

4  
Jul 05

H $\alpha$  SOLAR FLARES

JULY 2005

| 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) |         |    |
|       |      |     | 01 0000    |          | 0013     |     |     | No Flare Patrol         |           |      |              |            |      |            |      |              |                         |                  |         |    |
|       |      |     | 01 1623    |          | 1629     |     |     | No Flare Patrol         |           |      |              |            |      |            |      |              |                         |                  |         |    |
|       |      |     | 01 1639    |          | 1648     |     |     | No Flare Patrol         |           |      |              |            |      |            |      |              |                         |                  |         |    |
|       |      |     | 01 1653    |          | 1706     |     |     | No Flare Patrol         |           |      |              |            |      |            |      |              |                         |                  |         |    |
|       |      |     | 01 1823    |          | 1845     |     |     | No Flare Patrol         |           |      |              |            |      |            |      |              |                         |                  |         |    |
|       |      |     | 01 1903    |          | 1931     |     |     | No Flare Patrol         |           |      |              |            |      |            |      |              |                         |                  |         |    |
|       |      |     | 01 2204    |          | 2218     |     |     | No Flare Patrol         |           |      |              |            |      |            |      |              |                         |                  |         |    |
| 0001  | LEAR | 02  | 0037       | 0039     | 0042     | N12 | E78 | 10786                   | 07        | 7.9  | 5            | SF         |      | 3          | E    |              |                         | 21               |         |    |
| 0002  | LEAR | 02  | 0113       | 0114     | 0119     | N12 | E77 | 10786                   | 07        | 7.8  | 6            | SF         |      | 3          | E    |              |                         | 22               |         |    |
| 0003  | LEAR | 02  | 0207       | 0208     | 0213     | N12 | E77 | 10786                   | 07        | 7.9  | 6            | SF         |      | 3          | E    |              |                         | 16               |         |    |
| 0004  | LEAR | 02  | 0311       | 0314     | 0333     | S18 | E05 | 10785                   | 07        | 2.5  | 22           | SF         |      | 3          | E    |              |                         | 34               |         | FU |
| 0005  | LEAR | 02  | 0626       | 0639     | 0704     | S18 | E04 | 10785                   | 07        | 2.6  | 38           | SF         |      | 3          | E    |              |                         | 39               |         | FU |
| 0006  | KANZ | 02  | 0921       | 0923     | 0926     | S18 | E00 | 10785                   | 07        | 2.4  | 5            | SF         |      | 2          | E    |              |                         |                  |         |    |
| 0007  |      | 02  | 12346      | 12401    | 1253     | S18 | W00 | 10785                   | 07        | 2.5  | 19           | SF         |      |            |      |              |                         | 15               |         |    |
|       | KANZ | 02  | 1234       | 1240     | 1302     | S17 | W01 | 10785                   | 07        | 2.4  | 28           | SF         |      | 2          | E    |              |                         |                  |         |    |
|       | SVTO | 02  | 1240       | 1241     | 1244     | S18 | E00 | 10785                   | 07        | 2.5  | 4            | SF         |      | 3          | E    |              |                         | 15               |         |    |
| 0008  | HOLL | 02  | 1901       | 1902     | 1905     | S17 | W05 | 10785                   | 07        | 2.4  | 4            | SF         |      | 3          | E    |              |                         | 13               |         | F  |
| 0009  |      | 03  | 04491      | 0457     | 0519     | S09 | W39 | 10787                   | 06        | 30.3 | 30           | SF         |      |            |      |              |                         | 100              |         | FU |
|       | SVTO | 03  | 0449       | 0457     | 0519D    | S09 | W39 | 10787                   | 06        | 30.3 | 30D          | SF         |      | 1          | E    |              |                         | 132              |         | UF |
|       | LEAR | 03  | 0450       | 0457     | 0519     | S09 | W39 | 10787                   | 06        | 30.3 | 29           | SF         |      | 3          | E    |              |                         | 68               |         | UF |
| 0010  | SVTO | 03  | 0953       | 0955     | 0958     | S19 | W32 | 10782                   | 07        | 1.0  | 5            | SF         |      | 3          | E    |              |                         | 14               |         |    |
| 0011  | HOLL | 03  | 2106       | 2109     | 2124     | S10 | W46 | 10787                   | 06        | 30.4 | 18           | SF         |      | 3          | E    |              |                         | 28               |         | F  |
| 0012  | HOLL | 04  | 2219       | 2221     | 2229     | S11 | W63 | 10787                   | 06        | 30.2 | 10           | SF         |      | 3          | E    |              |                         | 27               |         | F  |
|       |      | 05  | 0207       |          | 0416     |     |     | No Flare Patrol         |           |      |              |            |      |            |      |              |                         |                  |         |    |
| 0013  | SVTO | 05  | 0518       | 0518     | 0521     | N15 | E31 | 10786                   | 07        | 7.6  | 3            | SF         |      | 3          | E    |              |                         | 21               |         |    |
| 0014  | SVTO | 05  | 0607       | 0610     | 0613     | N15 | E30 | 10786                   | 07        | 7.5  | 6            | SF         |      | 3          | E    |              |                         | 19               |         |    |
|       |      | 05  | 1134       |          | 1157     |     |     | No Flare Patrol         |           |      |              |            |      |            |      |              |                         |                  |         |    |
| 0015  | SVTO | 05  | 1500       | 1505     | 1545     | S08 | E34 | 10788                   | 07        | 8.2  | 45           | SF         |      | 3          | E    |              |                         | 40               |         | FU |
| 0016  | HOLL | 05  | 1516       | 1520     | 1524     | S06 | E38 | 10788                   | 07        | 8.5  | 8            | SF         |      | 3          | E    |              |                         | 14               |         | FS |
| 0017  | HOLL | 05  | 1501       | 1505     | 1513     | S06 | E39 | 10788                   | 07        | 8.5  | 12           | SF         |      | 3          | E    |              |                         | 46               |         | FU |
|       |      | 05  | 1742       |          | 1828     |     |     | No Flare Patrol         |           |      |              |            |      |            |      |              |                         |                  |         |    |
| 0018  | LEAR | 06  | 0125       | 0126     | 0134     | N15 | E61 | 10789                   | 07        | 10.7 | 9            | SF         |      | 3          | E    |              |                         | 84               |         | E  |
| 0019  | LEAR | 06  | 0307       | 0307     | 0315     | N13 | E20 | 10786                   | 07        | 7.6  | 8            | SF         |      | 3          | E    |              |                         | 14               |         |    |
| 0020  |      | 06  | 08452      | 08471    | 0855     | N11 | E18 | 10786                   | 07        | 7.7  | 10           | SF         |      |            |      |              |                         | 20               |         | F  |
|       | KANZ | 06  | 0845       | 0847     | 0856     | N09 | E19 | 10786                   | 07        | 7.8  | 11           | SF         |      | 2          | E    |              |                         |                  |         |    |
|       | SVTO | 06  | 0846       | 0848     | 0855     | N11 | E20 | 10786                   | 07        | 7.9  | 9            | SF         |      | 3          | E    |              |                         | 26               |         | F  |
|       | LEAR | 06  | 0847       | 0847     | 0853     | N13 | E16 | 10786                   | 07        | 7.6  | 6            | SF         |      | 3          | E    |              |                         | 13               |         | F  |
|       |      | 06  | 0953       |          | 0955     |     |     | No Flare Patrol         |           |      |              |            |      |            |      |              |                         |                  |         |    |
|       |      | 06  | 0959       |          | 1000     |     |     | No Flare Patrol         |           |      |              |            |      |            |      |              |                         |                  |         |    |
|       |      | 06  | 1102       |          | 1106     |     |     | No Flare Patrol         |           |      |              |            |      |            |      |              |                         |                  |         |    |
| 0021  |      | 06  | 1300*      | 1318     | 1324     | N10 | E16 | 10786                   | 07        | 7.7  | 24           | SF         |      |            |      |              |                         | 33               |         |    |
|       | KANZ | 06  | 1300       | 1318     | 1324     | N09 | E16 | 10786                   | 07        | 7.7  | 24           | SF         |      | 2          | E    |              |                         |                  |         |    |
|       | SVTO | 06  | 1317       | 1318     | 1324     | N10 | E17 | 10786                   | 07        | 7.8  | 7            | SF         |      | 3          | E    |              |                         | 33               |         |    |

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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 | Time<br>(UT) | Area Measurement        |                  | Remarks |  |
|-------|------|-----|------------|----------|----------|-----------------|-----|-------------------------|-----------|------------|--------------|-----|------|------------|------|--------------|-------------------------|------------------|---------|--|
|       |      |     |            |          |          |                 |     |                         |           |            |              |     |      |            |      |              | Apparent<br>(10-6 Disk) | Corr<br>(Sq Deg) |         |  |
| 0022  | SVTO | 06  | 1301       | 1302     | 1304     | N10             | E17 | 10786                   | 07        | 7.8        | 3            | SF  |      | 3          | E    |              | 14                      |                  |         |  |
| 0023  | SVTO | 06  | 1305       | 1306     | 1311     | N10             | E17 | 10786                   | 07        | 7.8        | 6            | SF  |      | 3          | E    |              | 46                      |                  | FH      |  |
| 0024  | SVTO | 06  | 1529       | 1532     | 1536     | N10             | E16 | 10786                   | 07        | 7.8        | 7            | SF  |      | 3          | E    |              | 24                      |                  | F       |  |
| 0025  |      | 06  | 16041      | 16061    | 1612     | N10             | E16 | 10786                   | 07        | 7.9        | 8            | SF  |      |            |      |              | 34                      |                  | EF      |  |
|       | SVTO | 06  | 1604       | 1606     | 1614     | N11             | E16 | 10786                   | 07        | 7.9        | 10           | SF  |      | 3          | E    |              | 49                      |                  | FE      |  |
|       | HOLL | 06  | 1605       | 1607     | 1610     | N09             | E15 | 10786                   | 07        | 7.8        | 5            | SF  |      | 3          | E    |              | 18                      |                  | FE      |  |
| 0026  | HOLL | 06  | 1746       | 1749     | 1755     | N10             | E14 | 10786                   | 07        | 7.8        | 9            | SF  |      | 3          | E    |              | 58                      |                  | F       |  |
|       |      | 06  | 1933       |          | 1943     | No Flare Patrol |     |                         |           |            |              |     |      |            |      |              |                         |                  |         |  |
| 0027  | HOLL | 06  | 2123       | 2123     | 2132     | N10             | E12 | 10786                   | 07        | 7.8        | 9            | SF  |      | 3          | E    |              | 17                      |                  | FH      |  |
|       |      | 07  | 0117       |          | 0402     | No Flare Patrol |     |                         |           |            |              |     |      |            |      |              |                         |                  |         |  |
| 0028  |      | 07  | 08001      | 08014    | 0813     | N10             | E06 | 10786                   | 07        | 7.8        | 13           | SF  |      |            |      |              | 20                      |                  |         |  |
|       | LEAR | 07  | 0800       | 0801     | 0811     | N13             | E04 | 10786                   | 07        | 7.6        | 11           | SF  |      | 3          | E    |              | 25                      |                  |         |  |
|       | SVTO | 07  | 0801       | 0803     | 0814     | N09             | E07 | 10786                   | 07        | 7.8        | 13           | SF  |      | 3          | E    |              | 16                      |                  |         |  |
|       | KANZ | 07  | 0802E      | 0805     | 0813     | N09             | E06 | 10786                   | 07        | 7.8        | 11D          | SF  |      | 2          | E    |              |                         |                  |         |  |
| 0029  | LEAR | 07  | 0840       | 0840     | 0851     | N15             | E43 | 10789                   | 07        | 10.6       | 11           | SF  |      | 3          | E    |              | 11                      |                  |         |  |
|       |      | 07  | 0952       |          | 1013     | No Flare Patrol |     |                         |           |            |              |     |      |            |      |              |                         |                  |         |  |
| 0030  |      | 07  | 13271      | 1329     | 1339     | N10             | E04 | 10786                   | 07        | 7.9        | 12           | SF  |      |            |      |              | 43                      |                  | EF      |  |
|       | HOLL | 07  | 1327       | 1329     | 1343     | N09             | E03 | 10786                   | 07        | 7.8        | 16           | SF  |      | 3          | E    |              | 56                      |                  | FE      |  |
|       | SVTO | 07  | 1328       | 1329     | 1335     | N10             | E04 | 10786                   | 07        | 7.9        | 7            | SF  |      | 3          | E    |              | 30                      |                  | F       |  |
| 0031  | HOLL | 07  | 1516       | 1516     | 1525     | N17             | E44 | 10789                   | 07        | 11.0       | 9            | SF  |      | 3          | E    |              | 10                      |                  | EF      |  |
| 0032  |      | 07  | 16102      | 16273    | 1714     | N10             | E00 | 10786                   | 07        | 7.7        | 64           | 1N  |      |            |      |              | 190                     |                  | FU      |  |
|       | HOLL | 07  | 1610       | 1627     | 1722     | N09             | E03 | 10786                   | 07        | 7.9        | 72           | SN  |      | 3          | E    |              | 133                     |                  | UF      |  |
|       | SVTO | 07  | 1612       | 1630     | 1706     | N12             | W03 | 10786                   | 07        | 7.4        | 54           | 1N  |      | 3          | E    |              | 248                     |                  | F       |  |
| 0033  | LEAR | 08  | 0315       | 0316     | 0333     | S02             | W50 | 10783                   | 07        | 4.4        | 18           | SF  |      | 3          | E    |              | 21                      |                  | FH      |  |
| 0034  | LEAR | 08  | 0518       | 0518     | 0529     | S02             | W52 | 10783                   | 07        | 4.3        | 11           | SF  |      | 3          | E    |              | 37                      |                  | HU      |  |
| 0035  | LEAR | 08  | 0631       | 0631     | 0633     | N15             | E31 | 10789                   | 07        | 10.6       | 2            | SF  |      | 3          | E    |              | 31                      |                  |         |  |
| 0036  | LEAR | 08  | 0858       | 0858     | 0904     | S02             | W54 | 10783                   | 07        | 4.3        | 6            | SF  |      | 3          | E    |              | 18                      |                  |         |  |
|       |      | 08  | 0943       |          | 1218     | No Flare Patrol |     |                         |           |            |              |     |      |            |      |              |                         |                  |         |  |
|       |      | 08  | 1223       |          | 1230     | No Flare Patrol |     |                         |           |            |              |     |      |            |      |              |                         |                  |         |  |
| 0037  | HOLL | 08  | 1646       | 1648     | 1652     | S03             | W56 | 10783                   | 07        | 4.5        | 6            | SF  |      | 3          | E    |              | 12                      |                  |         |  |
|       |      | 08  | 2223       |          | 2400     | No Flare Patrol |     |                         |           |            |              |     |      |            |      |              |                         |                  |         |  |
|       |      | 09  | 0000       |          | 0011     | No Flare Patrol |     |                         |           |            |              |     |      |            |      |              |                         |                  |         |  |
|       |      | 09  | 0029       |          | 1247     | No Flare Patrol |     |                         |           |            |              |     |      |            |      |              |                         |                  |         |  |
|       |      | 09  | 1259       |          | 1306     | No Flare Patrol |     |                         |           |            |              |     |      |            |      |              |                         |                  |         |  |
|       |      | 09  | 1658       |          | 1708     | No Flare Patrol |     |                         |           |            |              |     |      |            |      |              |                         |                  |         |  |
| 0038  | HOLL | 09  | 2028       | 2028     | 2034     | N18             | E16 | 10789                   | 07        | 11.1       | 6            | SF  |      | 3          | E    |              | 14                      |                  | F       |  |
| 0039  | HOLL | 09  | 2036       | 2040     | 2051     | N18             | E18 | 10789                   | 07        | 11.2       | 15           | SF  |      | 3          | E    |              | 48                      |                  | F       |  |
|       |      | 09  | 2100       |          | 2144     | No Flare Patrol |     |                         |           |            |              |     |      |            |      |              |                         |                  |         |  |
| 0040  | HOLL | 09  | 2156       | 2204     | 2238     | N11             | W27 | 10786                   | 07        | 7.9        | 42           | 1N  |      | 3          | E    |              | 137                     |                  | FU      |  |
|       |      | 09  | 2210       |          | 2235     | No Flare Patrol |     |                         |           |            |              |     |      |            |      |              |                         |                  |         |  |
|       |      | 09  | 2249       |          | 2400     | No Flare Patrol |     |                         |           |            |              |     |      |            |      |              |                         |                  |         |  |
|       |      | 10  | 0000       |          | 1218     | No Flare Patrol |     |                         |           |            |              |     |      |            |      |              |                         |                  |         |  |
| 0041  | HOLL | 10  | 1515       | 1516     | 1519     | S02             | W83 | 10783                   | 07        | 4.4        | 4            | SF  |      | 3          | E    |              | 23                      |                  |         |  |



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|-------|------|-----|------------|----------|----------|-----------------|-----|-------------------------|-----------|------|--------------|------------|------|------------|------|--------------|-------------------------|------------------|---------|
|       |      |     |            |          |          |                 |     |                         |           |      |              |            |      |            |      |              | Apparent<br>(10-6 Disk) | Corr<br>(Sq Deg) |         |
| 0055  | LEAR | 13  | 0157       | 0159     | 0203     | N14             | W70 | 10786                   | 07        | 7.8  | 6            | SF         |      | 3          | E    |              | 87                      |                  | FZ      |
| 0056  | LEAR | 13  | 0319       | 0319     | 0323     | N13             | W71 | 10786                   | 07        | 7.8  | 4            | SF         |      | 3          | E    |              | 15                      |                  | FZ      |
|       |      |     | 13 0340    |          | 0455     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |
| 0057  | LEAR | 13  | 0544       | 0547     | 0620     | N12             | W74 | 10786                   | 07        | 7.7  | 36           | SF         |      | 3          | E    |              | 38                      |                  | UZ      |
| 0058  | LEAR | 13  | 0638       | 0638     | 0654     | N13             | W81 | 10786                   | 07        | 7.2  | 16           | SF         |      | 3          | E    |              | 39                      |                  | UZ      |
| 0059  | LEAR | 13  | 0915       | 0915     | 0920     | N11             | W74 | 10786                   | 07        | 7.8  | 5            | SF         |      | 3          | E    |              | 25                      |                  | FU      |
|       |      |     | 13 0935    |          | 0937     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |
|       |      |     | 13 0941    |          | 0951     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |
|       |      |     | 13 0953    |          | 1001     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |
|       |      |     | 13 1008    |          | 1010     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |
|       |      |     | 13 1013    |          | 1016     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |
|       |      |     | 13 1021    |          | 1027     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |
|       |      |     | 13 1030    |          | 1032     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |
|       |      |     | 13 1038    |          | 1040     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |
|       |      |     | 13 1044    |          | 1045     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |
|       |      |     | 13 1100    |          | 1107     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |
|       |      |     | 13 1109    |          | 1112     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |
|       |      |     | 13 1134    |          | 1135     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |
|       |      |     | 13 1137    |          | 1144     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |
|       |      |     | 13 1149    |          | 1203     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |
|       |      |     | 13 1206    |          | 1210     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |
|       |      |     | 13 1212    |          | 1220     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |
| 0060  | HOLL | 13  | 1254       | 1258     | 1300     | N09             | W75 | 10786                   | 07        | 7.9  | 6            | SF         |      | 3          | E    |              | 23                      |                  | H       |
| 0061  | HOLL | 13  | 1303       | 1308     | 1311     | N10             | W76 | 10786                   | 07        | 7.8  | 8            | SF         |      | 3          | E    |              | 20                      |                  |         |
|       |      |     | 13 1403    |          | 1409     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |
| 0062  | HOLL | 13  | 1422       | 1437     | 1458     | N10             | W80 | 10786                   | 07        | 7.6  | 36           | SF         |      | 3          | E    |              | 26                      |                  | F       |
|       |      |     | 13 1450    |          | 1457     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |
| 0063  | HOLL | 13  | 1624       | 1625     | 1628     | N08             | W78 | 10786                   | 07        | 7.8  | 4            | SF         |      | 3          | E    |              | 29                      |                  | FY      |
| 0064  | HOLL | 13  | 1857       | 1858     | 1900     | N08             | W80 | 10786                   | 07        | 7.8  | 3            | SF         |      | 3          | E    |              | 18                      |                  | F       |
| 0065  | HOLL | 13  | 1905       | 1908     | 1918     | N13             | W82 | 10786                   | 07        | 7.6  | 13           | 1F         |      | 3          | E    |              | 114                     |                  | FY      |
|       |      |     | 13 2103    |          | 2323     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |
| 0066  | LEAR | 14  | 0320       | 0323     | 0329     | N13             | W86 | 10786                   | 07        | 7.6  | 9            | SF         |      | 3          | E    |              | 39                      |                  | FY      |
| 0067  | LEAR | 14  | 0723       | 0724     | 0732     | N11             | W73 | 10786                   | 07        | 8.8  | 9            | 1N         |      | 3          | E    |              | 147                     |                  | FM      |
| 0068  | LEAR | 14  | 0759       | 0804     | 0812     | N13             | W88 | 10786                   | 07        | 7.7  | 13           | SF         |      | 3          | E    |              | 82                      |                  |         |
|       |      |     | 14 1048    |          | 1055     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |
|       |      |     | 14 2120    |          | 2124     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |
| 0069  | HOLL | 15  | 1946       | 1948     | 1953     | S10             | W66 | 10790                   | 07        | 10.9 | 7            | SF         |      | 3          | E    |              | 10                      |                  | F       |
|       |      |     | 15 2248    |          | 2312     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |
| 0070  | HOLL | 15  | 2325       | 2333     | 2338     | S11             | W69 | 10790                   | 07        | 10.8 | 13           | SF         |      | 3          | E    |              | 24                      |                  | F       |
|       |      |     | 15 2348    |          | 2356     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |
|       |      |     | 16 0203    |          | 0357     | No Flare Patrol |     |                         |           |      |              |            |      |            |      |              |                         |                  |         |
| 0071  | LEAR | 16  | 0629       | 0630     | 0635     | S10             | W74 | 10790                   | 07        | 10.7 | 6            | SF         |      | 3          | E    |              | 46                      |                  | F       |
| 0072  |      | 16  | 11124      | 11191    | 1124     | S09             | W74 | 10790                   | 07        | 10.9 | 12           | SF         |      |            |      |              | 19                      |                  |         |
|       | KANZ | 16  | 1112       | 1120     | 1125     | S10             | W74 | 10790                   | 07        | 10.9 | 13           | SF         |      | 2          | E    |              |                         |                  |         |
|       | SVTO | 16  | 1116       | 1119     | 1124     | S08             | W75 | 10790                   | 07        | 10.8 | 8            | SF         |      | 3          | E    |              | 19                      |                  |         |

8  
Jul 05

H $\alpha$  SOLAR FLARES

JULY 2005

| 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 | Area Measurement |                         |                  | Remarks |  |
|-------|------|-----|------------|----------|----------|----------|--------|-------------------------|-----------|-----|--------------|------------|------|------------|------|------------------|-------------------------|------------------|---------|--|
|       |      |     |            |          |          |          |        |                         |           |     |              |            |      |            |      | Time (UT)        | Apparent<br>(10-6 Disk) | Corr<br>(Sq Deg) |         |  |
|       |      |     | 16 1905    |          | 1912     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 16 1919    |          | 2025     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 16 2057    |          | 2112     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 16 2131    |          | 2216     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 16 2320    |          | 2400     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 17 0000    |          | 0415     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 18 0412    |          | 0414     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 18 1945    |          | 2002     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 18 2229    |          | 2235     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 18 2254    |          | 2304     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 19 2016    |          | 2327     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 19 2334    |          | 2400     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 20 0000    |          | 0041     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 20 0136    |          | 0415     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 20 0418    |          | 0422     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 20 2049    |          | 2053     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 20 2127    |          | 2136     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 21 0201    |          | 0410     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 21 1812    |          | 1851     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 21 2016    |          | 2109     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 21 2201    |          | 2343     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 22 0339    |          | 0343     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 22 0354    |          | 0407     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 22 1542    |          | 1605     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 22 1725    |          | 1935     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 22 2041    |          | 2102     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 22 2129    |          | 2344     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 23 1957    |          | 2001     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 23 2152    |          | 2212     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 23 2234    |          | 2326     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 24 1855    |          | 2054     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 24 2111    |          | 2127     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 24 2143    |          | 2147     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 24 2244    |          | 2256     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 25 0106    |          | 0143     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 25 1749    |          | 1827     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 25 2059    |          | 2110     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 25 2142    |          | 2159     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 25 2208    |          | 2218     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 25 2225    |          | 2302     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 26 1322    |          | 1426     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 26 1608    |          | 1809     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 26 2041    |          | 2048     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 26 2122    |          | 2148     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 26 2211    |          | 2302     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 27 1850    |          | 1855     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 27 2053    |          | 2107     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 27 2245    |          | 2253     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 27 2300    |          | 2304     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
| 0073  | HOLL | 28  | 2151       | 2200     | 2221     | N08 E84  | 10792  | 08                      | 4.2       | 30  | SF           |            | 3    | E          |      |                  | 70                      |                  | FH      |  |
|       |      |     | 29 2031    |          | 2042     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 29 2100    |          | 2125     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 29 2240    |          | 2245     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
|       |      |     | 29 2257    |          | 2314     | No Flare | Patrol |                         |           |     |              |            |      |            |      |                  |                         |                  |         |  |
| 0074  | SVTO | 30  | 0501       | 0502     | 0504     | N12 E60  | 10792  | 08                      | 3.7       | 3   | SF           |            | 3    | E          |      |                  | 16                      |                  | F       |  |
| 0075  |      | 30  | 05074      | 05134    | 0548     | N12 E52  | 10792  | 08                      | 3.1       | 41  | 1N           |            |      |            |      |                  | 107                     |                  | FU      |  |
|       | LEAR | 30  | 0507       | 0517     | 0605     | N12 E54  | 10792  | 08                      | 3.3       | 58  | 1N           |            | 3    | E          |      |                  | 153                     |                  | UF      |  |
|       | SVTO | 30  | 0511       | 0513     | 0532     | N12 E51  | 10792  | 08                      | 3.0       | 21  | SF           |            | 3    | E          |      |                  | 61                      |                  | F       |  |
| 0076  |      | 30  | 0608*      | 06251    | 0823     | N11 E59  | 10792  | 08                      | 3.7       | 135 | 2N           |            |      |            |      |                  | 386                     |                  | UZ      |  |
|       | LEAR | 30  | 0608       | 0625     | 0940     | N12 E61  | 10792  | 08                      | 3.8       | 212 | 2B           |            | 3    | E          |      |                  | 390                     |                  | ZU      |  |
|       | SVTO | 30  | 0622       | 0626     | 0723     | N11 E58  | 10792  | 08                      | 3.6       | 61  | 2F           |            | 3    | E          |      |                  | 383                     |                  | U       |  |
|       | KANZ | 30  | 0628E      | 0630U    | 0805     | N11 E57  | 10792  | 08                      | 3.5       | 97D | 2B           |            | 2    | E          |      |                  |                         |                  |         |  |
| 0077  | HOLL | 30  | 1352       | 1353     | 1355     | N13 E54  | 10792  | 08                      | 3.6       | 3   | 2F           |            | 3    | E          |      |                  | 553                     |                  |         |  |

JULY 2005

| Grp # | Sta  | Start Day | Start (UT) | Max (UT) | End (UT) | Lat      | CMD      | NOAA/ USAF Region | CMP Mo | Dur (Min) | Imp Opt | Xray | Obs See | Type | Area Measurement |                      |               | Remarks |    |  |
|-------|------|-----------|------------|----------|----------|----------|----------|-------------------|--------|-----------|---------|------|---------|------|------------------|----------------------|---------------|---------|----|--|
|       |      |           |            |          |          |          |          |                   |        |           |         |      |         |      | Time (UT)        | Apparent (10-6 Disk) | Corr (Sq Deg) |         |    |  |
| 0078  |      | 30        | 1649       | 1700     | 1724     | N13      | E56      | 10792             | 08     | 3.9       | 35      | SF   |         |      |                  |                      | 48            |         | EF |  |
|       | HOLL | 30        | 1649       | 1700     | 1724     | N14      | E57      | 10792             | 08     | 4.0       | 35      | SF   | 3       | E    |                  |                      | 45            |         | FE |  |
|       | SVTO | 30        | 1654E      | 1654U    | 1718D    | N12      | E56      | 10792             | 08     | 3.9       | 24D     | SF   | 2       | E    |                  |                      | 51            |         | F  |  |
|       |      | 30        | 1752       |          |          | 1801     | No Flare | Patrol            |        |           |         |      |         |      |                  |                      |               |         |    |  |
|       |      | 30        | 1821       |          |          | 1838     | No Flare | Patrol            |        |           |         |      |         |      |                  |                      |               |         |    |  |
|       |      | 30        | 1842       |          |          | 1926     | No Flare | Patrol            |        |           |         |      |         |      |                  |                      |               |         |    |  |
|       |      | 30        | 1935       |          |          | 1956     | No Flare | Patrol            |        |           |         |      |         |      |                  |                      |               |         |    |  |
|       |      | 30        | 2043       |          |          | 2144     | No Flare | Patrol            |        |           |         |      |         |      |                  |                      |               |         |    |  |
|       |      | 30        | 2221       |          |          | 2242     | No Flare | Patrol            |        |           |         |      |         |      |                  |                      |               |         |    |  |
|       |      | 30        | 2246       |          |          | 2312     | No Flare | Patrol            |        |           |         |      |         |      |                  |                      |               |         |    |  |
|       | 30   | 2326      |            |          | 2338     | No Flare | Patrol   |                   |        |           |         |      |         |      |                  |                      |               |         |    |  |
| 0079  | LEAR | 31        | 0536       | 0540     | 0543     | N12      | W51      | 10791             | 07     | 27.4      | 7       | SF   | 3       | E    |                  |                      | 15            |         |    |  |
| 0080  |      | 31        | 09164      | 09222    | 0938     | N13      | W51      | 10791             | 07     | 27.5      | 22      | SF   |         |      |                  |                      | 136           |         | FU |  |
|       | LEAR | 31        | 0916       | 0924     | 0944D    | N12      | W53      | 10791             | 07     | 27.4      | 28D     | 1F   | 3       | E    |                  |                      | 187           |         | F  |  |
|       | KANZ | 31        | 0919U      | 0919U    | 0923U    | N13      | W49      | 10791             | 07     | 27.7      | 4U      | SF   | 2       | E    |                  |                      |               |         |    |  |
|       | SVTO | 31        | 0920       | 0922     | 0938     | N14      | W51      | 10791             | 07     | 27.5      | 18      | SF   | 3       | E    |                  |                      | 86            |         | U  |  |
| 0081  | KANZ | 31        | 1219E      | 1220     | 1230     | N12      | E44      | 10792             | 08     | 3.8       | 11D     | SB   | 2       | E    |                  |                      |               |         |    |  |
|       |      | 31        | 1738       |          |          | 1747     | No Flare | Patrol            |        |           |         |      |         |      |                  |                      |               |         |    |  |
|       |      | 31        | 1903       |          |          | 1935     | No Flare | Patrol            |        |           |         |      |         |      |                  |                      |               |         |    |  |
|       |      | 31        | 1942       |          |          | 2027     | No Flare | Patrol            |        |           |         |      |         |      |                  |                      |               |         |    |  |
|       |      | 31        | 2125       |          |          | 2148     | No Flare | Patrol            |        |           |         |      |         |      |                  |                      |               |         |    |  |

"Remarks"

- |   |   |
|---|---|
| <p>A = Eruptive prominence whose base is less than 90 degrees from central meridian.<br/>                 B = Probably the end of a more important flare.<br/>                 C = Invisible 10 minutes before.<br/>                 D = Brilliant point.<br/>                 E = Two or more brilliant points.<br/>                 F = Several eruptive centers.<br/>                 G = No visible spots in the neighborhood.<br/>                 H = Flare accompanied by high-speed dark filament.<br/>                 I = Active region very extended.<br/>                 J = Distinct variations of plage intensity before or after the flare.<br/>                 K = Several intensity maxima.<br/>                 L = Existing filaments show signs of sudden activity.<br/>                 M = White-light flare.<br/>                 N = Continuous spectrum shows effects of polarization.</p> | <p>O = Observations have been made in the H and K lines of Ca II.<br/>                 P = Flare shows Helium D3 in emission.<br/>                 Q = Flare shows Balmer continuum in emission.<br/>                 R = Marked asymmetry in H-alpha line suggests ejection of high-velocity material.<br/>                 S = Brightness follows disappearance of filament in same position.<br/>                 T = Region active all day.<br/>                 U = Two bright branches, parallel or converging.<br/>                 V = Occurrence of an explosive phase; important, expansion within roughly 1 minute that often includes a significant intensity increase.<br/>                 W = Great increase in area after time of maximum intensity.<br/>                 X = Unusually wide H-alpha line.<br/>                 Y = System of loop-type prominences.<br/>                 Z = Major sunspot umbra covered by flare.</p> |
|---|---|

Observation Type: C=Cinematographic, E=Electronic, P=Photographic, V=Visual