

NO. [REDACTED]

Copy No. 36 Pages
(Including Cover Sheet)



CORONA "J" FLIGHT DATA BOOK

SYSTEM NO. J-24
VEHICLE NO. 1619
MISSION NO. 1024-1
CAMERA NOS. 172 + 173

Prepared by [REDACTED]

Checked by: [REDACTED]

Approved by [REDACTED]

Approved by [REDACTED]

Manager

Declassified and Released by the N R O
In Accordance with E. O. 12958
on NOV 26 1997

LOGGED
4 OCT 1965

SYSTEM NO. F24
VEHICLE NO. 7679
MISSION NO. 1024-1
CAMERA NOS. 1724173

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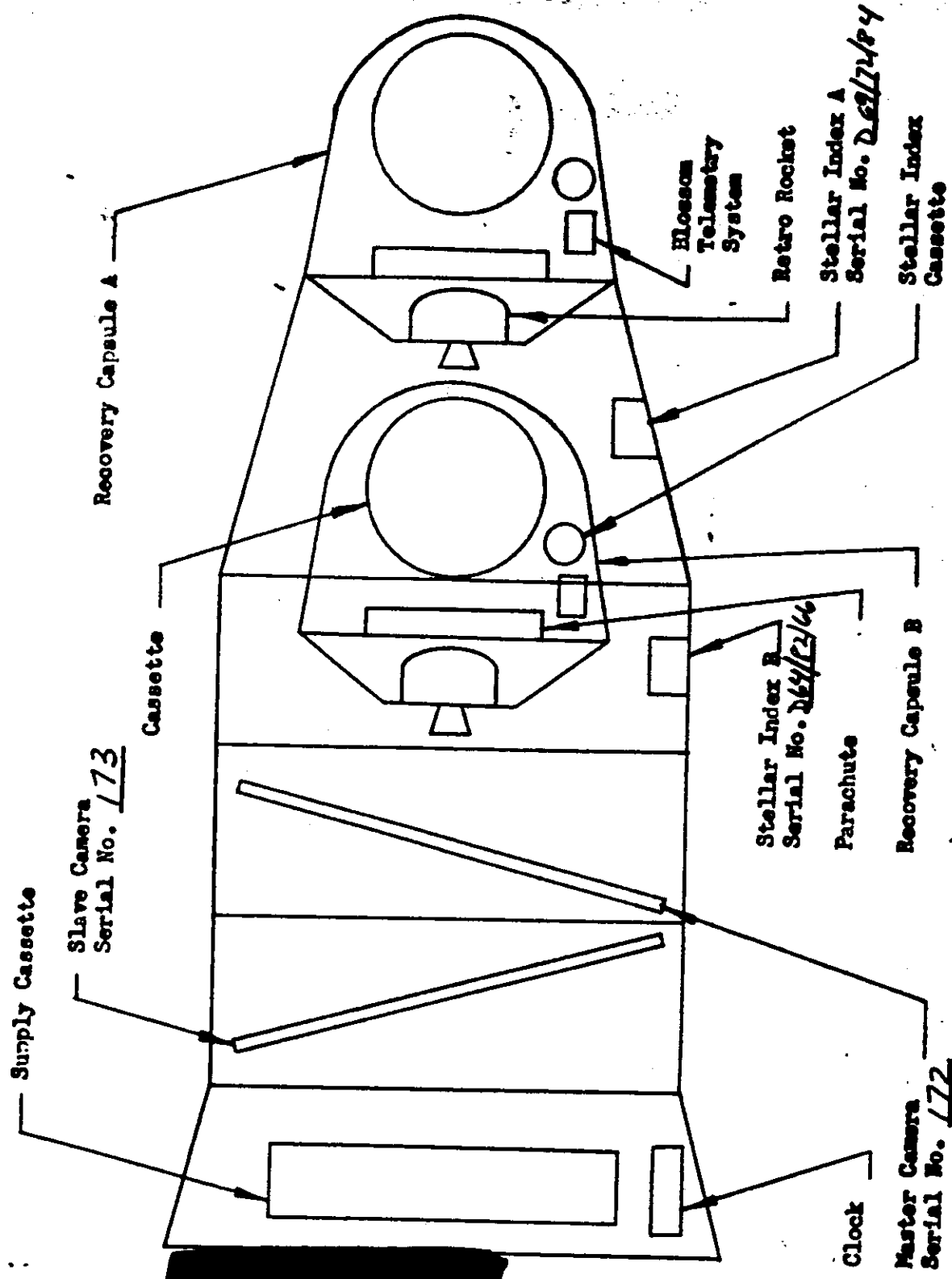
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SYSTEM NO. 224
VEHICLE NO. 1679
MISSION NO. 1624-1
CAMERA NOS. 172-4173

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VEHICLE LAYOUT: NO. [REDACTED]



SYSTEM NO. J-24
VEHICLE NO. 1619
MISSION NO. 1024-1
CAMERA NOS. 172 & 173

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GENERAL FLIGHT DATA:

Master Camera Serial No. 172

Slave Camera Serial No. 173

Stellar Index "A" Serial No. D69/72/84

Stellar Index "B" Serial No. D64/82/66

Launch Date 09-22-65

Reactivation Date N/A

Reactivation Orbit No. N/A

Orbital Parameters: (Rev. 41)

Period 90.078 Min.

Eccentricity 0.01522

Perigee 95.934 NM

Perigee Latitude 18.44 Deg. N

Apogee 205.32 NM

Inclination Angle 80.06 Deg. N

Recovery Orbit No. 81

Recovery Date 09-27-65

REMARKS:

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VEHICLE NO. 1619
MISSION NO. 1024-1
CAMERA NOS. 172 & 173

LENS SETTINGS AND FILM TYPES:

Panoramic Camera Settings:

| | | |
|------------------------------|---|---|
| | Camera No. <u>172</u> | Camera No. <u>173</u> |
| Panoramic Optics Slit Width | <u>0.225</u> in. | <u>0.150</u> in. |
| Panoramic Optics Filter Type | <u>WRATTEN 25</u> | <u>WRATTEN 21</u> |
| Horizon Optics Exp. Time | <u>1/100</u> sec. | <u>1/100</u> sec. |
| Horizon Optics Aperture | <u>F6.8 SUPPLY</u> <u>F8.0 TAKE-UP</u> | <u>F8.0 SUPPLY</u> <u>F6.8 TAKE-UP</u> |
| Horizon Optics Filter Type | <u>WRATTEN 25</u> | <u>WRATTEN 25</u> |

Stellar Index Camera Settings:

| | Stellar Index A | | Stellar Index B | |
|------------------------------------|-----------------|-------------------|-----------------------|-------------------|
| | Stellar | Index | Stellar | Index |
| Exposure Time | <u>2.0 SEC</u> | <u>1/500</u> | <u>2.0 SEC</u> | <u>1/500</u> |
| Aperture Setting | <u>F1.8</u> | <u>F4.5</u> | <u>F1.8</u> | <u>F4.5</u> |
| Filter Type | <u>NONE</u> | <u>WRATTEN 21</u> | <u>NONE</u> | <u>WRATTEN 21</u> |
| Ratio: One Stellar Index Frame Per | <u>7</u> | | Master Camera Frames. | |

Film:

Panoramic Cameras:

| | | |
|------------|-----------------------|-----------------------|
| | Camera No. <u>172</u> | Camera No. <u>173</u> |
| Type | <u>7J-40-1</u> | <u>7J-40</u> |
| Length | <u>16000</u> ft. | <u>16000</u> ft. |
| Splices | <u>5</u> | <u>5</u> |
| Emul. Data | <u>213-5-6-5</u> | <u>213-5-6-5</u> |

Stellar Index Cameras:

| | Stellar Index A | | Stellar Index B | |
|------|-------------------|-------------------|-------------------|-------------------|
| | Stellar | Index | Stellar | Index |
| Type | <u>3J-34</u> | <u>7J-33</u> | <u>3J-34</u> | <u>7J-33</u> |
| | <u>124-35-8-5</u> | <u>104-14-6-5</u> | <u>124-35-8-5</u> | <u>104-14-6-5</u> |



VEHICLE NO. 1619

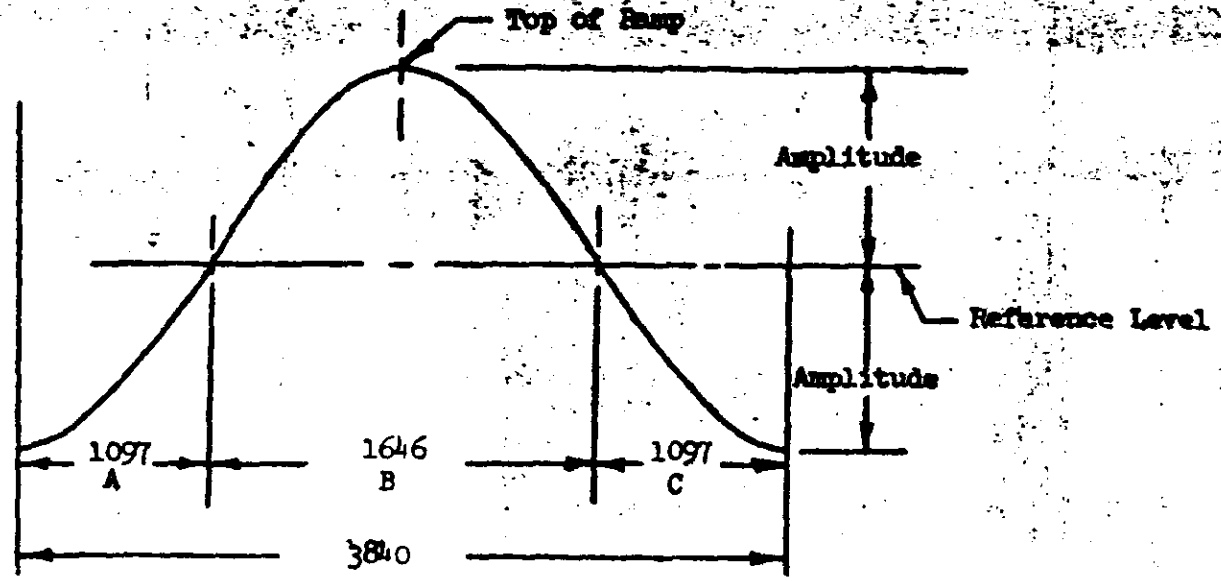
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MISSION NO. 1024-1

CAMERA NOS. 172 & 173

NO.

V/H RAMP CONFIGURATION AND CONSTANTS:



Cycle Rate Computation:

- A. 0 to 1097 Sec Up Ramp: $CPS = R+A \sin (1.5 X - 1.5707963)$
- B. 1097 to 2743 Sec Up Ramp: $CPS = R+A \sin (2 X - 2.0943951) \leq .4625$
- C. 2743 to 3840 Sec Up Ramp: $CPS = R+A \sin (1.5 X - 0.7853982)$

FMC Rate Computation:

$$FMC \text{ Rate (In/Sec)} = 2 \pi \left(\frac{0.3223}{CP} \right) = 2.02507 \times CPS$$

$$FMC \text{ Rate (Radians/Sec)} = 2 \pi \left(\frac{0.3224}{24 CP} \right) = 0.84378 \times CPS$$

Scan Velocity Computation:

$$\text{Scan Velocity (In/Sec)} = \frac{48 \pi}{CP} = 150.796 \times CPS$$

$$\text{Scan Velocity (Radians/Sec)} = \frac{48 \pi}{24 CP} = 6.28319 \times CPS$$

$$\text{Exposure Time (Milliseconds)} = 1000 \left(\frac{CP \times SLIT}{48 \pi} \right) = 6.63146 \left(\frac{SLIT}{CPS} \right)$$

WHERE: $X = \frac{\text{Time Up Ramp (Seconds)}}{1047.6942}$ $R = \frac{1}{2} (CPS_{top} + CPS_{bottom})$

$A = \frac{1}{2} (CPS_{top} - CPS_{bottom})$ $CP = \text{Camera Cycle Period in Sec/Cycle}$

CPS = Camera Cycle Rate in Cycles/Sec

SLIT = Slit Width in Inches

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SYSTEM NO. 1724
 VEHICLE NO. 1719
 MISSION NO. 1629-1
 CAMERA NOS. 172 + 173

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CYCLE PERIOD DATA:

PRE-FLIGHT CYCLE PERIODS:

| V/H Ramp Level | V/H Ramp Amplitude | Cycle Period Seconds | | Time Up Ramp Sec |
|----------------|--------------------|----------------------|-------|------------------|
| | | Master | Slave | |
| 6 | 4 | 4.222 | 4.197 | 10 |
| 6 | 4 | 2.314 | 2.314 | 1530 |
| 6 | 4 | 2.280 | 2.280 | 1575 |
| 6 | 4 | 2.254 | 2.250 | 1653 |
| 6 | 4 | 2.252 | 2.248 | 1686 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

IN-FLIGHT CYCLE PERIODS

| V/H Ramp Level | V/H Ramp Amplitude | Cycle Period Seconds | | Orbit No. | Time Up Ramp Sec |
|----------------|--------------------|----------------------|-------|-----------|------------------|
| | | Master | Slave | | |
| 6 | 4 | 4.270 | 4.175 | 09 | 10 |
| 6 | 4 | 2.320 | 2.325 | 16 | 1530 |
| 6 | 4 | 2.300 | 2.302 | 32 | 1575 |
| 6 | 4 | 2.274 | 2.269 | 47 | 1653 |
| 6 | 4 | 2.267 | 2.260 | 63 | 1686 |
| | | | | | |
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SYSTEM NO. J-24
 VEHICLE NO. 1619
 MISSION NO. 1024-1
 CAMERA NOS. 172 & 173

LENS DATA SUMMARY: Master Camera No. 172

Lens Serial No. 1602435

Slit Width 0.225 Inch

Filter Type WRATTEN 25

Equivalent Operational Focal Length 609.602 MM

Resolution:

Static:

| | Lines/MM | Film Type | Target Contrast |
|------------|------------|-------------|-----------------|
| Range Test | <u>264</u> | <u>3404</u> | <u>HIGH</u> |
| Other | <u>141</u> | <u>3404</u> | <u>LOW</u> |

Dynamic:

| | | | |
|--------------------------------|------------|-------------|-------------|
| Itek ^{POST} Vibration | <u>198</u> | <u>3404</u> | <u>HIGH</u> |
| Itek Post Vibration | <u>131</u> | <u>3404</u> | <u>LOW</u> |
| AP | <u>161</u> | <u>3404</u> | <u>HIGH</u> |
| AP | <u>113</u> | <u>3404</u> | <u>LOW</u> |
| Other | | | |

Note: Itek Post Vibration Resolution of 198 lines/MM Reported In

Message No. [REDACTED] dated 09-23-65

Distortion - Positive (Pincushion)

| Angle Off Axis Deg. | 3° | 2° | 1° | 0° | 359° | 358° | 357° | | |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--|--|
| Distortion Millimeters | <u>.001</u> | <u>.000</u> | <u>.000</u> | <u>.000</u> | <u>.000</u> | <u>.000</u> | <u>.002</u> | | |

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SYSTEM NO. J-24
VEHICLE NO. 1619
MISSION NO. 1024-1
CAMERA NOS. 172 & 173

NO. [REDACTED]

LENS DATA SUMMARY: (Horizon Cameras for ~~MAFUSA~~: Camera No. 172)

| | | |
|---|-------------------|-------------------|
| | Take-Up | Supply |
| Lens Serial No. | <u>812276</u> | <u>812288</u> |
| Exposure Time | <u>1/100</u> Sec. | <u>1/100</u> Sec. |
| Filter Type | <u>WRITTEN 25</u> | <u>WRITTEN 25</u> |
| Aperture | <u>F8.0</u> | <u>F6.8</u> |
| Operational Focal Length | <u>5419</u> MM | <u>5540</u> MM |
| Radial Distortion: | | |
| 10° off Axis | <u>.008</u> MM | <u>.003</u> MM |
| 20° off Axis | <u>.015</u> MM | <u>.005</u> MM |
| Tangential Distortion (Maximum Vector) | <u>.008</u> MM | <u>.005</u> MM |
| Resolution: | | |

| Angle off Axis Deg. | 0° | 5° | 10° | 15° | 20° | 25° | 27.5° | 0° | 5° | 10° | 15° | 20° | 25° | 27.5° |
|-----------------------|-----|-----|-----|-----|-----|-----|-------|-----|-----|-----|-----|-----|-----|-------|
| Radial Resolution | 184 | 164 | 162 | 141 | 122 | 125 | 56 | 164 | 164 | 162 | 127 | 122 | 112 | 46 |
| Tangential Resolution | 164 | 145 | 142 | 115 | 97 | 60 | 44 | 164 | 162 | 142 | 108 | 91 | 64 | 41 |

DYNAMIC

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Notes:

- Distortion and resolution are read at equivalent operational focal length.
- Resolution in lines per mm on 3404 film and HIGH contrast target.

SYSTEM NO. J-24
 VEHICLE NO. 1619
 MISSION NO. 1024-1
 CAMERA NOS. 172 + 173

LENS DATA SUMMARY: Slave Camera No. 173

Lens Serial No. 1522435
 Slit Width 0.150 Inch
 Filter Type WRATTEN 21
 Equivalent Operational Focal Length 609.628 MM
 Resolution:

Static:

| | <u>Lines/MM</u> | <u>Film Type</u> | <u>Target Contrast</u> |
|------------|-----------------|------------------|------------------------|
| Bench Test | <u>241</u> | <u>3404</u> | <u>HIGH</u> |
| Other | <u>138</u> | <u>3404</u> | <u>LOW</u> |

Dynamic:

| | | | |
|---------------------------------|-------------|-------------|-------------|
| Itek -Vibration | <u>201</u> | <u>3404</u> | <u>HIGH</u> |
| Itek Post Vibration | <u>129</u> | <u>3404</u> | <u>LOW</u> |
| AP | <u>181</u> | <u>3404</u> | <u>HIGH</u> |
| AP | <u>111</u> | <u>3404</u> | <u>LOW</u> |
| Other | <u> </u> | <u> </u> | <u> </u> |

NOTE: Itek Post Vibration Resolution of 201 lines/MM Reported In

Message No. dated 07-23-65.

Distortion - Positive (Pincushion)

| Angle Off Axis Deg. | 3° | 2° | 1° | 0° | 359° | 358° | 357° | | |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--|--|
| Distortion Millimeters | <u>.002</u> | <u>.001</u> | <u>.000</u> | <u>.000</u> | <u>.002</u> | <u>.002</u> | <u>.004</u> | | |

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SYSTEM NO. J-24
 VEHICLE NO. 1619
 MISSION NO. 1024-1
 CAMERA NOS. 172 & 173

LENS DATA SUMMARY: (Horizon Cameras for SLAVE Camera No. 173)

| | <u>Take-Up</u> | <u>Supply</u> |
|---|-------------------|-------------------|
| Lens Serial No. | <u>814018</u> | <u>813555</u> |
| Exposure Time | <u>1/100</u> Sec. | <u>1/100</u> Sec. |
| Filter Type | <u>WRATTEN 25</u> | <u>WRATTEN 25</u> |
| Aperture | <u>F6.8</u> | <u>F8.0</u> |
| Operational Focal Length | <u>54.93</u> MM | <u>54.70</u> MM |
| Radial Distortion: | | |
| 10° off Axis | <u>.003</u> MM | <u>.001</u> MM |
| 20° off Axis | <u>.012</u> MM | <u>.005</u> MM |
| Tangential Distortion (Maximum Vector) | <u>.004</u> MM | <u>.007</u> MM |

Resolution:

| Angle off Axis Deg. | 0° | 10° | 15° | 20° | 25° | 27.5° |
|-----------------------|-----|-----|-----|-----|-----|-------|
| Radial Resolution | 170 | 112 | 97 | 86 | 92 | 71 |
| Tangential Resolution | 170 | 104 | 91 | 95 | 55 | 42 |

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| Angle off Axis Deg. | 0° | 10° | 15° | 20° | 25° | 30° |
|-----------------------|-----|-----|-----|-----|-----|-----|
| Radial Resolution | 170 | 111 | 96 | 75 | 77 | 40 |
| Tangential Resolution | 170 | 104 | 89 | 66 | 55 | 35 |

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NOTE:

1. Distortion and resolution are read at equivalent operational focal length.
2. Resolution in lines per MM on 3404 film and HIGH contrast target.

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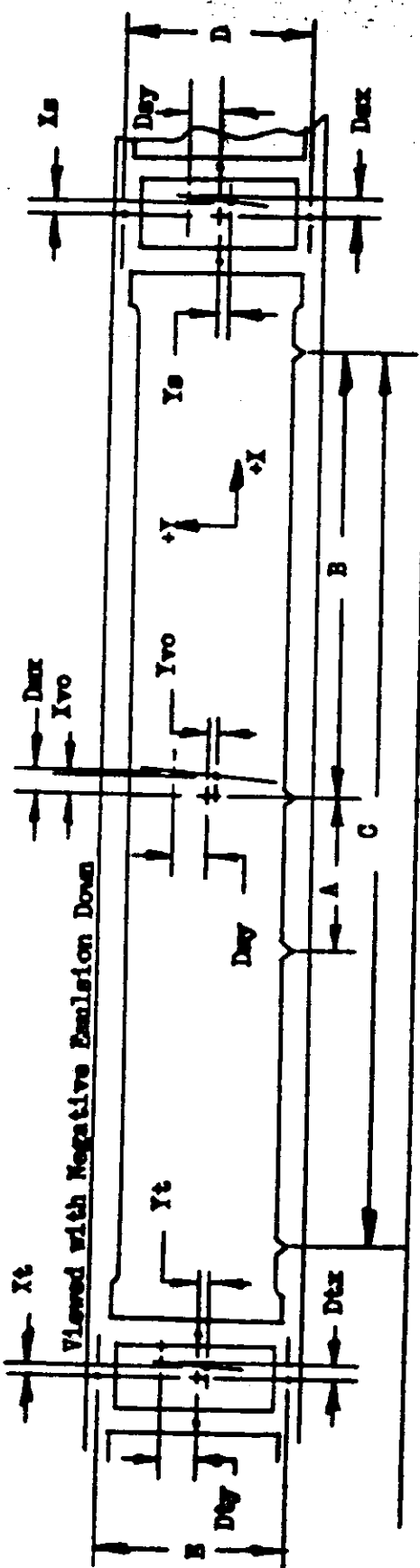
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DEFINITION OF PANORAMIC CAMERA FORMAT CALIBRATIONS:

- 2.0 Measurements are made with respect to collimator targets fixed with respect to the mechanical interface between the total payload assembly and the orbital vehicle.
- 2.0 Two sets of three targets each, are aligned to be coplanar within $\pm 5^\circ$ of arc so positioned to form an angle of $\pm 15.00^\circ \pm 5^\circ$ to the mechanical interface for master camera calibrations and an angle of $\pm 15.00^\circ \pm 5^\circ$ to the mechanical interface for slave camera calibrations.
 - 2.1 One target, Target 1 of each set is imaged on the Terrain format.
 - 2.2 The second and third targets of each set are at angles of $75.00^\circ \pm 5^\circ$ from target one and are imaged on the horizon formats.
- 3.0 The indicated center of format for the panoramic cameras is given by the intersection of a line through the center of mass of the central shrinkage marker drawn normal to the edge of format containing the shrinkage marker and a line parallel to the same edge located at a position half-way between the format edges.
- 4.0 The indicated principal points of the horizon cameras are the points of intersection of lines joining opposite fiducials.
- 5.0 X_v and Y_v are the offsets of Target 1 from the indicated center of format of the panoramic cameras as defined in Paragraph 3.
- 6.0 X_s , Y_s and X_t , Y_t are the offsets of Targets 2 and 3 from the indicated principal points of the supply and take-up horizon cameras respectively.
- 7.0 The indicated flight direction is the direction of vehicle travel during orbit. The forward edge of format is the edge opposite the shrinkage markers for the master camera and is the edge containing the shrinkage markers for the slave camera.
- 8.0 Dimensions A, B and C are the spacings of the shrinkage markers and dimensions D and E are the spacings of the Y Axis fiducials. Techniques for exact measurement of these dimensions have not been developed. The figures quoted are measurements made on hand processed film without control of shrinkage.
- 9.0 The format dimensions are measured to the best estimate of format edge.
- 10.0 Measurement of the angle between the indicated axis of the panoramic cameras and the line of intersection of the plane defined in Paragraph 2 on the format is obtained from the offset dimensions D_{ax} and D_{ay} of Target 1 for each camera.
- 11.0 Measurement of the angle between the indicated axis of the horizon cameras and the line of intersection of the plane defined in Paragraph 2 on the format is made by measuring the scan direction offset of the targets defined in Paragraph 2.2 at a fixed distance from the target center in the Y direction. Dimensions D_{tx} , D_{ty} , D_{ax} and D_{ay} are the effects of these measurements.

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FORMAT DIMENSIONS: (PANORAMIC CAMERAS)



| Camera No. | Vehicle Motion | Scan Direction | Vehicle Motion | Scan Direction |
|------------------|-------------------|--------------------|-------------------|--------------------|
| A <u>176,039</u> | $X_t = -0.063$ | $D_{ax} = -0.074$ | $X_t = -0.134$ | $D_{ax} = -0.143$ |
| B <u>354,865</u> | $X_t = -0.187$ | $D_{ay} = +2.813$ | $X_t = +0.032$ | $D_{ay} = +2.039$ |
| C <u>209,636</u> | $X_s = -0.508$ | $D_{ax} = -0.473$ | $X_s = -0.094$ | $D_{ax} = -0.089$ |
| D <u>56,469</u> | $X_o = -0.045$ | $D_{ay} = -2.045$ | $X_o = +0.072$ | $D_{ay} = -1.928$ |
| E <u>56,533</u> | $X_{vo} = -0.030$ | $D_{ax} = -0.023$ | $X_{vo} = +0.212$ | $D_{ax} = +0.362$ |
| | $X_{vo} = +1.504$ | $D_{ay} = +21.504$ | $X_{vo} = +0.833$ | $D_{ay} = +20.525$ |

Format Dimensions:

| Height | Panoramic | Take-Up | Supply |
|------------|------------|------------|------------|
| <u>N/A</u> | <u>N/A</u> | <u>N/A</u> | <u>N/A</u> |
| <u>N/A</u> | <u>N/A</u> | <u>N/A</u> | <u>N/A</u> |

Format Dimensions:

| Height | Panoramic | Take-Up | Supply |
|------------|------------|------------|------------|
| <u>N/A</u> | <u>N/A</u> | <u>N/A</u> | <u>N/A</u> |
| <u>N/A</u> | <u>N/A</u> | <u>N/A</u> | <u>N/A</u> |

Note: 1. All dimensions are in millimeters and are average dimensions of three formats.
 2. Height of main format is taken at center of format.
 3. D_t, D_v, D_e, I and Y dimensions are taken 10MM above point defining target center.
 4. Format Sign Convention

$$\begin{matrix} +X, Y \\ -X, Y \end{matrix}$$

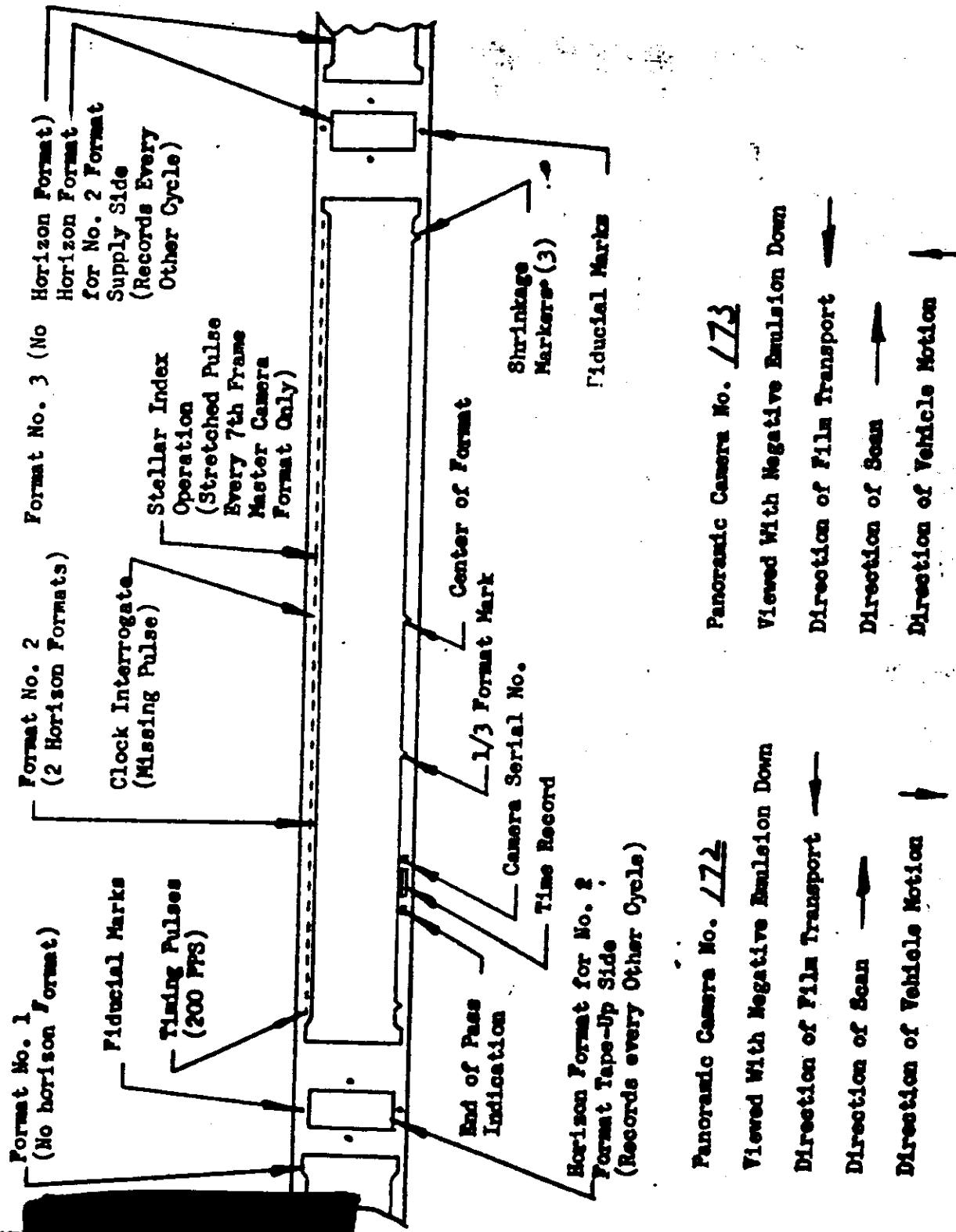
SYSTEM NO. TC 29
 VEHICLE NO. 1618
 MISSION NO. 1014-1
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FORMAT LAYOUT: (PANORAMIC CAMERAS)



Panoramic Camera No. 172

Viewed With Negative Emulsion Down

Direction of Film Transport →

Direction of Scan →

Direction of Vehicle Motion →

Panoramic Camera No. 173

Viewed With Negative Emulsion Down

Direction of Film Transport →

Direction of Scan →

Direction of Vehicle Motion →

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VEHICLE NO. 1619

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MISSION NO. 1024-1

CAMERA NOS. 172 + 173

NO [REDACTED]

LENS DATA SUMMARY STELLAR INDEX D69/72/84: A MISSION

| | <u>Stellar</u> | <u>Index</u> |
|-------------------------|-----------------------|-------------------|
| Lens Serial No. | <u>10505</u> | <u>817710</u> |
| Reseau Serial No. | <u>84</u> | <u>72</u> |
| Filter Type | <u>NONE</u> | <u>WRITTEN 21</u> |
| Aperture | <u>F1.8</u> | <u>F4.5</u> |
| Exposure Time | <u>2</u> Sec. | <u>1/500</u> Sec. |
| Equivalent Focal Length | <u>84 (NOMINAL)MM</u> | <u>38.57</u> MM |

Resolution:

| | | | | | |
|----------------------------------|--------------|--------------|--------------|--------------|--------------|
| Angle Off Axis | 0 | 10 | 20 | 30 | 35 |
| Resolution L/MM High Contrast | <u>84/84</u> | <u>84/74</u> | <u>99/71</u> | <u>99/55</u> | <u>86/53</u> |

NOTE: Index Resolution of 74 Lines/MM AWAR

Read From 3400 Film.

Distortion:

All distortions less than maximum allowable. Full Data to be reported as part of Photogrameter Data Reduction.

Alignment:

-0.0003 "/.937 Inches 1.0009 "/2.25 Inches



SYSTEM NO. J-24
VEHICLE NO. 1619
MISSION NO. 1024-1
CAMERA NOS. 172 & 173

NO. [REDACTED]

LENS DATA SUMMARY STELLAR INDEX D 64/82/66: B MISSION

| | <u>Stellar</u> | <u>Index</u> |
|-------------------------|-----------------------|-------------------|
| Lens Serial No. | <u>10578</u> | <u>817462</u> |
| Reseau Serial No. | <u>66</u> | <u>82</u> |
| Filter Type | <u>NONE</u> | <u>WRITTEN 21</u> |
| Aperture | <u>F1.8</u> | <u>F4.5</u> |
| Exposure Time | <u>2</u> Sec. | <u>1/500</u> Sec. |
| Equivalent Focal Length | <u>84(NOMINAL)</u> MM | <u>38.377</u> MM |

Resolution:

| | | | | | |
|----------------------------------|--------------|--------------|---------------|--------------|--------------|
| Angle Off Axis | 0 | 10 | 20 | 30 | 35 |
| Resolution L/MM High Contrast | <u>83/83</u> | <u>86/86</u> | <u>107/88</u> | <u>96/42</u> | <u>84/18</u> |

NOTE: Index Resolution of 72 Lines/MM AWAR
Read From 3400 Film.

Distortion:

All distortions less than maximum allowable. Full Data to be reported as part of Photogrameter Data Reduction.

Alignment:

-.0007 "/.937 Inches -.0004 "/2.25 Inches

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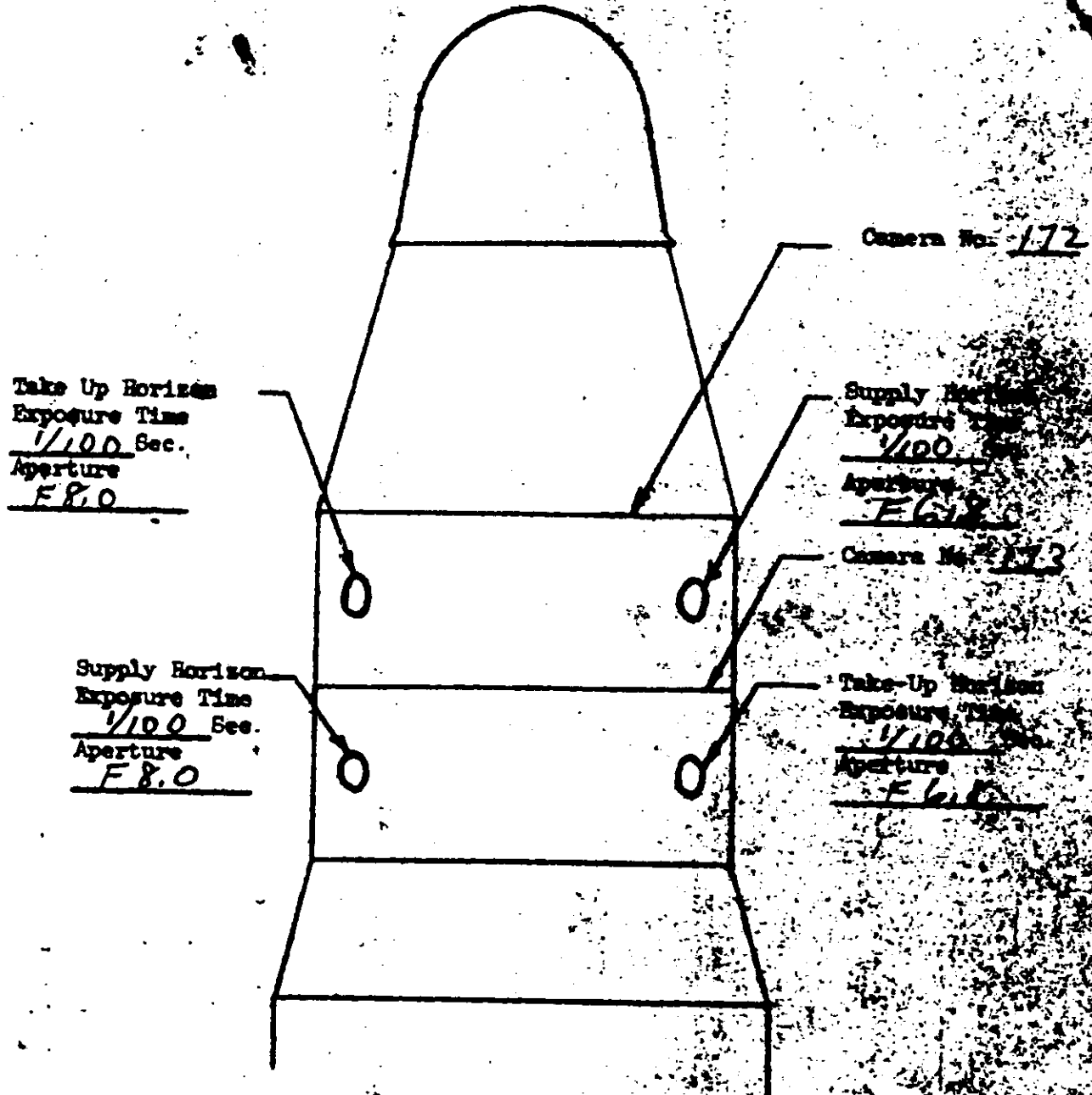
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SYSTEM NO. T-34
SERIAL NO. 1619
MOUNTING NO. 1029-1 TOP
CAMERA NOS. 172-173 TOP

HORIZON LINE SETTINGS (Viewed from top of vehicle in flight)



Take Up Horizon
Exposure Time
1/100 Sec.
Aperture
F8.0

Camera No. 172

Supply Horizon
Exposure Time
1/100 Sec.
Aperture
F8.0

Camera No. 173

Supply Horizon
Exposure Time
1/100 Sec.
Aperture
F8.0

Take-Up Horizon
Exposure Time
1/100 Sec.
Aperture
F8.0

~~TOP SECRET~~

Flight Direction



NQ. _____



~~TOP SECRET~~

- CONTROL NO. [REDACTED]

A. 1024-1 LAUNCH AT 2131Z ON 09/22/65

B. DRY

C. FINAL PERFORMANCE ESTIMATE, PART 1

10001
10002
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OPERATIONS SUMMARY

| FWD PAN CAMERA NUMBER | | 172 | | | | | | | | | | | | | |
|-----------------------|--------|---------|---------|---------|---------|-------|----|----|----|------|-------|-------|--|-------|--|
| OPN NO | FRA | Q | LAT | LONG | HEIGHT | RANGE | DA | H | M | S | LTIM | S-TIM | | | |
| PRE-FLT 110 | | | | | | | | | | | | | | 10013 | |
| 1 4 0 | 11 ON | 2 62 41 | 154 24W | 783532 | 812269 | 22 | 22 | 57 | 47 | 1240 | 82667 | | | 11001 | |
| | OFF | 2 60 59 | 153 5W | 773191 | 801534 | 22 | 22 | 58 | 14 | 1245 | 82694 | | | 11002 | |
| 5 7 1 | 21 ON | 2 75 56 | 91 12E | 867776 | 899734 | 23 | 4 | 54 | 31 | 1059 | 17671 | | | 11003 | |
| | OFF | 2 72 31 | 101 31E | 842304 | 873285 | 23 | 4 | 55 | 38 | 1141 | 17738 | | | 11004 | |
| 5 7 2 | 71 ON | 2 60 51 | 116 12E | 769554 | 797758 | 23 | 4 | 58 | 52 | 1243 | 17932 | | | 11005 | |
| | OFF | 2 48 28 | 122 19E | 704224 | 729951 | 23 | 5 | 2 | 4 | 1311 | 18124 | | | 11006 | |
| 5 7 3 | 21 ON | 2 46 0 | 123 6E | 692715 | 718008 | 23 | 5 | 2 | 42 | 1315 | 18162 | | | 11007 | |
| | OFF | 2 42 32 | 124 5E | 677350 | 702063 | 23 | 5 | 3 | 35 | 1319 | 18215 | | | 11008 | |
| 7 9 1 | 62 ON | 2 52 17 | 75 30E | 722433 | 748849 | 23 | 8 | 1 | 22 | 13 3 | 28882 | | | 11009 | |
| | OFF | 2 41 58 | 78 52E | 675105 | 699732 | 23 | 8 | 3 | 59 | 1319 | 29039 | | | 1101C | |
| 7 9 2 | 69 ON | 2 37 29 | 79 56E | 657515 | 681481 | 23 | 8 | 5 | 7 | 1324 | 29107 | | | 11011 | |
| | OFF | 2 26 45 | 81 55E | 624000 | 646706 | 23 | 8 | 7 | 48 | 1335 | 29268 | | | 11012 | |
| 7 9 3 | 19 ON | 2 24 15 | 82 18E | 618055 | 640538 | 23 | 8 | 8 | 25 | 1337 | 29305 | | | 11013 | |
| | OFF | 2 21 22 | 82 43E | 612206 | 634470 | 23 | 8 | 9 | 8 | 1340 | 29348 | | | 11014 | |
| 7 9 4 | 28 ON | 2 19 46 | 82 56E | 609382 | 631540 | 23 | 8 | 9 | 32 | 1341 | 29372 | | | 11015 | |
| | OFF | 2 15 29 | 83 30E | 603452 | 625388 | 23 | 8 | 10 | 36 | 1344 | 29436 | | | 11016 | |
| 9 4 0 | 11 UN | 1 38 54 | 123 8W | 1156793 | 1199990 | 23 | 10 | 39 | 48 | 227 | 38388 | | | 11017 | |
| | OFF | 1 41 53 | 122 25W | 1145787 | 1188551 | 23 | 10 | 40 | 35 | 230 | 38435 | | | 11018 | |
| 9 4 1 | 99 ON | 2 60 13 | 25 54E | 758960 | 786762 | 23 | 10 | 59 | 35 | 1243 | 39575 | | | 11019 | |
| | OFF | 2 43 35 | 33 4E | 676190 | 700859 | 23 | 11 | 3 | 51 | 1316 | 39831 | | | 11020 | |
| 16 4 0 | 10 UN | 2 37 10 | 124 9W | 637306 | 660512 | 23 | 21 | 36 | 20 | 1319 | 77780 | | | 11021 | |
| | OFF | 2 35 25 | 123 47W | 631337 | 654319 | 23 | 21 | 36 | 46 | 1321 | 77806 | | | 11022 | |
| 18 4 1 | 30 ON | 2 66 7 | 176 39E | 775321 | 803745 | 24 | 0 | 29 | 6 | 1215 | 1746 | | | 11023 | |
| | OFF | 2 60 45 | 178 37W | 744246 | 771489 | 24 | 0 | 30 | 32 | 1236 | 1832 | | | 11024 | |
| 20 6 1 | 48 ON | 2 59 11 | 137 3E | 733288 | 760116 | 24 | 3 | 31 | 11 | 1239 | 12671 | | | 11025 | |
| | OFF | 2 50 57 | 141 8E | 691461 | 716706 | 24 | 3 | 33 | 19 | 1257 | 12799 | | | 11026 | |
| 21 6 1 | 140 ON | 2 60 8 | 113 44E | 737381 | 764363 | 24 | 5 | 1 | 3 | 1236 | 18063 | | | 11027 | |
| | OFF | 2 37 11 | 122 25E | 634225 | 657316 | 24 | 5 | 6 | 54 | 1316 | 18414 | | | 11028 | |
| 21 6 2 | 34 ON | 3 14 42 | 129 28E | 626946 | 649763 | 24 | 5 | 19 | 43 | 1357 | 19183 | | | 11029 | |
| | OFF | 3 20 11 | 130 11E | 646668 | 670225 | 24 | 5 | 21 | 4 | 14 1 | 19264 | | | 11030 | |
| 22 3 1 | 54 ON | 2 58 23 | 92 11E | 726768 | 753349 | 24 | 6 | 31 | 37 | 1240 | 23497 | | | 11031 | |
| | OFF | 2 49 10 | 96 26E | 681279 | 706140 | 24 | 6 | 33 | 59 | 1259 | 23639 | | | 11032 | |
| 22 3 2 | 38 ON | 2 43 36 | 98 10E | 657372 | 681332 | 24 | 6 | 35 | 24 | 13 8 | 23724 | | | 11033 | |
| | OFF | 2 37 24 | 99 41E | 634278 | 657370 | 24 | 6 | 36 | 57 | 1315 | 23817 | | | 11034 | |
| 22 3 3 | 18 ON | 2 0 14 | 105 2E | 592574 | 614102 | 24 | 6 | 46 | 9 | 1346 | 24369 | | | 11035 | |
| | OFF | 3 2 32 | 105 21E | 596829 | 618517 | 24 | 6 | 46 | 50 | 1348 | 24410 | | | 11036 | |
| 23 5 1 | 91 ON | 2 59 17 | 68 56E | 730506 | 757228 | 24 | 8 | 1 | 29 | 1237 | 28889 | | | 11037 | |
| | OFF | 2 44 14 | 75 18E | 659185 | 683213 | 24 | 8 | 5 | 20 | 13 6 | 29120 | | | 11038 | |
| 23 5 2 | 33 ON | 2 34 40 | 77 34E | 624822 | 647559 | 24 | 8 | 7 | 45 | 1318 | 29265 | | | 11039 | |
| | OFF | 2 29 36 | 78 30E | 610646 | 632852 | 24 | 8 | 9 | 1 | 1323 | 29341 | | | 11040 | |
| 25 2 1 | 105 UN | 2 58 19 | 24 10E | 723138 | 749581 | 24 | 11 | 1 | 57 | 1238 | 39717 | | | 11041 | |
| | OFF | 2 41 12 | 30 45E | 645808 | 669334 | 24 | 11 | 6 | 19 | 13 9 | 39979 | | | 11042 | |
| 29 7 1 | 51 ON | 3 20 22 | 51 13W | 652445 | 676219 | 24 | 17 | 21 | 57 | 1357 | 62517 | | | 11043 | |
| | OFF | 3 29 1 | 49 55W | 691690 | 716943 | 24 | 17 | 24 | 6 | 14 4 | 62646 | | | 11044 | |

~~TOP SECRET~~

- CONTROL NO. [REDACTED]

~~TOP SECRET~~

CONTROL NO.

| | | | | | | | | | | | | | | | | | | | |
|----|---|---|-----|-----|---|----|----|-----|-----|--------|--------|----|----|----|----|------|---|-------|-------|
| 32 | 8 | 0 | 10 | ON | 2 | 37 | 19 | 127 | 5W | 627743 | 650590 | 24 | 21 | 37 | 59 | 13 | 9 | 77879 | 11045 |
| | | | | OFF | 2 | 35 | 35 | 126 | 43W | 622441 | 645089 | 24 | 21 | 38 | 25 | 1311 | | 77905 | 11046 |
| 34 | 9 | 1 | 42 | ON | 2 | 70 | 22 | 167 | 57E | 780783 | 809416 | 25 | 0 | 29 | 33 | 1141 | | 1773 | 11047 |
| | | | | OFF | 2 | 63 | 3 | 176 | 43E | 738310 | 765328 | 25 | 0 | 31 | 34 | 1218 | | 1894 | 11048 |
| 35 | 9 | 1 | 54 | ON | 2 | 74 | 24 | 136 | 7E | 806058 | 835654 | 25 | 1 | 58 | 25 | 11 | 2 | 7105 | 11049 |
| | | | | OFF | 2 | 65 | 12 | 152 | 4E | 749040 | 776465 | 25 | 2 | 1 | 5 | 12 | 9 | 7265 | 11050 |
| 36 | 9 | 1 | 139 | ON | 2 | 64 | 30 | 130 | 4E | 744000 | 771234 | 25 | 3 | 31 | 21 | 1211 | | 12681 | 11051 |
| | | | | OFF | 2 | 41 | 34 | 141 | 12E | 639418 | 662704 | 25 | 3 | 37 | 15 | 13 | 2 | 13035 | 11052 |
| 37 | 9 | 1 | 105 | ON | 2 | 36 | 50 | 119 | 38E | 623334 | 646015 | 25 | 5 | 8 | 31 | 13 | 7 | 18511 | 11053 |
| | | | | OFF | 2 | 20 | 58 | 122 | 20E | 590412 | 611860 | 25 | 5 | 12 | 27 | 1321 | | 18747 | 11054 |
| 38 | 7 | 1 | 125 | ON | 2 | 59 | 16 | 88 | 47E | 714150 | 740253 | 25 | 6 | 32 | 54 | 1228 | | 23574 | 11055 |
| | | | | OFF | 2 | 39 | 15 | 96 | 25E | 630313 | 653256 | 25 | 6 | 38 | 0 | 13 | 3 | 23880 | 11056 |
| 39 | 9 | 1 | 16 | ON | 2 | 47 | 25 | 71 | 30E | 659277 | 683309 | 25 | 8 | 6 | 2 | 1252 | | 29162 | 11057 |
| | | | | OFF | 2 | 44 | 45 | 72 | 19E | 648878 | 672519 | 25 | 8 | 6 | 42 | 1256 | | 29202 | 11058 |
| 39 | 9 | 2 | 91 | ON | 2 | 34 | 35 | 74 | 45E | 615884 | 638286 | 25 | 8 | 9 | 15 | 13 | 8 | 29355 | 11059 |
| | | | | OFF | 2 | 20 | 38 | 77 | 2E | 589661 | 611082 | 25 | 8 | 12 | 43 | 1320 | | 29563 | 11060 |
| 40 | 1 | 1 | 166 | ON | 2 | 66 | 14 | 37 | 35E | 749099 | 776527 | 25 | 9 | 31 | 12 | 12 | 1 | 34272 | 11061 |
| | | | | OFF | 2 | 39 | 23 | 51 | 2E | 629521 | 652435 | 25 | 9 | 38 | 7 | 13 | 2 | 34687 | 11062 |
| 41 | 2 | 1 | 70 | ON | 2 | 55 | 27 | 22 | 55E | 692585 | 717873 | 25 | 11 | 4 | 8 | 1235 | | 39848 | 11063 |
| | | | | OFF | 2 | 44 | 16 | 27 | 7E | 645662 | 669182 | 25 | 11 | 6 | 59 | 1255 | | 40019 | 11064 |
| 46 | 7 | 1 | 20 | ON | 2 | 39 | 41 | 85 | 3W | 626909 | 649725 | 25 | 18 | 38 | 29 | 1258 | | 67109 | 11065 |
| | | | | OFF | 2 | 36 | 31 | 84 | 21W | 617616 | 640083 | 25 | 18 | 39 | 16 | 13 | 1 | 67156 | 11066 |
| 47 | 7 | 1 | 20 | ON | 2 | 37 | 41 | 107 | 16W | 620340 | 642909 | 25 | 20 | 9 | 3 | 1259 | | 72543 | 11067 |
| | | | | OFF | 2 | 34 | 33 | 106 | 37W | 611929 | 634183 | 25 | 20 | 9 | 50 | 13 | 3 | 72590 | 11068 |
| 50 | 4 | 1 | 48 | ON | 2 | 71 | 20 | 163 | 25E | 766851 | 794953 | 26 | 0 | 30 | 27 | 1124 | | 1827 | 11069 |
| | | | | OFF | 2 | 63 | 6 | 173 | 54E | 721087 | 747453 | 26 | 0 | 32 | 44 | 12 | 8 | 1964 | 11070 |
| 52 | 4 | 1 | 62 | ON | 2 | 60 | 33 | 130 | 32E | 706216 | 732019 | 26 | 3 | 33 | 31 | 1215 | | 12811 | 11071 |
| | | | | OFF | 2 | 50 | 19 | 135 | 45E | 660724 | 684811 | 26 | 3 | 36 | 9 | 1239 | | 12969 | 11072 |
| 52 | 4 | 2 | 33 | ON | 2 | 45 | 42 | 137 | 19E | 643205 | 666633 | 26 | 3 | 37 | 20 | 1246 | | 13040 | 11073 |
| | | | | OFF | 2 | 40 | 30 | 138 | 43E | 625965 | 648745 | 26 | 3 | 38 | 38 | 1253 | | 13118 | 11074 |
| 53 | 4 | 1 | 43 | ON | 2 | 67 | 29 | 101 | 24E | 741059 | 768182 | 26 | 5 | 1 | 43 | 1147 | | 18103 | 11075 |
| | | | | OFF | 2 | 60 | 16 | 108 | 3E | 703877 | 729592 | 26 | 5 | 3 | 39 | 1215 | | 18219 | 11076 |
| 53 | 4 | 2 | 92 | ON | 2 | 42 | 46 | 115 | 29E | 632505 | 655531 | 26 | 5 | 8 | 7 | 1250 | | 18487 | 11077 |
| | | | | OFF | 2 | 28 | 43 | 118 | 25E | 597298 | 619004 | 26 | 5 | 11 | 37 | 13 | 5 | 18697 | 11078 |
| 54 | 7 | 1 | 117 | ON | 2 | 46 | 36 | 91 | 42E | 645049 | 668546 | 26 | 6 | 37 | 12 | 1244 | | 23832 | 11079 |
| | | | | OFF | 2 | 28 | 41 | 95 | 45E | 596933 | 618626 | 26 | 6 | 41 | 40 | 13 | 4 | 24100 | 11080 |
| 56 | 1 | 1 | 101 | ON | 2 | 59 | 25 | 40 | 37E | 696940 | 722393 | 26 | 9 | 34 | 1 | 1216 | | 34441 | 11081 |
| | | | | OFF | 2 | 43 | 24 | 47 | 18E | 632752 | 655787 | 26 | 9 | 38 | 6 | 1247 | | 34686 | 11082 |
| 57 | 1 | 1 | 20 | ON | 2 | 77 | 52 | 18 | 2W | 803920 | 833434 | 26 | 10 | 58 | 38 | 946 | | 39518 | 11083 |
| | | | | OFF | 2 | 75 | 4 | 4 | 48W | 782203 | 810889 | 26 | 10 | 59 | 40 | 1040 | | 39580 | 11084 |
| 57 | 1 | 2 | 20 | ON | 2 | 52 | 37 | 21 | 30E | 666077 | 690365 | 26 | 11 | 5 | 49 | 1231 | | 39949 | 11085 |
| | | | | OFF | 2 | 49 | 18 | 22 | 48E | 652927 | 676720 | 26 | 11 | 6 | 40 | 1237 | | 40000 | 11086 |
| 63 | 5 | 1 | 20 | ON | 2 | 38 | 34 | 110 | 7W | 614727 | 637085 | 26 | 20 | 9 | 35 | 1249 | | 72575 | 11087 |
| | | | | OFF | 2 | 35 | 22 | 109 | 26W | 606962 | 629030 | 26 | 20 | 10 | 23 | 1252 | | 72623 | 11088 |
| 66 | 7 | 1 | 50 | ON | 2 | 66 | 12 | 168 | 17E | 720155 | 746486 | 27 | 0 | 32 | 35 | 1145 | | 1955 | 11089 |
| | | | | OFF | 2 | 57 | 57 | 174 | 53E | 681131 | 705987 | 27 | 0 | 34 | 46 | 1214 | | 2086 | 11090 |
| 69 | 7 | 1 | 93 | ON | 2 | 64 | 22 | 102 | 10E | 707960 | 733829 | 27 | 5 | 3 | 9 | 1151 | | 18189 | 11091 |
| | | | | OFF | 2 | 49 | 19 | 110 | 51E | 644495 | 667972 | 27 | 5 | 7 | 3 | 1230 | | 18423 | 11092 |
| 69 | 7 | 2 | 37 | ON | 2 | 42 | 40 | 112 | 54E | 622990 | 645659 | 27 | 5 | 8 | 43 | 1240 | | 18523 | 11093 |
| | | | | OFF | 2 | 37 | 3 | 114 | 14E | 608324 | 630443 | 27 | 5 | 10 | 7 | 1247 | | 18607 | 11094 |
| 69 | 7 | 3 | 21 | ON | 2 | 24 | 2 | 116 | 33E | 588015 | 609374 | 27 | 5 | 13 | 21 | 1259 | | 18801 | 11095 |
| | | | | OFF | 2 | 20 | 48 | 117 | 0E | 586153 | 607442 | 27 | 5 | 14 | 9 | 13 | 2 | 18849 | 11096 |
| 70 | 5 | 1 | 104 | ON | 2 | 52 | 18 | 87 | 2E | 654748 | 678610 | 27 | 6 | 36 | 19 | 1224 | | 23779 | 11097 |
| | | | | OFF | 2 | 36 | 25 | 91 | 43E | 606509 | 628560 | 27 | 6 | 40 | 19 | 1247 | | 24019 | 11098 |

~~TOP SECRET~~

CONTROL NO.

~~TOP SECRET~~

- CONTROL NO. [REDACTED]

| | | | | | | | | | | | | | | | | | | | |
|----|---|---|-----|-----|---|----|----|----|-----|--------|--------|----|----|----|----|------|-------|-------|-------|
| 72 | 3 | 1 | 102 | ON | 2 | 60 | 22 | 37 | 24E | 686473 | 711531 | 27 | 9 | 34 | 16 | 12 | 3 | 34456 | 11099 |
| | | | | OFF | 2 | 44 | 25 | 44 | 26E | 626529 | 649331 | 27 | 9 | 38 | 20 | 1236 | 34700 | | 11100 |
| 73 | 2 | 1 | 34 | ON | 2 | 54 | 17 | 18 | 11E | 660170 | 684236 | 27 | 11 | 5 | 51 | 1218 | 39951 | | 11101 |
| | | | | OFF | 2 | 48 | 56 | 20 | 21E | 640485 | 663811 | 27 | 11 | 7 | 13 | 1228 | 40033 | | 11102 |

OPERATIONS SUMMARY

| AFT | PAN | CAMERA | NUMBER | 173 | | | | | | | | | | | | | | | | |
|---------|-----|--------|--------|------|--------|-------|----|-----|-----|---------|---------|-------|----|----|----|------|-------|-------|-------|-------|
| OPN NO | FRA | Q | LAT | LONG | HEIGHT | RANGE | DA | H | M | S | LTIM | S-TIM | | | | | | | | |
| PRE-FLT | 113 | | | | | | | | | | | | | | | | | | | |
| 1 | 4 | 0 | 11 | ON | 2 | 63 | 45 | 155 | 23W | 783532 | 812269 | 22 | 22 | 57 | 47 | 1236 | 82667 | | 12001 | |
| | | | | OFF | 2 | 62 | 2 | 153 | 57W | 773191 | 801534 | 22 | 22 | 58 | 14 | 1242 | 82694 | | 12002 | |
| 5 | 7 | 1 | 21 | ON | 2 | 76 | 48 | 87 | 12E | 867776 | 899734 | 23 | 4 | 54 | 31 | 1043 | 17671 | | 12003 | |
| | | | | OFF | 2 | 73 | 31 | 99 | 0E | 842304 | 873285 | 23 | 4 | 55 | 38 | 1131 | 17738 | | 12004 | |
| 5 | 7 | 2 | 71 | ON | 2 | 61 | 55 | 115 | 21E | 769554 | 797758 | 23 | 4 | 58 | 52 | 1240 | 17932 | | 12005 | |
| | | | | OFF | 2 | 49 | 28 | 121 | 54E | 704224 | 729951 | 23 | 5 | 2 | 4 | 13 | 9 | 18124 | | 12006 |
| 5 | 7 | 3 | 21 | ON | 2 | 47 | 0 | 122 | 44E | 692715 | 718008 | 23 | 5 | 2 | 42 | 1313 | 18162 | | 12007 | |
| | | | | OFF | 2 | 43 | 30 | 123 | 46E | 677350 | 702063 | 23 | 5 | 3 | 35 | 1318 | 18215 | | 12008 | |
| 7 | 9 | 1 | 62 | UN | 2 | 53 | 18 | 75 | 0E | 722433 | 748849 | 23 | 8 | 1 | 22 | 13 | 1 | 28882 | | 12009 |
| | | | | OFF | 2 | 42 | 56 | 78 | 33E | 675105 | 699732 | 23 | 8 | 3 | 59 | 1318 | 29039 | | 12010 | |
| 7 | 9 | 2 | 69 | ON | 2 | 38 | 26 | 79 | 40E | 657515 | 681481 | 23 | 8 | 5 | 7 | 1323 | 29107 | | 12011 | |
| | | | | OFF | 2 | 27 | 39 | 81 | 43E | 624000 | 646706 | 23 | 8 | 7 | 48 | 1334 | 29268 | | 12012 | |
| 7 | 9 | 3 | 19 | ON | 2 | 25 | 8 | 82 | 7E | 618055 | 640538 | 23 | 8 | 8 | 25 | 1336 | 29305 | | 12013 | |
| | | | | OFF | 2 | 22 | 15 | 82 | 32E | 612206 | 634470 | 23 | 8 | 9 | 8 | 1339 | 29348 | | 12014 | |
| 7 | 9 | 4 | 28 | ON | 2 | 20 | 39 | 82 | 46E | 609382 | 631540 | 23 | 8 | 9 | 32 | 1340 | 29372 | | 12015 | |
| | | | | OFF | 2 | 16 | 21 | 83 | 20E | 603452 | 625388 | 23 | 8 | 10 | 36 | 1343 | 29436 | | 12016 | |
| 9 | 4 | 0 | 11 | ON | 1 | 37 | 15 | 123 | 36W | 1156793 | 1199990 | 23 | 10 | 39 | 48 | 225 | 38388 | | 12017 | |
| | | | | OFF | 1 | 40 | 14 | 122 | 56W | 1145787 | 1188551 | 23 | 10 | 40 | 35 | 228 | 38435 | | 12018 | |
| 9 | 4 | 1 | 99 | ON | 2 | 61 | 16 | 25 | 6E | 758960 | 786762 | 23 | 10 | 59 | 35 | 1240 | 39575 | | 12019 | |
| | | | | OFF | 2 | 44 | 33 | 32 | 44E | 676190 | 700859 | 23 | 11 | 3 | 51 | 1314 | 39831 | | 12020 | |
| 16 | 4 | 0 | 11 | ON | 2 | 38 | 5 | 124 | 25W | 637306 | 660512 | 23 | 21 | 36 | 20 | 1318 | 77780 | | 12021 | |
| | | | | OFF | 2 | 36 | 20 | 124 | 2W | 631337 | 654319 | 23 | 21 | 36 | 46 | 1320 | 77806 | | 12022 | |
| 18 | 4 | 1 | 30 | ON | 2 | 67 | 9 | 175 | 23E | 775321 | 803745 | 24 | 0 | 29 | 6 | 1210 | 1746 | | 12023 | |
| | | | | OFF | 2 | 61 | 46 | 179 | 26W | 744246 | 771489 | 24 | 0 | 30 | 32 | 1232 | 1832 | | 12024 | |
| 20 | 6 | 1 | 48 | ON | 2 | 60 | 11 | 136 | 19E | 733288 | 760116 | 24 | 3 | 31 | 11 | 1236 | 12671 | | 12025 | |
| | | | | OFF | 2 | 51 | 55 | 140 | 41E | 691461 | 716706 | 24 | 3 | 33 | 19 | 1256 | 12799 | | 12026 | |
| 21 | 6 | 1 | 140 | ON | 2 | 61 | 9 | 112 | 58E | 737381 | 764363 | 24 | 5 | 1 | 3 | 1232 | 18063 | | 12027 | |
| | | | | OFF | 2 | 38 | 6 | 122 | 9E | 634225 | 657316 | 24 | 5 | 6 | 54 | 1315 | 18414 | | 12028 | |
| 21 | 6 | 2 | 34 | ON | 3 | 13 | 48 | 129 | 18E | 626946 | 649763 | 24 | 5 | 19 | 43 | 1356 | 19183 | | 12029 | |
| | | | | OFF | 3 | 19 | 15 | 130 | 0E | 646668 | 670225 | 24 | 5 | 21 | 4 | 14 | 1 | 19264 | | 12030 |
| 22 | 3 | 1 | 54 | ON | 2 | 59 | 23 | 91 | 29E | 726768 | 753349 | 24 | 6 | 31 | 37 | 1237 | 23497 | | 12031 | |
| | | | | OFF | 2 | 50 | 8 | 96 | 1E | 681279 | 706140 | 24 | 6 | 33 | 59 | 1258 | 23639 | | 12032 | |
| 22 | 3 | 2 | 39 | ON | 2 | 44 | 32 | 97 | 51E | 657372 | 681332 | 24 | 6 | 35 | 24 | 13 | 6 | 23724 | | 12033 |
| | | | | OFF | 2 | 38 | 18 | 99 | 25E | 634278 | 657370 | 24 | 6 | 36 | 57 | 1314 | 23817 | | 12034 | |
| 22 | 3 | 3 | 18 | ON | 2 | 1 | 6 | 104 | 53E | 592574 | 614102 | 24 | 6 | 46 | 9 | 1345 | 24369 | | 12035 | |
| | | | | OFF | 3 | 1 | 40 | 105 | 12E | 596829 | 618517 | 24 | 6 | 46 | 50 | 1347 | 24410 | | 12036 | |
| 23 | 5 | 1 | 91 | ON | 2 | 60 | 18 | 68 | 12E | 730506 | 757228 | 24 | 8 | 1 | 29 | 1234 | 28889 | | 12037 | |
| | | | | OFF | 2 | 45 | 11 | 74 | 58E | 659185 | 683213 | 24 | 8 | 5 | 20 | 13 | 5 | 29120 | | 12038 |
| 23 | 5 | 2 | 33 | ON | 2 | 35 | 34 | 77 | 20E | 624822 | 647559 | 24 | 8 | 7 | 45 | 1317 | 29265 | | 12039 | |
| | | | | OFF | 2 | 30 | 29 | 78 | 17E | 610646 | 632852 | 24 | 8 | 9 | 1 | 1322 | 29341 | | 12040 | |
| 25 | 2 | 1 | 105 | ON | 2 | 59 | 19 | 23 | 29E | 723138 | 749581 | 24 | 11 | 1 | 57 | 1235 | 39717 | | 12041 | |
| | | | | OFF | 2 | 42 | 8 | 30 | 27E | 645808 | 669334 | 24 | 11 | 6 | 19 | 13 | 8 | 39979 | | 12042 |
| 29 | 7 | 1 | 52 | ON | 3 | 19 | 26 | 51 | 24W | 652445 | 676219 | 24 | 17 | 21 | 57 | 1356 | 62517 | | 12043 | |
| | | | | OFF | 3 | 28 | 1 | 50 | 8W | 691690 | 716943 | 24 | 17 | 24 | 6 | 14 | 3 | 62646 | | 12044 |
| 32 | 8 | 0 | 11 | ON | 2 | 38 | 13 | 127 | 20W | 627743 | 650590 | 24 | 21 | 37 | 59 | 13 | 8 | 77879 | | 12045 |

~~TOP SECRET~~

CONTROL NO. [REDACTED]

~~TOP SECRET~~

[REDACTED] - CONTROL NO. [REDACTED]

| | | | | | | | | | | | | | | | | | | |
|----|---|---|--------|---|----|----|-----|-----|--------|--------|----|----|----|----|------|-------|-------|-------|
| | | | OFF | 2 | 36 | 29 | 128 | 97W | 622441 | 645089 | 24 | 21 | 38 | 25 | 1310 | 77905 | 12046 | |
| 34 | 9 | 1 | 42 ON | 2 | 71 | 21 | 166 | 6E | 780783 | 809416 | 25 | 0 | 29 | 33 | 1133 | 1773 | 12047 | |
| | | | OFF | 2 | 64 | 3 | 175 | 46E | 738310 | 765328 | 25 | 0 | 31 | 34 | 1214 | 1894 | 12048 | |
| 35 | 9 | 1 | 55 ON | 2 | 75 | 17 | 133 | 7E | 806058 | 835654 | 25 | 1 | 58 | 25 | 1050 | 7105 | 12049 | |
| | | | OFF | 2 | 66 | 12 | 150 | 56E | 749040 | 776465 | 25 | 2 | 1 | 5 | 12 | 4 | 7265 | 12050 |
| 36 | 9 | 1 | 140 ON | 2 | 65 | 30 | 129 | 0E | 744000 | 771234 | 25 | 3 | 31 | 21 | 12 | 7 | 12681 | 12051 |
| | | | OFF | 2 | 42 | 29 | 140 | 55E | 639418 | 662704 | 25 | 3 | 37 | 15 | 13 | 0 | 13035 | 12052 |
| 37 | 9 | 1 | 106 ON | 2 | 37 | 43 | 119 | 23E | 623334 | 646015 | 25 | 5 | 8 | 31 | 13 | 6 | 18511 | 12053 |
| | | | OFF | 2 | 21 | 49 | 122 | 10E | 590412 | 611860 | 25 | 5 | 12 | 27 | 1321 | 18747 | 12054 | |
| 38 | 7 | 1 | 125 ON | 2 | 60 | 15 | 88 | 4E | 714150 | 740253 | 25 | 6 | 32 | 54 | 1225 | 23574 | 12055 | |
| | | | OFF | 2 | 40 | 10 | 96 | 9E | 630313 | 653256 | 25 | 6 | 38 | 0 | 13 | 2 | 23880 | 12056 |
| 39 | 9 | 1 | 16 ON | 2 | 48 | 21 | 71 | 8E | 659277 | 683309 | 25 | 8 | 6 | 2 | 1250 | 29162 | 12057 | |
| | | | OFF | 2 | 45 | 40 | 71 | 59E | 648878 | 672519 | 25 | 8 | 6 | 42 | 1254 | 29202 | 12058 | |
| 39 | 9 | 2 | 93 ON | 2 | 35 | 29 | 74 | 31E | 615884 | 638286 | 25 | 8 | 9 | 15 | 13 | 7 | 29355 | 12059 |
| | | | OFF | 2 | 21 | 29 | 76 | 52E | 589661 | 611082 | 25 | 8 | 12 | 43 | 1320 | 29563 | 12060 | |
| 40 | 1 | 1 | 166 ON | 2 | 67 | 14 | 36 | 21E | 749099 | 776527 | 25 | 9 | 31 | 12 | 1156 | 34272 | 12061 | |
| | | | OFF | 2 | 40 | 17 | 50 | 46E | 629521 | 652435 | 25 | 9 | 38 | 7 | 13 | 1 | 34687 | 12062 |
| 41 | 2 | 1 | 70 ON | 2 | 56 | 25 | 22 | 21E | 692585 | 717873 | 25 | 11 | 4 | 8 | 1233 | 39848 | 12063 | |
| | | | OFF | 2 | 45 | 11 | 26 | 47E | 645662 | 669182 | 25 | 11 | 6 | 59 | 1254 | 40019 | 12064 | |
| 46 | 7 | 1 | 20 ON | 2 | 40 | 35 | 85 | 19W | 626909 | 649725 | 25 | 18 | 38 | 29 | 1257 | 67109 | 12065 | |
| | | | OFF | 2 | 37 | 25 | 84 | 35W | 617616 | 640083 | 25 | 18 | 39 | 16 | 13 | 0 | 67156 | 12066 |
| 47 | 7 | 1 | 20 ON | 2 | 38 | 34 | 107 | 31W | 620340 | 642909 | 25 | 20 | 9 | 3 | 1258 | 72543 | 12067 | |
| | | | OFF | 2 | 35 | 26 | 106 | 51W | 611929 | 634183 | 25 | 20 | 9 | 50 | 13 | 2 | 72590 | 12068 |
| 50 | 4 | 1 | 49 ON | 2 | 72 | 17 | 161 | 25E | 766851 | 794953 | 26 | 0 | 30 | 27 | 1116 | 1827 | 12069 | |
| | | | OFF | 2 | 64 | 5 | 172 | 59E | 721087 | 747453 | 26 | 0 | 32 | 44 | 12 | 4 | 1964 | 12070 |
| 52 | 4 | 1 | 63 ON | 2 | 61 | 31 | 129 | 46E | 706216 | 732019 | 26 | 3 | 33 | 31 | 1212 | 12811 | 12071 | |
| | | | OFF | 2 | 51 | 15 | 135 | 20E | 660724 | 684811 | 26 | 3 | 36 | 9 | 1237 | 12969 | 12072 | |
| 52 | 4 | 2 | 33 ON | 2 | 46 | 37 | 136 | 58E | 643205 | 666633 | 26 | 3 | 37 | 20 | 1245 | 13040 | 12073 | |
| | | | OFF | 2 | 41 | 24 | 138 | 27E | 625965 | 648745 | 26 | 3 | 38 | 38 | 1252 | 13118 | 12074 | |
| 53 | 4 | 1 | 43 ON | 2 | 68 | 27 | 100 | 4E | 741059 | 768182 | 26 | 5 | 1 | 43 | 1142 | 18103 | 12075 | |
| | | | OFF | 2 | 61 | 14 | 107 | 18E | 703877 | 729592 | 26 | 5 | 3 | 39 | 1212 | 18219 | 12076 | |
| 53 | 4 | 2 | 93 ON | 2 | 43 | 40 | 115 | 11E | 632505 | 655531 | 26 | 5 | 8 | 7 | 1248 | 18487 | 12077 | |
| | | | OFF | 2 | 29 | 35 | 118 | 13E | 597298 | 619004 | 26 | 5 | 11 | 37 | 13 | 4 | 18697 | 12078 |
| 54 | 7 | 1 | 118 ON | 2 | 47 | 31 | 91 | 21E | 645049 | 668546 | 26 | 6 | 37 | 12 | 1242 | 23832 | 12079 | |
| | | | OFF | 2 | 29 | 33 | 95 | 33E | 596933 | 618626 | 26 | 6 | 41 | 40 | 13 | 3 | 24100 | 12080 |
| 56 | 1 | 1 | 102 ON | 2 | 60 | 23 | 39 | 54E | 696940 | 722393 | 26 | 9 | 34 | 1 | 1213 | 34441 | 12081 | |
| | | | OFF | 2 | 44 | 18 | 47 | 0E | 632752 | 655787 | 26 | 9 | 38 | 6 | 1246 | 34686 | 12082 | |
| 57 | 1 | 1 | 21 ON | 2 | 78 | 30 | 22 | 55W | 803920 | 833434 | 26 | 10 | 58 | 38 | 926 | 39518 | 12083 | |
| | | | OFF | 2 | 75 | 54 | 7 | 59W | 782203 | 810889 | 26 | 10 | 59 | 40 | 1027 | 39580 | 12084 | |
| 57 | 1 | 2 | 21 ON | 2 | 53 | 34 | 21 | 2E | 666077 | 690365 | 26 | 11 | 5 | 49 | 1229 | 39949 | 12085 | |
| | | | OFF | 2 | 50 | 13 | 22 | 24E | 652927 | 676720 | 26 | 11 | 6 | 40 | 1236 | 40000 | 12086 | |
| 63 | 5 | 1 | 21 ON | 2 | 39 | 27 | 110 | 22W | 614727 | 637085 | 26 | 20 | 9 | 35 | 1248 | 72575 | 12087 | |
| | | | OFF | 2 | 36 | 14 | 109 | 40W | 606962 | 629030 | 26 | 20 | 10 | 23 | 1251 | 72623 | 12088 | |
| 66 | 7 | 1 | 50 ON | 2 | 67 | 9 | 167 | 7E | 720155 | 746486 | 27 | 0 | 32 | 35 | 1141 | 1955 | 12089 | |
| | | | OFF | 2 | 58 | 54 | 174 | 15E | 681131 | 705987 | 27 | 0 | 34 | 46 | 1211 | 2086 | 12090 | |
| 69 | 7 | 1 | 94 ON | 2 | 65 | 19 | 101 | 10E | 707960 | 733829 | 27 | 5 | 3 | 9 | 1147 | 18189 | 12091 | |
| | | | OFF | 2 | 50 | 14 | 110 | 27E | 644495 | 667972 | 27 | 5 | 7 | 3 | 1228 | 18423 | 12092 | |
| 69 | 7 | 2 | 37 ON | 2 | 43 | 33 | 112 | 36E | 622990 | 645659 | 27 | 5 | 8 | 43 | 1239 | 18523 | 12093 | |
| | | | OFF | 2 | 37 | 55 | 114 | 0E | 608324 | 630443 | 27 | 5 | 10 | 7 | 1246 | 18607 | 12094 | |
| 69 | 7 | 3 | 21 ON | 2 | 24 | 52 | 116 | 22E | 588015 | 609374 | 27 | 5 | 13 | 21 | 1258 | 18801 | 12095 | |
| | | | OFF | 2 | 21 | 39 | 116 | 50E | 586153 | 607442 | 27 | 5 | 14 | 9 | 13 | 1 | 18849 | 12096 |
| 70 | 5 | 1 | 104 ON | 2 | 53 | 13 | 86 | 35E | 654748 | 678610 | 27 | 6 | 36 | 19 | 1222 | 23779 | 12097 | |
| | | | OFF | 2 | 37 | 17 | 91 | 28E | 606509 | 628560 | 27 | 6 | 40 | 19 | 1246 | 24019 | 12098 | |
| 72 | 3 | 1 | 102 ON | 2 | 61 | 19 | 36 | 40E | 686473 | 711531 | 27 | 9 | 34 | 16 | 12 | 0 | 34456 | 12099 |

~~TOP SECRET~~

[REDACTED] - CONTROL NO. [REDACTED]

~~TOP SECRET~~

- CONTROL NO. [REDACTED]

| | | | | | | | |
|----------------------|--------|--------|--------|---------|---------|-------|-------|
| OFF 2 45 18 | 44 7E | 626529 | 649331 | 27 9 38 | 20 1234 | 34700 | 12100 |
| 73 2 1 35 ON 2 55 13 | 17 41E | 660170 | 684236 | 27 11 5 | 51 1216 | 39951 | 12101 |
| OFF 2 49 50 | 19 58E | 640485 | 663811 | 27 11 7 | 13 1227 | 40033 | 12102 |

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PHOTOGRAPHIC SUMMARY

| FWD PAN CAMERA NO | | 172 | 0.2250 SLIT W/25 | | FILTER | | 3404 FILM | | |
|-------------------|-----|-------|------------------|-------|--------|-------|-----------|-------|-------|
| OPN NO | FRA | FEET | ET | S-EL | S-DIR | EV | FULL | INT | PRI |
| PRE-FLT | 110 | 291.0 | | | | | | | |
| 1 4 0 | 11 | 29.1 | ON 229 | 26.8 | 33.9 | 11.69 | 11.93 | 11.33 | 10.73 |
| | | | OFF 233 | 28.4 | 34.4 | 11.72 | 11.95 | 11.35 | 10.75 |
| 5 7 1 | 21 | 55.5 | ON 208 | 13.6 | 31.7 | 11.55 | 11.39 | 10.79 | 10.19 |
| | | | OFF 214 | 17.4 | 31.6 | 11.60 | 11.63 | 11.03 | 10.43 |
| 5 7 2 | 71 | 187.8 | ON 235 | 28.6 | 33.7 | 11.73 | 11.95 | 11.35 | 10.75 |
| | | | OFF 262 | 39.1 | 38.6 | 11.88 | 12.06 | 11.46 | 10.86 |
| 5 7 3 | 21 | 55.5 | ON 267 | 41.1 | 39.9 | 11.91 | 12.07 | 11.47 | 10.87 |
| | | | OFF 273 | 43.8 | 42.0 | 11.95 | 12.09 | 11.49 | 10.89 |
| 7 9 1 | 62 | 164.0 | ON 258 | 36.0 | 36.4 | 11.86 | 12.04 | 11.44 | 10.84 |
| | | | OFF 277 | 44.3 | 42.0 | 11.97 | 12.09 | 11.49 | 10.89 |
| 7 9 2 | 69 | 182.5 | ON 285 | 47.7 | 45.3 | 12.01 | 12.10 | 11.50 | 10.90 |
| | | | OFF 299 | 54.7 | 55.8 | 12.08 | 12.10 | 11.50 | 10.90 |
| 7 9 3 | 19 | 50.3 | ON 302 | 56.1 | 58.9 | 12.09 | 12.10 | 11.50 | 10.90 |
| | | | OFF 304 | 57.5 | 62.8 | 12.10 | 12.10 | 11.50 | 10.90 |
| 7 9 4 | 28 | 74.1 | ON 305 | 58.2 | 65.1 | 12.11 | 12.10 | 11.50 | 10.90 |
| | | | OFF 307 | 59.8 | 71.9 | 12.12 | 12.10 | 11.50 | 10.90 |
| 9 4 0 | 11 | 29.1 | ON 159 | -38.5 | 37.4 | 11.17 | 0.00 | 0.00 | 0.00 |
| | | | OFF 160 | -36.0 | 36.1 | 11.17 | 0.00 | 0.00 | 0.00 |
| 9 4 1 | 99 | 261.9 | ON 253 | 29.2 | 33.2 | 11.83 | 11.96 | 11.36 | 10.76 |
| | | | OFF 284 | 43.2 | 40.6 | 12.00 | 12.09 | 11.49 | 10.89 |
| 16 4 0 | 10 | 26.5 | ON 287 | 48.5 | 43.6 | 12.02 | 12.10 | 11.50 | 10.90 |
| | | | OFF 289 | 49.8 | 45.1 | 12.03 | 12.10 | 11.50 | 10.90 |
| 18 4 1 | 30 | 79.3 | ON 231 | 23.8 | 30.2 | 11.70 | 11.86 | 11.26 | 10.66 |
| | | | OFF 241 | 28.8 | 31.4 | 11.77 | 11.96 | 11.36 | 10.76 |
| 20 6 1 | 48 | 127.0 | ON 243 | 30.3 | 31.5 | 11.77 | 11.98 | 11.38 | 10.78 |
| | | | OFF 259 | 37.6 | 34.5 | 11.87 | 12.05 | 11.45 | 10.85 |
| 21 6 1 | 140 | 370.3 | ON 241 | 29.4 | 31.1 | 11.76 | 11.97 | 11.37 | 10.77 |
| | | | OFF 283 | 48.8 | 42.5 | 12.00 | 12.10 | 11.50 | 10.90 |
| 21 6 2 | 34 | 89.9 | ON 286 | 57.4 | 124.5 | 12.01 | 12.10 | 11.50 | 10.90 |
| | | | OFF 278 | 54.0 | 130.9 | 11.97 | 12.10 | 11.50 | 10.90 |
| 22 3 1 | 54 | 142.8 | ON 246 | 31.1 | 31.4 | 11.79 | 11.99 | 11.39 | 10.79 |
| | | | OFF 264 | 39.2 | 35.0 | 11.90 | 12.06 | 11.46 | 10.86 |
| 22 3 2 | 38 | 100.5 | ON 275 | 43.8 | 37.9 | 11.95 | 12.09 | 11.49 | 10.89 |
| | | | OFF 284 | 48.7 | 42.2 | 12.00 | 12.10 | 11.50 | 10.90 |
| 22 3 3 | 18 | 47.6 | ON 301 | 63.4 | 99.5 | 12.08 | 12.10 | 11.50 | 10.90 |
| | | | OFF 299 | 62.8 | 104.9 | 12.08 | 12.10 | 11.50 | 10.90 |
| 23 5 1 | 91 | 240.7 | ON 246 | 30.2 | 31.0 | 11.79 | 11.98 | 11.38 | 10.78 |
| | | | OFF 275 | 43.3 | 37.4 | 11.95 | 12.09 | 11.49 | 10.89 |
| 23 5 2 | 33 | 87.3 | ON 289 | 50.8 | 44.2 | 12.03 | 12.10 | 11.50 | 10.90 |
| | | | OFF 295 | 54.4 | 49.1 | 12.06 | 12.10 | 11.50 | 10.90 |
| 25 2 1 | 105 | 277.7 | ON 249 | 31.2 | 30.9 | 11.81 | 11.99 | 11.39 | 10.79 |
| | | | OFF 280 | 45.9 | 38.8 | 11.98 | 12.10 | 11.50 | 10.90 |
| 29 7 1 | 51 | 134.9 | ON 273 | 54.8 | 132.4 | 11.95 | 12.10 | 11.50 | 10.90 |
| | | | OFF 258 | 48.4 | 140.1 | 11.86 | 12.10 | 11.50 | 10.90 |
| 32 8 0 | 10 | 26.5 | ON 287 | 49.3 | 40.1 | 12.02 | 12.10 | 11.50 | 10.90 |
| | | | OFF 289 | 50.7 | 41.4 | 12.03 | 12.10 | 11.50 | 10.90 |

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~~TOP SECRET~~

CONTROL NO. [REDACTED]

~~TOP SECRET~~

[REDACTED] - CONTROL NO. [REDACTED]

| | | | | | | | | | | | | | |
|----|---|---|-----|-------|-----|-----|------|------|-------|-------|-------|-------|-------|
| 34 | 9 | 1 | 42 | 111.1 | ON | 226 | 19.6 | 26.9 | 11.67 | 11.72 | 11.12 | 10.52 | 13047 |
| | | | | | OFF | 241 | 26.9 | 28.1 | 11.76 | 11.93 | 11.33 | 10.73 | 13048 |
| 35 | 9 | 1 | 54 | 142.8 | ON | 218 | 15.1 | 26.7 | 11.62 | 11.50 | 10.90 | 10.30 | 13049 |
| | | | | | OFF | 236 | 24.8 | 27.5 | 11.74 | 11.88 | 11.28 | 10.68 | 13050 |
| 36 | 9 | 1 | 139 | 367.7 | ON | 239 | 25.5 | 27.4 | 11.75 | 11.90 | 11.30 | 10.70 | 13051 |
| | | | | | OFF | 283 | 46.1 | 36.2 | 12.00 | 12.10 | 11.50 | 10.90 | 13052 |
| 37 | 9 | 1 | 105 | 277.7 | ON | 290 | 50.0 | 39.3 | 12.03 | 12.10 | 11.50 | 10.90 | 13053 |
| | | | | | OFF | 304 | 61.0 | 57.0 | 12.10 | 12.10 | 11.50 | 10.90 | 13054 |
| 38 | 7 | 1 | 125 | 330.6 | ON | 252 | 30.5 | 28.3 | 11.83 | 11.98 | 11.38 | 10.78 | 13055 |
| | | | | | OFF | 287 | 48.1 | 37.3 | 12.02 | 12.10 | 11.50 | 10.90 | 13056 |
| 39 | 9 | 1 | 16 | 42.3 | ON | 276 | 41.2 | 32.4 | 11.96 | 12.07 | 11.47 | 10.87 | 13057 |
| | | | | | OFF | 280 | 43.5 | 33.8 | 11.98 | 12.09 | 11.49 | 10.89 | 13058 |
| 39 | 9 | 2 | 91 | 240.7 | ON | 294 | 51.9 | 40.7 | 12.05 | 12.10 | 11.50 | 10.90 | 13059 |
| | | | | | OFF | 304 | 61.4 | 57.0 | 12.10 | 12.10 | 11.50 | 10.90 | 13060 |
| 40 | 1 | 1 | 166 | 439.1 | ON | 238 | 23.8 | 26.5 | 11.75 | 11.86 | 11.26 | 10.66 | 13061 |
| | | | | | OFF | 288 | 48.1 | 36.8 | 12.02 | 12.10 | 11.50 | 10.90 | 13062 |
| 41 | 2 | 1 | 70 | 185.1 | ON | 262 | 34.1 | 28.9 | 11.88 | 12.02 | 11.42 | 10.82 | 13063 |
| | | | | | OFF | 281 | 44.0 | 33.6 | 11.99 | 12.09 | 11.49 | 10.89 | 13064 |
| 46 | 7 | 1 | 20 | 52.9 | ON | 288 | 48.1 | 35.3 | 12.02 | 12.10 | 11.50 | 10.90 | 13065 |
| | | | | | OFF | 292 | 50.7 | 37.5 | 12.04 | 12.10 | 11.50 | 10.90 | 13066 |
| 47 | 7 | 1 | 20 | 52.9 | ON | 290 | 49.8 | 36.4 | 12.03 | 12.10 | 11.50 | 10.90 | 13067 |
| | | | | | OFF | 293 | 52.4 | 38.8 | 12.05 | 12.10 | 11.50 | 10.90 | 13068 |
| 50 | 4 | 1 | 48 | 127.0 | ON | 228 | 18.4 | 24.2 | 11.69 | 11.68 | 11.08 | 10.48 | 13069 |
| | | | | | OFF | 246 | 26.9 | 25.3 | 11.80 | 11.93 | 11.33 | 10.73 | 13070 |
| 52 | 4 | 1 | 62 | 164.0 | ON | 253 | 29.4 | 25.5 | 11.84 | 11.97 | 11.37 | 10.77 | 13071 |
| | | | | | OFF | 272 | 39.0 | 28.6 | 11.94 | 12.06 | 11.46 | 10.86 | 13072 |
| 52 | 4 | 2 | 33 | 87.3 | ON | 280 | 43.1 | 30.6 | 11.98 | 12.09 | 11.49 | 10.89 | 13073 |
| | | | | | OFF | 287 | 47.7 | 33.4 | 12.02 | 12.10 | 11.50 | 10.90 | 13074 |
| 53 | 4 | 1 | 43 | 113.7 | ON | 238 | 22.5 | 24.1 | 11.75 | 11.82 | 11.22 | 10.62 | 13075 |
| | | | | | OFF | 253 | 29.6 | 25.4 | 11.84 | 11.97 | 11.37 | 10.77 | 13076 |
| 53 | 4 | 2 | 92 | 243.3 | ON | 285 | 45.8 | 31.9 | 12.01 | 12.10 | 11.50 | 10.90 | 13077 |
| | | | | | OFF | 300 | 57.3 | 42.9 | 12.08 | 12.10 | 11.50 | 10.90 | 13078 |
| 54 | 7 | 1 | 117 | 309.5 | ON | 279 | 42.4 | 29.8 | 11.98 | 12.08 | 11.48 | 10.88 | 13079 |
| | | | | | OFF | 300 | 57.4 | 42.6 | 12.08 | 12.10 | 11.50 | 10.90 | 13080 |
| 56 | 1 | 1 | 101 | 267.1 | ON | 259 | 30.5 | 25.0 | 11.87 | 11.98 | 11.38 | 10.78 | 13081 |
| | | | | | OFF | 286 | 45.3 | 30.9 | 12.01 | 12.09 | 11.49 | 10.89 | 13082 |
| 57 | 1 | 1 | 20 | 52.9 | ON | 219 | 10.1 | 23.7 | 11.63 | 11.10 | 10.50 | 9.90 | 13083 |
| | | | | | OFF | 225 | 14.0 | 23.2 | 11.67 | 11.43 | 10.83 | 10.23 | 13084 |
| 57 | 1 | 2 | 20 | 52.9 | ON | 273 | 36.9 | 26.8 | 11.95 | 12.05 | 11.45 | 10.85 | 13085 |
| | | | | | OFF | 279 | 40.0 | 28.0 | 11.98 | 12.07 | 11.47 | 10.87 | 13086 |
| 63 | 5 | 1 | 20 | 52.9 | ON | 294 | 49.8 | 32.2 | 12.05 | 12.10 | 11.50 | 10.90 | 13087 |
| | | | | | OFF | 297 | 52.5 | 34.4 | 12.07 | 12.10 | 11.50 | 10.90 | 13088 |
| 66 | 7 | 1 | 50 | 132.3 | ON | 247 | 23.7 | 22.1 | 11.80 | 11.86 | 11.26 | 10.66 | 13089 |
| | | | | | OFF | 264 | 32.0 | 23.6 | 11.90 | 12.00 | 11.40 | 10.80 | 13090 |
| 69 | 7 | 1 | 93 | 246.0 | ON | 253 | 25.6 | 21.8 | 11.83 | 11.90 | 11.30 | 10.70 | 13091 |
| | | | | | OFF | 281 | 40.2 | 25.6 | 11.99 | 12.07 | 11.47 | 10.87 | 13092 |
| 69 | 7 | 2 | 37 | 97.9 | ON | 291 | 46.4 | 28.5 | 12.04 | 12.10 | 11.50 | 10.90 | 13093 |
| | | | | | OFF | 297 | 51.4 | 31.7 | 12.07 | 12.10 | 11.50 | 10.90 | 13094 |
| 69 | 7 | 3 | 21 | 55.5 | ON | 305 | 61.9 | 44.2 | 12.10 | 12.10 | 11.50 | 10.90 | 13095 |
| | | | | | OFF | 305 | 64.2 | 48.9 | 12.11 | 12.10 | 11.50 | 10.90 | 13096 |
| 70 | 5 | 1 | 104 | 275.1 | ON | 279 | 37.4 | 24.4 | 11.98 | 12.05 | 11.45 | 10.85 | 13097 |
| | | | | | OFF | 299 | 52.0 | 31.9 | 12.08 | 12.10 | 11.50 | 10.90 | 13098 |
| 72 | 3 | 1 | 102 | 269.8 | ON | 264 | 29.6 | 22.0 | 11.90 | 11.97 | 11.37 | 10.77 | 13099 |
| | | | | | OFF | 290 | 44.9 | 27.0 | 12.03 | 12.09 | 11.49 | 10.89 | 13100 |

~~TOP SECRET~~

[REDACTED] - CONTROL NO. [REDACTED]

~~TOP SECRET~~

- CONTROL NO. [REDACTED]

| | | | | | | | | | | | |
|--------|----|------|-----|-----|------|------|-------|-------|-------|-------|-------|
| 73 2 1 | 34 | 89.9 | ON | 276 | 35.6 | 23.2 | 11.96 | 12.03 | 11.43 | 10.83 | 13101 |
| | | | OFF | 284 | 40.7 | 24.9 | 12.00 | 12.07 | 11.47 | 10.87 | 13102 |

PHOTOGRAPHIC SUMMARY

| AFT PAN | CAMERA NO | 173 | 0.1500 | SLIT | W/21 | FILTER | 3404 | FILM | | | |
|---------|-----------|-------|--------|------|-------|--------|-------|-------|-------|-------|-------|
| OPN NO | FRA | FEET | ET | S-EL | S-DIR | EV | FULL | INT | PRI | | |
| PRE-FLT | 113 | 298.9 | | | | | | | | | |
| 1 4 0 | 11 | 29.1 | ON | 347 | 25.9 | 32.6 | 12.29 | 12.56 | 11.96 | 11.36 | 14001 |
| | | | OFF | 353 | 27.4 | 33.2 | 12.31 | 12.59 | 11.99 | 11.39 | 14002 |
| 5 7 1 | 21 | 55.5 | ON | 314 | 12.4 | 27.6 | 12.15 | 11.96 | 11.36 | 10.76 | 14003 |
| | | | OFF | 324 | 16.3 | 28.9 | 12.19 | 12.22 | 11.62 | 11.02 | 14004 |
| 5 7 2 | 71 | 187.8 | ON | 356 | 27.6 | 32.5 | 12.33 | 12.59 | 11.99 | 11.39 | 14005 |
| | | | OFF | 395 | 38.3 | 37.7 | 12.48 | 12.71 | 12.11 | 11.51 | 14006 |
| 5 7 3 | 21 | 55.5 | ON | 403 | 40.3 | 39.0 | 12.51 | 12.72 | 12.12 | 11.52 | 14007 |
| | | | OFF | 412 | 43.1 | 41.1 | 12.54 | 12.73 | 12.13 | 11.53 | 14008 |
| 7 9 1 | 62 | 164.0 | ON | 389 | 35.2 | 35.5 | 12.46 | 12.68 | 12.08 | 11.48 | 14009 |
| | | | OFF | 418 | 43.6 | 41.1 | 12.56 | 12.74 | 12.14 | 11.54 | 14010 |
| 7 9 2 | 69 | 182.5 | ON | 430 | 47.0 | 44.3 | 12.60 | 12.75 | 12.15 | 11.55 | 14011 |
| | | | OFF | 451 | 54.2 | 54.6 | 12.67 | 12.75 | 12.15 | 11.55 | 14012 |
| 7 9 3 | 19 | 50.3 | ON | 455 | 55.6 | 57.6 | 12.68 | 12.75 | 12.15 | 11.55 | 14013 |
| | | | OFF | 458 | 57.1 | 61.4 | 12.69 | 12.75 | 12.15 | 11.55 | 14014 |
| 7 9 4 | 28 | 74.1 | ON | 460 | 57.9 | 63.7 | 12.70 | 12.75 | 12.15 | 11.55 | 14015 |
| | | | OFF | 463 | 59.6 | 70.3 | 12.71 | 12.75 | 12.15 | 11.55 | 14016 |
| 9 4 0 | 11 | 29.1 | ON | 242 | -39.9 | 37.9 | 11.77 | 0.00 | 0.00 | 0.00 | 14017 |
| | | | OFF | 242 | -37.4 | 36.4 | 11.77 | 0.00 | 0.00 | 0.00 | 14018 |
| 9 4 1 | 99 | 261.9 | ON | 382 | 28.3 | 32.1 | 12.43 | 12.60 | 12.00 | 11.40 | 14019 |
| | | | OFF | 429 | 42.4 | 39.7 | 12.60 | 12.73 | 12.13 | 11.53 | 14020 |
| 16 4 0 | 11 | 29.1 | ON | 433 | 47.8 | 42.7 | 12.61 | 12.75 | 12.15 | 11.55 | 14021 |
| | | | OFF | 436 | 49.1 | 44.1 | 12.62 | 12.75 | 12.15 | 11.55 | 14022 |
| 18 4 1 | 30 | 79.3 | ON | 349 | 22.8 | 28.7 | 12.30 | 12.48 | 11.88 | 11.28 | 14023 |
| | | | OFF | 365 | 27.9 | 30.4 | 12.36 | 12.59 | 11.99 | 11.39 | 14024 |
| 20 6 1 | 48 | 127.0 | ON | 369 | 29.4 | 30.5 | 12.38 | 12.62 | 12.02 | 11.42 | 14025 |
| | | | OFF | 395 | 36.7 | 33.7 | 12.48 | 12.69 | 12.09 | 11.49 | 14026 |
| 21 6 1 | 140 | 370.3 | ON | 367 | 28.5 | 30.0 | 12.37 | 12.60 | 12.00 | 11.40 | 14027 |
| | | | OFF | 431 | 48.1 | 41.6 | 12.60 | 12.75 | 12.15 | 11.55 | 14028 |
| 21 6 2 | 34 | 89.9 | ON | 435 | 57.9 | 123.3 | 12.62 | 12.75 | 12.15 | 11.55 | 14029 |
| | | | OFF | 423 | 54.6 | 130.0 | 12.58 | 12.75 | 12.15 | 11.55 | 14030 |
| 22 3 1 | 54 | 142.8 | ON | 374 | 30.2 | 30.4 | 12.40 | 12.63 | 12.03 | 11.43 | 14031 |
| | | | OFF | 402 | 38.4 | 34.1 | 12.50 | 12.71 | 12.11 | 11.51 | 14032 |
| 22 3 2 | 39 | 103.2 | ON | 418 | 43.1 | 37.1 | 12.56 | 12.73 | 12.13 | 11.53 | 14033 |
| | | | OFF | 432 | 48.0 | 41.2 | 12.61 | 12.75 | 12.15 | 11.55 | 14034 |
| 22 3 3 | 18 | 47.6 | ON | 457 | 63.6 | 97.7 | 12.69 | 12.75 | 12.15 | 11.55 | 14035 |
| | | | OFF | 454 | 63.0 | 103.2 | 12.68 | 12.75 | 12.15 | 11.55 | 14036 |
| 23 5 1 | 91 | 240.7 | ON | 374 | 29.3 | 30.0 | 12.40 | 12.62 | 12.02 | 11.42 | 14037 |
| | | | OFF | 418 | 42.6 | 36.5 | 12.56 | 12.73 | 12.13 | 11.53 | 14038 |
| 23 5 2 | 33 | 87.3 | ON | 440 | 50.2 | 43.2 | 12.63 | 12.75 | 12.15 | 11.55 | 14039 |
| | | | OFF | 448 | 53.8 | 48.0 | 12.66 | 12.75 | 12.15 | 11.55 | 14040 |
| 25 2 1 | 105 | 277.7 | ON | 379 | 30.3 | 29.9 | 12.42 | 12.63 | 12.03 | 11.43 | 14041 |
| | | | OFF | 426 | 45.2 | 37.9 | 12.59 | 12.74 | 12.14 | 11.54 | 14042 |
| 29 7 1 | 52 | 137.5 | ON | 416 | 55.5 | 131.5 | 12.55 | 12.75 | 12.15 | 11.55 | 14043 |
| | | | OFF | 392 | 49.3 | 139.5 | 12.47 | 12.75 | 12.15 | 11.55 | 14044 |
| 32 8 0 | 11 | 29.1 | ON | 436 | 48.6 | 39.1 | 12.62 | 12.75 | 12.15 | 11.55 | 14045 |
| | | | OFF | 439 | 50.0 | 40.5 | 12.63 | 12.75 | 12.15 | 11.55 | 14046 |
| 34 9 1 | 42 | 111.1 | ON | 341 | 18.5 | 25.0 | 12.27 | 12.33 | 11.73 | 11.13 | 14047 |

~~TOP SECRET~~

- CONTROL NO. [REDACTED]

~~TOP SECRET~~

CONTROL NO.

| | | | | | | | | | | | | |
|----|---|---|-----|-------|---------|------|------|-------|-------|-------|-------|-------|
| 35 | 9 | 1 | 55 | 145.5 | OFF 363 | 25.9 | 26.9 | 12.36 | 12.56 | 11.96 | 11.36 | 14048 |
| | | | | | ON 330 | 14.0 | 23.6 | 12.22 | 12.08 | 11.48 | 10.88 | 14049 |
| | | | | | OFF 357 | 23.8 | 26.2 | 12.33 | 12.51 | 11.91 | 11.31 | 14050 |
| 36 | 9 | 1 | 140 | 370.3 | ON 361 | 24.5 | 26.2 | 12.35 | 12.53 | 11.93 | 11.33 | 14051 |
| | | | | | OFF 427 | 45.4 | 35.4 | 12.59 | 12.74 | 12.14 | 11.54 | 14052 |
| 37 | 9 | 1 | 106 | 280.4 | ON 438 | 49.3 | 38.4 | 12.63 | 12.75 | 12.15 | 11.55 | 14053 |
| | | | | | OFF 458 | 60.5 | 55.5 | 12.69 | 12.75 | 12.15 | 11.55 | 14054 |
| 38 | 7 | 1 | 125 | 330.6 | ON 380 | 29.5 | 27.3 | 12.42 | 12.62 | 12.02 | 11.42 | 14055 |
| | | | | | OFF 433 | 47.4 | 36.5 | 12.61 | 12.75 | 12.15 | 11.55 | 14056 |
| 39 | 9 | 1 | 16 | 42.3 | ON 416 | 40.4 | 31.6 | 12.55 | 12.72 | 12.12 | 11.52 | 14057 |
| | | | | | OFF 422 | 42.8 | 33.0 | 12.57 | 12.73 | 12.13 | 11.53 | 14058 |
| 39 | 9 | 2 | 93 | 246.0 | ON 444 | 51.2 | 39.7 | 12.64 | 12.75 | 12.15 | 11.55 | 14059 |
| | | | | | OFF 458 | 60.9 | 55.6 | 12.69 | 12.75 | 12.15 | 11.55 | 14060 |
| 40 | 1 | 1 | 166 | 439.1 | ON 360 | 22.8 | 25.1 | 12.34 | 12.48 | 11.88 | 11.28 | 14061 |
| | | | | | OFF 435 | 47.4 | 35.9 | 12.62 | 12.75 | 12.15 | 11.55 | 14062 |
| 41 | 2 | 1 | 70 | 185.1 | ON 395 | 33.2 | 28.0 | 12.48 | 12.66 | 12.06 | 11.46 | 14063 |
| | | | | | UFF 425 | 43.2 | 32.8 | 12.58 | 12.74 | 12.14 | 11.54 | 14064 |
| 46 | 7 | 1 | 20 | 52.9 | ON 435 | 47.4 | 34.4 | 12.62 | 12.75 | 12.15 | 11.55 | 14065 |
| | | | | | OFF 441 | 50.0 | 36.6 | 12.64 | 12.75 | 12.15 | 11.55 | 14066 |
| 47 | 7 | 1 | 20 | 52.9 | ON 442 | 49.1 | 35.6 | 12.64 | 12.75 | 12.15 | 11.55 | 14067 |
| | | | | | UFF 447 | 51.7 | 37.9 | 12.66 | 12.75 | 12.15 | 11.55 | 14068 |
| 50 | 4 | 1 | 49 | 129.6 | ON 349 | 17.4 | 22.1 | 12.30 | 12.28 | 11.68 | 11.08 | 14069 |
| | | | | | OFF 376 | 25.9 | 24.2 | 12.41 | 12.56 | 11.96 | 11.36 | 14070 |
| 52 | 4 | 1 | 63 | 166.6 | ON 386 | 26.4 | 24.5 | 12.45 | 12.60 | 12.00 | 11.40 | 14071 |
| | | | | | OFF 416 | 38.1 | 27.8 | 12.55 | 12.70 | 12.10 | 11.50 | 14072 |
| 52 | 4 | 2 | 33 | 87.3 | ON 428 | 42.3 | 29.8 | 12.59 | 12.73 | 12.13 | 11.53 | 14073 |
| | | | | | OFF 438 | 46.9 | 32.6 | 12.63 | 12.75 | 12.15 | 11.55 | 14074 |
| 53 | 4 | 1 | 43 | 113.7 | ON 364 | 21.5 | 22.6 | 12.36 | 12.44 | 11.84 | 11.24 | 14075 |
| | | | | | OFF 387 | 28.7 | 24.4 | 12.45 | 12.61 | 12.01 | 11.41 | 14076 |
| 53 | 4 | 2 | 93 | 246.0 | ON 435 | 45.0 | 31.1 | 12.62 | 12.74 | 12.14 | 11.54 | 14077 |
| | | | | | OFF 457 | 56.6 | 41.8 | 12.69 | 12.75 | 12.15 | 11.55 | 14078 |
| 54 | 7 | 1 | 118 | 312.1 | ON 426 | 41.6 | 29.0 | 12.59 | 12.73 | 12.13 | 11.53 | 14079 |
| | | | | | OFF 457 | 56.7 | 41.6 | 12.69 | 12.75 | 12.15 | 11.55 | 14080 |
| 56 | 1 | 1 | 102 | 269.8 | ON 395 | 29.5 | 24.1 | 12.48 | 12.62 | 12.02 | 11.42 | 14081 |
| | | | | | OFF 436 | 44.5 | 30.2 | 12.62 | 12.74 | 12.14 | 11.54 | 14082 |
| 57 | 1 | 1 | 21 | 55.5 | ON 334 | 9.0 | 18.8 | 12.23 | 11.63 | 11.03 | 10.43 | 14083 |
| | | | | | OFF 343 | 12.9 | 19.9 | 12.27 | 12.00 | 11.40 | 10.80 | 14084 |
| 57 | 1 | 2 | 21 | 55.5 | ON 415 | 36.1 | 26.0 | 12.55 | 12.69 | 12.09 | 11.49 | 14085 |
| | | | | | OFF 423 | 39.2 | 27.3 | 12.58 | 12.71 | 12.11 | 11.51 | 14086 |
| 63 | 5 | 1 | 21 | 55.5 | ON 447 | 49.0 | 31.4 | 12.65 | 12.75 | 12.15 | 11.55 | 14087 |
| | | | | | OFF 451 | 51.8 | 33.5 | 12.67 | 12.75 | 12.15 | 11.55 | 14088 |
| 66 | 7 | 1 | 50 | 132.3 | ON 376 | 22.8 | 20.7 | 12.41 | 12.48 | 11.88 | 11.28 | 14089 |
| | | | | | OFF 402 | 31.0 | 22.7 | 12.50 | 12.64 | 12.04 | 11.44 | 14090 |
| 69 | 7 | 1 | 94 | 248.6 | ON 384 | 24.6 | 20.7 | 12.44 | 12.53 | 11.93 | 11.33 | 14091 |
| | | | | | OFF 427 | 39.4 | 24.9 | 12.59 | 12.71 | 12.11 | 11.51 | 14092 |
| 69 | 7 | 2 | 37 | 97.9 | ON 442 | 45.6 | 27.8 | 12.64 | 12.74 | 12.14 | 11.54 | 14093 |
| | | | | | OFF 451 | 50.6 | 30.9 | 12.67 | 12.75 | 12.15 | 11.55 | 14094 |
| 69 | 7 | 3 | 21 | 55.5 | ON 463 | 61.3 | 42.9 | 12.71 | 12.75 | 12.15 | 11.55 | 14095 |
| | | | | | OFF 463 | 63.7 | 47.4 | 12.71 | 12.75 | 12.15 | 11.55 | 14096 |
| 70 | 5 | 1 | 104 | 275.1 | ON 423 | 36.6 | 23.7 | 12.58 | 12.69 | 12.09 | 11.49 | 14097 |
| | | | | | OFF 454 | 51.2 | 31.1 | 12.68 | 12.75 | 12.15 | 11.55 | 14098 |
| 72 | 3 | 1 | 102 | 269.8 | ON 401 | 28.7 | 21.1 | 12.50 | 12.61 | 12.01 | 11.41 | 14099 |
| | | | | | OFF 440 | 44.0 | 26.3 | 12.63 | 12.74 | 12.14 | 11.54 | 14100 |
| 73 | 2 | 1 | 35 | 92.6 | ON 420 | 34.7 | 22.5 | 12.56 | 12.68 | 12.08 | 11.48 | 14101 |

~~TOP SECRET~~

- CONTROL NO.

~~TOP SECRET~~

- CONTROL NO. [REDACTED]

OFF 432 39.8 24.2 12.61 12.72 12.12 11.52

14102
10050
10051
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15036
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15040
15041
15042
15043

STELLAR-INDEX SUMMARY

| CAMERA DATA | ET | FILM | FILTER | GRID | ASSEMBLY NO | D69 |
|-------------|-------|------|--------|------|-------------|-----|
| STELLAR | 2.0 | 3401 | NONE | 72 | | |
| INDEX | 1/500 | 3400 | w/21 | 84 | | |

PERFORMANCE SUMMARY

| OPN NO | FR | STEL FEET | INDX FEET | H | M | S | Q | ON LAT | ON LONG | Q | OFF LAT | OFF LONG | SEC DUR |
|---------|----|-----------|-----------|----|----|----|---|--------|---------|---|---------|----------|---------|
| PRE-FLT | 15 | 1.48 | 2.97 | | | | | | | | | | |
| 1 4 0 | 2 | 0.20 | 0.40 | 22 | 57 | 47 | 2 | 62 | 154W | 2 | 60 | 153W | 27 |
| 5 7 1 | 3 | 0.30 | 0.59 | 4 | 54 | 31 | 2 | 75 | 91E | 2 | 72 | 101E | 67 |
| 5 7 2 | 10 | 0.99 | 1.98 | 4 | 58 | 52 | 2 | 60 | 116E | 2 | 48 | 122E | 192 |
| 5 7 3 | 3 | 0.30 | 0.59 | 5 | 2 | 42 | 2 | 46 | 123E | 2 | 42 | 124E | 53 |
| 7 9 1 | 9 | 0.89 | 1.78 | 8 | 1 | 22 | 2 | 52 | 75E | 2 | 41 | 78E | 157 |
| 7 9 2 | 10 | 0.99 | 1.98 | 8 | 5 | 7 | 2 | 37 | 79E | 2 | 26 | 81E | 161 |
| 7 9 3 | 2 | 0.20 | 0.40 | 8 | 8 | 25 | 2 | 24 | 82E | 2 | 21 | 82E | 43 |
| 7 9 4 | 4 | 0.40 | 0.79 | 8 | 9 | 32 | 2 | 19 | 82E | 2 | 15 | 83E | 64 |
| 9 4 0 | 2 | 0.20 | 0.40 | 10 | 39 | 48 | 1 | 38 | 123W | 1 | 41 | 122W | 47 |
| 9 4 1 | 14 | 1.39 | 2.77 | 10 | 59 | 35 | 2 | 60 | 25E | 2 | 43 | 33E | 256 |
| 16 4 0 | 2 | 0.20 | 0.40 | 21 | 36 | 20 | 2 | 37 | 124W | 2 | 35 | 123W | 26 |
| 18 4 1 | 4 | 0.40 | 0.79 | 0 | 29 | 6 | 2 | 66 | 176E | 2 | 60 | 178W | 86 |
| 20 6 1 | 7 | 0.69 | 1.39 | 3 | 31 | 11 | 2 | 59 | 137E | 2 | 50 | 141E | 128 |
| 21 6 1 | 20 | 1.98 | 3.96 | 5 | 1 | 3 | 2 | 60 | 113E | 2 | 37 | 122E | 351 |
| 21 6 2 | 5 | 0.50 | 0.99 | 5 | 19 | 43 | 3 | 14 | 129E | 3 | 20 | 130E | 81 |
| 22 3 1 | 7 | 0.69 | 1.39 | 6 | 31 | 37 | 2 | 58 | 92E | 2 | 49 | 96E | 142 |
| 22 3 2 | 6 | 0.59 | 1.19 | 6 | 35 | 24 | 2 | 43 | 98E | 2 | 37 | 99E | 93 |
| 22 3 3 | 2 | 0.20 | 0.40 | 6 | 46 | 9 | 2 | 0 | 105E | 3 | 2 | 105E | 41 |
| 23 5 1 | 13 | 1.29 | 2.57 | 8 | 1 | 29 | 2 | 59 | 68E | 2 | 44 | 75E | 231 |
| 23 5 2 | 5 | 0.50 | 0.99 | 8 | 7 | 45 | 2 | 34 | 77E | 2 | 29 | 78E | 76 |
| 25 2 1 | 15 | 1.48 | 2.97 | 11 | 1 | 57 | 2 | 58 | 24E | 2 | 41 | 30E | 262 |
| 29 7 1 | 7 | 0.69 | 1.39 | 17 | 21 | 57 | 3 | 20 | 51W | 3 | 29 | 49W | 129 |
| 32 8 0 | 2 | 0.20 | 0.40 | 21 | 37 | 59 | 2 | 37 | 127W | 2 | 35 | 126W | 26 |
| 34 9 1 | 6 | 0.59 | 1.19 | 0 | 29 | 33 | 2 | 70 | 167E | 2 | 63 | 176E | 121 |
| 35 9 1 | 7 | 0.69 | 1.39 | 1 | 58 | 25 | 2 | 74 | 136E | 2 | 65 | 152E | 160 |
| 36 9 1 | 20 | 1.98 | 3.96 | 3 | 31 | 21 | 2 | 64 | 130E | 2 | 41 | 141E | 354 |
| 37 9 1 | 15 | 1.48 | 2.97 | 5 | 8 | 31 | 2 | 36 | 119E | 2 | 20 | 122E | 236 |
| 38 7 1 | 18 | 1.78 | 3.56 | 6 | 32 | 54 | 2 | 59 | 88E | 2 | 39 | 96E | 306 |
| 39 9 1 | 2 | 0.20 | 0.40 | 8 | 6 | 2 | 2 | 47 | 71E | 2 | 44 | 72E | 40 |
| 39 9 2 | 13 | 1.29 | 2.57 | 8 | 9 | 15 | 2 | 34 | 74E | 2 | 20 | 77E | 208 |
| 40 1 1 | 24 | 2.38 | 4.75 | 9 | 31 | 12 | 2 | 66 | 37E | 2 | 39 | 51E | 415 |
| 41 2 1 | 10 | 0.99 | 1.98 | 11 | 4 | 8 | 2 | 55 | 22E | 2 | 44 | 27E | 171 |
| 46 7 1 | 3 | 0.30 | 0.59 | 18 | 38 | 29 | 2 | 39 | 85W | 2 | 36 | 84W | 47 |
| 47 7 1 | 3 | 0.30 | 0.59 | 20 | 9 | 3 | 2 | 37 | 107W | 2 | 34 | 106W | 47 |
| 50 4 1 | 7 | 0.69 | 1.39 | 0 | 30 | 27 | 2 | 71 | 163E | 2 | 63 | 173E | 137 |
| 52 4 1 | 9 | 0.89 | 1.78 | 3 | 33 | 31 | 2 | 60 | 130E | 2 | 50 | 135E | 158 |
| 52 4 2 | 4 | 0.40 | 0.79 | 3 | 37 | 20 | 2 | 45 | 137E | 2 | 40 | 138E | 78 |
| 53 4 1 | 6 | 0.59 | 1.19 | 5 | 1 | 43 | 2 | 67 | 101E | 2 | 60 | 108E | 116 |
| 53 4 2 | 14 | 1.39 | 2.77 | 5 | 8 | 7 | 2 | 42 | 115E | 2 | 28 | 118E | 210 |
| 54 7 1 | 16 | 1.58 | 3.17 | 6 | 37 | 12 | 2 | 46 | 91E | 2 | 28 | 95E | 268 |
| 56 1 1 | 15 | 1.48 | 2.97 | 9 | 34 | 1 | 2 | 59 | 40E | 2 | 43 | 47E | 245 |
| 57 1 1 | 3 | 0.30 | 0.59 | 10 | 58 | 38 | 2 | 77 | 18W | 2 | 75 | 4W | 62 |
| 57 1 2 | 2 | 0.20 | 0.40 | 11 | 5 | 49 | 2 | 52 | 21E | 2 | 49 | 22E | 51 |

~~TOP SECRET~~

CONTROL NO. [REDACTED]

~~TOP SECRET~~ [REDACTED] - CONTROL NO. [REDACTED]

| | | | | | | | | | | | | | | | | |
|----|---|---|----|------|------|----|----|----|---|----|------|---|----|------|-----|-------|
| 63 | 5 | 1 | 3 | 0.30 | 0.59 | 20 | 9 | 35 | 2 | 38 | 110W | 2 | 35 | 109W | 48 | 15044 |
| 66 | 7 | 1 | 7 | 0.69 | 1.39 | 0 | 32 | 35 | 2 | 66 | 168E | 2 | 57 | 174E | 131 | 15045 |
| 69 | 7 | 1 | 14 | 1.39 | 2.77 | 5 | 3 | 9 | 2 | 64 | 102E | 2 | 49 | 110E | 234 | 15046 |
| 69 | 7 | 2 | 5 | 0.50 | 0.99 | 5 | 8 | 43 | 2 | 42 | 112E | 2 | 37 | 114E | 84 | 15047 |
| 69 | 7 | 3 | 3 | 0.30 | 0.59 | 5 | 13 | 21 | 2 | 24 | 116E | 2 | 20 | 117E | 48 | 15048 |
| 70 | 5 | 1 | 15 | 1.48 | 2.97 | 6 | 36 | 19 | 2 | 52 | 87E | 2 | 36 | 91E | 240 | 15049 |
| 72 | 3 | 1 | 14 | 1.39 | 2.77 | 9 | 34 | 16 | 2 | 60 | 37E | 2 | 44 | 44E | 244 | 15050 |
| 73 | 2 | 1 | 5 | 0.50 | 0.99 | 11 | 5 | 51 | 2 | 54 | 18E | 2 | 48 | 20E | 82 | 15051 |

~~TOP SECRET~~ [REDACTED] - CONTROL NO. [REDACTED]

~~TOP SECRET~~

- CONTROL NO. [REDACTED]

A. 1024-1 LAUNCH AT 2131Z UN 09/22/65
B. DRY
C. FINAL PERFORMANCE ESTIMATE, PART 2

20001
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20003
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RATE ESTIMATE

FWD PAN CAMERA NUMBER 172

| OPN NO | FR | R | A | TUR/ DUR | INST CPS | INST ANG VEL | SCAN R/SEC | RATE I/SEC | PCT CALIB | RATE REQD |
|--------|-----|---|------|-------------|-------------|-----------------|---------------|---------------|--------------|--------------|
| 1 4 0 | 11 | 8 | 3 ON | 1207 | 0.3431 | 0.02895 | 2.155 | 51.73 | -0.2 | 0.0 |
| | | | OFF | 27 | 0.3488 | 0.02943 | 2.192 | 52.60 | -0.2 | 0.3 |
| 5 7 1 | 21 | 6 | 4 ON | 846 | 0.3104 | 0.02619 | 1.951 | 46.81 | -0.2 | 1.1 |
| | | | OFF | 67 | 0.3201 | 0.02701 | 2.011 | 48.27 | -0.2 | 0.9 |
| 5 7 2 | 71 | 6 | 4 ON | 1107 | 0.3519 | 0.02969 | 2.211 | 53.06 | -0.2 | 0.7 |
| | | | OFF | 192 | 0.3912 | 0.03301 | 2.458 | 58.99 | -0.2 | 1.8 |
| 5 7 3 | 21 | 6 | 4 ON | 1337 | 0.3991 | 0.03367 | 2.508 | 60.18 | -0.2 | 2.0 |
| | | | OFF | 53 | 0.4083 | 0.03445 | 2.566 | 61.57 | -0.2 | 1.9 |
| 7 9 1 | 62 | 6 | 4 ON | 1267 | 0.3854 | 0.03252 | 2.422 | 58.12 | -0.2 | 3.0 |
| | | | OFF | 157 | 0.4145 | 0.03498 | 2.605 | 62.51 | -0.2 | 3.0 |
| 7 9 2 | 69 | 6 | 4 ON | 1492 | 0.4262 | 0.03596 | 2.678 | 64.26 | -0.2 | 3.0 |
| | | | OFF | 161 | 0.4468 | 0.03770 | 2.807 | 67.38 | -0.2 | 2.2 |
| 7 9 3 | 19 | 6 | 4 ON | 1690 | 0.4508 | 0.03803 | 2.832 | 67.97 | -0.2 | 2.1 |
| | | | OFF | 43 | 0.4540 | 0.03831 | 2.853 | 68.47 | -0.2 | 1.8 |
| 7 9 4 | 28 | 6 | 4 ON | 1757 | 0.4559 | 0.03847 | 2.865 | 68.76 | -0.2 | 1.7 |
| | | | OFF | 64 | 0.4592 | 0.03874 | 2.885 | 69.24 | -0.2 | 1.4 |
| 9 4 0 | 11 | 6 | 4 ON | 43 | 0.2383 | 0.02011 | 1.497 | 35.93 | -0.2 | 6.1 |
| | | | OFF | 47 | 0.2390 | 0.02016 | 1.501 | 36.03 | -0.2 | 5.4 |
| 9 4 1 | 99 | 6 | 4 ON | 1230 | 0.3779 | 0.03189 | 2.374 | 56.98 | -0.2 | 6.1 |
| | | | OFF | 256 | 0.4248 | 0.03585 | 2.669 | 64.06 | -0.2 | 5.5 |
| 16 4 0 | 10 | 6 | 4 ON | 1510 | 0.4289 | 0.03619 | 2.695 | 64.68 | -0.2 | 0.4 |
| | | | OFF | 26 | 0.4323 | 0.03648 | 2.716 | 65.19 | -0.2 | 0.2 |
| 18 4 1 | 30 | 6 | 4 ON | 1066 | 0.3449 | 0.02910 | 2.167 | 52.00 | -0.2 | -0.6 |
| | | | OFF | 86 | 0.3610 | 0.03046 | 2.268 | 54.43 | -0.2 | -0.4 |
| 20 6 1 | 48 | 6 | 4 ON | 1184 | 0.3626 | 0.03059 | 2.278 | 54.68 | -1.7 | -1.5 |
| | | | OFF | 128 | 0.3876 | 0.03270 | 2.435 | 58.45 | -1.7 | -1.1 |
| 21 6 1 | 140 | 6 | 4 ON | 1171 | 0.3600 | 0.03038 | 2.262 | 54.29 | -1.7 | -1.6 |
| | | | OFF | 351 | 0.4237 | 0.03575 | 2.662 | 63.90 | -1.7 | -1.4 |
| 21 6 2 | 34 | 6 | 4 ON | 2292 | 0.4277 | 0.03608 | 2.687 | 64.49 | -1.7 | -1.6 |
| | | | OFF | 81 | 0.4161 | 0.03511 | 2.614 | 62.74 | -1.7 | -1.1 |
| 22 3 1 | 54 | 6 | 4 ON | 1207 | 0.3674 | 0.03100 | 2.308 | 55.40 | -1.7 | -1.2 |
| | | | OFF | 142 | 0.3948 | 0.03331 | 2.480 | 59.53 | -1.7 | -0.9 |
| 22 3 2 | 38 | 6 | 4 ON | 1434 | 0.4103 | 0.03462 | 2.578 | 61.88 | -1.7 | -0.8 |
| | | | OFF | 93 | 0.4244 | 0.03581 | 2.667 | 64.00 | -1.7 | -1.2 |
| 22 3 3 | 18 | 6 | 4 ON | 2079 | 0.4493 | 0.03791 | 2.823 | 67.75 | -1.7 | -2.7 |
| | | | OFF | 41 | 0.4466 | 0.03768 | 2.806 | 67.35 | -1.7 | -2.5 |
| 23 5 1 | 91 | 6 | 4 ON | 1207 | 0.3675 | 0.03101 | 2.309 | 55.41 | -1.7 | -0.6 |
| | | | OFF | 231 | 0.4106 | 0.03465 | 2.580 | 61.92 | -1.7 | -0.4 |
| 23 5 2 | 33 | 6 | 4 UN | 1583 | 0.4323 | 0.03648 | 2.717 | 65.20 | -1.7 | -0.9 |
| | | | OFF | 76 | 0.4406 | 0.03718 | 2.768 | 66.44 | -1.7 | -1.5 |
| 25 2 1 | 105 | 6 | 4 ON | 1229 | 0.3718 | 0.03137 | 2.336 | 56.06 | -1.7 | -0.5 |
| | | | OFF | 262 | 0.4189 | 0.03535 | 2.632 | 63.18 | -1.7 | -0.6 |
| 29 7 1 | 51 | 6 | 4 ON | 2416 | 0.4085 | 0.03447 | 2.566 | 61.60 | -1.7 | -2.0 |
| | | | OFF | 129 | 0.3855 | 0.03252 | 2.422 | 58.13 | -1.7 | -1.6 |

~~TOP SECRET~~

- CONTROL NO. [REDACTED]

~~TOP SECRET~~

- CONTROL NO.

| | | | | | | | | | | | | | | |
|----|---|---|-----|---|---|-----|------|--------|---------|-------|-------|------|------|-------|
| 32 | 8 | 0 | 10 | 6 | 4 | ON | 1557 | 0.4290 | 0.03620 | 2.696 | 64.69 | -1.7 | -1.2 | 21045 |
| | | | | | | OFF | 26 | 0.4320 | 0.03645 | 2.714 | 65.14 | -1.7 | -1.4 | 21046 |
| 34 | 9 | 1 | 42 | 6 | 4 | ON | 1046 | 0.3375 | 0.02848 | 2.121 | 50.90 | -1.3 | -2.0 | 21047 |
| | | | | | | OFF | 121 | 0.3597 | 0.03035 | 2.260 | 54.24 | -1.3 | -1.6 | 21048 |
| 35 | 9 | 1 | 54 | 6 | 4 | ON | 976 | 0.3267 | 0.02757 | 2.053 | 49.26 | -1.3 | -1.8 | 21049 |
| | | | | | | OFF | 160 | 0.3532 | 0.02981 | 2.219 | 53.27 | -1.3 | -1.9 | 21050 |
| 36 | 9 | 1 | 139 | 6 | 4 | ON | 1152 | 0.3572 | 0.03014 | 2.244 | 53.86 | -1.3 | -1.5 | 21051 |
| | | | | | | OFF | 354 | 0.4228 | 0.03567 | 2.656 | 63.75 | -1.3 | -0.7 | 21052 |
| 37 | 9 | 1 | 105 | 6 | 4 | ON | 1581 | 0.4337 | 0.03659 | 2.725 | 65.40 | -1.3 | -0.9 | 21053 |
| | | | | | | OFF | 236 | 0.4537 | 0.03828 | 2.850 | 68.41 | -1.3 | -2.1 | 21054 |
| 38 | 7 | 1 | 125 | 6 | 4 | ON | 1243 | 0.3760 | 0.03173 | 2.363 | 56.71 | -1.3 | -0.7 | 21055 |
| | | | | | | OFF | 306 | 0.4290 | 0.03620 | 2.695 | 64.69 | -1.3 | -0.8 | 21056 |
| 39 | 9 | 1 | 16 | 6 | 4 | ON | 1437 | 0.4124 | 0.03479 | 2.591 | 62.18 | -1.3 | 0.0 | 21057 |
| | | | | | | OFF | 40 | 0.4184 | 0.03531 | 2.629 | 63.10 | -1.3 | -0.2 | 21058 |
| 39 | 9 | 2 | 91 | 6 | 4 | ON | 1630 | 0.4395 | 0.03708 | 2.761 | 66.27 | -1.3 | -0.8 | 21059 |
| | | | | | | OFF | 208 | 0.4544 | 0.03834 | 2.855 | 68.53 | -1.3 | -2.1 | 21060 |
| 40 | 1 | 1 | 166 | 6 | 4 | ON | 1147 | 0.3561 | 0.03004 | 2.237 | 53.69 | -1.3 | -1.0 | 21061 |
| | | | | | | OFF | 415 | 0.4307 | 0.03634 | 2.706 | 64.95 | -1.3 | -0.5 | 21062 |
| 41 | 2 | 1 | 70 | 6 | 4 | ON | 1321 | 0.3913 | 0.03302 | 2.459 | 59.01 | -1.3 | 0.0 | 21063 |
| | | | | | | OFF | 171 | 0.4206 | 0.03549 | 2.643 | 63.42 | -1.3 | -0.2 | 21064 |
| 46 | 7 | 1 | 20 | 6 | 4 | ON | 1562 | 0.4311 | 0.03638 | 2.709 | 65.01 | -1.3 | -0.9 | 21065 |
| | | | | | | OFF | 47 | 0.4367 | 0.03685 | 2.744 | 65.86 | -1.3 | -1.2 | 21066 |
| 47 | 7 | 1 | 20 | 6 | 4 | ON | 1596 | 0.4334 | 0.03657 | 2.723 | 65.36 | -1.8 | -1.4 | 21067 |
| | | | | | | OFF | 47 | 0.4384 | 0.03699 | 2.755 | 66.11 | -1.8 | -1.8 | 21068 |
| 50 | 4 | 1 | 48 | 6 | 4 | ON | 1078 | 0.3410 | 0.02877 | 2.142 | 51.42 | -1.8 | -2.9 | 21069 |
| | | | | | | OFF | 137 | 0.3678 | 0.03103 | 2.311 | 55.46 | -1.8 | -1.9 | 21070 |
| 52 | 4 | 1 | 62 | 6 | 4 | ON | 1262 | 0.3781 | 0.03190 | 2.376 | 57.01 | -1.8 | -1.4 | 21071 |
| | | | | | | OFF | 158 | 0.4070 | 0.03434 | 2.557 | 61.38 | -1.8 | -1.1 | 21072 |
| 52 | 4 | 2 | 33 | 6 | 4 | ON | 1490 | 0.4189 | 0.03535 | 2.632 | 63.17 | -1.8 | -1.0 | 21073 |
| | | | | | | OFF | 78 | 0.4296 | 0.03625 | 2.699 | 64.79 | -1.8 | -1.4 | 21074 |
| 53 | 4 | 1 | 43 | 6 | 4 | ON | 1154 | 0.3559 | 0.03003 | 2.236 | 53.66 | -1.8 | -2.3 | 21075 |
| | | | | | | OFF | 116 | 0.3789 | 0.03197 | 2.381 | 57.14 | -1.8 | -1.5 | 21076 |
| 53 | 4 | 2 | 92 | 6 | 4 | ON | 1538 | 0.4259 | 0.03593 | 2.676 | 64.22 | -1.8 | -1.2 | 21077 |
| | | | | | | OFF | 210 | 0.4477 | 0.03777 | 2.813 | 67.51 | -1.8 | -2.2 | 21078 |
| 54 | 7 | 1 | 117 | 6 | 4 | ON | 1483 | 0.4177 | 0.03525 | 2.625 | 62.99 | -1.8 | -1.0 | 21079 |
| | | | | | | OFF | 268 | 0.4479 | 0.03779 | 2.814 | 67.54 | -1.8 | -2.2 | 21080 |
| 56 | 1 | 1 | 101 | 6 | 4 | ON | 1305 | 0.3865 | 0.03261 | 2.429 | 58.28 | -1.8 | -0.5 | 21081 |
| | | | | | | OFF | 245 | 0.4272 | 0.03604 | 2.684 | 64.42 | -1.8 | -0.8 | 21082 |
| 57 | 1 | 1 | 20 | 6 | 4 | ON | 982 | 0.3277 | 0.02765 | 2.059 | 49.42 | -1.3 | -1.8 | 21083 |
| | | | | | | OFF | 62 | 0.3370 | 0.02844 | 2.118 | 50.82 | -1.3 | -1.9 | 21084 |
| 57 | 1 | 2 | 20 | 6 | 4 | ON | 1414 | 0.4086 | 0.03447 | 2.567 | 61.61 | -1.3 | 0.2 | 21085 |
| | | | | | | OFF | 51 | 0.4165 | 0.03515 | 2.617 | 62.81 | -1.3 | 0.0 | 21086 |
| 63 | 5 | 1 | 20 | 6 | 4 | ON | 1628 | 0.4395 | 0.03708 | 2.761 | 66.27 | -1.3 | -1.0 | 21087 |
| | | | | | | OFF | 48 | 0.4441 | 0.03747 | 2.790 | 66.97 | -1.3 | -1.3 | 21088 |
| 66 | 7 | 1 | 50 | 6 | 4 | ON | 1210 | 0.3696 | 0.03118 | 2.322 | 55.73 | -1.3 | -1.5 | 21089 |
| | | | | | | OFF | 131 | 0.3949 | 0.03332 | 2.481 | 59.55 | -1.3 | -0.8 | 21090 |
| 69 | 7 | 1 | 93 | 6 | 4 | ON | 1251 | 0.3779 | 0.03189 | 2.374 | 56.99 | -1.3 | -1.1 | 21091 |
| | | | | | | OFF | 234 | 0.4199 | 0.03543 | 2.638 | 63.31 | -1.3 | -0.6 | 21092 |
| 69 | 7 | 2 | 37 | 6 | 4 | ON | 1586 | 0.4345 | 0.03666 | 2.730 | 65.52 | -1.3 | -0.7 | 21093 |
| | | | | | | OFF | 84 | 0.4436 | 0.03743 | 2.787 | 66.89 | -1.3 | -1.2 | 21094 |
| 69 | 7 | 3 | 21 | 6 | 4 | ON | 1864 | 0.4555 | 0.03844 | 2.862 | 68.69 | -1.3 | -2.1 | 21095 |
| | | | | | | OFF | 48 | 0.4561 | 0.03849 | 2.866 | 68.79 | -1.3 | -2.3 | 21096 |
| 70 | 5 | 1 | 104 | 6 | 4 | ON | 1462 | 0.4166 | 0.03516 | 2.618 | 62.83 | -1.3 | 0.3 | 21097 |
| | | | | | | OFF | 240 | 0.4465 | 0.03767 | 2.805 | 67.33 | -1.3 | -0.8 | 21098 |

~~TOP SECRET~~

- CONTROL NO.

~~TOP SECRET~~

- CONTROL NO.

| | | | | | | | | | | | | | | |
|----|---|---|-----|---|---|-----|------|--------|---------|-------|-------|------|------|-------|
| 72 | 3 | 1 | 102 | 6 | 4 | ON | 1334 | 0.3942 | 0.03326 | 2.477 | 59.44 | -1.3 | -0.2 | 21099 |
| | | | | | | OFF | 244 | 0.4332 | 0.03656 | 2.722 | 65.33 | -1.3 | -0.4 | 21100 |
| 73 | 2 | 1 | 34 | 6 | 4 | ON | 1438 | 0.4127 | 0.03482 | 2.593 | 62.24 | -1.3 | 0.3 | 21101 |
| | | | | | | OFF | 82 | 0.4251 | 0.03587 | 2.671 | 64.10 | -1.3 | 0.0 | 21102 |

RATE ESTIMATE

AFT PAN CAMERA NUMBER 173

| OPN NO | FR | R | A | TUR/ DUR | INST CPS | INST ANG VEL | SCAN R/SEC | RATE I/SEC | PCT CALIB | RATE REQD | | | | |
|--------|----|---|-----|-------------|-------------|-----------------|---------------|---------------|--------------|--------------|-------|------|------|-------|
| 1 | 4 | 0 | 11 | 8 | 3 | ON | 1207 | 0.3455 | 0.02916 | 2.171 | 52.11 | 0.3 | 0.8 | 22001 |
| | | | | | | OFF | 27 | 0.3513 | 0.02964 | 2.207 | 52.97 | 0.3 | 1.0 | 22002 |
| 5 | 7 | 1 | 21 | 6 | 4 | ON | 846 | 0.3130 | 0.02641 | 1.966 | 47.20 | 0.3 | 1.9 | 22003 |
| | | | | | | OFF | 67 | 0.3226 | 0.02722 | 2.027 | 48.65 | 0.3 | 1.7 | 22004 |
| 5 | 7 | 2 | 71 | 6 | 4 | ON | 1107 | 0.3543 | 0.02990 | 2.226 | 53.43 | 0.3 | 1.3 | 22005 |
| | | | | | | OFF | 192 | 0.3935 | 0.03320 | 2.473 | 59.34 | 0.3 | 2.3 | 22006 |
| 5 | 7 | 3 | 21 | 6 | 4 | ON | 1337 | 0.4014 | 0.03387 | 2.522 | 60.52 | 0.3 | 2.5 | 22007 |
| | | | | | | OFF | 53 | 0.4106 | 0.03464 | 2.580 | 61.91 | 0.3 | 2.4 | 22008 |
| 7 | 9 | 1 | 62 | 6 | 4 | ON | 1267 | 0.3877 | 0.03272 | 2.436 | 58.47 | 0.3 | 3.5 | 22009 |
| | | | | | | OFF | 157 | 0.4168 | 0.03517 | 2.619 | 62.85 | 0.3 | 3.5 | 22010 |
| 7 | 9 | 2 | 69 | 6 | 4 | ON | 1492 | 0.4284 | 0.03614 | 2.691 | 64.60 | 0.3 | 3.5 | 22011 |
| | | | | | | OFF | 161 | 0.4489 | 0.03788 | 2.821 | 67.70 | 0.3 | 2.7 | 22012 |
| 7 | 9 | 3 | 19 | 6 | 4 | ON | 1690 | 0.4529 | 0.03821 | 2.846 | 68.30 | 0.3 | 2.5 | 22013 |
| | | | | | | OFF | 43 | 0.4562 | 0.03849 | 2.866 | 68.79 | 0.3 | 2.3 | 22014 |
| 7 | 9 | 4 | 28 | 6 | 4 | ON | 1757 | 0.4581 | 0.03865 | 2.878 | 69.07 | 0.3 | 2.2 | 22015 |
| | | | | | | OFF | 64 | 0.4613 | 0.03892 | 2.898 | 69.56 | 0.3 | 1.9 | 22016 |
| 9 | 4 | 0 | 11 | 6 | 4 | ON | 43 | 0.2410 | 0.02034 | 1.515 | 36.35 | 0.3 | 7.2 | 22017 |
| | | | | | | OFF | 47 | 0.2417 | 0.02039 | 1.519 | 36.45 | 0.3 | 6.4 | 22018 |
| 9 | 4 | 1 | 99 | 6 | 4 | ON | 1230 | 0.3802 | 0.03208 | 2.389 | 57.34 | 0.3 | 6.7 | 22019 |
| | | | | | | OFF | 256 | 0.4270 | 0.03603 | 2.683 | 64.40 | 0.3 | 6.0 | 22020 |
| 16 | 4 | 0 | 11 | 6 | 4 | ON | 1510 | 0.4311 | 0.03638 | 2.709 | 65.01 | 0.3 | 0.9 | 22021 |
| | | | | | | OFF | 26 | 0.4345 | 0.03666 | 2.730 | 65.52 | 0.3 | 0.7 | 22022 |
| 18 | 4 | 1 | 30 | 6 | 4 | ON | 1066 | 0.3473 | 0.02930 | 2.182 | 52.37 | 0.3 | 0.1 | 22023 |
| | | | | | | OFF | 86 | 0.3634 | 0.03066 | 2.283 | 54.79 | 0.3 | 0.3 | 22024 |
| 20 | 6 | 1 | 48 | 6 | 4 | ON | 1184 | 0.3679 | 0.03104 | 2.311 | 55.47 | -0.4 | -0.1 | 22025 |
| | | | | | | OFF | 128 | 0.3930 | 0.03316 | 2.469 | 59.26 | -0.4 | 0.3 | 22026 |
| 21 | 6 | 1 | 140 | 6 | 4 | ON | 1171 | 0.3653 | 0.03082 | 2.295 | 55.08 | -0.4 | -0.2 | 22027 |
| | | | | | | OFF | 351 | 0.4293 | 0.03623 | 2.698 | 64.74 | -0.4 | -0.0 | 22028 |
| 21 | 6 | 2 | 34 | 6 | 4 | ON | 2292 | 0.4333 | 0.03656 | 2.722 | 65.34 | -0.4 | -0.3 | 22029 |
| | | | | | | OFF | 81 | 0.4216 | 0.03558 | 2.649 | 63.58 | -0.4 | 0.3 | 22030 |
| 22 | 3 | 1 | 54 | 6 | 4 | ON | 1207 | 0.3727 | 0.03145 | 2.342 | 56.20 | -0.4 | 0.3 | 22031 |
| | | | | | | OFF | 142 | 0.4002 | 0.03377 | 2.515 | 60.35 | -0.4 | 0.5 | 22032 |
| 22 | 3 | 2 | 39 | 6 | 4 | ON | 1434 | 0.4159 | 0.03509 | 2.613 | 62.71 | -0.4 | 0.6 | 22033 |
| | | | | | | OFF | 93 | 0.4300 | 0.03629 | 2.702 | 64.85 | -0.4 | 0.1 | 22034 |
| 22 | 3 | 3 | 18 | 6 | 4 | ON | 2079 | 0.4550 | 0.03839 | 2.859 | 68.61 | -0.4 | -1.4 | 22035 |
| | | | | | | OFF | 41 | 0.4523 | 0.03817 | 2.842 | 68.21 | -0.4 | -1.2 | 22036 |
| 23 | 5 | 1 | 91 | 6 | 4 | ON | 1207 | 0.3728 | 0.03145 | 2.342 | 56.21 | -0.4 | 0.8 | 22037 |
| | | | | | | OFF | 231 | 0.4162 | 0.03512 | 2.615 | 62.76 | -0.4 | 0.9 | 22038 |
| 23 | 5 | 2 | 33 | 6 | 4 | ON | 1583 | 0.4380 | 0.03696 | 2.752 | 66.05 | -0.4 | 0.4 | 22039 |
| | | | | | | OFF | 76 | 0.4463 | 0.03766 | 2.804 | 67.30 | -0.4 | -0.2 | 22040 |
| 25 | 2 | 1 | 105 | 6 | 4 | ON | 1229 | 0.3771 | 0.03182 | 2.369 | 56.86 | -0.4 | 0.9 | 22041 |
| | | | | | | OFF | 262 | 0.4245 | 0.03582 | 2.667 | 64.02 | -0.4 | 0.7 | 22042 |
| 29 | 7 | 1 | 52 | 6 | 4 | ON | 2416 | 0.4140 | 0.03493 | 2.601 | 62.43 | -0.4 | -0.6 | 22043 |
| | | | | | | OFF | 129 | 0.3909 | 0.03298 | 2.456 | 58.94 | -0.4 | -0.2 | 22044 |
| 32 | 8 | 0 | 11 | 6 | 4 | ON | 1557 | 0.4346 | 0.03667 | 2.731 | 65.54 | -0.4 | 0.1 | 22045 |

~~TOP SECRET~~

- CONTROL NO.

~~TOP SECRET~~

- CONTROL NO.

| | | | | | | | | | | | | | |
|----|---|---|-----|---|------|------|--------|---------|-------|-------|------|------|-------|
| | | | | | OFF | 26 | 0.4376 | 0.03692 | 2.750 | 65.99 | -0.4 | -0.1 | 22046 |
| 34 | 9 | 1 | 42 | 6 | 4 ON | 1046 | 0.3400 | 0.02869 | 2.136 | 51.27 | -0.8 | -1.2 | 22047 |
| | | | | | OFF | 121 | 0.3620 | 0.03055 | 2.275 | 54.60 | -0.8 | -0.9 | 22048 |
| 35 | 9 | 1 | 55 | 6 | 4 ON | 976 | 0.3292 | 0.02777 | 2.068 | 49.64 | -0.8 | -1.0 | 22049 |
| | | | | | OFF | 160 | 0.3556 | 0.03001 | 2.235 | 53.63 | -0.8 | -1.2 | 22050 |
| 36 | 9 | 1 | 140 | 6 | 4 ON | 1152 | 0.3596 | 0.03034 | 2.259 | 54.22 | -0.8 | -0.8 | 22051 |
| | | | | | OFF | 354 | 0.4250 | 0.03586 | 2.670 | 64.08 | -0.8 | -0.2 | 22052 |
| 37 | 9 | 1 | 106 | 6 | 4 ON | 1581 | 0.4359 | 0.03678 | 2.739 | 65.73 | -0.8 | -0.4 | 22053 |
| | | | | | OFF | 236 | 0.4558 | 0.03846 | 2.864 | 68.73 | -0.8 | -1.6 | 22054 |
| 38 | 7 | 1 | 125 | 6 | 4 ON | 1243 | 0.3784 | 0.03193 | 2.377 | 57.06 | -0.8 | -0.1 | 22055 |
| | | | | | OFF | 306 | 0.4312 | 0.03638 | 2.709 | 65.02 | -0.8 | -0.3 | 22056 |
| 39 | 9 | 1 | 16 | 6 | 4 ON | 1437 | 0.4146 | 0.03498 | 2.605 | 62.52 | -0.8 | 0.6 | 22057 |
| | | | | | OFF | 40 | 0.4207 | 0.03550 | 2.643 | 63.44 | -0.8 | 0.3 | 22058 |
| 39 | 9 | 2 | 93 | 6 | 4 ON | 1630 | 0.4417 | 0.03727 | 2.775 | 66.60 | -0.8 | -0.3 | 22059 |
| | | | | | OFF | 208 | 0.4566 | 0.03852 | 2.869 | 68.85 | -0.8 | -1.6 | 22060 |
| 40 | 1 | 1 | 166 | 6 | 4 ON | 1147 | 0.3585 | 0.03025 | 2.252 | 54.06 | -0.8 | -0.4 | 22061 |
| | | | | | OFF | 415 | 0.4329 | 0.03653 | 2.720 | 65.28 | -0.8 | -0.0 | 22062 |
| 41 | 2 | 1 | 70 | 6 | 4 ON | 1321 | 0.3936 | 0.03321 | 2.473 | 59.36 | -0.8 | 0.6 | 22063 |
| | | | | | OFF | 171 | 0.4228 | 0.03568 | 2.657 | 63.76 | -0.8 | 0.3 | 22064 |
| 46 | 7 | 1 | 20 | 6 | 4 ON | 1562 | 0.4333 | 0.03656 | 2.723 | 65.34 | -0.8 | -0.3 | 22065 |
| | | | | | OFF | 47 | 0.4389 | 0.03703 | 2.758 | 66.18 | -0.8 | -0.6 | 22066 |
| 47 | 7 | 1 | 20 | 6 | 4 ON | 1596 | 0.4404 | 0.03716 | 2.767 | 66.42 | -0.2 | 0.2 | 22067 |
| | | | | | OFF | 47 | 0.4455 | 0.03759 | 2.799 | 67.17 | -0.2 | -0.1 | 22068 |
| 50 | 4 | 1 | 49 | 6 | 4 ON | 1078 | 0.3472 | 0.02930 | 2.182 | 52.36 | -0.2 | -1.1 | 22069 |
| | | | | | OFF | 137 | 0.3743 | 0.03158 | 2.352 | 56.44 | -0.2 | -0.1 | 22070 |
| 52 | 4 | 1 | 63 | 6 | 4 ON | 1262 | 0.3847 | 0.03246 | 2.417 | 58.00 | -0.2 | 0.4 | 22071 |
| | | | | | OFF | 158 | 0.4138 | 0.03492 | 2.600 | 62.40 | -0.2 | 0.6 | 22072 |
| 52 | 4 | 2 | 33 | 6 | 4 ON | 1490 | 0.4258 | 0.03593 | 2.676 | 64.21 | -0.2 | 0.6 | 22073 |
| | | | | | OFF | 78 | 0.4366 | 0.03684 | 2.743 | 65.84 | -0.2 | 0.3 | 22074 |
| 53 | 4 | 1 | 43 | 6 | 4 ON | 1154 | 0.3623 | 0.03057 | 2.276 | 54.63 | -0.2 | -0.5 | 22075 |
| | | | | | OFF | 116 | 0.3855 | 0.03253 | 2.422 | 58.13 | -0.2 | 0.2 | 22076 |
| 53 | 4 | 2 | 93 | 6 | 4 ON | 1538 | 0.4328 | 0.03652 | 2.720 | 65.27 | -0.2 | 0.5 | 22077 |
| | | | | | OFF | 210 | 0.4548 | 0.03838 | 2.858 | 68.59 | -0.2 | -0.6 | 22078 |
| 54 | 7 | 1 | 118 | 6 | 4 ON | 1483 | 0.4246 | 0.03583 | 2.668 | 64.03 | -0.2 | 0.6 | 22079 |
| | | | | | OFF | 268 | 0.4551 | 0.03840 | 2.859 | 68.62 | -0.2 | -0.6 | 22080 |
| 56 | 1 | 1 | 102 | 6 | 4 ON | 1305 | 0.3931 | 0.03317 | 2.470 | 59.28 | -0.2 | 1.1 | 22081 |
| | | | | | OFF | 245 | 0.4341 | 0.03663 | 2.728 | 65.47 | -0.2 | 0.8 | 22082 |
| 57 | 1 | 1 | 21 | 6 | 4 ON | 982 | 0.3325 | 0.02805 | 2.089 | 50.13 | -0.1 | -0.3 | 22083 |
| | | | | | OFF | 62 | 0.3418 | 0.02884 | 2.148 | 51.54 | -0.1 | -0.5 | 22084 |
| 57 | 1 | 2 | 21 | 6 | 4 ON | 1414 | 0.4136 | 0.03490 | 2.599 | 62.38 | -0.1 | 1.4 | 22085 |
| | | | | | OFF | 51 | 0.4217 | 0.03558 | 2.649 | 63.58 | -0.1 | 1.2 | 22086 |
| 63 | 5 | 1 | 21 | 6 | 4 ON | 1628 | 0.4447 | 0.03752 | 2.794 | 67.06 | -0.1 | 0.2 | 22087 |
| | | | | | OFF | 48 | 0.4493 | 0.03791 | 2.823 | 67.76 | -0.1 | -0.1 | 22088 |
| 66 | 7 | 1 | 50 | 6 | 4 ON | 1210 | 0.3745 | 0.03160 | 2.353 | 56.47 | -0.1 | -0.2 | 22089 |
| | | | | | OFF | 131 | 0.3999 | 0.03374 | 2.513 | 60.31 | -0.1 | 0.4 | 22090 |
| 69 | 7 | 1 | 94 | 6 | 4 ON | 1251 | 0.3828 | 0.03230 | 2.405 | 57.73 | -0.1 | 0.2 | 22091 |
| | | | | | OFF | 234 | 0.4250 | 0.03586 | 2.670 | 64.08 | -0.1 | 0.6 | 22092 |
| 69 | 7 | 2 | 37 | 6 | 4 ON | 1586 | 0.4397 | 0.03710 | 2.763 | 66.30 | -0.1 | 0.4 | 22093 |
| | | | | | OFF | 84 | 0.4488 | 0.03787 | 2.820 | 67.67 | -0.1 | -0.0 | 22094 |
| 69 | 7 | 3 | 21 | 6 | 4 ON | 1864 | 0.4608 | 0.03888 | 2.895 | 69.49 | -0.1 | -0.9 | 22095 |
| | | | | | OFF | 48 | 0.4614 | 0.03893 | 2.899 | 69.58 | -0.1 | -1.1 | 22096 |
| 70 | 5 | 1 | 104 | 6 | 4 ON | 1462 | 0.4217 | 0.03559 | 2.650 | 63.60 | -0.1 | 1.5 | 22097 |
| | | | | | OFF | 240 | 0.4517 | 0.03811 | 2.838 | 68.11 | -0.1 | 0.3 | 22098 |
| 72 | 3 | 1 | 102 | 6 | 4 ON | 1334 | 0.3992 | 0.03368 | 2.508 | 60.20 | -0.1 | 1.1 | 22099 |

~~TOP SECRET~~

- CONTROL NO.

~~TOP SECRET~~

- CONTROL NO. [REDACTED]

| | | | | | | | | |
|-----------|--------|------|--------|---------|-------|-------|------|-----|
| | OFF | 244 | 0.4384 | 0.03699 | 2.755 | 66.11 | -0.1 | 0.8 |
| 73 2 1 35 | 6 4 ON | 1438 | 0.4178 | 0.03525 | 2.625 | 63.00 | -0.1 | 1.5 |
| | OFF | 82 | 0.4302 | 0.03630 | 2.703 | 64.88 | -0.1 | 1.2 |

22100
22101
22102
20030
20031
20032
20033
20034
23001
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23009
23010
23011
23012
23013
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23016
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20039
23501
23502

RAMP PROFILE

R- 8 A- 3 PERIOD= 3840

R= 0.3170 A= 0.1276

| TUR | PER | CPS | ANG V |
|------|-------|--------|---------|
| -0 | 5.280 | 0.1894 | 0.01713 |
| 100 | 5.244 | 0.1907 | 0.01725 |
| 200 | 5.139 | 0.1946 | 0.01760 |
| 300 | 4.975 | 0.2010 | 0.01818 |
| 400 | 4.767 | 0.2098 | 0.01897 |
| 500 | 4.531 | 0.2207 | 0.01996 |
| 600 | 4.280 | 0.2337 | 0.02113 |
| 700 | 4.027 | 0.2483 | 0.02246 |
| 800 | 3.783 | 0.2643 | 0.02391 |
| 900 | 3.553 | 0.2815 | 0.02546 |
| 1000 | 3.341 | 0.2993 | 0.02707 |
| 1100 | 3.148 | 0.3177 | 0.02873 |
| 1200 | 2.925 | 0.3419 | 0.03092 |
| 1300 | 2.738 | 0.3652 | 0.03303 |
| 1400 | 2.586 | 0.3867 | 0.03498 |
| 1500 | 2.465 | 0.4057 | 0.03670 |
| 1600 | 2.372 | 0.4215 | 0.03812 |
| 1700 | 2.307 | 0.4335 | 0.03921 |
| 1800 | 2.266 | 0.4413 | 0.03991 |
| 1900 | 2.250 | 0.4445 | 0.04020 |
| 2000 | 2.257 | 0.4431 | 0.04008 |
| 2100 | 2.288 | 0.4371 | 0.03954 |
| 2200 | 2.343 | 0.4268 | 0.03860 |
| 2300 | 2.424 | 0.4125 | 0.03731 |
| 2400 | 2.534 | 0.3947 | 0.03570 |
| 2500 | 2.673 | 0.3741 | 0.03383 |
| 2600 | 2.846 | 0.3514 | 0.03178 |
| 2700 | 3.054 | 0.3274 | 0.02961 |
| 2800 | 3.262 | 0.3066 | 0.02773 |
| 2900 | 3.466 | 0.2885 | 0.02610 |
| 3000 | 3.689 | 0.2711 | 0.02452 |
| 3100 | 3.928 | 0.2546 | 0.02302 |
| 3200 | 4.178 | 0.2393 | 0.02165 |
| 3300 | 4.431 | 0.2257 | 0.02041 |
| 3400 | 4.675 | 0.2139 | 0.01935 |
| 3500 | 4.897 | 0.2042 | 0.01847 |
| 3600 | 5.080 | 0.1969 | 0.01780 |
| 3700 | 5.210 | 0.1920 | 0.01736 |
| 3800 | 5.274 | 0.1896 | 0.01715 |

RAMP PROFILE

R- 6 A- 4 PERIOD= 3840

R= 0.3503 A= 0.1118

| TUR | PER | CPS | ANG V |
|-----|-------|--------|---------|
| -0 | 4.193 | 0.2385 | 0.02157 |
| 100 | 4.173 | 0.2396 | 0.02167 |

~~TOP SECRET~~

- CONTROL NO. [REDACTED]

~~TOP SECRET~~

- CONTROL NO. [REDACTED]

| | | | | |
|------|-------|--------|---------|-------|
| 200 | 4.114 | 0.2431 | 0.02198 | 23503 |
| 300 | 4.022 | 0.2487 | 0.02249 | 23504 |
| 400 | 3.901 | 0.2563 | 0.02318 | 23505 |
| 500 | 3.760 | 0.2659 | 0.02405 | 23506 |
| 600 | 3.607 | 0.2773 | 0.02508 | 23507 |
| 700 | 3.447 | 0.2901 | 0.02624 | 23508 |
| 800 | 3.288 | 0.3042 | 0.02751 | 23509 |
| 900 | 3.133 | 0.3192 | 0.02887 | 23510 |
| 1000 | 2.987 | 0.3348 | 0.03028 | 23511 |
| 1100 | 2.850 | 0.3509 | 0.03174 | 23512 |
| 1200 | 2.687 | 0.3721 | 0.03366 | 23513 |
| 1300 | 2.548 | 0.3925 | 0.03550 | 23514 |
| 1400 | 2.431 | 0.4114 | 0.03721 | 23515 |
| 1500 | 2.336 | 0.4281 | 0.03872 | 23516 |
| 1600 | 2.263 | 0.4419 | 0.03997 | 23517 |
| 1700 | 2.211 | 0.4524 | 0.04092 | 23518 |
| 1800 | 2.178 | 0.4592 | 0.04153 | 23519 |
| 1900 | 2.164 | 0.4620 | 0.04179 | 23520 |
| 2000 | 2.170 | 0.4608 | 0.04168 | 23521 |
| 2100 | 2.195 | 0.4556 | 0.04120 | 23522 |
| 2200 | 2.240 | 0.4465 | 0.04038 | 23523 |
| 2300 | 2.304 | 0.4340 | 0.03925 | 23524 |
| 2400 | 2.390 | 0.4184 | 0.03784 | 23525 |
| 2500 | 2.498 | 0.4003 | 0.03620 | 23526 |
| 2600 | 2.629 | 0.3804 | 0.03441 | 23527 |
| 2700 | 2.782 | 0.3594 | 0.03251 | 23528 |
| 2800 | 2.931 | 0.3412 | 0.03086 | 23529 |
| 2900 | 3.074 | 0.3254 | 0.02943 | 23530 |
| 3000 | 3.225 | 0.3101 | 0.02804 | 23531 |
| 3100 | 3.383 | 0.2956 | 0.02673 | 23532 |
| 3200 | 3.543 | 0.2822 | 0.02553 | 23533 |
| 3300 | 3.700 | 0.2703 | 0.02445 | 23534 |
| 3400 | 3.847 | 0.2600 | 0.02351 | 23535 |
| 3500 | 3.976 | 0.2515 | 0.02275 | 23536 |
| 3600 | 4.081 | 0.2450 | 0.02216 | 23537 |
| 3700 | 4.154 | 0.2407 | 0.02177 | 23538 |
| 3800 | 4.190 | 0.2387 | 0.02159 | 23539 |

CLUCK SUMMARY

ORDER FIT 1

| SYS TIME I/P | CL TIME I/P | COMP SYS TM | DELTA ST | REV | STA | |
|--------------|--------------|-------------|----------|-----|-----|-------|
| 77909.957 | 103197.51990 | 77909.95810 | -0.00013 | 0 | 1 | 20040 |
| 38452.145 | 150139.70990 | 38452.14600 | -0.00008 | 9 | 1 | 20041 |
| 77824.792 | 189512.35290 | 77824.78730 | 0.00564 | 16 | 1 | 20042 |
| 33158.697 | 231246.26390 | 33158.69650 | 0.00146 | 24 | 1 | 20043 |
| 77923.647 | 276011.22490 | 77923.65550 | -0.00759 | 32 | 1 | 24001 |
| 33248.947 | 317736.51590 | 33248.94470 | 0.00324 | 40 | 1 | 24002 |
| 38653.047 | 323140.61890 | 38653.04750 | 0.00047 | 41 | 1 | 24003 |
| 72504.107 | 356991.68390 | 72504.11100 | -0.00305 | 47 | 1 | 24004 |
| 33217.050 | 404104.62690 | 33217.05190 | -0.00099 | 56 | 1 | 24005 |
| 72640.779 | 443528.35790 | 72640.78120 | -0.00127 | 63 | 1 | 24006 |
| 33342.682 | 490630.27090 | 33342.69220 | -0.00921 | 72 | 1 | 24007 |
| 72725.187 | 530012.75690 | 72725.17640 | 0.01151 | 79 | 1 | 24008 |

AO=-0.2528755736D 05 A1= 0.999999956314D 00

~~TOP SECRET~~

- CONTROL NO. [REDACTED]

~~TOP SECRET~~

- CONTROL NO. [REDACTED]

SIGMA=0.00505 NO. POINTS= 12
RATIO OF CLOCK TIME TO SYS TIME= 0.100000043690 01
ORDER FIT 2

24401
24402
20044
20045
24501
24502
24503
24504
24505
24506
24507
24508
24509
24510
24511
24512

| SYS TIME I/P | CL TIME I/P | COMP SYS TM | DELTA ST | REV | STA |
|--------------|--------------|-------------|----------|-----|-----|
| 77909.957 | 103197.51990 | 77909.96080 | -0.00287 | 0 | 1 |
| 38452.145 | 150139.70990 | 38452.14710 | -0.00115 | 9 | 1 |
| 77824.792 | 189512.35290 | 77824.78730 | 0.00566 | 16 | 1 |
| 33158.697 | 231246.26390 | 33158.69560 | 0.00231 | 24 | 1 |
| 77923.647 | 276011.22490 | 77923.65410 | -0.00620 | 32 | 1 |
| 33248.947 | 317736.51590 | 33248.94320 | 0.00479 | 40 | 1 |
| 38653.047 | 323140.61890 | 38653.04590 | 0.00202 | 41 | 1 |
| 72504.107 | 356991.68390 | 72504.10960 | -0.00164 | 47 | 1 |
| 33217.050 | 404104.62690 | 33217.05110 | -0.00014 | 56 | 1 |
| 72640.779 | 443528.35790 | 72640.78110 | -0.00119 | 63 | 1 |
| 33342.682 | 490630.27090 | 33342.69340 | -0.01045 | 72 | 1 |
| 72725.187 | 530012.75690 | 72725.17910 | 0.00886 | 79 | 1 |

A0=-0.2528754952D 05 A1= 0.999999897195D 00
A2= 0.9305952002470D-13
SIGMA=0.00484 NO. POINTS= 12

24900
24901
24902
20050

CLOCK OPERATIONS

| OPN NO | FR | | H | M | S | DEC | BINARY |
|--------|-----|-----|----|----|----|--------|---------------------------------|
| 1 4 0 | 11 | ON | 22 | 57 | 47 | 107954 | 0011001101111001111101010000 |
| | | OFF | 22 | 58 | 14 | 107981 | 00110011011111010100011001000 |
| 5 7 1 | 21 | ON | 4 | 54 | 31 | 129358 | 00111101101011101100010110000 |
| | | OFF | 4 | 55 | 38 | 129425 | 00111101101101101111001101000 |
| 5 7 2 | 71 | ON | 4 | 58 | 52 | 129619 | 00111101110011101010000111000 |
| | | OFF | 5 | 2 | 4 | 129811 | 00111101111001100001000111000 |
| 5 7 3 | 21 | ON | 5 | 2 | 42 | 129849 | 00111101111010101010101010000 |
| | | OFF | 5 | 3 | 35 | 129902 | 00111101111100010010110110000 |
| 7 9 1 | 62 | ON | 8 | 1 | 22 | 140570 | 01000011000001110110110010000 |
| | | OFF | 8 | 3 | 59 | 140727 | 01000011000110101001011011000 |
| 7 9 2 | 69 | ON | 8 | 5 | 7 | 140794 | 01000011001000101100010010000 |
| | | OFF | 8 | 7 | 48 | 140955 | 01000011001101100110101111000 |
| 7 9 3 | 19 | ON | 8 | 8 | 25 | 140993 | 01000011001110110000111101000 |
| | | OFF | 8 | 9 | 8 | 141036 | 01000011010000000100111100000 |
| 7 9 4 | 28 | ON | 8 | 9 | 32 | 141059 | 01000011010000110001110111000 |
| | | OFF | 8 | 10 | 36 | 141123 | 01000011010010101110110111000 |
| 9 4 0 | 11 | ON | 10 | 39 | 48 | 150075 | 01000111100011111011001111000 |
| | | OFF | 10 | 40 | 35 | 150122 | 01000111100101010111000010000 |
| 9 4 1 | 99 | ON | 10 | 59 | 35 | 151262 | 01001000001000001001100110000 |
| | | OFF | 11 | 3 | 51 | 151518 | 01001000001111111011001100000 |
| 16 4 0 | 10 | ON | 21 | 36 | 20 | 189468 | 01011010010110000110101100000 |
| | | OFF | 21 | 36 | 46 | 189494 | 01011010010110111001011110000 |
| 18 4 1 | 30 | ON | 0 | 29 | 6 | 199834 | 01011111010010011100110010000 |
| | | OFF | 0 | 30 | 32 | 199920 | 0101111101010101000100110000000 |
| 20 6 1 | 48 | ON | 3 | 31 | 11 | 210759 | 01100100011111110110101011000 |
| | | OFF | 3 | 33 | 19 | 210887 | 01100100100011110000101011000 |
| 21 6 1 | 140 | ON | 5 | 1 | 3 | 216150 | 01100111000100010111111110000 |
| | | OFF | 5 | 6 | 54 | 216501 | 01100111001111000101100001000 |
| 21 6 2 | 34 | ON | 5 | 19 | 43 | 217271 | 01100111100110100101011011000 |
| | | OFF | 5 | 21 | 4 | 217352 | 01100111101001000011101000000 |
| 22 3 1 | 54 | ON | 6 | 31 | 37 | 221585 | 01101001101010001111001101000 |
| | | OFF | 6 | 33 | 59 | 221727 | 01101001101110100100100011000 |

20051
20052
25001
25002
25003
25004
25005
25006
25007
25008
25009
25010
25011
25012
25013
25014
25015
25016
25017
25018
25019
25020
25021
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25023
25024
25025
25026
25027
25028
25029
25030
25031
25032

~~TOP SECRET~~

- CONTROL NO. [REDACTED]

~~TOP SECRET~~

- CONTROL NO. [REDACTED]

| | | | | | | | | | | |
|----|---|---|-----|-----|----|----|----|--------|---------------------------------|-------|
| 22 | 3 | 2 | 38 | ON | 6 | 35 | 24 | 221812 | 011010011100010010101001000000 | 25033 |
| | | | | OFF | 6 | 36 | 57 | 221905 | 011010011101000000000001101000 | 25034 |
| 22 | 3 | 3 | 18 | ON | 6 | 46 | 9 | 222457 | 01101010000100110110010101000 | 25035 |
| | | | | OFF | 6 | 46 | 50 | 222498 | 01101010000110000110011010000 | 25036 |
| 23 | 5 | 1 | 91 | ON | 8 | 1 | 29 | 226977 | 01101100001110110010011101000 | 25037 |
| | | | | OFF | 8 | 5 | 20 | 227208 | 01101100010101110101101000000 | 25038 |
| 23 | 5 | 2 | 33 | ON | 8 | 7 | 45 | 227352 | 01101100011010001110111000000 | 25039 |
| | | | | OFF | 8 | 9 | 1 | 227428 | 01101100011100100011010100000 | 25040 |
| 25 | 2 | 1 | 105 | ON | 11 | 1 | 57 | 237805 | 01110001011001001110111001000 | 25041 |
| | | | | OFF | 11 | 6 | 19 | 238067 | 01110001100001001110100111000 | 25042 |
| 29 | 7 | 1 | 51 | ON | 17 | 21 | 57 | 260605 | 01111100010001000010001001000 | 25043 |
| | | | | OFF | 17 | 24 | 6 | 260734 | 01111100010100111110000110000 | 25044 |
| 32 | 8 | 0 | 10 | ON | 21 | 37 | 59 | 275966 | 10000011100101110100000110000 | 25045 |
| | | | | OFF | 21 | 38 | 25 | 275992 | 10000011100110100110111000000 | 25046 |
| 34 | 9 | 1 | 42 | ON | 0 | 29 | 33 | 286261 | 10001000011111111111100001000 | 25047 |
| | | | | OFF | 0 | 31 | 34 | 286382 | 10001000100011101011110110000 | 25048 |
| 35 | 9 | 1 | 54 | ON | 1 | 58 | 25 | 291593 | 10001011000010101101100101000 | 25049 |
| | | | | OFF | 2 | 1 | 5 | 291753 | 10001011000111100110000101000 | 25050 |
| 36 | 9 | 1 | 139 | ON | 3 | 31 | 21 | 297169 | 100011011011001111000001101000 | 25051 |
| | | | | OFF | 3 | 37 | 15 | 297523 | 10001101110111101011100111000 | 25052 |
| 37 | 9 | 1 | 105 | ON | 5 | 8 | 31 | 302999 | 10010000011110110010111011000 | 25053 |
| | | | | OFF | 5 | 12 | 27 | 303235 | 10010000100101111111110111000 | 25054 |
| 38 | 7 | 1 | 125 | ON | 6 | 32 | 54 | 308062 | 10010010111001010011100110000 | 25055 |
| | | | | OFF | 6 | 38 | 0 | 308368 | 10010011000010101001010000000 | 25056 |
| 39 | 9 | 1 | 16 | ON | 8 | 6 | 2 | 313649 | 10010101100011110011101101000 | 25057 |
| | | | | OFF | 8 | 6 | 42 | 313689 | 10010101100101000001110101000 | 25058 |
| 39 | 9 | 2 | 91 | ON | 8 | 9 | 15 | 313842 | 10010101101001101100101010000 | 25059 |
| | | | | OFF | 8 | 12 | 43 | 314050 | 10010101110000000010111010000 | 25060 |
| 40 | 1 | 1 | 166 | ON | 9 | 31 | 12 | 318760 | 100101111111111110010001000000 | 25061 |
| | | | | OFF | 9 | 38 | 7 | 319175 | 10011000001100011100101011000 | 25062 |
| 41 | 2 | 1 | 70 | ON | 11 | 4 | 8 | 324335 | 1001101010101001111010110011000 | 25063 |
| | | | | OFF | 11 | 6 | 59 | 324506 | 10011010101111001000110010000 | 25064 |
| 46 | 7 | 1 | 20 | ON | 18 | 38 | 29 | 351596 | 10100111101001110110111100000 | 25065 |
| | | | | OFF | 18 | 39 | 16 | 351643 | 10100111101011010010101111000 | 25066 |
| 47 | 7 | 1 | 20 | ON | 20 | 9 | 3 | 357030 | 10101010001111101100001110000 | 25067 |
| | | | | OFF | 20 | 9 | 50 | 357077 | 10101010010001001000000001000 | 25068 |
| 50 | 4 | 1 | 48 | ON | 0 | 30 | 27 | 372715 | 10110001101110010110111111000 | 25069 |
| | | | | OFF | 0 | 32 | 44 | 372852 | 10110001110010100010100100000 | 25070 |
| 52 | 4 | 1 | 62 | ON | 3 | 33 | 31 | 383699 | 10110110111101100100000111000 | 25071 |
| | | | | OFF | 3 | 36 | 9 | 383857 | 10110111000010011000101101000 | 25072 |
| 52 | 4 | 2 | 33 | ON | 3 | 37 | 20 | 383927 | 10110111000100100001011011000 | 25073 |
| | | | | OFF | 3 | 38 | 38 | 384005 | 10110111000110111001110001000 | 25074 |
| 53 | 4 | 1 | 43 | ON | 5 | 1 | 43 | 388991 | 10111001011111000100000011000 | 25075 |
| | | | | OFF | 5 | 3 | 39 | 389107 | 10111001100010100110100111000 | 25076 |
| 53 | 4 | 2 | 92 | ON | 5 | 8 | 7 | 389375 | 10111001101010110010000011000 | 25077 |
| | | | | OFF | 5 | 11 | 37 | 389585 | 10111001110001001100001101000 | 25078 |
| 54 | 7 | 1 | 117 | ON | 6 | 37 | 12 | 394720 | 10111100001101111001100000000 | 25079 |
| | | | | OFF | 6 | 41 | 40 | 394988 | 10111100010110000100111100000 | 25080 |
| 56 | 1 | 1 | 101 | ON | 9 | 34 | 1 | 405329 | 11000001010001101010001101000 | 25081 |
| | | | | OFF | 9 | 38 | 6 | 405574 | 11000001011001001000101110000 | 25082 |
| 57 | 1 | 1 | 20 | ON | 10 | 58 | 38 | 410405 | 11000011101100100100010001000 | 25083 |
| | | | | OFF | 10 | 59 | 40 | 410467 | 11000011101110011101010111000 | 25084 |
| 57 | 1 | 2 | 20 | ON | 11 | 5 | 49 | 410837 | 11000011111001110000000001000 | 25085 |
| | | | | OFF | 11 | 6 | 40 | 410888 | 11000011111011010011101000000 | 25086 |

~~TOP SECRET~~

- CONTROL NO. [REDACTED]

~~TOP SECRET~~

- CONTROL NO.

| | | | | | | | | | | |
|----|---|---|-----|-----|----|----|----|--------|-------------------------------|-------|
| 63 | 5 | 1 | 20 | ON | 20 | 9 | 35 | 443462 | 11010011011101011000101110000 | 25087 |
| | | | | OFF | 20 | 10 | 23 | 443510 | 11010011011110110110011110000 | 25088 |
| 66 | 7 | 1 | 50 | ON | 0 | 32 | 35 | 459242 | 11011010111110111101000010000 | 25089 |
| | | | | OFF | 0 | 34 | 46 | 459373 | 11011011000010111100111001000 | 25090 |
| 69 | 7 | 1 | 93 | ON | 5 | 3 | 9 | 475477 | 11100010101110011010000001000 | 25091 |
| | | | | OFF | 5 | 7 | 3 | 475711 | 11100010110101100011000011000 | 25092 |
| 69 | 7 | 2 | 37 | ON | 5 | 8 | 43 | 475811 | 11100010111000100110010111000 | 25093 |
| | | | | OFF | 5 | 10 | 7 | 475895 | 11100010111011001010011011000 | 25094 |
| 69 | 7 | 3 | 21 | ON | 5 | 13 | 21 | 476089 | 11100011000001000101010101000 | 25095 |
| | | | | OFF | 5 | 14 | 9 | 476137 | 11100011000010100011000101000 | 25096 |
| 70 | 5 | 1 | 104 | ON | 6 | 36 | 19 | 481066 | 11100101011000111110000010000 | 25097 |
| | | | | OFF | 6 | 40 | 19 | 481306 | 11100101100000010010110010000 | 25098 |
| 72 | 3 | 1 | 102 | ON | 9 | 34 | 16 | 491743 | 11101010011110110011100011000 | 25099 |
| | | | | OFF | 9 | 38 | 20 | 491987 | 11101010100110010000000111000 | 25100 |
| 73 | 2 | 1 | 34 | ON | 11 | 5 | 51 | 497239 | 11101101000110100001111011000 | 25101 |
| | | | | OFF | 11 | 7 | 13 | 497321 | 11101101001001000010000101000 | 25102 |

~~TOP SECRET~~

- CONTROL NO.