

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71 PAGE 211

MISSION/
FRAME NO.
3008

TIME
670215
100059.51

YR.NO.DY
HR.MI.SEC

S/C POSITION
ALT 59.39 KM
ALT RT -0.0655 KM/SEC
LAT 2.92 DEG
LONG 34.70 DEG

S/C ORIENTATION
TILT ANG 1.21 DEG
TILT AZIM 280.70 DEG
SWING ANG 79.99 DEG
N.DEV. 339.29 DEG

PHOTO ILLUMINATION
SUN AZIM 92.26 DEG
INCID ANG 76.27 DEG
EMISS ANG 1.25 DEG
PHASE ANG 75.93 DEG
ALPHA 1.24 DEG

PRINCIPAL POINT
LATITUDE 2.93 DEG
LONGITUDE 34.66 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 3.44 DEG AB 48.2 KM
A LONG 35.58 DEG BC 41.2 KM
B LAT 1.55 DEG CD 49.0 KM
B LONG 35.02 DEG DA 41.1 KM
C LAT 2.42 DEG TILT DISTANCE 1.7
C LONG 33.74 DEG
D LAT 3.93 DEG
D LONG 34.31 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 3.23 DEG AB 21.3 KM
A LONG 34.87 DEG BC 5.4 KM
B LAT 2.57 DEG CD 21.4 KM
B LONG 34.62 DEG DA 5.4 KM
C LAT 2.63 DEG TILT DISTANCE 12.8
C LONG 34.45 DEG
D LAT 3.29 DEG
D LONG 34.70 DEG

MISSION/
FRAME NO.
3009

TIME
670215
100059.51

YR.NO.DY
HR.MI.SEC

S/C POSITION
ALT 59.23 KM
ALT RT -0.0647 KM/SEC
LAT 2.87 DEG
LONG 34.84 DEG

S/C ORIENTATION
TILT ANG 1.07 DEG
TILT AZIM 279.34 DEG
SWING ANG 78.62 DEG
N.DEV. 339.29 DEG

PHOTO ILLUMINATION
SUN AZIM 92.26 DEG
INCID ANG 76.13 DEG
EMISS ANG 1.10 DEG
PHASE ANG 75.03 DEG
ALPHA 1.10 DEG

PRINCIPAL POINT
LATITUDE 2.88 DEG
LONGITUDE 34.80 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 3.38 DEG AB 48.1 KM
A LONG 35.72 DEG BC 41.1 KM
B LAT 1.89 DEG CD 48.8 KM
B LONG 35.16 DEG DA 41.0 KM
C LAT 2.36 DEG TILT DISTANCE 1.5
C LONG 32.88 DEG
D LAT 3.87 DEG
D LONG 34.46 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 3.17 DEG AB 21.3 KM
A LONG 35.01 DEG BC 5.4 KM
B LAT 2.52 DEG CD 21.3 KM
B LONG 34.76 DEG DA 5.4 KM
C LAT 2.58 DEG TILT DISTANCE 11.3
C LONG 34.60 DEG
D LAT 3.24 DEG
D LONG 34.85 DEG

LUNAR CRATER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 34/17/71 PAGE 2-2

MISSION/
FRAME NO.

3010
YR. MO. DY
HR. MI. SEC

S/C POSITION
ALT 59.07 KM
ALT RT -0.3534 KM/SEC
LAT 2.82 DEG
LONG 34.98 DEG

S/C ORIENTATION
TILT ANG 3.92 DEG
TILT AZIM 277.46 DEG
SWING ANG 75.73 DEG
N.DEV. 339.28 DEG

PHOTO ILLUMINATION
SUN AZIM 92.25 DEG
INCID ANG 75.98 DEG
EMISS ANG 3.95 DEG
PHASE ANG 75.03 DEG
ALPHA 0.95 DEG

PRINCIPAL POINT
LATITUDE 2.82 DEG
LONGITUDE 34.95 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 3.33 DEG AB 48.0 KM
A LONG 35.87 DEG BC 41.0 KM
B LAT 1.84 DEG CD 49.5 KM
B LONG 25.31 DEG DA 40.9 KM
C LAT 2.31 DEG TILT DISTANCE
C LONG 34.03 DEG 1.3
D LAT 3.81 DEG
D LONG 34.60 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 3.12 DEG AB 21.2 KM
A LONG 35.16 DEG BC 5.3 KM
B LAT 2.46 DEG CD 21.3 KM
B LONG 34.91 DEG DA 5.3 KM
C LAT 2.52 DEG TILT DISTANCE
C LONG 34.74 DEG 9.7
D LAT 3.18 DEG
D LONG 34.99 DEG

MISSION/
FRAME NO.

3011
YR. MO. DY
HR. MI. SEC

S/C POSITION
ALT 58.91 KM
ALT RT -0.5621 KM/SEC
LAT 2.75 DEG
LONG 35.12 DEG

S/C ORIENTATION
TILT ANG 0.77 DEG
TILT AZIM 274.86 DEG
SWING ANG 74.12 DEG
N.DEV. 339.27 DEG

PHOTO ILLUMINATION
SUN AZIM 92.25 DEG
INCID ANG 75.83 DEG
EMISS ANG 0.80 DEG
PHASE ANG 75.03 DEG
ALPHA 0.80 DEG

PRINCIPAL POINT
LATITUDE 2.77 DEG
LONGITUDE 35.13 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 2.27 DEG AB 48.0 KM
A LONG 34.01 DEG BC 40.9 KM
B LAT 1.79 DEG CD 48.5 KM
B LONG 35.45 DEG DA 40.8 KM
C LAT 2.26 DEG TILT DISTANCE
C LONG 34.19 DEG 1.1
D LAT 2.75 DEG
D LONG 34.75 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 3.06 DEG AB 21.2 KM
A LONG 35.30 DEG BC 5.3 KM
B LAT 2.41 DEG CD 21.2 KM
B LONG 35.06 DEG DA 5.3 KM
C LAT 2.47 DEG TILT DISTANCE
C LONG 34.89 DEG 8.2
D LAT 3.12 DEG
D LONG 35.14 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 213

04/10/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NO.

3012
YR.MO.DY 670215
HR.MI.SEC 100058.01

S/C POSITION
ALT 58.76 KM
ALT RT -0.0609 KM/SEC
LAT 2.71 DEG
LONG 35.27 DEG

S/C ORIENTATION
TILT ANG 0.63 DEG
TILT AZIM 271.03 DEG
SWING ANG 70.29 DEG
N.DEV. 339.26 DEG

PHOTO ILLUMINATION
SUN AZIM 92.24 DEG
INCID ANG 75.68 DEG
EMISS ANG 0.65 DEG
PHASE ANG 75.03 DEG
ALPHA 0.65 DEG

PRINCIPAL POINT
LATITUDE 2.71 DEG
LONGITUDE 35.25 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 3.21 DEG AB 47.9 KM
A LONG 36.16 DEG BC 40.7 KM
B LAT 1.73 DEG CD 48.3 KM
B LONG 35.60 DEG DA 40.7 KM
C LAT 2.20 DEG TILT DISTANCE 0.9
C LONG 34.34 DEG
D LAT 3.69 DEG
D LONG 34.90 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 3.00 DEG AB 21.1 KM
A LONG 35.45 DEG BC 5.3 KM
B LAT 2.35 DEG CD 21.1 KM
B LONG 35.20 DEG DA 5.3 KM
C LAT 2.41 DEG TILT DISTANCE 6.6
C LONG 35.04 DEG
D LAT 3.07 DEG
D LONG 35.29 DEG

MISSION/
FRAME NO.

3013
YR.MO.DY 670215
HR.MI.SEC 1001 0.41

S/C POSITION
ALT 58.62 KM
ALT RT -0.0596 KM/SEC
LAT 2.66 DEG
LONG 35.40 DEG

S/C ORIENTATION
TILT ANG 0.49 DEG
TILT AZIM 265.25 DEG
SWING ANG 64.50 DEG
N.DEV. 339.25 DEG

PHOTO ILLUMINATION
SUN AZIM 92.24 DEG
INCID ANG 75.54 DEG
EMISS ANG 0.51 DEG
PHASE ANG 75.03 DEG
ALPHA 0.50 DEG

PRINCIPAL POINT
LATITUDE 2.66 DEG
LONGITUDE 35.39 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 3.16 DEG AB 47.8 KM
A LONG 36.30 DEG BC 40.6 KM
B LAT 1.68 DEG CD 48.1 KM
B LONG 35.74 DEG DA 40.5 KM
C LAT 2.15 DEG TILT DISTANCE 0.7
C LONG 34.48 DEG
D LAT 3.64 DEG
D LONG 35.05 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 2.95 DEG AB 21.1 KM
A LONG 35.59 DEG BC 5.3 KM
B LAT 2.30 DEG CD 21.1 KM
B LONG 35.35 DEG DA 5.3 KM
C LAT 2.36 DEG TILT DISTANCE 5.2
C LONG 35.18 DEG
D LAT 3.01 DEG
D LONG 35.43 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

MISSION/
FRAME NO.
3014

YR.MO.DY 670215
HR.MI.SEC 1001 2.91

S/C POSITION
ALT 58.47 KM
ALT RT -0.0584 KM/SEC
LAT 2.60 DEG
LONG 35.55 DEG

S/C ORIENTATION
TILT ANG 0.36 DEG
TILT AZIM 254.71 DEG
SWING ANG 53.96 DEG
N.DEV. 339.25 DEG

PHOTO ILLUMINATION
SUN AZIM 92.23 DEG
INCID ANG 75.39 DEG
EMISS ANG 0.37 DEG
PHASE ANG 75.03 DEG
ALPHA 0.35 DEG

PRINCIPAL POINT
LATITUDE 2.60 DEG
LONGITUDE 35.53 DEG

MEDIUM RESOLUTION

CORNER COORDINATE
A LAT 3.10 DEG
A LONG 36.45 DEG
B LAT 1.63 DEG
B LONG 35.69 DEG
C LAT 2.10 DEG
C LONG 34.63 DEG
D LAT 3.58 DEG
D LONG 35.19 DEG

SIDE LENGTH
AB 47.7 KM
BC 40.5 KM
CD 47.9 KM
DA 40.4 KM
TILT DISTANCE 0.5

HIGH RESOLUTION

CORNER COORDINATE
A LAT 2.89 DEG
A LONG 35.74 DEG
B LAT 2.24 DEG
B LONG 35.49 DEG
C LAT 2.31 DEG
C LONG 35.33 DEG
D LAT 2.96 DEG
D LONG 35.58 DEG

SIDE LENGTH
AB 21.0 KM
BC 5.3 KM
CD 21.0 KM
DA 5.3 KM
TILT DISTANCE 3.8

MISSION/
FRAME NO.
3015

YR.MO.DY 670215
HR.MI.SEC 1001 5.31

S/C POSITION
ALT 56.33 KM
ALT RT -0.0572 KM/SEC
LAT 2.55 DEG
LONG 35.68 DEG

S/C ORIENTATION
TILT ANG 0.26 DEG
TILT AZIM 235.04 DEG
SWING ANG 34.28 DEG
N.DEV. 339.24 DEG

PHOTO ILLUMINATION
SUN AZIM 92.23 DEG
INCID ANG 75.24 DEG
EMISS ANG 0.26 DEG
PHASE ANG 75.03 DEG
ALPHA 0.21 DEG

PRINCIPAL POINT
LATITUDE 2.55 DEG
LONGITUDE 35.68 DEG

MEDIUM RESOLUTION

CORNER COORDINATE
A LAT 3.05 DEG
A LONG 36.59 DEG
B LAT 1.57 DEG
B LONG 36.03 DEG
C LAT 2.04 DEG
C LONG 34.78 DEG
D LAT 3.52 DEG
D LONG 35.34 DEG

SIDE LENGTH
AB 47.6 KM
BC 40.4 KM
CD 47.8 KM
DA 40.3 KM
TILT DISTANCE 0.3

HIGH RESOLUTION

CORNER COORDINATE
A LAT 2.84 DEG
A LONG 35.88 DEG
B LAT 2.19 DEG
B LONG 35.43 DEG
C LAT 2.25 DEG
C LONG 35.47 DEG
D LAT 2.90 DEG
D LONG 35.72 DEG

SIDE LENGTH
AB 21.0 KM
BC 5.3 KM
CD 21.0 KM
DA 5.3 KM
TILT DISTANCE 2.7

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

MISSION/
FRAME NO.

3016
YR.NO.DY 670215
HR.MI.SEC 1001 7.81

S/C POSITION
ALT 58.19 KM
ALT RT -0.0559 KM/SEC
LAT 2.50 DEG
LONG 35.82 DEG

S/C ORIENTATION
TILT ANG 0.21 DEG
TILT AZIM 198.54 DEG
SWING ANG 357.78 DEG
N.DEV. 339.23 DEG

PHOTO ILLUMINATION
SUN AZIM 92.22 DEG
INCID ANG 75.09 DEG
EMISS ANG 0.22 DEG
PHASE ANG 75.03 DEG
ALPHA 0.06 DEG

PRINCIPAL POINT
LATITUDE 2.49 DEG
LONGITUDE 35.82 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 2.99 DEG AB 47.5 KM
A LONG 36.73 DEG BC 40.3 KM
B LAT 1.52 DEG CD 47.6 KM
B LONG 36.18 DEG DA 40.2 KM
C LAT 1.99 DEG TILT DISTANCE 0.2
C LONG 34.53 DEG
D LAT 3.45 DEG
D LONG 36.49 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 2.78 DEG AB 20.9 KM
A LONG 36.03 DEG RC 5.3 KM
B LAT 2.14 DEG CD 20.9 KM
B LONG 35.78 DEG DA 5.3 KM
C LAT 2.20 DEG TILT DISTANCE 2.2
C LONG 35.62 DEG
D LAT 2.84 DEG
D LONG 35.86 DEG

MISSION/
FRAME NO.

3017
YR.NO.DY 670215
HR.MI.SEC 100110.21

S/C POSITION
ALT 58.06 KM
ALT RT -0.0547 KM/SEC
LAT 2.45 DEG
LONG 35.96 DEG

S/C ORIENTATION
TILT ANG 0.26 DEG
TILT AZIM 164.67 DEG
SWING ANG 323.90 DEG
N.DEV. 339.23 DEG

PHOTO ILLUMINATION
SUN AZIM 92.21 DEG
INCID ANG 74.95 DEG
EMISS ANG 0.27 DEG
PHASE ANG 75.03 DEG
ALPHA -0.08 DEG

PRINCIPAL POINT
LATITUDE 2.44 DEG
LONGITUDE 35.96 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 2.93 DEG AB 47.5 KM
A LONG 36.87 DEG BC 40.2 KM
B LAT 1.47 DEG CD 47.5 KM
B LONG 36.32 DEG DA 40.2 KM
C LAT 1.94 DEG TILT DISTANCE 0.2
C LONG 35.07 DEG
D LAT 3.40 DEG
D LONG 35.63 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 2.73 DEG AB 20.9 KM
A LONG 36.17 DEG BC 5.3 KM
B LAT 2.08 DEG CD 20.9 KM
B LONG 35.92 DEG DA 5.2 KM
C LAT 2.14 DEG TILT DISTANCE 2.7
C LONG 35.76 DEG
D LAT 2.79 DEG
D LONG 36.01 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/77 PAGE 216

MISSION/
FRAME NO.

3018
YR. MO. DY
HR. MI. SEC

TIME
670215
100112.61

S/C POSITION
ALT 57.93 KM
ALT RT -0.0535 KM/SEC
LAT 2.39 DEG
LONG 36.10 DEG

S/C ORIENTATION
TILT ANG 0.37 DEG
TILT AZIM 145.96 DEG
SWING ANG 305.18 DEG
N.DEV. 339.22 DEG

PHOTO ILLUMINATION
SUN AZIM 92.20 DEG
INCID ANG 74.81 DEG
EMISS ANG 0.38 DEG
PHASE ANG 75.03 DEG
ALPHA -0.23 DEG

PRINCIPAL POINT
LATITUDE 2.38 DEG
LONGITUDE 36.11 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 2.88 DEG AB 47.5 KM
A LONG 37.01 DEG BC 40.2 KM
B LAT 1.41 DEG CD 47.3 KM
B LONG 35.46 DEG DA 40.1 KM
C LAT 1.89 DEG TILT DISTANCE
C LONG 35.22 DEG 0.3
D LAT 3.35 DEG
D LONG 35.77 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 2.67 DEG AB 20.8 KM
A LONG 36.31 DEG BC 5.2 KM
B LAT 2.03 DEG CD 20.8 KM
B LONG 36.06 DEG DA 5.2 KM
C LAT 2.09 DEG TILT DISTANCE
C LONG 35.90 DEG 3.9
D LAT 2.74 DEG
D LONG 36.15 DEG

MISSION/
FRAME NO.

3019
YR. MO. DY
HR. MI. SEC

TIME
670215
100115.11

S/C POSITION
ALT 57.79 KM
ALT RT -0.0522 KM/SEC
LAT 2.34 DEG
LONG 36.24 DEG

S/C ORIENTATION
TILT ANG 0.50 DEG
TILT AZIM 135.87 DEG
SWING ANG 295.09 DEG
N.DEV. 339.22 DEG

PHOTO ILLUMINATION
SUN AZIM 92.20 DEG
INCID ANG 74.66 DEG
EMISS ANG 0.52 DEG
PHASE ANG 75.03 DEG
ALPHA -0.38 DEG

PRINCIPAL POINT
LATITUDE 2.33 DEG
LONGITUDE 36.25 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 2.82 DEG AB 47.4 KM
A LONG 37.16 DEG BC 40.1 KM
B LAT 1.36 DEG CD 47.2 KM
B LONG 36.60 DEG DA 40.0 KM
C LAT 1.83 DEG TILT DISTANCE
C LONG 35.37 DEG 0.5
D LAT 3.29 DEG
D LONG 35.52 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 2.62 DEG AB 20.8 KM
A LONG 36.45 DEG BC 5.2 KM
B LAT 1.98 DEG CD 20.8 KM
B LONG 36.21 DEG DA 5.2 KM
C LAT 2.04 DEG TILT DISTANCE
C LONG 36.05 DEG 5.3
D LAT 2.68 DEG
D LONG 36.29 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/12/71 PAGE 217

MISSION/
FRAME NO.

3020 YR.MO.DY 670215
HR.MI.SEC 100419.31

S/C POSITION
ALT 57.67 KM
ALT RT -0.0510 KM/SEC
LAT 2.29 DEG
LONG 36.38 DEG

S/C ORIENTATION
TILT ANG 0.64 DEG
TILT AZIM 130.29 DEG
SWING ANG 289.50 DEG
N.DEV. 339.21 DEG

PHOTO ILLUMINATION
SUN AZIM 92.19 DEG
INCID ANG 74.51 DEG
EMISS ANG 0.66 DEG
PHASE ANG 75.03 DEG
ALPHA -0.52 DEG

PRINCIPAL POINT
LATITUDE 2.27 DEG
LONGITUDE 36.39 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 2.77 DEG AB 47.3 KM
A LONG 37.30 DEG BC 40.0 KM
B LAT 1.31 DEG CD 47.0 KM
B LONG 36.75 DEG DA 39.9 KM
C LAT 1.78 DEG TILT DISTANCE
C LONG 35.51 DEG 0.7
D LAT 3.23 DEG
D LONG 36.06 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 2.26 DEG AB 20.7 KM
A LONG 36.60 DEG BC 5.2 KM
B LAT 1.92 DEG CD 20.7 KM
B LONG 36.35 DEG DA 5.2 KM
C LAT 1.98 DEG TILT DISTANCE
C LONG 36.19 DEG 6.7
D LAT 2.52 DEG
D LONG 36.43 DEG

MISSION/
FRAME NO.

3021 YR.MO.DY 670215
HR.MI.SEC 100419.31

S/C POSITION
ALT 57.86 KM
ALT RT 0.0420 KM/SEC
LAT -1.68 DEG
LONG 46.74 DEG

S/C ORIENTATION
TILT ANG 11.97 DEG
TILT AZIM 111.94 DEG
SWING ANG 271.38 DEG
N.DEV. 339.91 DEG

PHOTO ILLUMINATION
SUN AZIM 90.77 DEG
INCID ANG 63.65 DEG
EMISS ANG 12.38 DEG
PHASE ANG 75.26 DEG
ALPHA -11.68 DEG

PRINCIPAL POINT
LATITUDE -1.84 DEG
LONGITUDE 47.12 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.29 DEG AB 52.4 KM
A LONG 48.13 DEG BC 42.5 KM
B LAT -2.91 DEG CD 45.0 KM
B LONG 47.53 DEG DA 42.3 KM
C LAT -2.31 DEG TILT DISTANCE
C LONG 46.26 DEG 16.8
D LAT -0.91 DEG
D LONG 46.78 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.54 DEG AB 21.5 KM
A LONG 47.33 DEG BC 5.5 KM
B LAT -2.20 DEG CD 21.1 KM
B LONG 47.08 DEG DA 5.5 KM
C LAT -2.13 DEG TILT DISTANCE
C LONG 46.91 DEG 29.2
D LAT -1.48 DEG
D LONG 47.16 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71 PAGE 218

MISSION/
FRAME NO.

3022
YR.NO.DY 670215
HR.MI.SEC 100421.61

S/C POSITION
ALT 57.96 KM
ALT RT 0.0432 KM/SEC
LAT -1.73 DEG
LONG 46.88 DEG

S/C ORIENTATION
TILT ANG 12.11 DEG
TILT AZIM 111.93 DEG
SWING ANG 271.36 DEG
N.DEV. 339.92 DEG

PHOTO ILLUMINATION
SUN AZIM 90.74 DEG
INCID ANG 63.52 DEG
EMISS ANG 12.52 DEG
PHASE ANG 75.26 DEG
ALPHA -11.82 DEG

PRINCIPAL POINT
LATITUDE -1.89 DEG
LONGITUDE 47.26 DEG

..2

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.34 DEG AB 52.6 KM
A LONG 48.27 DEG BC 42.6 KM
B LAT -2.97 DEG CD 45.1 KM
B LONG 47.67 DEG DA 42.4 KM
C LAT -2.36 DEG TILT DISTANCE 17.0
C LONG 46.40 DEG
D LAT -0.96 DEG
D LONG 46.92 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.59 DEG AB 21.5 KM
A LONG 47.47 DEG BC 5.5 KM
B LAT -2.25 DEG CD 21.1 KM
B LONG 47.22 DEG DA 5.5 KM
C LAT -2.18 DEG TILT DISTANCE 30.8
C LONG 47.05 DEG
D LAT -1.53 DEG
D LONG 47.30 DEG

MISSION/
FRAME NO.

3023
YR.NO.DY 670215
HR.MI.SEC 100424.01

S/C POSITION
ALT 58.07 KM
ALT RT 0.0444 KM/SEC
LAT -1.79 DEG
LONG 47.01 DEG

S/C ORIENTATION
TILT ANG 12.26 DEG
TILT AZIM 111.91 DEG
SWING ANG 271.35 DEG
N.DEV. 339.94 DEG

PHOTO ILLUMINATION
SUN AZIM 90.71 DEG
INCID ANG 63.37 DEG
EMISS ANG 12.68 DEG
PHASE ANG 75.26 DEG
ALPHA -11.97 DEG

PRINCIPAL POINT
LATITUDE -1.94 DEG
LONGITUDE 47.40 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.39 DEG AB 52.8 KM
A LONG 48.42 DEG BC 42.7 KM
B LAT -3.03 DEG CD 45.1 KM
B LONG 47.81 DEG DA 42.6 KM
C LAT -2.41 DEG TILT DISTANCE 17.2
C LONG 46.54 DEG
D LAT -1.02 DEG
D LONG 47.06 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.64 DEG AB 21.6 KM
A LONG 47.61 DEG BC 5.5 KM
B LAT -2.31 DEG CD 21.2 KM
B LONG 47.36 DEG DA 5.5 KM
C LAT -2.24 DEG TILT DISTANCE 32.4
C LONG 47.19 DEG
D LAT -1.58 DEG
D LONG 47.44 DEG

LUNAR CRBITEF PHOTOGRAPHIC SUPPORTING DATA

MISSION/
FRAME NO.
3024

TIME
670215
YR,MO,DY
100426.41
HR,MI,SEC

S/C POSITION
ALT 58.17 KM
ALT RT 0.0456 KM/SEC
LAT -1.84 DEG
LONG 47.15 DEG

S/C ORIENTATION
TILT ANG 12.40 DEG
TILT AZIM 111.89 DEG
SWING ANG 271.34 DEG
N.DEV. 339.95 DEG

PHOTO ILLUMINATION
SUN AZIM 90.47 DEG
INCID ANG 63.23 DEG
EMISS ANG 12.83 DEG
PHASE ANG 75.26 DEG
ALPHA -12.11 DEG

PRINCIPAL POINT
LATITUDE -2.00 DEG
LONGITUDE 47.54 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.44 DEG AB 52.9 KM
A LONG 48.57 DEG BC 42.9 KM
B LAT -3.09 DEG CD 45.2 KM
B LONG 47.56 DEG DA 42.7 KM
C LAT -2.47 DEG TILT DISTANCE 17.4
C LONG 46.68 DEG
D LAT -1.07 DEG
D LONG 47.20 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.69 DEG AB 21.7 KM
A LONG 47.75 DEG BC 5.5 KM
B LAT -2.36 DEG CD 21.2 KM
B LONG 47.50 DEG DA 5.5 KM
C LAT -2.29 DEG TILT DISTANCE 34.0
C LONG 47.33 DEG
D LAT -1.64 DEG
D LONG 47.58 DEG

MISSION/
FRAME NO.
3025

TIME
670215
YR,MO,DY
1332 3.51
HR,MI,SEC

S/C POSITION
ALT 56.05 KM
ALT RT 0.0166 KM/SEC
LAT -0.69 DEG
LONG 42.03 DEG

S/C ORIENTATION
TILT ANG 3.67 DEG
TILT AZIM 198.26 DEG
SWING ANG 357.62 DEG
N.DEV. 339.32 DEG

PHOTO ILLUMINATION
SUN AZIM 91.29 DEG
INCID ANG 67.05 DEG
EMISS ANG 3.78 DEG
PHASE ANG 65.99 DEG
ALPHA 1.01 DEG

PRINCIPAL POINT
LATITUDE -0.80 DEG
LONGITUDE 41.99 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -0.33 DEG AB 45.1 KM
A LONG 42.84 DEG BC 40.9 KM
B LAT -1.76 DEG CD 46.1 KM
B LONG 42.34 DEG DA 37.9 KM
C LAT -1.30 DEG TILT DISTANCE 5.0
C LONG 41.10 DEG
D LAT 0.11 DEG
D LONG 41.67 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -0.52 DEG AB 20.2 KM
A LONG 42.18 DEG BC 5.1 KM
B LAT -1.15 DEG CD 20.2 KM
B LONG 41.95 DEG DA 5.0 KM
C LAT -1.09 DEG TILT DISTANCE 39.0
C LONG 41.79 DEG
D LAT -0.46 DEG
D LONG 42.03 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 220

04/10/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NO.
3026

YR.NO.DY 670215
HR.MI.SEC 1332 5.81

S/C POSITION
ALT 56.09 KM
ALT RT 0.0178 KM/SEC
LAT -0.74 DEG
LONG 42.16 DEG

S/C ORIENTATION
TILT ANG 3.57 DEG
TILT AZIM 196.07 DEG
SWING ANG 359.42 DEG
N.DEV. 339.32 DEG

PHOTO ILLUMINATION
SUN AZIM 91.27 DEG
INCID ANG 66.91 DEG
EMISS ANG 3.79 DEG
PHASE ANG 65.99 DEG
ALPHA 0.87 DEG

PRINCIPAL POINT
LATITUDE -0.85 DEG
LONGITUDE 42.12 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -0.38 DEG AB 46.2 KM
A LONG 42.58 DEG BC 40.0 KM
B LAT -1.82 DEG CD 46.1 KM
B LONG 42.47 DEG DA 37.9 KM
C LAT -1.35 DEG TILT DISTANCE 5.0
C LONG 41.23 DEG
D LAT 0.86 DEG
D LONG 41.80 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -0.57 DEG AB 20.3 KM
A LONG 42.32 DEG BC 5.1 KM
B LAT -1.20 DEG CD 20.2 KM
B LONG 42.08 DEG DA 5.0 KM
C LAT -1.14 DEG TILT DISTANCE 39.1
C LONG 41.92 DEG
D LAT -0.51 DEG
D LONG 42.16 DEG

MISSION/
FRAME NO.
3027

YR.NO.DY 670215
HR.MI.SEC 1332 8.11

S/C POSITION
ALT 56.14 KM
ALT RT 0.0190 KM/SEC
LAT -0.79 DEG
LONG 42.29 DEG

S/C ORIENTATION
TILT ANG 3.69 DEG
TILT AZIM 193.89 DEG
SWING ANG 353.24 DEG
N.DEV. 339.32 DEG

PHOTO ILLUMINATION
SUN AZIM 91.24 DEG
INCID ANG 66.77 DEG
EMISS ANG 3.81 DEG
PHASE ANG 65.99 DEG
ALPHA 0.73 DEG

PRINCIPAL POINT
LATITUDE -0.93 DEG
LONGITUDE 42.26 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -0.43 DEG AB 46.3 KM
A LONG 43.11 DEG BC 40.0 KM
B LAT -1.87 DEG CD 46.1 KM
B LONG 42.61 DEG DA 37.9 KM
C LAT -1.40 DEG TILT DISTANCE 5.0
C LONG 41.37 DEG
D LAT 0.81 DEG
D LONG 41.94 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -3.62 DEG AB 20.3 KM
A LONG 42.45 DEG BC 5.1 KM
B LAT -1.25 DEG CD 20.3 KM
B LONG 42.22 DEG DA 5.0 KM
C LAT -1.19 DEG TILT DISTANCE 39.3
C LONG 42.05 DEG
D LAT -0.56 DEG
D LONG 42.30 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71 PAGE 231

MISSION/
FRAME NO.
3028

YR. MO. DY 670215
FR. MI. SEC 133212.61

S/C POSITION
ALT 55.18 KM
ALT RT 0.0202 KM/SEC
LAT -0.84 DEG
LONG 42.42 DEG

S/C ORIENTATION
TILT ANG 3.71 DEG
TILT AZIM 191.73 DEG
SWING ANG 351.08 DEG
N.DEV. 339.32 DEG

PHOTO ILLUMINATION
SUN AZIM 91.22 DEG
INCID ANG 66.53 DEG
EMISS ANG 3.83 DEG
PHASE ANG 69.99 DEG
ALPHA 0.59 DEG

PRINCIPAL POINT
LATITUDE -0.95 DEG
LONGITUDE 42.39 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -0.48 DEG AB 46.3 KM
A LONG 42.25 DEG BC 40.1 KM
B LAT -1.93 DEG CD 46.1 KM
B LONG 42.74 DEG DA 38.0 KM
C LAT -1.45 DEG TILT DISTANCE
C LONG 41.51 DEG 5.0
D LAT -0.04 DEG
D LONG 42.08 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -0.67 DEG AB 27.3 KM
A LONG 42.59 DEG RC 5.2 KM
B LAT -1.30 DEG CD 20.3 KM
B LONG 42.35 DEG DA 5.0 KM
C LAT -1.24 DEG TILT DISTANCE
C LONG 42.20 DEG 39.5
D LAT -0.62 DEG
D LONG 42.43 DEG

MISSION/
FRAME NO.
3029

YR. MO. DY 670215
FR. MI. SEC 133212.61

S/C POSITION
ALT 56.23 KM
ALT RT 0.0213 KM/SEC
LAT -0.89 DEG
LONG 42.54 DEG

S/C ORIENTATION
TILT ANG 3.73 DEG
TILT AZIM 189.69 DEG
SWING ANG 349.04 DEG
N.DEV. 339.33 DEG

PHOTO ILLUMINATION
SUN AZIM 91.20 DEG
INCID ANG 66.50 DEG
EMISS ANG 3.85 DEG
PHASE ANG 69.99 DEG
ALPHA 0.45 DEG

PRINCIPAL POINT
LATITUDE -1.00 DEG
LONGITUDE 42.52 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -0.53 DEG AB 46.4 KM
A LONG 43.38 DEG BC 40.1 KM
B LAT -1.98 DEG CD 46.1 KM
B LONG 42.88 DEG DA 38.0 KM
C LAT -1.50 DEG TILT DISTANCE
C LONG 41.64 DEG 5.1
D LAT -0.09 DEG
D LONG 42.20 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -0.72 DEG AB 20.3 KM
A LONG 42.72 DEG RC 5.2 KM
B LAT -1.35 DEG CD 20.3 KM
B LONG 42.48 DEG DA 5.0 KM
C LAT -1.29 DEG TILT DISTANCE
C LONG 42.32 DEG 39.7
D LAT -0.66 DEG
D LONG 42.56 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 222

04/10/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NO. 3033

TIME 070215

YR.NO.DY 133214.21

FR.MI.SEC

S/C POSITION ALT 56.28 KM

SUN AZIM 91.18 DEG

TILT ANG 3.76 DEG

INCID ANG 66.37 DEG

ALT RT 0.0225 KM/SEC

TILT AZIM 187.59 DEG

EMISS ANG 3.89 DEG

LAT -0.94 DEG

SWING ANG 346.93 DEG

LONG 42.68 DEG

N.DEV. 339.33 DEG

PHOTO ILLUMINATION

SUN AZIM 91.18 DEG

INCID ANG 66.37 DEG

EMISS ANG 3.89 DEG

PHASE ANG 65.99 DEG

ALPHA 0.32 DEG

PRINCIPAL POINT

LATITUDE -1.06 DEG

LONGITUDE 42.66 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH

A LAT -0.58 DEG AB 46.5 KM

A LONG 43.52 DEG BC 40.1 KM

B LAT -2.03 DEG CD 46.1 KM

B LONG 43.01 DEG DA 38.0 KM

C LAT -1.56 DEG TILT DISTANCE 5.1

C LONG 41.77 DEG

D LAT -0.14 DEG

D LONG 42.34 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH

A LAT -0.78 DEG AB 20.3 KM

A LONG 42.85 DEG BC 5.2 KM

B LAT -1.41 DEG CD 20.2 KM

B LONG 42.62 DEG DA 5.0 KM

C LAT -1.34 DEG TILT DISTANCE 40.1

C LONG 42.46 DEG

D LAT -0.72 DEG

D LONG 42.70 DEG

MISSION/
FRAME NO. 3031

TIME 070215

YR.NO.DY 133217.21

FR.MI.SEC

S/C POSITION ALT 56.33 KM

SUN AZIM 91.15 DEG

TILT ANG 3.80 DEG

INCID ANG 66.23 DEG

ALT RT 0.0236 KM/SEC

TILT AZIM 185.52 DEG

EMISS ANG 3.92 DEG

LAT -0.99 DEG

SWING ANG 344.87 DEG

LONG 42.81 DEG

N.DEV. 339.33 DEG

PHOTO ILLUMINATION

SUN AZIM 91.15 DEG

INCID ANG 66.23 DEG

EMISS ANG 3.92 DEG

PHASE ANG 65.99 DEG

ALPHA 0.18 DEG

PRINCIPAL POINT

LATITUDE -1.11 DEG

LONGITUDE 42.80 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH

A LAT -0.63 DEG AB 46.5 KM

A LONG 43.66 DEG BC 40.2 KM

B LAT -2.09 DEG CD 46.1 KM

B LONG 43.15 DEG DA 38.1 KM

C LAT -1.61 DEG TILT DISTANCE 5.1

C LONG 41.91 DEG

D LAT -0.19 DEG

D LONG 42.48 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH

A LAT -0.83 DEG AB 20.4 KM

A LONG 42.99 DEG BC 5.2 KM

B LAT -1.46 DEG CD 20.3 KM

B LONG 42.76 DEG DA 5.0 KM

C LAT -1.40 DEG TILT DISTANCE 40.4

C LONG 42.60 DEG

D LAT -0.77 DEG

D LONG 42.83 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/19/71 PAGE 223

MISSION/
FRAME NO.
3032

TIME 670215
YR.MO.DY 173114.31
PR.MI.SEC 133219.S1

S/C POSITION
ALT 56.39 KM
ALT RT 0.0248 KM/SEC
LAT -1.04 DEG
LONG 42.94 DEG

S/C ORIENTATION
TILT ANG 3.84 DEG
TILT AZIM 183.50 DEG
SWING ANG 342.84 DEG
N.DEV. 339.33 DEG

PHOTO ILLUMINATION
SUN AZIM 91.13 DEG
INCID ANG 66.09 DEG
EMISS ANG 3.96 DEG
PHASE ANG 65.99 DEG
ALPHA 0.04 DEG

PRINCIPAL POINT
LATITUDE -1.16 DEG
LONGITUDE 42.93 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -0.68 DEG AB 46.7 KM
A LONG 43.79 DEG BC 40.2 KM
B LAT -2.14 DEG CD 46.1 KM
B LONG 43.28 DEG DA 38.1 KM
C LAT -1.66 DEG TILT DISTANCE
C LONG 42.04 DEG 5.2
D LAT -0.25 DEG
D LONG 42.61 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -0.88 DEG AB 20.4 KM
A LONG 43.13 DEG BC 5.2 KM
B LAT -1.51 DEG CD 20.3 KM
B LONG 42.89 DEG DA 5.0 KM
C LAT -1.45 DEG TILT DISTANCE
C LONG 42.73 DEG 40.9
D LAT -0.82 DEG
D LONG 42.97 DEG

MISSION/
FRAME NO.
2033

TIME 670215
YR.MO.DY 173114.31
PR.MI.SEC 133219.S1

S/C POSITION
ALT 56.67 KM
ALT RT 0.0359 KM/SEC
LAT -1.56 DEG
LONG 42.28 DEG

S/C ORIENTATION
TILT ANG 19.72 DEG
TILT AZIM 22.48 DEG
SWING ANG 181.55 DEG
N.DEV. 337.73 DEG

PHOTO ILLUMINATION
SUN AZIM 91.21 DEG
INCID ANG 64.73 DEG
EMISS ANG 20.39 DEG
PHASE ANG 73.39 DEG
ALPHA -10.04 DEG

PRINCIPAL POINT
LATITUDE -0.94 DEG
LONGITUDE 43.54 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -0.26 DEG AB 54.7 KM
A LONG 43.68 DEG BC 36.3 KM
B LAT -1.86 DEG CD 54.3 KM
B LONG 42.82 DEG DA 49.4 KM
C LAT -1.43 DEG TILT DISTANCE
C LONG 41.71 DEG 28.7
D LAT 0.31 DEG
D LONG 42.15 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -0.59 DEG AB 23.3 KM
A LONG 42.77 DEG BC 5.1 KM
B LAT -1.31 DEG CD 23.2 KM
B LONG 42.49 DEG DA 5.8 KM
C LAT -1.25 DEG TILT DISTANCE
C LONG 42.33 DEG 18.5
D LAT -0.52 DEG
D LONG 42.59 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71 PAGE 224

MISSION/
FRAME NO.
3034

YR.MO.DY
HR.MI.SEC

TIME
670215
170116.71

S/C POSITION
ALT 56.75 KM
ALT RT 0.0372 KM/SEC
LAT -1.62 DEG
LONG 42.42 DEG

S/C ORIENTATION
TILT ANG 19.73 DEG
TILT AZIM 22.89 DEG
SWING ANG 181.99 DEG
N.DEV. 337.74 DEG

PHOTO ILLUMINATION
SUN AZIM 91.19 DEG
INCID ANG 64.58 DEG
SWISS ANG 20.45 DEG
PHASE ANG 73.39 DEG
ALPHA -10.18 DEG

PRINCIPAL POINT
LATITUDE -2.99 DEG
LONGITUDE 42.68 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -0.31 DEG AB 54.9 KM
A LONG 43.82 DEG BC 35.3 KM
B LAT -1.91 DEG CD 54.3 KM
B LONG 42.58 DEG DA 49.5 KM
C LAT -1.48 DEG TILT DISTANCE 28.7
C LONG 41.85 DEG
D LAT 0.26 DEG
D LONG 42.29 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -3.64 DEG AB 23.3 KM
A LONG 42.92 DEG BC 5.1 KM
B LAT -1.36 DEG CD 23.3 KM
B LONG 42.63 DEG DA 5.9 KM
C LAT -1.30 DEG TILT DISTANCE 18.5
C LONG 42.47 DEG
D LAT -2.58 DEG
D LONG 42.73 DEG

MISSION/
FRAME NO.
3035

YR.MO.DY
HR.MI.SEC

TIME
670215
170119.01

S/C POSITION
ALT 56.84 KM
ALT RT 0.0383 KM/SEC
LAT -1.67 DEG
LONG 42.55 DEG

S/C ORIENTATION
TILT ANG 19.73 DEG
TILT AZIM 23.28 DEG
SWING ANG 182.40 DEG
N.DEV. 337.75 DEG

PHOTO ILLUMINATION
SUN AZIM 91.16 DEG
INCID ANG 64.45 DEG
SWISS ANG 20.41 DEG
PHASE ANG 73.39 DEG
ALPHA -10.31 DEG

PRINCIPAL POINT
LATITUDE -1.25 DEG
LONGITUDE 42.81 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -0.36 DEG AB 55.0 KM
A LONG 43.96 DEG BC 36.4 KM
B LAT -1.97 DEG CD 54.4 KM
B LONG 43.11 DEG DA 49.6 KM
C LAT -1.54 DEG TILT DISTANCE 28.7
C LONG 41.99 DEG
D LAT 0.21 DEG
D LONG 42.43 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -0.69 DEG AB 23.3 KM
A LONG 43.05 DEG BC 5.1 KM
B LAT -1.41 DEG CD 23.3 KM
B LONG 42.76 DEG DA 5.9 KM
C LAT -1.35 DEG TILT DISTANCE 18.6
C LONG 42.61 DEG
D LAT -2.63 DEG
D LONG 42.87 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 225

04/10/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NO.

3036
YR.MO.DY 670215
HR.MI.SEC 170121.31

S/C POSITION
ALT 56.93 KM
ALT RT 0.0395 KM/SEC
LAT -1.72 DEG
LONG 42.68 DEG

S/C ORIENTATION
TILT ANG 19.74 DEG
TILT AZIM 23.67 DEG
SWING ANG 182.82 DEG
N.DEV. 337.77 DEG

PHOTO ILLUMINATION
SUN AZIM 91.14 DEG
INCID ANG 64.31 DEG
EMISS ANG 20.41 DEG
PHASE ANG 73.39 DEG
ALPHA -10.45 DEG

PRINCIPAL POINT
LATITUDE -1.10 DEG
LONGITUDE 42.95 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -0.41 DEG AB 55.2 KM
A LONG 44.10 DEG BC 36.4 KM
B LAT -2.02 DEG CD 54.4 KM
B LONG 42.25 DEG DA 49.7 KM
C LAT -1.59 DEG TILT DISTANCE 28.7
C LONG 42.12 DEG
D LAT 0.16 DEG
D LONG 42.56 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -0.75 DEG AB 23.4 KM
A LONG 43.19 DEG BC 5.1 KM
B LAT -1.46 DEG CD 23.3 KM
B LONG 42.90 DEG DA 5.9 KM
C LAT -1.40 DEG TILT DISTANCE 18.7
C LONG 42.74 DEG
D LAT -0.68 DEG
D LONG 43.01 DEG

MISSION/
FRAME NO.

3037
YR.MO.DY 670215
HR.MI.SEC 204522.51

S/C POSITION
ALT 395.66 KM
ALT RT 0.4484 KM/SEC
LAT -19.70 DEG
LONG 103.89 DEG

S/C ORIENTATION
TILT ANG 5.15 DEG
TILT AZIM 230.25 DEG
SWING ANG 149.23 DEG
N.DEV. 98.48 DEG

PHOTO ILLUMINATION
SUN AZIM 7.43 DEG
INCID ANG 19.10 DEG
EMISS ANG 6.33 DEG
PHASE ANG 15.09 DEG
ALPHA 3.24 DEG

PRINCIPAL POINT
LATITUDE -20.45 DEG
LONGITUDE 102.92 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -16.51 DEG AB 330.7 KM
A LONG 96.27 DEG BC 273.0 KM
B LAT -15.27 DEG CD 345.8 KM
B LONG 107.56 DEG DA 297.5 KM
C LAT -24.10 DEG TILT DISTANCE 7.3
C LONG 109.53 DEG
D LAT -26.31 DEG
D LONG 97.13 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -20.21 DEG AB 143.8 KM
A LONG 100.28 DEG BC 35.5 KM
B LAT -19.50 DEG CD 144.5 KM
B LONG 105.27 DEG DA 36.8 KM
C LAT -20.66 DEG TILT DISTANCE 54.9
C LONG 105.48 DEG
D LAT -21.41 DEG
D LONG 100.43 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 226

04/10/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NO.
3038

YR.MO.DY
HR.MI.SEC

TIME
670215
235643.01

S/C POSITION
ALT 56.89 KM
ALT RT 0.0475 KM/SEC
LAT -2.20 DEG
LONG 39.79 DEG

S/C ORIENTATION
TILT ANG 56.82 DEG
TILT AZIM 200.98 DEG
SWING ANG 358.98 DEG
N.DEV. 321.55 DEG

PHOTO ILLUMINATION
SUN AZIM 89.32 DEG
INCID ANG 65.00 DEG
EMISS ANG 59.82 DEG
PHASE ANG 59.84 DEG
ALPHA -21.37 DEG

PRINCIPAL POINT
LATITUDE -5.00 DEG
LONGITUDE 38.71 DEG

MEDIUM RESOLUTION

CORNER COORDINATE
A LAT -3.71 DEG
A LONG 40.02 DEG
B LAT -12.13 DEG
B LONG 35.38 DEG
C LAT -12.78 DEG
C LONG 30.64 DEG
D LAT -3.15 DEG
D LONG 35.66 DEG

SIDE LENGTH
AB 73.7 KM
BC 188.5 KM
CD 370.0 KM
DA 44.6 KM
TILT DISTANCE 21.8

HIGH RESOLUTION

CORNER COORDINATE
A LAT -4.14 DEG
A LONG 39.18 DEG
B LAT -6.90 DEG
B LONG 38.21 DEG
C LAT -6.70 DEG
C LONG 37.78 DEG
D LAT -4.05 DEG
D LONG 38.95 DEG

SIDE LENGTH
AB 88.4 KM
BC 14.4 KM
CD 87.8 KM
DA 7.5 KM
TILT DISTANCE 32.4

MISSION/
FRAME NO.
3039

YR.MO.DY
HR.MI.SEC

TIME
670216
032446.11

S/C POSITION
ALT 52.69 KM
ALT RT -0.0296 KM/SEC
LAT 1.08 DEG
LONG 29.34 DEG

S/C ORIENTATION
TILT ANG 67.07 DEG
TILT AZIM 257.23 DEG
SWING ANG 19.39 DEG
N.DEV. 293.50 DEG

PHOTO ILLUMINATION
SUN AZIM 91.55 DEG
INCID ANG 77.10 DEG
EMISS ANG 71.61 DEG
PHASE ANG 14.87 DEG
ALPHA 45.23 DEG

PRINCIPAL POINT
LATITUDE 0.07 DEG
LONGITUDE 24.92 DEG

MEDIUM RESOLUTION

CORNER COORDINATE
A LAT 0.36 DEG
A LONG 27.57 DEG
B LAT -6.91 DEG
B LONG 18.14 DEG
C LAT -1.02 DEG
C LONG 26.17 DEG
D LAT 1.64 DEG
D LONG 26.62 DEG

SIDE LENGTH
AB 71.2 KM
BC 424.9 KM
CD 128.6 KM
DA 56.7 KM
TILT DISTANCE 88.4

HIGH RESOLUTION

CORNER COORDINATE
A LAT 0.53 DEG
A LONG 26.66 DEG
B LAT -2.80 DEG
B LONG 17.88 DEG
C LAT -1.84 DEG
C LONG 16.92 DEG
D LAT 0.77 DEG
D LONG 26.40 DEG

SIDE LENGTH
AB 284.1 KM
BC 375.1 KM
CD 291.4 KM
DA 10.8 KM
TILT DISTANCE 40.8

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/13/71 PAGE 227

MISSION/
FRAME NO.
3043

YR. MO. DY 670216
HR. MI. SEC 0651 4.21

S/C POSITION
ALT 69.44 KM
ALT RT -0.0982 KM/SEC
LAT 4.12 DEG
LONG 19.77 DEG

S/C ORIENTATION
TILT ANG 17.14 DEG
TILT AZIM 206.96 DEG
SWING ANG 7.14 DEG
N.DEV. 339.05 DEG

PHOTO ILLUMINATION
SUN AZIM 92.09 DEG
INCID ANG 89.89 DEG
EMISS ANG 17.76 DEG
PHASE ANG 73.90 DEG
ALPHA 6.60 DEG

PRINCIPAL POINT
LATITUDE 3.57 DEG
LONGITUDE 19.49 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 4.09 DEG AB 54.8 KM
A LONG 20.36 DEG BC 50.5 KM
B LAT 2.24 DEG CD 56.7 KM
B LONG 15.51 DEG DA 38.9 KM
C LAT 2.86 DEG TILT DISTANCE 24.5
C LONG 18.33 DEG
D LAT 4.54 DEG
D LONG 15.15 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 3.89 DEG AB 23.9 KM
A LONG 19.70 DEG BC 6.1 KM
B LAT 3.14 DEG CD 24.0 KM
B LONG 19.44 DEG DA 5.4 KM
C LAT 3.21 DEG TILT DISTANCE 88.0
C LONG 19.25 DEG
D LAT 3.95 DEG
D LONG 19.53 DEG

MISSION/
FRAME NO.
3041

YR. MO. DY 670216
HR. MI. SEC 065114.81

S/C POSITION
ALT 59.83 KM
ALT RT -0.0929 KM/SEC
LAT 3.89 DEG
LONG 20.37 DEG

S/C ORIENTATION
TILT ANG 17.08 DEG
TILT AZIM 204.92 DEG
SWING ANG 4.95 DEG
N.DEV. 338.98 DEG

PHOTO ILLUMINATION
SUN AZIM 92.09 DEG
INCID ANG 80.25 DEG
EMISS ANG 17.69 DEG
PHASE ANG 73.90 DEG
ALPHA 5.92 DEG

PRINCIPAL POINT
LATITUDE 3.34 DEG
LONGITUDE 20.11 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 2.86 DEG AB 54.1 KM
A LONG 20.98 DEG BC 49.7 KM
B LAT 2.13 DEG CD 55.4 KM
B LONG 20.53 DEG DA 38.2 KM
C LAT 2.46 DEG TILT DISTANCE 24.4
C LONG 18.98 DEG
D LAT 4.30 DEG
D LONG 19.79 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 3.66 DEG AB 23.5 KM
A LONG 20.32 DEG BC 6.0 KM
B LAT 2.93 DEG CD 23.6 KM
B LONG 20.07 DEG DA 5.3 KM
C LAT 2.99 DEG TILT DISTANCE 87.3
C LONG 19.88 DEG
D LAT 3.72 DEG
D LONG 20.16 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71 PAGE 228

MISSION/
FRAME NO.

3042
YR.MO.DY 670216
PR.MI.SEC 065125.41

S/C POSITION
ALT 58.49 KM
ALT RT -0.0877 KM/SEC
LAT 3.67 DEG
LONG 20.96 DEG

S/C ORIENTATION
TILT ANG 17.05 DEG
TILT AZIM 202.90 DEG
SWING ANG 2.81 DEG
N.DEV. 338.92 DEG

PHOTO ILLUMINATION
SUN AZIM 92.09 DEG
INCL ANG 79.63 DEG
EMISS ANG 17.64 DEG
PHASE ANG 73.90 DEG
ALPHA 5.26 DEG

PRINCIPAL POINT
LATITUDE 3.12 DEG
LONGITUDE 20.73 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 3.63 DEG AB 53.5 KM
A LONG 21.58 DEG BC 48.8 KM
B LAT 1.92 DEG CD 54.2 KM
B LONG 21.15 DEG DA 37.6 KM
C LAT 2.45 DEG TILT DISTANCE 24.4
C LONG 19.62 DEG
D LAT 4.06 DEG
D LONG 20.42 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 3.43 DEG AB 23.2 KM
A LONG 20.94 DEG BC 5.9 KM
B LAT 2.71 DEG CD 23.2 KM
B LONG 20.68 DEG DA 5.2 KM
C LAT 2.78 DEG TILT DISTANCE 86.9
C LONG 20.50 DEG
D LAT 3.49 DEG
D LONG 20.77 DEG

MISSION/
FRAME NO.

3043
YR.MO.DY 670216
PR.MI.SEC 065125.41

S/C POSITION
ALT 57.62 KM
ALT RT -0.0825 KM/SEC
LAT 3.45 DEG
LONG 21.54 DEG

S/C ORIENTATION
TILT ANG 17.04 DEG
TILT AZIM 200.91 DEG
SWING ANG 0.69 DEG
N.DEV. 338.86 DEG

PHOTO ILLUMINATION
SUN AZIM 92.09 DEG
INCL ANG 79.02 DEG
EMISS ANG 17.62 DEG
PHASE ANG 73.90 DEG
ALPHA 4.61 DEG

PRINCIPAL POINT
LATITUDE 2.90 DEG
LONGITUDE 21.33 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 3.40 DEG AB 52.9 KM
A LONG 22.18 DEG BC 48.1 KM
B LAT 1.71 DEG CD 53.2 KM
B LONG 21.74 DEG DA 37.0 KM
C LAT 2.25 DEG TILT DISTANCE 24.3
C LONG 20.25 DEG
D LAT 3.82 DEG
D LONG 21.03 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 3.21 DEG AB 22.8 KM
A LONG 21.54 DEG BC 5.8 KM
B LAT 2.50 DEG CD 22.9 KM
B LONG 21.28 DEG DA 5.2 KM
C LAT 2.56 DEG TILT DISTANCE 86.7
C LONG 21.10 DEG
D LAT 3.27 DEG
D LONG 21.38 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 229

04/10/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NO.
3044

TIME
670216
102220.01

YR.MO.DY
FR.MI.SEC

S/C POSITION
ALT 51.73 KM
ALT RT -0.0163 KM/SEC
LAT 0.59 DEG
LONG 27.06 DEG

S/C ORIENTATION
TILT ANG 3.69 DEG
TILT AZIM 18.02 DEG
SWING ANG 176.97 DEG
N.DEV. 338.91 DEG

PHOTO ILLUMINATION
SUN AZIM 91.81 DEG
INCID ANG 71.41 DEG
EMISS ANG 3.81 DEG
PHASE ANG 72.51 DEG
ALPHA -1.14 DEG

PRINCIPAL POINT
LATITUDE 2.69 DEG
LONGITUDE 27.17 DEG

CORNER COORDINATE SIDE LENGTH
A LAT 1.14 DEG AB 42.5 KM
A LONG 27.93 DEG BC 34.9 KM
B LAT -0.15 DEG CD 42.6 KM
B LONG 27.39 DEG DA 36.9 KM
C LAT 0.26 DEG TILT DISTANCE 5.2
C LONG 26.32 DEG
D LAT 1.58 DEG
D LONG 26.79 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 3.95 DEG AB 18.7 KM
A LONG 27.28 DEG BC 4.6 KM
B LAT 2.38 DEG CD 18.7 KM
B LONG 27.06 DEG DA 4.7 KM
C LAT 3.43 DEG TILT DISTANCE 39.3
C LONG 25.91 DEG
D LAT 1.01 DEG
D LONG 27.13 DEG

MISSION/
FRAME NO.
3045

TIME
670216
102220.21

YR.MO.DY
FR.MI.SEC

S/C POSITION
ALT 51.70 KM
ALT RT -0.0152 KM/SEC
LAT 0.54 DEG
LONG 27.19 DEG

S/C ORIENTATION
TILT ANG 3.69 DEG
TILT AZIM 20.12 DEG
SWING ANG 179.07 DEG
N.DEV. 338.91 DEG

PHOTO ILLUMINATION
SUN AZIM 91.79 DEG
INCID ANG 71.27 DEG
EMISS ANG 3.80 DEG
PHASE ANG 72.51 DEG
ALPHA -1.27 DEG

PRINCIPAL POINT
LATITUDE 2.64 DEG
LONGITUDE 27.23 DEG

CORNER COORDINATE SIDE LENGTH
A LAT 1.09 DEG AB 42.5 KM
A LONG 28.06 DEG BC 34.9 KM
B LAT -0.20 DEG CD 42.5 KM
B LONG 27.52 DEG DA 36.9 KM
C LAT 0.21 DEG TILT DISTANCE 5.2
C LONG 26.45 DEG
D LAT 1.53 DEG
D LONG 26.52 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 0.90 DEG AB 18.7 KM
A LONG 27.41 DEG BC 4.6 KM
B LAT 0.33 DEG CD 18.7 KM
B LONG 27.19 DEG DA 4.7 KM
C LAT 0.38 DEG TILT DISTANCE 39.3
C LONG 27.04 DEG
D LAT 0.96 DEG
D LONG 27.26 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71

PAGE 230

MISSION/
FRAME NO.

3246 YR.MO.DY 57C21E
FR.MI.SEC 102229.61

S/C POSITION
ALT 51.66 KM
ALT RT -0.0140 KM/SEC
LAT 0.49 DEG
LONG 27.31 DEG

S/C ORIENTATION
TILT ANG 3.69 DEG
TILT AZIM 22.21 DEG
SWING ANG 181.17 DEG
N.DEV. 338.91 DEG

PHOTO ILLUMINATION
SUN AZIM 91.78 DEG
INCID ANG 71.14 DEG
EMISS ANG 3.80 DEG
PHASE ANG 72.51 DEG
ALPHA -1.40 DEG

PRINCIPAL POINT
LATITUDE 0.59 DEG
LONGITUDE 27.35 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.05 DEG AB 42.5 KM
A LONG 28.19 DEG BC 34.9 KM
B LAT -0.25 DEG CD 42.5 KM
B LONG 27.65 DEG DA 36.9 KM
C LAT 0.16 DEG TILT DISTANCE 5.2
C LONG 26.58 DEG
D LAT 1.48 DEG
D LONG 27.05 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.85 DEG AB 18.7 KM
A LONG 27.54 DEG BC 4.6 KM
B LAT 3.28 DEG CD 18.7 KM
B LONG 27.32 DEG DA 4.7 KM
C LAT 0.33 DEG TILT DISTANCE 39.3
C LONG 27.17 DEG
D LAT 3.91 DEG
D LONG 27.39 DEG

MISSION/
FRAME NO.

3247 YR.MO.DY 57C21E
FR.MI.SEC 102229.61

S/C POSITION
ALT 51.63 KM
ALT RT -0.0129 KM/SEC
LAT 0.44 DEG
LONG 27.44 DEG

S/C ORIENTATION
TILT ANG 3.70 DEG
TILT AZIM 24.30 DEG
SWING ANG 183.26 DEG
N.DEV. 338.91 DEG

PHOTO ILLUMINATION
SUN AZIM 91.76 DEG
INCID ANG 71.01 DEG
EMISS ANG 3.81 DEG
PHASE ANG 72.51 DEG
ALPHA -1.53 DEG

PRINCIPAL POINT
LATITUDE 0.54 DEG
LONGITUDE 27.48 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.00 DEG AB 42.5 KM
A LONG 28.32 DEG BC 34.9 KM
B LAT -0.30 DEG CD 42.4 KM
B LONG 27.78 DEG DA 36.8 KM
C LAT 0.11 DEG TILT DISTANCE 5.2
C LONG 26.71 DEG
D LAT 1.43 DEG
D LONG 27.15 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.80 DEG AB 18.6 KM
A LONG 27.67 DEG BC 4.6 KM
B LAT 0.23 DEG CD 18.6 KM
B LONG 27.45 DEG DA 4.7 KM
C LAT 0.28 DEG TILT DISTANCE 39.3
C LONG 27.30 DEG
D LAT 0.86 DEG
D LONG 27.52 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 231

04/19/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NC.

3048
YR.MO.DY 670216
PR.MI.SEC 102226.81

S/C POSITION ALT 51.61 KM
S/C ORIENTATION TILT ANG 3.71 DEG
INCID ANG 26.39 DEG
EMISS ANG 185.35 DEG
SWING ANG N.DEV. 338.91 DEG

PHOTO ILLUMINATION SUN AZIM 91.75 DEG
INCID ANG 70.88 DEG
EMISS ANG 3.82 DEG
PHASE ANG 72.51 DEG
ALPHA -1.66 DEG

PRINCIPAL POINT LATITUDE 0.49 DEG
LONGITUDE 27.51 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT C.55 DEG AB 42.5 KM
A LONG 28.45 DEG BC 34.8 KM
B LAT -0.35 DEG CD 42.4 KM
B LONG 27.91 DEG DA 36.8 KM
C LAT 0.06 DEG TILT DISTANCE 5.2
C LONG 26.24 DEG
D LAT 1.38 DEG
D LONG 27.31 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.75 DEG AB 18.6 KM
A LONG 27.80 DEG BC 4.6 KM
B LAT 0.18 DEG CD 18.6 KM
B LONG 27.58 DEG DA 4.7 KM
C LAT 0.23 DEG TILT DISTANCE 39.4
C LONG 27.43 DEG
D LAT 0.81 DEG
D LONG 27.65 DEG

MISSION/
FRAME NC.

3044
YR.MO.DY 670316
PR.MI.SEC 102229.61

S/C POSITION ALT 51.58 KM
S/C ORIENTATION TILT ANG 3.72 DEG
INCID ANG 28.45 DEG
EMISS ANG 187.42 DEG
SWING ANG N.DEV. 338.91 DEG

PHOTO ILLUMINATION SUN AZIM 91.73 DEG
INCID ANG 70.75 DEG
EMISS ANG 3.83 DEG
PHASE ANG 72.51 DEG
ALPHA -1.79 DEG

PRINCIPAL POINT LATITUDE 0.44 DEG
LONGITUDE 27.74 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT C.90 DEG AB 42.5 KM
A LONG 28.58 DEG BC 34.8 KM
B LAT -0.40 DEG CD 42.3 KM
B LONG 28.24 DEG DA 36.8 KM
C LAT 0.01 DEG TILT DISTANCE 5.2
C LONG 26.57 DEG
D LAT 1.23 DEG
D LONG 27.44 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.79 DEG AB 18.6 KM
A LONG 27.93 DEG BC 4.6 KM
B LAT 0.13 DEG CD 18.6 KM
B LONG 27.71 DEG DA 4.7 KM
C LAT 0.18 DEG TILT DISTANCE 39.6
C LONG 27.56 DEG
D LAT 0.76 DEG
D LONG 27.78 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 54/10/71 PAGE 233

MISSION/
FRAME NO.

3050 YR.MO.DY 670216
FR.MI.SEC 102231.21

S/C POSITION ALT 51.56 KM
ALT RT -0.9095 KM/SEC
LAT 0.29 DEG
LONG 27.82 DEG

S/C ORIENTATION TILT ANG 3.74 DEG
TILT AZIM 30.51 DEG
SWING ANG 189.48 DEG
N.DEV. 338.91 DEG

PHOTO ILLUMINATION SUN AZIM 91.72 DEG
INCID ANG 70.52 DEG
EMISS ANG 3.85 DEG
PHASE ANG 72.51 DEG
ALPHA -1.92 DEG

PRINCIPAL POINT LATITUDE 9.39 DEG
LONGITUDE 27.87 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.85 DEG AB 42.5 KM
A LONG 28.71 DEG BC 34.8 KM
B LAT -0.45 DEG CD 42.3 KM
B LONG 28.17 DEG DA 36.8 KM
C LAT -0.04 DEG TILT DISTANCE 5.2
D LAT 1.28 DEG
D LONG 27.57 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.65 DEG AB 18.6 KM
A LONG 28.06 DEG BC 4.6 KM
B LAT 0.08 DEG CD 18.6 KM
B LONG 27.83 DEG DA 4.7 KM
C LAT 0.13 DEG TILT DISTANCE 39.8
C LONG 27.69 DEG
D LAT 0.71 DEG
D LONG 27.91 DEG

MISSION/
FRAME NO.

3051 YR.MO.DY 670216
FR.MI.SEC 102233.41

S/C POSITION ALT 51.54 KM
ALT RT -0.0084 KM/SEC
LAT 0.25 DEG
LONG 27.94 DEG

S/C ORIENTATION TILT ANG 3.77 DEG
TILT AZIM 32.53 DEG
SWING ANG 191.50 DEG
N.DEV. 338.91 DEG

PHOTO ILLUMINATION SUN AZIM 91.70 DEG
INCID ANG 70.49 DEG
EMISS ANG 3.88 DEG
PHASE ANG 72.51 DEG
ALPHA -2.05 DEG

PRINCIPAL POINT LATITUDE 9.34 DEG
LONGITUDE 28.77 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.80 DEG AB 42.6 KM
A LONG 28.84 DEG BC 34.8 KM
B LAT -0.50 DEG CD 42.2 KM
B LONG 28.30 DEG DA 36.8 KM
C LAT -0.09 DEG TILT DISTANCE 5.3
C LONG 27.23 DEG
D LAT 1.23 DEG
D LONG 27.70 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.60 DEG AB 18.5 KM
A LONG 28.19 DEG BC 4.5 KM
B LAT 0.03 DEG CD 18.5 KM
B LONG 27.96 DEG DA 4.7 KM
C LAT 0.09 DEG TILT DISTANCE 40.1
C LONG 27.82 DEG
D LAT 0.66 DEG
D LONG 28.04 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 233

04/10/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NO.
3052

YR.MO.DY 670216
HR.MI.SEC 135039.21

S/C POSITION
ALT 51.09 KM
ALT RT -0.0235 KM/SEC
LAT 0.85 DEG
LONG 24.39 DEG

S/C ORIENTATION
TILT ANG 14.06 DEG
TILT AZIM 201.86 DEG
SWING ANG 1.29 DEG
N.DEV. 338.78 DEG

PHOTO ILLUMINATION
SUN AZIM 91.71 DEG
INCID ANG 72.51 DEG
EMISS ANG 14.48 DEG
PHASE ANG 68.08 DEG
ALPHA 3.87 DEG

PRINCIPAL POINT
LATITUDE 0.46 DEG
LONGITUDE 24.23 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.89 DEG AB 45.1 KM
A LONG 24.57 DEG BC 40.8 KM
B LAT -0.54 DEG CD 45.3 KM
B LONG 24.57 DEG DA 33.0 KM
C LAT -0.07 DEG TILT DISTANCE 19.9
C LONG 23.31 DEG
D LAT 1.28 DEG
D LONG 23.56 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.72 DEG AB 19.6 KM
A LONG 24.41 DEG BC 5.0 KM
B LAT 0.12 DEG CD 19.6 KM
B LONG 24.19 DEG DA 4.6 KM
C LAT 0.17 DEG TILT DISTANCE 52.6
C LONG 24.03 DEG
D LAT 0.78 DEG
D LONG 24.27 DEG

MISSION/
FRAME NO.
3053

YR.MO.DY 670216
HR.MI.SEC 135039.21

S/C POSITION
ALT 51.04 KM
ALT RT -0.0224 KM/SEC
LAT 0.81 DEG
LONG 24.51 DEG

S/C ORIENTATION
TILT ANG 14.06 DEG
TILT AZIM 201.33 DEG
SWING ANG 0.73 DEG
N.DEV. 338.77 DEG

PHOTO ILLUMINATION
SUN AZIM 91.70 DEG
INCID ANG 72.37 DEG
EMISS ANG 14.48 DEG
PHASE ANG 68.08 DEG
ALPHA 3.73 DEG

PRINCIPAL POINT
LATITUDE 0.41 DEG
LONGITUDE 24.36 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.84 DEG AB 45.1 KM
A LONG 25.10 DEG BC 40.8 KM
B LAT -0.59 DEG CD 45.2 KM
B LONG 24.70 DEG DA 33.0 KM
C LAT -0.12 DEG TILT DISTANCE 19.9
C LONG 23.44 DEG
D LAT 1.22 DEG
D LONG 24.09 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.67 DEG AB 19.6 KM
A LONG 24.54 DEG BC 5.0 KM
B LAT 0.07 DEG CD 19.6 KM
B LONG 24.32 DEG DA 4.5 KM
C LAT 0.12 DEG TILT DISTANCE 52.6
C LONG 24.16 DEG
D LAT 0.73 DEG
D LONG 24.40 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

MISSION/
FRAME NO.
3054

TIME
670216
135041.51

S/C POSITION.
ALT 50.99 KM
ALT RT -0.0212 KM/SEC
LAT 0.76 DEG
LONG 24.64 DEG

S/C ORIENTATION
TILT ANG 14.06 DEG
TILT AZIM 200.76 DEG
SWING ANG 0.15 DEG
N.DEV. 338.77 DEG

PHOTO ILLUMINATION
SUN AZIM 91.68 DEG
INCID ANG 72.24 DEG
EMISS ANG 14.48 DEG
PHASE ANG 68.08 DEG
ALPHA 3.59 DEG

PRINCIPAL POINT
LATITUDE 0.36 DEG
LONGITUDE 24.49 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.79 DEG AB 45.1 KM
A LONG 25.24 DEG BC 40.7 KM
B LAT -0.64 DEG CD 45.2 KM
B LONG 24.64 DEG DA 32.9 KM
C LAT -0.17 DEG TILT DISTANCE 19.9
C LONG 23.58 DEG
D LAT 1.17 DEG
D LONG 24.22 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.62 DEG AB 19.6 KM
A LONG 24.67 DEG BC 5.0 KM
B LAT 0.02 DEG CD 19.6 KM
B LONG 24.45 DEG DA 4.5 KM
C LAT 0.07 DEG TILT DISTANCE 52.6
C LONG 24.30 DEG
D LAT 0.68 DEG
D LONG 24.53 DEG

MISSION/
FRAME NO.
3055

TIME
670216
135042.71

S/C POSITION
ALT 50.94 KM
ALT RT -0.0201 KM/SEC
LAT 0.71 DEG
LONG 24.77 DEG

S/C ORIENTATION
TILT ANG 14.06 DEG
TILT AZIM 200.23 DEG
SWING ANG 359.59 DEG
N.DEV. 338.76 DEG

PHOTO ILLUMINATION
SUN AZIM 91.67 DEG
INCID ANG 72.11 DEG
EMISS ANG 14.48 DEG
PHASE ANG 68.08 DEG
ALPHA 3.45 DEG

PRINCIPAL POINT
LATITUDE 0.31 DEG
LONGITUDE 24.62 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.74 DEG AB 45.1 KM
A LONG 25.37 DEG BC 40.7 KM
B LAT -0.69 DEG CD 45.1 KM
B LONG 24.97 DEG DA 32.9 KM
C LAT -0.22 DEG TILT DISTANCE 19.9
C LONG 23.71 DEG
D LAT 1.12 DEG
D LONG 24.35 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.57 DEG AB 19.6 KM
A LONG 24.80 DEG BC 5.0 KM
B LAT -0.03 DEG CD 19.6 KM
B LONG 24.58 DEG DA 4.5 KM
C LAT 0.02 DEG TILT DISTANCE 52.6
C LONG 24.43 DEG
D LAT 0.63 DEG
D LONG 24.66 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71 PAGE 235

MISSION/
FRAME NO.
3056

YR. MO. DY 670216
HR. MI. SEC 135048.11

S/C POSITION
ALT 50.90 KM
ALT RT -0.0190 KM/SEC
LAT 0.66 DEG
LONG 24.89 DEG

S/C ORIENTATION
TILT ANG 14.06 DEG
TILT AZIM 199.69 DEG
SWING ANG 359.04 DEG
N.DEV. 338.76 DEG

PHOTO ILLUMINATION
SUN AZIM 91.65 DEG
INCID ANG 71.97 DEG
EMISS ANG 14.48 DEG
PHASE ANG 68.08 DEG
ALPHA 3.31 DEG

PRINCIPAL POINT
LATITUDE 0.26 DEG
LONGITUDE 24.75 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.69 DEG AB 45.1 KM
A LONG 25.50 DEG BC 40.7 KM
B LAT -0.74 DEG CD 45.0 KM
B LONG 25.10 DEG DA 32.9 KM
C LAT -0.27 DEG TILT DISTANCE
C LONG 23.84 DEG 19.9
D LAT 1.07 DEG
D LONG 24.48 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.52 DEG AB 19.5 KM
A LONG 24.93 DEG BC 5.0 KM
B LAT -0.08 DEG CD 19.5 KM
B LONG 24.71 DEG DA 4.5 KM
C LAT -0.02 DEG TILT DISTANCE
C LONG 24.56 DEG 52.7
D LAT 0.58 DEG
D LONG 24.79 DEG

MISSION/
FRAME NO.
3057

YR. MO. DY 670216
HR. MI. SEC 135048.11

S/C POSITION
ALT 50.86 KM
ALT RT -0.0178 KM/SEC
LAT 0.61 DEG
LONG 25.02 DEG

S/C ORIENTATION
TILT ANG 14.07 DEG
TILT AZIM 199.15 DEG
SWING ANG 358.48 DEG
N.DEV. 339.75 DEG

PHOTO ILLUMINATION
SUN AZIM 91.64 DEG
INCID ANG 71.84 DEG
EMISS ANG 14.49 DEG
PHASE ANG 68.08 DEG
ALPHA 3.17 DEG

PRINCIPAL POINT
LATITUDE 0.21 DEG
LONGITUDE 24.88 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.64 DEG AB 45.1 KM
A LONG 25.63 DEG BC 40.6 KM
B LAT -0.79 DEG CD 44.9 KM
B LONG 25.23 DEG DA 32.9 KM
C LAT -0.32 DEG TILT DISTANCE
C LONG 23.57 DEG 19.9
D LAT 1.02 DEG
D LONG 24.61 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.47 DEG AB 19.5 KM
A LONG 25.06 DEG BC 5.0 KM
B LAT -0.12 DEG CD 19.5 KM
B LONG 24.84 DEG DA 4.5 KM
C LAT -0.07 DEG TILT DISTANCE
C LONG 24.69 DEG 52.7
D LAT 0.53 DEG
D LONG 24.92 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/19/71 PAGE 236

MISSION/
FRAME NO.

3058
YR,MO, DY 670216
HR,MI,SEC 135050.41

S/C POSITION
ALT 50.82 KM
ALT RT -0.0166 KM/SEC
LAT 9.56 DEG
LONG 25.15 DEG

S/C ORIENTATION
TILT ANG 14.07 DEG
TILT AZIM 198.59 DEG
SWING ANG 357.90 DEG
N.DEV. 338.75 DEG

PHOTO ILLUMINATION
SUN AZIM 91.62 DEG
INCID ANG 71.71 DEG
EMISS ANG 14.49 DEG
PHASE ANG 68.08 DEG
ALPHA 3.02 DEG

PRINCIPAL POINT
LATITUDE 0.15 DEG
LONGITUDE 25.02 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 6.59 DEG AB 45.1 KM
A LONG 25.76 DEG BC 40.6 KM
B LAT -0.85 DEG CD 44.8 KM
B LONG 25.36 DEG DA 32.8 KM
C LAT -0.37 DEG TILT DISTANCE 19.9
C LONG 24.11 DEG
D LAT 0.97 DEG
D LONG 24.75 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 0.42 DEG AB 19.5 KM
A LONG 25.20 DEG BC 5.0 KM
B LAT -0.18 DEG CD 19.5 KM
B LONG 24.98 DEG DA 4.5 KM
C LAT -0.13 DEG TILT DISTANCE 52.8
C LONG 24.82 DEG
D LAT 0.47 DEG
D LONG 25.06 DEG

MISSION/
FRAME NO.

3059
YR,MO, DY 670216
HR,MI,SEC 135052.61

S/C POSITION
ALT 50.78 KM
ALT RT -0.0155 KM/SEC
LAT 0.51 DEG
LONG 25.28 DEG

S/C ORIENTATION
TILT ANG 14.08 DEG
TILT AZIM 198.05 DEG
SWING ANG 357.35 DEG
N.DEV. 338.74 DEG

PHOTO ILLUMINATION
SUN AZIM 91.61 DEG
INCID ANG 71.57 DEG
EMISS ANG 14.50 DEG
PHASE ANG 68.08 DEG
ALPHA 2.89 DEG

PRINCIPAL POINT
LATITUDE 0.11 DEG
LONGITUDE 25.13 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 6.54 DEG AB 45.1 KM
A LONG 25.89 DEG BC 40.6 KM
B LAT -0.90 DEG CD 44.8 KM
B LONG 25.49 DEG DA 32.8 KM
C LAT -0.42 DEG TILT DISTANCE 19.9
C LONG 24.24 DEG
D LAT 0.92 DEG
D LONG 24.88 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 0.37 DEG AB 19.5 KM
A LONG 25.32 DEG BC 5.0 KM
B LAT -0.23 DEG CD 19.5 KM
B LONG 25.10 DEG DA 4.5 KM
C LAT -0.18 DEG TILT DISTANCE 52.8
C LONG 24.95 DEG
D LAT 0.42 DEG
D LONG 25.19 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71 PAGE 237

MISSION/
FRAME NO.
3060

YR.NO.DY 670216
HR.MI.SEC 171537.91

S/C POSITION
ALT 50.27 KM
ALT RT -0.0091 KM/SEC
LAT 0.20 DEG
LONG 24.10 DEG

S/C ORIENTATION
TILT ANG 11.00 DEG
TILT AZIM 19.48 DEG
SWING ANG 178.43 DEG
N.DEV. 338.59 DEG

PHOTO ILLUMINATION
SUN AZIM 91.75 DEG
INCID ANG 70.76 DEG
EMISS ANG 11.32 DEG
PHASE ANG 74.53 DEG
ALPHA -4.12 DEG

PRINCIPAL POINT
LATITUDE 0.51 DEG
LONGITUDE 24.21 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.99 DEG AB 43.1 KM
A LONG 25.09 DEG BC 32.8 KM
B LAT -0.29 DEG CD 43.3 KM
B LONG 24.49 DEG DA 38.7 KM
C LAT 0.09 DEG TILT DISTANCE
C LONG 23.48 DEG 15.6
D LAT 1.48 DEG
D LONG 23.90 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.78 DEG AB 18.8 KM
A LONG 24.40 DEG BC 4.5 KM
B LAT 0.20 DEG CD 18.8 KM
B LONG 24.17 DEG DA 4.8 KM
C LAT 0.25 DEG TILT DISTANCE
C LONG 24.04 DEG 18.4
D LAT 0.83 DEG
D LONG 24.25 DEG

MISSION/
FRAME NO.
3061

YR.NO.DY 670216
HR.MI.SEC 171540.01

S/C POSITION
ALT 50.25 KM
ALT RT -0.0080 KM/SEC
LAT 0.16 DEG
LONG 24.22 DEG

S/C ORIENTATION
TILT ANG 10.99 DEG
TILT AZIM 20.14 DEG
SWING ANG 179.10 DEG
N.DEV. 338.59 DEG

PHOTO ILLUMINATION
SUN AZIM 91.74 DEG
INCID ANG 70.63 DEG
EMISS ANG 11.32 DEG
PHASE ANG 74.53 DEG
ALPHA -4.24 DEG

PRINCIPAL POINT
LATITUDE 0.46 DEG
LONGITUDE 24.34 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.95 DEG AB 43.1 KM
A LONG 25.21 DEG BC 32.8 KM
B LAT -0.34 DEG CD 43.2 KM
B LONG 24.61 DEG DA 38.7 KM
C LAT 0.04 DEG TILT DISTANCE
C LONG 23.60 DEG 15.5
D LAT 1.41 DEG
D LONG 24.02 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.73 DEG AB 18.8 KM
A LONG 24.53 DEG BC 4.5 KM
B LAT 0.15 DEG CD 18.8 KM
B LONG 24.30 DEG DA 4.8 KM
C LAT 0.21 DEG TILT DISTANCE
C LONG 24.16 DEG 18.4
D LAT 0.79 DEG
D LONG 24.38 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

MISSION/
FRAME NO.
3062

TIME
670216
YR.NO.DY
171942.31
PR.MI.SEC

S/C POSITION
ALT 50.24 KM
ALT RT -0.0069 KM/SEC
LAT 0.10 DEG
LONG 24.35 DEG

S/C ORIENTATION
TILT ANG 10.99 DEG
TILT AZIM 20.87 DEG
SWING ANG 179.84 DEG
N.DEV. 338.60 DEG

PHOTO ILLUMINATION
SUN AZIM 91.72 DEG
INCID ANG 70.49 DEG
EMISS ANG 11.32 DEG
PHASE ANG 74.53 DEG
ALPHA -4.38 DEG

PRINCIPAL POINT
LATITUDE 0.41 DEG
LONGITUDE 24.47 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 0.90 DEG AB 43.1 KM
A LONG 25.35 DEG BC 32.7 KM
B LAT -0.39 DEG CD 43.2 KM
B LONG 24.75 DEG DA 38.6 KM
C LAT -0.01 DEG TILT DISTANCE
C LONG 23.74 DEG 15.5
D LAT 1.35 DEG
D LONG 24.16 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 0.68 DEG AB 18.8 KM
A LONG 24.66 DEG BC 4.5 KM
B LAT 0.10 DEG CD 18.8 KM
B LONG 24.43 DEG DA 4.8 KM
C LAT 0.15 DEG TILT DISTANCE
C LONG 24.30 DEG 18.4
D LAT 0.73 DEG
D LONG 24.51 DEG

MISSION/
FRAME NO.
3063

TIME
670216
YR.NO.DY
171544.41
PR.MI.SEC

S/C POSITION
ALT 50.22 KM
ALT RT -0.0058 KM/SEC
LAT 0.06 DEG
LONG 24.48 DEG

S/C ORIENTATION
TILT ANG 10.99 DEG
TILT AZIM 21.54 DEG
SWING ANG 180.52 DEG
N.DEV. 338.60 DEG

PHOTO ILLUMINATION
SUN AZIM 91.71 DEG
INCID ANG 70.37 DEG
EMISS ANG 11.32 DEG
PHASE ANG 74.53 DEG
ALPHA -4.50 DEG

PRINCIPAL POINT
LATITUDE 0.36 DEG
LONGITUDE 24.59 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 0.85 DEG AB 43.1 KM
A LONG 25.47 DEG BC 32.7 KM
B LAT -0.44 DEG CD 43.1 KM
B LONG 24.87 DEG DA 38.6 KM
C LAT -0.06 DEG TILT DISTANCE
C LONG 23.86 DEG 15.5
D LAT 1.30 DEG
D LONG 24.28 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 0.63 DEG AB 18.8 KM
A LONG 24.78 DEG BC 4.5 KM
B LAT 0.05 DEG CD 18.8 KM
B LONG 24.55 DEG DA 4.8 KM
C LAT 0.11 DEG TILT DISTANCE
C LONG 24.42 DEG 18.4
D LAT 0.69 DEG
D LONG 24.64 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/19/71 PAGE 239

MISSION/
FRAME NO.

3064
YR.MO.DY 670216
HR.MI.SEC 171946.71

S/C POSITION
ALT 50.21 KM
ALT RT -0.0046 KM/SEC
LAT 0.01 DEG
LONG 24.61 DEG

S/C ORIENTATION
TILT ANG 11.00 DEG
TILT AZIM 22.26 DEG
SWING ANG 181.26 DEG
N.DEV. 338.60 DEG

PHOTO ILLUMINATION
SUN AZIM 91.69 DEG
INCID ANG 70.23 DEG
EMISS ANG 11.32 DEG
PHASE ANG 74.53 DEG
ALPHA -4.64 DEG

PRINCIPAL POINT
LATITUDE 0.31 DEG
LONGITUDE 24.73 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.80 DEG AB 43.2 KM
A LONG 25.61 DEG BC 32.7 KM
B LAT -0.50 DEG CD 43.1 KM
B LONG 25.01 DEG DA 38.6 KM
C LAT -0.11 DEG TILT DISTANCE
C LONG 24.00 DEG 15.5
D LAT 1.25 DEG
D LONG 24.42 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.58 DEG AB 18.8 KM
A LONG 24.92 DEG BC 4.5 KM
B LAT 0.00 DEG CD 18.8 KM
B LONG 24.69 DEG DA 4.8 KM
C LAT 0.05 DEG TILT DISTANCE
C LONG 24.55 DEG 18.4
D LAT 0.63 DEG
D LONG 24.77 DEG

MISSION/
FRAME NO.

3065
YR.MO.DY 670216
HR.MI.SEC 171546.91

S/C POSITION
ALT 50.20 KM
ALT RT -0.0034 KM/SEC
LAT -0.04 DEG
LONG 24.73 DEG

S/C ORIENTATION
TILT ANG 11.00 DEG
TILT AZIM 22.96 DEG
SWING ANG 181.97 DEG
N.DEV. 338.60 DEG

PHOTO ILLUMINATION
SUN AZIM 91.68 DEG
INCID ANG 70.10 DEG
EMISS ANG 11.32 DEG
PHASE ANG 74.53 DEG
ALPHA -4.77 DEG

PRINCIPAL POINT
LATITUDE 0.26 DEG
LONGITUDE 24.86 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.75 DEG AB 43.2 KM
A LONG 25.74 DEG BC 32.7 KM
B LAT -0.55 DEG CD 43.0 KM
B LONG 25.14 DEG DA 38.6 KM
C LAT -0.16 DEG TILT DISTANCE
C LONG 24.13 DEG 15.5
D LAT 1.20 DEG
D LONG 24.55 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.53 DEG AB 18.8 KM
A LONG 25.05 DEG BC 4.5 KM
B LAT -0.05 DEG CD 18.8 KM
B LONG 24.82 DEG DA 4.8 KM
C LAT 0.00 DEG TILT DISTANCE
C LONG 24.68 DEG 18.4
D LAT 0.58 DEG
D LONG 24.90 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

MISSION/
FRAME NO.

3066
YR.NO.DY
HR.MI.SEC

TIME
670216
171551.11

S/C POSITION
ALT. 50.20 KM
ALT RT -0.0023 KM/SEC
LAT -0.09 DEG
LONG 24.86 DEG

S/C ORIENTATION
TILT ANG 11.00 DEG
TILT AZIM 23.65 DEG
SWING ANG 182.68 DEG
N.DEV. 338.61 DEG

PHOTO ILLUMINATION
SUN AZIM 91.66 DEG
INCID ANG 69.97 DEG
EMISS ANG 11.33 DEG
PHASE ANG 74.53 DEG
ALPHA -4.90 DEG

PRINCIPAL POINT
LATITUDE 0.21 DEG
LONGITUDE 24.99 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.70 DEG AB 43.2 KM
A LONG 25.87 DEG BC 32.7 KM
B LAT -0.60 DEG CD 43.0 KM
B LONG 25.27 DEG DA 38.6 KM
C LAT -0.21 DEG TILT DISTANCE 15.6
C LONG 24.26 DEG
D LAT 1.15 DEG
D LONG 24.68 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.48 DEG AB 18.8 KM
A LONG 25.18 DEG BC 4.5 KM
B LAT -0.10 DEG CD 18.8 KM
B LONG 24.95 DEG DA 4.8 KM
C LAT -0.05 DEG TILT DISTANCE 18.5
C LONG 24.81 DEG
D LAT 0.53 DEG
D LONG 25.03 DEG

MISSION/
FRAME NO.

3067
YR.NO.DY
HR.MI.SEC

TIME
670216
171553.41

S/C POSITION
ALT 50.19 KM
ALT RT -0.0011 KM/SEC
LAT -0.14 DEG
LONG 24.99 DEG

S/C ORIENTATION
TILT ANG 11.01 DEG
TILT AZIM 24.38 DEG
SWING ANG 183.42 DEG
N.DEV. 338.61 DEG

PHOTO ILLUMINATION
SUN AZIM 91.64 DEG
INCID ANG 69.83 DEG
EMISS ANG 11.33 DEG
PHASE ANG 74.53 DEG
ALPHA -5.03 DEG

PRINCIPAL POINT
LATITUDE 0.15 DEG
LONGITUDE 25.12 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.65 DEG AB 43.3 KM
A LONG 26.01 DEG BC 32.7 KM
B LAT -0.65 DEG CD 42.9 KM
B LONG 25.40 DEG DA 38.6 KM
C LAT -0.26 DEG TILT DISTANCE 15.6
C LONG 24.40 DEG
D LAT 1.09 DEG
D LONG 24.81 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.42 DEG AB 18.8 KM
A LONG 25.31 DEG BC 4.5 KM
B LAT -0.15 DEG CD 18.8 KM
B LONG 25.09 DEG DA 4.8 KM
C LAT -0.10 DEG TILT DISTANCE 18.6
C LONG 24.95 DEG
D LAT 0.48 DEG
D LONG 25.17 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

MISSION/
FRAME NO.

3068 YR,MO,DY 67C216
FR,MI,SEC 204759.61

S/C POSITION
ALT 49.60 KM
TILT ANG 7.29 DEG
TILT AZIM 203.41 DEG
SWING ANG 2.79 DEG
N.DEV. 339.20 DEG

S/C ORIENTATION
TILT ANG 7.29 DEG
TILT AZIM 203.41 DEG
SWING ANG 2.79 DEG
N.DEV. 339.20 DEG

PHOTO ILLUMINATION
SUN AZIM 91.66 DEG
INCID ANG 72.21 DEG
EMISS ANG 7.50 DEG
PHASE ANG 69.58 DEG
ALPHA 2.49 DEG

PRINCIPAL POINT
LATITUDE 0.30 DEG
LONGITUDE 20.99 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.71 DEG AB 41.3 KM
A LONG 21.73 DEG BC 36.6 KM
B LAT -0.59 DEG CD 41.5 KM
B LONG 21.31 DEG DA 32.9 KM
C LAT -0.17 DEG TILT DISTANCE 10.1
C LONG 20.18 DEG
D LAT 1.09 DEG
D LONG 20.72 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.54 DEG AB 18.1 KM
A LONG 21.16 DEG BC 4.6 KM
B LAT -0.02 DEG CD 18.1 KM
B LONG 20.96 DEG DA 4.4 KM
C LAT 0.04 DEG TILT DISTANCE 78.0
C LONG 20.81 DEG
D LAT 0.60 DEG
D LONG 21.03 DEG

MISSION/
FRAME NO.

3069 YR,MO,DY 67D216
FR,MI,SEC 204759.11

S/C POSITION
ALT 49.45 KM
TILT ANG 7.29 DEG
TILT AZIM 199.33 DEG
SWING ANG 358.67 DEG
N.DEV. 339.19 DEG

S/C ORIENTATION
TILT ANG 7.29 DEG
TILT AZIM 199.33 DEG
SWING ANG 358.67 DEG
N.DEV. 339.19 DEG

PHOTO ILLUMINATION
SUN AZIM 91.60 DEG
INCID ANG 71.70 DEG
EMISS ANG 7.50 DEG
PHASE ANG 69.58 DEG
ALPHA 1.98 DEG

PRINCIPAL POINT
LATITUDE 0.10 DEG
LONGITUDE 21.49 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.51 DEG AB 41.3 KM
A LONG 22.23 DEG BC 36.5 KM
B LAT -0.78 DEG CD 41.3 KM
B LONG 21.81 DEG DA 32.7 KM
C LAT -0.36 DEG TILT DISTANCE 10.1
C LONG 20.68 DEG
D LAT 0.89 DEG
D LONG 21.22 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.35 DEG AB 18.1 KM
A LONG 21.66 DEG BC 4.6 KM
B LAT -0.21 DEG CD 18.1 KM
B LONG 21.45 DEG DA 4.4 KM
C LAT -0.15 DEG TILT DISTANCE 78.0
C LONG 21.31 DEG
D LAT 0.40 DEG
D LONG 21.53 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71

PAGE 242

MISSION/
FRAME NO.
3070

YR.MO.DY 670216
HR.MI.SEC 2048 7.71

S/C POSITION
ALT 49.33 KM
ALT RT -0.0110 KM/SEC
LAT 0.11 DEG
LONG 22.05 DEG

S/C ORIENTATION
TILT ANG 7.33 DEG
TILT AZIM 195.22 DEG
SWING ANG 354.53 DEG
N.DEV. 339.18 DEG

PHOTO ILLUMINATION
SUN AZIM 91.54 DEG
INCID ANG 71.19 DEG
EMISS ANG 7.54 DEG
PHASE ANG 69.58 DEG
ALPHA 1.45 DEG

PRINCIPAL POINT
LATITUDE -0.10 DEG
LONGITUDE 22.00 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 0.31 DEG AB 41.3 KM
A LONG 22.74 DEG BC 36.4 KM
B LAT -0.58 DEG CD 41.0 KM
B LONG 22.31 DEG DA 32.7 KM
C LAT -0.55 DEG TILT DISTANCE
C LONG 21.19 DEG 10.1
D LAT 0.69 DEG
D LONG 21.73 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 0.15 DEG AB 18.1 KM
A LONG 22.17 DEG BC 4.6 KM
B LAT -0.41 DEG CD 18.0 KM
B LONG 21.96 DEG DA 4.4 KM
C LAT -0.35 DEG TILT DISTANCE
C LONG 21.82 DEG 78.4
D LAT 0.20 DEG
D LONG 22.03 DEG

MISSION/
FRAME NO.
3071

YR.MO.DY 670216
HR.MI.SEC 2048 16.21

S/C POSITION
ALT 49.26 KM
ALT RT -0.0066 KM/SEC
LAT -0.08 DEG
LONG 22.54 DEG

S/C ORIENTATION
TILT ANG 7.40 DEG
TILT AZIM 191.22 DEG
SWING ANG 350.49 DEG
N.DEV. 339.17 DEG

PHOTO ILLUMINATION
SUN AZIM 91.47 DEG
INCID ANG 70.69 DEG
EMISS ANG 7.61 DEG
PHASE ANG 69.58 DEG
ALPHA 0.94 DEG

PRINCIPAL POINT
LATITUDE -0.29 DEG
LONGITUDE 22.50 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 0.12 DEG AB 41.4 KM
A LONG 23.24 DEG BC 36.3 KM
B LAT -1.18 DEG CD 40.8 KM
B LONG 22.82 DEG DA 32.6 KM
C LAT -0.74 DEG TILT DISTANCE
C LONG 21.70 DEG 10.2
D LAT 0.49 DEG
D LONG 22.23 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -0.04 DEG AB 18.0 KM
A LONG 22.67 DEG BC 4.6 KM
B LAT -0.60 DEG CD 18.0 KM
B LONG 22.45 DEG DA 4.4 KM
C LAT -0.55 DEG TILT DISTANCE
C LONG 22.32 DEG 79.2
D LAT 0.01 DEG
D LONG 22.53 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 243

04/19/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NO.
3072

TIME 670217
YR.NO.DY 670217
HR.MI.SEC 001748.51

S/C POSITION
ALT 49.86 KM
ALT RT 0.0243 KM/SEC
LAT -1.46 DEG
LONG 24.07 DEG

S/C ORIENTATION
TILT ANG 22.24 DEG
TILT AZIM 21.75 DEG
SWING ANG 181.15 DEG
N.DEV. 337.74 DEG

PHOTO ILLUMINATION
SUN AZIM 91.26 DEG
INCID ANG 67.08 DEG
EMISS ANG 22.92 DEG
PHASE ANG 76.51 DEG
ALPHA -11.03 DEG

PRINCIPAL POINT
LATITUDE -0.83 DEG
LONGITUDE 24.32 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -0.19 DEG AB 50.2 KM
A LONG 25.37 DEG BC 31.9 KM
B LAT -1.65 DEG CD 49.9 KM
B LONG 24.58 DEG DA 45.4 KM
C LAT -1.28 DEG TILT DISTANCE 32.7
C LONG 23.60 DEG
D LAT 0.33 DEG
D LONG 23.97 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -0.51 DEG AB 21.2 KM
A LONG 24.54 DEG BC 4.5 KM
B LAT -1.16 DEG CD 21.2 KM
B LONG 24.28 DEG DA 5.3 KM
C LAT -1.11 DEG TILT DISTANCE 49.3
C LONG 24.14 DEG
D LAT -0.45 DEG
D LONG 24.37 DEG

MISSION/
FRAME NO.
3073

TIME 670217
YR.NO.DY 670217
HR.MI.SEC 034129.51

S/C POSITION
ALT 62.79 KM
ALT RT -0.1247 KM/SEC
LAT 4.99 DEG
LONG 5.60 DEG

S/C ORIENTATION
TILT ANG 52.41 DEG
TILT AZIM 21.02 DEG
SWING ANG 177.43 DEG
N.DEV. 323.33 DEG

PHOTO ILLUMINATION
SUN AZIM 92.40 DEG
INCID ANG 83.35 DEG
EMISS ANG 55.19 DEG
PHASE ANG 101.30 DEG
ALPHA -22.13 DEG

PRINCIPAL POINT
LATITUDE 7.59 DEG
LONGITUDE 6.60 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 15.07 DEG AB 363.0 KM
A LONG 14.50 DEG BC 46.9 KM
B LAT 5.84 DEG CD 78.1 KM
B LONG 6.70 DEG DA 235.2 KM
C LAT 6.46 DEG TILT DISTANCE 03.9
C LONG 5.28 DEG
D LAT 17.83 DEG
D LONG 6.38 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 8.90 DEG AB 72.4 KM
A LONG 7.39 DEG BC 7.7 KM
B LAT 6.73 DEG CD 73.3 KM
B LONG 6.38 DEG DA 13.1 KM
C LAT 5.84 DEG TILT DISTANCE 91.9
C LONG 6.15 DEG
D LAT 9.10 DEG
D LONG 7.00 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/19/77 PAGE 214

MISSION/
FRAME NO.
3074

TIME
670217
071045.51

S/C POSITION
ALT 57.51 KM
ALT RT -0.1033 KM/SEC
LAT 4.03 DEG
LONG 5.19 DEG

S/C ORIENTATION
TILT ANG 0.50 DEG
TILT AZIM 255.39 DEG
SWING ANG 54.35 DEG
N.DEV. 339.28 DEG

PHOTO ILLUMINATION
SUN AZIM 92.09 DEG
INCID ANG 81.88 DEG
EMISS ANG 2.62 DEG
PHASE ANG 81.27 DEG
ALPHA 3.81 DEG

PRINCIPAL POINT
LATITUDE 4.73 DEG
LONGITUDE 5.17 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 4.52 DEG AB 46.9 KM
A LONG 7.07 DEG BC 39.9 KM
B LAT 3.07 DEG CD 47.2 KM
B LONG 4.52 DEG DA 39.8 KM
C LAT 3.53 DEG TILT DISTANCE 0.9
C LONG 5.28 DEG
D LAT 4.99 DEG
D LONG 5.84 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 4.31 DEG AB 23.7 KM
A LONG 5.38 DEG BC 5.2 KM
B LAT 3.68 DEG CD 20.7 KM
B LONG 5.13 DEG DA 5.2 KM
C LAT 3.74 DEG TILT DISTANCE 6.3
C LONG 5.57 DEG
D LAT 4.37 DEG
D LONG 6.21 DEG

MISSION/
FRAME NO.
3075

TIME
670217
071055.71

S/C POSITION
ALT 56.48 KM
ALT RT -0.0982 KM/SEC
LAT 3.80 DEG
LONG 6.77 DEG

S/C ORIENTATION
TILT ANG 0.28 DEG
TILT AZIM 183.31 DEG
SWING ANG 342.55 DEG
N.DEV. 339.24 DEG

PHOTO ILLUMINATION
SUN AZIM 92.09 DEG
INCID ANG 81.27 DEG
EMISS ANG 0.29 DEG
PHASE ANG 81.27 DEG
ALPHA 0.01 DEG

PRINCIPAL POINT
LATITUDE 3.79 DEG
LONGITUDE 4.77 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 4.28 DEG AB 46.2 KM
A LONG 7.65 DEG BC 39.2 KM
B LAT 2.85 DEG CD 46.2 KM
B LONG 7.11 DEG DA 39.9 KM
C LAT 3.31 DEG TILT DISTANCE 0.2
C LONG 5.50 DEG
D LAT 4.73 DEG
D LONG 5.44 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 4.08 DEG AB 20.3 KM
A LONG 6.97 DEG BC 5.1 KM
B LAT 3.45 DEG CD 20.3 KM
B LONG 5.73 DEG DA 5.1 KM
C LAT 3.51 DEG TILT DISTANCE 2.9
C LONG 6.57 DEG
D LAT 4.14 DEG
D LONG 6.81 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71 PAGE 245

MISSION/
FRAME NO.
3075

YR. MO. DY 670217
HR. MI. SEC 0711 5.61

S/C POSITION
ALT 55.53 KM
ALT RT -0.0932 KM/SEC.
LAT 3.58 DEG
LONG 7.33 DEG

S/C ORIENTATION
TILT ANG 9.74 DEG
TILT AZIM 132.18 DEG
SWING ANG 291.38 DEG
N-DEV. 339.20 DEG

PHOTO ILLUMINATION
SUN AZIM 92.09 DEG
INCID ANG 80.68 DEG
EMISS ANG 0.76 DEG
PHASE ANG 81.27 DEG
ALPHA -0.58 DEG

PRINCIPAL POINT
LATITUDE 3.57 DEG
LONGITUDE 7.35 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 4.04 DEG AB 45.6 KM
A LONG 2.22 DEG BC 38.5 KM
B LAT 2.64 DEG CD 45.2 KM
B LONG 7.69 DEG DA 38.4 KM
C LAT 3.09 DEG TILT DISTANCE
C LONG 6.50 DEG 0.8
D LAT 4.49 DEG
D LONG 7.03 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 3.85 DEG AB 20.0 KM
A LONG 7.55 DEG BC 5.0 KM
B LAT 3.23 DEG CD 20.0 KM
B LONG 7.31 DEG DA 5.0 KM
C LAT 3.29 DEG TILT DISTANCE
C LONG 7.16 DEG 7.8
D LAT 3.91 DEG
D LONG 7.39 DEG

MISSION/
FRAME NO.
3077

YR. MO. DY 670217
HR. MI. SEC 0711 15.51

S/C POSITION
ALT 54.64 KM
ALT RT -0.0882 KM/SEC
LAT 3.37 DEG
LONG 7.90 DEG

S/C ORIENTATION
TILT ANG 1.32 DEG
TILT AZIM 122.82 DEG
SWING ANG 281.98 DEG
N-DEV. 339.17 DEG

PHOTO ILLUMINATION
SUN AZIM 92.09 DEG
INCID ANG 80.10 DEG
EMISS ANG 1.36 DEG
PHASE ANG 61.27 DEG
ALPHA -1.17 DEG

PRINCIPAL POINT
LATITUDE 3.34 DEG
LONGITUDE 7.93 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 3.81 DEG AB 45.0 KM
A LONG 2.79 DEG BC 37.9 KM
B LAT 2.42 DEG CD 44.4 KM
B LONG 8.27 DEG DA 37.8 KM
C LAT 2.88 DEG TILT DISTANCE
C LONG 7.10 DEG 1.7
D LAT 4.24 DEG
D LONG 7.62 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 3.62 DEG AB 19.7 KM
A LONG 8.12 DEG BC 4.9 KM
B LAT 3.01 DEG CD 19.6 KM
B LONG 7.89 DEG DA 4.9 KM
C LAT 3.07 DEG TILT DISTANCE
C LONG 7.74 DEG 14.0
D LAT 3.67 DEG
D LONG 7.97 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71 PAGE 246

MISSION/
FRAME NO.

3078
YR,MO, DY
FR,MI,SEC

S/C POSITION
ALT 56.80 KM
ALT RT 0.0964 KM/SEC
LAT -4.74 DEG
LONG 26.53 DEG

S/C ORIENTATION
TILT ANG 58.88 DEG
TILT AZIM 180.19 DEG
SWING ANG 349.13 DEG
N.DEV. 348.43 DEG

PHOTO ILLUMINATION
SUN AZIM 85.69 DEG
INCLD ANG 59.84 DEG
EMISS ANG 74.44 DEG
PHASE ANG 78.46 DEG
ALPHA -59.65 DEG

PRINCIPAL POINT
LATITUDE -10.29 DEG
LONGITUDE 26.51 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -7.07 DEG AB 98.5 KM
A LONG 27.73 DEG BC 303.5 KM
B LAT -17.65 DEG CD 145.3 KM
B LONG 31.06 DEG DA 57.2 KM
C LAT -12.37 DEG TILT DISTANCE 05.9
C LONG 22.53 DEG
D LAT -6.57 DEG
D LONG 25.50 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -8.07 DEG AB 117.6 KM
A LONG 26.82 DEG BC 52.8 KM
B LAT -15.05 DEG CD 310.8 KM
B LONG 26.79 DEG DA 11.0 KM
C LAT -18.60 DEG TILT DISTANCE 78.3
C LONG 25.47 DEG
D LAT -7.93 DEG
D LONG 26.48 DEG

MISSION/
FRAME NO.

3079
YR,MO, DY
FR,MI,SEC

S/C POSITION
ALT 48.44 KM
ALT RT 0.0325 KM/SEC
LAT -2.00 DEG
LONG 17.58 DEG

S/C ORIENTATION
TILT ANG 7.36 DEG
TILT AZIM 20.52 DEG
SWING ANG 177.88 DEG
N.DEV. 337.21 DEG

PHOTO ILLUMINATION
SUN AZIM 90.83 DEG
INCLD ANG 69.68 DEG
EMISS ANG 7.56 DEG
PHASE ANG 59.41 DEG
ALPHA -2.91 DEG

PRINCIPAL POINT
LATITUDE -1.81 DEG
LONGITUDE 17.65 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -1.39 DEG AB 40.4 KM
A LONG 18.47 DEG BC 32.1 KM
B LAT -2.59 DEG CD 40.6 KM
B LONG 17.90 DEG DA 35.8 KM
C LAT -2.19 DEG TILT DISTANCE 10.3
C LONG 16.93 DEG
D LAT -0.93 DEG
D LONG 17.38 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -1.56 DEG AB 17.7 KM
A LONG 17.84 DEG BC 4.3 KM
B LAT -2.10 DEG CD 17.7 KM
B LONG 17.61 DEG DA 4.5 KM
C LAT -2.04 DEG TILT DISTANCE 78.7
C LONG 17.48 DEG
D LAT -1.50 DEG
D LONG 17.70 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA.

MISSION/
FRAME NO. 3083
YR.,MO.,DY 670217
HR.,MI.,SEC 2105 3.61

S/C POSITION
ALT 46.71 KM
ALT RT 0.0241 KM/SEC
LAT -1.54 DEG
LONG 12.89 DEG

S/C ORIENTATION
TILT ANG 4.37 DEG
TILT AZIM 25.81 DEG
SWING ANG 184.86 DEG
N.DEV. 338.98 DEG

PHOTO ILLUMINATION
SUN AZIM 91.91 DEG
INCID ANG 67.88 DEG
EMISS ANG 4.49 DEG
PHASE ANG 69.82 DEG
ALPHA -2.00 DEG

PRINCIPAL POINT
LATITUDE -1.43 DEG
LONGITUDE 12.94 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -1.02 DEG AB 36.5 KM
A LONG 13.69 DEG BC 31.4 KM
B LAT -2.19 DEG CD 36.4 KM
B LONG 13.21 DEG DA 33.5 KM
C LAT -1.82 DEG TILT DISTANCE 6.1
C LONG 12.24 DEG
D LAT -0.62 DEG
D LONG 12.66 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -1.19 DEG AB 16.9 KM
A LONG 13.11 DEG BC 4.2 KM
B LAT -1.71 DEG CD 16.9 KM
B LONG 12.90 DEG DA 4.3 KM
C LAT -1.66 DEG TILT DISTANCE 46.6
C LONG 12.78 DEG
D LAT -1.14 DEG
D LONG 12.97 DEG

MISSION/
FRAME NO. 3081
YR.,MO.,DY 670217
HR.,MI.,SEC 210511.51

S/C POSITION
ALT 46.92 KM
ALT RT 0.0282 KM/SEC
LAT -1.72 DEG
LONG 13.34 DEG

S/C ORIENTATION
TILT ANG 4.44 DEG
TILT AZIM 32.06 DEG
SWING ANG 191.14 DEG
N.DEV. 339.00 DEG

PHOTO ILLUMINATION
SUN AZIM 90.93 DEG
INCID ANG 67.41 DEG
EMISS ANG 4.56 DEG
PHASE ANG 69.82 DEG
ALPHA -2.46 DEG

PRINCIPAL POINT
LATITUDE -1.61 DEG
LONGITUDE 13.40 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -1.19 DEG AB 36.8 KM
A LONG 14.17 DEG BC 31.5 KM
B LAT -2.38 DEG CD 38.5 KM
B LONG 12.58 DEG DA 33.7 KM
C LAT -2.09 DEG TILT DISTANCE 6.2
C LONG 12.71 DEG
D LAT -0.81 DEG
D LONG 13.13 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -1.37 DEG AB 17.0 KM,
A LONG 13.57 DEG BC 4.2 KM
B LAT -1.90 DEG CD 17.0 KM
B LONG 13.37 DEG DA 4.3 KM
C LAT -1.85 DEG TILT DISTANCE 47.3
C LONG 13.24 DEG
D LAT -1.52 DEG
D LONG 13.44 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71 PAGE 249

MISSION/
FRAME NO.
3082

YR.,MO.,DY 670217
HR.,MI.,SEC 210519.51

S/C POSITION
ALT 47.16 KM
ALT RT 0.0324 KM/SEC
LAT -1.89 DEG
LONG 13.80 DEG

S/C ORIENTATION
TILT ANG 4.56 DEG
TILT AZIM 38.13 DEG
SWING ANG 197.24 DEG
N.DEV. 339.02 DEG

PHOTO ILLUMINATION
SUN AZIM 90.84 DEG
INCID ANG 66.94 DEG
EMISS ANG 4.68 DEG
PHASE ANG 69.82 DEG
ALPHA -2.93 DEG

PRINCIPAL POINT
LATITUDE -1.80 DEG
LONGITUDE 13.87 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.37 DEG AB 39.2 KM
A LONG 14.65 DEG BC 31.7 KM
B LAT -2.57 DEG CD 38.5 KM
B LONG 14.15 DEG DA 33.9 KM
C LAT -2.19 DEG TILT DISTANCE 6.4
C LONG 13.18 DEG
D LAT -0.99 DEG
D LONG 13.60 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.56 DEG AB 17.1 KM
A LONG 14.04 DEG BC 4.2 KM
B LAT -2.08 DEG CD 17.0 KM
B LONG 13.84 DEG DA 4.3 KM
C LAT -2.03 DEG TILT DISTANCE 48.5
C LONG 13.71 DEG
D LAT -1.51 DEG
D LONG 13.91 DEG

MISSION/
FRAME NO.
3083

YR.,MO.,DY 670217
HR.,MI.,SEC 210527.61

S/C POSITION
ALT 47.44 KM
ALT RT 0.0366 KM/SEC
LAT -2.08 DEG
LONG 14.26 DEG

S/C ORIENTATION
TILT ANG 4.72 DEG
TILT AZIM 43.90 DEG
SWING ANG 203.05 DEG
N.DEV. 339.05 DEG

PHOTO ILLUMINATION
SUN AZIM 90.75 DEG
INCID ANG 66.45 DEG
EMISS ANG 4.25 DEG
PHASE ANG 69.82 DEG
ALPHA -3.41 DEG

PRINCIPAL POINT
LATITUDE -1.98 DEG
LONGITUDE 14.35 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.55 DEG AB 39.5 KM
A LONG 15.13 DEG BC 31.9 KM
B LAT -2.76 DEG CD 36.7 KM
B LONG 14.63 DEG DA 34.1 KM
C LAT -2.37 DEG TILT DISTANCE 6.6
C LONG 13.65 DEG
D LAT -1.17 DEG
D LONG 14.07 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.74 DEG AB 17.2 KM
A LONG 14.52 DEG BC 4.2 KM
B LAT -2.27 DEG CD 17.1 KM
B LONG 14.32 DEG DA 4.4 KM
C LAT -2.22 DEG TILT DISTANCE 50.3
C LONG 14.19 DEG
D LAT -1.69 DEG
D LONG 14.39 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 249

04/10/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NO.
3084

YR.MD.DY 670218
FR.MI.SEC 003514.21

TIME 003514.21

S/C POSITION
ALT 46.75 KM
ALT RT -0.0496 KM/SEC
LAT 1.61 DEG
LONG 2.92 DEG

S/C ORIENTATION
TILT ANG 67.39 DEG
TILT AZIM 258.42 DEG
SWING ANG 31.92 DEG
N.DEV. 305.67 DEG

PHOTO ILLUMINATION
SUN AZIM 91.64 DEG
INCID ANG 80.17 DEG
EMISS ANG 71.44 DEG
PHASE ANG 15.55 DEG
ALPHA 57.86 DEG

PRINCIPAL POINT
LATITUDE 0.80 DEG
LONGITUDE -1.04 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 1.22 DEG AB 61.3 KM
A LONG 1.70 DEG BC 355.7 KM
B LAT -5.49 DEG CD 98.4 KM
B LONG -6.12 DEG DA 64.8 KM
C LAT 0.15 DEG TILT DISTANCE 91.6
C LONG 0.52 DEG
D LAT 2.60 DEG
D LONG 0.06 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 1.27 DEG AB 155.5 KM
A LONG 0.45 DEG BC 236.7 KM
B LAT -0.90 DEG CD 288.4 KM
B LONG -4.20 DEG DA 12.2 KM
C LAT -1.49 DEG TILT DISTANCE 63.9
C LONG -9.03 DEG
D LAT 1.47 DEG
D LONG 9.10 DEG

MISSION/
FRAME NO.
3085

YR.MD.DY 670218
FR.MI.SEC 0403 4.81

TIME 0403 4.81

S/C POSITION
ALT 49.07 KM
ALT RT -0.0713 KM/SEC
LAT 2.52 DEG
LONG -1.30 DEG

S/C ORIENTATION
TILT ANG 57.14 DEG
TILT AZIM 21.55 DEG
SWING ANG 178.45 DEG
N.DEV. 320.28 DEG

PHOTO ILLUMINATION
SUN AZIM 92.58 DEG
INCID ANG 77.86 DEG
EMISS ANG 59.74 DEG
PHASE ANG 99.76 DEG
ALPHA -30.76 DEG

PRINCIPAL POINT
LATITUDE 4.94 DEG
LONGITUDE -0.34 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 12.42 DEG AB 354.5 KM
A LONG 7.39 DEG BC 38.6 KM
B LAT 3.34 DEG CD 64.1 KM
B LONG -0.31 DEG DA 224.7 KM
C LAT 3.85 DEG TILT DISTANCE 23.8
C LONG -1.48 DEG
D LAT 14.74 DEG
D LONG -6.57 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 6.38 DEG AB 75.3 KM
A LONG 0.48 DEG BC 6.5 KM
B LAT 4.12 DEG CD 76.0 KM
B LONG -0.56 DEG DA 12.5 KM
C LAT 4.21 DEG TILT DISTANCE 43.7
C LONG -0.76 DEG
D LAT 6.56 DEG
D LONG 0.11 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

MISSION/
FRAME NO.

3086 YR,MO, DY
HR,MI,SEC

TIME
670218
0732 9.41

S/C POSITION
ALT 46.94 KM
ALT RT -0.0545 KM/SEC
LAT 1.83 DEG
LONG -1.33 DEG

S/C ORIENTATION
TILT ANG 23.60 DEG
TILT AZIM 203.00 DEG
SWING ANG 2.34 DEG
N.DEV. 337.37 DEG

PHOTO ILLUMINATION
SUN AZIM 91.78 DEG
INCID ANG 77.22 DEG
EMISS ANG 24.28 DEG
PHASE ANG 69.71 DEG
ALPHA 6.33 DEG

PRINCIPAL POINT
LATITUDE 1.21 DEG
LONGITUDE -1.60 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.63 DEG AB 47.8 KM
A LONG -0.91 DEG BC 43.7 KM
B LAT 0.99 DEG CD 48.7 KM
B LONG -1.26 DEG DA 30.0 KM
C LAT 0.57 DEG TILT DISTANCE 34.8
C LONG -2.61 DEG
D LAT 1.58 DEG
D LONG -1.83 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.47 DEG AB 20.4 KM
A LONG -1.42 DEG BC 5.1 KM
B LAT 0.84 DEG CD 20.4 KM
B LONG -1.65 DEG DA 4.3 KM
C LAT 0.89 DEG TILT DISTANCE 66.3
C LONG -1.81 DEG
D LAT 1.52 DEG
D LONG -1.55 DEG

MISSION/
FRAME NO.

3087 YR,MO, DY
HR,MI,SEC

TIME
670218
0732 11.71

S/C POSITION
ALT 46.92 KM
ALT RT -0.0533 KM/SEC
LAT 1.78 DEG
LONG -1.20 DEG

S/C ORIENTATION
TILT ANG 23.60 DEG
TILT AZIM 202.68 DEG
SWING ANG 1.99 DEG
N.DEV. 337.36 DEG

PHOTO ILLUMINATION
SUN AZIM 91.78 DEG
INCID ANG 77.08 DEG
EMISS ANG 24.28 DEG
PHASE ANG 69.71 DEG
ALPHA 6.18 DEG

PRINCIPAL POINT
LATITUDE 1.16 DEG
LONGITUDE -1.46 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.57 DEG AB 47.8 KM
A LONG -0.77 DEG BC 43.5 KM
B LAT 0.94 DEG CD 48.5 KM
B LONG -1.12 DEG DA 29.9 KM
C LAT 0.53 DEG TILT DISTANCE 34.7
C LONG -2.47 DEG
D LAT 1.93 DEG
D LONG -1.69 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.42 DEG AB 20.3 KM
A LONG -1.29 DEG BC 5.0 KM
B LAT 0.79 DEG CD 20.4 KM
B LONG -1.51 DEG DA 4.3 KM
C LAT 0.84 DEG TILT DISTANCE 66.3
C LONG -1.67 DEG
D LAT 1.47 DEG
D LONG -1.42 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 251

04/10/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NO.
3088

YR. MO. DY
HR. MI. SEC
670218
073214.00

S/C POSITION
ALT 46.70 KM
ALT RT -0.0521 KM/SEC
LAT 1.73 DEG
LONG -1.07 DEG

S/C ORIENTATION
TILT ANG 23.60 DEG
TILT AZIM 202.37 DEG
SWING ANG 1.64 DEG
N.DEV. 337.35 DEG

PHOTO ILLUMINATION
SUN AZIM 91.77 DEG
INCID ANG 76.94 DEG
EMISS ANG 24.27 DEG
PHASE ANG 69.71 DEG
ALPHA 6.02 DEG

PRINCIPAL POINT
LATITUDE 1.11 DEG
LONGITUDE -1.33 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.52 DEG AB 47.7 KM
A LONG -0.64 DEG BC 43.4 KM
B LAT -0.01 DEG CD 48.3 KM
B LONG -0.99 DEG DA 29.9 KM
C LAT 0.48 DEG TILT DISTANCE 34.7
C LONG -2.33 DEG
D LAT 1.87 DEG
D LONG -1.56 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.37 DEG AB 20.3 KM
A LONG -1.15 DEG BC 5.0 KM
B LAT -0.74 DEG CD 20.3 KM
B LONG -1.38 DEG DA 4.3 KM
C LAT 0.80 DEG TILT DISTANCE 66.2
C LONG -1.53 DEG
D LAT 1.42 DEG
D LONG -1.28 DEG

MISSION/
FRAME NO.
3089

YR. MO. DY
HR. MI. SEC
670218
073216.27

S/C POSITION
ALT 46.58 KM
ALT RT -0.0510 KM/SEC
LAT 1.68 DEG
LONG -0.94 DEG

S/C ORIENTATION
TILT ANG 23.59 DEG
TILT AZIM 202.05 DEG
SWING ANG 1.29 DEG
N.DEV. 337.34 DEG

PHOTO ILLUMINATION
SUN AZIM 91.76 DEG
INCID ANG 76.80 DEG
EMISS ANG 24.26 DEG
PHASE ANG 69.71 DEG
ALPHA 5.87 DEG

PRINCIPAL POINT
LATITUDE 1.06 DEG
LONGITUDE -1.19 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.47 DEG AB 47.5 KM
A LONG -0.50 DEG BC 43.3 KM
B LAT -0.06 DEG CD 48.1 KM
B LONG -0.85 DEG DA 29.8 KM
C LAT 0.43 DEG TILT DISTANCE 34.7
C LONG -2.19 DEG
D LAT 1.82 DEG
D LONG -1.42 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.32 DEG AB 20.2 KM
A LONG -1.02 DEG BC 5.0 KM
B LAT 0.69 DEG CD 20.2 KM
B LONG -1.24 DEG DA 4.3 KM
C LAT 0.75 DEG TILT DISTANCE 66.2
C LONG -1.40 DEG
D LAT 1.37 DEG
D LONG -1.15 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71

PAGE 252

MISSION/
FRAME NO.
3090

TIME
670218
073218.53

YR.NO.DY
HR.MI.SEC

S/C POSITION
ALT 46.46 KM
ALT RT -0.0498 KM/SEC
LAT 1.63 DEG
LONG -0.81 DEG

S/C ORIENTATION
TILT ANG 23.59 DEG
TILT AZIM 201.73 DEG
SWING ANG 0.94 DEG
N.DEV. 337.33 DEG

PHOTO ILLUMINATION
SUN AZIM 91.75 DEG
INCID ANG 76.67 DEG
EMISS ANG 24.26 DEG
PHASE ANG 69.71 DEG
ALPHA 5.72 DEG

PRINCIPAL POINT
LATITUDE 1.01 DEG
LONGITUDE -1.06 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.42 DEG AB 47.5 KM
A LONG -0.37 DEG BC 43.2 KM
B LAT -0.11 DEG CD 48.0 KM
B LONG -0.72 DEG DA 29.7 KM
C LAT 0.39 DEG TILT DISTANCE 34.7
C LONG -2.05 DEG
D LAT 1.77 DEG
D LONG -1.29 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.27 DEG AB 20.2 KM
A LONG -0.68 DEG BC 5.0 KM
B LAT 0.64 DEG CD 20.2 KM
B LONG -1.11 DEG DA 4.3 KM
C LAT 0.70 DEG TILT DISTANCE 66.2
C LONG -1.26 DEG
D LAT 1.32 DEG
D LONG -1.02 DEG

MISSION/
FRAME NO.
3091

TIME
670218
073220.77

YR.NO.DY
HR.MI.SEC

S/C POSITION
ALT 46.35 KM
ALT RT -0.0486 KM/SEC
LAT 1.58 DEG
LONG -0.68 DEG

S/C ORIENTATION
TILT ANG 23.69 DEG
TILT AZIM 201.42 DEG
SWING ANG 0.50 DEG
N.DEV. 337.32 DEG

PHOTO ILLUMINATION
SUN AZIM 91.74 DEG
INCID ANG 76.53 DEG
EMISS ANG 24.26 DEG
PHASE ANG 69.71 DEG
ALPHA 5.57 DEG

PRINCIPAL POINT
LATITUDE 0.96 DEG
LONGITUDE -0.93 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.37 DEG AB 47.5 KM
A LONG -0.24 DEG BC 43.1 KM
B LAT -0.16 DEG CD 47.8 KM
B LONG -0.59 DEG DA 29.6 KM
C LAT 0.34 DEG TILT DISTANCE 34.7
C LONG -1.92 DEG
D LAT 1.72 DEG
D LONG -1.15 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.22 DEG AB 20.1 KM
A LONG -0.75 DEG BC 5.0 KM
B LAT 0.59 DEG CD 20.1 KM
B LONG -0.98 DEG DA 4.2 KM
C LAT 0.65 DEG TILT DISTANCE 66.1
C LONG -1.13 DEG
D LAT 1.27 DEG
D LONG -0.88 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 253

04/10/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NO.

3092
YR.MO.DY 670218
HR.MI.SEC 073222.99

S/C POSITION
ALT 46.25 KM
ALT RT -0.0475 KM/SEC
LAT 1.53 DEG
LONG -0.56 DEG

S/C ORIENTATION
TILT ANG 23.59 DEG
TILT AZIM 201.11 DEG
SWING ANG 0.25 DEG
N.DEV. 337.31 DEG

PHOTO ILLUMINATION
SUN AZIM 91.74 DEG
INCID ANG 76.40 DEG
EMISS ANG 24.26 DEG
PHASE ANG 69.71 DEG
-ALPHA 5.42 DEG

PRINCIPAL POINT
LATITUDE 0.91 DEG
LONGITUDE -0.80 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.32 DEG AB 47.5 KM
A LONG -0.11 DEG BC 43.0 KM
B LAT -0.20 DEG CD 47.5 KM
B LONG -0.45 DEG DA 29.5 KM
C LAT 0.30 DEG TILT DISTANCE 34.7
C LONG -1.78 DEG
D LAT 1.67 DEG
D LONG -1.02 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.17 DEG AB 20.1 KM
A LONG -0.62 DEG BC 5.0 KM
B LAT 0.54 DEG CD 20.1 KM
B LONG -0.85 DEG DA 4.2 KM
C LAT 0.60 DEG TILT DISTANCE 66.1
C LONG -1.00 DEG
D LAT 1.22 DEG
D LONG -0.75 DEG

MISSION/
FRAME NO.

3093
YR.MO.DY 670218
HR.MI.SEC 073225.19

S/C POSITION
ALT 46.14 KM
ALT RT -0.0464 KM/SEC
LAT 1.48 DEG
LONG -0.43 DEG

S/C ORIENTATION
TILT ANG 23.59 DEG
TILT AZIM 200.81 DEG
SWING ANG 359.92 DEG
N.DEV. 337.29 DEG

PHOTO ILLUMINATION
SUN AZIM 91.73 DEG
INCID ANG 76.27 DEG
EMISS ANG 24.25 DEG
PHASE ANG 69.71 DEG
ALPHA 5.27 DEG

PRINCIPAL POINT
LATITUDE 0.86 DEG
LONGITUDE -0.67 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.27 DEG AB 47.4 KM
A LONG 0.02 DEG BC 42.9 KM
B LAT -0.25 DEG CD 47.5 KM
B LONG -0.33 DEG DA 29.5 KM
C LAT 0.25 DEG TILT DISTANCE 34.7
C LONG -1.65 DEG
D LAT 1.62 DEG
D LONG -0.89 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.12 DEG AB 20.0 KM
A LONG -0.49 DEG BC 5.0 KM
B LAT 0.50 DEG CD 20.0 KM
B LONG -0.72 DEG DA 4.2 KM
C LAT -0.56 DEG TILT DISTANCE 66.1
C LONG -0.87 DEG
D LAT 1.17 DEG
D LONG -0.62 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 254

04/10/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NO.

3094
YR.MO.DY 670218
HR.MI.SEC 110110.30

S/C POSITION
ALT 45.42 KM
ALT RT -0.0398 KM/SEC
LAT 1.16 DEG
LONG -1.52 DEG

S/C ORIENTATION
TILT ANG 10.16 DEG
TILT AZIM 204.01 DEG
SWING ANG 2.98 DEG
N.DEV. 338.62 DEG

PHOTO ILLUMINATION
SUN AZIM 91.76 DEG
INCID ANG 75.48 DEG
EMISS ANG 10.42 DEG
PHASE ANG 71.76 DEG
ALPHA 3.49 DEG

PRINCIPAL POINT
LATITUDE 0.92 DEG
LONGITUDE -1.53 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 1.29 DEG AB 38.5 KM
A LONG -0.96 DEG BC 34.5 KM
B LAT 0.08 DEG CD 38.8 KM
B LONG -1.34 DEG DA 29.7 KM
C LAT 0.48 DEG TILT DISTANCE
C LONG -2.41 DEG 14.2
D LAT 1.64 DEG
D LONG -1.87 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 1.15 DEG AB 16.9 KM
A LONG -1.47 DEG BC 4.3 KM
B LAT 0.63 DEG CD 16.9 KM
B LONG -1.67 DEG DA 4.0 KM
C LAT 0.68 DEG TILT DISTANCE
C LONG -1.80 DEG 09.2
D LAT 1.19 DEG
D LONG -1.60 DEG

MISSION/
FRAME NO.

3095
YR.MO.DY 670218
HR.MI.SEC 110112.32

S/C POSITION
ALT 45.34 KM
ALT RT -0.0387 KM/SEC
LAT 1.12 DEG
LONG -1.41 DEG

S/C ORIENTATION
TILT ANG 10.15 DEG
TILT AZIM 203.31 DEG
SWING ANG 2.28 DEG
N.DEV. 338.62 DEG

PHOTO ILLUMINATION
SUN AZIM 91.75 DEG
INCID ANG 75.36 DEG
EMISS ANG 10.42 DEG
PHASE ANG 71.76 DEG
ALPHA 3.37 DEG

PRINCIPAL POINT
LATITUDE 0.87 DEG
LONGITUDE -1.51 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 1.24 DEG AB 38.5 KM
A LONG -0.84 DEG BC 34.5 KM
B LAT 0.04 DEG CD 38.7 KM
B LONG -1.22 DEG DA 29.7 KM
C LAT 0.44 DEG TILT DISTANCE
C LONG -2.29 DEG 14.2
D LAT 1.60 DEG
D LONG -1.75 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 1.10 DEG AB 16.9 KM
A LONG -1.35 DEG BC 4.3 KM
B LAT 0.58 DEG CD 16.9 KM
B LONG -1.55 DEG DA 4.0 KM
C LAT 0.63 DEG TILT DISTANCE
C LONG -1.68 DEG 09.1
D LAT 1.15 DEG
D LONG -1.48 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 255

04/10/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NO.
3096

TIME 670218
YR.MO.DY 670218
FR.MI.SEC 110114.34

S/C POSITION ALT 45.26 KM
ALT RT -0.0377 KM/SEC
LAT 1.08 DEG
LONG -1.29 DEG

S/C ORIENTATION TILT ANG 10.15 DEG
TILT AZIM 202.62 DEG
SWING ANG 1.57 DEG
N.DEV. 338.61 DEG

PHOTO ILLUMINATION SUN AZIM 91.74 DEG
INCID ANG 75.23 DEG
EMISS ANG 10.41 DEG
PHASE ANG 71.76 DEG
ALPHA 3.24 DEG

PRINCIPAL POINT LATITUDE 0.83 DEG
LONGITUDE -1.39 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.20 DEG AB 38.4 KM
A LONG -0.72 DEG BC 34.4 KM
B LAT -0.01 DEG CD 38.6 KM
B LONG -1.11 DEG DA 29.6 KM
C LAT 0.39 DEG TILT DISTANCE 14.2
C LONG -2.17 DEG
D LAT 1.55 DEG
D LONG -1.63 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.06 DEG AB 16.8 KM
A LONG -1.24 DEG BC 4.3 KM
B LAT 0.54 DEG CD 16.8 KM
B LONG -1.43 DEG DA 4.0 KM
C LAT 0.59 DEG TILT DISTANCE 09.0
C LONG -1.56 DEG
D LAT 1.10 DEG
D LONG -1.36 DEG

MISSION/
FRAME NO.
3097

TIME 670218
YR.MO.DY 670218
FR.MI.SEC 110116.37

S/C POSITION ALT 45.18 KM
ALT RT -0.0366 KM/SEC
LAT 1.03 DEG
LONG -1.17 DEG

S/C ORIENTATION TILT ANG 10.14 DEG
TILT AZIM 201.93 DEG
SWING ANG 0.86 DEG
N.DEV. 338.61 DEG

PHOTO ILLUMINATION SUN AZIM 91.73 DEG
INCID ANG 75.11 DEG
EMISS ANG 10.41 DEG
PHASE ANG 71.76 DEG
ALPHA 3.12 DEG

PRINCIPAL POINT LATITUDE 0.78 DEG
LONGITUDE -1.27 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.15 DEG AB 38.4 KM
A LONG -0.60 DEG BC 34.3 KM
B LAT -0.05 DEG CD 38.5 KM
B LONG -0.59 DEG DA 29.6 KM
C LAT 0.35 DEG TILT DISTANCE 14.2
C LONG -2.04 DEG
D LAT 1.50 DEG
D LONG -1.51 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.01 DEG AB 16.8 KM
A LONG -1.12 DEG BC 4.3 KM
B LAT 0.49 DEG CD 16.8 KM
B LONG -1.31 DEG DA 4.0 KM
C LAT 0.54 DEG TILT DISTANCE 09.0
C LONG -1.44 DEG
D LAT 1.06 DEG
D LONG -1.24 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

MISSION/
FRAME NO. 3098

YR. MO. DY 670218
HR. MI. SEC 110118.41

S/C POSITION
ALT 45.11 KM
ALT RT -0.5356 KM/SEC
LAT 3.99 DEG
LONG -1.06 DEG

S/C ORIENTATION
TILT ANG 10.14 DEG
TILT AZIM 201.23 DEG
SWING ANG 0.15 DEG
N.DEV. 338.60 DEG

PHOTO ILLUMINATION
SUN AZIM 91.72 DEG
INCID ANG 74.99 DEG
EMISS ANG 10.41 DEG
PHASE ANG 71.76 DEG
ALPHA 2.99 DEG

PRINCIPAL POINT
LATITUDE 0.74 DEG
LONGITUDE -1.15 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.11 DEG AB 38.4 KM
A LONG -0.49 DEG BC 34.3 KM
B LAT -0.10 DEG CD 38.4 KM
B LONG -0.87 DEG DA 29.5 KM
C LAT 0.31 DEG TILT DISTANCE 14.2
C LONG -1.92 DEG
D LAT 1.46 DEG
D LONG -1.39 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 3.96 DEG AB 16.8 KM
A LONG -1.00 DEG BC 4.3 KM
B LAT 0.45 DEG CD 16.8 KM
B LONG -1.19 DEG DA 4.0 KM
C LAT 0.50 DEG TILT DISTANCE 39.0
C LONG -1.32 DEG
D LAT 1.01 DEG
D LONG -1.12 DEG

MISSION/
FRAME NO. 3099

YR. MO. DY 670218
HR. MI. SEC 110120.44

S/C POSITION
ALT 45.04 KM
ALT RT -0.0345 KM/SEC
LAT 0.94 DEG
LONG -0.94 DEG

S/C ORIENTATION
TILT ANG 10.14 DEG
TILT AZIM 200.53 DEG
SWING ANG 359.44 DEG
N.DEV. 338.60 DEG

PHOTO ILLUMINATION
SUN AZIM 91.71 DEG
INCID ANG 74.87 DEG
EMISS ANG 10.41 DEG
PHASE ANG 71.76 DEG
ALPHA 2.87 DEG

PRINCIPAL POINT
LATITUDE 0.69 DEG
LONGITUDE -1.03 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.06 DEG AB 38.3 KM
A LONG -0.37 DEG BC 34.2 KM
B LAT -0.14 DEG CD 38.3 KM
B LONG -0.75 DEG DA 29.5 KM
C LAT 0.26 DEG TILT DISTANCE 14.2
C LONG -1.80 DEG
D LAT 1.41 DEG
D LONG -1.27 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 0.92 DEG AB 16.7 KM
A LONG -0.88 DEG BC 4.3 KM
B LAT 0.40 DEG CD 16.7 KM
B LONG -1.07 DEG DA 4.0 KM
C LAT 0.45 DEG TILT DISTANCE 39.0
C LONG -1.20 DEG
D LAT 0.96 DEG
D LONG -1.00 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71 PAGE 257

MISSION/
FRAME NO.
3100

YR.MO.DY 670218.
FR.MI.SEC 110122.48

S/C POSITION ALT 44.97 KM
ALT RT -0.0335 KM/SEC
LAT 0.90 DEG
LONG -0.82 DEG

S/C ORIENTATION TILT ANG 10.14 DEG
TILT AZIM 199.83 DEG
SWING ANG 358.73 DEG
N.DEV. 338.59 DEG

PHOTO ILLUMINATION SUN AZIM 91.70 DEG
INCID ANG 74.75 DEG
EMISS ANG 10.41 DEG
PHASE ANG 71.76 DEG
ALPHA 2.74 DEG

PRINCIPAL POINT LATITUDE 0.55 DEG
LONGITUDE -0.91 DEG

MEDIUM RESOLUTION CORNER COORDINATE SIDE LENGTH
A LAT 1.01 DEG AB 38.3 KM
A LONG -0.25 DEG BC 34.2 KM
B LAT -0.19 DEG CD 38.2 KM
B LONG -0.43 DEG DA 29.4 KM
C LAT 0.22 DEG TILT DISTANCE 14.2
C LONG -1.68 DEG
D LAT 1.35 DEG
D LONG -1.15 DEG

HIGH RESOLUTION CORNER COORDINATE SIDE LENGTH
A LAT 0.87 DEG AB 16.7 KM
A LONG -0.76 DEG BC 4.3 KM
B LAT 0.35 DEG CD 16.7 KM
B LONG -0.95 DEG DA 4.0 KM
C LAT 0.41 DEG TILT DISTANCE 09.0
C LONG -1.08 DEG
D LAT -0.92 DEG
D LONG -0.88 DEG

MISSION/
FRAME NO.
3101

YR.MO.DY 670219
FR.MI.SEC 110124.52

S/C POSITION ALT 44.90 KM
ALT RT -0.0324 KM/SEC
LAT 0.85 DEG
LONG -0.71 DEG

S/C ORIENTATION TILT ANG 10.15 DEG
TILT AZIM 199.13 DEG
SWING ANG 358.01 DEG
N.DEV. 338.59 DEG

PHOTO ILLUMINATION SUN AZIM 91.59 DEG
INCID ANG 74.53 DEG
EMISS ANG 10.41 DEG
PHASE ANG 71.76 DEG
ALPHA 2.62 DEG

PRINCIPAL POINT LATITUDE 0.59 DEG
LONGITUDE -0.79 DEG

MEDIUM RESOLUTION CORNER COORDINATE SIDE LENGTH
A LAT 0.57 DEG AB 38.3 KM
A LONG -0.13 DEG BC 34.1 KM
B LAT -0.24 DEG CD 38.1 KM
B LONG -0.41 DEG DA 29.4 KM
C LAT 0.17 DEG TILT DISTANCE 14.2
C LONG -1.55 DEG
D LAT 1.31 DEG
D LONG -1.03 DEG

HIGH RESOLUTION CORNER COORDINATE SIDE LENGTH
A LAT 0.82 DEG AB 16.7 KM
A LONG -0.64 DEG BC 4.3 KM
B LAT 0.31 DEG CD 16.7 KM
B LONG -0.83 DEG DA 4.0 KM
C LAT 0.36 DEG TILT DISTANCE 09.1
C LONG -0.96 DEG
D LAT 0.87 DEG
D LONG -0.76 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71 PAGE 253

MISSION/
FRAME NO.

3102
YR.MO.DY 670218
HR.MI.SEC 1426 2.51

S/C POSITION ALT 51.88 KM
ALT RT -0.0912 KM/SEC
LAT 3.32 DEG
LONG -9.08 DEG

S/C ORIENTATION TILT ANG 41.24 DEG
TILT AZIM 0.47 DEG
SWING ANG 162.29 DEG
N.DEV. 341.66 DEG

PHOTO ILLUMINATION SUN AZIM 92.24 DEG
INCID ANG 81.29 DEG
EMISS ANG 42.76 DEG
PHASE ANG 82.42 DEG
ALPHA -4.29 DEG

PRINCIPAL POINT LATITUDE 4.84 DEG
LONGITUDE -9.07 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 5.09 DEG AB 77.9 KM
A LONG -7.61 DEG BC 36.7 KM
B LAT 3.78 DEG CD 114.9 KM
B LONG -6.74 DEG DA 96.4 KM
C LAT 4.15 DEG TILT DISTANCE 70.1
C LONG -9.50 DEG
D LAT 7.54 DEG
D LONG -9.56 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 5.42 DEG AB 33.8 KM
A LONG -8.80 DEG BC 5.6 KM
B LAT 4.35 DEG CD 35.1 KM
B LONG -9.09 DEG DA 7.9 KM
C LAT 4.41 DEG TILT DISTANCE 34.4
C LONG -9.27 DEG
D LAT 5.55 DEG
D LONG -9.03 DEG

MISSION/
FRAME NO.

3103
YR.MO.DY 670218
HR.MI.SEC 1756 0.61

S/C POSITION ALT 45.89 KM
ALT RT -0.0473 KM/SEC
LAT 1.41 DEG
LONG -5.99 DEG

S/C ORIENTATION TILT ANG 18.98 DEG
TILT AZIM 204.77 DEG
SWING ANG 3.65 DEG
N.DEV. 337.58 DEG

PHOTO ILLUMINATION SUN AZIM 91.73 DEG
INCID ANG 75.54 DEG
EMISS ANG 19.50 DEG
PHASE ANG 69.73 DEG
ALPHA 6.05 DEG

PRINCIPAL POINT LATITUDE 0.93 DEG
LONGITUDE -6.21 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.32 DEG AB 42.9 KM
A LONG -5.54 DEG BC 39.4 KM
B LAT -0.75 DEG CD 43.8 KM
B LONG -5.90 DEG DA 29.4 KM
C LAT 0.49 DEG TILT DISTANCE 27.3
C LONG -7.12 DEG
D LAT 1.68 DEG
D LONG -6.44 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.18 DEG AB 18.6 KM
A LONG -5.04 DEG BC 4.7 KM
B LAT 0.60 DEG CD 18.6 KM
B LONG -6.26 DEG DA 4.1 KM
C LAT 0.66 DEG TILT DISTANCE 09.6
C LONG -6.40 DEG
D LAT 1.23 DEG
D LONG -5.17 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA.

PAGE 259

00/17/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NO.

310A
TIME 670218
YR.MO.DY 175017.61
FR.MI.SEC

S/C POSITION
ALT 45.50 KM
ALT PT -0.0429 KM/SEC
LAT 1.22 DEG
LONG -5.51 DEG

S/C ORIENTATION
TILT ANG 18.95 DEG
TILT AZIM 203.25 DEG
SWING ANG 2.04 DEG
N.DEV. 337.54 DEG

PHOTO ILLUMINATION
SUN AZIM 91.70 DEG
INCID ANG 76.03 DEG
EMISS ANG 19.47 DEG
PHASE ANG 69.73 DEG
ALPHA 5.50 DEG

PRINCIPAL POINT
LATITUDE 0.75 DEG
LONGITUDE -5.71 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 1.13 DEG AB 42.7 KM
A LONG -5.04 DEG BC 39.9 KM
B LAT -0.23 DEG CD 43.2 KM
B LONG -5.40 DEG DA 29.1 KM
C LAT 0.22 DEG TILT DISTANCE 27.3
C LONG -6.60 DEG
D LAT 1.48 DEG
D LONG -5.53 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 0.99 DEG AB 18.4 KM
A LONG -5.54 DEG BC 4.7 KM
B LAT 0.42 DEG CD 18.5 KM
B LONG -5.76 DEG DA 4.1 KM
C LAT 3.47 DEG TILT DISTANCE 69.3
C LONG -5.90 DEG
D LAT 1.03 DEG
D LONG -5.67 DEG

MISSION/
FRAME NO.

310B
TIME 670218
YR.MO.DY 175017.61
FR.MI.SEC

S/C POSITION
ALT 45.16 KM
ALT PT -0.0385 KM/SEC
LAT 1.03 DEG
LONG -5.02 DEG

S/C ORIENTATION
TILT ANG 18.94 DEG
TILT AZIM 201.74 DEG
SWING ANG 0.43 DEG
N.DEV. 337.51 DEG

PHOTO ILLUMINATION
SUN AZIM 91.66 DEG
INCID ANG 75.52 DEG
EMISS ANG 19.45 DEG
PHASE ANG 69.73 DEG
ALPHA 4.95 DEG

PRINCIPAL POINT
LATITUDE 0.56 DEG
LONGITUDE -5.21 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 0.94 DEG AB 42.5 KM
A LONG -4.54 DEG BC 38.7 KM
B LAT -0.42 DEG CD 42.7 KM
B LONG -4.90 DEG DA 28.9 KM
C LAT 0.04 DEG TILT DISTANCE 27.3
C LONG -6.09 DEG
D LAT 1.28 DEG
D LONG -5.43 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 0.79 DEG AB 18.3 KM
A LONG -5.04 DEG BC 4.6 KM
B LAT 0.23 DEG CD 18.3 KM
B LONG -5.25 DEG DA 4.1 KM
C LAT 0.28 DEG TILT DISTANCE 29.1
C LONG -5.40 DEG
D LAT 3.84 DEG
D LONG -5.17 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71 PAGE 250

MISSION/
FRAME NO.
3106

YR,MO,DY 670218
HR,MI,SEC 175828.11

S/C POSITION
ALT 44.85 KM
ALT RT -0.0341 KM/SEC
LAT 0.84 DEG
LONG -4.53 DEG

S/C ORIENTATION
TILT ANG 18.94 DEG
TILT AZIM 200.22 DEG
SWING ANG 358.82 DEG
N.DEV. 337.48 DEG

PHOTO ILLUMINATION
SUN AZIM 91.62 DEG
INCID ANG 75.01 DEG
EMISS ANG 19.45 DEG
PHASE ANG 69.73 DEG
ALPHA 4.40 DEG

PRINCIPAL POINT
LATITUDE 0.37 DEG
LONGITUDE -4.71 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT C.74 DEG AB 42.5 KM
A LONG -4.04 DEG BC 38.4 KM
B LAT -0.51 DEG CD 42.3 KM
B LONG -4.40 DEG DA 28.7 KM
C LAT -0.14 DEG TILT DISTANCE
C LONG -5.58 DEG 27.3
D LAT 1.09 DEG
D LONG -4.52 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 0.60 DEG AB 18.2 KM
A LONG -4.54 DEG BC 4.6 KM
B LAT 0.04 DEG CD 18.2 KM
B LONG -4.75 DEG DA 4.0 KM
C LAT 0.10 DEG TILT DISTANCE
C LONG -4.89 DEG 09.1
D LAT 0.65 DEG
D LONG -4.67 DEG

MISSION/
FRAME NO.
3107

YR,MO,DY 670219
HR,MI,SEC 005415.91

S/C POSITION
ALT 43.90 KM
ALT RT -0.0102 KM/SEC
LAT -0.24 DEG
LONG -5.56 DEG

S/C ORIENTATION
TILT ANG 5.18 DEG
TILT AZIM 198.17 DEG
SWING ANG 356.58 DEG
N.DEV. 338.33 DEG

PHOTO ILLUMINATION
SUN AZIM 91.42 DEG
INCID ANG 72.36 DEG
EMISS ANG 5.31 DEG
PHASE ANG 70.90 DEG
ALPHA 1.38 DEG

PRINCIPAL POINT
LATITUDE -0.37 DEG
LONGITUDE -5.60 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -0.01 DEG AB 36.3 KM
A LONG -4.53 DEG BC 31.7 KM
B LAT -1.14 DEG CD 36.2 KM
B LONG -5.34 DEG DA 29.4 KM
C LAT -0.75 DEG TILT DISTANCE
C LONG -6.31 DEG 7.1
D LAT 0.34 DEG
D LONG -5.63 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -0.15 DEG AB 15.9 KM
A LONG -5.44 DEG BC 4.1 KM
B LAT -0.64 DEG CD 15.9 KM
B LONG -5.63 DEG DA 3.9 KM
C LAT -0.59 DEG TILT DISTANCE
C LONG -5.76 DEG 55.2
D LAT -0.10 DEG
D LONG -5.56 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 261

04/10/71

MISSION AND FRAME NUMBER

FULL LIST ORDERED BY

MISSION/
FRAME NO.
3108

YR. MO. DY
HR. MI. SEC
670219 042753.60

S/C POSITION
ALT 51.01 KM
ALT RT 0.0857 KM/SEC
LAT -4.38 DEG
LONG 3.25 DEG

S/C ORIENTATION
TILT ANG 0.77 DEG
TILT AZIM 93.70 DEG
SWING ANG 252.58 DEG
N.DEV. 338.89 DEG

PHOTO ILLUMINATION
SUN AZIM 89.30 DEG
INCID ANG 61.57 DEG
EMISS ANG 0.79 DEG
PHASE ANG 62.46 DEG
ALPHA -0.79 DEG

PRINCIPAL POINT
LATITUDE -4.38 DEG
LONGITUDE 3.28 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -3.54 DEG AB 41.9 KM
A LONG 4.08 DEG BC 35.2 KM
B LAT -5.23 DEG CD 41.5 KM
B LONG 3.58 DEG DA 35.4 KM
C LAT -4.81 DEG TILT DISTANCE 0.9
C LONG 2.49 DEG
D LAT -3.53 DEG
D LONG 2.99 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -4.12 DEG AB 18.3 KM
A LONG 3.46 DEG BC 4.6 KM
B LAT -4.69 DEG CD 18.3 KM
B LONG 3.24 DEG DA 4.6 KM
C LAT -4.63 DEG TILT DISTANCE 8.1
C LONG 3.10 DEG
D LAT -4.07 DEG
D LONG 3.31 DEG

MISSION/
FRAME NO.
3109

YR. MO. DY
HR. MI. SEC
670219 0428 2.52

S/C POSITION
ALT 51.80 KM
ALT RT 0.0902 KM/SEC
LAT -4.57 DEG
LONG 3.76 DEG

S/C ORIENTATION
TILT ANG 1.30 DEG
TILT AZIM 100.74 DEG
SWING ANG 259.67 DEG
N.DEV. 338.93 DEG

PHOTO ILLUMINATION
SUN AZIM 89.15 DEG
INCID ANG 61.15 DEG
EMISS ANG 1.34 DEG
PHASE ANG 62.46 DEG
ALPHA -1.31 DEG

PRINCIPAL POINT
LATITUDE -4.58 DEG
LONGITUDE 3.80 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -4.13 DEG AB 42.7 KM
A LONG 4.62 DEG BC 35.8 KM
B LAT -5.45 DEG CD 42.1 KM
B LONG 4.11 DEG DA 36.0 KM
C LAT -5.01 DEG TILT DISTANCE 1.7
C LONG 3.01 DEG
D LAT -3.72 DEG
D LONG 3.51 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -4.32 DEG AB 18.6 KM
A LONG 3.99 DEG BC 4.7 KM
B LAT -4.89 DEG CD 18.6 KM
B LONG 3.76 DEG DA 4.7 KM
C LAT -4.84 DEG TILT DISTANCE 13.8
C LONG 3.62 DEG
D LAT -4.26 DEG
D LONG 3.84 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71 PAGE 262

MISSION/
FRAME NO.

3110 YR, MO, DY 670219
PR, MI, SEC 342611.60

S/C POSITION
ALT 52.64 KM
ALT RT 0.0948 KM/SEC
LAT -4.77 DEG
LONG 4.28 DEG

S/C ORIENTATION
TILT ANG 1.85 DEG
TILT AZIM 103.59 DEG
SWING ANG 262.66 DEG
N.DEV. 338.98 DEG

PHOTO ILLUMINATION
SUN AZIM 88.99 DEG
INCID ANG 60.62 DEG
EMISS ANG 1.91 DEG
PHASE ANG 62.46 DEG
ALPHA -1.84 DEG

PRINCIPAL POINT
LATITUDE -4.79 DEG
LONGITUDE 4.34 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -4.33 DEG AB 43.6 KM
A LONG 5.17 DEG BC 36.4 KM
B LAT -5.67 DEG CD 42.5 KM
B LONG 4.66 DEG DA 36.6 KM
C LAT -5.22 DEG TILT DISTANCE 2.4
C LONG 3.54 DEG
D LAT -3.91 DEG
D LONG 4.04 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -4.52 DEG AB 19.0 KM
A LONG 4.52 DEG BC 4.8 KM
B LAT -5.10 DEG CD 18.9 KM
B LONG 4.30 DEG DA 4.8 KM
C LAT -5.04 DEG TILT DISTANCE 19.6
C LONG 4.15 DEG
D LAT -4.46 DEG
D LONG 4.38 DEG

MISSION/
FRAME NO.

3111 YR, MO, DY 670219
PR, MI, SEC 042620.82

S/C POSITION
ALT 53.53 KM
ALT RT 0.0995 KM/SEC
LAT -4.97 DEG
LONG 4.81 DEG

S/C ORIENTATION
TILT ANG 2.41 DEG
TILT AZIM 105.28 DEG
SWING ANG 264.30 DEG
N.DEV. 339.03 DEG

PHOTO ILLUMINATION
SUN AZIM 88.82 DEG
INCID ANG 60.08 DEG
EMISS ANG 2.48 DEG
PHASE ANG 62.46 DEG
ALPHA -2.39 DEG

PRINCIPAL POINT
LATITUDE -4.99 DEG
LONGITUDE 4.88 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -4.52 DEG AB 44.5 KM
A LONG 5.74 DEG BC 37.1 KM
B LAT -5.89 DEG CD 43.2 KM
B LONG 5.21 DEG DA 37.2 KM
C LAT -5.43 DEG TILT DISTANCE 3.2
C LONG 4.07 DEG
D LAT -4.10 DEG
D LONG 4.58 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -4.72 DEG AB 19.3 KM
A LONG 5.07 DEG BC 4.8 KM
B LAT -5.31 DEG CD 19.2 KM
B LONG 4.84 DEG DA 4.9 KM
C LAT -5.25 DEG TILT DISTANCE 25.6
C LONG 4.69 DEG
D LAT -4.66 DEG
D LONG 4.92 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

MISSION/
FRAME NO.

3112
YR.MO.DY 670219
HR.MI.SEC 075244.51

S/C POSITION
ALT 43.95 KM
ALT RT 0.0026 KM/SEC
LAT -0.87 DEG
LONG -7.82 DEG

S/C ORIENTATION
TILT ANG 35.35 DEG
TILT AZIM 201.70 DEG
SWING ANG 0.90 DEG
N.DEV. 334.59 DEG

PHOTO ILLUMINATION
SUN AZIM 90.93 DEG
INCID ANG 71.41 DEG
EMISS ANG 36.39 DEG
PHASE ANG 62.86 DEG
ALPHA 3.86 DEG

PRINCIPAL POINT
LATITUDE -1.83 DEG
LONGITUDE -8.29 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -1.35 DEG AB 62.3 KM
A LONG -7.51 DEG BC 54.2 KM
B LAT -3.37 DEG CD 63.0 KM
B LONG -7.64 DEG DA 28.9 KM
C LAT -2.76 DEG TILT DISTANCE 56.5
C LONG -9.52 DEG
D LAT -1.01 DEG
D LONG -6.40 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -1.53 DEG AB 24.7 KM
A LONG -8.01 DEG BC 5.7 KM
B LAT -2.29 DEG CD 24.7 KM
B LONG -8.28 DEG DA 4.3 KM
C LAT -2.23 DEG TILT DISTANCE 32.4
C LONG -9.46 DEG
D LAT -1.48 DEG
D LONG -8.14 DEG

MISSION/
FRAME NO.

3113
YR.MO.DY 670219
HR.MI.SEC 075246.91

S/C POSITION
ALT 43.96 KM
ALT RT 0.0039 KM/SEC
LAT -0.92 DEG
LONG -7.68 DEG

S/C ORIENTATION
TILT ANG 35.35 DEG
TILT AZIM 201.48 DEG
SWING ANG 0.65 DEG
N.DEV. 334.58 DEG

PHOTO ILLUMINATION
SUN AZIM 90.90 DEG
INCID ANG 71.26 DEG
EMISS ANG 36.39 DEG
PHASE ANG 62.86 DEG
ALPHA 3.67 DEG

PRINCIPAL POINT
LATITUDE -1.88 DEG
LONGITUDE -8.06 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -1.41 DEG AB 62.2 KM
A LONG -7.36 DEG BC 54.2 KM
B LAT -2.43 DEG CD 62.9 KM
B LONG -7.70 DEG DA 28.9 KM
C LAT -2.81 DEG TILT DISTANCE 56.5
C LONG -9.38 DEG
D LAT -1.07 DEG
D LONG -6.25 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -1.58 DEG AB 24.7 KM
A LONG -7.87 DEG BC 5.7 KM
B LAT -2.35 DEG CD 24.7 KM
B LONG -8.14 DEG DA 4.3 KM
C LAT -2.28 DEG TILT DISTANCE 32.4
C LONG -9.31 DEG
D LAT -1.53 DEG
D LONG -8.00 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 02/19/71 PAGE 264

MISSION/
FRAME NO.

3114
YR.NO.DY 670219
HR.MI.SEC 075349.31

S/C POSITION
ALT 43.97 KM
ALT RT 0.0051 KM/SEC
LAT -0.97 DEG
LONG -7.54 DEG

S/C ORIENTATION
TILT ANG 35.35 DEG
TILT AZIM 201.27 DEG
SWING ANG 0.39 DEG
N.DEV. 334.57 DEG

PHOTO ILLUMINATION
SUN AZIM 90.88 DEG
INCID ANG 71.12 DEG
EMISS ANG 36.39 DEG
PHASE ANG 62.86 DEG
ALPHA 3.49 DEG

PRINCIPAL POINT
LATITUDE -1.94 DEG
LONGITUDE -7.92 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -1.46 DEG AB 62.3 KM
A LONG -7.22 DEG BC 54.2 KM
B LAT -3.49 DEG CD 62.8 KM
B LONG -7.56 DEG DA 28.9 KM
C LAT -2.86 DEG TILT DISTANCE 55.5
C LONG -9.23 DEG
D LAT -1.12 DEG
D LONG -2.11 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -1.64 DEG AB 24.7 KM
A LONG -7.73 DEG BC 5.7 KM
B LAT -2.40 DEG CD 24.7 KM
B LONG -8.00 DEG DA 4.3 KM
C LAT -2.34 DEG TILT DISTANCE 32.4
C LONG -8.17 DEG
D LAT -1.59 DEG
D LONG -7.85 DEG

MISSION/
FRAME NO.

3115
YR.NO.DY 670219
HR.MI.SEC 075351.71

S/C POSITION
ALT 43.98 KM
ALT RT 0.0064 KM/SEC
LAT -1.03 DEG
LONG -7.41 DEG

S/C ORIENTATION
TILT ANG 35.35 DEG
TILT AZIM 201.06 DEG
SWING ANG 0.14 DEG
N.DEV. 334.56 DEG

PHOTO ILLUMINATION
SUN AZIM 90.86 DEG
INCID ANG 70.98 DEG
EMISS ANG 36.39 DEG
PHASE ANG 62.86 DEG
ALPHA 3.30 DEG

PRINCIPAL POINT
LATITUDE -1.99 DEG
LONGITUDE -7.78 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -1.52 DEG AB 62.4 KM
A LONG -7.08 DEG BC 54.2 KM
B LAT -3.55 DEG CD 62.7 KM
B LONG -7.41 DEG DA 28.9 KM
C LAT -2.51 DEG TILT DISTANCE 55.5
C LONG -9.09 DEG
D LAT -1.18 DEG
D LONG -7.57 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -1.69 DEG AB 24.7 KM
A LONG -7.59 DEG BC 5.7 KM
B LAT -2.46 DEG CD 24.7 KM
B LONG -7.86 DEG DA 4.3 KM
C LAT -2.39 DEG TILT DISTANCE 32.4
C LONG -8.03 DEG
D LAT -1.64 DEG
D LONG -7.72 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 265

04/10/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NO. 3116
YR.MO.DY 670219
HR.MI.SEC 112348.82

S/C POSITION
ALT 46.54 KM
ALT RT 0.0507 KM/SEC
LAT -2.94 DEG
LONG -4.34 DEG

S/C ORIENTATION
TILT ANG 6.36 DEG
TILT AZIM 196.79 DEG
SWING ANG 355.72 DEG
N.DEV. 338.83 DEG

PHOTO ILLUMINATION
SUN AZIM 90.21 DEG
INCID ANG 65.82 DEG
EMISS ANG 6.53 DEG
PHASE ANG 64.11 DEG
ALPHA 1.55 DEG

PRINCIPAL POINT
LATITUDE -3.11 DEG
LONGITUDE -4.39 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.72 DEG AB 38.7 KM
A LONG -3.69 DEG BC 34.0 KM
B LAT -3.93 DEG CD 38.5 KM
B LONG -4.10 DEG DA 31.0 KM
C LAT -3.53 DEG TILT DISTANCE 8.8
C LONG -5.15 DEG
D LAT -2.36 DEG
D LONG -4.65 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.88 DEG AB 17.0 KM
A LONG -4.23 DEG BC 4.3 KM
B LAT -3.40 DEG CD 16.9 KM
B LONG -4.43 DEG DA 4.1 KM
C LAT -3.35 DEG TILT DISTANCE 67.9
C LONG -4.56 DEG
D LAT -2.83 DEG
D LONG -4.36 DEG

MISSION/
FRAME NO. 3117
YR.MO.DY 670219
HR.MI.SEC 112356.95

S/C POSITION
ALT 46.97 KM
ALT RT 0.0549 KM/SEC
LAT -3.12 DEG
LONG -3.88 DEG

S/C ORIENTATION
TILT ANG 6.42 DEG
TILT AZIM 192.30 DEG
SWING ANG 351.23 DEG
N.DEV. 338.85 DEG

PHOTO ILLUMINATION
SUN AZIM 90.09 DEG
INCID ANG 65.33 DEG
EMISS ANG 6.59 DEG
PHASE ANG 64.11 DEG
ALPHA 1.95 DEG

PRINCIPAL POINT
LATITUDE -3.29 DEG
LONGITUDE -3.91 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.91 DEG AB 39.2 KM
A LONG -3.20 DEG BC 34.3 KM
B LAT -4.13 DEG CD 38.8 KM
B LONG -3.62 DEG DA 31.3 KM
C LAT -3.72 DEG TILT DISTANCE 8.8
C LONG -4.67 DEG
D LAT -2.54 DEG
D LONG -4.17 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -3.06 DEG AB 17.1 KM
A LONG -3.75 DEG BC 4.4 KM
B LAT -3.59 DEG CD 17.1 KM
B LONG -3.95 DEG DA 4.2 KM
C LAT -3.54 DEG TILT DISTANCE 68.5
C LONG -4.08 DEG
D LAT -3.01 DEG
D LONG -3.88 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 266

04/10/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NO.

3118
YR.MO.DY 670219
HR.MI.SEC 1124 5.32

S/C POSITION
ALT 47.45 KM
ALT RT 0.0592 KM/SEC
LAT -3.31 DEG
LONG -3.40 DEG

S/C ORIENTATION
TILT ANG 6.51 DEG
TILT AZIM 187.84 DEG
SWING ANG 346.77 DEG
N.DEV. 338.88 DEG

PHOTO ILLUMINATION
SUN AZIM 89.98 DEG
INCID ANG 64.84 DEG
EMISS ANG 6.59 DEG
PHASE ANG 64.11 DEG
ALPHA 0.55 DEG

PRINCIPAL POINT
LATITUDE -3.48 DEG
LONGITUDE -3.42 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -3.09 DEG AB 39.8 KM
A LONG -2.70 DEG BC 34.7 KM
B LAT -4.33 DEG CD 39.1 KM
B LONG -3.12 DEG DA 31.6 KM
C LAT -3.51 DEG TILT DISTANCE 9.0
C LONG -4.19 DEG
D LAT -2.72 DEG
D LONG -3.58 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -3.25 DEG AB 17.3 KM
A LONG -3.26 DEG BC 4.4 KM
B LAT -3.78 DEG CD 17.3 KM
B LONG -3.46 DEG DA 4.2 KM
C LAT -3.73 DEG TILT DISTANCE 69.5
C LONG -3.59 DEG
D LAT -3.20 DEG
D LONG -3.39 DEG

MISSION/
FRAME NO.

3119
YR.MO.DY 670219
HR.MI.SEC 112413.81

S/C POSITION
ALT 47.97 KM
ALT RT 0.0635 KM/SEC
LAT -3.49 DEG
LONG -2.91 DEG

S/C ORIENTATION
TILT ANG 6.65 DEG
TILT AZIM 183.44 DEG
SWING ANG 342.37 DEG
N.DEV. 338.90 DEG

PHOTO ILLUMINATION
SUN AZIM 89.86 DEG
INCID ANG 64.34 DEG
EMISS ANG 6.83 DEG
PHASE ANG 64.11 DEG
ALPHA 0.03 DEG

PRINCIPAL POINT
LATITUDE -3.67 DEG
LONGITUDE -2.92 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -3.28 DEG AB 40.4 KM
A LONG -2.19 DEG BC 35.1 KM
B LAT -4.54 DEG CD 39.4 KM
B LONG -2.61 DEG DA 32.0 KM
C LAT -4.10 DEG TILT DISTANCE 9.1
C LONG -3.69 DEG
D LAT -2.51 DEG
D LONG -3.18 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -3.44 DEG AB 17.5 KM
A LONG -2.75 DEG BC 4.5 KM
B LAT -3.98 DEG CD 17.5 KM
B LONG -2.96 DEG DA 4.3 KM
C LAT -3.92 DEG TILT DISTANCE 71.0
C LONG -3.10 DEG
D LAT -3.39 DEG
D LONG -2.89 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 267

04/10/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/ FRAME NO. 3120	TIME 670219	S/C POSITION ALT 45.33 KM ALT RT -0.0209 KM/SEC LAT 0.03 DEG LONG -15.93 DEG	S/C ORIENTATION TILT ANG 56.24 DEG TILT AZIM 257.95 DEG SWING ANG 27.42 DEG N.DEV. 301.61 DEG	PHOTO ILLUMINATION SUN AZIM 91.33 DEG INCID ANG 77.46 DEG EMISS ANG 69.90 DEG PHASE ANG 14.87 DEG ALPHA 52.52 DEG	PRINCIPAL POINT LATITUDE -0.73 DEG LONGITUDE -19.51 DEG																		
<p>MEDIUM RESOLUTION</p> <table border="0"> <tr> <td>CORNER COORDINATE</td> <td>SIDE LENGTH</td> </tr> <tr> <td>A LAT -0.42 DEG</td> <td>AB 58.9 KM</td> </tr> <tr> <td>A LONG -17.67 DEG</td> <td>BC 341.4 KM</td> </tr> <tr> <td>B LAT -6.59 DEG</td> <td>CD 95.3 KM</td> </tr> <tr> <td>B LONG -24.49 DEG</td> <td>DA 54.8 KM</td> </tr> <tr> <td>C LAT -1.45 DEG</td> <td>TILT DISTANCE 81.2</td> </tr> <tr> <td>C LONG -18.26 DEG</td> <td></td> </tr> <tr> <td>D LAT 0.85 DEG</td> <td></td> </tr> <tr> <td>D LONG -18.35 DEG</td> <td></td> </tr> </table>						CORNER COORDINATE	SIDE LENGTH	A LAT -0.42 DEG	AB 58.9 KM	A LONG -17.67 DEG	BC 341.4 KM	B LAT -6.59 DEG	CD 95.3 KM	B LONG -24.49 DEG	DA 54.8 KM	C LAT -1.45 DEG	TILT DISTANCE 81.2	C LONG -18.26 DEG		D LAT 0.85 DEG		D LONG -18.35 DEG	
CORNER COORDINATE	SIDE LENGTH																						
A LAT -0.42 DEG	AB 58.9 KM																						
A LONG -17.67 DEG	BC 341.4 KM																						
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D LAT 0.85 DEG																							
D LONG -18.35 DEG																							
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D LAT -0.14 DEG																							
D LONG -18.47 DEG																							

MISSION/ FRAME NO. 3121	TIME 670219	S/C POSITION ALT 1463.15 KM ALT RT 0.3159 KM/SEC LAT -12.92 DEG LONG 127.09 DEG	S/C ORIENTATION TILT ANG 12.74 DEG TILT AZIM 182.36 DEG SWING ANG 184.08 DEG N.DEV. 181.32 DEG	PHOTO ILLUMINATION SUN AZIM 277.46 DEG INCID ANG 70.43 DEG EMISS ANG 23.98 DEG PHASE ANG 70.19 DEG ALPHA -1.68 DEG	PRINCIPAL POINT LATITUDE -24.15 DEG LONGITUDE 126.59 DEG																		
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CORNER COORDINATE	SIDE LENGTH																						
A LAT -50.03 DEG	AB 324.7 KM																						
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LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71 PAGE 258

MISSION/
FRAME NO.

3122 YR.MO.DY 670219
FR.MI.SEC 214556.91

S/C POSITION
ALT 48.22 KM
ALT RT -0.0565 KM/SEC
LAT 1.54 DEG
LONG -21.72 DEG

S/C ORIENTATION
TILT ANG 17.59 DEG
TILT AZIM 202.17 DEG
SWING ANG 1.52 DEG
N.DEV. 338.32 DEG

PHOTO ILLUMINATION
SUN AZIM 91.71 DEG
INCID ANG 78.15 DEG
EMISS ANG 18.09 DEG
PHASE ANG 72.46 DEG
ALPHA 5.12 DEG

PRINCIPAL POINT
LATITUDE 1.07 DEG
LONGITUDE -21.91 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.48 DEG AB 44.5 KM
A LONG -21.20 DEG BC 40.5 KM
B LAT 0.06 DEG CD 44.8 KM
B LONG -21.57 DEG DA 30.9 KM
C LAT 0.52 DEG TILT DISTANCE 25.2
C LONG -22.83 DEG
D LAT 1.84 DEG
D LONG -22.16 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.32 DEG AB 19.2 KM
A LONG -21.74 DEG BC 4.9 KM
B LAT 0.73 DEG CD 19.2 KM
B LONG -21.95 DEG DA 4.3 KM
C LAT 0.78 DEG TILT DISTANCE 93.2
C LONG -22.10 DEG
D LAT 1.37 DEG
D LONG -21.87 DEG

MISSION/
FRAME NO.

3123 YR.MO.DY 670220
FR.MI.SEC 011317.41

S/C POSITION
ALT 53.72 KM
ALT RT -0.0924 KM/SEC
LAT 3.08 DEG
LONG -27.59 DEG

S/C ORIENTATION
TILT ANG 66.88 DEG
TILT AZIM 0.23 DEG
SWING ANG 168.74 DEG
N.DEV. 348.02 DEG

PHOTO ILLUMINATION
SUN AZIM 92.52 DEG
INCID ANG 82.30 DEG
EMISS ANG 71.46 DEG
PHASE ANG 85.40 DEG
ALPHA -18.90 DEG

PRINCIPAL POINT
LATITUDE 7.67 DEG
LONGITUDE -27.57 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 14.76 DEG AB 306.4 KM
A LONG -22.87 DEG BC 52.0 KM
B LAT 4.69 DEG CD 89.7 KM
B LONG -27.01 DEG DA 169.1 KM
C LAT 5.14 DEG TILT DISTANCE 87.6
C LONG -28.67 DEG
D LAT 10.91 DEG
D LONG -30.28 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 15.70 DEG AB 297.8 KM
A LONG -26.51 DEG BC 9.7 KM
B LAT 5.85 DEG CD 104.1 KM
B LONG -27.54 DEG DA 105.8 KM
C LAT 5.97 DEG TILT DISTANCE 27.7
C LONG -27.84 DEG
D LAT 16.05 DEG
D LONG -27.73 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/73 PAGE 269

MISSION/
FRAME NO.
3124

YR. MO. DY 670220
PR. MI. SEC 044432.19

TIME
S/C POSITION ALT 45.73 KM
ALT RT -0.0082 KM/SEC
LAT -0.62 DEG
LONG -20.09 DEG

S/C ORIENTATION
TILT ANG 0.25 DEG
TILT AZIM 225.42 DEG
SWING ANG 24.32 DEG
N.DEV. 338.90 DEG

PHOTO ILLUMINATION
SUN AZIM 91.33 DEG
INCID ANG 72.77 DEG
EMISS ANG 0.26 DEG
PHASE ANG 72.59 DEG
ALPHA 0.18 DEG

PRINCIPAL POINT
LATITUDE -0.62 DEG
LONGITUDE -20.10 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -0.24 DEG AB 37.3 KM
A LONG -19.38 DEG BC 31.7 KM
B LAT -1.39 DEG CD 37.4 KM
B LONG -19.83 DEG DA 31.6 KM
C LAT -1.01 DEG TILT DISTANCE 0.3
C LONG -20.80 DEG
D LAT 0.14 DEG
D LONG -20.36 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -0.39 DEG AB 16.4 KM
A LONG -19.94 DEG BC 4.1 KM
B LAT -0.90 DEG CD 15.4 KM
B LONG -20.13 DEG DA 4.1 KM
C LAT -0.85 DEG TILT DISTANCE 2.6
C LONG -20.26 DEG
D LAT -0.54 DEG
D LONG -20.06 DEG

MISSION/
FRAME NO.
3125

YR. MO. DY 670220
PR. MI. SEC 044434.21

TIME
S/C POSITION ALT 45.71 KM
ALT RT -0.0071 KM/SEC
LAT -0.66 DEG
LONG -19.98 DEG

S/C ORIENTATION
TILT ANG 0.23 DEG
TILT AZIM 195.63 DEG
SWING ANG 354.53 DEG
N.DEV. 338.90 DEG

PHOTO ILLUMINATION
SUN AZIM 91.31 DEG
INCID ANG 72.65 DEG
EMISS ANG 0.24 DEG
PHASE ANG 72.59 DEG
ALPHA 0.06 DEG

PRINCIPAL POINT
LATITUDE -0.67 DEG
LONGITUDE -19.98 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -0.28 DEG AB 37.3 KM
A LONG -19.27 DEG BC 31.7 KM
B LAT -1.43 DEG CD 37.4 KM
B LONG -19.71 DEG DA 31.6 KM
C LAT -1.06 DEG TILT DISTANCE 0.2
C LONG -20.68 DEG
D LAT 0.09 DEG
D LONG -20.24 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -0.44 DEG AB 16.4 KM
A LONG -19.82 DEG BC 4.1 KM
B LAT -0.95 DEG CD 16.4 KM
B LONG -20.01 DEG DA 4.1 KM
C LAT -0.90 DEG TILT DISTANCE 2.4
C LONG -20.14 DEG
D LAT -0.39 DEG
D LONG -19.94 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71 PAGE 273

MISSION/
FRAME NO.
3126

YR.MO.DY 670220
HR.MI.SEC 044436.23

S/C POSITION
ALT 45.70 KM
ALT RT -0.0061 KM/SEC
LAT -0.71 DEG
LONG -19.86 DEG

S/C ORIENTATION
TILT ANG 0.27 DEG
TILT AZIM 168.51 DEG
SWING ANG 327.42 DEG
N.DEV. 338.91 DEG

PHOTO ILLUMINATION
SUN AZIM 91.30 DEG
INCID ANG 72.53 DEG
EMISS ANG 0.28 DEG
PHASE ANG 72.59 DEG
ALPHA -0.06 DEG

PRINCIPAL POINT
LATITUDE -0.72 DEG
LONGITUDE -19.85 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -0.33 DEG AB 37.4 KM
A LONG -19.15 DEG BC 31.7 KM
B LAT -1.48 DEG CD 37.3 KM
B LONG -19.59 DEG DA 31.6 KM
C LAT -1.10 DEG TILT DISTANCE 0.2
C LONG -20.56 DEG
D LAT 6.04 DEG
D LONG -20.12 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -0.49 DEG AB 16.4 KM
A LONG -19.70 DEG BC 4.1 KM
B LAT -0.99 DEG CD 16.4 KM
B LONG -19.89 DEG DA 4.1 KM
C LAT -0.94 DEG TILT DISTANCE 2.8
C LONG -20.02 DEG
D LAT -0.44 DEG
D LONG -19.83 DEG

MISSION/
FRAME NO.
3127

YR.MO.DY 670220
HR.MI.SEC 044438.25

S/C POSITION
ALT 45.69 KM
ALT RT -0.0050 KM/SEC
LAT -0.75 DEG
LONG -19.75 DEG

S/C ORIENTATION
TILT ANG 0.35 DEG
TILT AZIM 151.42 DEG
SWING ANG 310.33 DEG
N.DEV. 338.91 DEG

PHOTO ILLUMINATION
SUN AZIM 91.28 DEG
INCID ANG 72.41 DEG
EMISS ANG 0.36 DEG
PHASE ANG 72.59 DEG
ALPHA -0.18 DEG

PRINCIPAL POINT
LATITUDE -0.76 DEG
LONGITUDE -19.74 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -0.38 DEG AB 37.4 KM
A LONG -19.03 DEG BC 31.6 KM
B LAT -1.53 DEG CD 37.3 KM
B LONG -19.47 DEG DA 31.6 KM
C LAT -1.15 DEG TILT DISTANCE 0.3
C LONG -20.44 DEG
D LAT -0.00 DEG
D LONG -20.00 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -0.53 DEG AB 16.4 KM
A LONG -19.58 DEG BC 4.1 KM
B LAT -1.04 DEG CD 16.4 KM
B LONG -19.77 DEG DA 4.1 KM
C LAT -0.99 DEG TILT DISTANCE 3.7
C LONG -19.90 DEG
D LAT -0.49 DEG
D LONG -19.71 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/12/71

PAGE 271

MISSION/
FRAME NO.

3128
YR.MO.DY 670220
HR.MI.SEC 044440.27

S/C POSITION
ALT 45.68 KM
ALT RT -0.0040 KM/SEC
LAT -0.80 DEG
LONG -15.63 DEG

S/C ORIENTATION
TILT ANG 0.46 DEG
TILT AZIM 141.37 DEG
SWING ANG 360.28 DEG
N.DEV. 338.91 DEG

PHOTO ILLUMINATION
SUN AZIM 91.26 DEG
INCID ANG 72.29 DEG
EMISS ANG 3.47 DEG
PHASE ANG 72.59 DEG
ALPHA -0.30 DEG

PRINCIPAL POINT
LATITUDE -0.81 DEG
LONGITUDE -19.52 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -0.42 DEG AB 37.4 KM
A LONG -18.91 DEG BC 31.5 KM
B LAT -1.57 DEG CD 37.3 KM
B LONG -19.35 DEG DA 31.6 KM
C LAT -1.20 DEG TILT DISTANCE
C LONG -20.32 DEG 0.5
D LAT -0.05 DEG
D LONG -15.88 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -0.58 DEG AB 16.4 KM
A LONG -19.46 DEG BC 4.1 KM
B LAT -1.09 DEG CD 16.4 KM
B LONG -19.66 DEG DA 4.1 KM
C LAT -1.04 DEG TILT DISTANCE
C LONG -19.78 DEG 4.8
D LAT -0.53 DEG
D LONG -19.59 DEG

MISSION/
FRAME NO.

3129
YR.MO.DY 670220
HR.MI.SEC 044442.29

S/C POSITION
ALT 45.67 KM
ALT RT -0.0029 KM/SEC
LAT -0.85 DEG
LONG -19.51 DEG

S/C ORIENTATION
TILT ANG 0.57 DEG
TILT AZIM 135.12 DEG
SWING ANG 294.03 DEG
N.DEV. 338.91 DEG

PHOTO ILLUMINATION
SUN AZIM 91.25 DEG
INCID ANG 72.17 DEG
EMISS ANG 0.58 DEG
PHASE ANG 72.59 DEG
ALPHA -0.42 DEG

PRINCIPAL POINT
LATITUDE -0.86 DEG
LONGITUDE -19.50 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -0.47 DEG AB 37.4 KM
A LONG -18.79 DEG BC 31.6 KM
B LAT -1.52 DEG CD 37.2 KM
B LONG -19.23 DEG DA 31.6 KM
C LAT -1.24 DEG TILT DISTANCE
C LONG -20.20 DEG 0.5
D LAT -0.10 DEG
D LONG -15.76 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -0.63 DEG AB 16.4 KM
A LONG -19.34 DEG BC 4.1 KM
B LAT -1.13 DEG CD 16.4 KM
B LONG -19.54 DEG DA 4.1 KM
C LAT -1.08 DEG TILT DISTANCE
C LONG -19.66 DEG 6.0
D LAT -0.58 DEG
D LONG -19.47 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 94/13/71 PAGE 272

MISSION/
FRAME NO.
3130

YR.NO.DY 670220
FR.MI.SEC 044444.31

S/C POSITION
ALT 45.67 KM
ALT RT -0.0019 KM/SEC
LAT -0.89 DEG
LONG -19.40 DEG

S/C ORIENTATION
TILT ANG 0.88 DEG
TILT AZIM 130.94 DEG
SWING ANG 289.85 DEG
N.DEV. 338.91 DEG

PHOTO ILLUMINATION
SUN AZIM 91.23 DEG
INCID ANG 72.05 DEG
EMISS ANG 0.70 DEG
PHASE ANG 72.59 DEG
ALPHA -0.54 DEG

PRINCIPAL POINT
LATITUDE -0.90 DEG
LONGITUDE -19.29 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -0.52 DEG AB 37.5 KM
A LONG -18.67 DEG BC 31.6 KM
B LAT -1.67 DEG CD 37.2 KM
B LONG -19.11 DEG DA 31.6 KM
C LAT -1.29 DEG TILT DISTANCE 0.8
C LONG -20.08 DEG
D LAT -0.15 DEG
D LONG -19.64 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -0.67 DEG AB 16.4 KM
A LONG -19.22 DEG BC 16.4 KM
B LAT -1.18 DEG CD 16.4 KM
B LONG -19.42 DEG DA 4.1 KM
C LAT -1.13 DEG TILT DISTANCE 7.2
C LONG -19.55 DEG
D LAT -0.63 DEG
D LONG -19.35 DEG

MISSION/
FRAME NO.
3131

YR.NO.DY 670220
FR.MI.SEC 044444.33

S/C POSITION
ALT 45.67 KM
ALT RT -0.0008 KM/SEC
LAT -0.94 DEG
LONG -19.28 DEG

S/C ORIENTATION
TILT ANG 0.80 DEG
TILT AZIM 127.98 DEG
SWING ANG 286.90 DEG
N.DEV. 338.92 DEG

PHOTO ILLUMINATION
SUN AZIM 91.22 DEG
INCID ANG 71.93 DEG
EMISS ANG 0.82 DEG
PHASE ANG 72.59 DEG
ALPHA -0.66 DEG

PRINCIPAL POINT
LATITUDE -0.95 DEG
LONGITUDE -19.27 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -0.56 DEG AB 37.5 KM
A LONG -18.55 DEG BC 31.6 KM
B LAT -1.72 DEG CD 37.2 KM
B LONG -18.99 DEG DA 31.6 KM
C LAT -1.34 DEG TILT DISTANCE 0.9
C LONG -19.56 DEG
D LAT -0.19 DEG
D LONG -19.52 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -0.72 DEG AB 16.4 KM
A LONG -19.11 DEG BC 16.4 KM
B LAT -1.23 DEG CD 16.4 KM
B LONG -19.30 DEG DA 4.1 KM
C LAT -1.18 DEG TILT DISTANCE 8.5
C LONG -19.43 DEG
D LAT -0.67 DEG
D LONG -19.23 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/13/71 PAGE 273

MISSION/
FRAME NO.
3132

TIME
670220
081418.81

YR.MO.DY
HR.MI.SEC

S/C POSITION
ALT 46.37 KM
ALT RT 0.0311 KM/SEC
LAT -2.30 DEG
LONG -17.59 DEG

S/C ORIENTATION
TILT ANG 33.10 DEG
TILT AZIM 201.87 DEG
SWING ANG 0.74 DEG
N.DEV. 334.86 DEG

PHOTO ILLUMINATION
SUN AZIM 90.30 DEG
INCID ANG 68.83 DEG
EMISS ANG 34.10 DEG
PHASE ANG 60.57 DEG
ALPHA 3.63 DEG

PRINCIPAL POINT
LATITUDE -3.23 DEG
LONGITUDE -17.95 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.76 DEG AB 60.8 KM
A LONG -17.24 DEG BC 53.6 KM
B LAT -4.73 DEG CD 61.5 KM
B LONG -17.60 DEG DA 30.2 KM
C LAT -4.11 DEG TILT DISTANCE 51.9
C LONG -15.26 DEG
D LAT -2.40 DEG
D LONG -18.17 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.93 DEG AB 24.5 KM
A LONG -17.76 DEG BC 5.7 KM
B LAT -3.59 DEG CD 24.6 KM
B LONG -18.04 DEG DA 4.5 KM
C LAT -3.62 DEG TILT DISTANCE 97.3
C LONG -18.22 DEG
D LAT -2.88 DEG
D LONG -17.90 DEG

MISSION/
FRAME NO.
3133

TIME
670220
081428.61

YR.MO.DY
HR.MI.SEC

S/C POSITION
ALT 46.70 KM
ALT RT 0.0362 KM/SEC
LAT -2.52 DEG
LONG -17.03 DEG

S/C ORIENTATION
TILT ANG 33.09 DEG
TILT AZIM 200.92 DEG
SWING ANG 359.54 DEG
N.DEV. 334.84 DEG

PHOTO ILLUMINATION
SUN AZIM 90.18 DEG
INCID ANG 68.25 DEG
EMISS ANG 34.10 DEG
PHASE ANG 60.57 DEG
ALPHA 2.89 DEG

PRINCIPAL POINT
LATITUDE -3.46 DEG
LONGITUDE -17.39 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.58 DEG AB 61.7 KM
A LONG -16.65 DEG BC 54.3 KM
B LAT -4.58 DEG CD 61.5 KM
B LONG -17.02 DEG DA 30.4 KM
C LAT -4.33 DEG TILT DISTANCE 51.9
C LONG -18.68 DEG
D LAT -2.62 DEG
D LONG -17.59 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -3.16 DEG AB 24.7 KM
A LONG -17.19 DEG BC 5.8 KM
B LAT -3.92 DEG CD 24.7 KM
B LONG -17.46 DEG DA 4.5 KM
C LAT -3.85 DEG TILT DISTANCE 97.2
C LONG -17.64 DEG
D LAT -3.10 DEG
D LONG -17.33 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

MISSION/
 FRAME NO.
 3134
 YR. MO. DY
 081438.51
 HR. MI. SEC
 S/C POSITION
 ALT 47.08 KM
 ALT RT 0.0413 KM/SEC
 LAT -2.74 DEG
 LONG -16.46 DEG
 S/C ORIENTATION
 TILT ANG 33.10 DEG
 TILT AZIM 199.96 DEG
 SWING ANG 358.52 DEG
 N.DEV. 334.82 DEG
 PHOTO ILLUMINATION
 SUN AZIM 90.05 DEG
 INCID ANG 67.67 DEG
 EMISS ANG 34.11 DEG
 PHASE ANG 60.57 DEG
 ALPHA 2.13 DEG
 PRINCIPAL POINT
 LATITUDE -3.69 DEG
 LONGITUDE -16.81 DEG

MEDIUM RESOLUTION
 CORNER COORDINATE SIDE LENGTH
 A LAT -2.21 DEG AB 62.7 KM
 A LONG -16.66 DEG BC 54.5 KM
 B LAT -5.25 DEG CD 61.6 KM
 B LONG -16.43 DEG DA 30.7 KM
 C LAT -4.56 DEG TILT DISTANCE 51.9
 C LONG -18.09 DEG
 D LAT -2.84 DEG
 D LONG -17.01 DEG

HIGH RESOLUTION
 CORNER COORDINATE SIDE LENGTH
 A LAT -3.39 DEG AB 25.0 KM
 A LONG -16.61 DEG BC 5.8 KM
 B LAT -4.16 DEG CD 24.9 KM
 B LONG -16.88 DEG DA 4.6 KM
 C LAT -4.09 DEG TILT DISTANCE 97.3
 C LONG -17.06 DEG
 D LAT -3.33 DEG
 D LONG -16.75 DEG

MISSION/
 FRAME NO.
 3135
 YR. MO. DY
 081448.51
 HR. MI. SEC
 S/C POSITION
 ALT 47.52 KM
 ALT RT 0.0464 KM/SEC
 LAT -2.96 DEG
 LONG -15.88 DEG
 S/C ORIENTATION
 TILT ANG 33.11 DEG
 TILT AZIM 198.99 DEG
 SWING ANG 357.40 DEG
 N.DEV. 334.80 DEG
 PHOTO ILLUMINATION
 SUN AZIM 89.91 DEG
 INCID ANG 67.08 DEG
 EMISS ANG 34.14 DEG
 PHASE ANG 60.57 DEG
 ALPHA 1.38 DEG
 PRINCIPAL POINT
 LATITUDE -3.93 DEG
 LONGITUDE -16.22 DEG

MEDIUM RESOLUTION
 CORNER COORDINATE SIDE LENGTH
 A LAT -3.44 DEG AB 63.8 KM
 A LONG -15.47 DEG BC 55.1 KM
 B LAT -5.51 DEG CD 61.8 KM
 B LONG -15.24 DEG DA 31.0 KM
 C LAT -4.79 DEG TILT DISTANCE 51.9
 C LONG -17.51 DEG
 D LAT -3.07 DEG
 D LONG -16.42 DEG

HIGH RESOLUTION
 CORNER COORDINATE SIDE LENGTH
 A LAT -3.62 DEG AB 25.2 KM
 A LONG -16.02 DEG BC 5.9 KM
 B LAT -4.40 DEG CD 25.1 KM
 B LONG -16.30 DEG DA 4.6 KM
 C LAT -4.33 DEG TILT DISTANCE 97.5
 C LONG -16.48 DEG
 D LAT -3.56 DEG
 D LONG -16.16 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 275

04/10/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NO.

3136 YR.MO.DY 670220
FR.MI.SEC 114242.31

S/C POSITION
ALT 46.99 KM
ALT RT 0.0274 KM/SEC
LAT -2.18 DEG
LONG -19.95 DEG

S/C ORIENTATION
TILT ANG 52.85 DEG
TILT AZIM 252.92 DEG
SWING ANG 13.56 DEG
N.DEV. 290.28 DEG

PHOTO ILLUMINATION
SUN AZIM 90.50 DEG
INCID ANG 72.17 DEG
EMISS ANG 67.22 DEG
PHASE ANG 17.37 DEG
ALPHA 29.38 DEG

PRINCIPAL POINT
LATITUDE -3.16 DEG
LONGITUDE -23.07 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.58 DEG AD 61.9 KM
A LONG -20.50 DEG BC 348.1 KM
B LAT -9.24 DEG CD 175.7 KM
B LONG -28.64 DEG DA 43.5 KM
C LAT -2.12 DEG TILT DISTANCE 62.3
C LONG -28.50 DEG
D LAT -1.77 DEG
D LONG -21.71 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.81 DEG AB 126.8 KM
A LONG -21.99 DEG BC 31.0 KM
B LAT -4.54 DEG CD 148.5 KM
B LONG -25.71 DEG DA 7.8 KM
C LAT -4.24 DEG TILT DISTANCE 41.9
C LONG -26.69 DEG
D LAT -2.61 DEG
D LONG -22.06 DEG

MISSION/
FRAME NO.

3137 YR.MO.DY 670220
FR.MI.SEC 151650.59

S/C POSITION
ALT 48.70 KM
ALT RT 0.0159 KM/SEC
LAT -1.74 DEG
LONG -22.98 DEG

S/C ORIENTATION
TILT ANG 37.94 DEG
TILT AZIM 201.24 DEG
SWING ANG 0.38 DEG
N.DEV. 333.72 DEG

PHOTO ILLUMINATION
SUN AZIM 90.51 DEG
INCID ANG 70.79 DEG
EMISS ANG 39.21 DEG
PHASE ANG 62.20 DEG
ALPHA 2.70 DEG

PRINCIPAL POINT
LATITUDE -2.92 DEG
LONGITUDE -23.44 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.36 DEG AB 76.7 KM
A LONG -22.65 DEG BC 65.5 KM
B LAT -4.86 DEG CD 77.4 KM
B LONG -23.03 DEG DA 32.4 KM
C LAT -4.11 DEG TILT DISTANCE 62.1
C LONG -25.05 DEG
D LAT -1.58 DEG
D LONG -23.65 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.56 DEG AB 29.6 KM
A LONG -23.22 DEG BC 6.6 KM
B LAT -3.49 DEG CD 29.6 KM
B LONG -23.54 DEG DA 4.9 KM
C LAT -3.41 DEG TILT DISTANCE 75.2
C LONG -23.75 DEG
D LAT -2.51 DEG
D LONG -23.37 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 276

04/13/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NO.

3138

YR.NO.DY 670220
HR.MI.SEC 151053.25

S/C POSITION
ALT 48.75 KM
ALT RT 0.0173 KM/SEC
LAT -1.87 DEG
LONG -22.83 DEG

S/C ORIENTATION
TILT ANG 37.94 DEG
TILT AZIM 201.02 DEG
SWING ANG 0.11 DEG
N.DEV. 333.71 DEG

PHOTO ILLUMINATION
SUN AZIM 90.48 DEG
INCID ANG 79.64 DEG
EMISS ANG 39.21 DEG
PHASE ANG 62.27 DEG
ALPHA 2.49 DEG

PRINCIPAL POINT
LATITUDE -2.98 DEG
LONGITUDE -23.29 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.42 DEG AB 77.9 KM
A LONG -22.49 DEG BC 55.6 KM
B LAT -4.93 DEG CD 77.3 KM
B LONG -22.87 DEG DA 32.4 KM
C LAT -4.17 DEG TILT DISTANCE 62.1
C LONG -24.90 DEG
D LAT -2.04 DEG
D LONG -23.49 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.62 DEG AB 29.6 KM
A LONG -23.06 DEG BC 6.6 KM
B LAT -3.55 DEG CD 29.6 KM
B LONG -23.39 DEG DA 4.9 KM
C LAT -3.47 DEG TILT DISTANCE 75.2
C LONG -23.59 DEG
D LAT -2.57 DEG
D LONG -23.21 DEG

MISSION/
FRAME NO.

3139

YR.NO.DY 670220
HR.MI.SEC 151053.91

S/C POSITION
ALT 48.80 KM
ALT RT 0.0186 KM/SEC
LAT -1.86 DEG
LONG -22.68 DEG

S/C ORIENTATION
TILT ANG 37.94 DEG
TILT AZIM 200.81 DEG
SWING ANG 359.85 DEG
N.DEV. 333.70 DEG

PHOTO ILLUMINATION
SUN AZIM 90.45 DEG
INCID ANG 79.48 DEG
EMISS ANG 39.21 DEG
PHASE ANG 62.20 DEG
ALPHA 2.27 DEG

PRINCIPAL POINT
LATITUDE -3.05 DEG
LONGITUDE -23.13 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.48 DEG AB 77.2 KM
A LONG -22.33 DEG BC 65.7 KM
B LAT -5.00 DEG CD 77.2 KM
B LONG -22.71 DEG DA 32.4 KM
C LAT -4.22 DEG TILT DISTANCE 62.1
C LONG -24.74 DEG
D LAT -2.10 DEG
D LONG -23.33 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.69 DEG AB 29.7 KM
A LONG -22.90 DEG BC 6.6 KM
B LAT -3.61 DEG CD 29.7 KM
B LONG -23.23 DEG DA 4.9 KM
C LAT -3.53 DEG TILT DISTANCE 75.2
C LONG -23.43 DEG
D LAT -2.53 DEG
D LONG -23.06 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 277

04/13/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NO.
3140

YR. MO. DY	67CE20	TIME	1511 1.23	S/C POSITION	ALT 48.85 KM	S/C ORIENTATION	TILT ANG 37.94 DEG	PHOTO ILLUMINATION	SUN AZIM 90.43 DEG	PRINCIPAL POINT	LATITUDE -3.11 DEG
HR. MI. SEC	151CEB-57	ALT RT	0.0200 KM/SEC	TILT AZIM	200.59 DEG	TILT ANG	200.59 DEG	INCID ANG	70.32 DEG	LONGITUDE	-22.97 DEG
		LAT	-1.92 DEG	SWING ANG	359.58 DEG	N.DEV.	333.69 DEG	EMISS ANG	39.21 DEG		
		LONG	-22.53 DEG	TILT DISTANCE	62.1			PHASE ANG	62.20 DEG		
								ALPHA	2.05 DEG		

MEDIUM RESOLUTION		HIGH RESOLUTION	
CORNER COORDINATE	SIDE LENGTH	CORNER COORDINATE	SIDE LENGTH
A LAT -2.54 DEG	AB 77.5 KM	A LAT -2.75 DEG	AB 29.7 KM
A LONG -22.18 DEG	BC 65.8 KM	A LONG -22.75 DEG	BC 8.6 KM
B LAT -5.07 DEG	CD 77.1 KM	B LAT -3.67 DEG	CD 29.7 KM
B LONG -22.55 DEG	DA 32.5 KM	B LONG -23.07 DEG	DA 4.9 KM
C LAT -4.28 DEG	TILT DISTANCE	C LAT -3.59 DEG	TILT DISTANCE
C LONG -24.58 DEG	62.1	C LONG -23.28 DEG	75.2
D LAT -2.16 DEG		D LAT -2.69 DEG	
D LONG -23.18 DEG		D LONG -22.90 DEG	

MISSION/
FRAME NO.
3141

YR. MO. DY	67Q220	TIME	1511 1.23	S/C POSITION	ALT 48.90 KM	S/C ORIENTATION	TILT ANG 37.94 DEG	PHOTO ILLUMINATION	SUN AZIM 90.39 DEG	PRINCIPAL POINT	LATITUDE -3.17 DEG
HR. MI. SEC	1511 1.23	ALT RT	0.0214 KM/SEC	TILT AZIM	200.38 DEG	TILT ANG	200.38 DEG	INCID ANG	70.16 DEG	LONGITUDE	-22.82 DEG
		LAT	-1.98 DEG	SWING ANG	359.22 DEG	N.DEV.	333.68 DEG	EMISS ANG	39.21 DEG		
		LONG	-22.37 DEG	TILT DISTANCE	62.1			PHASE ANG	62.20 DEG		
								ALPHA	1.84 DEG		

MEDIUM RESOLUTION		HIGH RESOLUTION	
CORNER COORDINATE	SIDE LENGTH	CORNER COORDINATE	SIDE LENGTH
A LAT -2.60 DEG	AB 77.8 KM	A LAT -2.81 DEG	AB 29.7 KM
A LONG -22.02 DEG	BC 65.9 KM	A LONG -22.59 DEG	BC 8.6 KM
B LAT -5.14 DEG	CD 77.0 KM	B LAT -3.74 DEG	CD 29.7 KM
B LONG -22.40 DEG	DA 32.5 KM	B LONG -22.92 DEG	DA 4.9 KM
C LAT -4.34 DEG	TILT DISTANCE	C LAT -3.65 DEG	TILT DISTANCE
C LONG -24.42 DEG	62.1	C LONG -23.12 DEG	75.3
D LAT -2.22 DEG		D LAT -2.75 DEG	
D LONG -23.02 DEG		D LONG -22.74 DEG	

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

MISSION/
FRAME NO.

3142 YR.MO.DY 570220
HR.MI.SEC 1511 3.89

S/C POSITION
ALT 48.96 KM
ALT RT 0.0228 KM/SEC
LAT -2.04 DEG
LONG -22.22 DEG

S/C ORIENTATION
TILT ANG 37.94 DEG
TILT AZIM 200.16 DEG
SWING ANG 359.05 DEG
N.DEV. 333.67 DEG

PHOTO ILLUMINATION
SUN AZIM 90.36 DEG
INCID ANG 70.01 DEG
EMISS ANG 39.22 DEG
PHASE ANG 62.20 DEG
ALPHA 1.62 DEG

PRINCIPAL POINT
LATITUDE -3.23 DEG
LONGITUDE -22.66 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.66 DEG AB 78.1 KM
A LONG -21.86 DEG BC 65.9 KM
B LAT -5.21 DEG CD 76.9 KM
B LONG -22.24 DEG DA 32.6 KM
C LAT -4.40 DEG TILT DISTANCE 62.1
C LONG -24.26 DEG
D LAT -2.28 DEG
D LONG -22.86 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.87 DEG AB 29.8 KM
A LONG -22.43 DEG BC 6.6 KM
B LAT -3.80 DEG CD 29.7 KM
B LONG -22.76 DEG DA 4.9 KM
C LAT -3.72 DEG TILT DISTANCE 75.3
C LONG -22.96 DEG
D LAT -2.81 DEG
D LONG -22.59 DEG

MISSION/
FRAME NO.

3143 YR.MO.DY 670220
HR.MI.SEC 1511 6.54

S/C POSITION
ALT 49.02 KM
ALT RT 0.0241 KM/SEC
LAT -2.09 DEG
LONG -22.07 DEG

S/C ORIENTATION
TILT ANG 37.95 DEG
TILT AZIM 199.95 DEG
SWING ANG 358.78 DEG
N.DEV. 333.66 DEG

PHOTO ILLUMINATION
SUN AZIM 90.33 DEG
INCID ANG 69.85 DEG
EMISS ANG 39.22 DEG
PHASE ANG 62.20 DEG
ALPHA 1.41 DEG

PRINCIPAL POINT
LATITUDE -3.29 DEG
LONGITUDE -22.50 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.73 DEG AB 78.4 KM
A LONG -21.70 DEG BC 66.0 KM
B LAT -5.29 DEG CD 76.9 KM
B LONG -22.08 DEG DA 32.6 KM
C LAT -4.46 DEG TILT DISTANCE 62.1
C LONG -24.11 DEG
D LAT -2.34 DEG
D LONG -22.71 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.93 DEG AB 29.8 KM
A LONG -22.28 DEG BC 6.7 KM
B LAT -3.86 DEG CD 29.8 KM
B LONG -22.60 DEG DA 4.9 KM
C LAT -3.78 DEG TILT DISTANCE 75.3
C LONG -22.81 DEG
D LAT -2.87 DEG
D LONG -22.43 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 279

04/13/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NO. 3144

TIME 670220

YR,MO, DY 67C220

PR,MI,SEC 1511 9.20

S/C POSITION
ALT 49.09 KM
ALT PT 0.0255 KM/SEC
LAT -2.15 DEG
LONG -21.92 DEG

S/C ORIENTATION
TILT ANG 37.95 DEG
TILT AZIM 199.73 DEG
SWING ANG 358.52 DEG
N.DEV. 333.65 DEG

PHOTO ILLUMINATION
SUN AZIM 90.30 DEG
INCID ANG 69.69 DEG
EMISS ANG 39.23 DEG
PHASE ANG 62.20 DEG
ALPHA 1.19 DEG

PRINCIPAL POINT
LATITUDE -3.25 DEG
LONGITUDE -22.25 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH

A LAT -2.99 DEG AB 29.9 KM
A LONG -22.12 DEG BC 6.7 KM
B LAT -3.92 DEG CD 29.8 KM
B LONG -22.25 DEG DA 5.0 KM
C LAT -3.84 DEG TILT DISTANCE 75.4
C LONG -22.65 DEG
D LAT -2.93 DEG
D LONG -22.27 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH

A LAT -2.79 DEG AB 78.7 KM
A LONG -21.54 DEG BC 66.2 KM
B LAT -5.36 DEG CD 76.8 KM
B LONG -21.92 DEG DA 32.7 KM
C LAT -4.51 DEG TILT DISTANCE 62.1
C LONG -22.55 DEG
D LAT -2.40 DEG
D LONG -22.55 DEG

MISSION/
FRAME NO. 3145

TIME 670220

YR,MO, DY 67C220

PR,MI,SEC 163552.03

S/C POSITION
ALT 49.82 KM
ALT RT 0.0320 KM/SEC
LAT -2.46 DEG
LONG -23.05 DEG

S/C ORIENTATION
TILT ANG 8.63 DEG
TILT AZIM 196.16 DEG
SWING ANG 355.37 DEG
N.DEV. 339.03 DEG

PHOTO ILLUMINATION
SUN AZIM 90.50 DEG
INCID ANG 68.72 DEG
EMISS ANG 8.88 DEG
PHASE ANG 66.58 DEG
ALPHA 1.88 DEG

PRINCIPAL POINT
LATITUDE -2.70 DEG
LONGITUDE -23.12 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH

A LAT -2.45 DEG AB 18.4 KM
A LONG -22.95 DEG BC 4.7 KM
B LAT -3.02 DEG CD 18.3 KM
B LONG -23.16 DEG DA 4.4 KM
C LAT -2.96 DEG TILT DISTANCE 92.5
C LONG -23.31 DEG
D LAT -2.40 DEG
D LONG -23.09 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH

A LAT -2.29 DEG AB 42.1 KM
A LONG -22.38 DEG BC 37.3 KM
B LAT -3.61 DEG CD 41.8 KM
B LONG -22.20 DEG DA 32.8 KM
C LAT -3.17 DEG TILT DISTANCE 12.0
C LONG -23.55 DEG
D LAT -1.91 DEG
D LONG -23.40 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/19/71 PAGE 283

MISSION/
FRAME NO.
3146

YR.NO.DY 57C220
HR.MI.SEC 183554.18

S/C POSITION
ALT 49.89 KM
ALT RT 0.0331 KM/SEC
LAT -2.51 DEG
LONG -22.93 DEG

S/C ORIENTATION
TILT ANG 8.65 DEG
TILT AZIM 195.29 DEG
SWING ANG 354.50 DEG
N.DEV. 339.03 DEG

PHOTO ILLUMINATION
SUN AZIM 90.47 DEG
INCID ANG 68.59 DEG
EMISS ANG 8.90 DEG
PHASE ANG 66.58 DEG
ALPHA 1.75 DEG

PRINCIPAL POINT
LATITUDE -2.75 DEG
LONGITUDE -23.03 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.34 DEG AB 42.2 KM
A LONG -22.25 DEG BC 37.3 KM
B LAT -3.56 DEG CD 41.8 KM
B LONG -22.67 DEG DA 32.9 KM
C LAT -3.22 DEG TILT DISTANCE
C LONG -23.63 DEG 12.0
D LAT -1.55 DEG
D LONG -23.27 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.50 DEG AB 18.4 KM
A LONG -22.82 DEG BC 4.7 KM
B LAT -3.07 DEG CD 18.4 KM
B LONG -23.03 DEG DA 4.4 KM
C LAT -3.01 DEG TILT DISTANCE
C LONG -23.18 DEG 92.7
D LAT -2.45 DEG
D LONG -22.96 DEG

MISSION/
FRAME NO.
3147

YR.NO.DY 670220
HR.MI.SEC 183556.33

S/C POSITION
ALT 49.97 KM
ALT RT 0.0342 KM/SEC
LAT -2.56 DEG
LONG -22.81 DEG

S/C ORIENTATION
TILT ANG 8.66 DEG
TILT AZIM 194.42 DEG
SWING ANG 353.62 DEG
N.DEV. 339.04 DEG

PHOTO ILLUMINATION
SUN AZIM 90.45 DEG
INCID ANG 68.46 DEG
EMISS ANG 8.91 DEG
PHASE ANG 66.58 DEG
ALPHA 1.62 DEG

PRINCIPAL POINT
LATITUDE -2.80 DEG
LONGITUDE -22.87 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.38 DEG AB 42.3 KM
A LONG -22.12 DEG BC 37.4 KM
B LAT -3.71 DEG CD 41.8 KM
B LONG -22.55 DEG DA 32.9 KM
C LAT -3.27 DEG TILT DISTANCE
C LONG -23.70 DEG 12.0
D LAT -2.00 DEG
D LONG -23.14 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.55 DEG AB 18.4 KM
A LONG -22.70 DEG BC 4.7 KM
B LAT -3.12 DEG CD 18.4 KM
B LONG -22.91 DEG DA 4.4 KM
C LAT -3.06 DEG TILT DISTANCE
C LONG -23.05 DEG 92.8
D LAT -2.50 DEG
D LONG -22.83 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/19/71 PAGE 281

MISSION/
FRAME NO.
3148

YR,MO,DY 670220
PR,MI,SEC 183558.48

S/C POSITION ALT 50.04 KM
S/C ORIENTATION TILT ANG 8.68 DEG
ALT RT 0.0353 KM/SEC TILT AZIM 193.55 DEG
LAT -2.60 DEG SWING ANG 352.75 DEG
LONG -22.85 DEG N.DEV. 339.04 DEG

PHOTO ILLUMINATION SUN AZIM 90.42 DEG
INCID ANG 58.33 DEG
EMISS ANG 8.93 DEG
PHASE ANG 66.58 DEG
ALPHA 1.48 DEG

PRINCIPAL POINT LATITUDE -2.85 DEG
LONGITUDE -22.74 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.43 DEG AB 42.4 KM
A LONG -21.59 DEG BC 37.4 KM
B LAT -3.77 DEG CD 41.9 KM
B LONG -23.42 DEG DA 33.0 KM
C LAT -3.32 DEG TILT DISTANCE
C LONG -23.57 DEG 12.0
D LAT -2.05 DEG
D LONG -22.01 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.60 DEG AB 18.5 KM
A LONG -22.57 DEG BC 4.7 KM
B LAT -3.17 DEG CD 18.4 KM
B LONG -22.78 DEG DA 4.5 KM
C LAT -3.11 DEG TILT DISTANCE
C LONG -22.53 DEG 93.0
D LAT -2.54 DEG
D LONG -22.71 DEG

MISSION/
FRAME NO.
3149

YR,MO,DY 670220
PR,MI,SEC 1840 0.64

S/C POSITION ALT 50.12 KM
S/C ORIENTATION TILT ANG 8.69 DEG
ALT RT 0.0365 KM/SEC TILT AZIM 192.69 DEG
LAT -2.65 DEG SWING ANG 351.88 DEG
LONG -22.56 DEG N.DEV. 339.04 DEG

PHOTO ILLUMINATION SUN AZIM 90.40 DEG
INCID ANG 68.21 DEG
EMISS ANG 8.95 DEG
PHASE ANG 66.58 DEG
ALPHA 1.35 DEG

PRINCIPAL POINT LATITUDE -2.90 DEG
LONGITUDE -22.62 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.48 DEG AB 42.5 KM
A LONG -21.87 DEG BC 37.5 KM
B LAT -3.82 DEG CD 41.9 KM
B LONG -22.29 DEG DA 33.0 KM
C LAT -3.37 DEG TILT DISTANCE
C LONG -23.44 DEG 12.1
D LAT -2.10 DEG
D LONG -22.89 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.65 DEG AB 18.5 KM
A LONG -22.44 DEG BC 4.7 KM
B LAT -3.22 DEG CD 18.4 KM
B LONG -22.65 DEG DA 4.5 KM
C LAT -3.16 DEG TILT DISTANCE
C LONG -22.80 DEG 93.2
D LAT -2.59 DEG
D LONG -22.58 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/13/71 PAGE 282

MISSION/
FRAME NO.

3150 YR.NO.DY 670220
FR.MI.SEC 1840 2.79

S/C POSITION
ALT 50.20 KM
ALT RT 0.0376 KM/SEC
LAT -2.70 DEG
LONG -22.44 DEG

S/C ORIENTATION
TILT ANG 8.71 DEG
TILT AZIM 191.83 DEG
SWING ANG 351.02 DEG
N.DEV. 339.05 DEG

PHOTO ILLUMINATION
SUN AZIM 90.37 DEG
INCID ANG 68.08 DEG
EMISS ANG 8.97 DEG
PHASE ANG 66.58 DEG
ALPHA 1.22 DEG

PRINCIPAL POINT
LATITUDE -2.95 DEG
LONGITUDE -22.49 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.53 DEG AB 42.5 KM
A LONG -21.74 DEG BC 37.5 KM
B LAT -3.87 DEG CD 41.9 KM
B LONG -22.16 DEG DA 33.1 KM
C LAT -3.41 DEG TILT DISTANCE 12.1
C LONG -23.32 DEG
D LAT -2.15 DEG
D LONG -22.76 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.69 DEG AB 18.5 KM
A LONG -22.32 DEG BC 4.7 KM
B LAT -3.27 DEG CD 18.5 KM
B LONG -22.53 DEG DA 4.5 KM
C LAT -3.21 DEG TILT DISTANCE 93.4
C LONG -22.67 DEG
D LAT -2.64 DEG
D LONG -22.45 DEG

MISSION/
FRAME NO.

3151 YR.NO.DY 670220
FR.MI.SEC 1840 4.94

S/C POSITION
ALT 50.28 KM
ALT RT 0.0387 KM/SEC
LAT -2.74 DEG
LONG -22.31 DEG

S/C ORIENTATION
TILT ANG 8.74 DEG
TILT AZIM 190.97 DEG
SWING ANG 350.16 DEG
N.DEV. 339.05 DEG

PHOTO ILLUMINATION
SUN AZIM 90.35 DEG
INCID ANG 67.95 DEG
EMISS ANG 8.99 DEG
PHASE ANG 66.58 DEG
ALPHA 1.09 DEG

PRINCIPAL POINT
LATITUDE -2.99 DEG
LONGITUDE -22.36 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.58 DEG AB 42.7 KM
A LONG -21.61 DEG BC 37.6 KM
B LAT -3.92 DEG CD 42.0 KM
B LONG -22.03 DEG DA 33.1 KM
C LAT -3.46 DEG TILT DISTANCE 12.1
C LONG -23.19 DEG
D LAT -2.20 DEG
D LONG -22.63 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.74 DEG AB 18.6 KM
A LONG -22.19 DEG BC 4.7 KM
B LAT -3.32 DEG CD 18.5 KM
B LONG -22.40 DEG DA 4.5 KM
C LAT -3.26 DEG TILT DISTANCE 93.6
C LONG -22.65 DEG
D LAT -2.69 DEG
D LONG -22.53 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 283

04/10/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NO.

3152 YR,MO, DY
HR,MI,SEC

TIME
670220
1840 7.05

S/C POSITION
ALT 50.37 KM
ALT RT 0.0392 KM/SEC
LAT -2.79 DEG
LONG -22.19 DEG

S/C ORIENTATION
TILT ANG 8.76 DEG
TILT AZIM 190.12 DEG
SWING ANG 349.31 DEG
N.DEV. 339.06 DEG

PHOTO ILLUMINATION
SUN AZIM 97.32 DEG
INCID ANG 67.82 DEG
EMISS ANG 9.82 DEG
PHASE ANG 65.58 DEG
ALPHA 0.95 DEG

PRINCIPAL POINT
LATITUDE -3.04 DEG
LONGITUDE -22.24 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.62 DEG AB 42.8 KM
A LONG -21.48 DEG BC 37.7 KM
B LAT -3.57 DEG CD 42.3 KM
B LONG -21.91 DEG DA 33.2 KM
C LAT -3.51 DEG TILT DISTANCE
C LONG -23.07 DEG 12.2
D LAT -2.24 DEG
D LONG -22.51 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.79 DEG AB 18.6 KM
A LONG -22.06 DEG BC 4.7 KM
B LAT -3.37 DEG CD 18.5 KM
B LONG -22.27 DEG DA 4.5 KM
C LAT -3.31 DEG TILT DISTANCE
C LONG -22.42 DEG 93.9
D LAT -2.74 DEG
D LONG -22.20 DEG

MISSION/
FRAME NO.

3153 YR,MO, DY
HR,MI,SEC

TIME
670220
220445.91

S/C POSITION
ALT 51.11 KM
ALT RT 0.0442 KM/SEC
LAT -3.01 DEG
LONG -23.55 DEG

S/C ORIENTATION
TILT ANG 2.07 DEG
TILT AZIM 41.57 DEG
SWING ANG 200.96 DEG
N.DEV. 339.37 DEG

PHOTO ILLUMINATION
SUN AZIM 90.32 DEG
INCID ANG 67.34 DEG
EMISS ANG 2.13 DEG
PHASE ANG 68.76 DEG
ALPHA -1.43 DEG

PRINCIPAL POINT
LATITUDE -2.97 DEG
LONGITUDE -23.51 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.52 DEG AB 42.0 KM
A LONG -22.70 DEG BC 34.9 KM
B LAT -3.81 DEG CD 41.7 KM
B LONG -23.21 DEG DA 35.9 KM
C LAT -3.40 DEG TILT DISTANCE
C LONG -24.28 DEG 2.9
D LAT -2.11 DEG
D LONG -23.81 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.71 DEG AB 18.4 KM
A LONG -23.33 DEG BC 4.6 KM
B LAT -3.28 DEG CD 18.4 KM
B LONG -23.55 DEG DA 4.7 KM
C LAT -3.22 DEG TILT DISTANCE
C LONG -23.69 DEG 22.9
D LAT -2.65 DEG
D LONG -23.48 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/11/77:

PAGE 23A

MISSION/
FRAME NO.
3154

TIME
670220
220648.11

S/C POSITION
ALT 51.21 KM
ALT RT 0.0453 KM/SEC
LAT -3.06 DEG
LONG -23.43 DEG

S/C ORIENTATION
TILT ANG 2.13 DEG
TILT AZIM -44.97 DEG
SWING ANG 204.37 DEG
N.DEV. 339.38 DEG

PHOTO ILLUMINATION
SUN AZIM 90.30 DEG
INCID ANG 67.21 DEG
EMISS ANG 2.19 DEG
PHASE ANG 68.76 DEG
ALPHA -1.56 DEG

PRINCIPAL POINT
LATITUDE -3.02 DEG
LONGITUDE -23.38 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.57 DEG AB 42.2 KM
A LONG -22.57 DEG BC 35.0 KM
B LAT -3.66 DEG CD 41.7 KM
B LONG -23.67 DEG DA 36.0 KM
C LAT -3.45 DEG TILT DISTANCE 2.9
C LONG -24.15 DEG
D LAT -2.15 DEG
D LONG -23.68 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.76 DEG AB 18.4 KM
A LONG -23.21 DEG BC 4.6 KM
B LAT -3.33 DEG CD 18.4 KM
B LONG -23.42 DEG DA 4.7 KM
C LAT -3.27 DEG TILT DISTANCE 22.6
C LONG -23.56 DEG
D LAT -2.70 DEG
D LONG -23.35 DEG

MISSION/
FRAME NO.
3155

TIME
570220
220650.31

S/C POSITION
ALT 51.31 KM
ALT RT 0.0445 KM/SEC
LAT -3.11 DEG
LONG -23.30 DEG

S/C ORIENTATION
TILT ANG 2.18 DEG
TILT AZIM 48.20 DEG
SWING ANG 207.61 DEG
N.DEV. 339.39 DEG

PHOTO ILLUMINATION
SUN AZIM 90.27 DEG
INCID ANG 67.08 DEG
EMISS ANG 2.25 DEG
PHASE ANG 68.76 DEG
ALPHA -1.59 DEG

PRINCIPAL POINT
LATITUDE -3.07 DEG
LONGITUDE -23.25 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.61 DEG AB 42.3 KM
A LONG -22.44 DEG BC 35.0 KM
B LAT -3.91 DEG CD 41.8 KM
B LONG -22.94 DEG DA 36.1 KM
C LAT -3.50 DEG TILT DISTANCE 3.0
C LONG -24.03 DEG
D LAT -2.20 DEG
D LONG -23.56 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.81 DEG AB 18.5 KM
A LONG -23.07 DEG BC 4.6 KM
B LAT -3.38 DEG CD 18.5 KM
B LONG -23.29 DEG DA 4.7 KM
C LAT -3.32 DEG TILT DISTANCE 23.2
C LONG -23.43 DEG
D LAT -2.75 DEG
D LONG -23.22 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 285

04/10/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NO. 3156

TIME 670220

YR,NO,DY 670220

HR,MI,SEC 220E52.51

S/C POSITION
ALT 51.42 KM
ALT RT 0.0476 KM/SEC
LAT -3.16 DEG
LONG -23.17 DEG

S/C ORIENTATION
TILT ANG 2.25 DEG
TILT AZIM 51.24 DEG
SWING ANG 210.66 DEG
N.DEV. 339.49 DEG

PHOTO ILLUMINATION
SUN AZIM 90.24 DEG
INCLD ANG 66.95 DEG
EMISS ANG 2.32 DEG
PHASE ANG 68.76 DEG
ALPHA -1.81 DEG

PRINCIPAL POINT
LATITUDE -3.12 DEG
LONGITUDE -23.12 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH

A LAT -2.66 DEG AB 42.4 KM
A LONG -22.30 DEG BC 35.1 KM
B LAT -3.97 DEG CD 41.8 KM
B LONG -22.81 DEG DA 36.2 KM
C LAT -3.55 DEG TILT DISTANCE 3.1
C LONG -23.90 DEG
D LAT -2.25 DEG
D LONG -23.43 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH

A LAT -2.85 DEG AB 18.5 KM
A LONG -22.94 DEG BC 4.6 KM
B LAT -3.43 DEG CD 18.5 KM
B LONG -23.16 DEG DA 4.7 KM
C LAT -3.37 DEG TILT DISTANCE 23.9
C LONG -23.30 DEG
D LAT -2.80 DEG
D LONG -23.09 DEG

MISSION/
FRAME NO. 3157

TIME 670220

YR,NO,DY 670220

HR,MI,SEC 220E54.71

S/C POSITION
ALT 51.52 KM
ALT RT 0.0487 KM/SEC
LAT -3.20 DEG
LONG -23.05 DEG

S/C ORIENTATION
TILT ANG 2.32 DEG
TILT AZIM 54.11 DEG
SWING ANG 213.54 DEG
N.DEV. 339.41 DEG

PHOTO ILLUMINATION
SUN AZIM 90.21 DEG
INCLD ANG 66.82 DEG
EMISS ANG 2.39 DEG
PHASE ANG 68.76 DEG
ALPHA -1.94 DEG

PRINCIPAL POINT
LATITUDE -3.16 DEG
LONGITUDE -22.99 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH

A LAT -2.71 DEG AB 42.5 KM
A LONG -22.17 DEG BC 35.2 KM
B LAT -4.02 DEG CD 41.9 KM
B LONG -22.68 DEG DA 36.3 KM
C LAT -3.60 DEG TILT DISTANCE 3.2
C LONG -23.77 DEG
D LAT -2.30 DEG
D LONG -23.30 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH

A LAT -2.90 DEG AB 18.6 KM
A LONG -22.81 DEG BC 4.6 KM
B LAT -3.48 DEG CD 18.5 KM
B LONG -23.03 DEG DA 4.7 KM
C LAT -3.42 DEG TILT DISTANCE 24.7
C LONG -23.17 DEG
D LAT -2.85 DEG
D LONG -22.96 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71 PAGE 286

MISSION/
FRAME NO.
3158

YR.MO.DY 670220
HR.MI.SEC 220859.11

S/C POSITION
ALT 51.63 KM
ALT RT 0.0499 KM/SEC
LAT -3.25 DEG
LONG -22.92 DEG

S/C ORIENTATION
TILT ANG 2.40 DEG
TILT AZIM 56.80 DEG
SWING ANG 216.24 DEG
N.DEV. 339.41 DEG

PHOTO ILLUMINATION
SUN AZIM 90.19 DEG
INCID ANG 66.59 DEG
EMISS ANG 2.47 DEG
PHASE ANG 68.76 DEG
ALPHA -2.07 DEG

PRINCIPAL POINT
LATITUDE -3.21 DEG
LONGITUDE -22.86 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.76 DEG AB 42.7 KM
A LONG -22.04 DEG BC 35.3 KM
B LAT -4.07 DEG CD 41.9 KM
B LONG -22.55 DEG DA 36.3 KM
C LAT -3.65 DEG TILT DISTANCE 3.3
C LONG -23.64 DEG
D LAT -2.35 DEG
D LONG -23.17 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.95 DEG AB 18.6 KM
A LONG -22.68 DEG BC 4.6 KM
B LAT -3.53 DEG CD 18.6 KM
B LONG -22.90 DEG DA 4.7 KM
C LAT -3.47 DEG TILT DISTANCE 25.5
C LONG -23.04 DEG
D LAT -2.90 DEG
D LONG -22.83 DEG

MISSION/
FRAME NO.
3159

YR.MO.DY 670220
HR.MI.SEC 220859.11

S/C POSITION
ALT 51.74 KM
ALT RT 0.0510 KM/SEC
LAT -3.30 DEG
LONG -22.80 DEG

S/C ORIENTATION
TILT ANG 2.48 DEG
TILT AZIM 59.32 DEG
SWING ANG 218.76 DEG
N.DEV. 339.42 DEG

PHOTO ILLUMINATION
SUN AZIM 90.16 DEG
INCID ANG 66.56 DEG
EMISS ANG 2.55 DEG
PHASE ANG 68.76 DEG
ALPHA -2.20 DEG

PRINCIPAL POINT
LATITUDE -3.26 DEG
LONGITUDE -22.73 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.80 DEG AB 42.8 KM
A LONG -21.51 DEG BC 35.4 KM
B LAT -4.12 DEG CD 42.3 KM
B LONG -22.42 DEG DA 36.4 KM
C LAT -5.70 DEG TILT DISTANCE 3.4
C LONG -23.51 DEG
D LAT -2.40 DEG
D LONG -23.04 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -3.00 DEG AB 18.7 KM
A LONG -22.55 DEG BC 4.7 KM
B LAT -3.58 DEG CD 18.6 KM
B LONG -22.77 DEG DA 4.7 KM
C LAT -3.52 DEG TILT DISTANCE 26.3
C LONG -22.91 DEG
D LAT -2.95 DEG
D LONG -22.70 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 287

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/13/71

MISSION/
FRAME NO.
3150

TIME
670220
2205.1.31

S/C POSITION
ALT 51.85 KM
ALT PT 0.0521 KM/SEC
LAT -3.35 DEG
LONG -22.67 DEG

S/C ORIENTATION
TILT ANG 2.56 DEG
TILT AZIM 61.67 DEG
SWING ANG 221.12 DEG
N.DEV. 339.43 DEG

PHOTO ILLUMINATION
SUN AZIM 90.13 DEG
INCID ANG 66.43 DEG
EMISS ANG 2.54 DEG
PHASE ANG 68.76 DEG
ALPHA -2.33 DEG

PRINCIPAL POINT
LATITUDE -3.31 DEG
LONGITUDE -22.52 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.85 DEG AB 42.9 KM
A LONG -21.77 DEG BC 35.4 KM
B LAT -4.17 DEG CD 42.1 KM
B LONG -22.29 DEG DA 36.5 KM
C LAT -3.75 DEG TILT DISTANCE 3.5
C LONG -23.38 DEG
D LAT -2.44 DEG
D LONG -22.51 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -3.05 DEG AB 18.7 KM
A LONG -23.42 DEG BC 4.7 KM
B LAT -3.63 DEG CD 18.6 KM
B LONG -22.64 DEG DA 4.7 KM
C LAT -3.57 DEG TILT DISTANCE 27.3
C LONG -22.78 DEG
D LAT -3.00 DEG
D LONG -22.57 DEG

MISSION/
FRAME NO.
3161

TIME
670221
0133.7.81

S/C POSITION
ALT 54.39 KM
ALT RT -0.1680 KM/SEC
LAT 1.63 DEG
LONG -37.91 DEG

S/C ORIENTATION
TILT ANG 54.69 DEG
TILT AZIM 269.34 DEG
SWING ANG 81.23 DEG
N.DEV. 351.51 DEG

PHOTO ILLUMINATION
SUN AZIM 91.61 DEG
INCID ANG 84.21 DEG
EMISS ANG 68.81 DEG
PHASE ANG 15.58 DEG
ALPHA 68.57 DEG

PRINCIPAL POINT
LATITUDE 1.58 DEG
LONGITUDE -42.02 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 2.42 DEG AB 63.5 KM
A LONG -39.60 DEG BC 93.5 KM
B LAT 0.37 DEG CD 243.7 KM
B LONG -40.53 DEG DA 527.1 KM
C LAT -2.45 DEG TILT DISTANCE 69.4
C LONG -47.52 DEG
D LAT 6.54 DEG
D LONG -49.27 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 2.25 DEG AB 47.4 KM
A LONG -41.28 DEG BC 41.8 KM
B LAT 0.78 DEG CD 62.6 KM
B LONG -41.82 DEG DA 39.8 KM
C LAT 0.60 DEG TILT DISTANCE 89.1
C LONG -43.15 DEG
D LAT 2.46 DEG
D LONG -42.28 DEG

LUNAR CRBITEF PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/13/71 PAGE 283

MISSION/
FRAME NO.
3162

YR. MO. DY 670221
HR. MI. SEC 115521.53

S/C POSITION
ALT 54.75 KM
ALT RT -0.0711 KM/SEC
LAT 1.74 DEG
LONG -43.11 DEG

S/C ORIENTATION
TILT ANG 69.46 DEG
TILT AZIM 21.15 DEG
SWING ANG 177.48 DEG
N.DEV. 301.54 DEG

PHOTO ILLUMINATION
SUN AZIM 92.86 DEG
INCID ANG 78.75 DEG
EMISS ANG 79.00 DEG
PHASE ANG 104.44 DEG
ALPHA -46.02 DEG

PRINCIPAL POINT
LATITUDE 6.91 DEG
LONGITUDE -38.13 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 12.29 DEG AB 304.3 KM
A LONG -30.76 DEG BC 53.3 KM
B LAT 2.27 DEG CD 88.7 KM
B LONG -38.65 DEG DA 160.1 KM
C LAT 4.01 DEG TILT DISTANCE 13.7
C LONG -40.24 DEG
D LAT 5.97 DEG
D LONG -39.91 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 13.65 DEG AB 175.4 KM
A LONG -35.07 DEG RC 19.3 KM
B LAT 4.66 DEG CD 13.1 KM
B LONG -38.84 DEG DA 31.1 KM
C LAT 4.81 DEG TILT DISTANCE 26.8
C LONG -39.13 DEG
D LAT 11.41 DEG
D LONG -35.78 DEG

MISSION/
FRAME NO.
3163

YR. MO. DY 670221
HR. MI. SEC 115521.53

S/C POSITION
ALT 54.80 KM
ALT RT -0.0599 KM/SEC
LAT 1.23 DEG
LONG -42.58 DEG

S/C ORIENTATION
TILT ANG 17.45 DEG
TILT AZIM 18.13 DEG
SWING ANG 176.19 DEG
N.DEV. 337.18 DEG

PHOTO ILLUMINATION
SUN AZIM 91.79 DEG
INCID ANG 79.33 DEG
EMISS ANG 18.02 DEG
PHASE ANG 84.80 DEG
ALPHA -5.97 DEG

PRINCIPAL POINT
LATITUDE 1.77 DEG
LONGITUDE -42.41 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 2.36 DEG AB 50.3 KM
A LONG -41.36 DEG BC 35.2 KM
B LAT 0.89 DEG CD 51.3 KM
B LONG -42.13 DEG DA 46.1 KM
C LAT 1.32 DEG TILT DISTANCE 25.1
C LONG -43.21 DEG
D LAT 2.55 DEG
D LONG -42.76 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 2.09 DEG AB 21.8 KM
A LONG -42.18 DEG BC 4.9 KM
B LAT 1.43 DEG CD 21.8 KM
B LONG -42.46 DEG DA 5.5 KM
C LAT 1.49 DEG TILT DISTANCE 9.06
C LONG -42.61 DEG
D LAT 2.16 DEG
D LONG -42.35 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71 PAGE 289

MISSION/
FRAME NO.
316A

YR.MO.DY 67G221
HR.MI.SEC 115523.98

S/C POSITION
ALT 54.65 KM
ALT RT -0.0586 KM/SEC
LAT 1.18 DEG
LONG -42.44 DEG

S/C ORIENTATION
TILT ANG 17.45 DEG
TILT AZIM 18.61 DEG
SWING ANG 176.59 DEG
N.DEV. 337.18 DEG

PHOTO ILLUMINATION
SUN AZIM 91.79 DEG
INCID ANG 79.18 DEG
EMISS ANG 18.01 DEG
PHASE ANG 84.80 DEG
ALPHA -6.12 DEG

PRINCIPAL POINT
LATITUDE 1.72 DEG
LONGITUDE -42.25 DEG

CORNER COORDINATE SIDE LENGTH
A LAT 2.31 DEG AB 50.3 KM
A LONG -41.21 DEG BC 35.1 KM
B LAT 0.84 DEG CD 51.1 KM
B LONG -41.99 DEG DA 45.9 KM
C LAT 1.27 DEG TILT DISTANCE 25.1
C LONG -43.06 DEG
D LAT 2.89 DEG
D LONG -42.61 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 2.04 DEG AB 21.7 KM
A LONG -42.04 DEG BC 4.9 KM
B LAT 1.37 DEG CD 21.8 KM
B LONG -42.31 DEG DA 5.5 KM
C LAT 1.43 DEG TILT DISTANCE 91.5
C LONG -42.45 DEG
D LAT 2.10 DEG
D LONG -42.21 DEG

MISSION/
FRAME NO.
3165

YR.MO.DY 67G221
HR.MI.SEC 115526.43

S/C POSITION
ALT 54.51 KM
ALT RT -0.0574 KM/SEC
LAT 1.13 DEG
LONG -42.30 DEG

S/C ORIENTATION
TILT ANG 17.44 DEG
TILT AZIM 19.09 DEG
SWING ANG 177.19 DEG
N.DEV. 337.19 DEG

PHOTO ILLUMINATION
SUN AZIM 91.78 DEG
INCID ANG 79.03 DEG
EMISS ANG 18.01 DEG
PHASE ANG 84.80 DEG
ALPHA -6.27 DEG

PRINCIPAL POINT
LATITUDE 1.65 DEG
LONGITUDE -42.12 DEG

CORNER COORDINATE SIDE LENGTH
A LAT 2.25 DEG AB 50.2 KM
A LONG -41.07 DEG BC 35.0 KM
B LAT 0.78 DEG CD 50.9 KM
B LONG -41.84 DEG DA 45.8 KM
C LAT 1.21 DEG TILT DISTANCE 25.1
C LONG -42.92 DEG
D LAT 2.83 DEG
D LONG -42.47 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 1.98 DEG AB 21.7 KM
A LONG -41.89 DEG BC 4.9 KM
B LAT 1.32 DEG CD 21.7 KM
B LONG -42.17 DEG DA 5.5 KM
C LAT 1.38 DEG TILT DISTANCE 91.5
C LONG -42.32 DEG
D LAT 2.05 DEG
D LONG -42.06 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71 PAGE 297

MISSION/
FRAME NO.
3166

TIME
YR.MO.DY 670221
HR.MI.SEC 115528.87

S/C POSITION
ALT 54.37 KM
ALT RT -0.0561 KM/SEC
LAT 1.07 DEG
LONG -42.16 DEG

S/C ORIENTATION
TILT ANG 17.44 DEG
TILT AZIM 19.57 DEG
SWING ANG 177.68 DEG
N.DEV. 337.19 DEG

PHOTO ILLUMINATION
SUN AZIM 91.78 DEG
INCID ANG 78.89 DEG
EMISS ANG 18.00 DEG
PHASE ANG 84.80 DEG
ALPHA -6.42 DEG

PRINCIPAL POINT
LATITUDE 1.63 DEG
LONGITUDE -41.98 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 2.19 DEG AB 50.1 KM
A LONG -40.93 DEG BC 34.9 KM
B LAT 0.73 DEG CD 50.7 KM
B LONG -41.70 DEG DA 45.7 KM
C LAT 1.16 DEG TILT DISTANCE 25.1
C LONG -42.77 DEG
D LAT 2.77 DEG
D LONG -42.32 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 1.92 DEG AB 21.5 KM
A LONG -41.75 DEG BC 4.9 KM
B LAT 1.26 DEG CD 21.7 KM
B LONG -42.03 DEG DA 5.5 KM
C LAT 1.32 DEG TILT DISTANCE 91.4
C LONG -42.18 DEG
D LAT 1.99 DEG
D LONG -41.92 DEG

MISSION/
FRAME NO.
3167

TIME
YR.MO.DY 670221
HR.MI.SEC 115531.30

S/C POSITION
ALT 54.24 KM
ALT RT -0.0549 KM/SEC
LAT 1.02 DEG
LONG -42.03 DEG

S/C ORIENTATION
TILT ANG 17.43 DEG
TILT AZIM 20.04 DEG
SWING ANG 178.18 DEG
N.DEV. 337.19 DEG

PHOTO ILLUMINATION
SUN AZIM 91.77 DEG
INCID ANG 78.74 DEG
EMISS ANG 18.00 DEG
PHASE ANG 84.80 DEG
ALPHA -6.56 DEG

PRINCIPAL POINT
LATITUDE 1.55 DEG
LONGITUDE -41.83 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 2.14 DEG AB 50.3 KM
A LONG -40.79 DEG BC 34.8 KM
B LAT 0.68 DEG CD 50.5 KM
B LONG -41.56 DEG DA 45.6 KM
C LAT 1.10 DEG TILT DISTANCE 25.1
C LONG -42.63 DEG
D LAT 2.71 DEG
D LONG -42.18 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 1.87 DEG AB 21.6 KM
A LONG -41.61 DEG BC 4.9 KM
B LAT 1.21 DEG CD 21.6 KM
B LONG -41.88 DEG DA 5.5 KM
C LAT 1.27 DEG TILT DISTANCE 91.4
C LONG -42.03 DEG
D LAT 1.93 DEG
D LONG -41.78 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

MISSION/
FRAME NO.

3158 YR.MO.DY 670221
PR.MI.SEC 115533.73

S/C POSITION
ALT 54.11 KM
ALT RT -0.0536 KM/SEC
LAT 0.97 DEG
LONG -41.89 DEG

S/C ORIENTATION
TILT ANG 17.43 DEG
TILT AZIM 20.52 DEG
SWING ANG 178.68 DEG
N.DEV. 337.19 DEG

PHOTO ILLUMINATION
SUN AZIM 91.76 DEG
INCID ANG 78.60 DEG
EMISS ANG 17.99 DEG
PHASE ANG 84.80 DEG
ALPHA -6.71 DEG

PRINCIPAL POINT
LATITUDE 1.49 DEG
LONGITUDE -41.59 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 2.02 DEG AB 50.0 KM
A LONG -46.64 DEG BC 34.7 KM
B LAT 6.52 DEG CD 53.3 KM
B LONG -41.42 DEG DA 45.5 KM
C LAT 1.05 DEG TILT DISTANCE 25.1
C LONG -42.48 DEG
D LAT 2.65 DEG
D LONG -42.04 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 1.81 DEG AB 21.5 KM
A LONG -41.47 DEG BC 4.9 KM
B LAT 1.15 DEG CD 21.6 KM
B LONG -41.74 DEG DA 5.5 KM
C LAT 1.21 DEG TILT DISTANCE 91.4
C LONG -41.89 DEG
D LAT 1.88 DEG
D LONG -41.63 DEG

MISSION/
FRAME NO.

3159 YR.MO.DY 670221
PR.MI.SEC 115536.16

S/C POSITION
ALT 53.98 KM
ALT RT -0.0524 KM/SEC
LAT 0.91 DEG
LONG -41.75 DEG

S/C ORIENTATION
TILT ANG 17.43 DEG
TILT AZIM 20.99 DEG
SWING ANG 179.17 DEG
N.DEV. 337.20 DEG

PHOTO ILLUMINATION
SUN AZIM 91.76 DEG
INCID ANG 78.46 DEG
EMISS ANG 17.99 DEG
PHASE ANG 84.80 DEG
ALPHA -5.86 DEG

PRINCIPAL POINT
LATITUDE 1.44 DEG
LONGITUDE -41.55 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 2.02 DEG AB 49.9 KM
A LONG -46.59 DEG BC 34.5 KM
B LAT 6.57 DEG CD 50.1 KM
B LONG -41.27 DEG DA 45.4 KM
C LAT 1.05 DEG TILT DISTANCE 25.1
C LONG -42.34 DEG
D LAT 2.69 DEG
D LONG -41.69 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT 1.75 DEG AB 21.5 KM
A LONG -41.33 DEG BC 4.8 KM
B LAT 1.10 DEG CD 21.5 KM
B LONG -41.60 DEG DA 5.4 KM
C LAT 1.16 DEG TILT DISTANCE 91.4
C LONG -41.75 DEG
D LAT 1.82 DEG
D LONG -41.49 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

MISSION/
FRAME NO.

3170 YR.NO.OY 670221
HR.MI.SEC 115938.57

S/C POSITION
ALT 53.85 KM
ALT RT -0.0512 KM/SEC
LAT 0.86 DEG
LONG -41.61 DEG

S/C ORIENTATION
TILT ANG 17.43 DEG
TILT AZIM 21.47 DEG
SWING ANG 179.56 DEG
N.DEV. 337.20 DEG

PHOTO ILLUMINATION
SUN AZIM 91.75 DEG
INCID ANG 78.31 DEG
EMISS ANG 17.99 DEG
PHASE ANG 84.80 DEG
ALPHA -7.01 DEG

PRINCIPAL POINT
LATITUDE 1.36 DEG
LONGITUDE -41.41 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.97 DEG AB 49.9 KM
A LONG -40.36 DEG BC 34.5 KM
B LAT 0.51 DEG CD 50.9 KM
B LONG -41.13 DEG DA 45.2 KM
C LAT 0.54 DEG TILT DISTANCE 25.1
C LONG -42.19 DEG
D LAT 2.53 DEG
D LONG -41.75 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 1.70 DEG AB 21.4 KM
A LONG -41.18 DEG BC 4.8 KM
B LAT 1.04 DEG CD 21.4 KM
B LONG -41.46 DEG DA 5.4 KM
C LAT 1.10 DEG TILT DISTANCE 91.4
C LONG -41.60 DEG
D LAT 1.76 DEG
D LONG -41.35 DEG

MISSION/
FRAME NO.

3171 YR.NO.OY 670221
HR.MI.SEC 1531 2.31

S/C POSITION
ALT 52.23 KM
ALT RT 0.0385 KM/SEC
LAT -2.98 DEG
LONG -33.48 DEG

S/C ORIENTATION
TILT ANG 62.53 DEG
TILT AZIM 255.44 DEG
SWING ANG 20.52 DEG
N.DEV. 296.45 DEG

PHOTO ILLUMINATION
SUN AZIM 90.25 DEG
INCID ANG 71.93 DEG
EMISS ANG 66.05 DEG
PHASE ANG 14.83 DEG
ALPHA 38.35 DEG

PRINCIPAL POINT
LATITUDE -3.86 DEG
LONGITUDE -34.90 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -3.63 DEG AB 65.8 KM
A LONG -34.61 DEG BC 371.5 KM
B LAT -10.43 DEG CD 267.1 KM
B LONG -42.53 DEG DA 51.2 KM
C LAT -2.41 DEG TILT DISTANCE 53.3
C LONG -46.24 DEG
D LAT -2.32 DEG
D LONG -35.68 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -3.49 DEG AB 115.2 KM
A LONG -35.70 DEG BC 35.3 KM
B LAT -5.11 DEG CD 140.7 KM
B LONG -39.15 DEG DA 9.1 KM
C LAT -4.87 DEG TILT DISTANCE 72.4
C LONG -40.30 DEG
D LAT -3.29 DEG
D LONG -35.92 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71 PAGE 293

MISSION/
FRAME NO.
3172

TIME 670221
YR,MO, DY 185212.51
HR,MI,SEC

S/C POSITION
ALT 52.26 KM
ALT RT -0.0018 KM/SEC
LAT -1.29 DEG
LONG -39.85 DEG

S/C ORIENTATION
TILT ANG 66.56 DEG
TILT AZIM 255.01 DEG
SWING ANG 20.72 DEG
N.DEV. 295.67 DEG

PHOTO ILLUMINATION
SUN AZIM 90.92 DEG
INCID ANG 77.36 DEG
EMISS ANG 70.93 DEG
PHASE ANG 16.47 DEG
ALPHA 45.56 DEG

PRINCIPAL POINT
LATITUDE -2.42 DEG
LONGITUDE -44.07 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.02 DEG AB 69.7 KM
A LONG -41.16 DEG BC 422.0 KM
B LAT -5.70 DEG CD 197.2 KM
B LONG -50.66 DEG DA 56.5 KM
C LAT -0.66 DEG TILT DISTANCE
C LONG -52.10 DEG 83.9
D LAT -0.61 DEG
D LONG -42.39 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.92 DEG AB 217.2 KM
A LONG -42.44 DEG BC 305.7 KM
B LAT -4.80 DEG CD 292.5 KM
B LONG -49.02 DEG DA 10.7 KM
C LAT -4.69 DEG TILT DISTANCE
C LONG -52.04 DEG 06.1
D LAT -1.69 DEG
D LONG -42.71 DEG

MISSION/
FRAME NO.
3173

TIME 670221
YR,MO, DY 222752.81
HR,MI,SEC

S/C POSITION
ALT 53.25 KM
ALT RT 0.0384 KM/SEC
LAT -3.15 DEG
LONG -37.25 DEG

S/C ORIENTATION
TILT ANG 3.54 DEG
TILT AZIM 189.44 DEG
SWING ANG 348.86 DEG
N.DEV. 339.39 DEG

PHOTO. ILLUMINATION
SUN AZIM 90.27 DEG
INCID ANG 58.79 DEG
EMISS ANG 3.64 DEG
PHASE ANG 68.25 DEG
ALPHA 0.49 DEG

PRINCIPAL POINT
LATITUDE -3.25 DEG
LONGITUDE -37.27 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.80 DEG AB 43.9 KM
A LONG -36.46 DEG BC 37.9 KM
B LAT -4.17 DEG CD 43.5 KM
B LONG -36.54 DEG DA 36.0 KM
C LAT -3.72 DEG TILT DISTANCE
C LONG -39.11 DEG 4.8
D LAT -2.39 DEG
D LONG -37.57 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.99 DEG AB 19.2 KM
A LONG -37.08 DEG BC 4.9 KM
B LAT -3.58 DEG CD 19.2 KM
B LONG -37.31 DEG DA 4.8 KM
C LAT -3.52 DEG TILT DISTANCE
C LONG -37.46 DEG 37.6
D LAT -2.93 DEG
D LONG -37.23 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 294

04/19/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NO.
3174

TIME
670221
222E 1.13

S/C POSITION
ALT 53.34 KM
ALT RT 0.0396 KM/SEC
LAT -3.20 DEG
LONG -37.42 DEG

S/C ORIENTATION
TILT ANG 3.57 DEG
TILT AZIM 187.20 DEG
SWING ANG 346.62 DEG
N.DEV. 339.40 DEG

PHOTO ILLUMINATION
SUN AZIM 90.24 DEG
INCID ANG 68.65 DEG
EMISS ANG 3.88 DEG
PHASE ANG 68.25 DEG
ALPHA 0.35 DEG

PRINCIPAL POINT
LATITUDE -3.30 DEG
LONGITUDE -37.13 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.85 DEG AB 44.0 KM
A LONG -36.32 DEG BC 38.0 KM
B LAT -4.22 DEG CD 43.6 KM
B LONG -36.80 DEG DA 36.1 KM
C LAT -3.78 DEG TILT DISTANCE 4.8
C LONG -37.57 DEG
D LAT -2.44 DEG
D LONG -37.44 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -3.04 DEG AB 19.3 KM
A LONG -36.95 DEG BC 4.9 KM
B LAT -3.63 DEG CD 19.2 KM
B LONG -37.17 DEG DA 4.8 KM
C LAT -3.58 DEG TILT DISTANCE 37.9
C LONG -37.32 DEG
D LAT -2.98 DEG
D LONG -37.09 DEG

MISSION/
FRAME NO.
3175

TIME
670221
222E 3.47

S/C POSITION
ALT 53.44 KM
ALT RT 0.0408 KM/SEC
LAT -3.25 DEG
LONG -36.98 DEG

S/C ORIENTATION
TILT ANG 3.60 DEG
TILT AZIM 184.98 DEG
SWING ANG 344.40 DEG
N.DEV. 339.41 DEG

PHOTO ILLUMINATION
SUN AZIM 90.21 DEG
INCID ANG 68.51 DEG
EMISS ANG 3.71 DEG
PHASE ANG 68.25 DEG
ALPHA 0.21 DEG

PRINCIPAL POINT
LATITUDE -3.36 DEG
LONGITUDE -36.99 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.50 DEG AB 44.2 KM
A LONG -36.18 DEG BC 38.0 KM
B LAT -4.28 DEG CD 43.7 KM
B LONG -36.66 DEG DA 36.2 KM
C LAT -3.83 DEG TILT DISTANCE 4.9
C LONG -37.83 DEG
D LAT -2.49 DEG
D LONG -37.30 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -3.09 DEG AB 19.3 KM
A LONG -36.81 DEG BC 4.9 KM
B LAT -3.69 DEG CD 19.3 KM
B LONG -37.03 DEG DA 4.8 KM
C LAT -3.63 DEG TILT DISTANCE 38.3
C LONG -37.18 DEG
D LAT -3.03 DEG
D LONG -36.96 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

MISSION/
FRAME NO.

2176
YR, MO, DY
HR, MI, SEC

S/C POSITION
ALT 52.53 KM
ALT RT 0.5423 KM/SEC
LAT -3.30 DEG
LONG -36.85 DEG

S/C ORIENTATION
TILT ANG 3.54 DEG
TILT AZIM 182.90 DEG
SWING ANG 342.23 DEG
N.DEV. 339.42 DEG

PHOTO ILLUMINATION
SUN AZIM 90.19 DEG
INCID ANG 68.37 DEG
EMISS ANG 3.75 DEG
PHASE ANG 68.25 DEG
ALPHA 1.57 DEG

PRINCIPAL POINT
LATITUDE -3.41 DEG
LONGITUDE -36.85 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.55 DEG AB 44.3 KM
A LONG -36.84 DEG BC 38.1 KM
B LAT -4.23 DEG CD 43.7 KM
B LONG -35.52 DEG DA 36.2 KM
C LAT -3.58 DEG TILT DISTANCE 4.9
D LAT -2.54 DEG
D LONG -37.16 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -3.14 DEG AB 19.3 KM
A LONG -36.67 DEG BC 4.9 KM
B LAT -3.74 DEG CD 19.3 KM
B LONG -36.89 DEG DA 4.8 KM
C LAT -3.68 DEG TILT DISTANCE 38.8
D LAT -3.08 DEG
D LONG -36.82 DEG

MISSION/
FRAME NO.

2177
YR, MO, DY
HR, MI, SEC

S/C POSITION
ALT 53.64 KM
ALT RT 0.5432 KM/SEC
LAT -3.35 DEG
LONG -36.71 DEG

S/C ORIENTATION
TILT ANG 3.69 DEG
TILT AZIM 180.57 DEG
SWING ANG 340.10 DEG
N.DEV. 339.43 DEG

PHOTO ILLUMINATION
SUN AZIM 90.16 DEG
INCID ANG 68.24 DEG
EMISS ANG 3.80 DEG
PHASE ANG 68.25 DEG
ALPHA -0.07 DEG

PRINCIPAL POINT
LATITUDE -3.46 DEG
LONGITUDE -36.72 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -3.20 DEG AB 44.4 KM
A LONG -36.89 DEG BC 38.2 KM
B LAT -4.39 DEG CD 45.8 KM
B LONG -36.38 DEG DA 36.3 KM
C LAT -3.52 DEG TILT DISTANCE 5.1
D LAT -2.59 DEG
D LONG -37.02 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -3.19 DEG AB 19.4 KM
A LONG -36.53 DEG BC 4.9 KM
B LAT -3.79 DEG CD 19.3 KM
B LONG -36.75 DEG DA 4.8 KM
C LAT -3.73 DEG TILT DISTANCE 39.2
D LAT -3.14 DEG
D LONG -36.68 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 94/19/71 PAGE 294

MISSION/
FRAME NO.

3178
YR,MO,DY 670221
HR,MI,SEC 222810.51

S/C POSITION
ALT 53.74 KM
ALT RT 0.0444 KM/SEC
LAT -3.43 DEG
LONG -36.58 DEG

S/C ORIENTATION
TILT ANG 3.74 DEG
TILT AZIM 178.59 DEG
SWING ANG 338.02 DEG
N.DEV. 339.43 DEG

PHOTO ILLUMINATION
SUN AZIM 90.13 DEG
INCID ANG 68.10 DEG
EMISS ANG 3.86 DEG
PHASE ANG 68.25 DEG
ALPHA -0.21 DEG.

PRINCIPAL POINT
LATITUDE -3.51 DEG
LONGITUDE -36.53 DEG

MEDIUM RESOLUTION

CORNER COORDINATE
A LAT -3.05 DEG
A LONG -35.75 DEG
B LAT -4.44 DEG
B LONG -36.24 DEG
C LAT -3.59 DEG
C LONG -37.42 DEG
D LAT -2.64 DEG
D LONG -36.88 DEG

SIDE LENGTH
AB 44.5 KM
BC 38.3 KM
CD 43.8 KM
DA 36.4 KM

TILT DISTANCE
5.1

HIGH RESOLUTION

CORNER COORDINATE
A LAT -3.24 DEG
A LONG -36.39 DEG
B LAT -3.84 DEG
B LONG -35.61 DEG
C LAT -3.79 DEG
C LONG -36.77 DEG
D LAT -3.19 DEG
D LONG -36.54 DEG

SIDE LENGTH
AB 19.4 KM
BC 4.9 KM
CD 19.4 KM
DA 4.8 KM

TILT DISTANCE
39.8

MISSION/
FRAME NO.

3179
YR,MO,DY 670221
HR,MI,SEC 222812.87

S/C POSITION
ALT 53.84 KM
ALT RT 0.0456 KM/SEC
LAT -3.45 DEG
LONG -36.45 DEG

S/C ORIENTATION
TILT ANG 3.80 DEG
TILT AZIM 176.56 DEG
SWING ANG 336.00 DEG
N.DEV. 339.44 DEG

PHOTO ILLUMINATION
SUN AZIM 90.10 DEG
INCID ANG 67.96 DEG
EMISS ANG 3.91 DEG
PHASE ANG 68.25 DEG
ALPHA -0.35 DEG

PRINCIPAL POINT
LATITUDE -3.56 DEG
LONGITUDE -36.44 DEG

MEDIUM RESOLUTION

CORNER COORDINATE
A LAT -3.10 DEG
A LONG -35.61 DEG
B LAT -4.50 DEG
B LONG -36.10 DEG
C LAT -4.04 DEG
C LONG -37.28 DEG
D LAT -2.69 DEG
D LONG -36.74 DEG

SIDE LENGTH
AB 44.7 KM
BC 38.3 KM
CD 43.9 KM
DA 36.5 KM

TILT DISTANCE
5.1

HIGH RESOLUTION

CORNER COORDINATE
A LAT -3.29 DEG
A LONG -36.25 DEG
B LAT -3.90 DEG
B LONG -36.48 DEG
C LAT -3.84 DEG
C LONG -36.63 DEG
D LAT -3.24 DEG
D LONG -36.40 DEG

SIDE LENGTH
AB 19.5 KM
BC 4.9 KM
CD 19.4 KM
DA 4.8 KM

TILT DISTANCE
40.4

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71 PAGE 297

MISSION/
FRAME NO.

3180 YR.MO.DY 670221
HR.HI.SEC 222815.23

S/C POSITION
ALT 53.95 KM
ALT RT 0.0468 KM/SEC
LAT -3.50 DEG
LONG -36.31 DEG

S/C ORIENTATION
TILT ANG 3.86 DEG
TILT AZIM 174.60 DEG
SWING ANG 334.04 DEG
N.DEV. 339.45 DEG

PHOTO ILLUMINATION
SUN AZIM 90.07 DEG
INCID ANG 57.82 DEG
EMISS ANG 3.98 DEG
PHASE ANG 68.25 DEG
ALPHA -0.49 DEG

PRINCIPAL POINT
LATITUDE -3.52 DEG
LONGITUDE -36.33 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -3.16 DEG AB 44.8 KM
A LONG -35.47 DEG BC 38.4 KM
B LAT -4.55 DEG CD 43.9 KM
B LONG -35.96 DEG DA 36.5 KM
C LAT -4.09 DEG TILT DISTANCE 5.2
C LONG -37.14 DEG
D LAT -2.75 DEG
D LONG -36.60 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -3.35 DEG AB 19.5 KM
A LONG -36.11 DEG BC 4.9 KM
B LAT -3.95 DEG CD 19.5 KM
B LONG -36.34 DEG DA 4.8 KM
C LAT -3.89 DEG TILT DISTANCE 41.0
C LONG -36.49 DEG
D LAT -3.29 DEG
D LONG -36.26 DEG

MISSION/
FRAME NO.

3181 YR.MO.DY 670222
HR.HI.SEC 015514.11

S/C POSITION
ALT 53.39 KM
ALT RT 0.0013 KM/SEC
LAT -1.65 DEG
LONG -43.28 DEG

S/C ORIENTATION
TILT ANG 18.96 DEG
TILT AZIM 200.32 DEG
SWING ANG 359.64 DEG
N.DEV. 338.17 DEG

PHOTO ILLUMINATION
SUN AZIM 90.82 DEG
INCID ANG 73.27 DEG
EMISS ANG 19.57 DEG
PHASE ANG 67.77 DEG
ALPHA 4.50 DEG

PRINCIPAL POINT
LATITUDE -2.22 DEG
LONGITUDE -43.50 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -1.76 DEG AB 50.6 KM
A LONG -42.71 DEG BC 45.9 KM
B LAT -3.38 DEG CD 50.6 KM
B LONG -43.12 DEG DA 34.2 KM
C LAT -2.85 DEG TILT DISTANCE 27.3
C LONG -44.54 DEG
D LAT -1.36 DEG
D LONG -43.77 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -1.94 DEG AB 21.7 KM
A LONG -43.30 DEG BC 5.5 KM
B LAT -2.61 DEG CD 21.7 KM
B LONG -43.55 DEG DA 4.8 KM
C LAT -2.55 DEG TILT DISTANCE 09.4
C LONG -43.71 DEG
D LAT -1.88 DEG
D LONG -43.45 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71 PAGE 298

MISSION/
FRAME NO.

3182 YR.NO.DY 670222 TIME 015516.51
 HR.MI.SEC 015516.51
 S/C POSITION ALT 53.59 KM S/C ORIENTATION TILT ANG 18.97 DEG PHOTO ILLUMINATION SUN AZIM 90.80 DEG PRINCIPAL POINT LATITUDE -2.28 DEG
 ALT RT 0.0026 KM/SEC TILT AZIM 199.89 DEG INCID ANG 73.13 DEG LONGITUDE -43.35 DEG
 LAT -1.70 DEG SWING ANG 359.18 DEG EMISS ANG 19.57 DEG
 LONG -43.15 DEG N.DEV. 338.17 DEG PHASE ANG 67.77 DEG
 ALPHA 4.34 DEG

MEDIUM RESOLUTION
 CORNER COORDINATE SIDE LENGTH
 A LAT -1.81 DEG AB 50.6 KM
 A LONG -42.57 DEG BC 45.9 KM
 B LAT -3.44 DEG CD 50.5 KM
 B LONG -42.98 DEG DA 34.2 KM
 C LAT -2.90 DEG TILT DISTANCE 27.3
 C LONG -44.39 DEG
 D LAT -1.42 DEG
 D LONG -43.53 DEG

HIGH RESOLUTION
 CORNER COORDINATE SIDE LENGTH
 A LAT -1.99 DEG AB 21.7 KM
 A LONG -43.16 DEG BC 5.5 KM
 B LAT -2.06 DEG CD 21.7 KM
 B LONG -43.40 DEG DA 4.8 KM
 C LAT -2.60 DEG TILT DISTANCE 09.4
 C LONG -43.57 DEG
 D LAT -1.93 DEG
 D LONG -43.31 DEG

MISSION/
FRAME NO.

3183 YR.NO.DY 670222 TIME 015518.91
 HR.MI.SEC 015518.91
 S/C POSITION ALT 53.40 KM S/C ORIENTATION TILT ANG 18.97 DEG PHOTO ILLUMINATION SUN AZIM 90.78 DEG PRINCIPAL POINT LATITUDE -2.33 DEG
 ALT RT 0.0038 KM/SEC TILT AZIM 199.46 DEG INCID ANG 72.99 DEG LONGITUDE -43.21 DEG
 LAT -1.76 DEG SWING ANG 358.73 DEG EMISS ANG 19.58 DEG
 LONG -43.01 DEG N.DEV. 338.17 DEG PHASE ANG 67.77 DEG
 ALPHA 4.19 DEG

MEDIUM RESOLUTION
 CORNER COORDINATE SIDE LENGTH
 A LAT -1.87 DEG AB 50.7 KM
 A LONG -42.43 DEG BC 45.9 KM
 B LAT -3.49 DEG CD 50.5 KM
 B LONG -42.83 DEG DA 34.2 KM
 C LAT -2.95 DEG TILT DISTANCE 27.3
 C LONG -44.25 DEG
 D LAT -1.47 DEG
 D LONG -43.49 DEG

HIGH RESOLUTION
 CORNER COORDINATE SIDE LENGTH
 A LAT -2.04 DEG AB 21.7 KM
 A LONG -43.02 DEG BC 5.5 KM
 B LAT -2.72 DEG CD 21.7 KM
 B LONG -43.26 DEG DA 4.8 KM
 C LAT -2.65 DEG TILT DISTANCE 09.5
 C LONG -43.43 DEG
 D LAT -1.99 DEG
 D LONG -43.17 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71 PAGE 299

MISSION/
FRAME NO.
3184

TIME 670222
YR.MO.DY 670222
PR.MI.SEC 015221.31

S/C POSITION
ALT 53.41 KM
ALT RT 0.0050 KM/SEC
LAT -1.81 DEG
LONG -42.87 DEG

S/C ORIENTATION
TILT ANG 18.97 DEG
TILT AZIM 199.03 DEG
SWING ANG 358.28 DEG
N.DEV. 338.17 DEG

PHOTO ILLUMINATION
SUN AZIM 90.76 DEG
INCID ANG 72.85 DEG
EMISS ANG 19.58 DEG
PHASE ANG 67.77 DEG
ALPHA 4.03 DEG

PRINCIPAL POINT
LATITUDE -2.38 DEG
LONGITUDE -43.07 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.92 DEG AB 50.8 KM
A LONG -42.29 DEG BC 45.9 KM
B LAT -3.55 DEG CD 50.4 KM
B LONG -42.65 DEG DA 34.2 KM
C LAT -3.00 DEG TILT DISTANCE
C LONG -44.11 DEG 27.3
D LAT -1.52 DEG
D LONG -43.34 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.10 DEG AB 21.7 KM
A LONG -42.88 DEG BC 5.5 KM
B LAT -2.77 DEG CD 21.7 KM
B LONG -43.12 DEG DA 4.8 KM
C LAT -2.71 DEG TILT DISTANCE
C LONG -43.29 DEG 09.5
D LAT -2.04 DEG
D LONG -43.03 DEG

MISSION/
FRAME NO.
3185

TIME 670222
YR.MO.DY 670222
PR.MI.SEC 052353.02

S/C POSITION
ALT 54.00 KM
ALT RT 0.0071 KM/SEC
LAT -1.93 DEG
LONG -44.52 DEG

S/C ORIENTATION
TILT ANG 12.68 DEG
TILT AZIM 201.82 DEG
SWING ANG 1.07 DEG
N.DEV. 338.71 DEG

PHOTO ILLUMINATION
SUN AZIM 90.78 DEG
INCID ANG 72.69 DEG
EMISS ANG 13.09 DEG
PHASE ANG 68.44 DEG
ALPHA 3.81 DEG

PRINCIPAL POINT
LATITUDE -2.30 DEG
LONGITUDE -44.67 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.85 DEG AB 47.0 KM
A LONG -43.88 DEG BC 42.4 KM
B LAT -3.34 DEG CD 47.2 KM
B LONG -44.31 DEG DA 35.0 KM
C LAT -2.85 DEG TILT DISTANCE
C LONG -45.63 DEG 17.8
D LAT -1.44 DEG
D LONG -44.95 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.02 DEG AB 20.5 KM
A LONG -44.48 DEG BC 5.2 KM
B LAT -2.66 DEG CD 20.5 KM
B LONG -44.72 DEG DA 4.8 KM
C LAT -2.60 DEG TILT DISTANCE
C LONG -44.88 DEG 37.2
D LAT -1.97 DEG
D LONG -44.63 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

MISSION/
FRAME NO.
3186
YR.NO.DY 670222
PR.MI.SEC 052355.40

S/C POSITION
ALT 54.02 KM
ALT RT 0.0083 KM/SEC
LAT -1.98 DEG
LONG -44.39 DEG

S/C ORIENTATION
TILT ANG 12.68 DEG
TILT AZIM 201.17 DEG
SWING ANG 0.40 DEG
N.DEV. 338.71 DEG

PHOTO ILLUMINATION
SUN AZIM 90.75 DEG
INCID ANG 72.55 DEG
EMISS ANG 13.08 DEG
PHASE ANG 68.44 DEG
ALPHA 3.67 DEG

PRINCIPAL POINT
LATITUDE -2.35 DEG
LONGITUDE -44.53 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.08 DEG AB 20.5 KM
A LONG -44.34 DEG BC 5.2 KM
B LAT -2.71 DEG CD 20.5 KM
B LONG -44.58 DEG DA 4.8 KM
C LAT -2.65 DEG TILT DISTANCE 37.1
C LONG -44.74 DEG
D LAT -2.02 DEG
D LONG -44.49 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.90 DEG AB 47.1 KM
A LONG -43.74 DEG BC 42.4 KM
B LAT -3.39 DEG CD 47.2 KM
B LONG -44.17 DEG DA 35.0 KM
C LAT -2.90 DEG TILT DISTANCE 17.8
C LONG -45.49 DEG
D LAT -1.49 DEG
D LONG -44.82 DEG

MISSION/
FRAME NO.
3187
YR.NO.DY 670222
PR.MI.SEC 052357.79

S/C POSITION
ALT 54.04 KM
ALT RT 0.0096 KM/SEC
LAT -2.03 DEG
LONG -44.25 DEG

S/C ORIENTATION
TILT ANG 12.68 DEG
TILT AZIM 200.52 DEG
SWING ANG 359.74 DEG
N.DEV. 338.72 DEG

PHOTO ILLUMINATION
SUN AZIM 90.73 DEG
INCID ANG 72.41 DEG
EMISS ANG 13.08 DEG
PHASE ANG 68.44 DEG
ALPHA 3.52 DEG

PRINCIPAL POINT
LATITUDE -2.40 DEG
LONGITUDE -44.39 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.13 DEG AB 20.5 KM
A LONG -44.20 DEG BC 5.2 KM
B LAT -2.76 DEG CD 20.5 KM
B LONG -44.43 DEG DA 4.8 KM
C LAT -2.70 DEG TILT DISTANCE 37.1
C LONG -44.60 DEG
D LAT -2.07 DEG
D LONG -44.35 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.95 DEG AB 47.1 KM
A LONG -43.60 DEG BC 42.4 KM
B LAT -3.45 DEG CD 47.1 KM
B LONG -44.03 DEG DA 35.1 KM
C LAT -2.95 DEG TILT DISTANCE 17.8
C LONG -45.34 DEG
D LAT -1.54 DEG
D LONG -44.68 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71 PAGE 301

MISSION/
FRAME NO.
3188

TIME 670222
YR.MO.DY 0524 0.17
HR.MI.SEC 0524 0.17

S/C POSITION ALT 54.06 KM
TILT ANG 12.68 DEG
TILT AZIM 199.86 DEG
LAT -2.08 DEG
LONG -44.11 DEG

S/C ORIENTATION
SWING ANG 359.07 DEG
N.DEV. 338.72 DEG

PHOTO ILLUMINATION
SUN AZIM 99.71 DEG
INCID ANG 72.27 DEG
EMISS ANG 13.08 DEG
PHASE ANG 68.44 DEG
ALPHA 3.37 DEG

PRINCIPAL POINT
LATITUDE -2.46 DEG
LONGITUDE -44.25 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.01 DEG AB 47.2 KM
A LONG -43.45 DEG BC 42.4 KM
B LAT -3.50 DEG CD 47.1 KM
B LONG -43.89 DEG DA 35.1 KM
C LAT -3.00 DEG TILT DISTANCE 17.8
C LONG -45.20 DEG
D LAT -1.60 DEG
D LONG -44.54 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.18 DEG AB 20.5 KM
A LONG -44.06 DEG BC 5.2 KM
B LAT -2.82 DEG CD 20.5 KM
B LONG -44.29 DEG DA 4.8 KM
C LAT -2.76 DEG TILT DISTANCE 37.1
C LONG -44.46 DEG
D LAT -2.13 DEG
D LONG -44.21 DEG

MISSION/
FRAME NO.
3189

TIME 670222
YR.MO.DY 0524 2.56
HR.MI.SEC 0524 2.56

S/C POSITION ALT 54.09 KM
TILT ANG 12.69 DEG
TILT AZIM 199.21 DEG
LAT -2.13 DEG
LONG -43.98 DEG

S/C ORIENTATION
SWING ANG 358.41 DEG
N.DEV. 338.72 DEG

PHOTO ILLUMINATION
SUN AZIM 90.59 DEG
INCID ANG 72.12 DEG
EMISS ANG 13.09 DEG
PHASE ANG 68.44 DEG
ALPHA 3.22 DEG

PRINCIPAL POINT
LATITUDE -2.51 DEG
LONGITUDE -44.11 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.06 DEG AB 47.3 KM
A LONG -43.31 DEG BC 42.5 KM
B LAT -3.56 DEG CD 47.1 KM
B LONG -43.75 DEG DA 35.1 KM
C LAT -3.06 DEG TILT DISTANCE 17.8
C LONG -45.05 DEG
D LAT -1.65 DEG
D LONG -44.40 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.24 DEG AB 20.5 KM
A LONG -43.92 DEG BC 5.2 KM
B LAT -2.87 DEG CD 20.5 KM
B LONG -44.15 DEG DA 4.8 KM
C LAT -2.81 DEG TILT DISTANCE 37.2
C LONG -44.31 DEG
D LAT -2.18 DEG
D LONG -44.07 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 302

04/10/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NO.

3190
YR.MO.DY
HR.MI:SEC

TIME
S/C POSITION
ALT 54.12 KM
ALT RT 0.0132 KM/SEC
LAT -2.18 DEG
LONG -43.64 DEG

S/C ORIENTATION
TILT ANG 12.69 DEG
TILT AZIM 198.55 DEG
SWING ANG 357.74 DEG
N.DEV. 338.72 DEG

PHOTO ILLUMINATION
SUN AZIM 90.66 DEG
INCID ANG 71.98 DEG
EMISS ANG 13.09 DEG
PHASE ANG 68.44 DEG
ALPHA 3.07 DEG

PRINCIPAL POINT
LATITUDE -2.56 DEG
LONGITUDE -43.97 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.11 DEG AB 47.3 KM
A LONG -43.17 DEG BC 42.5 KM
B LAT -3.61 DEG CD 47.1 KM
B LONG -43.61 DEG DA 35.1 KM
C LAT -3.11 DEG TILT DISTANCE 17.8
C LONG -44.92 DEG
D LAT -1.70 DEG
D LONG -44.25 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.29 DEG AB 20.5 KM
A LONG -43.78 DEG BC 5.2 KM
B LAT -2.92 DEG CD 20.5 KM
B LONG -44.01 DEG DA 4.8 KM
C LAT -2.86 DEG TILT DISTANCE 37.2
C LONG -44.17 DEG
D LAT -2.23 DEG
D LONG -43.93 DEG

MISSION/
FRAME NO.

3191
YR.MO.DY
HR.MI:SEC

TIME
S/C POSITION
ALT 54.15 KM
ALT RT 0.0144 KM/SEC
LAT -2.23 DEG
LONG -43.70 DEG

S/C ORIENTATION
TILT ANG 12.70 DEG
TILT AZIM 197.90 DEG
SWING ANG 357.08 DEG
N.DEV. 338.72 DEG

PHOTO ILLUMINATION
SUN AZIM 90.64 DEG
INCID ANG 71.84 DEG
EMISS ANG 13.10 DEG
PHASE ANG 68.44 DEG
ALPHA 2.92 DEG

PRINCIPAL POINT
LATITUDE -2.62 DEG
LONGITUDE -43.83 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.17 DEG AB 47.4 KM
A LONG -43.03 DEG BC 42.5 KM
B LAT -3.67 DEG CD 47.1 KM
B LONG -43.47 DEG DA 35.1 KM
C LAT -3.16 DEG TILT DISTANCE 17.9
C LONG -44.78 DEG
D LAT -1.76 DEG
D LONG -44.11 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.34 DEG AB 20.6 KM
A LONG -43.64 DEG BC 5.2 KM
B LAT -2.98 DEG CD 20.5 KM
B LONG -43.87 DEG DA 4.8 KM
C LAT -2.92 DEG TILT DISTANCE 37.3
C LONG -44.03 DEG
D LAT -2.28 DEG
D LONG -43.79 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71 PAGE 103

MISSION/
FRAME NO.

3192 YR.MO.DY
HR.MI.SEC

TIME 670222
S/C POSITION
ALT 54.19 KM
ALT RT 0.0157 KM/SEC
LAT -1.28 DEG
LONG -43.57 DEG

S/C ORIENTATION
TILT ANG 12.70 DEG
TILT AZIM 197.25 DEG
SWING ANG 356.41 DEG
N.DEV. 338.73 DEG

PHOTO ILLUMINATION
SUN AZIM 90.52 DEG
INCID ANG 71.70 DEG
EMISS ANG 13.11 DEG
PHASE ANG 68.44 DEG
ALPHA 2.77 DEG

PRINCIPAL POINT
LATITUDE -2.67 DEG
LONGITUDE -43.69 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.22 DEG AB 47.5 KM
A LONG -42.88 DEG BC 42.5 KM
B LAT -3.72 DEG CD 47.0 KM
B LONG -43.22 DEG DA 35.2 KM
C LAT -3.21 DEG TILT DISTANCE
C LONG -42.63 DEG 17.9
D LAT -1.81 DEG
D LONG -43.57 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.39 DEG AB 20.6 KM
A LONG -43.50 DEG BC 5.2 KM
B LAT -3.03 DEG CD 20.5 KM
B LONG -43.73 DEG DA 4.8 KM
C LAT -2.97 DEG TILT DISTANCE
C LONG -43.89 DEG 37.4
D LAT -2.34 DEG
D LONG -43.65 DEG

MISSION/
FRAME NO.

3193 YR.MO.DY
HR.MI.SEC

TIME 670222
S/C POSITION
ALT 54.23 KM
ALT RT 0.0169 KM/SEC
LAT -2.34 DEG
LONG -43.43 DEG

S/C ORIENTATION
TILT ANG 12.71 DEG
TILT AZIM 196.60 DEG
SWING ANG 355.75 DEG
N.DEV. 338.73 DEG

PHOTO ILLUMINATION
SUN AZIM 90.59 DEG
INCID ANG 71.56 DEG
EMISS ANG 13.12 DEG
PHASE ANG 68.44 DEG
ALPHA 2.63 DEG

PRINCIPAL POINT
LATITUDE -2.72 DEG
LONGITUDE -43.55 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.27 DEG AB 47.5 KM
A LONG -42.74 DEG BC 42.5 KM
B LAT -3.78 DEG CD 47.0 KM
B LONG -43.18 DEG DA 35.2 KM
C LAT -2.27 DEG TILT DISTANCE
C LONG -44.49 DEG 17.9
D LAT -1.86 DEG
D LONG -43.63 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.45 DEG AB 20.6 KM
A LONG -43.36 DEG BC 5.2 KM
B LAT -3.09 DEG CD 20.6 KM
B LONG -43.59 DEG DA 4.8 KM
C LAT -3.02 DEG TILT DISTANCE
C LONG -43.75 DEG 37.5
D LAT -2.39 DEG
D LONG -43.51 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

MISSION/
FRAME NO.

3194

YR.MO.DY
HR.MI.SEC

052416.87

S/C POSITION
ALT 54.27 KM
TILT ANG 12.72 DEG
TILT AZIM 195.95 DEG
SWING ANG 358.09 DEG
N.DEV. 338.73 DEG

S/C ORIENTATION
SUN AZIM 90.57 DEG
INCID ANG 71.42 DEG
EMISS ANG 13.13 DEG
PHASE ANG 68.44 DEG
ALPHA 2.48 DEG

PRINCIPAL POINT
LATITUDE -2.79 DEG
LONGITUDE -43.41 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.32 DEG AB 47.7 KM
A LONG -42.60 DEG BC 42.5 KM
B LAT -3.84 DEG CD 47.0 KM
B LONG -43.04 DEG DA 35.2 KM
C LAT -3.32 DEG TILT DISTANCE 17.9
C LONG -44.35 DEG
D LAT -1.92 DEG
D LONG -43.69 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.50 DEG AB 20.6 KM
A LONG -43.22 DEG BC 5.3 KM
B LAT -3.14 DEG CD 27.6 KM
B LONG -43.45 DEG DA 4.8 KM
C LAT -3.08 DEG TILT DISTANCE 37.6
C LONG -43.61 DEG
D LAT -2.44 DEG
D LONG -43.36 DEG

MISSION/
FRAME NO.

3195

YR.MO.DY
HR.MI.SEC

052416.87

S/C POSITION
ALT 54.31 KM
TILT ANG 12.74 DEG
TILT AZIM 195.30 DEG
SWING ANG 358.43 DEG
N.DEV. 338.74 DEG

S/C ORIENTATION
SUN AZIM 90.54 DEG
INCID ANG 71.28 DEG
EMISS ANG 13.14 DEG
PHASE ANG 68.44 DEG
ALPHA 2.33 DEG

PRINCIPAL POINT
LATITUDE -2.83 DEG
LONGITUDE -43.26 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.38 DEG AB 47.8 KM
A LONG -42.46 DEG BC 42.7 KM
B LAT -3.89 DEG CD 47.0 KM
B LONG -42.50 DEG DA 35.2 KM
C LAT -3.37 DEG TILT DISTANCE 17.9
C LONG -44.21 DEG
D LAT -1.97 DEG
D LONG -43.55 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.55 DEG AB 20.6 KM
A LONG -43.37 DEG BC 5.3 KM
B LAT -3.19 DEG CD 20.6 KM
B LONG -43.31 DEG DA 4.8 KM
C LAT -3.13 DEG TILT DISTANCE 37.7
C LONG -43.47 DEG
D LAT -2.50 DEG
D LONG -43.22 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/13/71 PAGE 305

MISSION/
FRAME NO.
3196

YR. MO. DY 670222
HR. MI. SEC 082419.26

TIME

S/C POSITION ALT 54.36 KM
ALT RT 0.0205 KM/SEC
LAT -2.49 DEG
LONG -43.02 DEG

S/C ORIENTATION TILT ANG 12.75 DEG
TILT AZIM 194.65 DEG
SWING ANG 353.77 DEG
N.DEV. 338.74 DEG

PHOTO ILLUMINATION SUN AZIM 90.52 DEG
INCID ANG 71.13 DEG
EMISS ANG 13.16 DEG
PHASE ANG 68.44 DEG
ALPHA 2.18 DEG

PRINCIPAL POINT LATITUDE -2.88 DEG
LONGITUDE -43.12 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.43 DEG AB 47.9 KM
A LONG -42.32 DEG BC 42.7 KM
B LAT -3.55 DEG CD 47.0 KM
B LONG -42.76 DEG DA 35.3 KM
C LAT -3.43 DEG TILT DISTANCE 17.9
C LONG -44.07 DEG
D LAT -2.02 DEG
D LONG -43.41 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.61 DEG AB 20.6 KM
A LONG -42.93 DEG BC 5.3 KM
B LAT -3.25 DEG CD 20.6 KM
B LONG -43.17 DEG DA 4.8 KM
C LAT -3.18 DEG TILT DISTANCE 37.9
C LONG -43.33 DEG
D LAT -2.55 DEG
D LONG -43.08 DEG

MISSION/
FRAME NO.
3197

YR. MO. DY 670222
HR. MI. SEC 082421.65

TIME

S/C POSITION ALT 54.41 KM
ALT RT 0.0218 KM/SEC
LAT -2.54 DEG
LONG -42.68 DEG

S/C ORIENTATION TILT ANG 12.77 DEG
TILT AZIM 194.00 DEG
SWING ANG 353.11 DEG
N.DEV. 338.74 DEG

PHOTO ILLUMINATION SUN AZIM 90.49 DEG
INCID ANG 70.99 DEG
EMISS ANG 13.17 DEG
PHASE ANG 68.44 DEG
ALPHA 2.03 DEG

PRINCIPAL POINT LATITUDE -2.94 DEG
LONGITUDE -42.98 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.48 DEG AB 48.0 KM
A LONG -42.17 DEG BC 42.8 KM
B LAT -4.00 DEG CD 47.0 KM
B LONG -42.61 DEG DA 35.3 KM
C LAT -3.48 DEG TILT DISTANCE 17.9
C LONG -43.93 DEG
D LAT -2.07 DEG
D LONG -43.27 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.65 DEG AB 20.7 KM
A LONG -42.79 DEG BC 5.3 KM
B LAT -3.30 DEG CD 20.6 KM
B LONG -43.03 DEG DA 4.8 KM
C LAT -3.24 DEG TILT DISTANCE 38.1
C LONG -43.19 DEG
D LAT -2.60 DEG
D LONG -42.94 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

MISSION/
FRAME NO.
3198

YR.MO.DY 670222
HR.MI.SEC 052424.03

TIME
S/C POSITION ALT 54.47 KM
ALT RT 0.0230 KM/SEC
LAT -2.59 DEG
LONG -42.75 DEG

S/C ORIENTATION
TILT ANG 12.78 DEG
TILT AZIM 193.36 DEG
SWING ANG 352.46 DEG
N.DEV. 338.75 DEG

PHOTO ILLUMINATION
SUN AZIM 90.47 DEG
INCID ANG 70.85 DEG
EMISS ANG 13.19 DEG
PHASE ANG 68.44 DEG
ALPHA 1.88 DEG

PRINCIPAL POINT
LATITUDE -2.99 DEG
LONGITUDE -42.84 DEG

CORNER COORDINATE SIDE LENGTH
A LAT -2.53 DEG AB 48.1 KM
A LONG -42.03 DEG BC 42.8 KM
B LAT -4.06 DEG CD 47.0 KM
B LONG -42.47 DEG DA 35.4 KM
C LAT -3.53 DEG TILT DISTANCE 18.0
C LONG -43.79 DEG
D LAT -2.13 DEG
D LONG -43.13 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.71 DEG AB 20.7 KM
A LONG -42.65 DEG BC 5.3 KM
B LAT -3.35 DEG CD 20.6 KM
B LONG -42.89 DEG DA 4.9 KM
C LAT -3.29 DEG TILT DISTANCE 38.3
C LONG -43.05 DEG
D LAT -2.66 DEG
D LONG -42.80 DEG

MISSION/
FRAME NO.
3199

YR.MO.DY 670222
HR.MI.SEC 052426.42

TIME
S/C POSITION ALT 54.52 KM
ALT RT 0.0242 KM/SEC
LAT -2.64 DEG
LONG -42.61 DEG

S/C ORIENTATION
TILT ANG 12.80 DEG
TILT AZIM 192.71 DEG
SWING ANG 351.81 DEG
N.DEV. 338.75 DEG

PHOTO ILLUMINATION
SUN AZIM 90.44 DEG
INCID ANG 70.71 DEG
EMISS ANG 13.21 DEG
PHASE ANG 68.44 DEG
ALPHA 1.73 DEG

PRINCIPAL POINT
LATITUDE -3.04 DEG
LONGITUDE -42.70 DEG

CORNER COORDINATE SIDE LENGTH
A LAT -2.59 DEG AB 48.2 KM
A LONG -41.89 DEG BC 42.9 KM
B LAT -4.11 DEG CD 47.0 KM
B LONG -42.33 DEG DA 35.4 KM
C LAT -3.58 DEG TILT DISTANCE 18.0
C LONG -43.65 DEG
D LAT -2.18 DEG
D LONG -42.98 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.77 DEG AB 20.7 KM
A LONG -42.51 DEG BC 5.3 KM
B LAT -3.41 DEG CD 20.7 KM
B LONG -42.75 DEG DA 4.9 KM
C LAT -3.34 DEG TILT DISTANCE 38.5
C LONG -42.91 DEG
D LAT -2.71 DEG
D LONG -42.66 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/13/71 PAGE 307

MISSION/
FRAME NO.
3200

TIME 670222
YR,MO, DY 052428.80
PR,MI,SEC 052428.80

S/C POSITION
ALT 59.58 KM
ALT RT. 0.0254 KM/SEC
LAT -2.69 DEG
LONG -42.4R DEG

S/C ORIENTATION
TILT ANG 12.82 DEG
TILT AZIM. 192.07 DEG
SWING ANG 351.16 DEG
N.DEV. 338.76 DEG

PHOTO ILLUMINATION
SUN AZIM 90.42 DEG
INCID. ANG 70.57 DEG
EMISS ANG 13.23 DEG
PHASE ANG 68.44 DEG
ALPHA 1.58 DEG

PRINCIPAL POINT
LATITUDE -3.10 DEG
LONGITUDE -42.56 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.64 DEG AB 48.3 KM
A LONG -41.75 DEG BC 42.9 KM
B LAT -4.17 DEG CD 47.9 KM
B LONG -42.15 DEG DA 35.5 KM
C LAT -3.64 DEG TILT DISTANCE
C LONG -43.50 DEG 18.0
D LAT -2.23 DEG
D LONG -42.84 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.82 DEG AB 20.7 KM
A LONG -42.37 DEG BC 5.3 KM
B LAT -3.46 DEG CD 20.7 KM
B LONG -42.61 DEG DA 4.9 KM
C LAT -3.40 DEG TILT DISTANCE
C LONG -42.77 DEG 38.7
D LAT -2.76 DEG
D LONG -42.52 DEG

MISSION/
FRAME NO.
3201

TIME 085312.30
YR,MO, DY 085312.30
PR,MI,SEC 085312.30

S/C POSITION
ALT 55.61 KM
ALT RT 0.0335 KM/SEC
LAT -3.07 DEG
LONG -43.45 DEG

S/C ORIENTATION
TILT ANG 4.58 DEG
TILT AZIM 190.19 DEG
SWING ANG 349.56 DEG
N.DEV. 339.33 DEG

PHOTO ILLUMINATION
SUN AZIM 90.33 DEG
INCID ANG 69.72 DEG
EMISS ANG 4.73 DEG
PHASE ANG 68.98 DEG
ALPHA 0.67 DEG

PRINCIPAL POINT
LATITUDE -3.21 DEG
LONGITUDE -43.47 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.74 DEG AB 46.1 KM
A LONG -42.63 DEG BC 46.0 KM
B LAT -4.18 DEG CD 45.6 KM
B LONG -42.12 DEG DA 37.4 KM
C LAT -3.71 DEG TILT DISTANCE
C LONG -44.36 DEG 6.3
D LAT -2.31 DEG
D LONG -43.79 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.93 DEG AB 20.1 KM
A LONG -43.28 DEG BC 5.1 KM
B LAT -3.56 DEG CD 20.1 KM
B LONG -43.51 DEG DA 5.0 KM
C LAT -3.50 DEG TILT DISTANCE
C LONG -43.67 DEG 48.8
D LAT -2.88 DEG
D LONG -43.43 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 378

04/10/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NO.

3202

YR.MO.DY
HR.MI.SEC

670222
085214.62

S/C POSITION
ALT 55.69 KM
ALT RT 0.0347 KM/SEC
LAT -3.12 DEG
LONG -43.31 DEG

S/C ORIENTATION
TILT ANG 4.61 DEG
TILT AZIM 188.45 DEG
SWING ANG 347.82 DEG
N.DEV. 339.34 DEG

PHOTO ILLUMINATION
SUN AZIM 90.30 DEG
INCID ANG 59.58 DEG
EMISS ANG 4.76 DEG
PHASE ANG 68.98 DEG
ALPHA 7.53 DEG

PRINCIPAL POINT
LATITUDE -3.26 DEG
LONGITUDE -43.34 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.79 DEG AB 46.2 KM
A LONG -42.49 DEG BC 40.3 KM
B LAT -4.23 DEG CD 45.7 KM
B LONG -42.99 DEG DA 37.5 KM
C LAT -3.76 DEG TILT DISTANCE
C LONG -44.22 DEG 6.3
D LAT -2.36 DEG
D LONG -43.65 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.98 DEG AB 20.2 KM
A LONG -43.14 DEG BC 5.1 KM
B LAT -3.61 DEG CD 20.1 KM
B LONG -43.38 DEG DA 5.0 KM
C LAT -3.55 DEG TILT DISTANCE
C LONG -43.53 DEG 49.1
D LAT -2.93 DEG
D LONG -43.30 DEG

MISSION/
FRAME NO.

3203

YR.MO.DY
HR.MI.SEC

670222
085316.99

S/C POSITION
ALT 55.77 KM
ALT RT 0.0359 KM/SEC
LAT -3.17 DEG
LONG -43.18 DEG

S/C ORIENTATION
TILT ANG 4.64 DEG
TILT AZIM 186.70 DEG
SWING ANG 346.07 DEG
N.DEV. 339.35 DEG

PHOTO ILLUMINATION
SUN AZIM 90.28 DEG
INCID ANG 59.44 DEG
EMISS ANG 4.79 DEG
PHASE ANG 68.98 DEG
ALPHA 0.39 DEG

PRINCIPAL POINT
LATITUDE -3.31 DEG
LONGITUDE -43.20 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.84 DEG AB 46.3 KM
A LONG -42.35 DEG BC 40.1 KM
B LAT -4.29 DEG CD 45.7 KM
B LONG -42.24 DEG DA 37.5 KM
C LAT -3.81 DEG TILT DISTANCE
C LONG -44.08 DEG 6.3
D LAT -2.42 DEG
D LONG -43.51 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -3.04 DEG AB 20.2 KM
A LONG -43.00 DEG BC 5.1 KM
B LAT -3.66 DEG CD 20.2 KM
B LONG -43.24 DEG DA 5.0 KM
C LAT -3.60 DEG TILT DISTANCE
C LONG -43.39 DEG 49.4
D LAT -2.98 DEG
D LONG -43.16 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 309

04/13/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NO.

3204
TIME 670222
YR,MO,DY 670222
HR,MI,SEC 065319.42

S/C POSITION
ALT 55.86 KM
ALT RT 0.0371 KM/SEC
LAT -43.22 DEG
LONG -43.04 DEG

S/C ORIENTATION
TILT ANG 4.68 DEG
TILT AZIM 184.93 DEG
SWING ANG 344.30 DEG
N.DEV. 339.35 DEG

PHOTO ILLUMINATION
SUN AZIM 90.25 DEG
INCID ANG 69.30 DEG
EMISS ANG 4.83 DEG
PHASE ANG 58.98 DEG
ALPHA 9.24 DEG

PRINCIPAL POINT
LATITUDE -3.37 DEG
LONGITUDE -43.05 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -2.90 DEG AB 46.4 KM
A LONG -42.20 DEG BC 40.2 KM
B LAT -4.35 DEG CD 45.7 KM
B LONG -42.70 DEG DA 37.5 KM
C LAT -3.87 DEG TILT DISTANCE 6.4
C LONG -43.94 DEG
D LAT -2.47 DEG
D LONG -43.37 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -3.09 DEG AB 20.2 KM
A LONG -42.86 DEG BC 5.1 KM
B LAT -3.72 DEG CD 20.2 KM
B LONG -43.09 DEG DA 5.0 KM
C LAT -3.66 DEG TILT DISTANCE 49.8
C LONG -43.25 DEG
D LAT -3.03 DEG
D LONG -43.01 DEG

MISSION/
FRAME NO.

3205
TIME 670222
YR,MO,DY 122142.21
HR,MI,SEC

S/C POSITION
ALT 56.25 KM
ALT RT 0.0347 KM/SEC
LAT -3.15 DEG
LONG -45.19 DEG

S/C ORIENTATION
TILT ANG 29.83 DEG
TILT AZIM 21.96 DEG
SWING ANG 180.92 DEG
N.DEV. 335.77 DEG

PHOTO ILLUMINATION
SUN AZIM 90.70 DEG
INCID ANG 69.29 DEG
EMISS ANG 30.90 DEG
PHASE ANG 82.57 DEG
ALPHA -15.92 DEG

PRINCIPAL POINT
LATITUDE -2.16 DEG
LONGITUDE -44.79 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -1.21 DEG AB 68.2 KM
A LONG -43.35 DEG BC 36.3 KM
B LAT -3.14 DEG CD 67.5 KM
B LONG -44.52 DEG DA 60.3 KM
C LAT -2.70 DEG TILT DISTANCE 45.8
C LONG -45.64 DEG
D LAT -0.51 DEG
D LONG -45.22 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT -1.72 DEG AB 27.7 KM
A LONG -44.50 DEG BC 5.3 KM
B LAT -2.57 DEG CD 27.6 KM
B LONG -44.85 DEG DA 5.6 KM
C LAT -2.50 DEG TILT DISTANCE 49.6
C LONG -45.02 DEG
D LAT -1.64 DEG
D LONG -44.71 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

PAGE 310

04/10/71

FULL LIST ORDERED BY MISSION AND FRAME NUMBER

MISSION/
FRAME NO.
3206.

YR. MO. DY
670222
HR. MI. SEC
122145.01

S/C POSITION
ALT 56.35 KM
ALT RT 0.0361 KM/SEC
LAT -3.21 DEG
LONG -45.03 DEG

S/C ORIENTATION
TILT ANG 29.84 DEG
TILT AZIM 22.25 DEG
SWING ANG 181.26 DEG
N.DEV. .335.79 DEG

PHOTO ILLUMINATION
SUN AZIM 90.67 DEG
INCID ANG 69.12 DEG
EMISS ANG 30.91 DEG
PHASE ANG 82.57 DEG
ALPHA -16.09 DEG

PRINCIPAL POINT
LATITUDE -2.22 DEG
LONGITUDE -44.62 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.26 DEG AB 68.5 KM
A LONG -43.18 DEG BC 36.4 KM
B LAT -3.20 DEG CD 67.6 KM
B LONG -44.35 DEG DA 60.4 KM
C LAT -2.77 DEG TILT DISTANCE
C LONG -45.47 DEG 45.8
D LAT -0.57 DEG
D LONG -45.05 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.78 DEG AB 27.7 KM
A LONG -44.34 DEG BC 5.3 KM
B LAT -2.63 DEG CD 27.7 KM
B LONG -44.69 DEG DA 6.6 KM
C LAT -2.56 DEG TILT DISTANCE
C LONG -44.85 DEG 49.6
D LAT -1.70 DEG
D LONG -44.54 DEG

MISSION/
FRAME NO.
3207

YR. MO. DY
670222
HR. MI. SEC
122147.82

S/C POSITION
ALT 56.45 KM
ALT RT 0.0376 KM/SEC
LAT -3.27 DEG
LONG -44.87 DEG

S/C ORIENTATION
TILT ANG 29.84 DEG
TILT AZIM 22.54 DEG
SWING ANG 181.60 DEG
N.DEV. 335.81 DEG

PHOTO ILLUMINATION
SUN AZIM 90.65 DEG
INCID ANG 68.96 DEG
EMISS ANG 30.92 DEG
PHASE ANG 82.57 DEG
ALPHA -16.26 DEG

PRINCIPAL POINT
LATITUDE -2.28 DEG
LONGITUDE -44.66 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.32 DEG AB 68.7 KM
A LONG -43.00 DEG BC 36.4 KM
B LAT -3.26 DEG CD 67.5 KM
B LONG -44.18 DEG DA 60.5 KM
C LAT -2.83 DEG TILT DISTANCE
C LONG -45.31 DEG 45.9
D LAT -0.64 DEG
D LONG -44.88 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.84 DEG AB 27.8 KM
A LONG -44.17 DEG BC 5.3 KM
B LAT -2.69 DEG CD 27.7 KM
B LONG -44.52 DEG DA 6.6 KM
C LAT -2.62 DEG TILT DISTANCE
C LONG -44.69 DEG 49.7
D LAT -1.76 DEG
D LONG -44.38 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71

PAGE 311

MISSION/
FRAME NO.
3208

YR. MO. DY
HR. MI. SEC
122150.64

S/C POSITION
ALT 50.56 KM
ALT RT 0.0390 KM/SEC
LAT -3.33 DEG
LONG -44.71 DEG

S/C ORIENTATION
TILT ANG 29.85 DEG
TILT AZIM 22.83 DEG
SWING ANG 181.95 DEG
N.DEV. 335.83 DEG

PHOTO ILLUMINATION
SUN AZIM 90.52 DEG
INCID ANG 68.79 DEG
EMISS ANG 30.93 DEG
PHASE ANG 82.57 DEG
ALPHA -16.43 DEG

PRINCIPAL POINT
LATITUDE -2.34 DEG
LONGITUDE -44.29 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.37 DEG AB 69.3 KM
A LONG -42.83 DEG BC 36.5 KM
B LAT -3.32 DEG CD 67.7 KM
B LONG -44.01 DEG DA 69.7 KM
C LAT -2.89 DEG TILT DISTANCE 45.9
C LONG -45.14 DEG
D LAT -0.70 DEG
D LONG -44.72 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.90 DEG AB 27.9 KM
A LONG -44.00 DEG BC 5.4 KM
B LAT -2.75 DEG CD 27.8 KM
B LONG -44.36 DEG DA 6.6 KM
C LAT -2.68 DEG TILT DISTANCE 49.8
C LONG -44.52 DEG
D LAT -1.82 DEG
D LONG -44.21 DEG

MISSION/
FRAME NO.
3209

YR. MO. DY
HR. MI. SEC
122153.47

S/C POSITION
ALT 56.67 KM
ALT RT 0.0404 KM/SEC
LAT -3.39 DEG
LONG -44.55 DEG

S/C ORIENTATION
TILT ANG 29.86 DEG
TILT AZIM 23.12 DEG
SWING ANG 182.30 DEG
N.DEV. 335.86 DEG

PHOTO ILLUMINATION
SUN AZIM 90.59 DEG
INCID ANG 68.62 DEG
EMISS ANG 30.94 DEG
PHASE ANG 82.57 DEG
ALPHA -16.63 DEG

PRINCIPAL POINT
LATITUDE -2.49 DEG
LONGITUDE -44.12 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.43 DEG AB 69.3 KM
A LONG -42.66 DEG BC 36.5 KM
B LAT -3.38 DEG CD 67.7 KM
B LONG -43.85 DEG DA 60.8 KM
C LAT -2.55 DEG TILT DISTANCE 45.9
C LONG -44.58 DEG
D LAT -0.76 DEG
D LONG -44.55 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.95 DEG AB 27.9 KM
A LONG -43.83 DEG BC 5.4 KM
B LAT -2.81 DEG CD 27.8 KM
B LONG -44.19 DEG DA 6.7 KM
C LAT -2.75 DEG TILT DISTANCE 49.9
C LONG -44.35 DEG
D LAT -1.88 DEG
D LONG -44.04 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71 PAGE 312

MISSION/
FRAME NO.
3210

YR. MO. DY 670222
FR. MI. SEC 122156.30

S/C POSITION
ALT 56.79 KM
ALT RT 0.0419 KM/SEC
LAT -3.45 DEG
LONG -44.39 DEG

S/C ORIENTATION
TILT ANG 29.87 DEG
TILT AZIM 23.41 DEG
SWING ANG 182.64 DEG
N.DEV. 335.88 DEG

PHOTO ILLUMINATION
SUN AZIM 90.56 DEG
INCID ANG 68.45 DEG
EMISS ANG 30.95 DEG
PHASE ANG 82.57 DEG
ALPHA -16.77 DEG

PRINCIPAL POINT
LATITUDE -2.46 DEG
LONGITUDE -43.95 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.48 DEG AB 69.6 KM
A LONG -42.48 DEG BC 36.7 KM
B LAT -3.45 DEG CD 67.7 KM
B LONG -43.68 DEG DA 61.0 KM
C LAT -3.01 DEG TILT DISTANCE 45.9
C LONG -44.81 DEG
D LAT -0.82 DEG
D LONG -44.38 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.02 DEG AB 25.0 KM
A LONG -43.67 DEG BC 5.4 KM
B LAT -2.87 DEG CD 27.9 KM
B LONG -44.02 DEG DA 6.7 KM
C LAT -2.81 DEG TILT DISTANCE 50.0
C LONG -44.19 DEG
D LAT -1.94 DEG
D LONG -43.87 DEG

MISSION/
FRAME NO.
3211

YR. MO. DY 670222
FR. MI. SEC 122159.15

S/C POSITION
ALT 56.91 KM
ALT RT 0.0433 KM/SEC
LAT -3.51 DEG
LONG -44.22 DEG

S/C ORIENTATION
TILT ANG 29.88 DEG
TILT AZIM 23.70 DEG
SWING ANG 182.99 DEG
N.DEV. 335.91 DEG

PHOTO ILLUMINATION
SUN AZIM 90.53 DEG
INCID ANG 68.28 DEG
EMISS ANG 30.96 DEG
PHASE ANG 82.57 DEG
ALPHA -16.95 DEG

PRINCIPAL POINT
LATITUDE -2.52 DEG
LONGITUDE -43.79 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.54 DEG AB 69.9 KM
A LONG -42.30 DEG BC 36.8 KM
B LAT -3.51 DEG CD 67.8 KM
B LONG -43.50 DEG DA 61.0 KM
C LAT -3.08 DEG TILT DISTANCE 45.9
C LONG -44.64 DEG
D LAT -0.88 DEG
D LONG -44.21 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.07 DEG AB 28.1 KM
A LONG -43.50 DEG BC 5.4 KM
B LAT -2.93 DEG CD 28.0 KM
B LONG -43.85 DEG DA 6.7 KM
C LAT -2.87 DEG TILT DISTANCE 50.2
C LONG -44.02 DEG
D LAT -2.00 DEG
D LONG -43.70 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/10/71 PAGE 313

MISSION/
FRAME NO.
3212

TIME
670222
1222 2.00

S/C POSITION
ALT 57.03 KM
ALT RT 0.0448 KM/SEC
LAT -3.57 DEG
LONG -44.06 DEG

S/C ORIENTATION
TILT ANG 29.89 DEG
TILT AZIM 23.99 DEG
SWING ANG 183.34 DEG
N.DEV. 335.93 DEG

PHOTO ILLUMINATION
SUN AZIM 90.49 DEG
INCID ANG 68.11 DEG
EMISS ANG 30.97 DEG
PHASE ANG 82.57 DEG
ALPHA -17.12 DEG

PRINCIPAL POINT
LATITUDE -2.58 DEG
LONGITUDE -43.62 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.59 DEG AB 70.2 KM
A LONG -42.13 DEG BC 36.9 KM
B LAT -3.57 DEG CD 57.8 KM
B LONG -43.33 DEG DA 61.3 KM
C LAT -2.14 DEG TILT DISTANCE
C LONG -44.47 DEG 45.9
D LAT -0.54 DEG
D LONG -44.05 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -2.13 DEG AB 28.1 KM
A LONG -43.33 DEG BC 5.4 KM
B LAT -2.99 DEG CD 28.0 KM
B LONG -43.68 DEG DA 6.7 KM
C LAT -2.93 DEG TILT DISTANCE
C LONG -43.85 DEG 50.3
D LAT -2.06 DEG
D LONG -43.54 DEG

MISSION/
FRAME NO.
3213

TIME
670222
154456.41

S/C POSITION
ALT 58.98 KM
ALT RT -0.0631 KM/SEC
LAT 1.31 DEG
LONG -58.00 DEG

S/C ORIENTATION
TILT ANG 66.49 DEG
TILT AZIM 200.92 DEG
SWING ANG 1.81 DEG
N.DEV. 311.52 DEG

PHOTO ILLUMINATION
SUN AZIM 90.99 DEG
INCID ANG 82.51 DEG
EMISS ANG 71.46 DEG
PHASE ANG 68.76 DEG
ALPHA -2.92 DEG

PRINCIPAL POINT
LATITUDE -3.33 DEG
LONGITUDE -59.78 DEG

MEDIUM RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -0.76 DEG AB 87.0 KM
A LONG -57.89 DEG BC 234.1 KM
B LAT -8.19 DEG CD 256.9 KM
B LONG -58.18 DEG DA 53.7 KM
C LAT -8.04 DEG TILT DISTANCE
C LONG -65.59 DEG 83.0
D LAT -0.20 DEG
D LONG -59.57 DEG

HIGH RESOLUTION
CORNER COORDINATE SIDE LENGTH
A LAT -1.57 DEG AB 110.6 KM
A LONG -58.95 DEG BC 411.9 KM
B LAT -11.29 DEG CD 323.0 KM
B LONG -62.14 DEG DA 9.9 KM
C LAT -11.47 DEG TILT DISTANCE
C LONG -66.57 DEG 01.0
D LAT -1.47 DEG
D LONG -59.26 DEG

LUNAR ORBITER PHOTOGRAPHIC SUPPORTING DATA

FULL LIST ORDERED BY MISSION AND FRAME NUMBER 04/19/71 PAGE 314

MISSION/
FRAME NO.
3214

YR.,MO.,DY 670222
HR.,MI.,SEC 2243 4.11

S/C POSITION
ALT 63.49 KM
ALT RT -0.0858 KM/SEC
LAT 1.90 DEG
LONG -64.41 DEG

S/C ORIENTATION
TILT ANG 65.66 DEG
TILT AZIM 0.25 DEG
SWING ANG 169.66 DEG
N.DEV. 347.89 DEG

PHOTO ILLUMINATION
SUN AZIM 92.19 DEG
INCID ANG 83.91 DEG
EMISS ANG 70.80 DEG
PHASE ANG 86.18 DEG
ALPHA -14.40 DEG

PRINCIPAL POINT
LATITUDE 7.05 DEG
LONGITUDE -64.39 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 14.88 DEG AB 338.7 KM
A LONG -55.13 DEG BC 60.2 KM
B LAT 3.73 DEG CD 103.9 KM
B LONG -63.74 DEG DA 189.7 KM
C LAT 4.25 DEG TILT DISTANCE 77.0
C LONG -65.68 DEG
D LAT 10.62 DEG
D LONG -67.43 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 15.39 DEG AB 312.9 KM
A LONG -63.25 DEG BC 71.1 KM
B LAT 5.04 DEG CD 119.5 KM
B LONG -64.36 DEG DA 105.1 KM
C LAT 5.17 DEG TILT DISTANCE 47.3
C LONG -64.70 DEG
D LAT 15.73 DEG
D LONG -64.55 DEG

MISSION/
FRAME NO.
3215

YR.,MO.,DY 670223
HR.,MI.,SEC 021123.81

S/C POSITION
ALT 64.60 KM
ALT RT -0.0889 KM/SEC
LAT 2.01 DEG
LONG -65.66 DEG

S/C ORIENTATION
TILT ANG. 1.12 DEG
TILT AZIM 273.89 DEG
SWING ANG 73.21 DEG
N.DEV. 339.32 DEG

PHOTO ILLUMINATION
SUN AZIM 91.62 DEG
INCID ANG 84.30 DEG
EMISS ANG 1.16 DEG
PHASE ANG 83.14 DEG
ALPHA 1.16 DEG

PRINCIPAL POINT
LATITUDE 2.02 DEG
LONGITUDE -56.70 DEG

MEDIUM RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 2.57 DEG AB 52.5 KM
A LONG -65.71 DEG BC 44.9 KM
B LAT 0.54 DEG CD 53.3 KM
B LONG -66.32 DEG DA 44.7 KM
C LAT 1.45 DEG TILT DISTANCE 1.6
C LONG -67.71 DEG
D LAT 3.10 DEG
D LONG -67.08 DEG

HIGH RESOLUTION

CORNER COORDINATE SIDE LENGTH
A LAT 2.34 DEG AB 23.2 KM
A LONG -66.48 DEG BC 5.8 KM
B LAT 1.62 DEG CD 23.2 KM
B LONG -66.75 DEG DA 5.8 KM
C LAT 1.69 DEG TILT DISTANCE 11.8
C LONG -66.93 DEG
D LAT 2.41 DEG
D LONG -66.66 DEG