISTANCE (HIGH)	=	7.1297736 MM
SCALE FACTOR (LOW)	=	0.0015945 M/KM	TILT DISTANCE (LOW)	=	0.9350523 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0378015 RAD/SEC	SWING ANGLE	=	255.4695721 DEG
EMISSION ANGLE	=	0.6891594 DEG	INCIDENCE ANGLE	=	58.6036377 DEG
PHASE ANGLE	=	59.2924204 DEG	NORTH DEVIATION ANGLE	=	348.8859940 DEG
TILT ANGLE	=	0.6696514 DEG	RESOLUTION CONSTANT	=	1.0956060 MTR
TILT AZIMUTH	=	86.5833836 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	86.3295050 DEG
SUN ANGLE AT NADIR	=	58.6230831 DEG	SUN ARC AT NADIR	=	1778.2622223 KM
LONGITUDE DISTANCE TO TARGET	=	0.3319168 DEG	LATITUDE DISTANCE TO TARGET	=	-0.0797980 DEG
LONGITUDE ARC LENGTH TO TARGET	=	10.0683055 KM	LATITUDE ARC LENGTH TO TARGET	=	-2.4205779 KM
FORWARD OVERLAP RATIO	=	3.8455680 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.3000479 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.90278219	0.41843564	0.09947830	51.56710434
CAMERA AXIS	-0.79915613	0.59865527	0.05441828	50.49229431
C1	-0.73120695	0.64664520	0.21722433	51.43193054
C2	-0.78904056	0.60083377	-0.12811626	51.37426758
C3	-0.84039278	0.53065474	-0.11020674	51.32041931
C4	-0.78255917	0.57646615	0.23513386	51.37796021

	X	Y		X DOT	Y DOT	Z DOT
STATE VECTOR	1441.7423706	-1053.9627075	-96	0896997	1.1402107	1.4821624	-0.3874271

```
LONG -35.4448 DEG          LONG -35.7207 DEG
LATI  -2.5256 DEG          LATI  -3.8618 DEG        *
                                                   ***
        *          41.38375 KM        *            * * *
      (1)                          (2)            *  *
                                                     *
                                                     *
                LOW RESOLUTION                       *
                                                     *
                                                     *
   34.88485 KM                34.79575 KM           *
                                                     *
                                                     *
                                                     *
                                                     *
      (4)                          (3)               *
        *          41.05214 KM        *             *
                                                     *
LONG -36.5734 DEG          LONG -36.8456 DEG         *
LATI  -2.2996 DEG          LATI  -3.6254 DEG         *
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                LONG -36.0144 DEG          LONG -36.1352 DEG
                LATI  -2.8005 DEG          LATI  -3.3867 DEG

                        *        18.15227 KM        *
                      (1)                          (2)

                                                        FRAME 183
                          HIGH RESOLUTION

IRECTION        4.56434 KM                  4.55923 KM
F MOTION

                      (4)                          (3)
                        *        18.13323 KM        *
                LONG -36.1621 DEG          LONG -36.2826 DEG
                LATI  -2.7706 DEG          LATI  -3.3561 DEG
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*********************************
*   PHOTO FRAME NUMBER  1 OF 16   *
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184

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	9	56	43.799

LONGITUDE OF NADIR POINT	=	-44.4883194	DEG	LATITUDE OF NADIR POINT	=	-1.7533736	DEG
LONG OF CAMERA AXIS INTERSECT	=	-44.5274744	DEG	LATI OF CAMERA AXIS INTERSECT	=	-1.7493139	DEG
SPACECRAFT RADIUS	=	1784.4701843	KM	SPACECRAFT ALTITUDE	=	44.9701843	KM
MEAN ALTITUDE RATE	=	0.0115709	KM/SEC	TIME FROM PERIAPSIS	=	22.6464021	SEC
HORIZONTAL VELOCITY	=	1.9128392	KM/SEC	TRUE ANOMALY	=	1.3910260	DEG
SCALE FACTOR (HIGH)	=	0.0135645	M/KM	TILT DISTANCE (HIGH)	=	16.2067690	MM
SCALE FACTOR (LOW)	=	0.0017790	M/KM	TILT DISTANCE (LOW)	=	2.1254779	MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0425357	RAD/SEC	SWING ANGLE	=	84.3457785	DEG
EMISSION ANGLE	=	1.5612717	DEG	INCIDENCE ANGLE	=	65.1664124	DEG
PHASE ANGLE	=	63.6222916	DEG	NORTH DEVIATION ANGLE	=	348.4275360	DEG
TILT ANGLE	=	1.5219034	DEG	RESOLUTION CONSTANT	=	0.9758530	MTR
TILT AZIMUTH	=	275.9203415	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.5055208	DEG
SUN ANGLE AT NADIR	=	65.1274853	DEG	SUN ARC AT NADIR	=	1977.2706299	KM
LONGITUDE DISTANCE TO TARGET	=	-1.1483192	DEG	LATITUDE DISTANCE TO TARGET	=	0.8166264	DEG
LONGITUDE ARC LENGTH TO TARGET	=	-34.8629751	KM	LATITUDE ARC LENGTH TO TARGET	=	24.7927804	KM
FORWARD OVERLAP RATIO	=	0.	PCT	SIDE OVERLAP RATIO	=	0.	PCT
TIME BETWEEN PHOTOS	=	0.	SEC				

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.13739741	0.91687337	-0.37478684	62.43261003
CAMERA AXIS	-0.73125898	0.68128540	0.03332455	44.98645020
C1	-0.66072300	0.72448851	0.19637085	45.69213867
C2	-0.71856315	0.67930172	-0.14905092	45.73870850
C3	-0.77735195	0.61530967	-0.13083565	45.85093689
C4	-0.71951179	0.66049647	0.21458612	45.80416870

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1272.4331055	-1249.9065247	-54.6001225	1.3113039	1.3356495	-0.3944753

```
LONG -43.9092 DEG          LONG -44.1548 DEG
LATI  -1.2681 DEG          LATI  -2.4405 DEG          *
                                                     ***
      *          36.36489 KM      *                 * * *          LONG -44.4073 DEG          LONG -44.5169 DEG
     (1)                         (2)               *  *  *         LATI  -1.5031 DEG          LATI  -2.0234 DEG
                                                     *                    *          16.14373 KM      *
                                                     *                   (1)                        (2)
            LOW RESOLUTION                           *                                                          FRAME 184
                                                     *                                HIGH RESOLUTION
                                                     *
   31.00422 KM                31.07640 KM           *  DIRECTION      4.06333 KM                 4.06746 KM
                                                     *  OF MOTION
                                                     *
                                                     *                   (4)                        (3)
                                                     *                    *          16.18332 KM      *
     (4)                        (3)                  *
      *          37.05372 KM      *                  *          LONG -44.5381 DEG          LONG -44.6482 DEG
                                                     *          LATI  -1.4748 DEG          LATI  -1.9964 DEG
LONG -44.9063 DEG          LONG -45.1596 DEG         *
LATI  -1.0466 DEG          LATI  -2.2406 DEG         *
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********************* **************
*   PHOTO FRAME NUMB R  2 OF 16   *  185
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	9	56	45.899

LONGITUDE OF NADIR POINT	=	-44.3623734 DEG	LATITUDE OF NADIR POINT	=	-1.7799567 DEG
LONG OF CAMERA AXIS INTERSECT	=	-44.3982811 DEG	LATI OF CAMERA AXIS INTERSECT	=	-1.7765851 DEG
SPACECRAFT RADIUS	=	1784.4955902 KM	SPACECRAFT ALTITUDE	=	44.9955902 KM
MEAN ALTITUDE RATE	=	0.0126421 KM/SEC	TIME FROM PERIAPSIS	=	24.7433970 SEC
HORIZONTAL VELOCITY	=	1.9128132 KM/SEC	TRUE ANOMALY	=	1.5158174 DEG
SCALE FACTOR (HIGH)	=	0.0135569 M/KM	TILT DISTANCE (HIGH)	=	14.8410395 MM
SCALE FACTOR (LOW)	=	0.0017779 M/KM	TILT DISTANCE (LOW)	=	1.9463658 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0425111 RAD/SEC	SWING ANGLE	=	83.7934494 DEG
EMISSION ANGLE	=	1.4297817 DEG	INCIDENCE ANGLE	=	65.0382586 DEG
PHASE ANGLE	=	63.6222916 DEG	NORTH DEVIATION ANGLE	=	348.4307518 DEG
TILT ANGLE	=	1.3937069 DEG	RESOLUTION CONSTANT	=	0.9764043 MTR
TILT AZIMUTH	=	275.3642578 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.4867191 DEG
SUN ANGLE AT NADIR	=	65.0025826 DEG	SUN ARC AT NADIR	=	1973.4786072 KM
LONGITUDE DISTANCE TO TARGET	=	-1.0223732 DEG	LATITUDE DISTANCE TO TARGET	=	0.7900433 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-31.0392530 KM	LATITUDE ARC LENGTH TO TARGET	=	23.9857178 KM
FORWARD OVERLAP RATIO	=	1.4531492 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.1001697 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.19866574	0.[illegible]0717155	-0.37609177	60.01359606
CAMERA AXIS	-0.73125548	0.[illegible]8128914	0.03332448	45.00924683
C1	-0.66071923	0.[illegible]2449199	0.19637074	45.72006226
C2	-0.71855973	0.[illegible]7930532	-0.14905100	45.76664734
C3	-0.77734884	0.[illegible]1531357	-0.13083568	45.86938477
C4	-0.71950834	0.[illegible]6050024	0.21458606	45.82257080

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1275.1775360	-1247.1063538	-55.421[illegible]234	1.3090029	1.3379060	-0.3943769

```
LONG -43.7792 DEG          LONG -44.0251 DEG
LATI  -1.2947 DEG          LATI  -2.4686 DEG
                                   *
                                  ***
*          36.41220 KM     *     * * *
(1)                        (2)  *  *  *
                                   *
                                   *
          LOW RESOLUTION           *
                                   *
                                   *
31.01733 KM            31.08955 KM *  DIRE TION
                                   *  OF M TION
                                   *
                                   *
(4)                        (3)     *
*          37.04263 KM     *       *
                                   *
LONG -44.7770 DEG          LONG -45.0301 DEG  *
LATI  -1.0741 DEG          LATI  -2.2677 DEG  *
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LONG -44.2780 DEG          LONG -44.3976 DEG
LATI  -1.5302 DEG          LATI  -2.0508 DEG
*          16.15359 KM     *
(1)                        (2)
                 HIGH RESOLUTION
4.06513 KM                 4.06529 KM
(4)                        (3)
*          16.18983 KM     *
LONG -44.4090 DEG          LONG -44.5190 DEG
LATI  -1.5020 DEG          LATI  -2.0238 DEG
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FRAME 185

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*********************************
*   PHOTO FRAME NUMBER   3 OF 16   *
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186

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	9	56	47.999

LONGITUDE OF NADIR POINT	= -44.2364311	DEG	LATITUDE OF NADIR POINT	= -1.8065287	DEG
LONG OF CAMERA AXIS INTERSECT	= -44.2690916	DEG	LATI OF CAMERA AXIS INTERSECT	= -1.8038461	DEG
SPACECRAFT RADIUS	= 1784.5232697	KM	SPACECRAFT ALTITUDE	= 45.0232697	KM
MEAN ALTITUDE RATE	= 0.0137131	KM/SEC	TIME FROM PERIAPSIS	= 26.8403487	SEC
HORIZONTAL VELOCITY	= 1.9127847	KM/SEC	TRUE ANOMALY	= 1.6486023	DEG
SCALE FACTOR (HIGH)	= 0.0135485	M/KM	TILT DISTANCE (HIGH)	= 13.4777808	MM
SCALE FACTOR (LOW)	= 0.0017769	M/KM	TILT DISTANCE (LOW)	= 1.7675778	MM
IMAGE MOTION COMPENSATION (V/H)	= 0.0424844	RAD/SEC	SWING ANGLE	= 83.1293287	DEG
EMISSION ANGLE	= 1.2984864	DEG	INCIDENCE ANGLE	= 64.9101973	DEG
PHASE ANGLE	= 63.6222916	DEG	NORTH DEVIATION ANGLE	= 348.4340897	DEG
TILT ANGLE	= 1.2657284	DEG	RESOLUTION CONSTANT	= 0.9770049	MTR
TILT AZIMUTH	= 274.6963425	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	= 87.4677582	DEG
SUN ANGLE AT NADIR	= 64.8776541	DEG	SUN ARC AT NADIR	= 1969.6869965	KM
LONGITUDE DISTANCE TO TARGET	= -0.8964310	DEG	LATITUDE DISTANCE TO TARGET	= 0.7634713	DEG
LONGITUDE ARC LENGTH TO TARGET	= -27.2156465	KM	LATITUDE ARC LENGTH TO TARGET	= 23.1789916	KM
FORWARD OVERLAP RATIO	= 1.5070214	PCT	SIDE OVERLAP RATIO	= 0.	PCT
TIME BETWEEN PHOTOS	= 2.0998478	SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.24342830	0.89390992	-0.37638772	57.76629353
CAMERA AXIS	-0.73125191	0.68129298	0.03332442	45.03453064
C1	-0.66071536	0.72449552	0.19637064	45.75053406
C2	-0.71855623	0.67930901	-0.14905106	45.79714966
C3	-0.77734567	0.61531758	-0.13083570	45.89038086
C4	-0.71550482	0.66050410	0.21458600	45.84355164

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1277.9169765	-1244.3015900	-56.2565198	1.3066972	1.3401573	-0.3942770

```
LONG -43.6493 DEG          LONG -43.8954 DEG
LATI  -1.3212 DEG          LATI  -2.4968 DEG        *
                                                   ***          LONG -44.1488 DEG          LONG -44.2584 DEG
      *          36.46162 KM      *              * * *          LATI  -1.5573 DEG          LATI  -2.0783 DEG
     (1)                         (2)            * * *
                                                  *                        *        16.16436 KM        *
                                                  *                       (1)                         (2)
            LOW RESOLUTION                        *                                                          FRAME 186
                                                  *                          HIGH RESOLUTION
                                                  *
  31.03240 KM                31.10464 KM          *  DIRECTION       4.06718 KM                 4.07134 KM
                                                  *  OF MOTION
                                                  *
                                                  *                       (4)                         (3)
                                                  *                        *        16.19725 KM        *
     (4)                         (3)              *
      *          37.03365 KM      *               *                 LONG -44.2798 DEG          LONG -44.3858 DEG
                                                  *                 LATI  -1.5291 DEG          LATI  -2.0512 DEG
LONG -44.6478 DEG          LONG -44.9007 DEG      *
LATI  -1.1016 DEG          LATI  -2.2949 DEG      *
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* PHOTO FRAME NUMBER 4 OF 16 * 187
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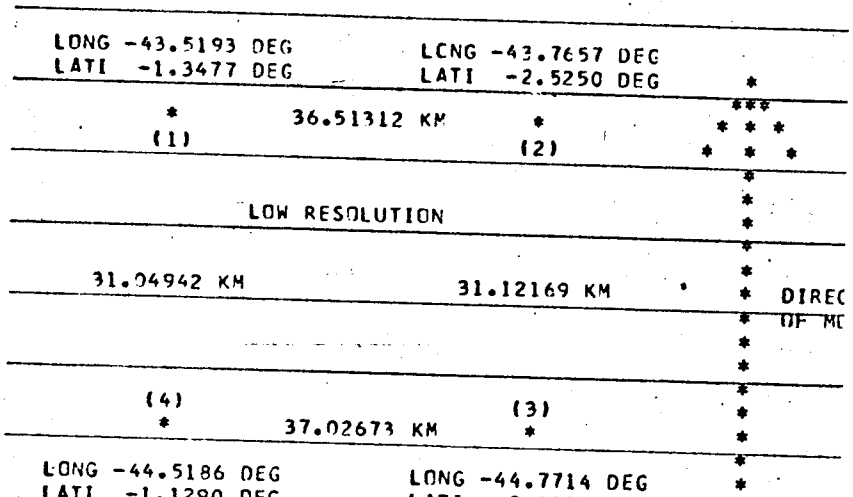
	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29		56	50.100

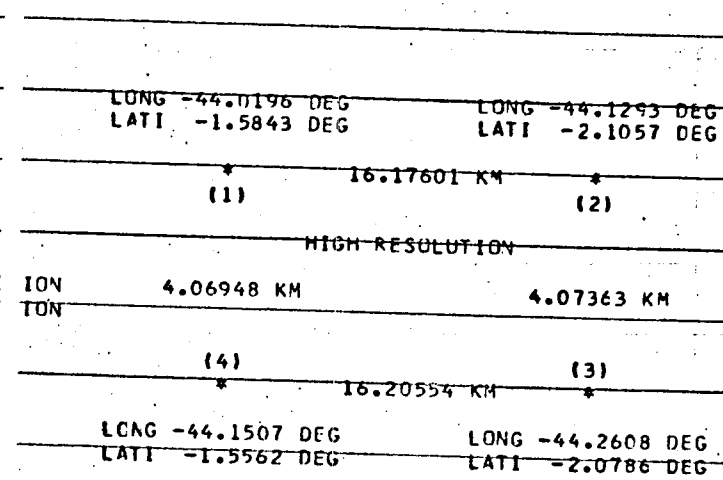
LONGITUDE OF NADIR POINT	=	-44.1105423 DEG
LONG OF CAMERA AXIS INTERSECT	=	-44.1355565 DEG
SPACECRAFT RADIUS	=	1784.5531769 KM
MEAN ALTITUDE RATE	=	0.0147835 KM/SEC
HORIZONTAL VELOCITY	=	1.9127539 KM/SEC
SCALE FACTOR (HIGH)	=	0.0135396 M/KM
SCALE FACTOR (LOW)	=	0.0017757 M/KM
IMAGE MOTION COMPENSATION (V/H)	=	0.0424555 RAD/SEC
EMISSION ANGLE	=	1.1674507 DEG
PHASE ANGLE	=	63.6222930 DEG
TILT ANGLE	=	1.1375332 DEG
TILT AZIMUTH	=	273.8794861 DEG
SUN ANGLE AT NADIR	=	64.7528801 DEG
LONGITUDE DISTANCE TO TARGET	=	-0.7705421 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-23.3936615 KM
FORWARD OVERLAP RATIO	=	1.6049248 PCT
TIME BETWEEN PHOTOS	=	2.1001697 SEC

ATITUDE OF NADIR POINT	=	-1.8330802 DEG		
ATI OF CAMERA AXIS INTERSECT	=	-1.8310857 DEG		
PACECRAFT ALTITUDE	=	45.0531769 KM		
IME FROM PERIAPSIS	=	28.9362664 SEC		
RUE ANOMALY	=	1.7773196 DEG		
ILT DISTANCE (HIGH)	=	12.1166090 MM		
ILT DISTANCE (LOW)	=	1.5890635 MM		
WING ANGLE	=	82.3162441 DEG		
NCIDENCE ANGLE	=	64.7821684 DEG		
JRTH DEVIATION ANGLE	=	348.4375381 DEG		
ESOLUTION CONSTANT	=	0.9776539 MTR		
JN AZIMUTH AT PRINCIPAL GND PT	=	87.4486485 DEG		
JN ARC AT NADIR	=	1965.8776135 KM		
ATITUDE DISTANCE TO TARGET	=	0.7369198 DEG		
ATITUDE ARC LENGTH TO TARGET	=	22.3728881 KM		
IDE OVERLAP RATIO	=	0. PCT		

DIRECTION COSINES TO TARGET CAMERA AXIS	X	Y	Z	MAGNITUDE (KM)
C1	-0.30146701	0. /646087	-0.37541173	55.71226454
C2	-0.73124842	0. 3129673	0.03332435	45.06230164
C3	-0.66071160	0. 9449899	0.19637053	45.78349304
C4	-0.71855281	0. 7931262	-0.14905113	45.83016968
	-0.77734257	0. .532149	-0.13083571	45.91386414
	-0.71550138	0. 5050788	0.21458594	45.86701565

STATE VECTOR	X	Y	Z	X DOT	Y DOT	Z DOT
	1280.6504364	-1241.4533472	-57.0841 54	1.3043876	1.3424025	-0.3941757





FRAME 187

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*********************************
*   PHOTO FRAME NUMBER  5 OF 16   *
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188

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	9	56	52.199

LONGITUDE OF NADIR POINT	=	-43.9845963 DEG	LATITUDE OF NADIR POINT	=	-1.8596334 DEG
LONG OF CAMERA AXIS INTERSECT	=	-44.0107603 DEG	LATI OF CAMERA AXIS INTERSECT	=	-1.8583280 DEG
SPACECRAFT RADIUS	=	1784.5853271 KM	SPACECRAFT ALTITUDE	=	45.0853271 KM
MEAN ALTITUDE RATE	=	0.0158543 KM/SEC	TIME FROM PERIAPSIS	=	31.0331638 SEC
HORIZONTAL VELOCITY	=	1.9127205 KM/SEC	TRUE ANOMALY	=	1.9060929 DEG
SCALE FACTOR (HIGH)	=	0.0135299 M/KM	TILT DISTANCE (HIGH)	=	10.7587585 MM
SCALE FACTOR (LOW)	=	0.0017744 M/KM	TILT DISTANCE (LOW)	=	1.4109847 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0424245 RAD/SEC	SWING ANGLE	=	81.2973585 DEG
EMISSION ANGLE	=	1.0366305 DEG	INCIDENCE ANGLE	=	64.6540880 DEG
PHASE ANGLE	=	63.6222939 DEG	NORTH DEVIATION ANGLE	=	348.4411087 DEG
TILT ANGLE	=	1.0104386 DEG	RESOLUTION CONSTANT	=	0.9783516 MTR
TILT AZIMUTH	=	272.85667C4 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.4293709 DEG
SUN ANGLE AT NADIR	=	64.6280174 DEG	SUN ARC AT NADIR	=	1962.1068115 KM
LONGITUDE DISTANCE TO TARGET	=	-0.6445961 DEG	LATITUDE DISTANCE TO TARGET	=	0.7103666 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-19.5699391 KM	LATITUDE ARC LENGTH TO TARGET	=	21.5667324 KM
FORWARD OVERLAP RATIO	=	1.6154749 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.0958478 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-C.36244064	0.85416692	-0.37287487	53.87163162
CAMERA AXIS	-0.73124491	0.68130050	0.03332428	45.09251404
C1	-C.66C70782	0.72450248	0.19637042	45.81900024
C2	-0.71854937	0.67931623	-0.14905120	45.86572266
C3	-0.77733947	0.61532543	-0.13083574	45.93988037
C4	-0.71949790	0.66051167	0.21458587	45.89302063

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1283.3802948	-1238.6790524	-57.9116654	1.302C721	1.3446435	-0.3940728

```
LONG -43.3892 DEG          LONG -43.6359 DEG
LATI  -1.3742 DEG          LATI  -2.5532 DEG        *
                                                   ***          LONG -43.8903 DEG          LONG -44.0000 DEG
      *          36.56671 KM      *               * * *         LATI  -1.6113 DEG          LATI  -2.1332 DEG
     (1)                         (2)             *  *  *
                                                   *                     *        16.18855 KM        *
                                                   *                    (1)                        (2)
            LOW RESOLUTION                         *                                                          FRAME 188
                                                   *                          HIGH RESOLUTION
                                                   *
  31.06838 KM                31.14069 KM           *  DIRECTION      4.07203 KM                4.07618 KM
                                                   *  OF MOTION
                                                   *
                                                   *                    (4)                        (3)
                                                   *                     *        16.21472 KM        *
     (4)                         (3)               *
      *          37.02184 KM      *                *          LONG -44.0215 DEG          LONG -44.1316 DEG
                                                   *          LATI  -1.5833 DEG          LATI  -2.1059 DEG
LONG -44.3893 DEG          LONG -44.6420 DEG       *
LATI  -1.1563 DEG          LATI  -2.3494 DEG       *
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* PHOTO FRAME NUMBER 6 OF 16 *
********** 189

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	9	56	54.300

LONGITUDE OF NADIR POINT	=	-43.8565930	DEG	LATITUDE OF NADIR POINT	= -1.8861500 DEG
LONG OF CAMERA AXIS INTERSECT	=	-43.8814988	DEG	LAT OF CAMERA AXIS INTERSECT	= -1.8855736 DEG
SPACECRAFT RADIUS	=	1784.6197815	KM	SPACECRAFT ALTITUDE	= 45.1197815 KM
MEAN ALTITUDE RATE	=	0.0169255	KM/SEC	TIME FROM PERIAPSIS	= 33.1310477 SEC
HORIZONTAL VELOCITY	=	1.9126846	KM/SEC	TRUE ANOMALY	= 2.0349221 DEG
SCALE FACTOR (HIGH)	=	0.0135196	M/KM	TILT DISTANCE (HIGH)	= 9.4055926 MM
SCALE FACTOR (LOW)	=	0.0017731	M/KM	TILT DISTANCE (LOW)	= 1.2335203 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0423913	RAD/SEC	SWING ANGLE	= 79.9840508 DEG
EMISSION ANGLE	=	0.9063073	DEG	INCIDENCE ANGLE	= 64.5259590 DEG
PHASE ANGLE	=	63.6222939	DEG	NORTH DEVIATION ANGLE	= 348.4447937 DEG
TILT ANGLE	=	0.8833739	DEG	RESOLUTION CONSTANT	= 0.9790993 MTR
TILT AZIMUTH	=	271.5394325	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	= 87.4099236 DEG
SUN ANGLE AT NADIR	=	64.5031090	DEG	SUN ARC AT NADIR	= 1958.3145752 KM
LONGITUDE DISTANCE TO TARGET	=	-0.5185928	DEG	LATITUDE DISTANCE TO TARGET	= 0.6838100 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-15.7444798	KM	LATITUDE ARC LENGTH TO TARGET	= 20.7604730 KM
FORWARD OVERLAP RATIO	=	1.6340484	PCT	SIDE OVERLAP RATIO	= 0. PCT
TIME BETWEEN PHOTOS	=	2.1001657	SEC		

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.42572588	0.82642544	-0.36848129	52.26733208
CAMERA AXIS	-0.73124138	0.68130429	0.03332423	45.12527466
C1	-0.66070401	0.72450598	0.19637032	45.85708618
C2	-0.71854591	0.67931987	-0.14905126	45.90393911
C3	-0.77733634	0.61532937	-0.13083574	45.96847534
C4	-0.71949442	0.66051547	0.21458583	45.92156582

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1286.1065826	-1235.8587799	-58.395096	1.2957507	1.3468803	-0.3939684

LONG -43.2590 DEG LONG -43.5060 DEG
LATI -1.4007 DEG LATI -2.5815 DEG

* 36.62247 KM *
(1) (2)

LOW RESOLUTION

31.08931 KM 31.16167 KM

(4) (3)
* 37.01905 KM *

LONG -44.2601 DEG LONG -44.5127 DEG
LATI -1.1837 DEG LATI -2.3766 DEG

LONG -43.7609 DEG LONG -43.8708 DEG
LATI -1.6384 DEG LATI -2.1606 DEG

* 16.20201 KM *
(1) (2)

HIGH RESOLUTION

IRECTION 4.07482 KM 4.07858 KM
F MOTION

(4) (3)
* 16.22481 KM *

LONG -43.8923 DEG LONG -44.0024 DEG
LATI -1.6104 DEG LATI -2.1334 DEG

FRAME 189

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*************************************
*   PHOTO FRAME NUMBER   7 OF 16    *
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190

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	9	56	56.400

LONGITUDE OF NADIR POINT	=	-43.7326546 DEG	LATITUDE OF NADIR POINT	=	-1.9127236 DEG
LONG OF CAMERA AXIS INTERSECT	=	-43.7523026 DEG	LATI OF CAMERA AXIS INTERSECT	=	-1.9127970 DEG
SPACECRAFT RADIUS	=	1784.6564484 KM	SPACECRAFT ALTITUDE	=	45.1564484 KM
MEAN ALTITUDE RATE	=	0.0179960 KM/SEC	TIME FROM PERIAPSIS	=	35.2279263 SEC
HORIZONTAL VELOCITY	=	1.9126466 KM/SEC	TRUE ANOMALY	=	2.1636840 DEG
SCALE FACTOR (HIGH)	=	0.0135086 M/KM	TILT DISTANCE (HIGH)	=	8.0587056 MM
SCALE FACTOR (LOW)	=	0.0017716 M/KM	TILT DISTANCE (LOW)	=	1.0568794 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0423560 RAD/SEC	SWING ANGLE	=	78.2312393 DEG
EMISSION ANGLE	=	0.7765100 DEG	INCIDENCE ANGLE	=	64.3978987 DEG
PHASE ANGLE	=	63.6222959 DEG	NORTH DEVIATION ANGLE	=	348.4485570 DEG
TILT ANGLE	=	0.7568901 DEG	RESOLUTION CONSTANT	=	0.9759949 MTR
TILT AZIMUTH	=	269.7826118 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.3903755 DEG
SUN ANGLE AT NADIR	=	64.3782730 DEG	SUN ARC AT NADIR	=	1954.5245514 KM
LONGITUDE DISTANCE TO TARGET	=	-0.3926544 DEG	LATITUDE DISTANCE TO TARGET	=	0.6572764 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-11.9209892 KM	LATITUDE ARC LENGTH TO TARGET	=	19.9545534 KM
FORWARD OVERLAP RATIO	=	1.7598016 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.0996478 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.49037585	0.79278968	-0.36196138	50.92342615
CAMERA AXIS	-0.73123780	0.68130814	0.03332415	45.16047668
C1	-0.66070015	0.72450954	0.19637020	45.85765930
C2	-0.71854240	0.67932357	-0.14905133	45.94447327
C3	-0.77733315	0.61533339	-0.13083577	45.99955750
C4	-0.71949089	0.66051935	0.21458576	45.95262146

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1288.8266449	-1233.0352936	-59.5667295	1.2974257	1.3491108	-0.3938625

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LONG -43.1289 DEG          LONG -43.3761 DEG
LATI  -1.4271 DEG          LATI  -2.6098 DEG        *
                                                   ***          LONG -43.6317 DEG          LONG -43.7415 DEG
        *          36.68030 KM      *             * * *         LATI  -1.6654 DEG          LATI  -2.1881 DEG
       (1)                         (2)            *  *  *
                                                   *                     *        16.21635 KM        *
                                                   *                    (1)                         (2)
            LOW RESOLUTION                         *                                                          FRAME 190
                                                   *                          HIGH RESOLUTION
                                                   *
  31.11218 KM                31.18461 KM           *  DIRECTION      4.07786 KM                 4.08203 KM
                                                   *  OF MOTION
                                                   *
                                                   *                    (4)                         (3)
                                                   *                     *        16.23578 KM        *
       (4)                         (3)             *
        *          37.01829 KM      *             *          LONG -43.7631 DEG          LONG -43.8733 DEG
                                                   *          LATI  -1.6374 DEG          LATI  -2.1608 DEG
LONG -44.1309 DEG          LONG -44.3834 DEG       *
LATI  -1.2109 DEG          LATI  -2.4039 DEG       *
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*   PHOTO FRAME NUMBER  8 OF 16   *  191
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	9	56	58.499

LONGITUDE OF NADIR POINT	=	-43.6067123 DEG	LATITUDE OF NADIR POINT	=	-1.9392478 DEG
LONG OF CAMERA AXIS INTERSECT	=	-43.6230960 DEG	LATI OF CAMERA AXIS INTERSECT	=	-1.9400128 DEG
SPACECRAFT RADIUS	=	1784.6953583 KM	SPACECRAFT ALTITUDE	=	45.1953583 KM
MEAN ALTITUDE RATE	=	0.0190665 KM/SEC	TIME FROM PERIAPSIS	=	37.3247504 SEC
HORIZONTAL VELOCITY	=	1.9126060 KM/SEC	TRUE ANOMALY	=	2.2924387 DEG
SCALE FACTOR (HIGH)	=	0.0134970 M/KM	TILT DISTANCE (HIGH)	=	6.7217934 MM
SCALE FACTOR (LOW)	=	0.0017701 M/KM	TILT DISTANCE (LOW)	=	0.8815467 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0423186 RAD/SEC	SWING ANGLE	=	75.7783651 DEG
EMISSION ANGLE	=	0.6477429 DEG	INCIDENCE ANGLE	=	64.2698479 DEG
PHASE ANGLE	=	63.6222959 DEG	NORTH DEVIATION ANGLE	=	348.4525146 DEG
TILT ANGLE	=	0.6313357 DEG	RESOLUTION CONSTANT	=	0.9807393 MTR
TILT AZIMUTH	=	267.3257217 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.3705673 DEG
SUN ANGLE AT NADIR	=	64.2534485 DEG	SUN ARC AT NADIR	=	1950.7348785 KM
LONGITUDE DISTANCE TO TARGET	=	-0.2667122 DEG	LATITUDE DISTANCE TO TARGET	=	0.6307522 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-8.0973827 KM	LATITUDE ARC LENGTH TO TARGET	=	19.1496389 KM
FORWARD OVERLAP RATIO	=	1.8335239 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.1001697 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.55529342	.75297613	-0.35309513	49.85992718
CAMERA AXIS	-0.73123424	.68131196	0.03332409	45.19816589
C1	-0.66069632	.72451306	0.19637009	45.94076538
C2	-0.71853892	.67932724	-0.14905141	45.98762512
C3	-0.77733000	.61533738	-0.13083579	46.03314209
C4	-0.71948738	.66052320	0.21458570	45.98617554

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1291.5419155	-1230.2070618	-60.3 37459	1.2550959	1.3513361	-0.3937551

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LONG -42.9987 DEG          LONG -43.2463 DEG
LATI  -1.4535 DEG          LATI  -2.6381 DEG        *
                                                    ***
      *          36.74024 KM      *                 * * *
     (1)                         (2)                * * *
                                                    *
                                                    *
                LOW RESOLUTION                      *
                                                    *
                                                    *
   31.13699 KM                31.20546 KM          *  DI ECTION
                                                    *  OF MOTION
                                                    *
                                                    *
                                                    *
     (4)                        (3)                 *
      *          37.01955 KM      *                 *
                                                    *
LONG -44.0017 DEG          LONG -44.2542 DEG        *
LATI  -1.2382 DEG          LATI  -2.4312 DEG        *
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                    LONG -43.5024 DEG          LONG -43.6123 DEG
                    LATI  -1.6924 DEG          LATI  -2.2156 DEG
                        *          16.23158 KM      *
                       (1)                         (2)
                                HIGH RESOLUTION
   4.08116 KM                                   4.08531 KM
                       (4)                         (3)
                        *          16.24763 KM      *
                    LONG -43.6339 DEG          LONG -43.7441 DEG
                    LATI  -1.6645 DEG          LATI  -2.1882 DEG
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FRAME 191

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*********************************
*   PHOTO FRAME NUMBER  9 OF 16   *
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192

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	9	57	0.600

LONGITUDE OF NADIR POINT	= -43.4807739	DEG	LATITUDE OF NADIR POINT	= -1.9657600	DEG
LONG OF CAMERA AXIS INTERSECT	= -43.4938927	DEG	LATI OF CAMERA AXIS INTERSECT	= -1.9672165	DEG
SPACECRAFT RADIUS	= 1784.7365265	KM	SPACECRAFT ALTITUDE	= 45.2365265	KM
MEAN ALTITUDE RATE	= 0.0201367	KM/SEC	TIME FROM PERIAPSIS	= 39.4214950	SEC
HORIZONTAL VELOCITY	= 1.9125630	KM/SEC	TRUE ANOMALY	= 2.4211812	DEG
SCALE FACTOR (HIGH)	= 0.0134847	M/KM	TILT DISTANCE (HIGH)	= 5.4073136	MM
SCALE FACTOR (LOW)	= 0.0017685	M/KM	TILT DISTANCE (LOW)	= 0.7091559	MM
IMAGE MOTION COMPENSATION (V/H)	= 0.0422792	RAD/SEC	SWING ANGLE	= 72.1197128	DEG
EMISSION ANGLE	= 0.5211454	DEG	INCIDENCE ANGLE	= 64.1418133	DEG
PHASE ANGLE	= 63.6222959	DEG	NORTH DEVIATION ANGLE	= 348.4565544	DEG
TILT ANGLE	= 0.5078822	DEG	RESOLUTION CONSTANT	= 0.9816326	MTR
TILT AZIMUTH	= 263.6629524	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	= 87.3506489	DEG
SUN ANGLE AT NADIR	= 64.1286449	DEG	SUN ARC AT NADIR	= 1946.9458313	KM
LONGITUDE DISTANCE TO TARGET	= -0.1407738	DEG	LATITUDE DISTANCE TO TARGET	= 0.6042400	DEG
LONGITUDE ARC LENGTH TO TARGET	= -4.2738921	KM	LATITUDE ARC LENGTH TO TARGET	= 18.3447278	KM
FORWARD OVERLAP RATIO	= 1.9174453	PCT	SIDE OVERLAP RATIO	= 0.	PCT
TIME BETWEEN PHOTOS	= 2.1001697	SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.61914980	0.70700517	-0.34175610	49.09504318
CAMERA AXIS	-0.73123073	0.68131573	0.03332403	45.23834229
C1	-0.66069252	0.72451654	0.19636999	45.96641568
C2	-0.71853548	0.67933087	-0.14905147	46.03332520
C3	-0.77732687	0.61534131	-0.13083581	46.06925964
C4	-0.71948390	0.66052698	0.21458565	46.02227783

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1294.2522125	-1227.3741760	-61.2205129	1.2927613	1.3535561	-0.3936463

```
LONG -42.8685 DEG          LONG -43.1163 DEG
LATI  -1.4798 DEG          LATI  -2.6665 DEG          *
                                                     ***          LONG -43.3730 DEG        LONG -43.4831 DEG
      *          36.80231 KM      *                  * * *        LATI  -1.7193 DEG        LATI  -2.4231 DEG
     (1)                         (2)                *  *  *
                                                     *                   *        16.24771 KM        *
                                                     *                  (1)                        (2)
            LOW RESOLUTION                           *                                                          FRAME 192
                                                     *                          HIGH RESOLUTION
                                                     *
  31.16378 KM                31.23630 KM            *  DIRECTION      4.08469 KM                 4.08885 KM
                                                     *  OF MOTION
                                                     *
                                                     *                  (4)                        (3)
                                                     *                   *        16.26039 KM        *
     (4)                         (3)                 *
      *          37.02288 KM      *                  *          LONG -43.5047 DEG        LONG -43.6150 DEG
                                                     *          LATI  -1.6914 DEG        LATI  -2.2156 DEG
LONG -43.8726 DEG          LONG -44.1250 DEG         *
LATI  -1.2653 DEG          LATI  -2.4584 DEG         *
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*************************************
*   PHOTO FRAME NUMBER 10 OF 16     *
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193

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	9	57	2.700

LONGITUDE OF NADIR POINT	=	-43.3548927 DEG	LATITUDE OF NADIR POINT	=	-1.9922492 DEG
LONG OF CAMERA AXIS INTERSECT	=	-43.3647370 DEG	LATI OF CAMERA AXIS INTERSECT	=	-1.9943973 DEG
SPACECRAFT RADIUS	=	1784.7799225 KM	SPACECRAFT ALTITUDE	=	45.2799225 KM
MEAN ALTITUDE RATE	=	0.0212063 KM/SEC	TIME FROM PERIAPSIS	=	41.5172572 SEC
HORIZONTAL VELOCITY	=	1.9125176 KM/SEC	TRUE ANOMALY	=	2.5498584 DEG
SCALE FACTOR (HIGH)	=	0.0134718 M/KM	TILT DISTANCE (HIGH)	=	4.1278947 MM
SCALE FACTOR (LOW)	=	0.0017668 M/KM	TILT DISTANCE (LOW)	=	0.5413632 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0422376 RAD/SEC	SWING ANGLE	=	66.1507778 DEG
EMISSION ANGLE	=	0.3978669 DEG	INCIDENCE ANGLE	=	64.0138464 DEG
PHASE ANGLE	=	63.6222968 DEG	NORTH DEVIATION ANGLE	=	348.4607048 DEG
TILT ANGLE	=	0.3877169 DEG	RESOLUTION CONSTANT	=	0.9825743 MTR
TILT AZIMUTH	=	257.6857964 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.3305788 DEG
SUN ANGLE AT NADIR	=	64.0039120 DEG	SUN ARC AT NADIR	=	1943.1585508 KM
LONGITUDE DISTANCE TO TARGET	=	-0.0148926 DEG	LATITUDE DISTANCE TO TARGET	=	0.5777508 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-0.4521387 KM	LATITUDE ARC LENGTH TO TARGET	=	17.5405161 KM
FORWARD OVERLAP RATIO	=	2.0450731 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.0998478 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.66049820	0.65526506	-0.32794800	48.64306259
CAMERA AXIS	-0.73122729	0.68131944	-0.03332396	45.28097534
C1	-0.66068880	0.72451997	0.19636988	46.03456116
C2	-0.71853211	0.67933442	-0.14905153	46.08152771
C3	-0.77732381	0.61534517	-0.13083583	46.10789490
C4	-0.71948051	0.66053071	0.21458558	46.06086731

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1296.9565430	-1224.5378265	-62.0466480	1.2904229	1.3557699	-0.3935360

```
LONG -42.7383 DEG          LONG -42.9865 DEG
LATI  -1.5061 DEG          LATI  -2.6948 DEG        *
                                                    ***          LONG -43.2438 DEG          LONG -43.3539 DEG
      *          36.86647 KM      *                 * * *        LATI  -1.7462 DEG          LATI  -2.2705 DEG
     (1)                         (2)               *  *  *
                                                    *                    *        16.26472 KM        *
                                                    *                   (1)                        (2)
            LOW RESOLUTION                          *                                                          FRAME 193
                                                    *                          HIGH RESOLUTION
                                                    *
   31.19247 KM                31.26507 KM          *  DIRECTION      4.08847 KM                 4.09263 KM
                                                    *  OF MOTION
                                                    *
                                                    *                   (4)                        (3)
                                                    *                    *        16.27402 KM        *
     (4)                        (3)                 *
      *          37.02824 KM      *                 *          LONG -43.3756 DEG          LONG -43.4859 DEG
                                                    *          LATI  -1.7184 DEG          LATI  -2.2430 DEG
LONG -43.7435 DEG          LONG -43.9959 DEG        *
LATI  -1.2924 DEG          LATI  -2.4857 DEG        *
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*   PHOTO FRAME NUMBER 11 OF 16   *
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194

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	9	57	4.800

LONGITUDE OF NADIR POINT	=	-43.2288933 DEG	LATITUDE OF NADIR POINT	=	-2.0187529 DEG
LONG OF CAMERA AXIS INTERSECT	=	-43.2354589 DEG	LATI OF CAMERA AXIS INTERSECT	=	-2.0215942 DEG
SPACECRAFT RADIUS	=	1784.8255920 KM	SPACECRAFT ALTITUDE	=	45.3255920 KM
MEAN ALTITUDE RATE	=	0.0222767 KM/SEC	TIME FROM PERIAPSIS	=	43.6150064 SEC
HORIZONTAL VELOCITY	=	1.9124699 KM/SEC	TRUE ANOMALY	=	2.6786505 DEG
SCALE FACTOR (HIGH)	=	0.0134582 M/KM	TILT DISTANCE (HIGH)	=	2.9316323 MM
SCALE FACTOR (LOW)	=	0.0017650 M/KM	TILT DISTANCE (LOW)	=	0.3844764 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0421540 RAD/SEC	SWING ANGLE	=	55.0600553 DEG
EMISSION ANGLE	=	0.2825486 DEG	INCIDENCE ANGLE	=	63.8857451 DEG
PHASE ANGLE	=	63.6222973 DEG	NORTH DEVIATION ANGLE	=	348.4649734 DEG
TILT ANGLE	=	0.2753588 DEG	RESOLUTION CONSTANT	=	0.9835653 MTR
TILT AZIMUTH	=	246.5954514 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.3103266 DEG
SUN ANGLE AT NADIR	=	63.8790717 DEG	SUN ARC AT NADIR	=	1939.3687337 KM
LONGITUDE DISTANCE TO TARGET	=	0.1111069 DEG	LATITUDE DISTANCE TO TARGET	=	0.5512471 DEG
LONGITUDE ARC LENGTH TO TARGET	=	3.3732049 KM	LATITUDE ARC LENGTH TO TARGET	=	16.7358639 KM
FORWARD OVERLAP RATIO	=	2.0507357 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.1001697 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.73802718	0.59841670	-0.31179054	48.51231337
CAMERA AXIS	-0.73122372	0.68132326	0.03332390	45.32612610
C1	-0.66068497	0.72452349	0.19636977	46.08526611
C2	-0.71852862	0.67933809	-0.14905161	46.13229370
C3	-0.77732065	0.61534916	-0.13083585	46.14906311
C4	-0.71947699	0.66053456	0.21458553	46.10198975

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1299.6584320	-1221.6943054	-62.8733630	1.2880778	1.3579804	-0.3934240

```
LONG -42.6079 DEG          LONG -42.8564 DEG
LATI  -1.5324 DEG          LATI  -2.7233 DEG        *
                                                   ***          LONG -43.1144 DEG          LONG -43.2246 DEG
      *          36.93282 KM      *                * * *        LATI  -1.7731 DEG          LATI  -2.2980 DEG
     (1)                         (2)               *  *  *
                                                   *                    *        16.28264 KM        *
                                                   *                   (1)                         (2)
            LOW RESOLUTION                         *
                                                   *                                HIGH RESOLUTION
                                                   *
  31.22316 KM                31.29583 KM           *  DIRECTION      4.09249 KM                 4.09666 KM
                                                   *  OF MOTION
                                                   *
                                                   *                   (4)                         (3)
                                                   *                    *        16.28855 KM        *
     (4)                         (3)               *
      *          37.03562 KM      *                *          LONG -43.2464 DEG          LONG -43.3567 DEG
                                                   *          LATI  -1.7453 DEG          LATI  -2.2704 DEG
LONG -43.6144 DEG          LONG -43.8667 DEG        *
LATI  -1.3195 DEG          LATI  -2.5131 DEG        *
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FRAME 194

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*********************************
*   PHOTO FRAME NUMBER 12 OF 16   *
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195

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	9	57	6.900

LONGITUDE OF NADIR POINT	= -43.1030273	DEG	LATITUDE OF NADIR POINT	= -2.0452198	DEG
LONG OF CAMERA AXIS INTERSECT	= -43.1063066	DEG	LAT OF CAMERA AXIS INTERSECT	= -2.0487562	DEG
SPACECRAFT RADIUS	= 1784.8734741	KM	SPACECRAFT ALTITUDE	= 45.3734741	KM
MEAN ALTITUDE RATE	= 0.0233460	KM/SEC	TIME FROM PERIAPSIS	= 45.7107310	SEC
HORIZONTAL VELOCITY	= 1.9124197	KM/SEC	TRUE ANOMALY	= 2.8073122	DEG
SCALE FACTOR (HIGH)	= 0.0134440	M/KM	TILT DISTANCE (HIGH)	= 1.9771342	MM
SCALE FACTOR (LOW)	= 0.0017631	M/KM	TILT DISTANCE (LOW)	= 0.2592563	MM
IMAGE MOTION COMPENSATION (V/H)	= 0.0421484	RAD/SEC	SWING ANGLE	= 31.3518980	DEG
EMISSION ANGLE	= 0.1909022	DEG	INCIDENCE ANGLE	= 63.7578163	DEG
PHASE ANGLE	= 63.6222973	DEG	NORTH DEVIATION ANGLE	= 348.4693604	DEG
TILT ANGLE	= 0.1857066	DEG	RESOLUTION CONSTANT	= 0.9846044	MTR
TILT AZIMUTH	= 222.8806419	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	= 87.2899342	DEG
SUN ANGLE AT NADIR	= 63.7543688	DEG	SUN ARC AT NADIR	= 1935.5828094	KM
LONGITUDE DISTANCE TO TARGET	= 0.2369728	DEG	LATITUDE DISTANCE TO TARGET	= 0.5247802	DEG
LONGITUDE ARC LENGTH TO TARGET	= 7.1944950	KM	LATITUDE ARC LENGTH TO TARGET	= 15.9323267	KM
FORWARD OVERLAP RATIO	= 2.2449258	PCT	SIDE OVERLAP RATIO	= 0.	PCT
TIME BETWEEN PHOTOS	= 2.0958478	SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.79041722	0.53762370	-0.29360072	48.70557642
CAMERA AXIS	-0.73122014	0.68132710	0.03332383	45.37371826
C1	-0.66068111	0.72452705	0.19636966	46.13848877
C2	-0.71852510	0.67934179	-0.14905167	46.18559265
C3	-0.77731747	0.61535317	-0.13083587	46.19271851
C4	-0.71947347	0.66053843	0.21458547	46.14561462

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1302.3527527	-1218.3489990	-63.6990509	1.2857303	1.3601834	-0.3933108

```
LONG -42.4776 DEG          LONG -42.7265 DEG
LATI  -1.5586 DEG          LATI  -2.7517 DEG          *
                                                     ***          LONG -42.9851 DEG          LONG -43.0954 DEG
        *          37.00125 KM      *                * * *        LATI  -1.8000 DEG          LATI  -2.3255 DEG
       (1)                          (2)            *  *  *
                                                     *                    *        16.30145 KM        *
                                                     *                   (1)                         (2)
            LOW RESOLUTION                           *                                                          FRAME 195
                                                     *                              HIGH RESOLUTION
                                                     *
   31.25576 KM                31.32853 KM           *  DIRECTION      4.09676 KM                 4.10094 KM
                                                     *  OF MOTION
                                                     *
                                                     *                   (4)                         (3)
                                                     *                    *        16.30396 KM        *
       (4)                          (3)              *
        *          37.04502 KM      *               *          LONG -43.1172 DEG          LONG -43.2277 DEG
                                                     *          LATI  -1.7722 DEG          LATI  -2.2978 DEG
LONG -43.4854 DEG          LONG -43.7376 DEG         *
LATI  -1.3465 DEG          LATI  -2.5404 DEG         *
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*   PHOTO FRAME NUMBER 13 OF 16    *
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196

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	9	57	9.000

LONGITUDE OF NADIR POINT	=	-42.9770355 DEG	LATITUDE OF NADIR POINT	=	-2.0717022 DEG
LONG OF CAMERA AXIS INTERSECT	=	-42.9770175 DEG	LATI OF CAMERA AXIS INTERSECT	=	-2.0759327 DEG
SPACECRAFT RADIUS	=	1784.9236450 KM	SPACECRAFT ALTITUDE	=	45.4236450 KM
MEAN ALTITUDE RATE	=	0.0244161 KM/SEC	TIME FROM PERIAPSIS	=	47.8083878 SEC
HORIZONTAL VELOCITY	=	1.9123672 KM/SEC	TRUE ANOMALY	=	2.9360849 DEG
SCALE FACTOR (HIGH)	=	0.0134291 M/KM	TILT DISTANCE (HIGH)	=	1.7335678 MM
SCALE FACTOR (LOW)	=	0.0017612 M/KM	TILT DISTANCE (LOW)	=	0.2273532 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0421007 RAD/SEC	SWING ANGLE	=	348.3523865 DEG
EMISSION ANGLE	=	0.1674211 DEG	INCIDENCE ANGLE	=	63.6297560 DEG
PHASE ANGLE	=	63.6222982 DEG	NORTH DEVIATION ANGLE	=	348.4738655 DEG
TILT ANGLE	=	0.1628293 DEG	RESOLUTION CONSTANT	=	0.9856931 MTR
TILT AZIMUTH	=	179.8784084 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.2693[illegible] DEG
SUN ANGLE AT NADIR	=	63.6295614 DEG	SUN ARC AT NADIR	=	1931.7936[illegible] KM
LONGITUDE DISTANCE TO TARGET	=	0.3629646 DEG	LATITUDE DISTANCE TO TARGET	=	0.4982978 DEG
LONGITUDE ARC LENGTH TO TARGET	=	11.0196071 KM	LATITUDE ARC LENGTH TO TARGET	=	15.1283219 KM
FORWARD OVERLAP RATIO	=	2.2525921 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.1001697 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.83686229	0.47404940	-0.27374932	49.21936989
CAMERA AXIS	-0.73121665	0.68133086	0.03332376	45.42382812
C1	-0.66067734	0.72453051	0.19636955	46.19429016
C2	-0.71852168	0.67934540	-0.14905174	46.24145508
C3	-0.77731437	0.61535709	-0.13083589	46.23892212
C4	-0.71947002	0.66054219	0.21458541	46.19177246

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1305.0448608	-1215.9961395	-64.5252743	1.2833756	1.3623834	-0.3931959

```
LONG -42.3471 DEG          LONG -42.5964 DEG
LATI  -1.5848 DEG          LATI  -2.7802 DEG
                                   *
                                  ***
                                 * * *
*          37.07189 KM     *    * * *
(1)                        (2)  * * *
                                   *
                                   *
                                   *
          LOW RESOLUTION           *
                                   *
                                   *
31.29036 KM                31.36320 KM   *  DIRECTION
                                         *  OF MOTION
                                   *
                                   *
                                   *
(4)                        (3)     *
*          37.05645 KM     *       *
                                   *
LONG -43.3562 DEG          LONG -43.6085 DEG
LATI  -1.3735 DEG          LATI  -2.5678 DEG
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LONG -42.8557 DEG          LONG -42.9660 DEG
LATI  -1.8269 DEG          LATI  -2.3530 DEG
*          16.32116 KM     *
(1)                        (2)

          HIGH RESOLUTION

4.10127 KM                 4.10546 KM

(4)                        (3)
*          16.32027 KM     *
LONG -42.9880 DEG          LONG -43.0585 DEG
LATI  -1.7991 DEG          LATI  -2.3752 DEG
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FRAME 196

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************************************
*   PHOTO FRAME NUMBER 14 OF 16    *
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197

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	9	57	11.100

LONGITUDE OF NADIR POINT	=	-42.8511124 DEG	LATITUDE OF NADIR POINT	=	-2.0981589 DEG
LONG OF CAMERA AXIS INTERSECT	=	-42.8477541 DEG	LATI OF CAMERA AXIS INTERSECT	=	-2.1030869 DEG
SPACECRAFT RADIUS	=	1784.9760437 KM	SPACECRAFT ALTITUDE	=	45.4760437 KM
MEAN ALTITUDE RATE	=	0.0254854 KM/SEC	TIME FROM PERIAPSIS	=	49.9050107 SEC
HORIZONTAL VELOCITY	=	1.9123120 KM/SEC	TRUE ANOMALY	=	3.0647881 DEG
SCALE FACTOR (HIGH)	=	0.0134137 M/KM	TILT DISTANCE (HIGH)	=	2.4277786 MM
SCALE FACTOR (LOW)	=	0.0017592 M/KM	TILT DISTANCE (LOW)	=	0.3183972 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0420510 RAD/SEC	SWING ANGLE	=	314.6124802 DEG
EMISSION ANGLE	=	0.2339634 DEG	INCIDENCE ANGLE	=	63.5017676 DEG
PHASE ANGLE	=	63.6222992 DEG	NORTH DEVIATION ANGLE	=	348.4784851 DEG
TILT ANGLE	=	0.2280340 DEG	RESOLUTION CONSTANT	=	0.9868301 MTR
TILT AZIMUTH	=	146.1346149 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.2486305 DEG
SUN ANGLE AT NADIR	=	63.5048337 DEG	SUN ARC AT NADIR	=	1928.0065275 KM
LONGITUDE DISTANCE TO TARGET	=	0.4888878 DEG	LATITUDE DISTANCE TO TARGET	=	0.4718411 DEG
LONGITUDE ARC LENGTH TO TARGET	=	14.8426344 KM	LATITUDE ARC LENGTH TO TARGET	=	14.3250959 KM
FORWARD OVERLAP RATIO	=	2.4123593 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.0998478 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.87675322	0.40917443	-0.25274508	50.04326630
CAMERA AXIS	-0.73121312	0.68133465	0.03332371	45.47640991
C1	-0.66067352	0.72453401	0.19636945	46.25260925
C2	-0.71851823	0.67934905	-0.14905181	46.29983521
C3	-0.77731123	0.61536104	-0.13083591	46.28765869
C4	-0.71946653	0.66054602	0.21458535	46.24044800

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1307.7306213	-1213.1401520	-65.3508539	1.2810175	1.3645769	-0.3930795

```
LONG -42.2167 DEG          LONG -42.4664 DEG
LATI  -1.6109 DEG          LATI  -2.8087 DEG          *
                                                     ***
        *          37.14465 KM        *             * * *          LONG -42.7263 DEG          LONG -42.8368 DEG
      (1)                            (2)            * * *          LATI  -1.8537 DEG          LATI  -2.3805 DEG
                                                     *                          *          16.34177 KM          *
                                                     *                        (1)                            (2)
            LOW RESOLUTION                           *                                                                  FRAME 197
                                                     *                                  HIGH RESOLUTION
                                                     *
   31.32689 KM                31.39583 KM           *  DIRECTION      4.10606 KM                    4.11023 KM
                                                     *  OF MOTION
                                                     *
                                                     *                        (4)                            (3)
                                                     *                          *          16.33747 KM          *
      (4)                            (3)             *
        *          37.06989 KM        *             *          LONG -42.8588 DEG          LONG -42.9694 DEG
                                                     *          LATI  -1.8260 DEG          LATI  -2.3527 DEG
LONG -43.2272 DEG          LONG -43.4795 DEG         *
LATI  -1.4005 DEG          LATI  -2.5952 DEG         *
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*  PHOTO FRAME NUMBER 15 OF 16  *
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198

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	9	57	13.300

LONGITUDE OF NADIR POINT	=	-42.7192459 DEG	LATITUDE OF NADIR POINT	=	-2.1258511 DEG
LONG OF CAMERA AXIS INTERSECT	=	-42.7124677 DEG	LATI OF CAMERA AXIS INTERSECT	=	-2.1315099 DEG
SPACECRAFT RADIUS	=	1785.0333099 KM	SPACECRAFT ALTITUDE	=	45.5333099 KM
MEAN ALTITUDE RATE	=	0.0266050 KM/SEC	TIME FROM PERIAPSIS	=	52.1004825 SEC
HORIZONTAL VELOCITY	=	1.9122519 KM/SEC	TRUE ANOMALY	=	3.1995501 DEG
SCALE FACTOR (HIGH)	=	0.0133968 M/KM	TILT DISTANCE (HIGH)	=	3.5928329 MM
SCALE FACTOR (LOW)	=	0.0017570 M/KM	TILT DISTANCE (LOW)	=	0.4711912 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0419968 RAD/SEC	SWING ANGLE	=	298.3762360 DEG
EMISSION ANGLE	=	0.3464034 DEG	INCIDENCE ANGLE	=	63.3677545 DEG
PHASE ANGLE	=	63.6223001 DEG	NORTH DEVIATION ANGLE	=	348.4834480 DEG
TILT ANGLE	=	0.3374619 DEG	RESOLUTION CONSTANT	=	0.9880728 MTR
TILT AZIMUTH	=	129.8941650 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.2267513 DEG
SUN ANGLE AT NADIR	=	63.3742414 DEG	SUN ARC AT NADIR	=	1924.0421448 KM
LONGITUDE DISTANCE TO TARGET	=	0.6207542 DEG	LATITUDE DISTANCE TO TARGET	=	0.4441429 DEG
LONGITUDE ARC LENGTH TO TARGET	=	18.8461003 KM	LATITUDE ARC LENGTH TO TARGET	=	13.4843616 KM
FORWARD OVERLAP RATIO	=	-2.0641865 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.1999478 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.91137621	0.34127433	-0.23005485	51.22228241
CAMERA AXIS	-0.73120944	0.68133861	0.03332363	45.53411865
C1	-0.66066956	0.72453766	0.19636933	46.31637573
C2	-0.71851462	0.67935284	-0.14905188	46.36369324
C3	-0.77730756	0.61536518	-0.13083593	46.34135437
C4	-0.71946290	0.66054998	0.21458528	46.29409750

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1310.5377960	-1210.1445770	-66.2151089	1.2785432	1.3668681	-0.3929561

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LONG -42.0800 DEG          LONG -42.3301 DEG
LATI  -1.6383 DEG          LATI  -2.8386 DEG        *
                                                   ***          LONG -42.5909 DEG          LONG -42.7014 DEG
        *        37.22314 KM        *             * * *         LATI  -1.8818 DEG          LATI  -2.4093 DEG
      (1)                         (2)            * * *
                                                   *                     *        16.36430 KM        *
                                                   *                    (1)                         (2)
            LOW RESOLUTION                         *
                                                   *                          HIGH RESOLUTION
                                                   *
   31.36723 KM                31.44028 KM         *  DIRECTION      4.11131 KM                 4.11550 KM
                                                   *  OF MOTION
                                                   *
                                                   *                    (4)                         (3)
                                                   *                     *        16.35642 KM        *
      (4)                         (3)              *
        *        37.08611 KM        *              *          LONG -42.7235 DEG          LONG -42.8342 DEG
                                                   *          LATI  -1.8541 DEG          LATI  -2.3814 DEG
LONG -43.0921 DEG          LONG -43.3444 DEG       *
LATI  -1.4286 DEG          LATI  -2.6239 DEG       *
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FRAME 198

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*************************************
*   PHOTO FRAME NUMBER 16 OF 16     *
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199

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	9	57	15.400

LONGITUDE OF NADIR POINT	=	-42.5933266 DEG	LATITUDE OF NADIR POINT	=	-2.1522848 DEG
LONG OF CAMERA AXIS INTERSECT	=	-42.5832267 DEG	LATI OF CAMERA AXIS INTERSECT	=	-2.1586428 DEG
SPACECRAFT RADIUS	=	1785.0903168 KM	SPACECRAFT ALTITUDE	=	45.5903168 KM
MEAN ALTITUDE RATE	=	0.0276740 KM/SEC	TIME FROM PERIAPSIS	=	54.1970958 SEC
HORIZONTAL VELOCITY	=	1.9121919 KM/SEC	TRUE ANOMALY	=	3.3282362 DEG
SCALE FACTOR (HIGH)	=	0.0133800 M/KM	TILT DISTANCE (HIGH)	=	4.8487869 MM
SCALE FACTOR (LOW)	=	0.0017548 M/KM	TILT DISTANCE (LOW)	=	0.6359065 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0419429 RAD/SEC	SWING ANGLE	=	290.7184448 DEG
EMISSION ANGLE	=	0.4673525 DEG	INCIDENCE ANGLE	=	63.2397828 DEG
PHASE ANGLE	=	63.6223011 DEG	NORTH DEVIATION ANGLE	=	348.4383080 DEG
TILT ANGLE	=	0.4554249 DEG	RESOLUTION CONSTANT	=	0.9893099 MTR
TILT AZIMUTH	=	122.2319145 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.7056885 DEG
SUN ANGLE AT NADIR	=	63.2495461 DEG	SUN ARC AT NADIR	=	1920.2563934 KM
LONGITUDE DISTANCE TO TARGET	=	0.7466736 DEG	LATITUDE DISTANCE TO TARGET	=	0.4177152 DEG
LONGITUDE ARC LENGTH TO TARGET	=	22.6690118 KM	LATITUDE ARC LENGTH TO TARGET	=	12.6818352 KM
FORWARD OVERLAP RATIO	=	2.6502670 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.1001697 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.93783123	0.27769779	-0.20822226	52.63049316
CAMERA AXIS	-0.73120594	0.68134236	0.03332357	45.59178162
C1	-0.66066578	0.72454113	0.19636922	46.37591333
C2	-0.71851118	0.67935645	-0.14905195	46.42729187
C3	-0.77730485	0.61536909	-0.13083595	46.39523315
C4	-0.71945945	0.66055377	0.21458522	46.34793041

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1313.2135468	-1207.2790985	-67.0402031	1.2761755	1.3690307	-0.3928367

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LONG -41.9495 DEG          LONG -42.2000 DEG
LATI  -1.6643 DEG          LATI  -2.8672 DEG        *
                                                   ***                 LONG -42.4615 DEG          LONG -42.5721 DEG
        *          37.30033 KM        *            * * *               LATI  -1.9085 DEG          LATI  -2.4368 DEG
       (1)                           (2)           * * *
                                                   *                          *          16.38675 KM        *
                                                   *                         (1)                          (2)
                LOW RESOLUTION                     *
                                                   *                                  HIGH RESOLUTION
                                                   *
   31.40778 KM                31.48093 KM          *  DIRECTION       4.11657 KM                  4.12077 KM
                                                   *  OF MOTION
                                                   *
                                                   *                         (4)                          (3)
                                                   *                          *          16.37544 KM        *
       (4)                           (3)           *
        *          37.10367 KM        *            *                 LONG -42.5943 DEG          LONG -42.7050 DEG
                                                   *                 LATI  -1.8809 DEG          LATI  -2.4088 DEG
LONG -42.9631 DEG          LONG -43.2154 DEG       *
LATI  -1.4554 DEG          LATI  -2.6513 DEG       *
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FRAME 199

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*************************************
*   PHOTO FRAME NUMBER   1 OF 16    *
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200

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	13	23	30.499

LONGITUDE OF NADIR POINT	=	-44.5465775	DEG	LATITUDE OF NADIR POINT	=	-2.1543765	DEG
LONG OF CAMERA AXIS INTERSECT	=	-44.5790968	DEG	LATI OF CAMERA AXIS INTERSECT	=	-2.1535245	DEG
SPACECRAFT RADIUS	=	1785.2475433	KM	SPACECRAFT ALTITUDE	=	45.7475433	KM
MEAN ALTITUDE RATE	=	0.0266245	KM/SEC	TIME FROM PERIAPSIS	=	52.1663947	SEC
HORIZONTAL VELOCITY	=	1.9120672	KM/SEC	TRUE ANOMALY	=	3.2029065	DEG
SCALE FACTOR (HIGH)	=	0.0133340	M/KM	TILT DISTANCE (HIGH)	=	13.1637057	MM
SCALE FACTOR (LOW)	=	0.0017487	M/KM	TILT DISTANCE (LOW)	=	1.7263876	MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0417561	RAD/SEC	SWING ANGLE	=	79.9848404	DEG
EMISSION ANGLE	=	1.2687589	DEG	INCIDENCE ANGLE	=	63.4899893	DEG
PHASE ANGLE	=	62.2249980	DEG	NORTH DEVIATION ANGLE	=	348.4839554	DEG
TILT ANGLE	=	1.2362422	DEG	RESOLUTION CONSTANT	=	0.9927217	MTR
TILT AZIMUTH	=	271.5012245	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.2179670	DEG
SUN ANGLE AT NADIR	=	63.4575677	DEG	SUN ARC AT NADIR	=	1926.5719299	KM
LONGITUDE DISTANCE TO TARGET	=	-1.2065773	DEG	LATITUDE DISTANCE TO TARGET	=	0.4156235	DEG
LONGITUDE ARC LENGTH TO TARGET	=	-36.6316900	KM	LATITUDE ARC LENGTH TO TARGET	=	12.6183301	KM
FORWARD OVERLAP RATIO	=	0.	PCT	SIDE OVERLAP RATIO	=	0.	PCT
TIME BETWEEN PHOTOS	=	0.	SEC				

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.12540618	0.97551291	-0.18068720	60.25768566
CAMERA AXIS	-0.72712293	0.68544655	0.03814812	45.75846863
C1	-0.65586665	0.72758035	0.20116106	46.47828674
C2	-0.71496059	0.68411770	-0.14426967	46.54466248
C3	-0.77407445	0.62040105	-0.12613995	46.63645935
C4	-0.71498010	0.66386370	0.21929079	46.56582422

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1271.4117126	-1251.4458771	-67.1112509	1.3212057	1.3253815	-0.3930520

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LONG -43.9497 DEG          LONG -44.1984 DEG
LATI  -1.6627 DEG          LATI  -2.8578 DEG        *
                                                   ***            LONG -44.4570 DEG        LONG -44.5680 DEG
     *          37.05905 KM      *                 * * *          LATI  -1.9029 DEG        LATI  -2.4324 DEG
    (1)                         (2)            *   *  *
                                                   *                     *        16.42490 KM      *
                                                   *                    (1)                       (2)
            LOW RESOLUTION                         *                                                          FRAME 200
                                                   *                          HIGH RESOLUTION
                                                   *
  31.51777 KM                31.62060 KM           *  DIRECTION      4.13169 KM                4.13760 KM
                                                   *  OF MOTION
                                                   *
                                                   *                    (4)                       (3)
                                                   *                     *        16.45728 KM      *
     (4)                        (3)                *
      *          37.62226 KM      *                *            LONG -44.5902 DEG        LONG -44.7016 DEG
                                                   *            LATI  -1.8745 DEG        LATI  -2.4050 DEG
LONG -44.9642 DEG          LONG -45.2208 DEG       *
LATI  -1.4408 DEG          LATI  -2.6532 DEG       *
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*******************************************
*   PHOTO FRAME NUMBER  2 OF 16   *  201
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	13	23	32.599

LONGITUDE OF NADIR POINT	=	-44.4207458 DEG	LATITUDE OF NADIR POINT	=	-2.1808000 DEG
LONG OF CAMERA AXIS INTERSECT	=	-44.4499822 DEG	LATI OF CAMERA AXIS INTERSECT	=	-2.1806454 DEG
SPACECRAFT RADIUS	=	1785.3045502 KM	SPACECRAFT ALTITUDE	=	45.8045502 KM
MEAN ALTITUDE RATE	=	0.0276926 KM/SEC	TIME FROM PERIAPSIS	=	54.2622639 SEC
HORIZONTAL VELOCITY	=	1.9120073 KM/SEC	TRUE ANOMALY	=	3.3315195 DEG
SCALE FACTOR (HIGH)	=	0.0133175 M/KM	TILT DISTANCE (HIGH)	=	11.8168839 MM
SCALE FACTOR (LOW)	=	0.0017466 M/KM	TILT DISTANCE (LOW)	=	1.5497553 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0417427 RAD/SEC	SWING ANGLE	=	78.7907896 DEG
EMISSION ANGLE	=	1.1390075 DEG	INCIDENCE ANGLE	=	63.3621435 DEG
PHASE ANGLE	=	62.2249980 DEG	NORTH DEVIATION ANGLE	=	348.4881859 DEG
TILT ANGLE	=	1.1057917 DEG	RESOLUTION CONSTANT	=	0.9939587 MTR
TILT AZIMUTH	=	270.3026466 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.1969013 DEG
SUN ANGLE AT NADIR	=	63.3329639 DEG	SUN ARC AT NADIR	=	1922.7889557 KM
LONGITUDE DISTANCE TO TARGET	=	-1.0807457 DEG	LATITUDE DISTANCE TO TARGET	=	0.3892000 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-32.8114419 KM	LATITUDE ARC LENGTH TO TARGET	=	11.8161138 KM
FORWARD OVERLAP RATIO	=	3.2379750 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.0998478 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.17846214	0.96843821	-0.17400777	57.83016729
CAMERA AXIS	-0.72711937	0.68545032	0.03814805	45.81335449
C1	-0.65586283	0.72759383	0.20116095	46.53890991
C2	-0.71495751	0.68412134	-0.14426974	46.60537720
C3	-0.77407128	0.62040500	-0.12613997	46.68756104
C4	-0.71497660	0.66386750	0.21929073	46.62084561

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1274.1755219	-1248.6686707	-67.9161448	1.3189107	1.3276366	-0.3929311

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LONG -43.8194 DEG          LONG -44.0684 DEG
LATI  -1.6888 DEG          LATI  -2.8863 DEG        *
                                                   ***                 LONG -44.3278 DEG          LONG -44.4389 DEG
      *          37.13310 KM      *                * * *               LATI  -1.9297 DEG          LATI  -2.4599 DEG
     (1)                         (2)              *  *  *
                                                   *                          *        16.44633 KM        *
                                                   *                         (1)                         (2)
                                                   *
            LOW RESOLUTION                         *                                                                  FRAME 201
                                                   *                                HIGH RESOLUTION
                                                   *
   31.55357 KM                31.65652 KM         *  DIRECTION      4.13644 KM                  4.14235 KM
                                                   *  OF MOTION
                                                   *
                                                   *                         (4)                         (3)
                                                   *                          *        16.47531 KM        *
     (4)                        (3)                *
      *          37.63726 KM      *                *                 LONG -44.4611 DEG          LONG -44.5726 DEG
                                                   *                 LATI  -1.9013 DEG          LATI  -2.4324 DEG
LONG -44.8353 DEG          LONG -45.0919 DEG       *
LATI  -1.4676 DEG          LATI  -2.6806 DEG       *
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*********************************
*   PHOTO FRAME NUMBER  3 OF 16   *
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202

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	13	23	34.699

LONGITUDE OF NADIR POINT	= -44.2948570	DEG	LATITUDE OF NADIR POINT	= -2.2072234	DEG
LONG OF CAMERA AXIS INTERSECT	= -44.3208032	DEG	LATI OF CAMERA AXIS INTERSECT	= -2.2077689	DEG
SPACECRAFT RADIUS	= 1785.3638153	KM	SPACECRAFT ALTITUDE	= 45.8638153	KM
MEAN ALTITUDE RATE	= 0.0287608	KM/SEC	TIME FROM PERIAPSIS	= 56.3589773	SEC
HORIZONTAL VELOCITY	= 1.9119450	KM/SEC	TRUE ANOMALY	= 3.4601759	DEG
SCALE FACTOR (HIGH)	= 0.0133002	M/KM	TILT DISTANCE (HIGH)	= 10.4761045	MM
SCALE FACTOR (LOW)	= 0.0017443	M/KM	TILT DISTANCE (LOW)	= 1.3739153	MM
IMAGE MOTION COMPENSATION (V/H)	= 0.0416874	RAD/SEC	SWING ANGLE	= 77.2897997	DEG
EMISSION ANGLE	= 1.0058817	DEG	INCIDENCE ANGLE	= 63.2342496	DEG
PHASE ANGLE	= 62.2249580	DEG	NORTH DEVIATION ANGLE	= 348.4925308	DEG
TILT ANGLE	= 0.9838977	DEG	RESOLUTION CONSTANT	= 0.9952448	MTR
TILT AZIMUTH	= 268.7970581	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	= 87.1756620	DEG
SUN ANGLE AT NADIR	= 63.2083206	DEG	SUN ARC AT NADIR	= 1919.0047913	KM
LONGITUDE DISTANCE TO TARGET	= -0.9548569	DEG	LATITUDE DISTANCE TO TARGET	= 0.3627766	DEG
LONGITUDE ARC LENGTH TO TARGET	= -28.9894571	KM	LATITUDE ARC LENGTH TO TARGET	= 11.0138986	KM
FORWARD OVERLAP RATIO	= 3.3080949	PCT	SIDE OVERLAP RATIO	= 0.	PCT
TIME BETWEEN PHOTOS	= 2.0958478	SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.23535585	0.95759128	-0.16621242	55.57873297
CAMERA AXIS	-0.72711582	0.68545410	0.03814798	45.87075806
C1	-0.65585899	0.72758731	0.20116083	46.60209656
C2	-0.71495400	0.68412498	-0.14426982	46.66865540
C3	-0.77406812	0.62040894	-0.12614000	46.74119568
C4	-0.71497310	0.66387128	0.21929066	46.67440756

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1276.9358063	-1245.8854370	-68.7611675	1.3166098	1.3298876	-0.3928087

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LONG -43.6890 DEG          LONG -43.9384 DEG
LATI  -1.7148 DEG          LATI  -2.9148 DEG        *
                                                   ***                LONG -44.1985 DEG          LONG -44.3097 DEG
      *          37.20930 KM        *             * * *              LATI  -1.9565 DEG          LATI  -2.4874 DEG
     (1)                           (2)           *  *  *
                                                  *                        *          16.46866 KM        *
                                                  *                       (1)                          (2)
            LOW RESOLUTION                        *                                                                  FRAME 202
                                                  *                                HIGH RESOLUTION
                                                  *
  31.59134 KM                31.69438 KM          *  DIRECTION      4.14144 KM                  4.14737 KM
                                                  *  OF MOTION
                                                  *
                                                  *                       (4)                          (3)
                                                  *                        *          16.49424 KM        *
     (4)                           (3)            *
      *          37.65429 KM        *             *                LONG -44.3320 DEG          LONG -44.4436 DEG
                                                  *                LATI  -1.9281 DEG          LATI  -2.4598 DEG
LONG -44.7063 DEG          LONG -44.9629 DEG      *
LATI  -1.4945 DEG          LATI  -2.7080 DEG      *
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*   PHOTO FRAME NUMBER  4 OF 16   *
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203

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	13	23	36.799

LONGITUDE OF NADIR POINT	=	-44.1689110 DEG	LATITUDE OF NADIR POINT	=	-2.2336477 DEG
LONG OF CAMERA AXIS INTERSECT	=	-44.1915555 DEG	LATI OF CAMERA AXIS INTERSECT	=	-2.2348925 DEG
SPACECRAFT RADIUS	=	1785.4253693 KM	SPACECRAFT ALTITUDE	=	45.9253693 KM
MEAN ALTITUDE RATE	=	0.0298254 KM/SEC	TIME FROM PERIAPSIS	=	58.4567113 SEC
HORIZONTAL VELOCITY	=	1.9118801 KM/SEC	TRUE ANOMALY	=	3.5888856 DEG
SCALE FACTOR (HIGH)	=	0.0132824 M/KM	TILT DISTANCE (HIGH)	=	9.1454684 MM
SCALE FACTOR (LOW)	=	0.0017420 M/KM	TILT DISTANCE (LOW)	=	1.1994057 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0416301 RAD/SEC	SWING ANGLE	=	75.3492794 DEG
EMISSION ANGLE	=	0.8816555 DEG	INCIDENCE ANGLE	=	63.1063066 DEG
PHASE ANGLE	=	62.2249990 DEG	NORTH DEVIATION ANGLE	=	348.4965540 DEG
TILT ANGLE	=	0.8589467 DEG	RESOLUTION CONSTANT	=	0.9965805 MTR
TILT AZIMUTH	=	266.8518715 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.1542501 DEG
SUN ANGLE AT NADIR	=	63.0836363 DEG	SUN ARC AT NADIR	=	1915.2193756 KM
LONGITUDE DISTANCE TO TARGET	=	-0.8289108 DEG	LATITUDE DISTANCE TO TARGET	=	0.3363523 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-25.1657348 KM	LATITUDE ARC LENGTH TO TARGET	=	10.2116563 KM
FORWARD OVERLAP RATIO	=	3.3778429 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.0998478 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.29588723	0.94220386	-0.15717070	53.52590227
CAMERA AXIS	-0.72711230	0.68545783	0.03814793	45.93064880
C1	-0.65585521	0.72759075	0.20116074	46.66783142
C2	-0.71495058	0.68412857	-0.14426988	46.73451233
C3	-0.77406500	0.62041284	-0.12614000	46.79736328
C4	-0.71496963	0.66387503	0.21929061	46.73051453

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1279.6926575	-1243.0960388	-69.[illegible]863400	1.3143030	1.3321345	-0.3926847

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LONG -43.5584 DEG          LONG -43.8083 DEG
LATI  -1.7409 DEG          LATI  -2.9434 DEG        *
                                                   ***          LONG -44.0691 DEG          LONG -44.1804 DEG
     *          37.28770 KM      *                 * * *        LATI  -1.9832 DEG          LATI  -2.5149 DEG
    (1)                        (2)                *  *  *
                                                   *                    *        16.49190 KM        *
                                                   *                   (1)                         (2)
            LOW RESOLUTION                         *                                                          FRAME 203
                                                   *                          HIGH RESOLUTION
                                                   *
  31.63108 KM                31.73427 KM           *  D RECTION      4.14670 KM                 4.15263 KM
                                                   *  O  MOTION
                                                   *
                                                   *                   (4)                         (3)
                                                   *                    *        16.51406 KM        *
    (4)                        (3)                 *
     *          37.67335 KM      *                 *          LONG -44.2028 DEG          LONG -44.3144 DEG
                                                   *          LATI  -1.9549 DEG          LATI  -2.4873 DEG
LONG -44.5773 DEG          LONG -44.8339 DEG       *
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*   PHOTO FRAME NUMBER  5 OF 16     *
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204

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	13	23	38.999

LONGITUDE OF NADIR POINT	= -44.0370331	DEG	LATITUDE OF NADIR POINT	= -2.2613040	DEG
LONG OF CAMERA AXIS INTERSECT	= -44.0562153	DEG	LATI OF CAMERA AXIS INTERSECT	= -2.2632839	DEG
SPACECRAFT RADIUS	= 1785.4922333	KM	SPACECRAFT ALTITUDE	= 45.9922333	KM
MEAN ALTITUDE RATE	= 0.0309481	KM/SEC	TIME FROM PERIAPSIS	= 60.6532674	SEC
HORIZONTAL VELOCITY	= 1.9118098	KM/SEC	TRUE ANOMALY	= 3.7236494	DEG
SCALE FACTOR (HIGH)	= 0.0132631	M/KM	TILT DISTANCE (HIGH)	= 7.7657053	NM
SCALE FACTOR (LOW)	= 0.0017394	M/KM	TILT DISTANCE (LOW)	= 1.0184532	NM
IMAGE MOTION COMPENSATION (V/H)	= 0.0415681	RAD/SEC	SWING ANGLE	= 72.6072292	DEG
EMISSION ANGLE	= 0.7487349	DEG	INCIDENCE ANGLE	= 62.9723463	DEG
PHASE ANGLE	= 62.2250004	DEG	NORTH DEVIATION ANGLE	= 348.5017929	DEG
TILT ANGLE	= 0.7293739	DEG	RESOLUTION CONSTANT	= 0.9980315	MTR
TILT AZIMUTH	= 264.1049767	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	= 87.1316509	DEG
SUN ANGLE AT NADIR	= 62.9530926	DEG	SUN ARC AT NADIR	= 1911.2560577	KM
LONGITUDE DISTANCE TO TARGET	= -0.6970329	DEG	LATITUDE DISTANCE TO TARGET	= 0.3086960	DEG
LONGITUDE ARC LENGTH TO TARGET	= -21.1619215	KM	LATITUDE ARC LENGTH TO TARGET	= 9.3720114	KM
FORWARD OVERLAP RATIO	= -1.0342477	PCT	SIDE OVERLAP RATIO	= 0.	PCT
TIME BETWEEN PHOTOS	= 2.2002697	SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.36265946	0.92037436	-0.14625026	51.61652946
CAMERA AXIS	-0.72710860	0.68546177	0.03814784	45.99604797
C1	-0.65585122	0.72759439	0.20116061	46.73941040
C2	-0.71494693	0.68413234	-0.14426997	46.80618286
C3	-0.77406169	0.62041695	-0.12614004	46.85890198
C4	-0.71496558	0.66387899	0.21929053	46.79196167

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1282.5742493	-1240.1702576	-70.4501123	1.3118824	1.3344817	-0.3925533

```
LONG -43.4217 DEG          LONG -43.6720 DEG          *
LATI  -1.7681 DEG          LATI  -2.9734 DEG          *
                                                      ***                LONG -43.9336 DEG          LONG -44.0450 DEG
      *          37.37210 KM        *                 * * *              LATI  -2.0112 DEG          LATI  -2.5437 DEG
     (1)                           (2)                * * *
                                                      *                        *          16.51719 KM        *
                                                      *                       (1)                          (2)
                                                      *
            LOW RESOLUTION                            *                                HIGH RESOLUTION
                                                      *
                                                      *
   31.67479 KM                31.77811 KM            *  DIRECTION       4.15245 KM                  4.15839 KM
                                                      *  OF MOTION
                                                      *
                                                      *                       (4)                          (3)
                                                      *                        *          16.53578 KM        *
     (4)                          (3)                 *
      *          37.69547 KM        *                 *                LONG -44.0675 DEG          LONG -44.1792 DEG
                                                      *                LATI  -1.9829 DEG          LATI  -2.5160 DEG
LONG -44.4422 DEG          LONG -44.6589 DEG          *
LATI  -1.5493 DEG          LATI  -2.7641 DEG          *
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FRAME 204

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*********************************
*   PHOTO FRAME NUMBER  6 OF 16   *
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205

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	13	23	41.199

LONGITUDE OF NADIR POINT	= -43.9052200	DEG	LATITUDE OF NADIR POINT	= -2.2889321	DEG
LONG OF CAMERA AXIS INTERSECT	= -43.9209366	DEG	LATI OF CAMERA AXIS INTERSECT	= -2.2916479	DEG
SPACECRAFT RADIUS	= 1785.5615082	KM	SPACECRAFT ALTITUDE	= 46.0615082	KM
MEAN ALTITUDE RATE	= 0.0320660	KM/SEC	TIME FROM PERIAPSIS	= 62.8487873	SEC
HORIZONTAL VELOCITY	= 1.9117368	KM/SEC	TRUE ANOMALY	= 3.8583393	DEG
SCALE FACTOR (HIGH)	= 0.0132432	M/KM	TILT DISTANCE (HIGH)	= 6.4144561	MM
SCALE FACTOR (LOW)	= 0.0017368	M/KM	TILT DISTANCE (LOW)	= 0.8412402	MM
IMAGE MOTION COMPENSATION (V/H)	= 0.0415040	RAD/SEC	SWING ANGLE	= 68.6974211	DEG
EMISSION ANGLE	= 0.6184187	DEG	INCIDENCE ANGLE	= 62.8384581	DEG
PHASE ANGLE	= 62.2250013	DEG	NORTH DEVIATION ANGLE	= 348.5067177	DEG
TILT ANGLE	= 0.6024717	DEG	RESOLUTION CONSTANT	= 0.9995347	MTR
TILT AZIMUTH	= 260.1901474	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	= 87.1088839	DEG
SUN ANGLE AT NADIR	= 62.8226309	DEG	SUN ARC AT NADIR	= 1907.2952423	KM
LONGITUDE DISTANCE TO TARGET	= -0.5652199	DEG	LATITUDE DISTANCE TO TARGET	= 0.2810679	DEG
LONGITUDE ARC LENGTH TO TARGET	= -17.1600769	KM	LATITUDE ARC LENGTH TO TARGET	= 8.5332223	KM
FORWARD OVERLAP RATIO	= -0.8419869	PCT	SIDE OVERLAP RATIO	= 0.	PCT
TIME BETWEEN PHOTOS	= 2.1996260	SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.43204606	0.89187575	-0.13376789	49.98108673
CAMERA AXIS	-0.72710488	0.68546570	0.03814779	46.06411743
C1	-0.65584722	0.72759802	0.20116052	46.81369019
C2	-0.71494330	0.68413614	-0.14427002	46.88059998
C3	-0.77405839	0.62042107	-0.12614004	46.92314148
C4	-0.71496232	0.66388295	0.21929049	46.85610962

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1285.4491577	-1237.2406464	-71.3131790	1.3094578	1.3368219	-0.3924204

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LONG -43.2850 DEG          LONG -43.5358 DEG
LATI  -1.7952 DEG          LATI  -3.0034 DEG        *
                                                   ***          LONG -43.7981 DEG          LONG -43.9097 DEG
        *          37.45880 KM        *            * * *        LATI  -2.0392 DEG          LATI  -2.5726 DEG
       (1)                           (2)          * * *
                                                   *                     *        16.54345 KM        *
                                                   *                    (1)                         (2)
            LOW RESOLUTION                         *
                                                   *                          HIGH RESOLUTION
                                                   *
   31.72061 KM                31.82409 KM          *  DIRECTION      4.15849 KM                 4.16444 KM
                                                   *  OF MOTION
                                                   *
                                                   *                    (4)                         (3)
                                                   *                     *        16.55845 KM        *
       (4)                           (3)           *
        *          37.71977 KM        *            *          LONG -43.9322 DEG          LONG -44.0441 DEG
                                                   *          LATI  -2.0109 DEG          LATI  -2.5447 DEG
LONG -44.3073 DEG          LONG -44.5640 DEG       *
LATI  -1.5772 DEG          LATI  -2.7929 DEG       *
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FRAME 205

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*   PHOTO FRAME NUMBER  7 OF 16  *
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206

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	13	23	43.299

LONGITUDE OF NADIR POINT	= -43.7792931	DEG	LATITUDE OF NADIR POINT	= -2.3153171	DEG
LONG OF CAMERA AXIS INTERSECT	= -43.7916818	DEG	LATI OF CAMERA AXIS INTERSECT	= -2.3187373	DEG
SPACECRAFT RADIUS	= 1785.6300049	KM	SPACECRAFT ALTITUDE	= 46.1300049	KM
MEAN ALTITUDE RATE	= 0.0331338	KM/SEC	TIME FROM PERIAPSIS	= 64.9464064	SEC
HORIZONTAL VELOCITY	= 1.9116646	KM/SEC	TRUE ANOMALY	= 3.9870142	DEG
SCALE FACTOR (HIGH)	= 0.0132235	M/KM	TILT DISTANCE (HIGH)	= 5.1644501	MM
SCALE FACTOR (LOW)	= 0.0017342	M/KM	TILT DISTANCE (LOW)	= 0.6773049	MM
IMAGE MOTION COMPENSATION (V/H)	= 0.0414408	RAD/SEC	SWING ANGLE	= 63.0725431	DEG
EMISSION ANGLE	= 0.4980099	DEG	INCIDENCE ANGLE	= 62.7105465	DEG
PHASE ANGLE	= 62.2250013	DEG	NORTH DEVIATION ANGLE	= 348.5115433	DEG
TILT ANGLE	= 0.4850723	DEG	RESOLUTION CONSTANT	= 1.0010211	MTR
TILT AZIMUTH	= 254.5603714	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	= 87.0869598	DEG
SUN ANGLE AT NADIR	= 62.6980014	DEG	SUN ARC AT NADIR	= 1903.5114899	KM
LONGITUDE DISTANCE TO TARGET	= -0.4392929	DEG	LATITUDE DISTANCE TO TARGET	= 0.2546829	DEG
LONGITUDE ARC LENGTH TO TARGET	= -13.3369337	KM	LATITUDE ARC LENGTH TO TARGET	= 7.7321725	KM
FORWARD OVERLAP RATIO	= 3.7896864	PCT	SIDE OVERLAP RATIO	= 0.	PCT
TIME BETWEEN PHOTOS	= 2.1004915	SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.49571995	0.85778373	-0.12036214	48.69899845
CAMERA AXIS	-0.72710127	0.68546955	0.03814774	46.13169861
C1	-0.65584332	0.72760155	0.20116042	46.88729858
C2	-0.71493974	0.68413983	-0.14427008	46.95431519
C3	-0.77405517	0.62042508	-0.12614005	46.98712158
C4	-0.71495876	0.66388680	0.21929044	46.91999817

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1288.1908875	-1234.4369354	-72.1375275	1.3071366	1.3390523	-0.3922918

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LONG -43.1543 DEG          LONG -43.4056 DEG
LATI  -1.8211 DEG          LATI  -3.0320 DEG          *
                                                     ***
     *        37.54385 KM      *                    * * *
    (1)                       (2)                  *  *  *
                                                     *
                                                     *
                                                     *
                LOW RESOLUTION                       *
                                                     *
                                                     *
                                                     *
   31.76639 KM                31.87002 KM           *  DIRECTION
                                                     *  OF MOTION
                                                     *
                                                     *
                                                     *
     (4)                       (3)                   *
      *        37.74504 KM      *                    *
                                                     *
LONG -44.1783 DEG          LONG -44.4351 DEG         *
LATI  -1.6039 DEG          LATI  -2.8204 DEG         *
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LONG -43.6687 DEG          LONG -43.7804 DEG
LATI  -2.0658 DEG          LATI  -2.6001 DEG

                    *        16.56946 KM      *
                   (1)                        (2)

                          HIGH RESOLUTION

   4.16449 KM                                 4.17046 KM

                   (4)                        (3)
                    *        16.58103 KM      *

LONG -43.8030 DEG          LONG -43.9150 DEG
LATI  -2.0376 DEG          LATI  -2.5722 DEG
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FRAME 206

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*************************************
*   PHOTO FRAME NUMBER  8 OF 16     *
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207

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	13	23	45.499

LONGITUDE OF NADIR POINT	=	-43.6474266 DEG	LATITUDE OF NADIR POINT	=	-2.3429295 DEG
LONG OF CAMERA AXIS INTERSECT	=	-43.6563249 DEG	LATI OF CAMERA AXIS INTERSECT	=	-2.3470920 DEG
SPACECRAFT RADIUS	=	1785.7041169 KM	SPACECRAFT ALTITUDE	=	46.2041168 KM
MEAN ALTITUDE RATE	=	0.0342517 KM/SEC	TIME FROM PERIAPSIS	=	67.1429176 SEC
HORIZONTAL VELOCITY	=	1.9115864 KM/SEC	TRUE ANOMALY	=	4.1217440 DEG
SCALE FACTOR (HIGH)	=	0.0132023 M/KM	TILT DISTANCE (HIGH)	=	3.9444869 MM
SCALE FACTOR (LOW)	=	0.0017314 M/KM	TILT DISTANCE (LOW)	=	0.5173098 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0413726 RAD/SEC	SWING ANGLE	=	53.4561958 DEG
EMISSION ANGLE	=	0.3803287 DEG	INCIDENCE ANGLE	=	62.5766220 DEG
PHASE ANGLE	=	62.2250023 DEG	NORTH DEVIATION ANGLE	=	348.5167198 DEG
TILT ANGLE	=	0.3704907 DEG	RESOLUTION CONSTANT	=	1.0026293 MTR
TILT AZIMUTH	=	244.9383411 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.0638256 DEG
SUN ANGLE AT NADIR	=	62.5675206 DEG	SUN ARC AT NADIR	=	1899.5501099 KM
LONGITUDE DISTANCE TO TARGET	=	-0.3074265 DEG	LATITUDE DISTANCE TO TARGET	=	0.2270701 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-9.3334678 KM	LATITUDE ARC LENGTH TO TARGET	=	6.8938496 KM
FORWARD OVERLAP RATIO	=	-0.5909193 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.1956260 SEC			

DIRECTION COSINES TO TARGET	X	Y	Z	MAGNITUDE (KM)
CAMERA AXIS	-0.57057247	0.81452674	-0.10484874	47.67451668
C1	-0.72709761	0.68547343	0.03814766	46.20510864
C2	-0.65583939	0.72760513	0.20116030	46.96767153
C3	-0.71493617	0.68414357	-0.14427017	47.03421021
C4	-0.77405191	0.62042913	-0.12614009	47.05677795
	-0.71495515	0.66389070	0.21929037	46.98956299

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1291.0567932	-1231.4958554	-73.0004301	1.3047007	1.3413823	-0.3921557

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LONG -43.0174 DEG          LONG -43.2692 DEG                    LONG -43.5331 DEG          LONG -43.6450 DEG
LATI  -1.8482 DEG          LATI  -3.0621 DEG                    LATI  -2.0938 DEG          LATI  -2.6289 DEG
                                   *                                                                  *
                                  ***                                                                 *
*          37.63523 KM     *     * * *                                        16.59765 KM            *
(1)                        (2)   * * *                                  (1)                        (2)
                                   *                                                                  *
                                   *                                                                  *
          LOW RESOLUTION           *                                                                  *
                                   *                                                                  *
                                   *                                                                  *
                                   
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*   PHOTO FRAME NUMBER  9 OF 16   *
********************************* 208
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	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	13	23	47.699

LONGITUDE OF NADIR POINT	=	-43.5156364 DEG	LATITUDE OF NADIR POINT	=	-2.3705170 DEG
LONG OF CAMERA AXIS INTERSECT	=	-43.5210357 DEG	LATI OF CAMERA AXIS INTERSECT	=	-2.3754194 DEG
SPACECRAFT RADIUS	=	1785.7806702 KM	SPACECRAFT ALTITUDE	=	46.2806702 KM
MEAN ALTITUDE RATE	=	0.0353688 KM/SEC	TIME FROM PERIAPSIS	=	69.3383303 SEC
HORIZONTAL VELOCITY	=	1.9115057 KM/SEC	TRUE ANOMALY	=	4.2563953 DEG
SCALE FACTOR (HIGH)	=	0.0131804 M/KM	TILT DISTANCE (HIGH)	=	2.9297402 MM
SCALE FACTOR (LOW)	=	0.0017286 M/KM	TILT DISTANCE (LOW)	=	0.3842282 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0413025 RAD/SEC	SWING ANGLE	=	36.2917647 DEG
EMISSION ANGLE	=	0.2825486 DEG	INCIDENCE ANGLE	=	62.4427681 DEG
PHASE ANGLE	=	62.2250023 DEG	NORTH DEVIATION ANGLE	=	348.5220222 DEG
TILT ANGLE	=	0.2751811 DEG	RESOLUTION CONSTANT	=	1.0042905 MTR
TILT AZIMUTH	=	227.7654588 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.0405207 DEG
SUN ANGLE AT NADIR	=	62.4371204 DEG	SUN ARC AT NADIR	=	1895.5911560 KM
LONGITUDE DISTANCE TO TARGET	=	-0.1756363 DEG	LATITUDE DISTANCE TO TARGET	=	0.1994830 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-5.3323182 KM	LATITUDE ARC LENGTH TO TARGET	=	6.0563046 KM
FORWARD OVERLAP RATIO	=	-0.3757366 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.2002697 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.63963869	0.76362009	-0.08801522	46.99661255
CAMERA AXIS	-0.72709384	0.68547742	0.03814760	46.28121948
C1	-0.65583534	0.72760881	0.20116019	47.04559106
C2	-0.71493246	0.68414742	-0.14427023	47.11686707
C3	-0.77404857	0.62043332	-0.12614010	47.12916565
C4	-0.71495145	0.66389471	0.21929032	47.06185913

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1293.9158783	-1228.5512848	-73.8626261	1.3022610	1.3437052	-0.3920179

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LONG -42.8806 DEG          LONG -43.1328 DEG
LATI  -1.8753 DEG          LATI  -3.0922 DEG        *
                                                   ***          LONG -43.3977 DEG          LONG -43.5096 DEG
     *          37.72895 KM      *                 * * *        LATI  -2.1216 DEG          LATI  -2.6577 DEG
    (1)                         (2)                * * *
                                                   *                    *          16.62681 KM      *
                                                   *                   (1)                         (2)
            LOW RESOLUTION                         *                                                          FRAME 208
                                                   *                          HIGH RESOLUTION
                                                   *
  31.86856 KM                31.97255 KM           *  DIRECTION      4.17790 KM                 4.18388 KM
                                                   *  OF MOTION
                                                   *
                                                   *                   (4)                         (3)
                                                   *                    *          16.63115 KM      *
    (4)                         (3)                *
     *          37.80441 KM      *                 *          LONG -43.5324 DEG          LONG -43.6447 DEG
                                                   *          LATI  -2.0934 DEG          LATI  -2.6296 DEG
LONG -43.9084 DEG          LONG -44.1654 DEG       *
LATI  -1.6595 DEG          LATI  -2.8780 DEG       *
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*************************************
*   PHOTO FRAME NUMBER 10 OF 16     *
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209

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	13	23	49.799

LONGITUDE OF NADIR POINT	=	-43.3897209 DEG	LATITUDE OF NADIR POINT	=	-2.3968593 DEG
LONG OF CAMERA AXIS INTERSECT	=	-43.3917642 DEG	LATI OF CAMERA AXIS INTERSECT	=	-2.4024720 DEG
SPACECRAFT RADIUS	=	1785.8561096 KM	SPACECRAFT ALTITUDE	=	46.3561096 KM
MEAN ALTITUDE RATE	=	0.0364358 KM/SEC	TIME FROM PERIAPSIS	=	71.4359045 SEC
HORIZONTAL VELOCITY	=	1.9114261 KM/SEC	TRUE ANOMALY	=	4.3850355 DEG
SCALE FACTOR (HIGH)	=	0.0131590 M/KM	TILT DISTANCE (HIGH)	=	2.3979039 MM
SCALE FACTOR (LOW)	=	0.0017258 M/KM	TILT DISTANCE (LOW)	=	0.3144792 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0412335 RAD/SEC	SWING ANGLE	=	8.5813025 DEG
EMISSION ANGLE	=	0.2313351 DEG	INCIDENCE ANGLE	=	62.3148928 DEG
PHASE ANGLE	=	62.2250037 DEG	NORTH DEVIATION ANGLE	=	348.5272026 DEG
TILT ANGLE	=	0.2252280 DEG	RESOLUTION CONSTANT	=	1.0055276 MTR
TILT AZIMUTH	=	200.0543613 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	87.0180836 DEG
SUN ANGLE AT NADIR	=	62.3125539 DEG	SUN ARC AT NADIR	=	1891.8053109 KM
LONGITUDE DISTANCE TO TARGET	=	-0.0497208 DEG	LATITUDE DISTANCE TO TARGET	=	0.1731407 DEG
LONGITUDE ARC LENGTH TO TARGET	=	-1.5095225 KM	LATITUDE ARC LENGTH TO TARGET	=	5.2565513 KM
FORWARD OVERLAP RATIO	=	4.2435125 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.0998478 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.70229970	0.70833576	-0.07096183	46.68602610
CAMERA AXIS	-0.72709029	0.68548119	0.03814752	46.35647583
C1	-0.65583152	0.72761229	0.20116007	47.13104248
C2	-0.71492858	0.68415104	-0.14427031	47.19845581
C3	-0.77404541	0.62043726	-0.12614013	47.20091248
C4	-0.71494794	0.66389851	0.21929024	47.13351440

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1296.6426086	-1225.7331085	-74.6861172	1.2999253	1.3459191	-0.3918848

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LONG -42.7498 DEG          LONG -43.0025 DEG
LATI  -1.9010 DEG          LATI  -3.1210 DEG        *
                                                   ***          LONG -43.2682 DEG          LONG -43.3803 DEG
      *        37.82073 KM      *                 * * *         LATI  -2.1482 DEG          LATI  -2.6853 DEG
     (1)                       (2)               *  *  *
                                                  *                    *        16.65560 KM        *
                                                  *                   (1)                         (2)
            LOW RESOLUTION                        *
                                                  *                          HIGH RESOLUTION
                                                  *
  31.92040 KM                32.02454 KM          *  DIRECTION      4.18468 KM                4.19066 KM
                                                  *  OF MOTION
                                                  *
                                                  *                   (4)                         (3)
                                                  *                    *        16.65647 KM        *
     (4)                       (3)                *
      *        37.83585 KM      *                 *          LONG -43.4032 DEG          LONG -43.5156 DEG
                                                  *          LATI  -2.1201 DEG          LATI  -2.6571 DEG
LONG -43.7795 DEG          LONG -44.0366 DEG      *
LATI  -1.6860 DEG          LATI  -2.9055 DEG      *
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FRAME 209

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*   PHOTO FRAME NUMBER 13 OF 16     *
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212

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	13	23	56.299

LONGITUDE OF NADIR POINT	=	-43.0002058 DEG	LATITUDE OF NADIR POINT	=	-2.4782701 DEG
LONG OF CAMERA AXIS INTERSECT	=	-42.9918017 DEG	LATI OF CAMERA AXIS INTERSECT	=	-2.4860940 DEG
SPACECRAFT RADIUS	=	1786.1036530 KM	SPACECRAFT ALTITUDE	=	46.6036530 KM
MEAN ALTITUDE RATE	=	0.0397352 KM/SEC	TIME FROM PERIAPSIS	=	77.9251165 SEC
HORIZONTAL VELOCITY	=	1.9111647 KM/SEC	TRUE ANOMALY	=	4.7829342 DEG
SCALE FACTOR (HIGH)	=	0.0130891 M/KM	TILT DISTANCE (HIGH)	=	4.5636443 MM
SCALE FACTOR (LOW)	=	0.0017166 M/KM	TILT DISTANCE (LOW)	=	0.5985107 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0410089 RAD/SEC	SWING ANGLE	=	301.5340080 DEG
EMISSION ANGLE	=	0.4401304 DEG	INCIDENCE ANGLE	=	61.9193392 DEG
PHASE ANGLE	=	62.2250056 DEG	NORTH DEVIATION ANGLE	=	348.5439682 DEG
TILT ANGLE	=	0.4286437 DEG	RESOLUTION CONSTANT	=	1.0112993 MTR
TILT AZIMUTH	=	132.9907112 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	86.9476080 DEG
SUN ANGLE AT NADIR	=	61.9273024 DEG	SUN ARC AT NADIR	=	1880.1130676 KM
LONGITUDE DISTANCE TO TARGET	=	0.3397903 DEG	LATITUDE DISTANCE TO TARGET	=	0.0917299 DEG
LONGITUDE ARC LENGTH TO TARGET	=	10.3160357 KM	LATITUDE ARC LENGTH TO TARGET	=	2.7849212 KM
FORWARD OVERLAP RATIO	=	0.2186380 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.2002697 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.86099576	0.50835939	-0.01603234	47.84270620
CAMERA AXIS	-0.72707929	0.68549290	0.03814732	46.60499573
C1	-0.65581968	0.72762307	0.20115975	47.39910889
C2	-0.71491817	0.68416230	-0.14427051	47.46694946
C3	-0.77403560	0.62044948	-0.12614020	47.43876648
C4	-0.71493710	0.66391025	0.21929006	47.37101746

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1305.0473938	-1216.5850159	-77.2320127	1.2926698	1.3527346	-0.3914636

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LONG -42.3449 DEG          LONG -42.5992 DEG
LATI  -1.9805 DEG          LATI  -2.2101 DEG          *
                                                     ***
      *        38.11851 KM      *                   * * *        LONG -42.8676 DEG        LONG -42.9802 DEG
     (1)                       (2)                 *  *  *       LATI  -2.2304 DEG        LATI  -2.7705 DEG
                                                   *
                                                   *                   *        16.75034 KM      *
                                                   *                  (1)                       (2)
            LOW RESOLUTION                         *
                                                   *                          HIGH RESOLUTION
                                                   *
  32.09314 KM                32.15789 KM           *  DIRECTION      4.20720 KM                4.21322 KM
                                                   *  OF MOTION
                                                   *
                                                   *                  (4)                       (3)
                                                   *                   *        16.74041 KM      *
     (4)                       (3)                 *
      *        37.94563 KM      *                   *        LONG -43.0034 DEG        LONG -43.1162 DEG
                                                   *        LATI  -2.2023 DEG        LATI  -2.7420 DEG
LONG -43.3808 DEG          LONG -43.6383 DEG        *
LATI  -1.7676 DEG          LATI  -2.9907 DEG        *
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FRAME 212

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*   PHOTO FRAME NUMBER 14 OF 16 *
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213

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	13	23	58.399

LONGITUDE OF NADIR POINT	=	-42.8743782 DEG	LATITUDE OF NADIR POINT	=	-2.5045424 DEG
LONG OF CAMERA AXIS INTERSECT	=	-42.8625679 DEG	LATI OF CAMERA AXIS INTERSECT	=	-2.5130852 DEG
SPACECRAFT RADIUS	=	1786.1882172 KM	SPACECRAFT ALTITUDE	=	46.6882172 KM
MEAN ALTITUDE RATE	=	0.0408005 KM/SEC	TIME FROM PERIAPSIS	=	80.0215549 SEC
HORIZONTAL VELOCITY	=	1.9110753 KM/SEC	TRUE ANOMALY	=	4.9114584 DEG
SCALE FACTOR (HIGH)	=	0.0130654 M/KM	TILT DISTANCE (HIGH)	=	5.7791095 MM
SCALE FACTOR (LOW)	=	0.0017135 M/KM	TILT DISTANCE (LOW)	=	0.7579160 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0409327 RAD/SEC	WING ANGLE	=	294.4714127 DEG
EMISSION ANGLE	=	0.5574730 DEG	INCIDENCE ANGLE	=	61.7915659 DEG
PHASE ANGLE	=	62.2250056 DEG	NORTH DEVIATION ANGLE	=	348.5456254 DEG
TILT ANGLE	=	0.5428011 DEG	RESOLUTION CONSTANT	=	1.0131343 MTR
TILT AZIMUTH	=	125.9231071 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	86.9244947 DEG
SUN ANGLE AT NADIR	=	61.8028803 DEG	SUN ARC AT NADIR	=	1876.3356171 KM
LONGITUDE DISTANCE TO TARGET	=	0.4656219 DEG	LATITUDE DISTANCE TO TARGET	=	0.0654576 DEG
LONGITUDE ARC LENGTH TO TARGET	=	14.1362835 KM	LATITUDE ARC LENGTH TO TARGET	=	1.9872933 KM
FORWARD OVERLAP RATIO	=	4.9624315 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.0958478 SEC			

DIRECTION COSINES TO TARGET	X	Y	Z	MAGNITUDE (KM)
CAMERA AXIS	-0.85818711	0.43961194	0.00112359	48.87372589
C1	-0.72707577	0.68549662	0.03814726	46.69036865
C2	-0.65581588	0.72762650	0.20115964	47.49092102
C3	-0.71491472	0.68416588	-0.14427058	47.55891418
C4	-0.77403247	0.62045337	-0.12614021	47.52075195
	-0.71493363	0.66391400	0.21929000	47.45289612

STATE VECTOR	X	Y	Z	X DOT	Y DOT	Z DOT
	1307.7527771	-1214.1492004	-78.0539579	1.2903162	1.3549255	-0.3913245

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LONG -42.2139 DEG          LONG -42.4688 DEG
LATI  -2.0061 DEG          LATI  -3.2390 DEG
                                   *
                                  ***
      *        38.21921 KM   *     * * *                LONG -42.7381 DEG        LONG -42.8509 DEG
     (1)                     (2)   * * *                LATI  -2.2569 DEG        LATI  -2.7981 DEG
                                   *
                                   *                          *        16.78279 KM        *
            LOW RESOLUTION         *                         (1)                         (2)
                                   *                                   HIGH RESOLUTION
                                   *                                                        FRAME 213
   32.15297 KM              32.25794 KM   *  DIRECTION      4.21499 KM                 4.22102 KM
                                          *  OF MOTION
                                          *
                                          *                    (4)                        (3)
     (4)                     (3)          *                     *        16.76934 KM        *
      *        37.98514 KM    *           *
                              *           *                LONG -42.8742 DEG        LONG -42.9871 DEG
LONG -43.2521 DEG          LONG -43.5097 DEG *             LATI  -2.2288 DEG        LATI  -2.7695 DEG
LATI  -1.7939 DEG          LATI  -3.0183 DEG *
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*   PHOTO FRAME NUMBER 15 OF 16     *
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214

	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND
GMT	66	8	29	13	24	0.599

LONGITUDE OF NADIR POINT	=	-42.7425613	DEG	LATITUDE OF NADIR POINT	=	-2.5320510	DEG
LONG OF CAMERA AXIS INTERSECT	=	-42.7271767	DEG	LATI OF CAMERA AXIS INTERSECT	=	-2.5413477	DEG
SPACECRAFT RADIUS	=	1786.2792053	KM	SPACECRAFT ALTITUDE	=	46.7792053	KM
MEAN ALTITUDE RATE	=	0.0419162	KM/SEC	TIME FROM PERIAPSIS	=	82.2178411	SEC
HORIZONTAL VELOCITY	=	1.9105790	KM/SEC	TRUE ANOMALY	=	5.0460899	DEG
SCALE FACTOR (HIGH)	=	0.0130400	M/KM	TILT DISTANCE (HIGH)	=	7.1141997	MM
SCALE FACTOR (LOW)	=	0.0017102	M/KM	TILT DISTANCE (LOW)	=	0.9330058	MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0408510	RAD/SEC	SWING ANGLE	=	289.7328300	DEG
EMISSION ANGLE	=	0.6862475	DEG	INCIDENCE ANGLE	=	61.6577201	DEG
PHASE ANGLE	=	62.2250066	DEG	NORTH DEVIATION ANGLE	=	348.5556717	DEG
TILT ANGLE	=	0.6681888	DEG	RESOLUTION CONSTANT	=	1.0151087	MTR
TILT AZIMUTH	=	121.1794977	DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	86.9001007	DEG
SUN ANGLE AT NADIR	=	61.6725578	DEG	SUN ARC AT NADIR	=	1872.3790131	KM
LONGITUDE DISTANCE TO TARGET	=	0.5974388	DEG	LATITUDE DISTANCE TO TARGET	=	0.0379490	DEG
LONGITUDE ARC LENGTH TO TARGET	=	18.1382437	KM	LATITUDE ARC LENGTH TO TARGET	=	1.1521325	KM
FORWARD OVERLAP RATIO	=	0.6334212	PCT	SIDE OVERLAP RATIO	=	0.	PCT
TIME BETWEEN PHOTOS	=	2.2002697	SEC				

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.92955839	0.36822463	0.01821582	50.26755047
CAMERA AXIS	-0.72707205	0.68550056	0.03814720	46.78247070
C1	-0.65581188	0.72763013	0.20115954	47.58584375
C2	-0.71491107	0.68416968	-0.14427064	47.65798950
C3	-0.77402916	0.62045750	-0.12614023	47.60934448
C4	-0.71492958	0.66391796	0.21928996	47.54135132

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1310.5816498	-1211.1734772	-78.9147081	1.2878458	1.3572149	-0.3911772

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LONG -42.0767 DEG          LONG -42.3322 DEG
LATI  -2.0329 DEG          LATI  -3.2693 DEG          *
                                                     ***
    *          38.32708 KM        *                 * * *        LONG -42.6025 DEG          LONG -42.7154 DEG
   (1)                           (2)               *  *  *       LATI  -2.2846 DEG          LATI  -2.8269 DEG
                                                     *                    *          16.81775 KM        *
                                                     *                   (1)                          (2)
                LOW RESOLUTION                       *
                                                     *                          HIGH RESOLUTION
                                                     *
   32.21776 KM                32.32294 KM           *  DIRECTION      4.22341 KM                 4.22947 KM
                                                     *  OF MOTION
                                                     *
                                                     *                   (4)                        (3)
                                                     *                    *          16.80060 KM        *
      (4)                         (3)                *
       *          38.02863 KM      *                 *        LONG -42.7389 DEG          LONG -42.8519 DEG
                                                     *        LATI  -2.2565 DEG          LATI  -2.7982 DEG
LONG -43.1172 DEG          LONG -43.3751 DEG         *
LATI  -1.8214 DEG          LATI  -3.0472 DEG         *
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FRAME 214

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* PHOTO FRA NUMBER 1 OF 16 * 215
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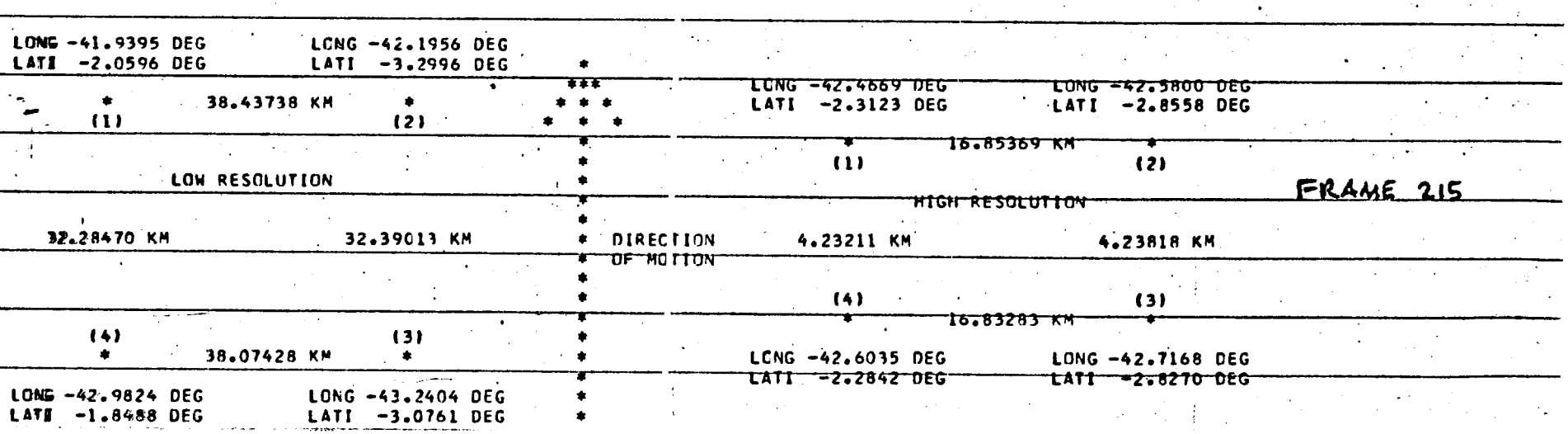
	YEAR	MONTH	DA	HOUR	MINUTE	SECOND
GMT	66	8	29	13	24	2.799

LONGITUDE OF NADIR POINT	=	-42.6107559 DEG	LATITUDE OF NADIR POINT	=	-2.5595433 DEG
LONG OF CAMERA AXIS INTERSECT	=	-42.5917783 DEG	LATI OF CAMERA AXIS INTERSECT	=	-2.5695982 DEG
SPACECRAFT RADIUS	=	1786.3726501 KM	SPACECRAFT ALTITUDE	=	46.8726501 KM
MEAN ALTITUDE RATE	=	0.0430315 KM/SEC	TIME FROM PERIAPSIS	=	84.4140739 SEC
HORIZONTAL VELOCITY	=	1.9108803 KM/SEC	TRUE ANOMALY	=	5.1807041 DEG
SCALE FACTOR (HIGH)	=	0.0130140 M/KM	TILT DISTANCE (HIGH)	=	8.4802341 MM
SCALE FACTOR (LOW)	=	0.0017067 M/KM	TILT DISTANCE (LOW)	=	1.1121619 MM
IMAGE MOTION COMPENSATION (V/H)	=	0.0407675 RAD/SEC	SWING ANGLE	=	286.5080414 DEG
EMISSION ANGLE	=	0.8179555 DEG	INCIDENCE ANGLE	=	61.5238805 DEG
PHASE ANGLE	=	62.2250066 DEG	NORTH DEVIATION ANGLE	=	348.5618439 DEG
TILT ANGLE	=	0.7964760 DEG	RESOLUTION CONSTANT	=	1.0171365 MTR
TILT AZIMUTH	=	117.9480982 DEG	SUN AZIMUTH AT PRINCIPAL GND PT	=	86.8755207 DEG
SUN ANGLE AT NADIR	=	61.5422573 DEG	SUN ARC AT NADIR	=	1868.4230557 KM
LONGITUDE DISTANCE TO TARGET	=	0.7292442 DEG	LATITUDE DISTANCE TO TARGET	=	0.0104567 DEG
LONGITUDE ARC LENGTH TO TARGET	=	22.1398566 KM	LATITUDE ARC LENGTH TO TARGET	=	0.3174640 KM
FORWARD OVERLAP RATIO	=	0.8344250 PCT	SIDE OVERLAP RATIO	=	0. PCT
TIME BETWEEN PHOTOS	=	2.1996260 SEC			

	X	Y	Z	MAGNITUDE (KM)
DIRECTION COSINES TO TARGET	-0.95367719	0.29388336	0.03418408	51.95689917
CAMERA AXIS	-0.72706832	0.68550453	0.03814714	46.87728882
C1	-0.65580788	0.72763378	0.20115943	47.69154358
C2	-0.71490741	0.68417348	-0.14427071	47.75984192
C3	-0.77402584	0.62046164	-0.12614025	47.70068359
C4	-0.71492629	0.68392194	0.21928989	47.63255310

	X	Y	Z	X DOT	Y DOT	Z DOT
STATE VECTOR	1313.4051361	-1208.1927795	-79.7751127	1.2853704	1.3594983	-0.3910283



FRAME 215