

H $\alpha$  SOLAR FLARES

OCTOBER 1998

| Grp # | Sta     | Start (UT) | Max (UT) | End (UT) | NOAA/USAF       |     |        | Dur (Min) | Imp Opt | Obs See | Area Measurement | Corr | Remarks |     |       |
|-------|---------|------------|----------|----------|-----------------|-----|--------|-----------|---------|---------|------------------|------|---------|-----|-------|
|       |         |            |          |          | Lat             | CMD | Region |           |         |         |                  |      |         |     |       |
| 0001  | SVTO 01 | 0830       | 0830     | 0835     | S26             | E35 | 8349   | 10        | 4.1     | 5       | SF               | 2    | E       | 16  |       |
| 0002  | HOLL 01 | 1711       | 1716     | 1735     | S27             | E35 | 8349   | 10        | 4.4     | 24      | SF               | 3    | E       | 65  |       |
|       | 01      | 1752       |          | 1832     | No Flare Patrol |     |        |           |         |         |                  |      |         |     |       |
|       | 01      | 1837       |          | 1856     | No Flare Patrol |     |        |           |         |         |                  |      |         |     |       |
|       | 01      | 1932       |          | 2042     | No Flare Patrol |     |        |           |         |         |                  |      |         |     |       |
|       | 01      | 2103       |          | 2119     | No Flare Patrol |     |        |           |         |         |                  |      |         |     |       |
|       | 01      | 2215       |          | 2220     | No Flare Patrol |     |        |           |         |         |                  |      |         |     |       |
|       | 02      | 0547       |          | 0622     | No Flare Patrol |     |        |           |         |         |                  |      |         |     |       |
| 0003  | URUM 02 | 0825E      | 0825     | 0841     | S26             | W58 | 8346   | 09        | 27.9    | 16D     | SN               |      | P       | 48  | D     |
| 0004  | KANZ 02 | 1409       | 1409     | 1413     | N19             | E73 | 8350   | 10        | 8.2     | 4       | SF               | 2    | C       |     |       |
| 0005  | HOLL 03 | 0015       | 0015     | 0024     | N20             | E65 | 8350   | 10        | 8.0     | 9       | SF               | 3    | E       | 16  |       |
| 0006  | KANZ 03 | 0734E      | 0734U    | 0742     | N20             | E66 | 8350   | 10        | 8.4     | 8D      | SF               | 2    | C       |     |       |
|       | 03      | 1120       |          | 1148     | No Flare Patrol |     |        |           |         |         |                  |      |         |     |       |
|       | 03      | 1155       |          | 1319     | No Flare Patrol |     |        |           |         |         |                  |      |         |     |       |
| 0007  | HOLL 03 | 2302       | 2302     | 2307     | N16             | E51 | 8350   | 10        | 7.8     | 5       | SF               | 3    | E       | 11  |       |
| 0008  | RAMY 04 | 1200       | 1208     | 1227     | N18             | E43 | 8350   | 10        | 7.8     | 27      | SF               | 3    | E       | 28  |       |
| 0009  | RAMY 04 | 1229       | 1229     | 1240     | N17             | E42 | 8350   | 10        | 7.7     | 11      | SF               | 3    | E       | 12  |       |
| 0010  | 04      | 1448       | 1448I    | 1456     | N16             | E42 | 8350   | 10        | 7.8     | 8       | SF               |      |         | 28  | F     |
|       | RAMY 04 | 1448       | 1448     | 1500     | N17             | E42 | 8350   | 10        | 7.8     | 12      | SF               | 3    | E       | 27  | F     |
|       | HOLL 04 | 1448       | 1449     | 1453     | N16             | E41 | 8350   | 10        | 7.7     | 5       | SF               | 3    | E       | 30  |       |
|       | 04      | 2236       |          | 2240     | No Flare Patrol |     |        |           |         |         |                  |      |         |     |       |
|       | 04      | 2321       |          | 2330     | No Flare Patrol |     |        |           |         |         |                  |      |         |     |       |
|       | 04      | 2343       |          | 2400     | No Flare Patrol |     |        |           |         |         |                  |      |         |     |       |
|       | 05      | 0000       |          | 0041     | No Flare Patrol |     |        |           |         |         |                  |      |         |     |       |
| 0011  | URUM 05 | 0308       | 0312     | 0320     | N17             | E35 | 8350   | 10        | 7.8     | 12      | SF               |      | C       | 161 | 2.1 E |
|       | 05      | 1149       |          | 1157     | No Flare Patrol |     |        |           |         |         |                  |      |         |     |       |
| 0012  | HOLL 05 | 1722       | 1723     | 1738     | N21             | E30 | 8350   | 10        | 8.0     | 16      | SF               | 3    | E       | 15  |       |
|       | 05      | 1812       |          | 1947     | No Flare Patrol |     |        |           |         |         |                  |      |         |     |       |
|       | 05      | 2013       |          | 2021     | No Flare Patrol |     |        |           |         |         |                  |      |         |     |       |
|       | 06      | 0849       |          | 0901     | No Flare Patrol |     |        |           |         |         |                  |      |         |     |       |
|       | 07      | 0038       |          | 0052     | No Flare Patrol |     |        |           |         |         |                  |      |         |     |       |
|       | 07      | 0837       |          | 0931     | No Flare Patrol |     |        |           |         |         |                  |      |         |     |       |
|       | 07      | 0938       |          | 0939     | No Flare Patrol |     |        |           |         |         |                  |      |         |     |       |
|       | 07      | 0957       |          | 1017     | No Flare Patrol |     |        |           |         |         |                  |      |         |     |       |
| 0013  | RAMY 07 | 1157       | 1159     | 1202     | S21             | E69 | 8355   | 10        | 12.8    | 5       | SF               | 3    | E       | 23  |       |
| 0014  | RAMY 07 | 1245       | 1250     | 1349     | S22             | E68 | 8355   | 10        | 12.7    | 64      | 1N               | 3    | E       | 154 | F     |
| 0015  | RAMY 07 | 1318       | 1321     | 1337     | N18             | E01 | 8350   | 10        | 7.6     | 19      | SF               | 3    | E       | 28  |       |
| 0016  | HOLL 07 | 1514       | 1519     | 1528     | S20             | E67 | 8355   | 10        | 12.7    | 14      | SF               | 3    | E       | 54  | H     |
| 0017  | 07      | 1517*      | 1539I    | 1714     | S21             | E68 | 8355   | 10        | 12.8    | 117     | 1N               |      |         | 154 | FH    |
|       | RAMY 07 | 1517       | 1539     | 1815     | S21             | E68 | 8355   | 10        | 12.8    | 178     | 1N               | 3    | E       | 132 | FH    |
|       | HOLL 07 | 1538       | 1541     | 1613     | S21             | E68 | 8355   | 10        | 12.9    | 35      | 1N               | 3    | E       | 176 |       |
| 0018  | RAMY 07 | 1519       | 1519     | 1531     | N19             | W01 | 8350   | 10        | 7.6     | 12      | SF               | 3    | E       | 11  | F     |
| 0019  | HOLL 07 | 1614       | 1618     | 1630     | S22             | E68 | 8355   | 10        | 12.9    | 16      | SF               | 3    | E       | 44  |       |
| 0020  | HOLL 07 | 1709       | 1715     | 1729     | S20             | E65 | 8355   | 10        | 12.7    | 20      | SF               | 3    | E       | 70  |       |

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| Grp # | Sta  | Day | Start (UT) | Max (UT) | End (UT) | Lat             | CMD | NOAA/<br>USAF<br>Region | CMP<br>Mo | Day  | Dur<br>(Min) | Imp<br>Opt | Xray | Obs<br>See | Type | Time<br>(UT) | Area Measurement        |                  | Remarks |   |
|-------|------|-----|------------|----------|----------|-----------------|-----|-------------------------|-----------|------|--------------|------------|------|------------|------|--------------|-------------------------|------------------|---------|---|
|       |      |     |            |          |          |                 |     |                         |           |      |              |            |      |            |      |              | Apparent<br>(10-6 Disk) | Corr<br>(Sq Deg) |         |   |
| 0021  | HOLL | 07  | 1734       | 1741     | 1813     | S22             | E67 | 8355                    | 10        | 12.9 | 39           | SF         |      | 3          | E    |              |                         | 27               |         |   |
| 0022  | HOLL | 07  | 1924       | 1925     | 1930     | S22             | E67 | 8355                    | 10        | 12.9 | 6            | SF         |      | 3          | E    |              |                         | 27               |         |   |
| 0023  | HOLL | 07  | 1944       | 1948     | 2006     | S21             | E66 | 8355                    | 10        | 12.9 | 22           | SF         |      | 3          | E    |              |                         | 93               | F       |   |
| 0024  | HOLL | 07  | 2016       | 2018     | 2027     | N20             | W04 | 8350                    | 10        | 7.5  | 11           | SF         |      | 3          | E    |              |                         | 25               | F       |   |
| 0025  | HOLL | 07  | 2020       | 2020     | 2028     | S22             | E66 | 8355                    | 10        | 12.9 | 8            | SF         |      | 3          | E    |              |                         | 48               |         |   |
| 0026  | HOLL | 07  | 2031       | 2034     | 2045     | S20             | E65 | 8355                    | 10        | 12.8 | 14           | SF         |      | 3          | E    |              |                         | 41               |         |   |
| 0027  | HOLL | 07  | 2042       | 2053     | 2106     | N21             | W08 | 8350                    | 10        | 7.2  | 24           | SF         |      | 3          | E    |              |                         | 36               | F       |   |
| 0028  | HOLL | 07  | 2104       | 2112     | 2155     | S22             | E66 | 8355                    | 10        | 12.9 | 51           | SF         |      | 3          | E    |              |                         | 33               |         |   |
| 0029  | HOLL | 07  | 2215       | 2220     | 2244     | S21             | E65 | 8355                    | 10        | 12.9 | 29           | SF         |      | 3          | E    |              |                         | 53               | F       |   |
| 0030  | HOLL | 07  | 2314       | 2321     | 2342     | S21             | E66 | 8355                    | 10        | 13.0 | 28           | SF         |      | 3          | E    |              |                         | 37               |         |   |
| 0031  | HOLL | 07  | 2351       | 2355     | 2359     | S22             | E64 | 8355                    | 10        | 12.9 | 8            | SF         |      | 3          | E    |              |                         | 33               | F       |   |
| 0032  | URUM | 08  | 0238       | 0242     | 0249     | N19             | W01 | 8350                    | 10        | 8.0  | 11           | SN         |      |            | C    |              |                         | 161              | 1.7     | E |
|       |      |     | 08 0623    |          | 0712     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |   |
|       |      |     | 08 0944    |          | 1034     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |   |
| 0033  | RAMY | 08  | 1042E      | 1042U    | 1051D    | S22             | E56 | 8355                    | 10        | 12.7 | 9D           | SF         |      | 3          | E    |              |                         | 18               |         |   |
| 0034  | RAMY | 08  | 1248       | 1249     | 1258     | S22             | E57 | 8355                    | 10        | 12.9 | 10           | SF         |      | 3          | E    |              |                         | 57               |         |   |
| 0035  |      | 08  | 1335       | 1336     | 1355     | S22             | E55 | 8355                    | 10        | 12.8 | 20           | SF         |      |            |      |              |                         | 28               |         |   |
|       | SVTO | 08  | 1335       | 1336U    | 1351D    | S21             | E53 | 8355                    | 10        | 12.6 | 16D          | SF         | 1    | E          |      |              |                         | 32               |         |   |
|       | RAMY | 08  | 1335       | 1336     | 1355     | S22             | E57 | 8355                    | 10        | 12.9 | 20           | SF         | 3    | E          |      |              |                         | 25               |         |   |
| 0036  | RAMY | 08  | 1407       | 1418     | 1441     | S23             | E57 | 8355                    | 10        | 13.0 | 34           | SF         |      | 3          | E    |              |                         | 25               |         |   |
| 0037  | RAMY | 08  | 1527       | 1528     | 1532     | N22             | E03 | 8356                    | 10        | 8.9  | 5            | SF         |      | 3          | E    |              |                         | 13               |         |   |
| 0038  | RAMY | 08  | 1621       | 1621     | 1625     | N22             | E03 | 8357                    | 10        | 8.9  | 4            | SF         |      | 3          | E    |              |                         | 13               |         |   |
| 0039  | RAMY | 08  | 1656       | 1659     | 1710     | S23             | E56 | 8355                    | 10        | 13.0 | 14           | SN         |      | 3          | E    |              |                         | 67               |         |   |
| 0040  | RAMY | 08  | 1723       | 1724     | 1734     | S23             | E54 | 8355                    | 10        | 12.9 | 11           | SF         |      | 3          | E    |              |                         | 25               |         |   |
|       |      |     | 08 1938    |          | 2004     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |   |
| 0041  | HOLL | 08  | 2146       | 2147     | 2205     | S22             | E54 | 8355                    | 10        | 13.0 | 19           | SF         |      | 3          | E    |              |                         | 13               |         |   |
|       |      |     | 08 2219    |          | 2224     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |   |
| 0042  | HOLL | 08  | 2233       | 2233     | 2246     | S21             | E53 | 8355                    | 10        | 13.0 | 13           | SF         |      | 3          | E    |              |                         | 13               |         |   |
| 0043  | HOLL | 08  | 2305       | 2307     | 2336     | S22             | E53 | 8355                    | 10        | 13.0 | 31           | SF         |      | 3          | E    |              |                         | 26               |         |   |
| 0044  | LEAR | 09  | 0048       | 0049     | 0101     | N19             | W12 | 8350                    | 10        | 8.1  | 13           | SF         |      | 3          | E    |              |                         | 14               |         |   |
| 0045  |      | 09  | 07444      | 07522    | 0801     | N20             | W08 | 8356                    | 10        | 8.7  | 17           | SF         |      |            |      |              |                         | 31               | E       |   |
|       | KANZ | 09  | 0744       | 0752     | 0812D    | N20             | W08 | 8356                    | 10        | 8.7  | 28D          | SF         | 2    | C          |      |              |                         |                  |         |   |
|       | LEAR | 09  | 0748       | 0754     | 0801     | N20             | W07 | 8356                    | 10        | 8.8  | 13           | SF         | 3    | E          |      |              |                         | 31               | E       |   |
| 0046  | KANZ | 09  | 0904       | 0908     | 0924     | S23             | W32 | 8354                    | 10        | 6.9  | 20           | SF         |      | 2          | C    |              |                         |                  |         |   |
| 0047  | KANZ | 09  | 1004       | 1004     | 1012     | S20             | E42 | 8355                    | 10        | 12.6 | 8            | SF         |      | 2          | C    |              |                         |                  |         |   |
| 0048  | RAMY | 09  | 1143       | 1144     | 1148     | S24             | W73 | 8349                    | 10        | 3.8  | 5            | SF         |      | 3          | E    |              |                         | 37               |         |   |
| 0049  |      | 09  | 13201      | 1331     | 1335     | S20             | E40 | 8355                    | 10        | 12.6 | 15           | SF         |      |            |      |              |                         | 22               | H       |   |
|       | KANZ | 09  | 1320       | 1330U    | 1330D    | S21             | E40 | 8355                    | 10        | 12.6 | 10D          | SF         | 2    | C          |      |              |                         |                  |         |   |
|       | RAMY | 09  | 1321       | 1331     | 1335     | S19             | E40 | 8355                    | 10        | 12.6 | 14           | SF         | 3    | E          |      |              |                         | 22               | H       |   |

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|-------|------|-----|------------|----------|----------|-----------------|-----|-------------------------|-----------|------------|--------------|------------|------|------------|------|------------------|----------------------|---------------|---------|--|
|       |      |     |            |          |          |                 |     |                         |           |            |              |            |      |            |      | Time (UT)        | Apparent (10-6 Disk) | Corr (Sq Deg) |         |  |
| 0050  | RAMY | 09  | 1545       | 1546     | 1556     | S24             | W76 | 8349                    | 10        | 3.8        | 11           | SF         |      | 3          | E    |                  | 12                   |               |         |  |
| 0051  |      | 09  | 16018      | 16101    | 1616     | S26             | W76 | 8349                    | 10        | 3.8        | 15           | SF         |      |            |      |                  | 30                   |               |         |  |
|       | RAMY | 09  | 1601       | 1610     | 1618     | S25             | W76 | 8349                    | 10        | 3.8        | 17           | SF         |      | 4          | E    |                  | 40                   |               |         |  |
|       | HOLL | 09  | 1609       | 1611     | 1615     | S26             | W76 | 8349                    | 10        | 3.8        | 6            | SF         |      | 3          | E    |                  | 19                   |               |         |  |
| 0052  | RAMY | 09  | 1645       | 1648     | 1702     | S25             | W77 | 8349                    | 10        | 3.7        | 17           | SF         |      | 3          | E    |                  | 12                   |               |         |  |
| 0053  | RAMY | 09  | 1709       | 1710     | 1712     | S25             | W77 | 8349                    | 10        | 3.7        | 3            | SF         |      | 4          | E    |                  | 14                   |               |         |  |
| 0054  | HOLL | 09  | 2326       | 2327     | 2337     | S23             | E40 | 8355                    | 10        | 13.0       | 11           | SF         |      | 3          | E    |                  | 12                   |               |         |  |
|       |      | 10  | 0033       |          | 0603     | No Flare Patrol |     |                         |           |            |              |            |      |            |      |                  |                      |               |         |  |
|       |      | 10  | 0618       |          | 0813     | No Flare Patrol |     |                         |           |            |              |            |      |            |      |                  |                      |               |         |  |
| 0055  | KANZ | 10  | 0854       | 0858     | 0914     | N18             | W29 | 8350                    | 10        | 8.2        | 20           | SF         |      | 2          | C    |                  |                      |               |         |  |
|       |      | 10  | 1019       |          | 1025     | No Flare Patrol |     |                         |           |            |              |            |      |            |      |                  |                      |               |         |  |
|       |      | 10  | 1115       |          | 1118     | No Flare Patrol |     |                         |           |            |              |            |      |            |      |                  |                      |               |         |  |
| 0056  | LEAR | 11  | 0104       | 0106     | 0108     | N20             | W29 | 8356                    | 10        | 8.8        | 4            | SF         |      | 3          | E    |                  | 10                   |               |         |  |
| 0057  | KANZ | 11  | 0905       | 0905     | 0909     | N20             | W33 | 8356                    | 10        | 8.8        | 4            | SF         |      | 2          | C    |                  |                      |               |         |  |
| 0058  | KANZ | 11  | 0909       | 0917     | 0929     | S21             | E66 |                         | 10        | 16.4       | 20           | SF         |      | 2          | C    |                  |                      |               |         |  |
| 0059  | KANZ | 11  | 1001       | 1005     | 1017     | N21             | W33 | 8356                    | 10        | 8.9        | 16           | SF         |      | 2          | C    |                  |                      |               |         |  |
| 0060  | KANZ | 11  | 1041       | 1041     | 1049     | N21             | W34 | 8356                    | 10        | 8.8        | 8            | SF         |      | 2          | C    |                  |                      |               |         |  |
| 0061  |      | 11  | 11441      | 11472    | 1216     | N21             | W35 | 8356                    | 10        | 8.8        | 32           | SF         |      |            |      |                  | 57                   |               | FH      |  |
|       | RAMY | 11  | 1144       | 1147     | 1220     | N21             | W35 | 8356                    | 10        | 8.8        | 36           | SF         |      | 4          | E    |                  | 57                   |               | FH      |  |
|       | KANZ | 11  | 1145       | 1149     | 1213     | N21             | W35 | 8356                    | 10        | 8.8        | 28           | SF         |      | 2          | C    |                  |                      |               |         |  |
| 0062  | RAMY | 11  | 1825E      | 1828U    | 1830D    | S23             | E15 | 8355                    | 10        | 12.9       | 5D           | SF         |      | 3          | E    |                  | 27                   |               |         |  |
|       |      | 12  | 1008       |          | 1201     | No Flare Patrol |     |                         |           |            |              |            |      |            |      |                  |                      |               |         |  |
| 0063  |      | 12  | 13598      | 14018    | 1417     | S20             | W62 | 8354                    | 10        | 7.8        | 18           | SF         |      |            |      |                  | 17                   |               |         |  |
|       | RAMY | 12  | 1359       | 1401     | 1422     | S19             | W61 | 8354                    | 10        | 7.9        | 23           | SF         |      | 3          | E    |                  | 15                   |               |         |  |
|       | HOLL | 12  | 1407       | 1409     | 1414     | S21             | W63 | 8354                    | 10        | 7.7        | 7            | SF         |      | 3          | E    |                  | 18                   |               |         |  |
|       | SVTO | 12  | 1409E      | 1409U    | 1416     | S20             | W62 | 8354                    | 10        | 7.8        | 7D           | SF         |      | 3          | E    |                  | 17                   |               |         |  |
| 0064  |      | 12  | 19421      | 19441    | 1956     | S21             | E03 | 8355                    | 10        | 13.0       | 14           | SF         |      |            |      |                  | 42                   |               |         |  |
|       | RAMY | 12  | 1942       | 1944     | 1956     | S21             | E03 | 8355                    | 10        | 13.0       | 14           | SF         |      | 3          | E    |                  | 40                   |               |         |  |
|       | HOLL | 12  | 1943       | 1945     | 1955     | S21             | E03 | 8355                    | 10        | 13.0       | 12           | SF         |      | 3          | E    |                  | 45                   |               |         |  |
| 0065  | LEAR | 13  | 0057       | 0101     | 0110     | N22             | W54 | 8356                    | 10        | 8.9        | 13           | SF         |      | 3          | E    |                  | 18                   |               |         |  |
| 0066  | KANZ | 13  | 0853E      | 0853U    | 0916     | N15             | E14 | 8358                    | 10        | 14.4       | 23D          | SF         |      | 2          | C    |                  |                      |               |         |  |
| 0067  | KANZ | 13  | 1012E      | 1012U    | 1013D    | N15             | E12 | 8358                    | 10        | 14.3       | 1D           | SF         |      | 2          | C    |                  |                      |               |         |  |
|       |      | 13  | 1014       |          | 1022     | No Flare Patrol |     |                         |           |            |              |            |      |            |      |                  |                      |               |         |  |
|       |      | 13  | 1032       |          | 1036     | No Flare Patrol |     |                         |           |            |              |            |      |            |      |                  |                      |               |         |  |
| 0068  | RAMY | 13  | 1051E      | 1056U    | 1115D    | N20             | W58 | 8356                    | 10        | 9.0        | 24D          | SF         |      | 2          | E    |                  | 30                   |               | FH      |  |
| 0069  | HOLL | 13  | 1703       | 1704     | 1711     | N20             | W67 | 8350                    | 10        | 8.6        | 8            | SF         |      | 3          | E    |                  | 14                   |               |         |  |
| 0070  | HOLL | 13  | 1842       | 1843     | 1853     | N23             | W44 | 8359                    | 10        | 10.4       | 11           | SF         |      | 3          | E    |                  | 38                   |               |         |  |
| 0071  | HOLL | 13  | 1944       | 1949     | 2014     | N16             | E03 | 8358                    | 10        | 14.0       | 30           | SF         |      | 3          | E    |                  | 23                   |               | F       |  |
|       |      | 13  | 2220       |          | 2229     | No Flare Patrol |     |                         |           |            |              |            |      |            |      |                  |                      |               |         |  |
|       |      | 14  | 0028       |          | 0159     | No Flare Patrol |     |                         |           |            |              |            |      |            |      |                  |                      |               |         |  |
| 0072  | URUM | 14  | 0514       | 0518     | 0529D    | N16             | W02 | 8358                    | 10        | 14.1       | 15D          | SF         |      |            | P    |                  | 80                   | 0.8           | D       |  |



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| Grp # | Sta  | Day | Start (UT) | Max (UT) | End (UT) | Lat             | CMD | NOAA/<br>USAF<br>Region | CMP<br>Mo | Dur<br>Day | Imp<br>(Min) | Opt | Xray | Obs<br>See | Type | Area Measurement |                         |                  | Remarks |
|-------|------|-----|------------|----------|----------|-----------------|-----|-------------------------|-----------|------------|--------------|-----|------|------------|------|------------------|-------------------------|------------------|---------|
|       |      |     |            |          |          |                 |     |                         |           |            |              |     |      |            |      | Time (UT)        | Apparent<br>(10-6 Disk) | Corr<br>(Sq Deg) |         |
| 0097  | URUM | 17  | 0439       | 0443     | 0459     | N15             | W42 | 8358                    | 10        | 14.0       | 20           | SN  |      |            |      | C                | 80                      | 1.1              | E       |
| 0098  | LEAR | 17  | 0622       | 0627     | 0630     | N16             | W41 | 8358                    | 10        | 14.1       | 8            | SF  |      | 3          | E    |                  | 15                      |                  |         |
| 0099  | SVTO | 17  | 0913       | 0915     | 0922     | N19             | E34 | 8364                    | 10        | 20.0       | 9            | SF  |      | 3          | E    |                  | 19                      |                  | F       |
| 0100  | RAMY | 17  | 1118       | 1125     | 1138     | N17             | W46 | 8358                    | 10        | 14.0       | 20           | SF  |      | 3          | E    |                  | 13                      |                  | F       |
| 0101  |      | 17  | 14301      | 14321    | 1502     | N16             | W48 | 8358                    | 10        | 14.0       | 32           | SF  |      |            |      |                  | 28                      |                  |         |
|       | RAMY | 17  | 1430       | 1432     | 1509     | N16             | W49 | 8358                    | 10        | 13.9       | 39           | SF  |      | 4          | E    |                  | 27                      |                  |         |
|       | HOLL | 17  | 1430       | 1433     | 1513     | N16             | W49 | 8358                    | 10        | 13.9       | 43           | SF  |      | 3          | E    |                  | 31                      |                  |         |
|       | SVTO | 17  | 1431       | 1432     | 1443     | N16             | W46 | 8358                    | 10        | 14.1       | 12           | SF  |      | 3          | E    |                  | 27                      |                  |         |
| 0102  | HOLL | 17  | 1841       | 1848     | 1913     | N14             | W51 | 8358                    | 10        | 13.9       | 32           | 1F  |      | 3          | E    |                  | 134                     |                  |         |
| 0103  | HOLL | 17  | 2137       | 2141     | 2151     | N15             | W53 | 8358                    | 10        | 13.9       | 14           | SF  |      | 3          | E    |                  | 24                      |                  |         |
| 0104  | HOLL | 17  | 2222       | 2226     | 2244     | N14             | W54 | 8358                    | 10        | 13.8       | 22           | SF  |      | 3          | E    |                  | 26                      |                  |         |
| 0105  | LEAR | 17  | 2354       | 2407     | 2430     | N16             | W51 | 8358                    | 10        | 14.1       | 36           | SN  |      | 3          | E    |                  | 65                      |                  | FH      |
| 0106  |      | 18  | 0142       | 01443    | 0202     | N16             | W53 | 8358                    | 10        | 14.0       | 20           | 2B  |      |            |      |                  | 259                     | 5.6              | EFH     |
|       | LEAR | 18  | 0142       | 0144     | 0208     | N16             | W52 | 8358                    | 10        | 14.1       | 26           | 1N  |      | 3          | E    |                  | 197                     |                  | FH      |
|       | URUM | 18  | 0145E      | 0147     | 0157     | N15             | W54 | 8358                    | 10        | 14.0       | 12D          | 2B  |      |            | P    |                  | 321                     | 5.6              | E       |
| 0107  | LEAR | 18  | 0537       | 0537     | 0548     | N16             | W57 | 8358                    | 10        | 13.9       | 11           | 1F  |      | 3          | E    |                  | 107                     |                  | EF      |
| 0108  | URUM | 18  | 0755       | 0803     | 0807     | N12             | W55 | 8358                    | 10        | 14.2       | 12           | SB  |      |            | C    |                  | 48                      | 0.9              | D       |
| 0109  | HOLL | 18  | 2327       | 2332     | 2338     | N13             | W53 | 8361                    | 10        | 15.0       | 11           | SF  |      | 2          | E    |                  | 21                      |                  |         |
| 0110  | LEAR | 19  | 0649       | 0653     | 0656     | N14             | W60 | 8361                    | 10        | 14.7       | 7            | SF  |      | 3          | E    |                  | 19                      |                  |         |
|       |      | 19  | 1027       |          | 1039     | No Flare Patrol |     |                         |           |            |              |     |      |            |      |                  |                         |                  |         |
| 0111  | SVTO | 19  | 1127       | 1128U    | 1139D    | N13             | W59 | 8361                    | 10        | 15.0       | 12D          | SF  |      | 3          | E    |                  | 27                      |                  | F       |
| 0112  | RAMY | 19  | 1151       | 1154     | 1204     | N14             | W59 | 8361                    | 10        | 15.0       | 13           | SF  |      | 3          | E    |                  | 13                      |                  |         |
| 0113  |      | 19  | 1221       | 1232     | 1309     | N14             | W60 | 8361                    | 10        | 15.0       | 48           | 1N  |      |            |      |                  | 90                      |                  | E       |
|       | RAMY | 19  | 1221       | 1232     | 1309     | N14             | W59 | 8361                    | 10        | 15.0       | 48           | 1N  |      | 4          | E    |                  | 118                     |                  | E       |
|       | SVTO | 19  | 1223E      | 1227U    | 1250D    | N14             | W61 | 8361                    | 10        | 14.9       | 27D          | SF  |      | 3          | E    |                  | 62                      |                  |         |
| 0114  | RAMY | 19  | 1354       | 1354     | 1402     | N21             | E08 | 8364                    | 10        | 20.2       | 8            | SF  |      | 4          | E    |                  | 11                      |                  |         |
| 0115  | RAMY | 19  | 1426       | 1426     | 1438     | N14             | W60 | 8361                    | 10        | 15.1       | 12           | SF  |      | 3          | E    |                  | 14                      |                  |         |
| 0116  | RAMY | 19  | 1527       | 1530     | 1542     | N16             | W62 | 8361                    | 10        | 14.9       | 15           | SF  |      | 3          | E    |                  | 78                      |                  | FH      |
| 0117  | RAMY | 19  | 1618       | 1618     | 1621     | N14             | W62 | 8361                    | 10        | 15.0       | 3            | SF  |      | 3          | E    |                  | 15                      |                  |         |
| 0118  | RAMY | 19  | 1716       | 1718     | 1726     | N14             | W63 | 8361                    | 10        | 14.9       | 10           | SF  |      | 3          | E    |                  | 10                      |                  |         |
|       |      | 19  | 1936       |          | 2041     | No Flare Patrol |     |                         |           |            |              |     |      |            |      |                  |                         |                  |         |
|       |      | 19  | 2046       |          | 2228     | No Flare Patrol |     |                         |           |            |              |     |      |            |      |                  |                         |                  |         |
| 0119  | LEAR | 19  | 2356       | 2359     | 2403     | N15             | W63 | 8361                    | 10        | 15.2       | 7            | SF  |      | 3          | E    |                  | 18                      |                  |         |
| 0120  | LEAR | 20  | 0249       | 0250     | 0253     | N14             | W68 | 8361                    | 10        | 15.0       | 4            | SF  |      | 3          | E    |                  | 16                      |                  |         |
| 0121  | LEAR | 20  | 0342       | 0343     | 0346     | N14             | W69 | 8361                    | 10        | 14.9       | 4            | SF  |      | 3          | E    |                  | 28                      |                  |         |
| 0122  | LEAR | 20  | 0342       | 0343     | 0349     | N16             | W80 | 8358                    | 10        | 14.1       | 7            | SF  |      | 3          | E    |                  | 32                      |                  |         |
| 0123  | LEAR | 20  | 0343       | 0358     | 0407     | S29             | W04 | 8365                    | 10        | 19.8       | 24           | SF  |      | 3          | E    |                  | 14                      |                  |         |
| 0124  | LEAR | 20  | 0519       | 0522     | 0527     | N16             | W80 | 8358                    | 10        | 14.1       | 8            | SF  |      | 3          | E    |                  | 43                      |                  |         |
| 0125  | LEAR | 20  | 0622       | 0632     | 0638     | N16             | W81 | 8358                    | 10        | 14.1       | 16           | SF  |      | 3          | E    |                  | 31                      |                  |         |

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| Grp # | Sta  | Day | Start (UT) | Max (UT) | End (UT) | Lat | CMD | NOAA/<br>USAF<br>Region | CMP<br>Mo | Dur<br>Day | Imp<br>(Min) | Xray<br>Opt | Obs<br>See | Type | Area Measurement |                      |                 | Remarks |
|-------|------|-----|------------|----------|----------|-----|-----|-------------------------|-----------|------------|--------------|-------------|------------|------|------------------|----------------------|-----------------|---------|
|       |      |     |            |          |          |     |     |                         |           |            |              |             |            |      | Time (UT)        | Apparent (10-6 Disk) | Corr (Sq Deg)   |         |
| 0126  | LEAR | 20  | 0629       | 0630     | 0634     | N14 | W72 | 8361                    | 10        | 14.8       | 5            | SF          | 3          | E    |                  | 13                   |                 |         |
|       |      |     | 20 1011    |          | 1155     |     |     |                         |           |            |              |             |            |      |                  |                      | No Flare Patrol |         |
|       |      |     | 20 1629    |          | 2224     |     |     |                         |           |            |              |             |            |      |                  |                      | No Flare Patrol |         |
| 0127  | SVTO | 21  | 1124       | 1127     | 1130     | S26 | W26 | 8365                    | 10        | 19.4       | 6            | SF          | 3          | E    |                  | 13                   |                 |         |
| 0128  | SVTO | 21  | 1457E      | 1457     | 1507     | S27 | W20 | 8365                    | 10        | 20.1       | 10D          | SF          | 3          | E    |                  | 11                   |                 |         |
| 0129  | RAMY | 21  | 1502       | 1502     | 1510     | S27 | W29 | 8365                    | 10        | 19.4       | 8            | SF          | 3          | E    |                  | 67                   |                 |         |
|       |      |     | 21 1610    |          | 1741     |     |     |                         |           |            |              |             |            |      |                  |                      | No Flare Patrol |         |
|       |      |     | 21 1755    |          | 2235     |     |     |                         |           |            |              |             |            |      |                  |                      | No Flare Patrol |         |
| 0130  | LEAR | 22  | 0144       | 0144     | 0148     | S27 | W35 | 8365                    | 10        | 19.3       | 4            | SF          | 3          | E    |                  | 15                   |                 |         |
| 0131  | LEAR | 22  | 0509       | 0515     | 0522     | S27 | W37 | 8365                    | 10        | 19.3       | 13           | SF          | 3          | E    |                  | 26                   |                 |         |
| 0132  | KANZ | 22  | 0657       | 0701     | 0705     | N22 | W27 | 8364                    | 10        | 20.2       | 8            | SF          | 2          | C    |                  |                      |                 |         |
| 0133  |      | 22  | 07241      | 07251    | 0744     | S26 | W38 | 8365                    | 10        | 19.3       | 20           | SF          |            |      |                  | 23                   |                 |         |
|       | SVTO | 22  | 0724       | 0726     | 0743     | S26 | W38 | 8365                    | 10        | 19.3       | 19           | SF          | 3          | E    |                  | 23                   |                 |         |
|       | KANZ | 22  | 0725       | 0725     | 0745     | S27 | W37 | 8365                    | 10        | 19.4       | 20           | SF          | 2          | C    |                  |                      |                 |         |
| 0134  |      | 22  | 09352      | 09352    | 0940     | S26 | W37 | 8365                    | 10        | 19.5       | 5            | SF          |            |      |                  | 11                   |                 |         |
|       | SVTO | 22  | 0935       | 0935     | 0939     | S26 | W39 | 8365                    | 10        | 19.4       | 4            | SF          | 3          | E    |                  | 11                   |                 |         |
|       | KANZ | 22  | 0937       | 0937     | 0941     | S27 | W35 | 8365                    | 10        | 19.7       | 4            | SF          | 2          | C    |                  |                      |                 |         |
| 0135  |      | 22  | 09472      | 09491    | 0958     | S26 | W38 | 8365                    | 10        | 19.4       | 11           | SF          |            |      |                  | 27                   |                 |         |
|       | SVTO | 22  | 0947       | 0950     | 0958     | S26 | W39 | 8365                    | 10        | 19.4       | 11           | SF          | 3          | E    |                  | 27                   |                 |         |
|       | KANZ | 22  | 0949       | 0949     | 0957     | S27 | W38 | 8365                    | 10        | 19.4       | 8            | SF          | 2          | C    |                  |                      |                 |         |
| 0136  | KANZ | 22  | 1133       | 1137     | 1141     | S27 | W39 | 8365                    | 10        | 19.4       | 8            | SF          | 2          | C    |                  |                      |                 |         |
| 0137  |      | 22  | 1201       | 1201     | 1208     | S27 | W42 | 8365                    | 10        | 19.2       | 7            | SF          |            |      |                  | 15                   |                 |         |
|       | SVTO | 22  | 1201       | 1201     | 1208     | S26 | W42 | 8365                    | 10        | 19.2       | 7            | SF          | 3          | E    |                  | 15                   |                 |         |
|       | KANZ | 22  | 1201       | 1201     | 1209     | S28 | W41 | 8365                    | 10        | 19.3       | 8            | SF          | 2          | C    |                  |                      |                 |         |
| 0138  | KANZ | 22  | 1321       | 1321     | 1325     | S30 | W34 | 8365                    | 10        | 19.9       | 4            | SF          | 2          | C    |                  |                      |                 |         |
|       |      |     | 22 1555    |          | 2231     |     |     |                         |           |            |              |             |            |      |                  |                      | No Flare Patrol |         |
| 0139  | LEAR | 23  | 0147       | 0151     | 0156     | S27 | W48 | 8365                    | 10        | 19.3       | 9            | SF          | 3          | E    |                  | 20                   |                 |         |
| 0140  | KANZ | 23  | 0645       | 0653     | 0705     | S31 | W54 | 8365                    | 10        | 19.0       | 20           | SF          | 2          | C    |                  |                      |                 |         |
| 0141  | KANZ | 23  | 0657       | 0657     | 0709     | N21 | W25 | 8362                    | 10        | 21.4       | 12           | SF          | 2          | C    |                  |                      |                 |         |
| 0142  | KANZ | 23  | 0857       | 0857     | 0905     | S26 | W54 | 8365                    | 10        | 19.2       | 8            | SF          | 2          | C    |                  |                      |                 |         |
|       |      |     | 23 1018    |          | 1024     |     |     |                         |           |            |              |             |            |      |                  |                      | No Flare Patrol |         |
|       |      |     | 23 1026    |          | 1057     |     |     |                         |           |            |              |             |            |      |                  |                      | No Flare Patrol |         |
|       |      |     | 23 1418    |          | 1457     |     |     |                         |           |            |              |             |            |      |                  |                      | No Flare Patrol |         |
|       |      |     | 23 1539    |          | 1614     |     |     |                         |           |            |              |             |            |      |                  |                      | No Flare Patrol |         |
|       |      |     | 23 1647    |          | 1811     |     |     |                         |           |            |              |             |            |      |                  |                      | No Flare Patrol |         |
|       |      |     | 23 1851    |          | 2400     |     |     |                         |           |            |              |             |            |      |                  |                      | No Flare Patrol |         |
|       |      |     | 24 0000    |          | 0046     |     |     |                         |           |            |              |             |            |      |                  |                      | No Flare Patrol |         |
|       |      |     | 24 0157    |          | 0219     |     |     |                         |           |            |              |             |            |      |                  |                      | No Flare Patrol |         |
|       |      |     | 24 0311    |          | 0313     |     |     |                         |           |            |              |             |            |      |                  |                      | No Flare Patrol |         |
| 0143  | LEAR | 24  | 0448       | 0451     | 0457     | S27 | W62 | 8365                    | 10        | 19.4       | 9            | SF          | 3          | E    |                  | 28                   |                 |         |
| 0144  | LEAR | 24  | 0458       | 0503     | 0508     | S27 | W63 | 8365                    | 10        | 19.3       | 10           | SF          | 3          | E    |                  | 21                   |                 |         |
|       |      |     | 24 1001    |          | 1107     |     |     |                         |           |            |              |             |            |      |                  |                      | No Flare Patrol |         |
|       |      |     | 24 1147    |          | 1239     |     |     |                         |           |            |              |             |            |      |                  |                      | No Flare Patrol |         |
|       |      |     | 24 1256    |          | 1402     |     |     |                         |           |            |              |             |            |      |                  |                      | No Flare Patrol |         |
|       |      |     | 24 1422    |          | 1444     |     |     |                         |           |            |              |             |            |      |                  |                      | No Flare Patrol |         |
|       |      |     | 24 1506    |          | 1520     |     |     |                         |           |            |              |             |            |      |                  |                      | No Flare Patrol |         |
|       |      |     | 24 1538    |          | 1553     |     |     |                         |           |            |              |             |            |      |                  |                      | No Flare Patrol |         |

