

4  
Sep 90

# H $\alpha$ SOLAR FLARES

SEPTEMBER 1990

| 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  | See | Obs<br>Type | Area Measurement |                                     |                  | Remarks |
|-------|------|-----|------------|----------|----------|-----------------|-----|-------------------------|---------------|--------------|------------|-------|-----|-------------|------------------|-------------------------------------|------------------|---------|
|       |      |     |            |          |          |                 |     |                         |               |              |            |       |     |             | Time<br>(UT)     | Apparent<br>(10 <sup>-6</sup> Disk) | Corr<br>(Sq Deg) |         |
| 0001  | YUNN | 01  | 0112       | 0115     | 0130     | N15             | W27 | 6240                    | 08 30.1       | 18           | SN         |       |     | C           |                  | 63                                  | 0.7              |         |
| 0002  | YUNN | 01  | 0135       | 0143     | 0211     | N14             | W25 | 6240                    | 08 30.3       | 36           | SN         |       |     | C           |                  | 79                                  | 0.9              |         |
| 0003  | YUNN | 01  | 0207       | 0211     | 0211D    | S12             | E25 | 6238                    | 09 3.0        | 40           | SN         |       |     | P           |                  | 16                                  | 0.2              |         |
| 0004  | LEAR | 01  | 0234       | 0234     | 0238     | N13             | W28 | 6233                    | 08 30.1       | 4            | SF         |       | 3   | E           |                  | 17                                  |                  | F       |
| 0005  |      | 01  | 0256       | 0314*    | 0410     | N14             | W30 | 6233                    | 08 29.9       | 74           | SN         | C 4.9 |     |             |                  | 76                                  | 1.2              | FKTZ    |
|       | LEAR | 01  | 0256       | 0314     | 0413     | N14             | W29 | 6233                    | 08 30.0       | 77           | SF         |       |     | E           |                  | 49                                  |                  | K       |
|       | LEAR | 01  | 0256       | 0327     | 0413     | N14             | W29 | 6233                    | 08 30.0       | 77           | SF         | C 4.9 | 3   | E           |                  | 45                                  |                  | F       |
|       | TACH | 01  | 0300E      |          | 0406     | N15             | W31 | 6233                    | 08 29.9       | 660          | SB         |       | 3   | C           | 0328             | 148                                 | 1.8              | TZ      |
|       | YUNN | 01  | 0300       | 0332     | 0410     | N14             | W29 | 6233                    | 08 30.0       | 70           | SN         |       |     | C           |                  | 63                                  | 0.7              | F       |
| 0006  |      | 01  | 03137      | 0315*    | 0430     | N14             | W25 | 6240                    | 08 30.3       | 77           | SF         |       |     |             |                  | 26                                  |                  | E       |
|       | MITK | 01  | 0313       | 0315     | 0445     | N13             | W26 | 6240                    | 08 30.3       | 92           | SF         |       |     | C           | 0315             |                                     |                  | E       |
|       | LEAR | 01  | 0320       | 0342     | 0414     | N15             | W24 | 6240                    | 08 30.4       | 54           | SF         |       | 3   | E           |                  | 26                                  |                  |         |
| 0007  |      | 01  | 0629*      | 07063    | 0730     | N13             | W30 | 6233                    | 08 30.1       | 61           | SN         | M 2.7 |     |             |                  | 203                                 | 3.2              | EF      |
|       | HTPR | 01  | 0629       | 0707     | 0730     | N13             | W30 | 6233                    | 08 30.1       | 61           | SN         |       |     | C           | 0707             | 140                                 | 1.6              |         |
|       | LEAR | 01  | 0658       | 0706     | 0731     | N14             | W31 | 6233                    | 08 30.0       | 33           | SN         | M 2.7 | 3   | E           |                  | 60                                  |                  | F       |
|       | MITK | 01  | 0701       | 0709     | 0757D    | N13             | W28 | 6233                    | 08 30.3       | 560          | 1B         |       |     | C           | 0709             | 410                                 | 4.8              | E       |
| 0008  |      | 01  | 0631*      | 0707*    | 0757     | N14             | W27 | 6240                    | 08 30.3       | 86           | 1N         |       |     |             |                  | 172                                 | 3.1              | CEFK    |
|       | YUNN | 01  | 0631       | 0710     | 0800     | N16             | W27 | 6240                    | 08 30.3       | 89           | 1N         |       |     | C           |                  | 393                                 | 4.6              | F       |
|       | SVTO | 01  | 0702E      | 0707U    | 07400    | N14             | W27 | 6240                    | 08 30.3       | 380          | SN         |       | 3   | E           |                  | 28                                  |                  | F       |
|       | LEAR | 01  | 0705       | 0707     | 0823     | N15             | W25 | 6240                    | 08 30.5       | 78           | SF         |       | 3   | E           |                  | 29                                  |                  |         |
|       | BUCA | 01  | 0705       | 0710     | 0740     | N14             | W29 | 6240                    | 08 30.2       | 35           | 1B         |       |     | C           | 0710             | 215                                 | 2.5              | E       |
|       | ISTA | 01  | 0707       | 0709     | 0747     | N13             | W25 | 6240                    | 08 30.5       | 40           | 1N         |       |     |             |                  |                                     |                  | KE      |
|       | ISTA | 01  | 0707       | 0710     | 0724     | N14             | W28 | 6240                    | 08 30.3       | 17           | 1B         |       |     |             |                  |                                     |                  | CE      |
|       | URUM | 01  | 0805       | 0810     | 0830     | N15             | W27 | 6240                    | 08 30.4       | 25           | 1N         |       |     | C           |                  | 193                                 | 2.2              | E       |
|       |      |     |            |          |          |                 |     |                         |               |              |            |       |     |             |                  |                                     |                  | AG      |
| 0009  | YUNN | 01  | 0650       | 0654     | 0702     | S25             | W87 | 6230                    | 08 25.6       | 12           |            |       |     | C           |                  |                                     |                  |         |
| 0010  | ATHN | 01  | 1006E      | 1006U    | 1017     | N13             | W33 | 6233                    | 08 30.0       | 110          | SB         |       | 3   | V           | 1006             | 143                                 | 1.8              |         |
| 0011  | HOLL | 01  | 1522       | 1527     | 1538     | N14             | W35 | 6233                    | 08 30.1       | 16           | SF         |       | 3   | E           |                  | 12                                  |                  |         |
| 0012  | PALE | 01  | 1916       | 1916     | 1922     | S14             | E67 | 6246                    | 09 6.9        | 6            | SF         |       | 3   | E           |                  | 13                                  |                  |         |
| 0013  |      | 01  | 1950*      | 1945*    | 2018     | N14             | W38 | 6233                    | 08 30.0       | 28           | SF         |       |     |             |                  | 15                                  |                  |         |
|       | HOLL | 01  | 1926E      | 1945     | 2026     | N14             | W38 | 6233                    | 08 30.0       | 600          | SF         |       | 3   | E           |                  | 16                                  |                  |         |
|       | RAMY | 01  | 1950       | 2004     | 2022     | N13             | W37 | 6233                    | 08 30.1       | 32           | SF         |       | 3   | E           |                  | 13                                  |                  |         |
|       | PALE | 01  | 2000       | 2005     | 2007     | N14             | W39 | 6233                    | 08 30.0       | 7            | SF         |       | 3   | E           |                  | 16                                  |                  |         |
|       |      |     | 01 2111    |          | 2114     | No Flare Patrol |     |                         |               |              |            |       |     |             |                  |                                     |                  |         |
|       |      |     | 01 2203    |          | 2205     | No Flare Patrol |     |                         |               |              |            |       |     |             |                  |                                     |                  |         |
| 0014  | HOLL | 01  | 2221       | 2225     | 2335     | N13             | W39 | 6233                    | 08 30.1       | 74           | SF         | C 2.2 | 2   | E           |                  | 16                                  |                  | F       |
|       |      |     | 01 2237    |          | 2244     | No Flare Patrol |     |                         |               |              |            |       |     |             |                  |                                     |                  |         |
| 0015  | YUNN | 02  | 0002       | 0021     | 0105     | N13             | W48 | 6233                    | 08 29.5       | 63           | SN         |       |     | C           |                  | 79                                  | 1.2              |         |
| 0016  | YUNN | 02  | 0020       | 0142     | 0212D    | S25             | W87 | 6230                    | 08 26.4       | 112D         |            |       |     | P           |                  |                                     |                  | AG      |
| 0017  |      | 02  | 0143       | 0144     | 0152     | N14             | W46 | 6233                    | 08 29.7       | 9            | 1N         | C 3.4 |     |             |                  | 103                                 | 2.3              |         |
|       | LEAR | 02  | 0143       | 0144     | 0149     | N14             | W45 | 6233                    | 08 29.8       | 6            | SF         | C 3.4 | 3   | E           |                  | 49                                  |                  |         |
|       | YUNN | 02  | 0146E      | 0146U    | 0155     | N13             | W47 | 6233                    | 08 29.6       | 90           | 1N         |       |     | P           | 0146             | 157                                 | 2.3              |         |
| 0018  | YUNN | 02  | 0305       | 0320     | 0350     | S18             | E01 | 6242                    | 09 2.2        | 45           | SN         |       |     | P           |                  | 157                                 | 1.8              | E       |
| 0019  |      | 02  | 0600       | 0601     | 0613     | N11             | W46 | 6233                    | 08 29.9       | 13           | SN         | C 1.5 |     |             |                  | 35                                  | 0.7              |         |
|       | LEAR | 02  | 0600       | 0601     | 0614     | N11             | W46 | 6233                    | 08 29.9       | 14           | SF         | C 1.5 | 3   | E           |                  | 23                                  |                  |         |
|       | YUNN | 02  | 0601E      | 0601U    | 0612     | N11             | W46 | 6233                    | 08 29.9       | 11D          | SN         |       |     | P           | 0601             | 47                                  | 0.7              |         |

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SEPTEMBER 1990

| 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<br>(UT)     | Apparent<br>(10-6 Disk) | Corr<br>(Sq Deg) |         |
| 0020  |      | 02  | 0713*      | 07235    | 0736     | N12             | W46 | 6233                    | 08 29.9       | 23           | SF         |      |            |      |                  | 82                      | 1.9              | EF      |
|       | SVTO | 02  | 0713       | 0728     | 0754     | N13             | W47 | 6233                    | 08 29.8       | 41           | SF         |      | 3          | E    |                  | 47                      |                  | F       |
|       | LEAR | 02  | 0720       | 0723     | 0734     | N12             | W44 | 6233                    | 08 30.1       | 14           | SF         |      | 3          | E    |                  | 45                      |                  |         |
|       | YUNN | 02  | 0721       | 0725     | 0729     | N12             | W52 | 6233                    | 08 29.5       | 8            | 1F         |      |            | C    |                  | 204                     | 3.3              | E       |
|       | ISTA | 02  | 0723       |          | 0733     | N12             | W43 | 6233                    | 08 30.2       | 10           | 1M         |      |            |      |                  |                         |                  | E       |
|       | PURP | 02  | 0723       | 0727     | 0731     | N13             | W45 | 6233                    | 08 30.0       | 8            | SN         |      |            | C    | 0727             | 34                      | 0.5              | E       |
| 0021  |      | 02  | 08375      | 0845     | 0857     | N16             | W48 | 6233                    | 08 29.8       | 20           | SF         |      |            |      |                  | 16                      | 0.2              | DEL     |
|       | KHAR | 02  | 0837       | 0845U    | 0909     | N17             | W50 | 6233                    | 08 29.6       | 32           | SF         |      | 2          | V    | 0842             |                         |                  | DL      |
|       | ISTA | 02  | 0842       |          | 0851     | N15             | W46 | 6233                    | 08 30.0       | 9            | 1F         |      |            |      |                  |                         |                  | E       |
|       | YUNN | 02  | 0842       | 0845     | 0852     | N16             | W49 | 6233                    | 08 29.7       | 10           | SN         |      |            | C    |                  | 16                      | 0.2              |         |
| 0022  |      | 02  | 08414      | 0848     | 0852     | N14             | E20 | 6244                    | 09 3.9        | 11           | 1N         |      |            |      |                  | 16                      |                  | F       |
|       | ISTA | 02  | 0841       |          | 0852     | N13             | E15 | 6244                    | 09 3.5        | 11           | 1N         |      |            |      |                  |                         |                  | F       |
|       | SVTO | 02  | 0845       | 0848     | 0852     | N14             | E26 | 6244                    | 09 4.3        | 7            | SF         |      | 3          | E    |                  | 16                      |                  |         |
| 0023  | KHAR | 02  | 0903       |          | 0910     | S11             | E04 | 6238                    | 09 2.7        | 7            | SF         |      | 1          | V    |                  |                         |                  | DH      |
| 0024  | SVTO | 02  | 1147       | 1200     | 1204     | S13             | E55 | 6246                    | 09 6.6        | 17           | SF         |      | 4          | E    |                  | 13                      |                  |         |
| 0025  |      | 02  | 1211       | 1212     | 1224     | N12             | W46 | 6233                    | 08 30.1       | 13           | SF         |      |            |      |                  | 14                      |                  | FH      |
|       | SVTO | 02  | 1211       | 1212     | 1218     | N12             | W46 | 6233                    | 08 30.1       | 7            | SF         |      | 4          | E    |                  | 15                      |                  | H       |
|       | RAMY | 02  | 1211       | 1212     | 1230     | N13             | W45 | 6233                    | 08 30.2       | 19           | SF         |      | 2          | E    |                  | 14                      |                  | FH      |
| 0026  | HOLL | 02  | 1449       | 1554U    | 1600D    | S13             | E03 | 6238                    | 09 2.8        | 71D          | SF         |      | 1          | E    |                  | 16                      |                  | F       |
| 0027  |      | 02  | 1626       | 16273    | 1636     | S14             | E03 | 6238                    | 09 2.9        | 10           | SF         |      |            |      |                  | 20                      |                  | F       |
|       | HOLL | 02  | 1626       | 1627     | 1637     | S13             | E03 | 6238                    | 09 2.9        | 11           | SF         |      | 4          | E    |                  | 26                      |                  | F       |
|       | RAMY | 02  | 1626       | 1630     | 1635     | S15             | E03 | 6238                    | 09 2.9        | 9            | SF         |      | 3          | E    |                  | 15                      |                  |         |
| 0028  | RAMY | 02  | 1634       | 1634     | 1640     | N13             | W52 | 6233                    | 08 29.9       | 6            | SF         |      | 3          | E    |                  | 26                      |                  |         |
| 0029  | PALE | 02  | 1745       | 1748     | 1753     | N12             | W56 | 6233                    | 08 29.6       | 8            | SF C       | 1.9  | 3          | E    |                  | 24                      |                  |         |
| 0030  |      | 02  | 1852       | 1853     | 1908     | N10             | W52 | 6233                    | 08 30.0       | 16           | SN C       | 2.0  |            |      |                  | 32                      |                  |         |
|       | PALE | 02  | 1852       | 1853     | 1905     | N10             | W53 | 6233                    | 08 29.9       | 13           | SF C       | 2.0  | 3          | E    |                  | 29                      |                  |         |
|       | HOLL | 02  | 1852       | 1853     | 1912     | N10             | W52 | 6233                    | 08 30.0       | 20           | SN C       | 2.0  | 3          | E    |                  | 36                      |                  |         |
| 0031  | HOLL | 02  | 1908       | 1921     | 1930     | S13             | E03 | 6238                    | 09 3.0        | 22           | SF         |      | 3          | E    |                  | 17                      |                  | F       |
|       |      | 02  | 2010       |          | 2041     | No Flare Patrol |     |                         |               |              |            |      |            |      |                  |                         |                  |         |
|       |      | 02  | 2101       |          | 2218     | No Flare Patrol |     |                         |               |              |            |      |            |      |                  |                         |                  |         |
|       |      | 02  | 2225       |          | 2244     | No Flare Patrol |     |                         |               |              |            |      |            |      |                  |                         |                  |         |
| 0032  |      | 03  | 02196      | 02198    | 0230     | N14             | W53 | 6233                    | 08 30.2       | 11           | SF C       | 3.5  |            |      |                  | 62                      | 1.1              | EF      |
|       | URUM | 03  | 0219E      | 0219     | 0222     | N13             | W53 | 6233                    | 08 30.2       | 3D           | SN         |      |            | C    |                  | 80                      | 1.4              | E       |
|       | LEAR | 03  | 0219       | 0219     | 0232     | N14             | W53 | 6233                    | 08 30.2       | 13           | SF C       | 3.5  | 3          | E    |                  | 58                      |                  | F       |
|       | URUM | 03  | 0225       | 0227     | 0236     | N14             | W54 | 6233                    | 08 30.1       | 11           | SF         |      |            | C    |                  | 48                      | 0.8              | E       |
| 0033  | URUM | 03  | 0245       | 0255     | 0305     | N16             | W64 | 6233                    | 08 29.4       | 20           | 1N         |      |            | C    |                  | 96                      | 2.2              | E       |
| 0034  |      | 03  | 0346       | 0347     | 0358     | N11             | W59 | 6233                    | 08 29.8       | 12           | SN         |      |            |      |                  | 32                      | 1.2              | DF      |
|       | LEAR | 03  | 0346       | 0347     | 0352     | N10             | W57 | 6233                    | 08 30.0       | 6            | SF         |      | 3          | E    |                  | 26                      |                  | F       |
|       | TACH | 03  | 0347E      |          | 0405     | N13             | W61 | 6233                    | 08 29.6       | 18D          | SB         |      | 3          | C    | 0347             | 61                      | 1.2              | D       |
|       | PALE | 03  | 0347E      | 0347     | 0355D    | N09             | W60 | 6233                    | 08 29.7       | 8D           | SF         |      | 3          | E    |                  | 10                      |                  |         |
| 0035  | LEAR | 03  | 0559       | 0602     | 0609     | N15             | W64 | 6233                    | 08 29.5       | 10           | SF C       | 1.5  | 3          | E    |                  | 33                      |                  |         |
| 0036  |      | 03  | 07151      | 0719     | 0728     | S12             | W05 | 6238                    | 09 2.9        | 13           | SN C       | 3.0  |            |      |                  | 52                      |                  | DEF     |
|       | ISTA | 03  | 0715       |          | 0727     | S10             | W06 | 6238                    | 09 2.8        | 12           | SN         |      |            |      |                  |                         |                  | D       |
|       | LEAR | 03  | 0716       | 0719     | 0729     | S14             | W04 | 6238                    | 09 3.0        | 13           | SN C       | 3.0  | 4          | E    |                  | 52                      |                  | FE      |
| 0037  |      | 03  | 07341      | 0739     | 0753     | N14             | W57 | 6233                    | 08 30.1       | 19           | SN C       | 2.0  |            |      |                  | 45                      | 1.2              | D       |
|       | ISTA | 03  | 0734       |          | 0751     | N14             | W57 | 6233                    | 08 30.1       | 17           | 1N         |      |            |      |                  |                         |                  |         |
|       | URUM | 03  | 0734       | 0739     | 0750     | N14             | W57 | 6233                    | 08 30.1       | 16           | SN         |      |            | C    |                  | 64                      | 1.2              | D       |
|       | LEAR | 03  | 0735       | 0739     | 0757     | N14             | W57 | 6233                    | 08 30.1       | 22           | SF C       | 2.0  | 3          | E    |                  | 26                      |                  |         |
| 0038  | SVTO | 03  | 0843E      | 0843U    | 0857D    | S15             | E44 | 6246                    | 09 6.7        | 14D          | SF         |      | 3          | E    |                  | 23                      |                  |         |

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# H $\alpha$ S O L A R F L A R E S

SEPTEMBER 1990

| Grp # | Sta  | Day | Start (UT) | Max (UT) | End (UT) | Lat             | CMD | NOAA/<br>USAF Region | CMP Mo | Day  | Dur (Min) | Imp Opt | Xray  | Obs See | Type | Time (UT) | Area Measurement                 |               | Remarks |
|-------|------|-----|------------|----------|----------|-----------------|-----|----------------------|--------|------|-----------|---------|-------|---------|------|-----------|----------------------------------|---------------|---------|
|       |      |     |            |          |          |                 |     |                      |        |      |           |         |       |         |      |           | Apparent (10 <sup>-6</sup> Disk) | Corr (Sq Deg) |         |
| 0039  |      | 03  | 0943       | 09448    | 1016     | N15             | W59 | 6233                 | 08     | 30.0 | 33        | 1N      | M 2.2 |         |      |           | 142                              | 3.5           |         |
|       | LEAR | 03  | 0943       | 0944     | 1004D    | N14             | W57 | 6233                 | 08     | 30.2 | 21D       | 1F      | M 2.2 | 2       | E    |           | 121                              |               |         |
|       | SVTO | 03  | 0943       | 0947     | 1033     | N12             | W57 | 6233                 | 08     | 30.2 | 50        | 1B      | M 2.2 | 3       | E    |           | 129                              |               |         |
|       | ATHN | 03  | 0945E      | 0952     | 0959     | N18             | W62 | 6233                 | 08     | 29.8 | 14D       | 1N      |       | 2       | V    | 0952      | 175                              | 3.5           |         |
| 0040  | SVTO | 03  | 1109       | 1112     | 1143     | N12             | W52 | 6233                 | 08     | 30.6 | 34        | SF      |       | 3       | E    |           | 16                               |               |         |
| 0041  | RAMY | 03  | 1146E      | 1203     | 1204     | N13             | W54 | 6233                 | 08     | 30.5 | 18D       | SF      |       | 3       | E    |           | 19                               |               |         |
| 0042  |      | 03  | 1339       | 1340     | 1351     | N14             | W58 | 6233                 | 08     | 30.3 | 12        | SF      | C 2.4 |         |      |           | 36                               |               | F       |
|       | RAMY | 03  | 1339       | 1340     | 1351     | N15             | W57 | 6233                 | 08     | 30.3 | 12        | SF      | C 2.4 | 3       | E    |           | 46                               |               | F       |
|       | HOLL | 03  | 1340E      | 1340U    | 1405D    | N13             | W58 | 6233                 | 08     | 30.3 | 25D       | SF      |       | 2       | E    |           | 25                               |               |         |
| 0043  |      | 03  | 15223      | 15252    | 1543     | S14             | W17 | 6237                 | 09     | 2.3  | 21        | SF      |       |         |      |           | 33                               |               | F       |
|       | HOLL | 03  | 1518E      | 1527     | 1603     | S13             | W17 | 6237                 | 09     | 2.3  | 45D       | SF      |       | 3       | E    |           | 32                               |               | F       |
|       | SVTO | 03  | 1522       | 1526     | 1532     | S15             | W16 | 6237                 | 09     | 2.4  | 10        | SF      |       | 2       | E    |           | 36                               |               |         |
|       | RAMY | 03  | 1525       | 1525     | 1534     | S14             | W17 | 6237                 | 09     | 2.3  | 9         | SF      |       | 3       | E    |           | 30                               |               |         |
| 0044  | HOLL | 03  | 1723       | 1726     | 1731     | N13             | W73 | 6233                 | 08     | 29.3 | 8         | SF      |       | 3       | E    |           | 28                               |               |         |
| 0045  | HOLL | 03  | 1855       | 1858     | 1902     | S13             | W19 | 6238                 | 09     | 2.3  | 7         | SF      |       | 3       | E    |           | 11                               |               |         |
|       |      | 03  | 1929       |          | 1936     | No Flare Patrol |     |                      |        |      |           |         |       |         |      |           |                                  |               |         |
| 0046  | HOLL | 03  | 1947E      | 1948U    | 1952     | N13             | W68 | 6233                 | 08     | 29.8 | 5D        | SF      | C 4.3 | 3       | E    |           | 27                               |               | F       |
|       |      | 03  | 1955       |          | 2230     | No Flare Patrol |     |                      |        |      |           |         |       |         |      |           |                                  |               |         |
| 0047  | LEAR | 04  | 0042       | 0045     | 0105     | N15             | W66 | 6233                 | 08     | 30.1 | 23        | SF      | C 7.0 | 3       | E    |           | 48                               |               |         |
| 0048  | SVTO | 04  | 0604       | 0608     | 0624     | N13             | E83 | 6252                 | 09     | 10.5 | 20        | SF      |       | 3       | E    |           | 81                               |               |         |
| 0049  |      | 04  | 06565      | 06586    | 0712     | N10             | W77 | 6233                 | 08     | 29.6 | 16        | SF      |       |         |      |           | 43                               |               | D       |
|       | SVTO | 04  | 0656       | 0658     | 0713     | N10             | W74 | 6233                 | 08     | 29.8 | 17        | SF      |       | 3       | E    |           | 34                               |               |         |
|       | ABST | 04  | 0701       | 0704     | 0712     | N10             | W80 | 6233                 | 08     | 29.4 | 11        | SF      |       |         | C    | 0704      | 52                               |               | D       |
| 0050  |      | 04  | 0741*      | 0759*    | 0846     | N12             | W71 | 6233                 | 08     | 30.1 | 65        | 2N      | C 9.2 |         |      |           | 192                              | 4.2           | EFK     |
|       | SVTO | 04  | 0741       | 0806     | 0859     | N12             | W67 | 6233                 | 08     | 30.4 | 78        | 2B      |       | 3       | E    |           | 286                              |               | F       |
|       | SVTO | 04  | 0741       | 0821     | 0859     | N12             | W67 | 6233                 | 08     | 30.4 | 78        | 2N      |       |         | E    |           | 190                              |               | K       |
|       | LEAR | 04  | 0750       | 0804     | 0845     | N14             | W79 | 6233                 | 08     | 29.4 | 55        | 2F      | C 9.2 | 3       | E    |           | 262                              |               | F       |
|       | ABST | 04  | 0757       | 0759     | 0809D    | N10             | W69 | 6233                 | 08     | 30.2 | 12D       | SF      |       |         | P    | 0759      | 96                               |               | E       |
|       | ATHN | 04  | 0808E      | 0809U    | 0819     | N12             | W73 | 6233                 | 08     | 29.9 | 11D       | 1F      |       | 2       | V    | 0809      | 127                              | 4.2           |         |
| 0051  | SVTO | 04  | 0831       | 0838     | 0859     | N13             | E82 | 6252                 | 09     | 10.5 | 28        | SF      |       | 3       | E    |           | 56                               |               |         |
| 0052  | SVTO | 04  | 0916       | 0917     | 0923     | N12             | W01 | 6244                 | 09     | 4.3  | 7         | SF      |       | 3       | E    |           | 12                               |               |         |
| 0053  | SVTO | 04  | 0923       | 0924     | 0949     | S13             | E10 | 6241                 | 09     | 5.1  | 26        | SN      |       | 3       | E    |           | 27                               |               |         |
| 0054  | SVTO | 04  | 0941       | 0941     | 0956     | N13             | E80 | 6252                 | 09     | 10.4 | 15        | SF      |       | 3       | E    |           | 25                               |               |         |
| 0055  | SVTO | 04  | 1004       | 1004     | 1011     | N11             | E82 | 6252                 | 09     | 10.6 | 7         | SF      |       | 3       | E    |           | 22                               |               |         |
| 0056  | SVTO | 04  | 1145       | 1148     | 1151     | N15             | E79 | 6252                 | 09     | 10.5 | 6         | SF      |       | 4       | E    |           | 29                               |               |         |
| 0057  | SVTO | 04  | 1216       | 1216     | 1220     | N15             | E78 | 6252                 | 09     | 10.4 | 4         | SF      |       | 4       | E    |           | 20                               |               |         |
| 0058  |      | 04  | 13103      | 13151    | 1324     | N15             | E78 | 6252                 | 09     | 10.4 | 14        | SF      |       |         |      |           | 26                               |               |         |
|       | SVTO | 04  | 1310       | 1316     | 1326     | N16             | E78 | 6252                 | 09     | 10.5 | 16        | SF      |       | 4       | E    |           | 33                               |               |         |
|       | RAMY | 04  | 1313       | 1315     | 1322     | N14             | E78 | 6252                 | 09     | 10.4 | 9         | SF      |       | 3       | E    |           | 18                               |               |         |
| 0059  |      | 04  | 1313*      | 13198    | 1328     | N14             | W72 | 6233                 | 08     | 30.2 | 15        | SF      | C 3.3 |         |      |           | 26                               |               |         |
|       | RAMY | 04  | 1313       | 1319     | 1325     | N14             | W71 | 6233                 | 08     | 30.3 | 12        | SF      | C 3.3 | 3       | E    |           | 21                               |               |         |
|       | RAMY | 04  | 1326       | 1327     | 1330     | N14             | W73 | 6233                 | 08     | 30.1 | 4         | SF      |       | 3       | E    |           | 30                               |               |         |
| 0060  |      | 04  | 1424*      | 1424*    | 1527     | N14             | W76 | 6233                 | 08     | 29.9 | 63        | 1F      | M 1.4 |         |      |           | 86                               |               |         |
|       | HOLL | 04  | 1424       | 1424     | 1431     | N16             | W81 | 6233                 | 08     | 29.5 | 7         | SF      |       | 3       | E    |           | 38                               |               |         |
|       | RAMY | 04  | 1426       | 1442U    | 1538     | N14             | W73 | 6233                 | 08     | 30.2 | 72        | SF      |       | 3       | E    |           | 62                               |               |         |
|       | SVTO | 04  | 1435       | 1448     | 1611     | N13             | W75 | 6233                 | 08     | 30.0 | 96        | 1F      |       | 4       | E    |           | 120                              |               |         |
|       | HOLL | 04  | 1437       | 1449     | 1528D    | N14             | W73 | 6233                 | 08     | 30.2 | 51D       | 1N      | M 1.4 | 3       | E    |           | 125                              |               |         |

H $\alpha$  SOLAR FLARES7  
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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 | Area Measurement |                         |                  | Remarks |      |
|-------|------|------|------------|----------|-----------------|-----|-----|-------------------------|---------------|--------------|-----------------|-----------------|------------------|-------------------------|------------------|---------|------|
|       |      |      |            |          |                 |     |     |                         |               |              |                 |                 | Time<br>(UT)     | Apparent<br>(10-6 Disk) | Corr<br>(Sq Deg) |         |      |
| 0061  | SVTO | 04   | 1602       | 1605     | 1611            | S13 | W25 | 6238                    | 09            | 2.8          | 9               | SF              | 3                | E                       | 18               |         |      |
| 0062  | RAMY | 04   | 1612       | 1612     | 1625            | N12 | E75 | 6252                    | 09            | 10.3         | 13              | SF              | 3                | E                       | 39               |         |      |
| 0063  | HOLL | 04   | 2102       | 2115     | 2158D           | N13 | W08 | 6244                    | 09            | 4.3          | 56D             | SF C 2.4        | 3                | E                       | 37               |         | F    |
| 0064  | RAMY | 04   | 2107       | 2107     | 2111            | N13 | E70 | 6252                    | 09            | 10.2         | 4               | SF              | 3                | E                       | 22               |         |      |
|       | 04   | 2234 |            | 2244     | No Flare Patrol |     |     |                         |               |              |                 |                 |                  |                         |                  |         |      |
| 0065  | LEAR | 04   | 2347       | 2349     | 2415            | S15 | E21 | 6246                    | 09            | 6.6          | 28              | SF C 1.4        | 3                | E                       | 26               |         | F    |
| 0066  |      | 05   | 0142       | 0149     | 0212            | N12 | E53 | 6249                    | 09            | 9.1          | 30              | 1N C 3.0        |                  |                         | 86               | 2.7     |      |
|       | LEAR | 05   | 0142       | 0149     | 0203            | N13 | E52 | 6249                    | 09            | 9.0          | 21              | SF C 3.0        | 3                | E                       | 15               |         |      |
|       | YUNN | 05   | 0148E      | 0148U    | 0221            | N12 | E54 | 6249                    | 09            | 9.1          | 33D             | 1N              | P                | 0148                    | 157              | 2.7     |      |
| 0067  | TACH | 05   | 0313       | 0315     | 0327            | N15 | W82 | 6233                    | 08            | 30.0         | 14              | SB              | 3                | C                       | 0315             | 51      | ETZ  |
| 0068  |      | 05   | 0357       | 0401*    | 0544            | N14 | W84 | 6233                    | 08            | 29.9         | 107             | 1N M 2.7        |                  |                         | 119              |         | FHTZ |
|       | TACH | 05   | 0357       | 0430     | 0556            | N15 | W80 | 6233                    | 08            | 30.2         | 119             | 1B              | 3                | C                       | 0430             | 194     | TZ   |
|       | PALE | 05   | 0359E      | 0401     | 0430D           | N14 | W85 | 6233                    | 08            | 29.8         | 31D             | SF              | 3                | E                       | 62               |         | F    |
|       | LEAR | 05   | 0426E      | 0440     | 0531            | N14 | W87 | 6233                    | 08            | 29.7         | 65D             | SF M 2.7        | 3                | E                       | 84               |         |      |
|       | PURP | 05   | 0438E      | 0445     | 0510D           | N13 | W86 | 6233                    | 08            | 29.8         | 32D             | 1B              | C                | 0445                    | 136              |         | H    |
| 0069  | URUM | 05   | 0415       | 0428     | 0532            | N23 | W55 |                         | 08            | 31.9         | 77              | SN              |                  | C                       | 80               | 1.4     | A    |
| 0070  | SVTO | 05   | 0943       | 0951     | 0954            | S11 | W37 | 6238                    | 09            | 2.6          | 11              | SF              | 3                | E                       | 16               |         |      |
| 0071  |      | 05   | 1330I      | 1337     | 1413            | S14 | W36 | 6238                    | 09            | 2.8          | 43              | SF C 3.0        |                  |                         | 75               |         | F    |
|       | RAMY | 05   | 1330       | 1337     | 1415            | S13 | W37 | 6238                    | 09            | 2.8          | 45              | SF C 3.0        | 3                | E                       | 57               |         | F    |
|       | SVTO | 05   | 1331       | 1337U    | 1411            | S14 | W36 | 6238                    | 09            | 2.8          | 40              | SF              | 3                | E                       | 93               |         | F    |
| 0072  | RAMY | 05   | 1540       | 1541     | 1552            | S15 | E12 | 6246                    | 09            | 6.6          | 12              | SF C 3.1        | 3                | E                       | 31               |         |      |
|       | 05   | 1634 |            | 1641     | No Flare Patrol |     |     |                         |               |              |                 |                 |                  |                         |                  |         |      |
|       | 05   | 1646 |            | 1657     | No Flare Patrol |     |     |                         |               |              |                 |                 |                  |                         |                  |         |      |
|       | 05   | 1734 |            | 1748     | No Flare Patrol |     |     |                         |               |              |                 |                 |                  |                         |                  |         |      |
|       | 05   | 1820 |            | 1828     | No Flare Patrol |     |     |                         |               |              |                 |                 |                  |                         |                  |         |      |
|       | 05   | 1900 |            | 1919     | No Flare Patrol |     |     |                         |               |              |                 |                 |                  |                         |                  |         |      |
| 0073  | HOLL | 05   | 1957E      | 1958U    | 2007            | N14 | W90 | 6233                    | 08            | 30.1         | 10D             | SF C 1.4        | 2                | E                       | 28               |         |      |
| 0074  | HOLL | 05   | 1957E      | 1959U    | 2008            | N01 | E30 | 6247                    | 09            | 8.1          | 11D             | SF              | 2                | E                       | 15               |         |      |
|       | 05   | 2134 |            | 2205     | No Flare Patrol |     |     |                         |               |              |                 |                 |                  |                         |                  |         |      |
| 0075  | ISTA | 06   | 0752       |          | 0802            | N13 | E60 | 6252                    | 09            | 10.8         | 10              | SF              |                  |                         |                  |         |      |
| 0076  |      | 06   | 08142      | 08152    | 0825            | S14 | W26 | 6241                    | 09            | 4.4          | 11              | SF              |                  |                         | 48               | 0.6     | D    |
|       | ISTA | 06   | 0814       |          | 0825            | S13 | W24 | 6241                    | 09            | 4.5          | 11              | SF              |                  |                         |                  |         |      |
|       | KANZ | 06   | 0815       | 0815     | 0827            | S15 | W26 | 6241                    | 09            | 4.4          | 12              | SF              | V                |                         |                  |         |      |
|       | URUM | 06   | 0816       | 0817     | 0822            | S15 | W27 | 6241                    | 09            | 4.3          | 6               | SN              | C                |                         | 48               | 0.6     | D    |
| 0077  |      | 06   | 11307      | 11327    | 1151            | S17 | W61 | 6237                    | 09            | 1.8          | 21              | SF C 1.5        |                  |                         | 22               |         | F    |
|       | KANZ | 06   | 1126E      | 1126U    | 1149D           | S17 | W60 | 6237                    | 09            | 1.9          | 23D             | SF              | V                |                         |                  |         |      |
|       | RAMY | 06   | 1130       | 1132     | 1136            | S17 | W62 | 6237                    | 09            | 1.8          | 6               | SF C 1.5        | 3                | E                       | 21               |         |      |
|       | RAMY | 06   | 1137       | 1139     | 1206            | S17 | W62 | 6237                    | 09            | 1.8          | 29              | SF              | 3                | E                       | 24               |         | F    |
| 0078  |      | 06   | 1535*      | 1537*    | 1653            | S20 | E70 |                         | 09            | 12.0         | 78              | SF              |                  |                         | 24               |         | F    |
|       | HOLL | 06   | 1535       | 1537     | 1641            | S20 | E72 |                         | 09            | 12.1         | 66              | SF              | 3                | E                       | 27               |         | F    |
|       | RAMY | 06   | 1605       | 1605     | 1705            | S19 | E68 |                         | 09            | 11.8         | 60              | SF              | 3                | E                       | 22               |         | F    |
| 0079  | RAMY | 06   | 1603       | 1603     | 1607            | N17 | E18 | 6249                    | 09            | 8.0          | 4               | SF              | 3                | E                       | 12               |         |      |
| 0080  | HOLL | 06   | 1729       | 1737     | 1743            | S14 | W33 | 6241                    | 09            | 4.2          | 14              | SF              | 4                | E                       | 10               |         | F    |
| 0081  | HOLL | 06   | 1755       | 1756     | 1803            | S14 | W33 | 6241                    | 09            | 4.2          | 8               | SF              | 3                | E                       | 23               |         | F    |
| 0082  | HOLL | 06   | 1843       | 1844     | 1852            | N14 | E52 | 6252                    | 09            | 10.7         | 9               | SF              | 3                | E                       | 14               |         | F    |

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# H $\alpha$ SOLAR FLARES

SEPTEMBER 1990

| Grp # | Sta  | Day | Start (UT) | Max (UT) | End (UT) | Lat             | CMD | NOAA/<br>USAF Region | CMP Mo | Dur Day | Imp Opt | Xray     | Obs See | Type | Time (UT) | Area Measurement     |               | Remarks |
|-------|------|-----|------------|----------|----------|-----------------|-----|----------------------|--------|---------|---------|----------|---------|------|-----------|----------------------|---------------|---------|
|       |      |     |            |          |          |                 |     |                      |        |         |         |          |         |      |           | Apparent (10-6 Disk) | Corr (Sq Deg) |         |
| 0083  |      | 06  | 1909E      | 1911*    | 2024     | S14             | W32 | 6241                 | 09     | 4.4     | 75D     | SN       |         |      |           | 31                   |               | FK      |
|       | HOLL | 06  | 1909E      | 1911     | 2024     | S14             | W33 | 6241                 | 09     | 4.3     | 75D     | SF       | 3       | E    |           | 25                   |               | F       |
|       | HOLL | 06  | 1909E      | 1947     | 2024     | S14             | W33 | 6241                 | 09     | 4.3     | 75D     | SB       |         |      |           | 50                   |               | K       |
|       | RAMY | 06  | 1947E      | 1947U    | 1949D    | S14             | W30 | 6241                 | 09     | 4.5     | 2D      | SF       | 2       | E    |           | 18                   |               | F       |
| 0084  | HOLL | 06  | 1911E      | 1912U    | 1916     | S13             | W53 | 6238                 | 09     | 2.8     | 5D      | SF       | 3       | E    |           | 21                   |               |         |
| 0085  | HOLL | 06  | 2052       | 2118     | 2125     | S14             | W33 | 6241                 | 09     | 4.4     | 33      | SF       | 3       | E    |           | 16                   |               |         |
| 0086  |      | 07  | 0030       | 0032     | 0051     | S18             | W06 | 6246                 | 09     | 6.6     | 21      | SF       |         |      |           | 33                   |               | FU      |
|       | PALE | 07  | 0030       | 0032     | 0051     | S16             | W05 | 6246                 | 09     | 6.6     | 21      | SF       | 3       | E    |           | 27                   |               | F       |
|       | HOLL | 07  | 0040E      | 0045U    | 0055D    | S19             | W06 | 6246                 | 09     | 6.6     | 15D     | SF       | 1       | E    |           | 39                   |               | UF      |
|       |      | 07  | 0125       |          | 0128     | No Flare Patrol |     |                      |        |         |         |          |         |      |           |                      |               |         |
| 0087  |      | 07  | 0512*      | 0529*    | 0628     | S16             | W38 | 6241                 | 09     | 4.3     | 76      | 1N       |         |      |           | 184                  | 3.2           | EK      |
|       | TACH | 07  | 0512       | 0544     | 0615     | S18             | W32 | 6241                 | 09     | 4.8     | 63      | 2B       | 3       | C    | 0544      | 400                  | 5.2           | E       |
|       | PURP | 07  | 0516E      | 0535U    | 0619     | S14             | W38 | 6241                 | 09     | 4.3     | 63D     | SN       |         |      | 0535      | 88                   | 1.3           |         |
|       | LEAR | 07  | 0524       | 0529     | 0639     | S15             | W42 | 6241                 | 09     | 4.0     | 75      | 1F       |         |      |           | 105                  |               | K       |
|       | LEAR | 07  | 0524       | 0549     | 0639     | S15             | W42 | 6241                 | 09     | 4.0     | 75      | 1F       | 3       | E    |           | 142                  |               |         |
| 0088  | LEAR | 07  | 0753       | 0756     | 0805     | S13             | W38 | 6241                 | 09     | 4.5     | 12      | SF       | 3       | E    |           | 18                   |               |         |
| 0089  |      | 07  | 1153       | 1201     | 1241     | S15             | W12 | 6246                 | 09     | 6.6     | 48      | 1N C 3.0 |         |      |           | 108                  |               | FU      |
|       | RAMY | 07  | 1153       | 1201     | 1239     | S15             | W13 | 6246                 | 09     | 6.5     | 46      | SN       | 3       | E    |           | 89                   |               | UF      |
|       | SVTO | 07  | 1153       | 1201     | 1243     | S15             | W11 | 6246                 | 09     | 6.7     | 50      | 1F C 3.0 | 3       | E    |           | 127                  |               | U       |
| 0090  |      | 07  | 1356       | 1357     | 1410     | S14             | W39 | 6241                 | 09     | 4.6     | 14      | SF       |         |      |           | 24                   |               |         |
|       | SVTO | 07  | 1356       | 1357     | 1412     | S15             | W39 | 6241                 | 09     | 4.6     | 16      | SF       | 3       | E    |           | 25                   |               |         |
|       | HOLL | 07  | 1356       | 1359     | 1409     | S14             | W39 | 6241                 | 09     | 4.6     | 13      | SF       | 3       | E    |           | 23                   |               |         |
| 0091  |      | 07  | 1521       | 1522     | 1527     | N20             | E75 | 6254                 | 09     | 13.4    | 6       | SF B 9.6 |         |      |           | 45                   |               | H       |
|       | RAMY | 07  | 1521       | 1522     | 1526     | N19             | E73 | 6254                 | 09     | 13.2    | 5       | SF       | 3       | E    |           | 30                   |               | H       |
|       | HOLL | 07  | 1521       | 1522     | 1528     | N19             | E76 | 6254                 | 09     | 13.4    | 7       | SF B 9.6 | 4       | E    |           | 55                   |               |         |
|       | SVTO | 07  | 1521       | 1522     | 1528     | N21             | E76 | 6254                 | 09     | 13.5    | 7       | SF       | 3       | E    |           | 51                   |               |         |
| 0092  | HOLL | 07  | 1656       | 1658     | 1704D    | N15             | E21 | 6249                 | 09     | 9.3     | 8D      | SF       | 3       | E    |           | 24                   |               |         |
| 0093  | HOLL | 07  | 1715       | 1743     | 1753     | S14             | W44 | 6241                 | 09     | 4.4     | 38      | SF       | 3       | E    |           | 25                   |               |         |
| 0094  |      | 07  | 17444      | 17458    | 1806     | S18             | W14 | 6246                 | 09     | 6.7     | 22      | SF       |         |      |           | 16                   |               | F       |
|       | HOLL | 07  | 1744       | 1745     | 1806     | S17             | W14 | 6246                 | 09     | 6.7     | 22      | SF       | 4       | E    |           | 21                   |               |         |
|       | PALE | 07  | 1748       | 1753     | 1807     | S18             | W15 | 6246                 | 09     | 6.6     | 19      | SF       | 4       | E    |           | 11                   |               | F       |
| 0095  | HOLL | 07  | 1745       | 1747     | 1800     | N18             | E68 | 6254                 | 09     | 12.9    | 15      | SF       | 3       | E    |           | 13                   |               |         |
|       |      | 07  | 2018       |          | 2025     | No Flare Patrol |     |                      |        |         |         |          |         |      |           |                      |               |         |
|       |      | 07  | 2029       |          | 2039     | No Flare Patrol |     |                      |        |         |         |          |         |      |           |                      |               |         |
|       |      | 07  | 2043       |          | 2050     | No Flare Patrol |     |                      |        |         |         |          |         |      |           |                      |               |         |
|       |      | 07  | 2149       |          | 2242     | No Flare Patrol |     |                      |        |         |         |          |         |      |           |                      |               |         |
| 0096  |      | 07  | 2308E      | 2308U    | 2331     | N10             | E40 | 6252                 | 09     | 11.0    | 23D     | SF       |         |      |           | 28                   |               |         |
|       | LEAR | 07  | 2308E      | 2308U    | 2331     | N09             | E40 | 6252                 | 09     | 11.0    | 23D     | SF       | 2       | E    |           | 30                   |               |         |
|       | PALE | 07  | 2308E      | 2309U    | 2356D    | N10             | E40 | 6252                 | 09     | 11.0    | 48D     | SF       | 3       | E    |           | 27                   |               |         |
| 0097  | LEAR | 07  | 2331       | 2332     | 2344     | N18             | E67 | 6254                 | 09     | 13.1    | 13      | SF       | 3       | E    |           | 13                   |               |         |
| 0098  |      | 08  | 1046       | 1057     | 1132     | S15             | W52 | 6241                 | 09     | 4.5     | 46      | 1F C 3.1 |         |      |           | 108                  |               |         |
|       | KANZ | 08  | 1046       | 1057     | 1122D    | S15             | W51 | 6241                 | 09     | 4.6     | 36D     | 1F       |         | V    |           |                      |               |         |
|       | RAMY | 08  | 1055E      | 1058U    | 1132     | S15             | W52 | 6241                 | 09     | 4.5     | 37D     | 1F C 3.1 | 2       | E    |           | 108                  |               |         |
| 0099  |      | 08  | 1136       | 1138     | 1150     | N16             | E58 | 6254                 | 09     | 12.9    | 14      | 1N C 4.0 |         |      |           | 64                   | 2.2           | H       |
|       | ATHN | 08  | 1131E      | 1132U    | 1135D    | N15             | E60 | 6254                 | 09     | 13.0    | 4D      | 1N       | 2       | V    | 1132      | 111                  | 2.2           |         |
|       | RAMY | 08  | 1136       | 1138     | 1150     | N18             | E57 | 6254                 | 09     | 12.8    | 14      | SF C 4.0 | 2       | E    |           | 18                   |               | H       |
| 0100  |      | 08  | 1418       | 1419     | 1424     | N19             | E57 | 6254                 | 09     | 12.9    | 6       | SF       |         |      |           | 26                   |               | H       |
|       | SVTO | 08  | 1418       | 1419     | 1423     | N20             | E58 | 6254                 | 09     | 13.0    | 5       | SF       | 3       | E    |           | 30                   |               |         |
|       | RAMY | 08  | 1418       | 1419     | 1425     | N18             | E56 | 6254                 | 09     | 12.9    | 7       | SF       | 3       | E    |           | 22                   |               | H       |

H $\alpha$  SOLAR FLARES9  
Sep 90

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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  | See | Obs<br>Type | Area Measurement |                         |                  | Remarks |
|-------|------|-----|------------|----------|----------|-----|-----|-------------------------|-----------|------|--------------|------------|-------|-----|-------------|------------------|-------------------------|------------------|---------|
|       |      |     |            |          |          |     |     |                         |           |      |              |            |       |     |             | Time<br>(UT)     | Apparent<br>(10-6 Disk) | Corr<br>(Sq Deg) |         |
| 0101  |      | 08  | 17075      | 17134    | 1732     | N18 | E56 | 6254                    | 09        | 13.0 | 25           | SF         |       |     |             |                  | 18                      |                  | F       |
|       | HOLL | 08  | 1707       | 1713     | 1739     | N18 | E55 | 6254                    | 09        | 12.9 | 32           | SF         |       | 3   | E           |                  | 18                      |                  | F       |
|       | PALE | 08  | 1712       | 1717     | 1724     | N19 | E58 | 6254                    | 09        | 13.1 | 12           | SF         |       | 3   | E           |                  | 17                      |                  |         |
| 0102  | PALE | 08  | 1902       | 1903     | 1909     | N18 | E56 | 6254                    | 09        | 13.0 | 7            | SF         | C 1.0 | 3   | E           |                  | 28                      |                  |         |
| 0103  | HOLL | 08  | 2031       | 2033     | 2038     | N16 | E54 | 6254                    | 09        | 12.9 | 7            | SF         |       | 3   | E           |                  | 26                      |                  | H       |
| 0104  |      | 08  | 2209       | 2216     | 2339     | N07 | E47 | 6253                    | 09        | 12.4 | 90           | 1N         |       |     |             |                  | 104                     |                  | FU      |
|       | HOLL | 08  | 2209       | 2216     | 2339     | N06 | E48 | 6253                    | 09        | 12.5 | 90           | 1N         |       | 3   | E           |                  | 156                     |                  | U       |
|       | PALE | 08  | 2230E      |          | 2301D    | N08 | E46 | 6253                    | 09        | 12.4 | 31D          | SF         |       | 3   | E           |                  | 53                      |                  | F       |
| 0105  | HOLL | 08  | 2215       | 2223     | 2238     | N17 | E53 | 6254                    | 09        | 12.9 | 23           | SF         | C 4.8 | 3   | E           |                  | 36                      |                  |         |
| 0106  | HOLL | 08  | 2342       | 2343     | 2347     | N17 | E52 | 6254                    | 09        | 12.9 | 5            | SF         |       | 3   | E           |                  | 24                      |                  |         |
| 0107  | PALE | 09  | 0352       | 0404     | 0411     | S16 | W63 | 6241                    | 09        | 4.4  | 19           | 1F         |       | 3   | E           |                  | 114                     |                  |         |
| 0108  |      | 09  | 0600       | 06034    | 0614     | S14 | W61 | 6241                    | 09        | 4.6  | 14           | SF         |       |     |             |                  | 43                      |                  | E       |
|       | SVTO | 09  | 0545E      | 0607     | 0617     | S15 | W59 | 6241                    | 09        | 4.8  | 32D          | SF         |       | 3   | E           |                  | 25                      |                  |         |
|       | KANZ | 09  | 0558E      | 0604     | 0619     | S14 | W61 | 6241                    | 09        | 4.6  | 21D          | SF         |       |     | V           |                  |                         |                  |         |
|       | LEAR | 09  | 0600       | 0603     | 0610     | S14 | W62 | 6241                    | 09        | 4.6  | 10           | SF         |       | 3   | E           |                  | 41                      |                  |         |
|       | URUM | 09  | 0600       | 0603     | 0611     | S13 | W62 | 6241                    | 09        | 4.6  | 11           | SN         |       |     | C           |                  | 64                      |                  | E       |
| 0109  |      | 09  | 06402      | 0642     | 0646     | N20 | W35 | 6255                    | 09        | 6.6  | 6            | SF         |       |     |             |                  | 84                      | 1.1              | D       |
|       | PEKG | 09  | 0640       | 0642     | 0645     | N20 | W36 | 6255                    | 09        | 6.5  | 5            | SF         |       |     | P           | 0642             | 84                      | 1.1              | D       |
|       | KANZ | 09  | 0642       | 0642     | 0646     | N20 | W34 | 6255                    | 09        | 6.7  | 4            | SF         |       |     | V           |                  |                         |                  |         |
| 0110  |      | 09  | 08063      | 08067    | 0820     | N12 | W66 | 6244                    | 09        | 4.4  | 14           | SF         |       |     |             |                  | 14                      |                  |         |
|       | SVTO | 09  | 0806       | 0806     | 0824     | N11 | W66 | 6244                    | 09        | 4.4  | 18           | SF         |       | 3   | E           |                  | 14                      |                  |         |
|       | KANZ | 09  | 0809       | 0813     | 0817     | N13 | W65 | 6244                    | 09        | 4.4  | 8            | SF         |       |     | V           |                  |                         |                  |         |
| 0111  |      | 09  | 0828       | 08287    | 0837     | N20 | W36 | 6255                    | 09        | 6.6  | 9            | SF         |       |     |             |                  | 20                      | 0.3              |         |
|       | KANZ | 09  | 0828       | 0828     | 0836     | N20 | W35 | 6255                    | 09        | 6.7  | 8            | SF         |       |     | V           |                  |                         |                  |         |
|       | SVTO | 09  | 0829E      | 0830     | 0834     | N19 | W36 | 6255                    | 09        | 6.6  | 5D           | SF         |       | 2   | E           |                  | 16                      |                  |         |
|       | YUNN | 09  | 0829E      | 0835     | 0840     | N20 | W36 | 6255                    | 09        | 6.6  | 11D          | SN         |       |     | P           |                  | 24                      | 0.3              |         |
| 0112  |      | 09  | 11052      | 11062    | 1117     | S15 | W69 | 6241                    | 09        | 4.2  | 12           | SF         |       |     |             |                  | 32                      |                  |         |
|       | SVTO | 09  | 1105       | 1108     | 1118     | S16 | W71 | 6241                    | 09        | 4.1  | 13           | SF         |       | 3   | E           |                  | 42                      |                  |         |
|       | RAMY | 09  | 1106       | 1106     | 1112     | S15 | W68 | 6241                    | 09        | 4.3  | 6            | SF         |       | 3   | E           |                  | 23                      |                  |         |
|       | KANZ | 09  | 1107       | 1107     | 1121     | S14 | W68 | 6241                    | 09        | 4.3  | 14           | SF         |       |     | C           |                  |                         |                  |         |
| 0113  |      | 09  | 1327*      | 1327*    | 1342     | S16 | W70 | 6241                    | 09        | 4.2  | 15           | SF         |       |     |             |                  | 14                      |                  |         |
|       | SVTO | 09  | 1327       | 1327     | 1337     | S16 | W72 | 6241                    | 09        | 4.1  | 10           | SF         |       | 3   | E           |                  | 16                      |                  |         |
|       | SVTO | 09  | 1342       | 1342     | 1347     | S16 | W68 | 6241                    | 09        | 4.4  | 5            | SF         |       | 3   | E           |                  | 13                      |                  |         |
| 0114  |      | 09  | 1346*      | 1340*    | 1408     | N05 | W14 | 6247                    | 09        | 8.5  | 22           | SF         |       |     |             |                  | 27                      |                  | F       |
|       | SVTO | 09  | 1340E      | 1340     | 1407     | N05 | W17 | 6247                    | 09        | 8.3  | 27D          | SF         |       | 3   | E           |                  | 29                      |                  | F       |
|       | KANZ | 09  | 1346       | 1346     | 1356     | N07 | W12 | 6247                    | 09        | 8.7  | 10           | SF         |       |     | C           |                  |                         |                  |         |
|       | HOLL | 09  | 1358       | 1407     | 1422     | N04 | W12 | 6247                    | 09        | 8.7  | 24           | SF         |       | 3   | E           |                  | 25                      |                  | F       |
| 0115  | HOLL | 09  | 1358       | 1359     | 1405     | N20 | W37 | 6255                    | 09        | 6.7  | 7            | SF         |       | 3   | E           |                  | 15                      |                  | F       |
| 0116  | HOLL | 09  | 1626       | 1655     | 1707     | S14 | W68 | 6241                    | 09        | 4.5  | 41           | SF         |       | 3   | E           |                  | 23                      |                  | F       |
| 0117  | HOLL | 09  | 2004       | 2009     | 2117     | N05 | W16 | 6247                    | 09        | 8.6  | 73           | SF         |       | 3   | E           |                  | 29                      |                  | F       |
| 0118  | HOLL | 09  | 2243       | 2245     | 2301     | N07 | E31 | 6253                    | 09        | 12.3 | 18           | SF         |       | 3   | E           |                  | 44                      |                  |         |
| 0119  | YUNN | 10  | 0716E      | 0716U    | 0727     | N15 | E37 | 6254                    | 09        | 13.1 | 11D          | SN         |       |     | P           | 0716             | 16                      | 0.2              | E       |
| 0120  | YUNN | 10  | 0720       | 0741     | 0802     | N14 | E88 | 6263                    | 09        | 16.9 | 42           |            |       |     | C           |                  |                         |                  | AG      |
| 0121  | SVTO | 10  | 1307       | 1308     | 1312     | N19 | W48 | 6255                    | 09        | 6.9  | 5            | SF         | C 1.2 | 3   | E           |                  | 22                      |                  |         |
| 0122  | HOLL | 10  | 1750       | 1811     | 1822     | S11 | E56 | 6257                    | 09        | 14.9 | 32           | SF         |       | 3   | E           |                  | 17                      |                  |         |
| 0123  | HOLL | 10  | 1752       | 1754     | 1807     | S18 | E47 | 6265                    | 09        | 14.3 | 15           | SF         |       | 3   | E           |                  | 18                      |                  |         |

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Sep 90

# H $\alpha$ SOLAR FLARES

SEPTEMBER 1990

| Grp<br># | Sta  | Day | Start<br>(UT) | Max<br>(UT) | End<br>(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<br>(UT)     | Apparent<br>(10-6 Disk) | Corr<br>(Sq Deg) |         |
| 0124     | LEAR | 11  | 0018          | 0019        | 0028        | S23 | E34 | 6271A                   | 09        | 13.6 | 10           | SF         | C 1.7 | 3          | E    |                  | 18                      |                  |         |
| 0125     |      | 11  | 0225*         | 0304        | 0317D       | N22 | E88 | 6268                    | 09        | 17.9 | 52D          | SN         |       |            |      |                  | 30                      |                  | A       |
|          | YUNN | 11  | 0225          | 0305        | 0307D       | N21 | E87 | 6268                    | 09        | 17.8 | 42D          | SN         |       | P          |      |                  | 31                      |                  | A       |
|          | PALE | 11  | 0303          | 0304        | 0317D       | N23 | E89 | 6268                    | 09        | 18.0 | 14D          | SF         |       | 3          | E    |                  | 28                      |                  |         |
| 0126     | TACH | 11  | 0335          | 0338        | 0349        | S11 | E53 | 6257                    | 09        | 15.1 | 14           | 1B         |       | 2          | C    | 0338             | 117                     | 2.1              | D       |
| 0127     | LEAR | 11  | 0423E         | 0426        | 0445        | N20 | E93 | 6268                    | 09        | 18.3 | 22D          | 1F         |       | 3          | E    |                  | 174                     |                  |         |
| 0128     |      | 11  | 0446*         | 0512*       | 0651        | N21 | E90 | 6268                    | 09        | 18.1 | 125          | SN         | C 5.2 |            |      |                  | 72                      |                  | AD      |
|          | LEAR | 11  | 0446          | 0512        | 0557        | N20 | E92 | 6268                    | 09        | 18.2 | 71           | SF         | C 5.2 | 3          | E    |                  | 74                      |                  |         |
|          | YUNN | 11  | 0530E         | 0548U       | 0736        | N22 | E87 | 6268                    | 09        | 17.9 | 126D         | SN         |       | P          |      | 0548             | 79                      |                  | A       |
|          | PEKG | 11  | 0600          | 0630        | 0700        | N21 | E90 | 6268                    | 09        | 18.1 | 60           | 1N         |       | P          |      | 0630             | 63                      |                  | D       |
| 0129     | YUNN | 11  | 0548E         | 0548U       | 0618U       | S16 | E88 | 6267                    | 09        | 17.9 | 30U          | SN         |       | P          |      | 0548             | 31                      |                  | AG      |
| 0130     | SVTO | 11  | 0819          | 0824        | 0828        | N22 | E88 | 6268                    | 09        | 18.1 | 9            | SF         |       | 2          | E    |                  | 33                      |                  |         |
| 0131     | SVTO | 11  | 0953          | 0955        | 1001        | N23 | E89 | 6268                    | 09        | 18.3 | 8            | SF         |       | 3          | E    |                  | 19                      |                  |         |
| 0132     | SVTO | 11  | 1008          | 1009        | 1016        | N23 | E87 | 6268                    | 09        | 18.1 | 8            | SF         |       | 3          | E    |                  | 13                      |                  |         |
| 0133     | SVTO | 11  | 1011          | 1011        | 1016        | S10 | E57 | 6257                    | 09        | 15.7 | 5            | SF         |       | 3          | E    |                  | 18                      |                  |         |
| 0134     | HTPR | 11  | 1121E         | 1152        | 1236D       | N22 | E85 | 6268                    | 09        | 18.0 | 75D          | SF         |       | C          |      | 1152             | 50                      |                  | A       |
| 0135     | HTPR | 11  | 1248E         | 1509        | 1600D       | N22 | E85 | 6268                    | 09        | 18.1 | 192D         | SF         |       | C          |      | 1509             | 40                      |                  | A       |
| 0136     | PALE | 11  | 1710          | 1717        | 1726        | N23 | E82 | 6268                    | 09        | 18.0 | 16           | SF         |       | 3          | E    |                  | 51                      |                  |         |
| 0137     | HOLL | 11  | 1729          | 1729        | 1738        | S12 | E80 | 6267                    | 09        | 17.7 | 9            | SF         |       | 3          | E    |                  | 36                      |                  |         |
| 0138     | HOLL | 11  | 1732          | 1734        | 1742        | N08 | W12 | 6252                    | 09        | 10.8 | 10           | SF         |       | 3          | E    |                  | 11                      |                  |         |
| 0139     | RAMY | 11  | 1838          | 1839U       | 1859        | N21 | E80 | 6268                    | 09        | 17.9 | 21           | SF         |       | 3          | E    |                  | 48                      |                  |         |
| 0140     |      | 11  | 1841          | 1842        | 1846        | S19 | E23 | 6262                    | 09        | 13.5 | 5            | SF         |       |            |      |                  | 19                      |                  |         |
|          | PALE | 11  | 1841          | 1842        | 1844        | S16 | E21 | 6262                    | 09        | 13.4 | 3            | SF         |       | 3          | E    |                  | 11                      |                  |         |
|          | RAMY | 11  | 1841          | 1842        | 1845        | S19 | E23 | 6262                    | 09        | 13.5 | 4            | SF         |       | 3          | E    |                  | 12                      |                  |         |
|          | HOLL | 11  | 1844E         | 1844U       | 1849        | S21 | E24 | 6262                    | 09        | 13.6 | 5D           | SF         |       | 3          | E    |                  | 34                      |                  |         |
| 0141     | HOLL | 11  | 2031          | 2033        | 2240D       | N13 | E67 | 6263                    | 09        | 16.9 | 129D         | SF         |       | 3          | E    |                  | 39                      |                  |         |
| 0142     | HOLL | 11  | 2200          | 2201        | 2208        | N16 | E17 | 6254                    | 09        | 13.2 | 8            | SF         |       | 4          | E    |                  | 29                      |                  |         |
| 0143     | HOLL | 11  | 2341E         | 2341U       | 2345        | S13 | E74 | 6267                    | 09        | 17.6 | 4D           | SF         |       | 2          | E    |                  | 18                      |                  |         |
| 0144     | HOLL | 12  | 0037E         | 0038U       | 0041        | S17 | E16 | 6262                    | 09        | 13.2 | 4D           | SF         |       | 2          | E    |                  | 17                      |                  | H       |
| 0145     |      | 12  | 00543         | 01032       | 0224        | N05 | W47 | 6247                    | 09        | 8.5  | 90           | 2N         | M 1.5 |            |      |                  | 399                     | 3.8              | EFU     |
|          | PEKG | 12  | 0054          | 0103        | 0137        | N05 | W48 | 6247                    | 09        | 8.4  | 43           | 3N         |       | C          |      | 0105             | 925                     | 14.0             | EF      |
|          | HOLL | 12  | 0056E         | 0058U       | 0101D       | N07 | W45 | 6247                    | 09        | 8.7  | 5D           | SN         |       | 1          | E    |                  | 87                      |                  | F       |
|          | PALE | 12  | 0057          | 0113U       | 0233        | N06 | W45 | 6247                    | 09        | 8.7  | 96           | 2N         | M 1.5 | 3          | E    |                  | 474                     |                  | UF      |
|          | YUNN | 12  | 0100E         | 0105        | 0232        | N07 | W46 | 6247                    | 09        | 8.6  | 92D          | 1N         |       | P          |      |                  | 189                     | 2.8              | F       |
|          | LEAR | 12  | 0102E         | 0102U       | 0229        | N05 | W46 | 6247                    | 09        | 8.6  | 87D          | 2N         |       | 3          | E    |                  | 417                     |                  | FE      |
|          | PURP | 12  | 0102E         | 0102U       | 0245        | N04 | W50 | 6247                    | 09        | 8.3  | 103D         | 2B         |       | P          |      | 0102             | 340                     | 5.5              |         |
|          | MITK | 12  | 0111E         |             | 0230        | N03 | W47 | 6247                    | 09        | 8.5  | 79D          | 2N         |       | C          |      | 0111             | 360                     | 5.4              | F       |
| 0146     | LEAR | 12  | 0320          | 0325        | 0330        | N21 | E79 | 6268                    | 09        | 18.2 | 10           | SF         |       | 3          | E    |                  | 15                      |                  |         |
| 0147     |      | 12  | 0404*         | 0415        | 0420        | N18 | E62 | 6257F                   | 09        | 16.9 | 16           | SF         |       |            |      |                  | 60                      | 2.0              | D       |
|          | PEKG | 12  | 0404          | 0415        | 0420        | N17 | E64 | 6257F                   | 09        | 17.0 | 16           | SF         |       | P          |      | 0415             | 84                      | 2.0              | D       |
|          | PALE | 12  | 0415          | 0415        | 0432D       | N19 | E59 | 6257F                   | 09        | 16.7 | 17D          | SF         |       | 3          | E    |                  | 35                      |                  |         |
| 0148     | HTPR | 12  | 1128          | 1133        | 1205        | S10 | E40 | 6257                    | 09        | 15.5 | 37           | SF         |       | C          |      | 1133             | 20                      | 0.3              |         |

SEPTEMBER 1990

| Grp # | Sta  | Day | Start (UT) | Max (UT) | End (UT) | NOAA/ |     |        | Dur (Min) | Imp Opt | Xray | Obs See  | Type | Area Measurement |                      |               | Remarks |
|-------|------|-----|------------|----------|----------|-------|-----|--------|-----------|---------|------|----------|------|------------------|----------------------|---------------|---------|
|       |      |     |            |          |          | Lat   | CMD | Region | Mo        | Day     |      |          |      | Time (UT)        | Apparent (10-6 Disk) | Corr (Sq Deg) |         |
| 0149  |      | 12  | 1630*      | 1715*    | 1754     | N06   | W56 | 6247   | 09        | 8.5     | 84   | SF       |      |                  | 46                   |               | FK      |
|       | HOLL | 12  | 1630       | 1718     | 1800     | N06   | W55 | 6247   | 09        | 8.6     | 90   | 1F       | 3    | E                | 113                  |               | F       |
|       | RAMY | 12  | 1710       | 1715     | 1755     | N06   | W56 | 6247   | 09        | 8.5     | 45   | SF       |      | E                | 21                   |               | K       |
|       | RAMY | 12  | 1710       | 1736     | 1755     | N06   | W56 | 6247   | 09        | 8.5     | 45   | SF       | 3    | E                | 40                   |               | F       |
|       | PALE | 12  | 1717       | 1735     | 1745     | N06   | W56 | 6247   | 09        | 8.5     | 28   | SF       | 4    | E                | 10                   |               |         |
| 0150  |      | 12  | 1848       | 1905*    | 2000     | S29   | E58 | 6266   | 09        | 17.3    | 72   | SN C 6.6 |      |                  | 77                   |               | EFK     |
|       | HOLL | 12  | 1848       | 1905     | 2005     | S29   | E58 | 6266   | 09        | 17.3    | 77   | 1N C 6.6 | 4    | E                | 144                  |               | FE      |
|       | HOLL | 12  | 1848       | 1938     | 2005     | S29   | E58 | 6266   | 09        | 17.3    | 77   | SB       |      | E                | 22                   |               | K       |
|       | PALE | 12  | 1910E      | 1917U    | 1949     | S28   | E58 | 6266   | 09        | 17.3    | 39D  | SF       | 4    | E                | 65                   |               | F       |
| 0151  |      | 12  | 2104       | 2107     | 2122     | S28   | E58 | 6266   | 09        | 17.4    | 18   | SF       |      |                  | 21                   |               |         |
|       | HOLL | 12  | 2104       | 2107     | 2125     | S28   | E58 | 6266   | 09        | 17.4    | 21   | SF       | 3    | E                | 24                   |               |         |
|       | RAMY | 12  | 2111E      | 2112U    | 2120     | S28   | E59 | 6266   | 09        | 17.5    | 9D   | SF       | 2    | E                | 18                   |               |         |
| 0152  | HOLL | 12  | 2230       | 2232     | 2242     | S09   | E33 | 6257   | 09        | 15.4    | 12   | SF       | 3    | E                | 20                   |               |         |
| 0153  |      | 12  | 2257E      | 23012    | 2322     | N24   | E14 | 6264A  | 09        | 14.0    | 25D  | SF       |      |                  | 50                   |               | F       |
|       | HOLL | 12  | 2257E      | 2257U    | 2324     | N24   | E15 | 6264A  | 09        | 14.1    | 27D  | SF       | 2    | E                | 79                   |               | F       |
|       | LEAR | 12  | 2259E      | 2301     | 2319     | N22   | E13 | 6264A  | 09        | 13.9    | 20D  | SF       | 2    | E                | 34                   |               | F       |
|       | PALE | 12  | 2301E      | 2303     | 2323     | N25   | E15 | 6264A  | 09        | 14.1    | 22D  | SF       | 3    | E                | 38                   |               |         |
| 0154  |      | 12  | 2348*      | 2351*    | 2432     | N13   | E53 | 6263   | 09        | 17.0    | 44   | SF C 1.7 |      |                  | 42                   |               | F       |
|       | LEAR | 12  | 2348       | 2351     | 2355     | N09   | E52 | 6263   | 09        | 16.9    | 7    | SF       | 3    | E                | 18                   |               |         |
|       | HOLL | 12  | 2349       | 2351     | 2412     | N13   | E53 | 6263   | 09        | 17.0    | 23   | SF       | 2    | E                | 22                   |               |         |
|       | HOLL | 13  | 0011       | 0027     | 0046     | N15   | E51 | 6263   | 09        | 16.9    | 35   | SF       | 2    | E                | 81                   |               | F       |
|       | LEAR | 13  | 0014       | 0028     | 0104     | N14   | E53 | 6263   | 09        | 17.0    | 50   | SF C 1.7 | 3    | E                | 63                   |               | F       |
|       | PALE | 13  | 0027       | 0029     | 0044     | N13   | E54 | 6263   | 09        | 17.1    | 17   | SF       | 3    | E                | 24                   |               |         |
| 0155  | PALE | 13  | 0138       | 0138     | 0148     | S09   | E33 | 6257   | 09        | 15.5    | 10   | SF       | 3    | E                | 11                   |               |         |
| 0156  |      | 13  | 02201      | 02211    | 0230     | N11   | E51 | 6263   | 09        | 16.9    | 10   | SF C 2.4 |      |                  | 36                   |               | F       |
|       | PALE | 13  | 0220       | 0222     | 0228     | N13   | E51 | 6263   | 09        | 16.9    | 8    | SF       | 3    | E                | 20                   |               |         |
|       | LEAR | 13  | 0221       | 0221     | 0232     | N09   | E51 | 6263   | 09        | 16.9    | 11   | SF C 2.4 | 3    | E                | 53                   |               | F       |
| 0157  |      | 13  | 03332      | 03365    | 0348     | N13   | E51 | 6263   | 09        | 17.0    | 15   | SN C 1.3 |      |                  | 111                  | 3.0           | CEF     |
|       | LEAR | 13  | 0333       | 0336     | 0350     | N13   | E52 | 6263   | 09        | 17.1    | 17   | SF       | 3    | E                | 94                   |               | F       |
|       | TACH | 13  | 0334       | 0340     | 0348     | N13   | E50 | 6263   | 09        | 16.9    | 14   | 1B       | 3    | C                | 194                  | 3.0           | EC      |
|       | PALE | 13  | 0335       | 0341     | 0346     | N14   | E50 | 6263   | 09        | 16.9    | 11   | SF C 1.3 | 3    | E                | 44                   |               | F       |
| 0158  |      | 13  | 06431      | 06462    | 0700     | N12   | E50 | 6263   | 09        | 17.0    | 17   | SF       |      |                  | 42                   | 0.9           | F       |
|       | HTRP | 13  | 0643       | 0646     | 0700     | N12   | E50 | 6263   | 09        | 17.0    | 17   | SF       |      | C                | 60                   | 0.9           |         |
|       | KANZ | 13  | 0644       | 0647     | 0659     | N12   | E50 | 6263   | 09        | 17.0    | 15   | SF       |      | C                |                      |               |         |
|       | LEAR | 13  | 0644       | 0648     | 0701     | N12   | E50 | 6263   | 09        | 17.0    | 17   | SF       | 3    | E                | 23                   |               | F       |
| 0159  |      | 13  | 08341      | 08351    | 0854     | S10   | E29 | 6257   | 09        | 15.5    | 20   | SF       |      |                  | 28                   |               |         |
|       | LEAR | 13  | 0834       | 0836     | 0900     | S10   | E29 | 6257   | 09        | 15.5    | 26   | SF       | 3    | E                | 28                   |               |         |
|       | KANZ | 13  | 0835       | 0835     | 0847     | S09   | E29 | 6257   | 09        | 15.5    | 12   | SF       |      | V                |                      |               |         |
| 0160  | KANZ | 13  | 1052       | 1052     | 1056     | N02   | W70 | 6247   | 09        | 8.2     | 4    | SF       |      | V                |                      |               |         |
| 0161  |      | 13  | 1405       | 14091    | 1450     | N14   | E44 | 6263   | 09        | 16.9    | 45   | 1F C 1.8 |      |                  | 130                  |               | F       |
|       | SVTO | 13  | 1405       | 1409     | 1457     | N14   | E45 | 6263   | 09        | 17.0    | 52   | 1F       | 3    | E                | 174                  |               | F       |
|       | RAMY | 13  | 1405       | 1410     | 1447     | N14   | E44 | 6263   | 09        | 16.9    | 42   | SF       | 3    | E                | 89                   |               | F       |
|       | HOLL | 13  | 1412E      | 1412U    | 1446     | N14   | E43 | 6263   | 09        | 16.8    | 34D  | 1F C 1.8 | 3    | E                | 126                  |               | F       |
| 0162  | RAMY | 13  | 1443E      | 1445U    | 1505     | S14   | E77 | 6272   | 09        | 19.4    | 22D  | SF       | 2    | E                | 20                   |               | H       |
| 0163  | HOLL | 13  | 1450       | 1458     | 1502     | S27   | E48 | 6266   | 09        | 17.3    | 12   | SF       | 3    | E                | 10                   |               |         |
| 0164  | HOLL | 13  | 1547       | 1625     | 1637     | S29   | E49 | 6266   | 09        | 17.5    | 50   | SF       | 3    | E                | 18                   |               |         |
| 0165  | HOLL | 13  | 1623       | 1625     | 1632     | N24   | E57 | 6268   | 09        | 18.1    | 9    | SF       | 3    | E                | 29                   |               |         |
| 0166  |      | 13  | 17351      | 1745*    | 1853     | S28   | E48 | 6266   | 09        | 17.5    | 78   | SF C 2.6 |      |                  | 61                   |               | F       |
|       | HOLL | 13  | 1735       | 1806     | 1850     | S29   | E48 | 6266   | 09        | 17.5    | 75   | SF C 2.6 | 3    | E                | 70                   |               | F       |
|       | PALE | 13  | 1736       | 1745     | 1856     | S28   | E49 | 6266   | 09        | 17.6    | 80   | SF       | 3    | E                | 52                   |               |         |
| 0167  | HOLL | 13  | 1929       | 1929     | 1939     | N11   | W22 | 6253   | 09        | 12.1    | 10   | SF       | 3    | E                | 12                   |               | F       |

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# H $\alpha$ SOLAR FLARES

SEPTEMBER 1990

| Grp # | Sta  | Day | Start (UT) | Max (UT) | End (UT) | Lat             | CMD | NOAA/       | CMP     | Dur (Min) | Imp Opt  | Xray | Obs See | Type | Area Measurement |                      |               | Remarks |
|-------|------|-----|------------|----------|----------|-----------------|-----|-------------|---------|-----------|----------|------|---------|------|------------------|----------------------|---------------|---------|
|       |      |     |            |          |          |                 |     | USAF Region |         |           |          |      |         |      | Time (UT)        | Apparent (10-6 Disk) | Corr (Sq Deg) |         |
| 0168  | HOLL | 13  | 2152       | 2155     | 2206     | N11             | W23 | 6253        | 09 12.2 | 14        | SF       |      | 3       | E    |                  | 12                   |               | F       |
|       |      |     | 13 2223    |          | 2231     | No Flare Patrol |     |             |         |           |          |      |         |      |                  |                      |               |         |
| 0169  |      | 13  | 22399      | 2239*    | 2257     | S10             | E20 | 6257        | 09 15.4 | 18        | SF C 1.4 |      |         |      |                  | 27                   |               | F       |
|       | HOLL | 13  | 2239       | 2239     | 2258     | S10             | E20 | 6257        | 09 15.4 | 19        | SF C 1.4 | 3    | E       |      |                  | 43                   |               | F       |
|       | PALE | 13  | 2248       | 2250     | 2256     | S09             | E21 | 6257        | 09 15.5 | 8         | SF       | 3    | E       |      |                  | 11                   |               |         |
| 0170  |      | 13  | 2303*      | 23251    | 2345     | S10             | E20 | 6257        | 09 15.5 | 42        | SF       |      |         |      |                  | 47                   |               | F       |
|       | LEAR | 13  | 2303       | 2326     | 2350     | S09             | E21 | 6257        | 09 15.5 | 47        | SF       | 3    | E       |      |                  | 56                   |               | F       |
|       | HOLL | 13  | 2322       | 2326     | 2347     | S10             | E19 | 6257        | 09 15.4 | 25        | SF       | 3    | E       |      |                  | 60                   |               | F       |
|       | PALE | 13  | 2324       | 2325     | 2337     | S10             | E20 | 6257        | 09 15.5 | 13        | SF       | 3    | E       |      |                  | 24                   |               |         |
| 0171  |      | 13  | 23523      | 2356*    | 2409     | S30             | E46 | 6266        | 09 17.6 | 17        | SF       |      |         |      |                  | 16                   |               | F       |
|       | LEAR | 13  | 2352       | 2407     | 2414     | S30             | E47 | 6266        | 09 17.7 | 22        | SF       | 3    | E       |      |                  | 15                   |               |         |
|       | HOLL | 13  | 2355       | 2356     | 2404     | S29             | E45 | 6266        | 09 17.5 | 9         | SF       | 3    | E       |      |                  | 18                   |               | F       |
| 0172  |      | 14  | 00533      | 00571    | 0118     | S10             | E18 | 6257        | 09 15.4 | 25        | SF C 1.6 |      |         |      |                  | 74                   |               | F       |
|       | LEAR | 14  | 0053       | 0057     | 0125     | S10             | E18 | 6257        | 09 15.4 | 32        | SF C 1.6 | 3    | E       |      |                  | 89                   |               | F       |
|       | PALE | 14  | 0056       | 0058     | 0110     | S09             | E19 | 6257        | 09 15.5 | 14        | SF C 1.6 | 3    | E       |      |                  | 60                   |               | F       |
| 0173  |      | 14  | 02206      | 02261    | 0247     | S10             | E18 | 6257        | 09 15.4 | 27        | SF       |      |         |      |                  | 34                   |               | F       |
|       | LEAR | 14  | 0220       | 0227     | 0256     | S10             | E17 | 6257        | 09 15.4 | 36        | SF       | 3    | E       |      |                  | 43                   |               |         |
|       | PALE | 14  | 0226       | 0226     | 0238     | S10             | E18 | 6257        | 09 15.4 | 12        | SF       | 3    | E       |      |                  | 26                   |               | F       |
| 0174  | TACH | 14  | 0400       |          | 0411D    | S09             | E13 | 6257        | 09 15.1 | 11D       | SB       |      | 2       | C    | 0411             | 143                  | 1.6           | D       |
| 0175  |      | 14  | 0410       | 04123    | 0446     | S30             | E44 | 6266        | 09 17.6 | 36        | 1N M 1.3 |      |         |      |                  | 185                  | 4.0           | EF      |
|       | LEAR | 14  | 0410       | 0412     | 0501     | S29             | E43 | 6266        | 09 17.5 | 51        | 1F M 1.3 | 3    | E       |      |                  | 160                  |               | FE      |
|       | PEKG | 14  | 0410       | 0415     | 0432     | S30             | E45 | 6266        | 09 17.7 | 22        | 1N       |      | P       | 0415 |                  | 210                  | 4.0           | E       |
| 0176  | LEAR | 14  | 0532       | 0536     | 0542     | S13             | E49 | 6267        | 09 17.9 | 10        | SF       |      | 3       | E    |                  | 23                   |               |         |
| 0177  | LEAR | 14  | 0535       | 0537     | 0544     | N17             | E71 | 6269        | 09 19.6 | 9         | SF       |      | 3       | E    |                  | 22                   |               |         |
| 0178  |      | 14  | 0806       | 08091    | 0824     | N14             | E35 | 6263        | 09 17.0 | 18        | SF       |      |         |      |                  | 27                   |               |         |
|       | SVTO | 14  | 0806       | 0809     | 0827     | N13             | E35 | 6263        | 09 17.0 | 21        | SF       | 3    | E       |      |                  | 27                   |               |         |
|       | KANZ | 14  | 0806       | 0810     | 0821     | N14             | E35 | 6263        | 09 17.0 | 15        | SF       |      | V       |      |                  |                      |               |         |
| 0179  |      | 14  | 08073      | 08082    | 0826     | S12             | E18 | 6257        | 09 15.7 | 19        | SF       |      |         |      |                  | 22                   |               |         |
|       | SVTO | 14  | 0807       | 0808     | 0824     | S13             | E18 | 6257        | 09 15.7 | 17        | SF       | 3    | E       |      |                  | 22                   |               |         |
|       | KANZ | 14  | 0810       | 0810     | 0827     | S12             | E18 | 6257        | 09 15.7 | 17        | SF       |      | V       |      |                  |                      |               |         |
| 0180  | HTPR | 14  | 0915       | 0928     | 0940     | S18             | E85 | 6275        | 09 20.8 | 25        | SF       |      |         | C    | 0928             | 40                   |               | A       |
| 0181  |      | 14  | 09411      | 09441    | 0952     | N14             | E34 | 6263        | 09 17.0 | 11        | SF       |      |         |      |                  | 25                   |               |         |
|       | KANZ | 14  | 0941       | 0944     | 0951     | N14             | E33 | 6263        | 09 16.9 | 10        | SF       |      | V       |      |                  |                      |               |         |
|       | SVTO | 14  | 0942       | 0945     | 0952     | N13             | E34 | 6263        | 09 17.0 | 10        | SF       | 3    | E       |      |                  | 25                   |               |         |
| 0182  | HTPR | 14  | 0956       | 1000     | 1010     | S18             | E85 | 6275        | 09 20.9 | 14        | 1N       |      |         | C    | 1000             | 60                   |               | A       |
| 0183  |      | 14  | 1006*      | 10191    | 1024     | N23             | E49 | 6268        | 09 18.2 | 18        | SF       |      |         |      |                  | 52                   | 0.8           |         |
|       | HTPR | 14  | 1006       | 1019     | 1025     | N23             | E51 | 6268        | 09 18.3 | 19        | SF       |      |         | C    | 1019             | 50                   | 0.8           |         |
|       | SVTO | 14  | 1006       | 1020     | 1026     | N23             | E48 | 6268        | 09 18.1 | 20        | SF       | 4    | E       |      |                  | 53                   |               |         |
|       | KANZ | 14  | 1016       | 1020     | 1022     | N24             | E48 | 6268        | 09 18.1 | 6         | SF       |      | V       |      |                  |                      |               |         |
| 0184  |      | 14  | 11136      | 1123     | 1142     | N18             | E64 | 6269        | 09 19.3 | 29        | SF C 1.8 |      |         |      |                  | 69                   |               |         |
|       | SVTO | 14  | 1113       | 1123     | 1146     | N18             | E64 | 6269        | 09 19.3 | 33        | SF C 1.8 | 4    | E       |      |                  | 69                   |               |         |
|       | KANZ | 14  | 1119       | 1123     | 1137     | N18             | E65 | 6269        | 09 19.4 | 18        | SF       |      | V       |      |                  |                      |               |         |
| 0185  |      | 14  | 12552      | 12561    | 1312     | S10             | E12 | 6257        | 09 15.4 | 17        | 1F C 3.1 |      |         |      |                  | 140                  |               | EF      |
|       | SVTO | 14  | 1255       | 1257     | 1316     | S10             | E13 | 6257        | 09 15.5 | 21        | 1F C 3.1 | 4    | E       |      |                  | 180                  |               |         |
|       | RAMY | 14  | 1256       | 1256     | 1307     | S10             | E13 | 6257        | 09 15.5 | 11        | 1F       | 2    | E       |      |                  | 100                  |               | FE      |
|       | KANZ | 14  | 1257       | 1257     | 1313     | S10             | E11 | 6257        | 09 15.4 | 16        | 1F       |      | V       |      |                  |                      |               |         |
| 0186  |      | 14  | 13272      | 13292    | 1342     | N09             | E30 | 6263        | 09 16.8 | 15        | 1F       |      |         |      |                  | 116                  |               | H       |
|       | SVTO | 14  | 1327       | 1331     | 1340     | N08             | E29 | 6263        | 09 16.7 | 13        | 1F       | 4    | E       |      |                  | 124                  |               |         |
|       | RAMY | 14  | 1328       | 1331     | 1338     | N10             | E32 | 6263        | 09 17.0 | 10        | 1F       | 3    | E       |      |                  | 109                  |               | H       |
|       | KANZ | 14  | 1329       | 1329     | 1348     | N08             | E29 | 6263        | 09 16.7 | 19        | 1F       |      | V       |      |                  |                      |               |         |

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# H $\alpha$ SOLAR FLARES

SEPTEMBER 1990

| Grp # | Sta  | Day | Start (UT) | Max (UT) | End (UT) | Lat             | CMD | NOAA/<br>USAF Region | CMP Mo | Day  | Dur (Min) | Imp Opt | Xray  | Obs See | Type | Time (UT) | Area Measurement                 |               | Remarks |
|-------|------|-----|------------|----------|----------|-----------------|-----|----------------------|--------|------|-----------|---------|-------|---------|------|-----------|----------------------------------|---------------|---------|
|       |      |     |            |          |          |                 |     |                      |        |      |           |         |       |         |      |           | Apparent (10 <sup>-6</sup> Disk) | Corr (Sq Deg) |         |
| 0204  |      | 15  | 1835       | 1841     | 1912     | S30             | E22 | 6266                 | 09     | 17.5 | 37        | SF      |       |         |      |           | 29                               |               |         |
|       | HOLL | 15  | 1835       | 1841     | 1912     | S30             | E23 | 6266                 | 09     | 17.6 | 37        | SF      |       | 3       | E    |           | 40                               |               |         |
|       | PALE | 15  | 1835E      | 1905U    | 1905D    | S29             | E22 | 6266                 | 09     | 17.5 | 30D       | SF      |       | 3       | E    |           | 18                               |               |         |
|       |      | 15  | 1922       |          | 1939     | No Flare Patrol |     |                      |        |      |           |         |       |         |      |           |                                  |               |         |
| 0205  |      | 15  | 2349       | 2347B    | 2406     | S18             | E10 | 6267                 | 09     | 16.7 | 17        | SF      |       |         |      |           | 86                               | 1.0           | DEIJ    |
|       | VORO | 15  | 2343E      | 2347     | 2406     | S19             | E07 | 6267                 | 09     | 16.5 | 23D       | SF      |       | 2       | C    | 2347      | 81                               | 0.9           | EIJ     |
|       | VORO | 15  | 2349       | 2355     | 2406     | S17             | E14 | 6267                 | 09     | 17.0 | 17        | SF      |       | 2       | C    | 2355      | 90                               | 1.0           | DIJ     |
| 0206  | PALE | 16  | 0038       | 0040     | 0051     | S12             | W09 | 6257                 | 09     | 15.3 | 13        | SF      | C 1.3 | 4       | E    |           | 43                               |               | F       |
| 0207  | VORO | 16  | 0041       | 0045     | 0102     | S13             | E13 | 6267                 | 09     | 17.0 | 21        | SF      |       | 2       | C    | 0045      | 72                               | 0.8           | DHIJ    |
| 0208  | RAMY | 16  | 1337       | 1338     | 1341     | S12             | W13 | 6257                 | 09     | 15.6 | 4         | SF      |       | 3       | E    |           | 18                               |               |         |
| 0209  | RAMY | 16  | 1341       | 1342     | 1349     | S15             | E51 | 6272                 | 09     | 20.4 | 8         | SF      |       | 3       | E    |           | 22                               |               |         |
| 0210  | RAMY | 16  | 1417       | 1424     | 1445     | S11             | W15 | 6257                 | 09     | 15.5 | 28        | 1F      | C 2.4 | 3       | E    |           | 100                              |               | F       |
|       |      | 16  | 1619       |          | 1635     | No Flare Patrol |     |                      |        |      |           |         |       |         |      |           |                                  |               |         |
| 0211  | HOLL | 16  | 1643       | 1645     | 1703     | N15             | E04 | 6263A                | 09     | 17.0 | 20        | SF      |       | 3       | E    |           | 67                               |               | F       |
| 0212  |      | 16  | 1649       | 16551    | 1712     | N10             | W60 | 6253                 | 09     | 12.2 | 23        | 1F      | C 1.5 |         |      |           | 113                              |               | F       |
|       | PALE | 16  | 1649       | 1655     | 1712     | N10             | W60 | 6253                 | 09     | 12.2 | 23        | SF      | C 1.5 | 3       | E    |           | 50                               |               | F       |
|       | HOLL | 16  | 1649       | 1656     | 1712     | N10             | W61 | 6253                 | 09     | 12.1 | 23        | 1F      | C 1.5 | 3       | E    |           | 176                              |               | F       |
| 0213  | HOLL | 16  | 1809       | 1814     | 1910     | N10             | W59 | 6253                 | 09     | 12.3 | 61        | SF      | C 2.1 | 3       | E    |           | 45                               |               | F       |
| 0214  |      | 16  | 1903       | 1907     | 1924     | S12             | E04 | 6267                 | 09     | 17.1 | 21        | SF      |       |         |      |           | 33                               |               | F       |
|       | PALE | 16  | 1903       | 1907     | 1936D    | S11             | E04 | 6267                 | 09     | 17.1 | 33D       | SF      |       | 3       | E    |           | 26                               |               | F       |
|       | HOLL | 16  | 1904E      | 1904U    | 1924     | S12             | E03 | 6267                 | 09     | 17.0 | 20D       | SF      |       | 3       | E    |           | 40                               |               |         |
| 0215  | HOLL | 16  | 2133       | 2136     | 2140D    | S28             | E04 | 6266                 | 09     | 17.2 | 7D        | SF      |       | 2       | E    |           | 23                               |               |         |
|       |      | 16  | 2141       |          | 2234     | No Flare Patrol |     |                      |        |      |           |         |       |         |      |           |                                  |               |         |
| 0216  |      | 17  | 0314       | 03152    | 0322     | S14             | E42 | 6272                 | 09     | 20.3 | 8         | SN      | C 2.1 |         |      |           | 62                               | 1.2           | DF      |
|       | PEKG | 17  | 0314       | 0315     | 0320     | S14             | E43 | 6272                 | 09     | 20.4 | 6         | SN      |       |         | P    | 0315      | 84                               | 1.2           | D       |
|       | LEAR | 17  | 0314       | 0317     | 0323     | S15             | E42 | 6272                 | 09     | 20.3 | 9         | SF      | C 2.1 | 3       | E    |           | 39                               |               | F       |
| 0217  | TACH | 17  | 0337       | 0339     | 0400     | S12             | W02 | 6267                 | 09     | 17.0 | 23        | SB      |       | 2       | C    | 0339      | 71                               | 0.8           | E       |
| 0218  |      | 17  | 05465      | 05504    | 0600     | S14             | E39 | 6272                 | 09     | 20.2 | 14        | 1N      | M 1.0 |         |      |           | 136                              | 1.9           | DEFZ    |
|       | TACH | 17  | 0546       | 0550     | 0559     | S13             | E40 | 6272                 | 09     | 20.2 | 13        | SB      |       | 2       | C    | 0550      | 46                               | 0.7           | D       |
|       | ATHN | 17  | 0550E      | 0553     | 0558     | S14             | E35 | 6272                 | 09     | 19.9 | 8D        | 1N      |       | 3       | V    | 0553      | 191                              | 2.6           |         |
|       | LEAR | 17  | 0550       | 0553     | 0601     | S15             | E41 | 6272                 | 09     | 20.3 | 11        | 1N      | M 1.0 | 3       | E    |           | 134                              |               | ZF      |
|       | ABST | 17  | 0551       | 0554     | 0603     | S15             | E40 | 6272                 | 09     | 20.3 | 12        | 1N      |       |         | C    | 0554      | 175                              | 2.5           | E       |
| 0219  | SVTO | 17  | 0654       | 0754     | 0840     | S22             | E47 | 6275                 | 09     | 20.9 | 106       | SF      | C 4.1 | 4       | E    |           | 82                               |               | F       |
| 0220  |      | 17  | 0708*      | 07353    | 0759     | S19             | E49 | 6275                 | 09     | 21.0 | 51        | 1N      |       |         |      |           | 108                              | 2.2           | EF      |
|       | ISTA | 17  | 0708       | 0735     | 0801     | S18             | E52 | 6275                 | 09     | 21.2 | 53        | 1B      |       |         |      |           |                                  |               | E       |
|       | LEAR | 17  | 0728       | 0738     | 0803     | S17             | E48 | 6275                 | 09     | 20.9 | 35        | SF      |       | 3       | E    |           | 68                               |               | F       |
|       | ABST | 17  | 0730       | 0736     | 0752     | S21             | E47 | 6275                 | 09     | 20.9 | 22        | 1N      |       |         | C    | 0736      | 131                              | 2.2           | E       |
|       | PEKG | 17  | 0735E      | 0737     | 0740D    | S19             | E49 | 6275                 | 09     | 21.0 | 5D        | 1B      |       |         | P    | 0737      | 126                              | 2.2           | E       |
| 0221  | KANZ | 17  | 1309       | 1309     | 1317     | S11             | W06 | 6267                 | 09     | 17.1 | 8         | SF      |       |         | V    |           |                                  |               |         |
| 0222  |      | 17  | 1333       | 13448    | 1414     | S14             | E34 | 6272                 | 09     | 20.1 | 41        | SB      | M 1.3 |         |      |           | 74                               |               | FHK     |
|       | HOLL | 17  | 1319E      | 1345     | 1423     | S15             | E30 | 6272                 | 09     | 19.8 | 64D       | SB      | M 1.3 | 3       | E    |           | 52                               |               | FH      |
|       | RAMY | 17  | 1333       | 1344     | 1410     | S14             | E35 | 6272                 | 09     | 20.2 | 37        | 1B      |       | 3       | E    |           | 130                              |               | FH      |
|       | KANZ | 17  | 1333       | 1345     | 1412     | S13             | E37 | 6272                 | 09     | 20.3 | 39        | SN      |       |         | V    |           |                                  |               |         |
|       | RAMY | 17  | 1333       | 1352     | 1410     | S14             | E35 | 6272                 | 09     | 20.2 | 37        | 1B      |       |         | E    |           | 81                               |               | K       |
|       | SVTO | 17  | 1353E      | 1354U    | 1421D    | S15             | E34 | 6272                 | 09     | 20.1 | 28D       | SB      |       | 2       | E    |           | 31                               |               | H       |
| 0223  | HOLL | 17  | 1500       | 1503     | 1539     | S31             | E00 | 6266                 | 09     | 17.6 | 39        | SF      |       | 3       | E    |           | 19                               |               |         |

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| Grp # | Sta  | Day | Start (UT) | Max (UT) | End (UT) | Lat             | CMD | NOAA/<br>USAF Region | CMP Mo | Day  | Dur (Min) | Imp Opt  | Xray | Obs See | Type | Area Measurement |                      |               | Remarks |
|-------|------|-----|------------|----------|----------|-----------------|-----|----------------------|--------|------|-----------|----------|------|---------|------|------------------|----------------------|---------------|---------|
|       |      |     |            |          |          |                 |     |                      |        |      |           |          |      |         |      | Time (UT)        | Apparent (10-6 Disk) | Corr (Sq Deg) |         |
| 0224  |      | 17  | 15041      | 1505     | 1512     | S18             | W64 | 6262                 | 09     | 12.7 | 8         | SF       |      |         |      |                  | 28                   |               |         |
|       | RAMY | 17  | 1504       | 1505     | 1512     | S19             | W68 | 6262                 | 09     | 12.4 | 8         | SF       |      | 3       | E    |                  | 29                   |               |         |
|       | HOLL | 17  | 1505       | 1505     | 1512     | S18             | W61 | 6262                 | 09     | 13.0 | 7         | SF       |      | 3       | E    |                  | 26                   |               |         |
| 0225  | HOLL | 17  | 1527       | 1528     | 1537     | S20             | E48 | 6275                 | 09     | 21.3 | 10        | SF       |      | 3       | E    |                  | 13                   |               |         |
| 0226  |      | 17  | 1616       | 16286    | 1724     | S27             | W03 | 6266                 | 09     | 17.4 | 68        | SF C 1.6 |      |         |      |                  | 50                   |               | FH      |
|       | HOLL | 17  | 1616       | 1628     | 1719     | S27             | W03 | 6266                 | 09     | 17.4 | 63        | SF       |      | 3       | E    |                  | 73                   |               | F       |
|       | RAMY | 17  | 1616       | 1634     | 1728     | S27             | W03 | 6266                 | 09     | 17.4 | 72        | SF C 1.6 |      | 3       | E    |                  | 44                   |               | FH      |
|       | PALE | 17  | 1701E      | 1701U    | 1739D    | S27             | W04 | 6266                 | 09     | 17.4 | 38D       | SF       |      | 4       | E    |                  | 33                   |               | F       |
| 0227  |      | 17  | 1642       | 1643     | 1658     | S16             | E35 | 6272                 | 09     | 20.3 | 16        | SF C 1.6 |      |         |      |                  | 17                   |               | FH      |
|       | RAMY | 17  | 1642       | 1643     | 1653     | S16             | E35 | 6272                 | 09     | 20.3 | 11        | SF C 1.6 |      | 3       | E    |                  | 16                   |               | FH      |
|       | HOLL | 17  | 1642       | 1643     | 1702     | S16             | E35 | 6272                 | 09     | 20.3 | 20        | SF C 1.6 |      | 3       | E    |                  | 18                   |               |         |
| 0228  |      | 17  | 17101      | 17136    | 1725     | S17             | W62 | 6262                 | 09     | 13.0 | 15        | SF       |      |         |      |                  | 14                   |               |         |
|       | HOLL | 17  | 1710       | 1719     | 1725     | S17             | W61 | 6262                 | 09     | 13.1 | 15        | SF       |      | 3       | E    |                  | 11                   |               |         |
|       | PALE | 17  | 1711       | 1713     | 1739D    | S17             | W62 | 6262                 | 09     | 13.0 | 28D       | SF       |      | 4       | E    |                  | 18                   |               |         |
| 0229  |      | 17  | 17501      | 1751     | 1825     | S14             | E34 | 6272                 | 09     | 20.3 | 35        | SF       |      |         |      |                  | 30                   |               | F       |
|       | RAMY | 17  | 1750       | 1751     | 1818     | S15             | E35 | 6272                 | 09     | 20.4 | 28        | SF       |      | 3       | E    |                  | 23                   |               |         |
|       | PALE | 17  | 1751       | 1751     | 1825     | S13             | E36 | 6272                 | 09     | 20.5 | 34        | SF       |      | 4       | E    |                  | 35                   |               | F       |
|       | HOLL | 17  | 1751       | 1751     | 1831     | S15             | E31 | 6272                 | 09     | 20.1 | 40        | SF       |      | 4       | E    |                  | 33                   |               | F       |
| 0230  |      | 17  | 1802*      | 1802*    | 1836     | S18             | W62 | 6262                 | 09     | 13.0 | 34        | SF       |      |         |      |                  | 26                   |               | H       |
|       | PALE | 17  | 1800E      | 1802     | 1839     | S18             | W63 | 6262                 | 09     | 12.9 | 39D       | SF       |      | 4       | E    |                  | 25                   |               | H       |
|       | HOLL | 17  | 1802       | 1802     | 1816     | S18             | W62 | 6262                 | 09     | 13.0 | 14        | SF       |      | 3       | E    |                  | 18                   |               | H       |
|       | HOLL | 17  | 1825       | 1830     | 1854     | S17             | W61 | 6262                 | 09     | 13.1 | 29        | SF       |      | 3       | E    |                  | 34                   |               |         |
| 0231  | PALE | 17  | 1827       | 1828     | 1834     | N17             | E21 | 6269                 | 09     | 19.4 | 7         | SF       |      | 4       | E    |                  | 18                   |               |         |
| 0232  |      | 17  | 18451      | 18492    | 1934     | S14             | E33 | 6272                 | 09     | 20.3 | 49        | 1B C 6.5 |      |         |      |                  | 111                  |               | FH      |
|       | RAMY | 17  | 1845       | 1849     | 1923     | S14             | E33 | 6272                 | 09     | 20.3 | 38        | 1B C 6.5 |      | 4       | E    |                  | 126                  |               | F       |
|       | PALE | 17  | 1846       | 1906U    | 1906D    | S14             | E35 | 6272                 | 09     | 20.4 | 200       | SB       |      | 4       | E    |                  | 63                   |               | F       |
|       | HOLL | 17  | 1848E      | 1851     | 1944     | S14             | E31 | 6272                 | 09     | 20.1 | 56D       | 1B       |      | 3       | E    |                  | 144                  |               | FH      |
| 0233  | HOLL | 17  | 1857       | 1904     | 1937     | S18             | W62 | 6262                 | 09     | 13.1 | 40        | SF       |      | 3       | E    |                  | 25                   |               |         |
|       |      | 17  | 2051       |          | 2054     | No Flare Patrol |     |                      |        |      |           |          |      |         |      |                  |                      |               |         |
| 0234  | HOLL | 17  | 2109       | 2111     | 2127     | S30             | W04 | 6266                 | 09     | 17.6 | 18        | SF C 1.3 |      | 3       | E    |                  | 28                   |               | F       |
| 0235  | HOLL | 17  | 2137       | 2138     | 2144     | N19             | W14 | 6257F                | 09     | 16.8 | 7         | SF       |      | 3       | E    |                  | 15                   |               |         |
| 0236  | HOLL | 17  | 2140       | 2156     | 2216     | S15             | E29 | 6272                 | 09     | 20.1 | 36        | 1B M 5.3 |      | 4       | E    |                  | 218                  |               | FH      |
| 0237  | HOLL | 17  | 2308       | 2310     | 2320     | S15             | E32 | 6272                 | 09     | 20.4 | 12        | SF       |      | 4       | E    |                  | 16                   |               |         |
| 0238  |      | 18  | 02522      | 02562    | 0324     | S16             | E36 | 6272                 | 09     | 20.8 | 32        | SN       |      |         |      |                  | 56                   | 1.2           | DF      |
|       | LEAR | 18  | 0252       | 0258     | 0319     | S16             | E36 | 6272                 | 09     | 20.8 | 27        | SF       |      | 3       | E    |                  | 27                   |               | F       |
|       | PEKG | 18  | 0254       | 0256     | 0330     | S16             | E36 | 6272                 | 09     | 20.8 | 36        | SN       |      |         | P    | 0256             | 84                   | 1.2           | D       |
| 0239  | TACH | 18  | 0336       | 0340     | 0349     | S12             | W13 | 6267                 | 09     | 17.2 | 13        | SB       |      | 2       | C    | 0340             | 128                  | 1.4           | F       |
| 0240  | LEAR | 18  | 0404       | 0404     | 0409     | S26             | E79 | 6278                 | 09     | 24.3 | 5         | SF       |      | 3       | E    |                  | 25                   |               |         |
| 0241  |      | 18  | 0735       | 0743     | 0802     | S15             | W05 | 6267                 | 09     | 17.9 | 27        | SF       |      |         |      |                  | 54                   | 0.7           | EF      |
|       | LEAR | 18  | 0735       | 0743     | 0804     | S15             | W05 | 6267                 | 09     | 17.9 | 29        | SF       |      | 3       | E    |                  | 39                   |               | F       |
|       | HTPR | 18  | 0736E      | 0743     | 0805     | S15             | W08 | 6267                 | 09     | 17.7 | 29D       | SF       |      |         | C    | 0743             | 70                   | 0.7           |         |
|       | ISTA | 18  | 0743E      |          | 0757     | S15             | W02 | 6267                 | 09     | 18.2 | 14D       | SF       |      |         |      |                  |                      |               | E       |
| 0242  |      | 18  | 08046      | 08081    | 0820     | S13             | E26 | 6272                 | 09     | 20.3 | 16        | SF       |      |         |      |                  | 23                   | 0.4           | E       |
|       | HTPR | 18  | 0804       | 0809     | 0820     | S13             | E23 | 6272                 | 09     | 20.1 | 16        | SF       |      |         | C    | 0809             | 30                   | 0.4           |         |
|       | LEAR | 18  | 0805       | 0808     | 0821     | S14             | E26 | 6272                 | 09     | 20.3 | 16        | SF       |      | 3       | E    |                  | 16                   |               |         |
|       | ISTA | 18  | 0810       |          | 0819     | S13             | E29 | 6272                 | 09     | 20.5 | 9         | SN       |      |         |      |                  |                      |               | E       |
| 0243  | HTPR | 18  | 0910       | 0920     | 0925     | S13             | E23 | 6272                 | 09     | 20.1 | 15        | SF       |      |         | C    | 0920             | 50                   | 0.6           |         |

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# H $\alpha$ SOLAR FLARES

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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 | Area Measurement |                         |                  | Remarks |     |
|-------|------|-----|------------|----------|----------|-----------------|-----|-------------------------|---------------|--------------|------------|-------|------------|------|------------------|-------------------------|------------------|---------|-----|
|       |      |     |            |          |          |                 |     |                         |               |              |            |       |            |      | Time<br>(UT)     | Apparent<br>(10-6 Disk) | Corr<br>(Sq Deg) |         |     |
| 0244  |      | 18  | 0937       | 0937     | 0948     | S14             | E24 | 6272                    | 09 20.2       | 11           | 1N         | C 6.6 |            |      |                  | 122                     | 1.8              | H       |     |
|       | LEAR | 18  | 0937       | 0937     | 0946     | S14             | E25 | 6272                    | 09 20.3       | 9            | 1N         | C 6.6 | 3          | E    |                  | 103                     |                  |         |     |
|       | HTPR | 18  | 0937       | 0938     | 0950     | S13             | E23 | 6272                    | 09 20.1       | 13           | SN         |       |            | C    | 0938             | 140                     | 1.8              | H       |     |
| 0245  | HTPR | 18  | 1128       | 1131     | 1140     | N12             | W90 | 6252                    | 09 11.7       | 12           | SF         |       |            | C    | 1131             | 20                      |                  | A       |     |
| 0246  |      | 18  | 1202       | 1206     | 1208     | S12             | W42 | 6257                    | 09 15.3       | 6            | SF         |       |            |      |                  | 29                      |                  | F       |     |
|       | RAMY | 18  | 1202       | 1206     | 1208     | S12             | W42 | 6257                    | 09 15.3       | 6            | SF         |       | 3          | E    |                  | 29                      |                  | F       |     |
|       | KANZ | 18  | 1204E      |          | 1204D    | S13             | W41 | 6257                    | 09 15.4       | 6D           | SF         |       |            | C    |                  |                         |                  |         |     |
| 0247  | HTPR | 18  | 1224       | 1224     | 1240     | S07             | E57 | 6279                    | 09 22.8       | 16           | SF         |       |            | C    | 1224             | 30                      | 0.5              | T       |     |
| 0248  | HTPR | 18  | 1255       | 1301     | 1315     | S15             | E42 | 6279                    | 09 21.7       | 20           | SF         |       |            | C    | 1301             | 60                      | 0.9              |         |     |
| 0249  |      | 18  | 1324       | 1327     | 1335     | S38             | W71 | 62588                   | 09 12.8       | 11           | SF         |       |            |      |                  | 43                      |                  |         |     |
|       | SVTO | 18  | 1323E      | 1327U    | 1333     | S40             | W74 | 62588                   | 09 12.5       | 10D          | SF         |       | 2          | E    |                  | 43                      |                  |         |     |
|       | KANZ | 18  | 1324       | 1327     | 1337     | S36             | W68 | 62588                   | 09 13.1       | 13           | SF         |       |            | V    |                  |                         |                  |         |     |
| 0250  |      | 18  | 1346I      | 1347*    | 1412     | S13             | W43 | 6257                    | 09 15.3       | 26           | SF         |       |            |      |                  | 33                      |                  | FH      |     |
|       | HOLL | 18  | 1340E      | 1340U    | 1438     | S12             | W44 | 6257                    | 09 15.2       | 58D          | SF         |       | 1          | E    |                  | 54                      |                  |         |     |
|       | RAMY | 18  | 1346       | 1348     | 1356     | S13             | W42 | 6257                    | 09 15.4       | 10           | SF         |       | 3          | E    |                  | 16                      |                  | FH      |     |
|       | KANZ | 18  | 1347       | 1347     | 1402     | S14             | W42 | 6257                    | 09 15.4       | 15           | SF         |       |            | V    |                  |                         |                  |         |     |
|       | SVTO | 18  | 1415E      | 1450     | 1450D    | S12             | W44 | 6257                    | 09 15.3       | 35D          | SF         |       | 2          | E    |                  | 29                      |                  |         |     |
| 0251  | SVTO | 18  | 1405       | 1428     | 1450     | S40             | W75 | 62588                   | 09 12.5       | 45           | SF         |       | 3          | E    |                  | 50                      |                  |         |     |
| 0252  | HTPR | 18  | 1455       | 1505     | 1520     | N16             | W21 | 6257F                   | 09 17.0       | 25           | SF         |       |            | C    | 1505             | 20                      | 0.2              | H       |     |
| 0253  |      | 18  | 1551I      | 15597    | 1622     | S12             | W45 | 6257                    | 09 15.3       | 31           | SF         | C 1.4 |            |      |                  | 73                      |                  | 1.7     | F   |
|       | HTPR | 18  | 1551       | 1602     | 1620     | S14             | W43 | 6257                    | 09 15.4       | 29           | SF         |       |            | C    | 1602             | 110                     | 1.7              |         |     |
|       | RAMY | 18  | 1552       | 1606     | 1624     | S11             | W46 | 6257                    | 09 15.2       | 32           | SF         |       | 3          | E    |                  | 59                      |                  | F       |     |
|       | HOLL | 18  | 1559E      | 1559     | 1623     | S12             | W45 | 6257                    | 09 15.3       | 24D          | SF         | C 1.4 | 2          | E    |                  | 51                      |                  | F       |     |
| 0254  | HTPR | 18  | 1610       | 1615     | 1635     | S18             | W75 | 6262                    | 09 13.0       | 25           | SN         |       |            | C    | 1615             | 40                      |                  |         |     |
| 0255  | HOLL | 18  | 1623       | 1656     | 1703     | S13             | E21 | 6272                    | 09 20.3       | 40           | SF         |       | 3          | E    |                  | 40                      |                  |         |     |
| 0256  |      | 18  | 16322      | 16391    | 1656     | S27             | W16 | 6266                    | 09 17.4       | 24           | SF         | C 1.4 |            |      |                  | 23                      |                  | 0.4     |     |
|       | HTPR | 18  | 1632       |          | 1641D    | S28             | W13 | 6266                    | 09 17.7       | 9D           | SF         |       |            | C    | 1641             | 30                      |                  | 0.4     |     |
|       | RAMY | 18  | 1634       | 1640     | 1655     | S27             | W16 | 6266                    | 09 17.4       | 21           | SF         |       | 2          | E    |                  | 21                      |                  |         |     |
|       | PALE | 18  | 1636E      | 1639     | 1657     | S26             | W18 | 6266                    | 09 17.3       | 21D          | SF         | C 1.4 | 3          | E    |                  | 18                      |                  |         |     |
| 0257  | HOLL | 18  | 1650       | 1700     | 1710     | S40             | W76 | 62588                   | 09 12.5       | 20           | SF         |       | 3          | E    |                  | 30                      |                  |         |     |
| 0258  |      | 18  | 1634*      | 16575    | 1703     | S13             | W46 | 6257                    | 09 15.2       | 29           | SF         |       |            |      |                  | 45                      |                  |         | F   |
|       | RAMY | 18  | 1634       | 1657     | 1706     | S13             | W45 | 6257                    | 09 15.3       | 32           | SF         |       | 2          | E    |                  | 36                      |                  |         | F   |
|       | PALE | 18  | 1636E      | 1636U    | 1655     | S13             | W46 | 6257                    | 09 15.2       | 19D          | SF         |       | 3          | E    |                  | 53                      |                  |         | F   |
|       | HOLL | 18  | 1701       | 1702     | 1707     | S12             | W46 | 6257                    | 09 15.2       | 6            | SF         |       | 3          | E    |                  | 47                      |                  |         |     |
| 0259  |      | 18  | 1827*      | 1827*    | 1844     | S13             | W46 | 6257                    | 09 15.3       | 17           | SF         |       |            |      |                  | 18                      |                  |         | FH  |
|       | PALE | 18  | 1827       | 1827     | 1839     | S14             | W44 | 6257                    | 09 15.4       | 12           | SF         |       | 3          | E    |                  | 20                      |                  |         |     |
|       | HOLL | 18  | 1844       | 1846     | 1850     | S12             | W47 | 6257                    | 09 15.2       | 6            | SF         |       | 4          | E    |                  | 16                      |                  |         | FH  |
| 0260  | HOLL | 18  | 1859       | 1903     | 1908     | S37             | W74 | 62588                   | 09 12.8       | 9            | SF         |       | 4          | E    |                  | 35                      |                  |         |     |
|       |      | 18  | 2101       |          | 2105     | No Flare Patrol |     |                         |               |              |            |       |            |      |                  |                         |                  |         |     |
| 0261  | HOLL | 18  | 2108E      | 2111U    | 2125D    | S37             | W74 | 62588                   | 09 12.9       | 17D          | SF         |       | 1          | E    |                  | 14                      |                  |         |     |
| 0262  |      | 18  | 2209E      | 2222     | 2244     | S08             | E46 | 6279                    | 09 22.4       | 35D          | SF         | C 2.6 |            |      |                  | 98                      |                  | 1.6     | EFJ |
|       | HOLL | 18  | 2209E      | 2220U    | 2243     | S08             | E46 | 6279                    | 09 22.4       | 34D          | SF         | C 2.6 | 2          | E    |                  | 45                      |                  |         | F   |
|       | VORO | 18  | 2217E      | 2222     | 2244     | S08             | E45 | 6279                    | 09 22.3       | 27D          | SF         |       | 2          | C    | 2222             | 152                     | 1.6              |         | EJ  |
| 0263  | YUNN | 19  | 0155       | 0216     | 0238     | S17             | W88 | 6262                    | 09 12.4       | 43           | 1N         |       |            | P    |                  | 47                      |                  |         | AG  |
| 0264  |      | 19  | 0226       | 02293    | 0244     | S07             | E45 | 6279                    | 09 22.5       | 18           | SF         | C 2.5 |            |      |                  | 85                      |                  | 2.7     | F   |
|       | PALE | 19  | 0226       | 0229     | 0244     | S06             | E45 | 6279                    | 09 22.5       | 18           | SF         | C 2.5 | 3          | E    |                  | 30                      |                  |         |     |
|       | YUNN | 19  | 0226       | 0232     | 0240     | S07             | E46 | 6279                    | 09 22.5       | 14           | 1N         |       |            | C    |                  | 173                     |                  | 2.7     | F   |
|       | LEAR | 19  | 0227E      | 0232U    | 0247     | S08             | E44 | 6279                    | 09 22.4       | 20D          | SF         |       | 3          | E    |                  | 51                      |                  |         | F   |

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| Grp # | Sta  | Day | Start (UT) | Max (UT) | End (UT) | Lat | CMD | NOAA/       | CMP Mo | Dur (Min) | Imp Opt | Xray     | Obs See | Type | Area Measurement |                      |               | Remarks |
|-------|------|-----|------------|----------|----------|-----|-----|-------------|--------|-----------|---------|----------|---------|------|------------------|----------------------|---------------|---------|
|       |      |     |            |          |          |     |     | USAF Region |        |           |         |          |         |      | Time (UT)        | Apparent (10-6 Disk) | Corr (Sq Deg) |         |
| 0265  | ABST | 19  | 0533       | 0534     | 0540     | N08 | E90 | 6281        | 09     | 26.0      | 7       | 1F       |         | C    | 0534             | 87                   |               | ADGV    |
| 0266  | ABST | 19  | 0603       | 0606     | 0612     | N04 | E90 | 6281        | 09     | 26.0      | 9       | 1H       |         | C    | 0606             | 131                  |               | EG      |
| 0267  | SVTO | 19  | 0620       | 0659     | 0844     | S06 | E42 | 6279        | 09     | 22.4      | 144     | SF       | 3       | E    |                  | 30                   |               |         |
| 0268  |      | 19  | 0855*      | 0906*    | 0938     | N05 | E90 | 6281        | 09     | 26.1      | 43      | 1N M 2.6 |         |      |                  | 204                  |               | HK      |
|       | HTPR | 19  | 0855       | 0906     | 0945     | N05 | E90 | 6281        | 09     | 26.1      | 50      | 1B       |         | C    |                  |                      |               |         |
|       | KANZ | 19  | 0903       | 0915     | 0919D    | N07 | E90 | 6281        | 09     | 26.1      | 160     | 1F       |         | V    |                  |                      |               |         |
|       | SVTO | 19  | 0905       | 0906     | 0936     | N06 | E90 | 6281        | 09     | 26.1      | 31      | 2N M 2.6 | 3       | E    |                  | 332                  |               | H       |
|       | SVTO | 19  | 0905       | 0918     | 0936     | N06 | E90 | 6281        | 09     | 26.1      | 31      | 2B       |         | E    |                  | 193                  |               | K       |
|       | LEAR | 19  | 0908E      | 0908U    | 0935     | N03 | E90 | 6281        | 09     | 26.1      | 27D     | SF       | 1       | E    |                  | 87                   |               |         |
| 0269  | HTPR | 19  | 1005       |          | 1020     | N05 | E90 | 6281        | 09     | 26.1      | 15      | SF       |         | C    |                  |                      |               |         |
| 0270  | HTPR | 19  | 1010       | 1015     | 1030     | S27 | E70 | 6278        | 09     | 24.9      | 20      | 1B       |         | C    | 1015             | 120                  |               |         |
| 0271  |      | 19  | 1355I      | 14003    | 1414     | S11 | W30 | 6267        | 09     | 17.3      | 19      | SF C 2.3 |         |      |                  | 60                   | 1.4           | H       |
|       | KANZ | 19  | 1355       | 1401     | 1412     | S12 | W31 | 6267        | 09     | 17.2      | 17      | SF       |         | V    |                  |                      |               |         |
|       | HTPR | 19  | 1355       | 1403     | 1420     | S10 | W30 | 6267        | 09     | 17.3      | 25      | SF       |         | C    | 1403             | 120                  | 1.4           | H       |
|       | RAMY | 19  | 1356       | 1400     | 1410     | S11 | W33 | 6267        | 09     | 17.1      | 14      | SF C 2.3 | 3       | E    |                  | 20                   |               |         |
|       | HOLL | 19  | 1404E      | 1404U    | 1418D    | S12 | W27 | 6267        | 09     | 17.5      | 14D     | SF       | 2       | E    |                  | 40                   |               |         |
| 0272  |      | 19  | 16334      | 16352    | 1640     | N04 | E81 | 6281        | 09     | 25.7      | 7       | SN C 3.9 |         |      |                  | 33                   |               |         |
|       | HOLL | 19  | 1633       | 1635     | 1639     | N05 | E83 | 6281        | 09     | 25.9      | 6       | SN C 3.9 | 3       | E    |                  | 53                   |               |         |
|       | RAMY | 19  | 1637       | 1637     | 1640     | N04 | E79 | 6281        | 09     | 25.6      | 3       | SF       | 3       | E    |                  | 13                   |               |         |
| 0273  |      | 19  | 17072      | 17072    | 1719     | N22 | W20 | 6268        | 09     | 18.2      | 12      | SF       |         |      |                  | 20                   |               | F       |
|       | HOLL | 19  | 1707       | 1707     | 1719     | N22 | W21 | 6268        | 09     | 18.1      | 12      | SF       | 3       | E    |                  | 18                   |               | F       |
|       | PALE | 19  | 1709       | 1709     | 1721D    | N22 | W19 | 6268        | 09     | 18.2      | 12D     | SF       | 3       | E    |                  | 22                   |               | F       |
| 0274  | RAMY | 19  | 1752       | 1753     | 1757     | N05 | E76 | 6281        | 09     | 25.4      | 5       | SF       | 3       | E    |                  | 22                   |               |         |
| 0275  | HOLL | 19  | 1835       | 1836     | 1841     | S28 | W28 | 6266        | 09     | 17.6      | 6       | SF       | 3       | E    |                  | 11                   |               |         |
| 0276  | HOLL | 19  | 2050       | 2052     | 2101     | N05 | E81 | 6281        | 09     | 25.9      | 11      | SF       | 3       | E    |                  | 16                   |               |         |
| 0277  | HOLL | 19  | 2054       | 2056     | 2107     | S11 | W35 | 6267        | 09     | 17.2      | 13      | SF       | 3       | E    |                  | 23                   |               |         |
| 0278  | HOLL | 19  | 2128       | 2136     | 2142D    | N05 | E78 | 6281        | 09     | 25.7      | 14D     | SF       | 3       | E    |                  | 39                   |               |         |
| 0279  |      | 19  | 2330*      | 2346     | 2403     | N04 | E80 | 6281        | 09     | 25.9      | 33      | 1F       |         |      |                  | 88                   |               | DJ      |
|       | VORO | 19  | 2330       | 2346     | 2425U    | N05 | E80 | 6281        | 09     | 26.0      | 55U     | 2N       | 2       | C    | 2346             | 116                  |               | DJ      |
|       | LEAR | 19  | 2341       | 2346     | 2403     | N03 | E78 | 6281        | 09     | 25.8      | 22      | SF       | 3       | E    |                  | 99                   |               |         |
|       | PALE | 19  | 2348E      | 2348U    | 2348D    | N05 | E81 | 6281        | 09     | 26.0      | 22D     | SF       | 3       | E    |                  | 49                   |               |         |
| 0280  | LEAR | 20  | 0038       | 0043     | 0045     | S17 | E12 | 6272        | 09     | 20.9      | 7       | SF       | 3       | E    |                  | 26                   |               |         |
| 0281  |      | 20  | 00474      | 0053     | 0102     | N03 | E82 | 6281        | 09     | 26.2      | 15      | 1N C 3.0 |         |      |                  | 107                  |               | DGJ     |
|       | LEAR | 20  | 0047       | 0053     | 0104     | N02 | E79 | 6281        | 09     | 25.9      | 17      | 1F C 3.0 | 3       | E    |                  | 127                  |               |         |
|       | VORO | 20  | 0051       |          | 0056D    | N05 | E80 | 6281        | 09     | 26.0      | 5D      | 2N       | 2       | C    | 0055             | 170                  |               | DJ      |
|       | YUNN | 20  | 0052E      | 0055U    | 0100     | N03 | E86 | 6281        | 09     | 26.5      | 8D      | SN       |         | P    | 0055             | 24                   |               | G       |
| 0282  |      | 20  | 0127I      | 0129I    | 0139     | S12 | W38 | 6267        | 09     | 17.2      | 12      | SF C 1.5 |         |      |                  | 44                   | 0.8           | EF1J    |
|       | YUNN | 20  | 0126E      | 0130     | 0140     | S13 | W39 | 6267        | 09     | 17.1      | 14D     | SN       |         | P    |                  | 24                   | 0.3           |         |
|       | VORO | 20  | 0127       | 0130     | 0143     | S12 | W38 | 6267        | 09     | 17.2      | 16      | SF       | 2       | C    | 0130             | 90                   | 1.2           | E1J     |
|       | LEAR | 20  | 0128       | 0129     | 0134     | S11 | W37 | 6267        | 09     | 17.3      | 6       | SF C 1.5 | 3       | E    |                  | 17                   |               | F       |
| 0283  | LEAR | 20  | 0209       | 0213     | 0219     | N04 | E77 | 6281        | 09     | 25.8      | 10      | SF       | 3       | E    |                  | 40                   |               |         |
| 0284  | YUNN | 20  | 0307       | 0325     | 0340     | N15 | W44 | 6263        | 09     | 16.8      | 33      | SN       |         | C    |                  | 16                   | 0.2           |         |
| 0285  | TACH | 20  | 0353       | 0355     | 0420     | N25 | W27 | 6268        | 09     | 18.1      | 27      | SB       | 3       | C    | 0355             | 112                  | 1.4           | F       |
| 0286  |      | 20  | 04182      | 04222    | 0519     | N05 | E76 | 6281        | 09     | 25.9      | 61      | 1N       |         |      |                  | 77                   |               | D       |
|       | TACH | 20  | 0418       | 0424     | 0445     | N07 | E76 | 6281        | 09     | 25.9      | 27      | 1N       | 3       | C    | 0424             | 102                  |               | D       |
|       | LEAR | 20  | 0420       | 0422     | 0553     | N03 | E75 | 6281        | 09     | 25.8      | 93      | SF       | 3       | E    |                  | 52                   |               |         |
| 0287  | YUNN | 20  | 0500       | 0508     | 0524D    | N05 | E82 | 6281        | 09     | 26.3      | 24D     | SN       |         | P    |                  | 47                   |               |         |

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H $\alpha$  SOLAR FLARES

SEPTEMBER 1990

| Grp # | Sta  | Day | Start (UT) | Max (UT) | End (UT) | NOAA/           |      |        | Dur     | Imp  | Obs      | Area Measurement |                      |               | Remarks  |
|-------|------|-----|------------|----------|----------|-----------------|------|--------|---------|------|----------|------------------|----------------------|---------------|----------|
|       |      |     |            |          |          | Lat             | Long | Region |         |      |          | Time (UT)        | Apparent (10-6 Disk) | Corr (Sq Deg) |          |
| 0288  |      | 20  | 06129      | 06233    | 0644     | N04             | E79  | 6281   | 09 26.2 | 32   | 1F C 7.0 |                  |                      | 139           | BDH      |
|       | SVTO | 20  | 0612       | 0625     | 0644     | N06             | E79  | 6281   | 09 26.2 | 32   | 1F C 7.0 | 3                | E                    | 203           | H        |
|       | LEAR | 20  | 0615       | 0623     | 0643     | N02             | E77  | 6281   | 09 26.0 | 28   | 1F       |                  | E                    | 114           |          |
|       | ABST | 20  | 0621       | 0626     | 0643     | N03             | E85  | 6281   | 09 26.6 | 22   | 1N       |                  | C                    | 0626 131      | D        |
|       | KANZ | 20  | 0621E      | 0626     | 0645     | N03             | E79  | 6281   | 09 26.2 | 24D  | 1F       |                  | V                    |               |          |
|       | BUCA | 20  | 0635E      |          | 0645     | N04             | E77  | 6281   | 09 26.0 | 10D  | 1F       |                  | C                    | 0635 107      | BD       |
| 0289  |      | 20  | 06414      | 06432    | 0654     | N12             | W46  | 6263   | 09 16.8 | 13   | SF       |                  |                      | 29            | F        |
|       | LEAR | 20  | 0641       | 0643     | 0659     | N13             | W45  | 6263   | 09 16.9 | 18   | SF       | 3                | E                    | 29            | F        |
|       | KANZ | 20  | 0645       | 0645     | 0648     | N11             | W46  | 6263   | 09 16.8 | 3    | SF       |                  | V                    |               |          |
| 0290  |      | 20  | 07421      | 0744     | 0750     | N13             | W48  | 6263   | 09 16.7 | 8    | SF C 1.8 |                  |                      | 54            | 1.2 D    |
|       | LEAR | 20  | 0742       | 0744     | 0750     | N13             | W48  | 6263   | 09 16.7 | 8    | SF C 1.8 | 3                | E                    | 28            |          |
|       | ABST | 20  | 0743       | 0744     | 0750     | N13             | W49  | 6263   | 09 16.6 | 7    | SF       |                  | C                    | 0744 79       | 1.2 D    |
| 0291  |      | 20  | 07501      | 07515    | 0804     | N15             | E70  | 6280   | 09 25.6 | 14   | SF       |                  |                      | 66            | CDE      |
|       | HTRP | 20  | 0750       | 0756     | 0805     | N15             | E70  | 6280   | 09 25.6 | 15   | SN       |                  | C                    |               |          |
|       | BUCA | 20  | 0750       | 0756U    | 0815     | N16             | E68  | 6280   | 09 25.5 | 25   | SF       |                  | P                    | 0756 64       | E        |
|       | ISTA | 20  | 0751       |          | 0800     | N14             | E75  | 6280   | 09 26.0 | 9    | 1N       |                  |                      |               | C        |
|       | LEAR | 20  | 0751       | 0751     | 0800     | N14             | E67  | 6280   | 09 25.4 | 9    | SF       | 3                | E                    | 46            |          |
|       | ABST | 20  | 0751       | 0754     | 0759     | N14             | E69  | 6280   | 09 25.5 | 8    | 1F       |                  | C                    | 0754 87       | D        |
|       | KANZ | 20  | 0752E      | 0752U    | 0756D    | N16             | E69  | 6280   | 09 25.6 | 4D   | SF       |                  | V                    |               |          |
| 0292  |      | 20  | 08382      | 08404    | 0855     | S21             | E14  | 6275   | 09 21.4 | 17   | SN C 1.5 |                  |                      | 72            | 1.2 EGLU |
|       | KHAR | 20  | 0838E      |          | 0851     | S23             | E12  | 6275   | 09 21.3 | 13D  | SF       | 2                | P                    | 0845 100      | 1.2 EL   |
|       | SVTO | 20  | 0838       | 0840     | 0859     | S21             | E15  | 6275   | 09 21.5 | 21   | SN C 1.5 | 4                | E                    | 43            |          |
|       | ISTA | 20  | 0840       |          | 0850     | S19             | E17  | 6275   | 09 21.6 | 10   | 1N       |                  |                      |               | GU       |
|       | KANZ | 20  | 0840       | 0844     | 0900     | S22             | E13  | 6275   | 09 21.4 | 20   | SF       |                  | V                    |               |          |
| 0293  | ISTA | 20  | 0856       |          | 0900     | S09             | E26  | 6279   | 09 22.3 | 4    | 1N       |                  |                      |               | D        |
| 0294  | KANZ | 20  | 1053       | 1057     | 1106     | N03             | E73  | 6281   | 09 25.9 | 13   | SF       |                  | V                    |               |          |
| 0295  |      | 20  | 1123*      | 1129*    | 1158     | N14             | E86  | 6280   | 09 27.0 | 35   | SF       |                  |                      | 37            | K        |
|       | SVTO | 20  | 1123       | 1129     | 1159     | N13             | E88  | 6280   | 09 27.1 | 36   | SF       |                  | E                    | 27            | K        |
|       | SVTO | 20  | 1123       | 1151     | 1159     | N13             | E88  | 6280   | 09 27.1 | 36   | SF       | 3                | E                    | 55            |          |
|       | KANZ | 20  | 1142       | 1150     | 1154D    | N14             | E81  | 6280   | 09 26.6 | 12D  | SF       |                  | V                    |               |          |
|       | RAMY | 20  | 1149E      | 1151     | 1155     | N14             | E85  | 6280   | 09 26.9 | 6D   | SF       | 2                | E                    | 28            |          |
| 0296  | HOLL | 20  | 1453       | 1500     | 1507     | S27             | W41  | 6266   | 09 17.4 | 14   | SF       | 3                | E                    | 21            | F        |
| 0297  |      | 20  | 1521       | 1523     | 1537     | N04             | E76  | 6281   | 09 26.3 | 16   | SN C 2.1 |                  |                      | 77            |          |
|       | SVTO | 20  | 1521       | 1523     | 1536     | N03             | E80  | 6281   | 09 26.6 | 15   | SN C 2.1 | 3                | E                    | 97            |          |
|       | HOLL | 20  | 1522E      | 1522U    | 1538     | N04             | E73  | 6281   | 09 26.1 | 16D  | SN       | 3                | E                    | 57            |          |
| 0298  |      | 20  | 1711       | 1719     | 1742     | N13             | W54  | 6263   | 09 16.6 | 31   | SF C 2.5 |                  |                      | 32            |          |
|       | RAMY | 20  | 1711       | 1719     | 1738     | N14             | W54  | 6263   | 09 16.6 | 27   | SF C 2.5 | 3                | E                    | 20            |          |
|       | PALE | 20  | 1711       | 1719     | 1746     | N12             | W53  | 6263   | 09 16.7 | 35   | SF C 2.5 | 3                | E                    | 45            |          |
| 0299  | HOLL | 20  | 1830       | 1834     | 1855     | N13             | W53  | 6263   | 09 16.8 | 25   | SF       | 3                | E                    | 16            |          |
| 0300  |      | 20  | 1832       | 1838*    | 2121D    | S27             | W40  | 6266   | 09 17.6 | 169D | SN C 4.9 |                  |                      | 78            | FK       |
|       | HOLL | 20  | 1832       | 1838     | 1955D    | S27             | W40  | 6266   | 09 17.6 | 83D  | SN       |                  | E                    | 13            | K        |
|       | HOLL | 20  | 1832       | 1848     | 1955D    | S27             | W40  | 6266   | 09 17.6 | 83D  | 1N       | 3                | E                    | 134           | F        |
|       | PALE | 20  | 1832       | 1901     | 2121D    | S28             | W39  | 6266   | 09 17.7 | 169D | SN C 4.9 | 3                | E                    | 97            |          |
|       | RAMY | 20  | 1842E      | 1842     | 1846D    | S26             | W40  | 6266   | 09 17.7 | 4D   | SF       | 3                | E                    | 69            | F        |
|       |      | 20  | 1935       |          | 2010     | No Flare Patrol |      |        |         |      |          |                  |                      |               |          |
|       |      | 20  | 2014       |          | 2101     | No Flare Patrol |      |        |         |      |          |                  |                      |               |          |
| 0301  | HOLL | 20  | 2103       | 2107     | 2110     | S23             | E07  | 6275   | 09 21.4 | 7    | SF       | 3                | E                    | 19            | F        |
| 0302  | HOLL | 20  | 2153       | 2156     | 2220     | S26             | W45  | 6266   | 09 17.4 | 27   | SF       | 3                | E                    | 21            | F        |
|       |      | 20  | 2203       |          | 2212     | No Flare Patrol |      |        |         |      |          |                  |                      |               |          |
| 0303  | HOLL | 20  | 2214       | 2214     | 2236     | N13             | W55  | 6263   | 09 16.8 | 22   | SF C 1.6 | 3                | E                    | 32            | F        |
|       |      | 20  | 2225       |          | 2230     | No Flare Patrol |      |        |         |      |          |                  |                      |               |          |

H $\alpha$  SOLAR FLARES19  
Sep 90

SEPTEMBER 1990

| Grp # | Sta  | Day | Start (UT) | Max (UT) | End (UT) | Lat             | CND | NOAA/<br>USAF<br>Region | CMP<br>Mo Day | Dur<br>(Min) | Imp<br>Opt | Xray | Obs<br>See Type | Area Measurement |                         |                  | Remarks |
|-------|------|-----|------------|----------|----------|-----------------|-----|-------------------------|---------------|--------------|------------|------|-----------------|------------------|-------------------------|------------------|---------|
|       |      |     |            |          |          |                 |     |                         |               |              |            |      |                 | Time<br>(UT)     | Apparent<br>(10-6 Disk) | Corr<br>(Sq Deg) |         |
| 0304  | HOLL | 20  | 2237       | 2239     | 2252     | N14             | W52 | 6263                    | 09 17.0       | 15           | SF         |      | 3 E             |                  | 11                      |                  | F       |
| 0305  | PALE | 20  | 2348E      | 2348U    | 2348D    | S05             | E81 |                         | 09 27.0       | 15D          | SF         |      | 3 E             |                  | 49                      |                  |         |
| 0306  |      | 21  | 00297      | 00382    | 0054     | S26             | W50 | 6266                    | 09 17.1       | 25           | SN C 1.4   |      |                 |                  | 46                      | 1.0              | F       |
|       | LEAR | 21  | 0029       | 0038     | 0057     | S26             | W50 | 6266                    | 09 17.1       | 28           | SF C 1.4   | 3    | E               |                  | 45                      |                  | F       |
|       | YUNN | 21  | 0036       | 0040     | 0050     | S27             | W51 | 6266                    | 09 17.0       | 14           | SN         |      | C               |                  | 47                      | 1.0              |         |
| 0307  | PEKG | 21  | 0253       | 0255     | 0304     | S13             | W52 | 6267                    | 09 17.2       | 11           | SN         |      | C               | 0255             | 42                      | 0.7              | D       |
| 0308  |      | 21  | 0302       | 03054    | 0316     | N13             | W60 | 6263                    | 09 16.6       | 14           | SN         |      |                 |                  | 44                      | 0.8              | E       |
|       | PEKG | 21  | 0302       | 0305     | 0316     | N12             | W60 | 6263                    | 09 16.6       | 14           | SN         |      | C               | 0305             | 63                      | 1.2              | E       |
|       | YUNN | 21  | 0304E      | 0309     | 0316     | N14             | W60 | 6263                    | 09 16.6       | 12D          | SN         |      | P               |                  | 24                      | 0.5              |         |
| 0309  | YUNN | 21  | 0316       | 0319     | 0328     | S12             | W52 | 6267                    | 09 17.2       | 12           | SF         |      | C               |                  | 24                      | 0.4              |         |
| 0310  | PEKG | 21  | 0405       | 0412     | 0423     | N12             | W61 | 6263                    | 09 16.6       | 18           | SN         |      | P               | 0412             | 84                      | 1.6              | E       |
| 0311  | ABST | 21  | 0528       | 0530     | 0536     | N11             | W61 | 6263                    | 09 16.6       | 8            | SF         |      | C               | 0530             | 70                      | 1.5              | E       |
| 0312  | ISTA | 21  | 0717       |          | 0722     | N11             | E65 | 6280                    | 09 26.2       | 5            | SF         |      |                 |                  |                         |                  | D       |
| 0313  | ISTA | 21  | 0825       |          | 0838     | N11             | E65 | 6280                    | 09 26.2       | 13           | 1N         |      |                 |                  |                         |                  | U       |
| 0314  | KHAR | 21  | 0827       | 0829     | 0840     | N14             | E54 | 6280                    | 09 25.4       | 13           | SF         | 2    | V               | 0829             |                         |                  | DL      |
| 0315  | KHAR | 21  | 0905U      |          | 0911     | S26             | E40 | 6278                    | 09 24.5       | 6U           | SF         | 2    | V               | 0906             |                         |                  | EL      |
| 0316  |      | 21  | 09183      | 09203    | 0929     | S24             | W53 | 6266                    | 09 17.3       | 11           | SF         |      |                 |                  | 90                      |                  | D       |
|       | HTPR | 21  | 0918       | 0920     | 0930     | S25             | W52 | 6266                    | 09 17.3       | 12           | SF         |      | C               | 0920             | 90                      |                  |         |
|       | KHAR | 21  | 0921       | 0923     | 0928     | S22             | W54 | 6266                    | 09 17.2       | 7            | SF         | 2    | V               | 0923             |                         |                  | D       |
| 0317  | SVTO | 21  | 0948       | 0948     | 0956     | S17             | W10 | 6272                    | 09 20.6       | 8            | SF         | 3    | E               |                  | 20                      |                  |         |
| 0318  | KHAR | 21  | 0949       | 0951     | 0956     | S12             | W22 | 6272                    | 09 19.7       | 7            | SF         | 2    | V               | 0951             |                         |                  | D       |
| 0319  | HTPR | 21  | 1040       | 1045     | 1100     | S15             | W50 | 6267                    | 09 17.6       | 20           | SN         |      | C               | 1045             | 80                      | 1.6              |         |
| 0320  | HTPR | 21  | 1055       | 1103     | 1115     | N12             | W60 | 6263                    | 09 16.9       | 20           | SF         |      | C               | 1103             | 100                     | 1.9              |         |
| 0321  |      | 21  | 12514      | 12561    | 1308     | N13             | E60 | 6280                    | 09 26.1       | 17           | SN C 2.1   |      |                 |                  | 68                      | 1.8              |         |
|       | HTPR | 21  | 1251       | 1257     | 1310     | N13             | E60 | 6280                    | 09 26.1       | 19           | SB         |      | C               | 1257             | 90                      | 1.8              |         |
|       | RAMY | 21  | 1255       | 1256     | 1307     | N13             | E59 | 6280                    | 09 26.0       | 12           | SF C 2.1   | 3    | E               |                  | 47                      |                  |         |
| 0322  | HOLL | 21  | 1439       | 1439     | 1444     | S15             | W15 | 6272                    | 09 20.5       | 5            | SF         | 3    | E               |                  | 12                      |                  |         |
| 0323  | HOLL | 21  | 1500       | 1502     | 1507     | N04             | E60 | 6281                    | 09 26.1       | 7            | SF         | 3    | E               |                  | 12                      |                  |         |
| 0324  | RAMY | 21  | 1701       | 1702     | 1711     | N13             | E56 | 6280                    | 09 25.9       | 10           | SF C 1.4   | 3    | E               |                  | 28                      |                  |         |
| 0325  | HOLL | 21  | 1858       | 1858     | 1907     | S11             | W59 | 6267                    | 09 17.3       | 9            | SF         | 3    | E               |                  | 12                      |                  |         |
|       |      | 21  | 2052       |          | 2106     | No Flare Patrol |     |                         |               |              |            |      |                 |                  |                         |                  |         |
| 0326  | HOLL | 21  | 2107E      | 2110U    | 2144     | S12             | W56 | 6267                    | 09 17.7       | 37D          | SF         | 2    | E               |                  | 27                      |                  | F       |
|       |      | 21  | 2125       |          | 2131     | No Flare Patrol |     |                         |               |              |            |      |                 |                  |                         |                  |         |
| 0327  | HOLL | 21  | 2159       | 2208     | 2223D    | S09             | E07 | 6279                    | 09 22.4       | 24D          | SF         | 3    | E               |                  | 34                      |                  |         |
| 0328  | VORO | 21  | 2326       | 2329     | 2350     | S28             | W57 | 6266                    | 09 17.5       | 24           | SF         | 2    | C               | 2329             | 72                      | 1.5              | DIJ     |
| 0329  | VORO | 21  | 2344       | 2348     | 2400     | N07             | E55 | 6281                    | 09 26.1       | 16           | SF         | 2    | C               | 2348             | 54                      | 0.9              | DIJ     |
| 0330  |      | 22  | 0301*      | 0321*    | 0425     | S27             | W60 | 6266                    | 09 17.4       | 84           | 1N M 1.1   |      |                 |                  | 113                     | 2.6              | EF      |
|       | YUNN | 22  | 0301       | 0321     | 0422     | S28             | W63 | 6266                    | 09 17.2       | 81           | SF         |      | C               |                  | 63                      |                  |         |
|       | PALE | 22  | 0306       | 0319U    | 0319D    | S28             | W57 | 6266                    | 09 17.7       | 13D          | SF M 1.1   | 3    | E               |                  | 88                      |                  | F       |
|       | LEAR | 22  | 0328E      | 0334     | 0357     | S27             | W60 | 6266                    | 09 17.5       | 29D          | 1F         | 2    | E               |                  | 199                     |                  |         |
|       | TACH | 22  | 0334       |          | 0455     | S26             | W58 | 6266                    | 09 17.6       | 81           | 1B         | 2    | C               | 0340             | 102                     | 2.6              | E       |

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# H $\alpha$ SOLAR FLARES

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| Grp # | Sta  | Start Day | Max (UT) | End (UT) | Lat             | CMD | NOAA/<br>USAF Region | CMP Mo | Dur (Min) | Imp Opt | Xray     | Obs See | Type | Time (UT) | Area Measurement     |               | Remarks |
|-------|------|-----------|----------|----------|-----------------|-----|----------------------|--------|-----------|---------|----------|---------|------|-----------|----------------------|---------------|---------|
|       |      |           |          |          |                 |     |                      |        |           |         |          |         |      |           | Apparent (10-6 Disk) | Corr (Sq Deg) |         |
| 0331  |      | 22 0748   |          | 0806     | S07             | E88 | 6283                 | 09     | 28.9      | 18      | SN       |         |      |           |                      |               | DT      |
|       | HTPR | 22 0657E  |          | 0820     | S08             | E90 | 6283                 | 09     | 29.0      | 83D     | N        |         | C    |           |                      |               | T       |
|       | ISTA | 22 0748   |          | 0752     | S06             | E85 | 6283                 | 09     | 28.7      | 4       | SN       |         |      |           |                      |               | D       |
| 0332  |      | 22 0834   | 0835     | 0838     | N14             | E48 | 6280                 | 09     | 26.0      | 4       | SF       |         |      |           | 39                   |               | E       |
|       | ISTA | 22 0834   |          | 0836     | N13             | E48 | 6280                 | 09     | 26.0      | 2       | SF       |         |      |           |                      |               | E       |
|       | SVTO | 22 0835   | 0835     | 0839     | N14             | E48 | 6280                 | 09     | 26.0      | 4       | SF       | 3       | E    |           | 39                   |               |         |
| 0333  |      | 22 1521   | 1521     | 1526     | N14             | E44 | 6280                 | 09     | 26.0      | 5       | SN       |         |      |           | 34                   | 0.7           |         |
|       | RAMY | 22 1521   | 1521     | 1525     | N14             | E44 | 6280                 | 09     | 26.0      | 4       | SF       | 3       | E    |           | 17                   |               |         |
|       | HTPR | 22 1521   | 1522     | 1528     | N15             | E45 | 6280                 | 09     | 26.0      | 7       | SN       |         | C    | 1522      | 50                   | 0.7           |         |
| 0334  | PALE | 22 1836   | 1842     | 1854     | N13             | W75 | 6263                 | 09     | 17.1      | 18      | SF       | 3       | E    |           | 43                   |               |         |
| 0335  | PALE | 22 1942   | 1944     | 1950     | N14             | W75 | 6263                 | 09     | 17.1      | 8       | SF       | 3       | E    |           | 34                   |               |         |
| 0336  | PALE | 22 2013   | 2015     | 2018     | S14             | W66 | 6267                 | 09     | 17.8      | 5       | SF       | 3       | E    |           | 17                   |               |         |
| 0337  | LEAR | 22 2216E  | 2243U    | 2310     | N14             | W75 | 6263                 | 09     | 17.2      | 54D     | SF       | 3       | E    |           | 80                   |               |         |
| 0338  | PALE | 23 0027   | 0029     | 0102D    | S26             | W66 | 6266                 | 09     | 17.9      | 35D     | SF C 3.6 | 3       | E    |           | 53                   |               | F       |
| 0339  | LEAR | 23 0134   | 0135     | 0142     | N15             | E37 | 6280                 | 09     | 25.9      | 8       | SF       | 3       | E    |           | 32                   |               | F       |
| 0340  | LEAR | 23 0443   | 0445     | 0453     | N13             | W84 | 6263                 | 09     | 16.8      | 10      | SF       | 3       | E    |           | 68                   |               |         |
| 0341  |      | 23 05499  | 05529    | 0617     | N14             | W86 | 6263                 | 09     | 16.7      | 28      | 1N       |         |      |           | 108                  |               | ADGTVV  |
|       | LEAR | 23 0549   | 0556     | 0622     | N13             | W84 | 6263                 | 09     | 16.9      | 33      | SF       | 3       | E    |           | 97                   |               |         |
|       | MITK | 23 0552   | 0552     | 0606D    | N14             | W90 | 6263                 | 09     | 16.4      | 14D     | 1F       |         | C    | 0552      | 100                  |               |         |
|       | TACH | 23 0553   | 0601     | 0616     | N10             | W82 | 6263                 | 09     | 17.1      | 23      | 1B       | 2       | C    | 0601      | 148                  |               | TY      |
|       | ABST | 23 0558   | 0559     | 0612     | N18             | W90 | 6263                 | 09     | 16.4      | 14      | 1F       |         | C    | 0559      | 87                   |               | ADGV    |
| 0342  | ISTA | 23 0605E  |          | 0620     | N13             | E35 | 6280                 | 09     | 25.9      | 15D     | SF       |         |      |           |                      |               | D       |
| 0343  | ISTA | 23 0728   | 0730     | 0733     | S11             | W07 | 6279                 | 09     | 22.8      | 5       | SN       |         |      |           |                      |               |         |
| 0344  | ISTA | 23 0847E  | 0848     | 0854     | N13             | E35 | 6280                 | 09     | 26.0      | 7D      | SB       |         |      |           |                      |               | D       |
|       |      | 23 1327   |          | 1333     | No Flare Patrol |     |                      |        |           |         |          |         |      |           |                      |               |         |
|       |      | 23 1620   |          | 1645     | No Flare Patrol |     |                      |        |           |         |          |         |      |           |                      |               |         |
|       |      | 23 1736   |          | 1747     | No Flare Patrol |     |                      |        |           |         |          |         |      |           |                      |               |         |
|       |      | 23 1800   |          | 1820     | No Flare Patrol |     |                      |        |           |         |          |         |      |           |                      |               |         |
| 0345  |      | 23 2155   |          | 2201     | No Flare Patrol |     |                      |        |           |         |          |         |      |           |                      |               |         |
|       | VORO | 24 0004   | 0007     | 0014     | N20             | W68 | 6269                 | 09     | 18.8      | 10      | SF       | 2       | C    | 0007      | 63                   | 1.4           | DJ      |
|       | LEAR | 24 0126   | 0127     | 0135     | S07             | E64 | 6283                 | 09     | 28.8      | 9       | SF C 2.8 | 3       | E    |           | 27                   |               |         |
|       |      | 24 0130   | 0133     | 0144     | N16             | E24 | 6280                 | 09     | 25.9      | 14      | SF       |         |      |           | 46                   | 0.9           | EIJ     |
|       | VORO | 24 0130   | 0133     | 0144     | N15             | E23 | 6280                 | 09     | 25.8      | 14      | SF       | 2       | C    | 0133      | 81                   | 0.9           | EIJ     |
| 0347  | PALE | 24 0132E  | 0135U    | 0144D    | N16             | E25 | 6280                 | 09     | 26.0      | 12D     | SF       | 3       | E    |           | 12                   |               |         |
|       |      | 24 06281  | 06293    | 0638     | N14             | E21 | 6280                 | 09     | 25.8      | 10      | SN C 4.4 |         |      |           | 79                   | 1.2           | DEF     |
|       | TACH | 24 0628   | 0629     | 0643     | N13             | E22 | 6280                 | 09     | 25.9      | 15      | SB       | 2       | C    | 0629      | 122                  | 1.4           | E       |
|       | LEAR | 24 0628   | 0630     | 0635     | N14             | E20 | 6280                 | 09     | 25.8      | 7       | SF C 4.4 | 3       | E    |           | 27                   |               | F       |
|       | ABST | 24 0629   | 0632     | 0636     | N14             | E21 | 6280                 | 09     | 25.8      | 7       | SF       |         | C    | 0632      | 87                   | 1.0           | D       |
| 0349  |      | 24 08085  | 08132    | 0838     | S13             | W46 | 6272                 | 09     | 20.9      | 30      | 1N C 2.9 |         |      |           | 139                  | 2.1           | F       |
|       | ISTA | 24 0808   | 0813     | 0837     | S12             | W45 | 6272                 | 09     | 20.9      | 29      | 2B       |         |      |           |                      |               | F       |
|       | ATHN | 24 0811   | 0815     | 0822     | S10             | W46 | 6272                 | 09     | 20.9      | 11      | SN       |         |      | 0815      | 191                  | 2.1           |         |
|       | LEAR | 24 0813   | 0814     | 0844     | S14             | W48 | 6272                 | 09     | 20.7      | 31      | 1F C 2.9 | 3       | E    |           | 102                  |               | F       |
|       | SVTO | 24 0817E  | 0821U    | 0850     | S15             | W45 | 6272                 | 09     | 20.9      | 33D     | 1F       | 2       | E    |           | 123                  |               |         |
| 0350  |      | 24 0908   | 0908     | 0925     | N14             | E26 | 6280                 | 09     | 26.3      | 17      | SF       |         |      |           | 29                   |               | F       |
|       | LEAR | 24 0908   | 0908     | 0928     | N13             | E26 | 6280                 | 09     | 26.3      | 20      | SF       | 3       | E    |           | 33                   |               | F       |
|       | SVTO | 24 0908   | 0909     | 0922     | N15             | E25 | 6280                 | 09     | 26.3      | 14      | SF       | 3       | E    |           | 25                   |               |         |
| 0351  | SVTO | 24 1316   | 1332     | 1347     | S14             | W52 | 6272                 | 09     | 20.6      | 31      | SF       | 3       | E    |           | 31                   |               | F       |

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| Grp # | Sta  | Day   | Start (UT) | Max (UT) | End (UT) | Lat | CND  | NOAA/<br>USAF<br>Region | CMP<br>Mo | Day  | Dur<br>(Min) | Imp<br>Opt | Xray  | Obs<br>See | Type | Area Measurement |                                     |                  | Remarks |
|-------|------|-------|------------|----------|----------|-----|------|-------------------------|-----------|------|--------------|------------|-------|------------|------|------------------|-------------------------------------|------------------|---------|
|       |      |       |            |          |          |     |      |                         |           |      |              |            |       |            |      | Time<br>(UT)     | Apparent<br>(10 <sup>-6</sup> Disk) | Corr<br>(Sq Deg) |         |
| 0352  | 24   | 13434 | 13528      | 1421     | N16      | E18 | 6280 | 09                      | 25.9      | 38   | 1F           | C 4.2      |       |            |      |                  | 109                                 |                  | FH      |
|       | SVTO | 24    | 1343       | 1400     | 1422     | N15 | E17  | 6280                    | 09        | 25.8 | 39           | 1F         |       | 3          | E    |                  | 113                                 |                  | FH      |
|       | RAMY | 24    | 1347       | 1352     | 1420     | N16 | E18  | 6280                    | 09        | 25.9 | 33           | 1F         | C 4.2 | 3          | E    |                  | 105                                 |                  | FH      |
| 0353  | 24   | 18464 | 18539      | 1927     | N17      | E16 | 6280 | 09                      | 26.0      | 41   | 1N           | C 4.7      |       |            |      |                  | 110                                 |                  | EFHK    |
|       | RAMY | 24    | 1846       | 1853     | 1928     | N16 | E16  | 6280                    | 09        | 26.0 | 42           | 1F         | C 4.7 | 3          | E    |                  | 109                                 |                  | FH      |
|       | HOLL | 24    | 1850       | 1853     | 1940D    | N17 | E15  | 6280                    | 09        | 25.9 | 50D          | 1N         | C 4.7 | 3          | E    |                  | 172                                 |                  | FH      |
|       | PALE | 24    | 1850       | 1855     | 1926     | N17 | E16  | 6280                    | 09        | 26.0 | 36           | SN         |       |            | E    |                  | 100                                 |                  | K       |
|       | PALE | 24    | 1850       | 1902     | 1926     | N17 | E16  | 6280                    | 09        | 26.0 | 36           | SF         |       | 4          | E    |                  | 58                                  |                  | FE      |
| 0354  | 24   | 18581 | 18585      | 1915     | S06      | W30 | 6279 | 09                      | 22.5      | 17   | SF           |            |       |            |      |                  | 16                                  |                  | F       |
|       | PALE | 24    | 1858       | 1858     | 1917     | S05 | W31  | 6279                    | 09        | 22.5 | 19           | SF         |       | 4          | E    |                  | 14                                  |                  | F       |
|       | RAMY | 24    | 1859       | 1903     | 1913     | S07 | W29  | 6279                    | 09        | 22.6 | 14           | SF         |       | 3          | E    |                  | 19                                  |                  | F       |
| 0355  | 24   | 19492 | 19504      | 2000     | N14      | W13 | 6286 | 09                      | 23.8      | 11   | SF           |            |       |            |      |                  | 14                                  |                  | F       |
|       | RAMY | 24    | 1949       | 1950     | 2002     | N14 | W13  | 6286                    | 09        | 23.8 | 13           | SF         |       | 2          | E    |                  | 12                                  |                  |         |
|       | HOLL | 24    | 1951       | 1954     | 1958     | N14 | W13  | 6286                    | 09        | 23.8 | 7            | SF         |       | 3          | E    |                  | 16                                  |                  | F       |
| 0356  | 24   | 2026  | 2030       | 2058     | N15      | E14 | 6280 | 09                      | 25.9      | 32   | SF           |            |       |            |      |                  | 27                                  |                  | F       |
|       | HOLL | 24    | 2026       | 2030     | 2053     | N16 | E13  | 6280                    | 09        | 25.8 | 27           | SF         |       | 3          | E    |                  | 39                                  |                  | F       |
|       | RAMY | 24    | 2030E      | 2031U    | 2103     | N14 | E14  | 6280                    | 09        | 25.9 | 33D          | SF         |       | 2          | E    |                  | 23                                  |                  |         |
|       | PALE | 24    | 2045E      | 2045U    | 2050D    | N15 | E14  | 6280                    | 09        | 25.9 | 5D           | SF         |       | 3          | E    |                  | 19                                  |                  |         |
| 0357  | 24   | 2215  | 2219       | 2251     | N14      | E12 | 6280 | 09                      | 25.8      | 36   | 1N           | C 3.8      |       |            |      |                  | 136                                 | 1.7              | EFHIJ   |
|       | HOLL | 24    | 2215       | 2219     | 2248     | N14 | E13  | 6280                    | 09        | 25.9 | 33           | 1N         | C 3.8 | 3          | E    |                  | 112                                 |                  | F       |
|       | VORO | 24    | 2233E      |          | 2254     | N15 | E11  | 6280                    | 09        | 25.8 | 21D          | SN         |       | 2          | C    | 2234             | 161                                 | 1.7              | EHIJ    |
| 0358  | HOLL | 24    | 2321       | 2323     | 2332     | S07 | E51  | 6283                    | 09        | 28.8 | 11           | SF         |       | 3          | E    |                  | 10                                  |                  |         |
| 0359  | HOLL | 24    | 2352       | 2354     | 2422     | S07 | E51  | 6283                    | 09        | 28.8 | 30           | SF         |       | 3          | E    |                  | 14                                  |                  |         |
| 0360  | 25   | 0210* | 0211*      | 0241     | N15      | E11 | 6280 | 09                      | 25.9      | 31   | 1N           | M 1.7      |       |            |      |                  | 174                                 | 2.3              | EFKU    |
|       | LEAR | 25    | 0210       | 0211     | 0214     | N13 | E16  | 6280                    | 09        | 26.3 | 4            | SF         |       | 3          | E    |                  | 17                                  |                  |         |
|       | YUNN | 25    | 0217E      | 0228     | 0246D    | N17 | E10  | 6280                    | 09        | 25.8 | 29D          | 1N         |       |            | P    |                  | 283                                 | 3.0              | F       |
|       | LEAR | 25    | 0221       | 0224     | 0252     | N15 | E09  | 6280                    | 09        | 25.8 | 31           | 2B         |       |            | E    |                  | 220                                 |                  | K       |
|       | PURP | 25    | 0221       | 0227U    | 0238     | N15 | E13  | 6280                    | 09        | 26.1 | 17           | SB         |       |            | C    | 0227             | 88                                  | 1.1              | E       |
|       | LEAR | 25    | 0221       | 0228     | 0252     | N15 | E09  | 6280                    | 09        | 25.8 | 31           | 1B         | M 1.7 | 3          | E    |                  | 181                                 |                  | F       |
|       | URUM | 25    | 0226E      | 0226     | 0251     | N14 | E10  | 6280                    | 09        | 25.8 | 25D          | 1N         |       |            | C    |                  | 257                                 | 2.7              | U       |
| 0361  | LEAR | 25    | 0234       | 0236     | 0244     | S11 | W62  | 6272                    | 09        | 20.4 | 10           | SF         |       | 3          | E    |                  | 18                                  |                  |         |
| 0362  | LEAR | 25    | 0502       | 0504     | 0518     | N11 | E11  | 6280                    | 09        | 26.0 | 16           | SF         | C 1.3 | 3          | E    |                  | 25                                  |                  | F       |
| 0363  | 25   | 07265 | 07306      | 0743     | N14      | E08 | 6280 | 09                      | 25.9      | 17   | SF           |            |       |            |      |                  | 30                                  | 0.4              | E       |
|       | SVTO | 25    | 0726       | 0730     | 0742     | N15 | E08  | 6280                    | 09        | 25.9 | 16           | SF         |       | 3          | E    |                  | 19                                  |                  |         |
|       | LEAR | 25    | 0729       | 0730     | 0737     | N14 | E07  | 6280                    | 09        | 25.8 | 8            | SF         |       | 3          | E    |                  | 17                                  |                  |         |
|       | ISTA | 25    | 0731       | 0736     | 0745     | N14 | E10  | 6280                    | 09        | 26.1 | 14           | SN         |       |            |      |                  |                                     |                  | E       |
|       | YUNN | 25    | 0733E      | 0733U    | 0740     | N15 | E08  | 6280                    | 09        | 25.9 | 7D           | SN         |       |            | P    | 0733             | 47                                  | 0.5              |         |
|       | HPRP | 25    | 0733E      | 0736     | 0750     | N14 | E09  | 6280                    | 09        | 26.0 | 17D          | SF         |       |            | C    | 0736             | 35                                  | 0.3              |         |
| 0364  | 25   | 09014 | 0905*      | 0926     | N14      | E06 | 6280 | 09                      | 25.8      | 25   | SN           | C 2.9      |       |            |      |                  | 83                                  | 1.1              | ENK     |
|       | LEAR | 25    | 0901       | 0905     | 0935     | N13 | E06  | 6280                    | 09        | 25.8 | 34           | SF         | C 2.9 | 3          | E    |                  | 63                                  |                  |         |
|       | LEAR | 25    | 0901       | 0930     | 0935     | N13 | E06  | 6280                    | 09        | 25.8 | 34           | SB         |       |            | E    |                  | 55                                  |                  | K       |
|       | KHAR | 25    | 0902       |          | 0920     | N15 | E07  | 6280                    | 09        | 25.9 | 18           | SF         |       | 2          | P    | 0911             | 150                                 | 1.5              | EH      |
|       | URUM | 25    | 0905       | 0910     | 0916     | N13 | E07  | 6280                    | 09        | 25.9 | 11           | SN         |       |            | C    |                  | 64                                  | 0.7              | E       |
| 0365  | 25   | 1035  | 1036*      | 1111     | N16      | E06 | 6280 | 09                      | 25.9      | 36   | 1N           | C 5.3      |       |            |      |                  | 253                                 | 6.6              | EFHK    |
|       | KHAR | 25    | 1035U      | 1036     | 1100D    | N15 | E06  | 6280                    | 09        | 25.9 | 25U          | 2N         |       | 2          | P    | 1040             | 600                                 | 6.6              | EH      |
|       | RAMY | 25    | 1035E      | 1037     | 1110     | N15 | E08  | 6280                    | 09        | 26.0 | 35D          | SF         | C 5.3 | 2          | E    |                  | 87                                  |                  | FH      |
|       | SVTO | 25    | 1035       | 1037     | 1112     | N16 | E06  | 6280                    | 09        | 25.9 | 37           | 1N         | C 5.3 | 3          | E    |                  | 196                                 |                  | FH      |
|       | SVTO | 25    | 1035       | 1046     | 1112     | N16 | E06  | 6280                    | 09        | 25.9 | 37           | 1N         |       |            | E    |                  | 129                                 |                  | K       |
| 0366  | HURB | 25    | 1140       | 1140     | 1152     | N14 | E04  | 6280                    | 09        | 25.8 | 12           | SN         |       |            |      |                  |                                     |                  | D       |
| 0367  | 25   | 14253 | 1429       | 1447     | N12      | E04 | 6280 | 09                      | 25.9      | 22   | SF           | C 1.5      |       |            |      |                  | 23                                  |                  | F       |
|       | HOLL | 25    | 1425       | 1429     | 1437     | N13 | E04  | 6280                    | 09        | 25.9 | 12           | SF         | C 1.5 | 3          | E    |                  | 26                                  |                  | F       |
|       | SVTO | 25    | 1425       | 1429     | 1511     | N12 | E04  | 6280                    | 09        | 25.9 | 46           | SF         | C 1.5 | 3          | E    |                  | 29                                  |                  | F       |
|       | RAMY | 25    | 1428       | 1429     | 1433     | N12 | E04  | 6280                    | 09        | 25.9 | 5            | SF         |       | 3          | E    |                  | 14                                  |                  | F       |

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| Grp # | Sta  | Day | Start (UT) | Max (UT) | End (UT) | Lat             | CMD | Region | Mo | Day  | Dur (Min) | Imp Opt | Xray  | Obs See | Type | Area Measurement |                      |               | Remarks |
|-------|------|-----|------------|----------|----------|-----------------|-----|--------|----|------|-----------|---------|-------|---------|------|------------------|----------------------|---------------|---------|
|       |      |     |            |          |          |                 |     |        |    |      |           |         |       |         |      | Time (UT)        | Apparent (10-6 Disk) | Corr (Sq Deg) |         |
| 0368  |      | 25  | 1427       | 1427.3   | 1450     | S08             | E44 | 6283   | 09 | 28.9 | 23        | SF      |       |         |      |                  | 37                   |               | F       |
|       | RAMY | 25  | 1427       | 1427     | 1437     | S09             | E43 | 6283   | 09 | 28.8 | 10        | SF      |       | 3       | E    |                  | 52                   |               | F       |
|       | HOLL | 25  | 1427       | 1427     | 1438     | S09             | E44 | 6283   | 09 | 28.9 | 11        | SF      |       | 3       | E    |                  | 30                   |               | F       |
|       | SVTO | 25  | 1427       | 1430     | 1516     | S07             | E44 | 6283   | 09 | 28.9 | 49        | SF      |       | 3       | E    |                  | 30                   |               | F       |
| 0369  | HOLL | 25  | 1534       | 1537     | 1552     | S05             | E42 | 6283   | 09 | 28.8 | 18        | SF      |       | 3       | E    |                  | 20                   |               | F       |
| 0370  | HOLL | 25  | 1539       | 1539     | 1546     | N14             | E03 | 6280   | 09 | 25.9 | 7         | SF      |       | 3       | E    |                  | 19                   |               | F       |
|       |      | 25  | 1616       |          | 1709     | No Flare Patrol |     |        |    |      |           |         |       |         |      |                  |                      |               |         |
| 0371  | HOLL | 25  | 1625       | 1644     | 1646     | S04             | E40 | 6283   | 09 | 28.7 | 21        | SF      |       | 3       | E    |                  | 65                   |               |         |
| 0372  | HOLL | 25  | 1702       | 1708     | 1714     | S16             | W66 | 6272   | 09 | 20.7 | 12        | SF      |       | 3       | E    |                  | 23                   |               |         |
| 0373  | HOLL | 25  | 1803       | 1806     | 1815     | N13             | E03 | 6280   | 09 | 26.0 | 12        | SF      |       | 3       | E    |                  | 12                   |               |         |
|       |      | 25  | 1937       |          | 2034     | No Flare Patrol |     |        |    |      |           |         |       |         |      |                  |                      |               |         |
|       |      | 25  | 2051       |          | 2056     | No Flare Patrol |     |        |    |      |           |         |       |         |      |                  |                      |               |         |
|       |      | 25  | 2104       |          | 2118     | No Flare Patrol |     |        |    |      |           |         |       |         |      |                  |                      |               |         |
|       |      | 25  | 2126       |          | 2226     | No Flare Patrol |     |        |    |      |           |         |       |         |      |                  |                      |               |         |
| 0374  | HOLL | 25  | 2242       | 2243     | 2246     | S11             | W71 | 6272   | 09 | 20.6 | 4         | SF      |       | 3       | E    |                  | 45                   |               | F       |
| 0375  | HOLL | 25  | 2259       | 2303     | 2314     | N15             | W01 | 6280   | 09 | 25.9 | 15        | SF      |       | 3       | E    |                  | 23                   |               | F       |
| 0376  | ISTA | 26  | 0605       | 0608     | 0715     | S08             | W52 | 6279   | 09 | 22.3 | 70        | 2F      |       |         |      |                  |                      |               | FK      |
| 0377  |      | 26  | 0622       | 0625     | 0623     | S04             | E32 | 6283   | 09 | 28.6 | 1         | SN      |       |         |      |                  |                      |               | DE      |
|       | ISTA | 26  | 0614E      |          | 0616     | S04             | E33 | 6283   | 09 | 28.7 | 2D        | SN      |       |         |      |                  |                      |               | D       |
|       | ISTA | 26  | 0622       | 0625     | 0630     | S04             | E31 | 6283   | 09 | 28.6 | 8         | SN      |       |         |      |                  |                      |               | E       |
| 0378  | HTPR | 26  | 0955       | 1005     | 1022D    | S08             | W55 | 6279   | 09 | 22.3 | 27D       | SF      |       | C       |      | 1005             | 120                  | 1.9           |         |
| 0379  | RAMY | 26  | 1215       | 1219     | 1234     | S06             | W56 | 6279   | 09 | 22.3 | 19        | SF      |       | 3       | E    |                  | 23                   |               | F       |
| 0380  | HOLL | 26  | 1320E      | 1320U    | 1417D    | S05             | E29 | 6283   | 09 | 28.7 | 57D       | SF      |       | 2       | E    |                  | 16                   |               |         |
| 0381  | RAMY | 26  | 1325       | 1329     | 1420     | S17             | W83 | 6272   | 09 | 20.2 | 55        | SF      | C 7.8 | 3       | E    |                  | 19                   |               | F       |
| 0382  |      | 26  | 1407E      | 1430     | 1456     | S08             | W57 | 6279   | 09 | 22.3 | 49D       | 1N      | C 4.2 |         |      |                  | 96                   |               | F       |
|       | HOLL | 26  | 1407E      | 1430     | 1505     | S08             | W55 | 6279   | 09 | 22.5 | 58D       | 1F      |       | 3       | E    |                  | 136                  |               | F       |
|       | RAMY | 26  | 1418E      | 1430     | 1447     | S07             | W59 | 6279   | 09 | 22.2 | 29D       | SN      | C 4.2 | 3       | E    |                  | 57                   |               | F       |
| 0383  | HOLL | 26  | 1507       | 1512     | 1523     | N15             | W06 | 6280   | 09 | 26.2 | 16        | SF      |       | 3       | E    |                  | 20                   |               |         |
| 0384  |      | 26  | 15508      | 16021    | 1617     | S08             | W58 | 6279   | 09 | 22.3 | 27        | SF      | C 3.3 |         |      |                  | 72                   | 1.9           | F       |
|       | HTPR | 26  | 1550       | 1603     | 1620     | S08             | W57 | 6279   | 09 | 22.4 | 30        | SF      |       | C       |      | 1603             | 120                  | 1.9           |         |
|       | RAMY | 26  | 1558       | 1602     | 1614     | S07             | W59 | 6279   | 09 | 22.2 | 16        | SF      | C 3.3 | 3       | E    |                  | 23                   |               | F       |
| 0385  | HOLL | 26  | 1751E      | 1752U    | 1800D    | S07             | W56 | 6279   | 09 | 22.5 | 9D        | SF      |       | 3       | E    |                  | 20                   |               | F       |
| 0386  |      | 26  | 19471      | 19472    | 2000     | S09             | E27 | 6283   | 09 | 28.8 | 13        | SF      | B 7.7 |         |      |                  | 28                   |               | F       |
|       | PALE | 26  | 1947       | 1947     | 2000     | S08             | E28 | 6283   | 09 | 28.9 | 13        | SF      | B 7.7 | 3       | E    |                  | 29                   |               | F       |
|       | RAMY | 26  | 1948       | 1948     | 2000     | S10             | E26 | 6283   | 09 | 28.8 | 12        | SF      |       | 3       | E    |                  | 23                   |               | F       |
|       | HOLL | 26  | 1948       | 1949     | 2000     | S08             | E27 | 6283   | 09 | 28.8 | 12        | SF      |       | 3       | E    |                  | 31                   |               | F       |
|       |      | 27  | 0046       |          | 0100     | No Flare Patrol |     |        |    |      |           |         |       |         |      |                  |                      |               |         |
| 0387  | LEAR | 27  | 0427       | 0435     | 0446     | S17             | W88 | 6272   | 09 | 20.5 | 19        | SF      |       | 3       | E    |                  | 39                   |               |         |
| 0388  | ISTA | 27  | 0811       |          | 0825     | S06             | E21 | 6283   | 09 | 28.9 | 14        | SF      |       |         |      |                  |                      |               | D       |
| 0389  | LEAR | 27  | 0844       | 0846     | 0854     | N12             | W15 | 6280   | 09 | 26.2 | 10        | SF      | C 1.1 | 3       | E    |                  | 71                   |               |         |
| 0390  | HTPR | 27  | 1246       | 1250     | 1253     | S25             | W32 | 6278   | 09 | 25.0 | 7         | SF      |       | C       |      | 1250             | 90                   | 1.4           |         |
| 0391  | PALE | 27  | 1746       | 1747     | 1803     | S09             | W72 | 6279   | 09 | 22.3 | 17        | SF      |       | 3       | E    |                  | 20                   |               |         |

| Grp # | Sta  | Start Day | Start (UT) | Max (UT) | End (UT) | Lat             | CND | NOAA/USAF Region | CMP Mo | Day  | Dur (Min) | Imp Opt | Xray  | Obs See | Type | Area Measurement |                      |               | Remarks |
|-------|------|-----------|------------|----------|----------|-----------------|-----|------------------|--------|------|-----------|---------|-------|---------|------|------------------|----------------------|---------------|---------|
|       |      |           |            |          |          |                 |     |                  |        |      |           |         |       |         |      | Time (UT)        | Apparent (10-6 Disk) | Corr (Sq Deg) |         |
| 0392  | HOLL | 27        | 1755       | 1805     | 1813     | S04             | E09 | 6283             | 09     | 28.4 | 18        | SF      |       | 3       | E    |                  | 14                   |               |         |
| 0393  | HOLL | 27        | 1758       | 1800     | 1805     | S24             | W46 | 6278             | 09     | 24.2 | 7         | SF      |       | 3       | E    |                  | 27                   |               |         |
| 0394  |      | 27        | 18372      | 1839     | 1853     | S23             | W43 | 6278             | 09     | 24.5 | 16        | SF      | B 9.2 |         |      |                  | 56                   |               | F       |
|       | HOLL | 27        | 1837       | 1839     | 1856     | S21             | W44 | 6278             | 09     | 24.4 | 19        | SF      | B 9.2 | 3       | E    |                  | 77                   |               | F       |
|       | PALE | 27        | 1839       | 1839     | 1850     | S25             | W42 | 6278             | 09     | 24.5 | 11        | SF      |       | 3       | E    |                  | 34                   |               |         |
| 0395  | HOLL | 27        | 1931       | 1932     | 1941     | S24             | W51 | 6278             | 09     | 23.9 | 10        | SF      |       | 3       | E    |                  | 21                   |               |         |
| 0396  | PALE | 27        | 2018       | 2021     | 2038D    | S08             | E13 | 6283             | 09     | 28.8 | 20D       | SF      |       | 3       | E    |                  | 14                   |               |         |
| 0397  |      | 27        | 2047       | 2050     | 2057     | S06             | E08 | 6283             | 09     | 28.5 | 10        | SF      | B 5.5 |         |      |                  | 14                   |               | F       |
|       | HOLL | 27        | 2047       | 2050     | 2057     | S05             | E08 | 6283             | 09     | 28.5 | 10        | SF      | B 5.5 | 3       | E    |                  | 16                   |               |         |
|       | RAMY | 27        | 2047       | 2050     | 2057     | S06             | E08 | 6283             | 09     | 28.5 | 10        | SF      | B 5.5 | 3       | E    |                  | 13                   |               | F       |
|       |      | 27        | 2206       |          | 2217     | No Flare Patrol |     |                  |        |      |           |         |       |         |      |                  |                      |               |         |
| 0398  |      | 28        | 0154       | 0155     | 0208     | S04             | E07 | 6283             | 09     | 28.6 | 14        | SN      | C 1.5 |         |      |                  | 66                   |               | F       |
|       | LEAR | 28        | 0154       | 0155     | 0208     | S04             | E06 | 6283             | 09     | 28.5 | 14        | SN      | C 1.5 | 3       | E    |                  | 95                   |               | F       |
|       | PALE | 28        | 0156E      | 0156U    | 0211D    | S04             | E08 | 6283             | 09     | 28.7 | 15D       | SF      |       | 3       | E    |                  | 38                   |               | F       |
| 0399  | HTPR | 28        | 0935       | 0945     | 1015     | N14             | W21 | 6280             | 09     | 26.8 | 40        | SF      |       |         | C    | 0945             | 150                  | 1.7           | E       |
| 0400  |      | 28        | 12241      | 1225*    | 1240     | S28             | W54 | 6278             | 09     | 24.3 | 16        | SF      |       |         |      |                  | 25                   | 0.5           |         |
|       | SVTO | 28        | 1224       | 1231     | 1242     | S30             | W56 | 6278             | 09     | 24.1 | 18        | SF      |       | 3       | E    |                  | 22                   |               |         |
|       | RAMY | 28        | 1224       | 1236     | 1239     | S27             | W53 | 6278             | 09     | 24.4 | 15        | SF      |       | 3       | E    |                  | 27                   |               |         |
|       | HTPR | 28        | 1225       | 1225     | 1240     | S28             | W53 | 6278             | 09     | 24.4 | 15        | SF      |       |         | C    | 1225             | 25                   | 0.5           |         |
| 0401  |      | 28        | 14092      | 1411     | 1419     | S15             | W31 | 6287             | 09     | 26.2 | 10        | SF      | C 1.4 |         |      |                  | 22                   | 0.4           |         |
|       | SVTO | 28        | 1409       | 1411     | 1420     | S16             | W31 | 6287             | 09     | 26.2 | 11        | SF      | C 1.4 | 3       | E    |                  | 18                   |               |         |
|       | RAMY | 28        | 1410       | 1411     | 1417     | S14             | W31 | 6287             | 09     | 26.2 | 7         | SF      | C 1.4 | 3       | E    |                  | 14                   |               |         |
|       | HTPR | 28        | 1410       | 1411     | 1420     | S15             | W28 | 6287             | 09     | 26.5 | 10        | SF      |       |         | C    | 1411             | 30                   | 0.4           |         |
|       | KANZ | 28        | 1411       | 1411     | 1418     | S15             | W32 | 6287             | 09     | 26.2 | 7         | SF      |       |         | V    |                  |                      |               |         |
|       | HOLL | 28        | 1412E      | 1413U    | 1422     | S15             | W31 | 6287             | 09     | 26.2 | 10D       | SF      |       | 3       | E    |                  | 24                   |               |         |
| 0402  | RAMY | 28        | 1652       | 1653     | 1659     | S09             | E00 | 6283             | 09     | 28.7 | 7         | SF      |       | 3       | E    |                  | 13                   |               |         |
| 0403  | HOLL | 28        | 1658       | 1658     | 1709     | N07             | W38 | 6281             | 09     | 25.9 | 11        | SF      |       | 3       | E    |                  | 12                   |               |         |

24  
Sep 90

# H $\alpha$ SOLAR FLARES

SEPTEMBER 1990

| 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<br>(UT)     | Apparent<br>(10 <sup>-6</sup> Disk) | Corr<br>(Sq Deg) |         |
| 0412  | SVTO | 29  | 1521       | 1525     | 1549     | N12             | W74 | 6290                    | 09 24.1       | 28           | SF         |       | 3          | E    |                  | 24                                  |                  |         |
| 0413  | HOLL | 29  | 1539       | 1542     | 1547     | S16             | W45 | 6287                    | 09 26.2       | 8            | SF         |       | 2          | E    |                  | 40                                  |                  | FH      |
| 0414  | HOLL | 29  | 1555       | 1555U    | 1604D    | S08             | W10 | 6283                    | 09 28.9       | 90           | SF         |       | 2          | E    |                  | 14                                  |                  |         |
| 0415  | RAMY | 29  | 1612       | 1613     | 1728     | S11             | W16 | 6283                    | 09 28.5       | 76           | SF         |       | 3          | E    |                  | 14                                  |                  | F       |
| 0416  | PALE | 29  | 1959       | 2003     | 2008     | S08             | W11 | 6283                    | 09 29.0       | 9            | SF         |       | 3          | E    |                  | 12                                  |                  |         |
| 0417  | RAMY | 29  | 2021       | 2021     | 2028     | S09             | W14 | 6283                    | 09 28.8       | 7            | SF         |       | 3          | E    |                  | 18                                  |                  | F       |
| 0418  | LEAR | 29  | 2257       | 2313     | 2338     | S10             | W20 | 6283                    | 09 28.4       | 41           | SF         | C 1.7 | 3          | E    |                  | 27                                  |                  | F       |
| 0419  | LEAR | 29  | 2345       | 2348     | 2351     | N15             | W79 | 6290                    | 09 24.0       | 6            | SF         |       | 3          | E    |                  | 35                                  |                  |         |
| 0420  | LEAR | 30  | 0023       | 0111     | 0222     | S05             | E23 | 6294                    | 10 1.7        | 119          | SF         |       | 3          | E    |                  | 80                                  |                  |         |
| 0421  | LEAR | 30  | 0530       | 0533     | 0540     | S05             | E20 | 6294                    | 10 1.7        | 10           | SF         |       | 3          | E    |                  | 23                                  |                  | F       |
| 0422  | ISTA | 30  | 0647       |          | 0652     | S03             | W25 | 6283                    | 09 28.4       | 5            | SF         |       |            |      |                  |                                     |                  | E       |
| 0423  |      | 30  | 0652*      |          | 0714     | S04             | E20 | 6294                    | 10 1.8        | 22           | 1N         |       |            |      |                  |                                     |                  | DF      |
|       | ISTA | 30  | 0652       |          | 0708     | S05             | E20 | 6294                    | 10 1.8        | 16           | 1F         |       |            |      |                  |                                     |                  | F       |
|       | ISTA | 30  | 0716       |          | 0720     | S04             | E19 | 6294                    | 10 1.7        | 4            | SN         |       |            |      |                  |                                     |                  | D       |
| 0424  |      | 30  | 0737*      | 0742*    | 0820     | S09             | W23 | 6283                    | 09 28.6       | 43           | SN         | C 9.2 |            |      |                  | 72                                  | 1.3              | EF      |
|       | LEAR | 30  | 0737       | 0744     | 0810     | S11             | W28 | 6283                    | 09 28.2       | 33           | SF         |       | 3          | E    |                  | 66                                  |                  | F       |
|       | ISTA | 30  | 0737       | 0745     | 0803     | S09             | W24 | 6283                    | 09 28.5       | 26           | 1B         |       |            |      |                  |                                     |                  | F       |
|       | SVTO | 30  | 0737       | 0746     | 0824     | S10             | W23 | 6283                    | 09 28.6       | 47           | SN         | C 9.2 | 4          | E    |                  | 80                                  |                  | FE      |
|       | KANZ | 30  | 0738       | 0742     | 0814     | S10             | W25 | 6283                    | 09 28.4       | 36           | SN         |       |            | V    |                  |                                     |                  |         |
|       | BUCA | 30  | 0739       | 0743     | 0820     | S09             | W25 | 6283                    | 09 28.4       | 41           | SN         |       |            | C    | 0743             | 107                                 | 1.3              | E       |
|       | KANZ | 30  | 0822       | 0822     | 0826     | S07             | W20 | 6283                    | 09 28.8       | 4            | SF         |       |            | V    |                  |                                     |                  |         |
|       | SVTO | 30  | 0824       | 0825     | 0841     | S07             | W20 | 6283                    | 09 28.8       | 17           | SF         |       | 4          | E    |                  | 34                                  |                  |         |
| 0425  | SVTO | 30  | 0913       | 0913     | 0923     | S11             | W21 | 6283                    | 09 28.8       | 10           | SF         |       | 4          | E    |                  | 19                                  |                  |         |
| 0426  | SVTO | 30  | 0929       | 0931     | 0942     | S07             | W20 | 6283                    | 09 28.9       | 13           | SF         |       | 4          | E    |                  | 14                                  |                  |         |
| 0427  | SVTO | 30  | 1014       | 1014     | 1022     | S18             | W54 | 6287                    | 09 26.3       | 8            | SF         |       | 3          | E    |                  | 12                                  |                  |         |
| 0428  | RAMY | 30  | 1118       | 1118     | 1123     | S15             | W57 | 6287                    | 09 26.1       | 5            | SF         |       | 3          | E    |                  | 15                                  |                  |         |
| 0429  | KANZ | 30  | 1227       | 1227     | 1234     | S36             | E62 |                         | 10 5.5        | 7            | SF         |       |            | V    |                  |                                     |                  |         |
| 0430  | RAMY | 30  | 1413       | 1423     | 1427     | S08             | E18 | 6294                    | 10 1.9        | 14           | SF         |       | 3          | E    |                  | 21                                  |                  |         |
| 0431  |      | 30  | 14372      | 14392    | 1456     | S06             | E17 | 6294                    | 10 1.9        | 19           | SF         |       |            |      |                  | 18                                  |                  | H       |
|       | RAMY | 30  | 1437       | 1439     | 1456     | S08             | E18 | 6294                    | 10 1.9        | 19           | SF         |       | 3          | E    |                  | 18                                  |                  | H       |
|       | SVTO | 30  | 1439       | 1441     | 1456     | S04             | E16 | 6294                    | 10 1.8        | 17           | SF         |       | 3          | E    |                  | 19                                  |                  |         |
| 0432  | RAMY | 30  | 1457       | 1457     | 1510     | S08             | E17 | 6294                    | 10 1.9        | 13           | SF         |       | 3          | E    |                  | 21                                  |                  |         |
| 0433  | RAMY | 30  | 1511       | 1527     | 1532     | S08             | E16 | 6294                    | 10 1.8        | 21           | SF         |       | 3          | E    |                  | 17                                  |                  |         |
| 0434  |      | 30  | 1522       | 15221    | 1528     | S18             | W59 | 6287                    | 09 26.1       | 6            | SF         |       |            |      |                  | 14                                  |                  |         |
|       | RAMY | 30  | 1522       | 1522     | 1528     | S18             | W58 | 6287                    | 09 26.2       | 6            | SF         |       | 3          | E    |                  | 12                                  |                  |         |
|       | SVTO | 30  | 1522       | 1523     | 1529     | S17             | W60 | 6287                    | 09 26.1       | 7            | SF         |       | 3          | E    |                  | 16                                  |                  |         |
| 0435  | RAMY | 30  | 1545       | 1545     | 1551     | S08             | E17 | 6294                    | 10 1.9        | 6            | SF         |       | 3          | E    |                  | 12                                  |                  |         |
|       |      | 30  | 1741       |          | 1939     | No Flare Patrol |     |                         |               |              |            |       |            |      |                  |                                     |                  |         |
|       |      | 30  | 2002       |          | 2220     | No Flare Patrol |     |                         |               |              |            |       |            |      |                  |                                     |                  |         |
| 0436  | LEAR | 30  | 2337       | 2337     | 2349     | N15             | W64 | 6280                    | 09 26.1       | 12           | SF         |       | 3          | E    |                  | 20                                  |                  |         |