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**NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE**
Thomas N. Pyke, Jr., Assistant Administrator

APRIL 1988 NUMBER 524 - Part II

# Solar-Geophysical Data comprehensive reports

Data for October 1987, and Miscellanea

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**NATIONAL GEOPHYSICAL DATA CENTER**
Michael A. Chinnery, Director
Boulder, Colorado

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NUMBER 524

(Issued in Two Parts)

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C O N T E N T S



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Comprehensive Reports DATA FOR **OCTOBER 1987** Number 524 Part II

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## A C T I V E  R E G I O N S
### CARRINGTON ROTATION 1794

(3 October to 30 October 1987)

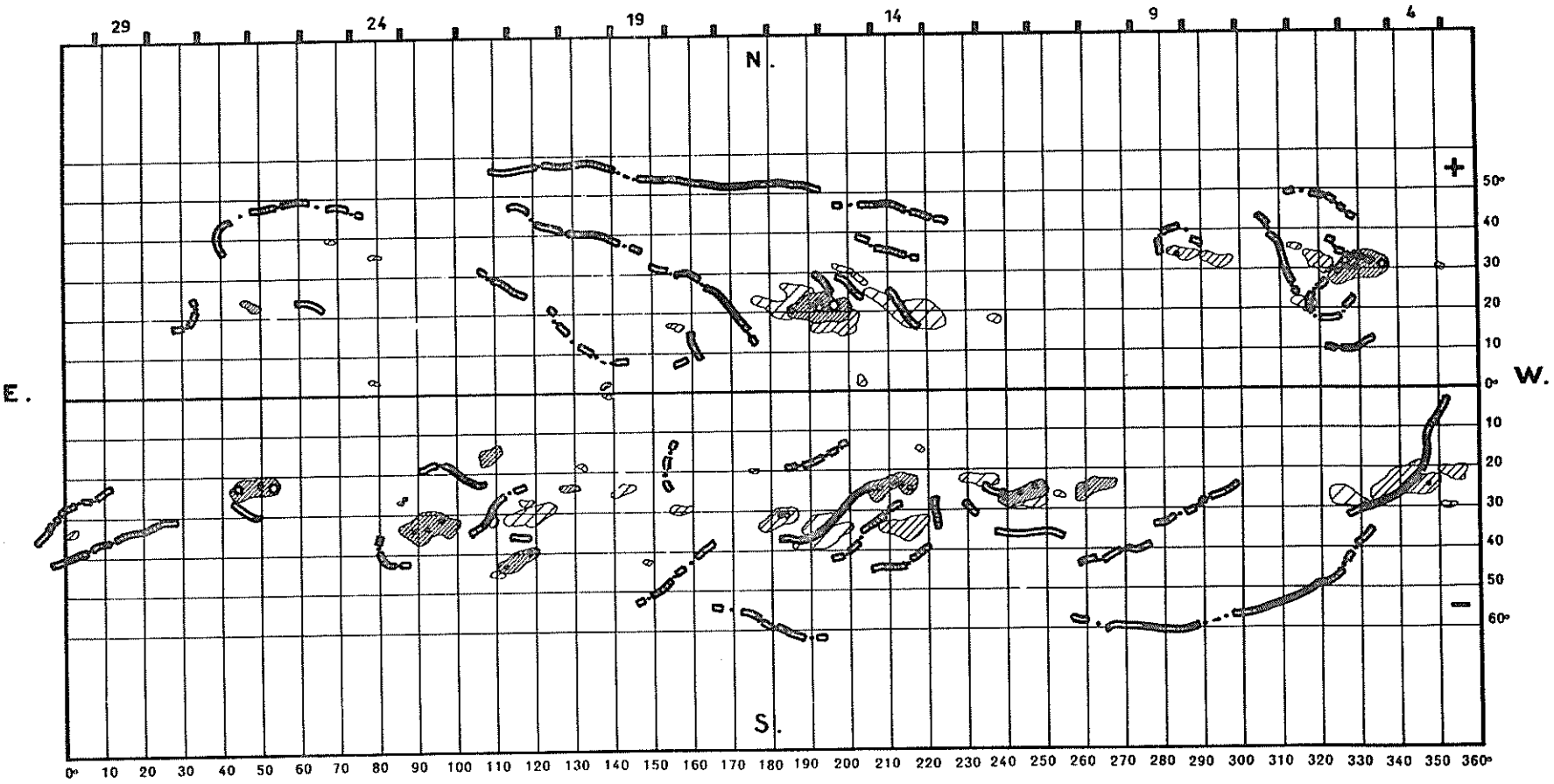
| Region No. | Coordinates Lat. | Long. | Imp | Age at CMP (Days) | Spotless Region | Region No. in Rotation 1793 | Activity at West Limb |
|---|---|---|---|---|---|---|---|
| 1 | 21 S | 353 | 1 | >6 | x | | decreasing |
| 2 | 30 N | 350 | 1 | -3 | x | | dispersed |
| 3 | 23 S | 342 | 2 | >6 | | 1 | decreasing |
| 4 | 30 N | 330 | 4 | >6 | | | decreasing |
| 5 | 22 N | 320 | 1 | >6 | x | | decreasing |
| 6 | 21 N | 316 | 1 | -2 | x | | dispersed |
| 7 | 36 N | 313 | 1 | 0 | x | | disappeared |
| 8 | 32 N | 294 | 1 | +5 | x | | decreasing |
| 9 | 34 N | 285 | 2 | +4 | | | decreasing |
| 10 | 24 S | 262 | 2 | +2 | | | decreasing |
| 11 | 28 S | 245 | 1 | >6 | x | | dispersed |
| 12 | 26 S | 244 | 3 | 0 | | | decreasing |
| 13 | 18 N | 237 | 1 | -4 | x | | disappeared |
| 14 | 23 S | 214 | 2 | -2 | | | decreasing |
| 15 | 34 S | 214 | 1 | >6 | x | 10 | decreasing |
| 16 | 24 S | 207 | 3 | -3 | | | decreasing |
| 17 | 18 N | 197 | 1 | >6 | x | | decreasing |
| 18 | 21 N | 193 | 4 | >6 | | | decreasing |
| 19 | 23 N | 184 | 1 | >6 | x | | dispersed |
| 20 | 32 S | 182 | 3 | >6 | | | decreasing |
| 21 | 29 S | 157 | 1 | +5 | x | | disappeared |
| 22 | 17 N | 156 | 1 | -1 | x | | disappeared |
| 23 | 24 S | 129 | 1 | -3 | x | | stable |
| 24 | 30 S | 119 | 1 | >6 | x | | disappeared |
| 25 | 42 S | 115 | 2 | +5 | | | decreasing |
| 26 | 45 S | 110 | 1 | +4 | x | | disappeared |
| 27 | 31 S | 109 | 1 | -2 | x | | disappeared |
| 28 | 15 S | 108 | 1 | >6 | x | | disappeared |
| 29 | 32 S | 94 | 2 | >6 | | | decreasing |
| 30 | 22 S | 49 | 4 | 0 | | | decreasing |
| 31 | 23 N | 47 | 1 | 0 | x | | dispersed |

# CARTE SYNOPTIQUE

CARRINGTON ROTATION NUMBER 1794
(3 October to 30 October 1987)

Meudon Observatory

October 1987




Heliographic Longitude

5
Oct 87

# H - ALPHA SOLAR FLARES

## OCTOBER 1987

| Grp # | Sta | Day | Start (UT) | Max (UT) | End (UT) | Lat | CMD | NOAA/ USAF Region | CMP Mo | CMP Day | Dur (Min) | Imp Opt | Imp Xray | Imp See | Obs Type | Area Measurement Time (UT) | Area Measurement Apparent ($10^{-6}$ Disk) | Area Measurement Corr (Sq Deg) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 01 | 0010 | | 0106 | No Flare Patrol | | | | | | | | | | | | | |
| | | 01 | 0125 | | 0140 | No Flare Patrol | | | | | | | | | | | | | |
| 0001 | YUNN | 01 | 0636 | 0639 | 0651 | S25 | E45 | 4859 | 10 | 4.8 | 15 | 1N | | | C | | 161 | 2.8 | |
| | | 02 | 0022 | | 0230 | No Flare Patrol | | | | | | | | | | | | | |
| | | 02 | 0043 | | 0230 | No Flare Patrol | | | | | | | | | | | | | |
| | | 02 | 0810 | | 0926 | No Flare Patrol | | | | | | | | | | | | | |
| | | 02 | 0944 | | 1049 | No Flare Patrol | | | | | | | | | | | | | |
| 0002 | | 02 | 17216 | 17329 | 1815 | S24 | E27 | 4859 | 10 | 4.8 | 54 | SF | | | | | 32 | | F |
| | RAMY | 02 | 1721 | 1732 | 1814 | S24 | E29 | 4859 | 10 | 5.0 | 53 | SF | | 4 | C | | 33 | | F |
| | HOLL | 02 | 1727 | 1741 | 1816 | S24 | E25 | 4859 | 10 | 4.6 | 49 | SF | | 3 | C | | 31 | | |
| | | 02 | 2123 | | 2142 | No Flare Patrol | | | | | | | | | | | | | |
| | | 02 | 2123 | | 2142 | No Flare Patrol | | | | | | | | | | | | | |
| | | 02 | 2149 | | 2200 | No Flare Patrol | | | | | | | | | | | | | |
| | | 02 | 2149 | | 2200 | No Flare Patrol | | | | | | | | | | | | | |
| | | 02 | 2226 | | 2239 | No Flare Patrol | | | | | | | | | | | | | |
| | | 02 | 2226 | | 2250 | No Flare Patrol | | | | | | | | | | | | | |
| | | 03 | 0901 | | 1010 | No Flare Patrol | | | | | | | | | | | | | |
| 0003 | RAMY | 03 | 1242 | 1244 | 1247 | N34 | E70 | 4862 | 10 | 9.1 | 5 | SF | | 3 | C | | 11 | | H |
| 0004 | RAMY | 03 | 1300 | 1300 | 1324 | N30 | E28 | 4860 | 10 | 5.7 | 24 | SF | | 3 | C | | 14 | | H |
| 0005 | | 03 | 1551 | 1553* | 1724D | S22 | E14 | 4859 | 10 | 4.7 | 93D | 1N | C 1.8 | | | | 122 | | EFH |
| | RAMY | 03 | 1551 | 1553 | 1724D | S23 | E15 | 4859 | 10 | 4.8 | 93D | 1F | C 1.8 | 3 | C | | 140 | | FH |
| | PALE | 03 | 1653E | 1656 | 1704D | S21 | E13 | 4859 | 10 | 4.7 | 11D | 1N | | 2 | C | | 103 | | FE |
| | | 03 | 1725 | | 1727 | No Flare Patrol | | | | | | | | | | | | | |
| | | 03 | 1725 | | 1727 | No Flare Patrol | | | | | | | | | | | | | |
| 0006 | RAMY | 03 | 1742E | 1742U | 1748 | N33 | E23 | 4860 | 10 | 5.6 | 6D | SF | | 3 | C | | 12 | | |
| | | 03 | 1940 | | 2004 | No Flare Patrol | | | | | | | | | | | | | |
| | | 03 | 1940 | | 2004 | No Flare Patrol | | | | | | | | | | | | | |
| | | 03 | 2008 | | 2010 | No Flare Patrol | | | | | | | | | | | | | |
| | | 03 | 2008 | | 2010 | No Flare Patrol | | | | | | | | | | | | | |
| | | 03 | 2021 | | 2034 | No Flare Patrol | | | | | | | | | | | | | |
| | | 03 | 2021 | | 2034 | No Flare Patrol | | | | | | | | | | | | | |
| | | 03 | 2041 | | 2057 | No Flare Patrol | | | | | | | | | | | | | |
| | | 03 | 2041 | | 2057 | No Flare Patrol | | | | | | | | | | | | | |
| | | 03 | 2127 | | 2246 | No Flare Patrol | | | | | | | | | | | | | |
| | | 03 | 2127 | | 2252 | No Flare Patrol | | | | | | | | | | | | | |
| 0007 | YUNN | 04 | 0509E | 0510 | 0517 | N31 | E23 | 4860 | 10 | 6.0 | 8D | SN | | | P | | 32 | 0.4 | D |
| | | 04 | 0831 | | 0843 | No Flare Patrol | | | | | | | | | | | | | |
| 0008 | KHAR | 04 | 0845 | 0846 | 0856 | N28 | E17 | 4860 | 10 | 5.7 | 11 | SF | | | V | 0846 | | | DL |
| | | 04 | 0851 | | 1051 | No Flare Patrol | | | | | | | | | | | | | |
| | | 04 | 0949 | | 1036 | No Flare Patrol | | | | | | | | | | | | | |
| 0009 | RAMY | 04 | 1504 | 1545 | 1614 | N30 | E15 | 4860 | 10 | 5.8 | 70 | SF | | 3 | C | | 14 | | FH |
| 0010 | HOLL | 04 | 1621 | 1621 | 1627 | N29 | E13 | 4860 | 10 | 5.7 | 6 | SF | | 3 | C | | 27 | | |
| 0011 | HOLL | 04 | 1728 | 1730 | 1820 | N31 | E12 | 4860 | 10 | 5.7 | 52 | SF | | 3 | C | | 14 | | F |
| 0012 | HOLL | 04 | 1846 | 1846 | 1852 | N29 | E10 | 4860 | 10 | 5.6 | 6 | SF | | 3 | C | | 44 | | |
| 0013 | RAMY | 04 | 2127 | 2129 | 2142 | N29 | E12 | 4860 | 10 | 5.8 | 15 | SF | | 2 | C | | 17 | | F |
| 0014 | HOLL | 04 | 2212 | 2213 | 2231 | N29 | E09 | 4860 | 10 | 5.6 | 19 | SF | | 4 | C | | 28 | | F |

# H - ALPHA SOLAR FLARES

## OCTOBER 1987

| Grp # | Sta | Day | Start (UT) | Max (UT) | End (UT) | Lat | CMD | NOAA/ USAF Region | CMP Mo | CMP Day | Dur (Min) | Imp Opt | Imp Xray | Imp See | Obs Type | Area Measurement Time (UT) | Area Measurement Apparent ($10^{-6}$ Disk) | Area Measurement Corr (Sq Deg) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0015 | | 05 | 0644 | 0646 | 0706 | N30 | E06 | 4860 | 10 | 5.7 | 22 | SF | | | | | 62 | 1.0 | EF |
| | LEAR | 05 | 0644 | 0646 | 0656 | N30 | E06 | 4860 | 10 | 5.7 | 12 | SF | | 3 | C | | 59 | | F |
| | ABST | 05 | 0647E | 0650U | 0654D | N30 | E03 | 4860 | 10 | 5.5 | 7D | SF | | | P | 0650 | 87 | 1.0 | E |
| | SVTO | 05 | 0656E | 0656U | 0715 | N30 | E08 | 4860 | 10 | 5.9 | 19D | SF | | 3 | C | | 40 | | F |
| 0016 | | 05 | 08032 | 08071 | 0819 | N35 | E37 | 4862 | 10 | 8.3 | 16 | SF | | | | | 58 | 1.1 | D |
| | SVTO | 05 | 0803 | 0808 | 0826 | N35 | E37 | 4862 | 10 | 8.3 | 23 | SF | | 3 | C | | 29 | | |
| | KANZ | 05 | 0804 | 0808 | 0817 | N33 | E38 | 4862 | 10 | 8.3 | 13 | SF | | 2 | | | | | D |
| | YUNN | 05 | 0805E | 0805U | 0809 | N37 | E36 | 4862 | 10 | 8.2 | 4D | SN | | | P | 0805 | 80 | 1.2 | |
| | BUCA | 05 | 0805 | 0807 | 0825 | N34 | E38 | 4862 | 10 | 8.4 | 20 | SF | | | C | 0807 | 64 | 1.0 | D |
| | | 05 | 1458 | | 1521 | No Flare Patrol | | | | | | | | | | | | | |
| | | 05 | 1458 | | 1521 | No Flare Patrol | | | | | | | | | | | | | |
| 0017 | | 05 | 1600 | 1605 | 1623 | N34 | E32 | 4862 | 10 | 8.2 | 23 | SN | | | | | 40 | | EF |
| | RAMY | 05 | 1600 | 1605 | 1623 | N34 | E33 | 4862 | 10 | 8.3 | 23 | SN | | 3 | C | | 39 | | FE |
| | HOLL | 05 | 1611E | 1612U | 1620D | N33 | E30 | 4862 | 10 | 8.0 | 9D | SN | | 3 | C | | 40 | | |
| | | 05 | 1917 | | 1944 | No Flare Patrol | | | | | | | | | | | | | |
| 0018 | | 05 | 21321 | 2135 | 2148 | N34 | E32 | 4862 | 10 | 8.4 | 16 | SN | C 1.5 | | | | 37 | | F |
| | PALE | 05 | 2132 | 2132U | 2142D | N33 | E31 | 4862 | 10 | 8.3 | 10D | SF | C 1.5 | 1 | C | | 19 | | F |
| | HOLL | 05 | 2133 | 2135 | 2148 | N35 | E32 | 4862 | 10 | 8.4 | 15 | SB | C 1.5 | 3 | C | | 55 | | |
| | | 06 | 0023 | | 0052 | No Flare Patrol | | | | | | | | | | | | | |
| | | 06 | 0207 | | 0210 | No Flare Patrol | | | | | | | | | | | | | |
| 0019 | | 06 | 12205 | 1225 | 1235 | N34 | E24 | 4862 | 10 | 8.4 | 15 | SN | | | | | 16 | 0.3 | D |
| | KAND | 06 | 1220 | 1225 | 1229D | N34 | E24 | 4862 | 10 | 8.4 | 9D | SB | | | P | 1225 | 21 | 0.3 | D |
| | RAMY | 06 | 1225 | 1225 | 1235 | N35 | E23 | 4862 | 10 | 8.3 | 10 | SF | | 3 | C | | 10 | | |
| 0020 | KAND | 06 | 1225 | | 1252 | S24 | E90 | | 10 | 13.5 | 27 | SN | | | P | | | | A |
| 0021 | HTPR | 06 | 1318 | 1319 | 1323 | N34 | E09 | 4862 | 10 | 7.3 | 5 | SF | | | C | 1319 | 10 | 0.1 | |
| | | 06 | 1508 | | 1514 | No Flare Patrol | | | | | | | | | | | | | |
| | | 06 | 1650 | | 1707 | No Flare Patrol | | | | | | | | | | | | | |
| 0022 | | 06 | 1731 | 1734 | 1749 | N33 | E20 | 4862 | 10 | 8.3 | 18 | SF | | | | | 19 | | |
| | HOLL | 06 | 1731E | 1733U | 1749D | N34 | E19 | 4862 | 10 | 8.2 | 18D | SF | | 3 | C | | 18 | | |
| | RAMY | 06 | 1731 | 1734 | 1749 | N32 | E22 | 4862 | 10 | 8.5 | 18 | SF | | 3 | C | | 20 | | |
| 0023 | | 06 | 1838 | 1840 | 1859 | N32 | E20 | 4862 | 10 | 8.3 | 21 | SF | | | | | 18 | | |
| | HOLL | 06 | 1836E | 1840 | 1906 | N32 | E20 | 4862 | 10 | 8.3 | 30D | SF | | 3 | C | | 20 | | |
| | PALE | 06 | 1838 | 1840 | 1852 | N32 | E20 | 4862 | 10 | 8.3 | 14 | SF | | 3 | C | | 15 | | |
| 0024 | PALE | 06 | 1903 | 1903 | 1908 | N31 | W14 | 4860 | 10 | 5.7 | 5 | SF | | 3 | C | | 16 | | F |
| | | 06 | 2052 | | 2124 | No Flare Patrol | | | | | | | | | | | | | |
| 0025 | | 06 | 2104 | 2105 | 2206 | N33 | E21 | 4862 | 10 | 8.5 | 62 | SF | | | | | 30 | | F |
| | PALE | 06 | 2104 | 2105 | 2130D | N33 | E20 | 4862 | 10 | 8.5 | 26D | SF | | 3 | C | | 14 | | F |
| | HOLL | 06 | 2121E | 2124U | 2206 | N33 | E22 | 4862 | 10 | 8.6 | 45D | SF | | 3 | C | | 47 | | F |
| | | 07 | 0011 | | 0210 | No Flare Patrol | | | | | | | | | | | | | |
| 0026 | LEAR | 07 | 0050 | 0055U | 0111 | N33 | E16 | 4862 | 10 | 8.3 | 21 | SF | | 4 | C | | 27 | | F |
| | | 07 | 0501 | | 0515 | No Flare Patrol | | | | | | | | | | | | | |
| | | 07 | 0511 | | 0515 | No Flare Patrol | | | | | | | | | | | | | |
| 0027 | ABST | 07 | 0633 | 0635 | 0753D | N31 | E17 | 4862 | 10 | 8.6 | 80D | SF | | | P | 0635 | 87 | 1.0 | D |
| 0028 | | 07 | 08505 | 08555 | 0913 | N33 | E14 | 4862 | 10 | 8.5 | 23 | SN | C 1.2 | | | | 82 | 1.2 | EF |
| | LEAR | 07 | 0850 | 0854U | 0903 | N33 | E12 | 4862 | 10 | 8.3 | 13 | SF | C 1.2 | 3 | C | | 27 | | F |
| | KAND | 07 | 0852 | 0855 | 0916 | N34 | E15 | 4862 | 10 | 8.6 | 24 | SN | C 1.2 | | P | 0855 | 52 | 0.6 | E |
| | ABST | 07 | 0852E | 0858U | 0911D | N33 | E14 | 4862 | 10 | 8.5 | 19D | SF | | | P | 0858 | 122 | 1.4 | E |
| | BUCA | 07 | 0855 | 0900 | 0920 | N33 | E16 | 4862 | 10 | 8.6 | 25 | SN | | | C | 0900 | 129 | 1.5 | E |

# H - ALPHA S O L A R F L A R E S

## OCTOBER 1987

| Grp # | Sta | Day | Start (UT) | Max (UT) | End (UT) | Lat | CMD | NOAA/ USAF Region | CMP Mo | CMP Day | Dur (Min) | Imp Opt | Imp Xray | Obs See | Obs Type | Time (UT) | Area Measurement Apparent ($10^{-6}$ Disk) | Area Measurement Corr (Sq Deg) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0029 | | 07 | 1045 | 10471 | 1054 | N29 | W16 | 4860 | 10 | 6.2 | 9 | SF | | | | | 20 | 0.2 | E |
| | HTPR | 07 | 1045 | 1047 | 1056 | N28 | W17 | 4860 | 10 | 6.1 | 11 | SF | | | C | 1047 | 20 | 0.2 | E |
| | KAND | 07 | 1045 | 1048 | 1053 | N30 | W15 | 4860 | 10 | 6.3 | 8 | SF | | | P | 1048 | 21 | 0.2 | E |
| 0030 | HTPR | 07 | 1056 | 1057 | 1102 | N28 | W27 | 4860 | 10 | 5.3 | 6 | SF | | | C | 1057 | 20 | 0.2 | E |
| 0031 | | 07 | 1157 | 11584 | 1225 | N32 | E11 | 4862 | 10 | 8.4 | 28 | SN | | | | | 55 | 0.8 | E |
| | RAMY | 07 | 1157 | 1158 | 1230 | N32 | E12 | 4862 | 10 | 8.4 | 33 | SF | | 3 | C | | 24 | | |
| | KAND | 07 | 1157 | 1202 | 1220 | N32 | E11 | 4862 | 10 | 8.4 | 23 | SB | | | P | 1202 | 62 | 0.7 | E |
| | HTPR | 07 | 1159E | | 1217D | N32 | E10 | 4862 | 10 | 8.3 | 18D | SN | | | C | 1159 | 80 | 0.9 | E |
| 0032 | | 07 | 2214 | 2215 | 2228 | N30 | W28 | 4860 | 10 | 5.7 | 14 | SF | | | | | 23 | | |
| | HOLL | 07 | 2214 | 2215 | 2227 | N30 | W27 | 4860 | 10 | 5.8 | 13 | SF | | 3 | C | | 28 | | |
| | PALE | 07 | 2214 | 2215 | 2228 | N31 | W30 | 4860 | 10 | 5.5 | 14 | SF | | 3 | C | | 18 | | |
| | | 08 | 0121 | | 0125 | No Flare Patrol | | | | | | | | | | | | | |
| 0033 | LEAR | 08 | 0150E | 0150U | 0154 | N32 | W32 | 4860 | 10 | 5.5 | 4D | SF | | 3 | C | | 36 | | H |
| | | 08 | 0651 | | 0658 | No Flare Patrol | | | | | | | | | | | | | |
| | | 08 | 0712 | | 0715 | No Flare Patrol | | | | | | | | | | | | | |
| 0034 | KHAR | 08 | 0808 | 0811 | 0817 | S36 | E89 | 4867 | 10 | 15.5 | 9 | SF | | | V | 0811 | | | D |
| 0035 | | 08 | 09382 | 09393 | 0949 | N22 | W24 | 4863 | 10 | 6.5 | 11 | SF | | | | | 20 | 0.2 | DH |
| | HTPR | 08 | 0938 | 0939 | 0950 | N21 | W25 | 4863 | 10 | 6.5 | 12 | SF | | | C | 0939 | 20 | 0.2 | |
| | KHAR | 08 | 0940 | 0942 | 0948 | N22 | W24 | 4863 | 10 | 6.5 | 8 | SF | | | V | 0942 | | | DH |
| 0036 | | 08 | 10184 | 10221 | 1033 | N21 | W24 | 4863 | 10 | 6.6 | 15 | SF | | | | | 16 | 0.2 | DH |
| | HTPR | 08 | 1018 | | 1026D | N21 | W26 | 4863 | 10 | 6.4 | 8D | SF | | | C | 1023 | 10 | 0.1 | |
| | KHAR | 08 | 1020 | 1023 | 1037 | N22 | W24 | 4863 | 10 | 6.6 | 17 | SF | | | V | 1023 | | | DH |
| | KAND | 08 | 1022 | 1022 | 1029 | N20 | W22 | 4863 | 10 | 6.7 | 7 | SF | | | P | 1022 | 21 | 0.2 | D |
| | | 08 | 1224 | | 1231 | No Flare Patrol | | | | | | | | | | | | | |
| 0037 | HTPR | 08 | 1516 | 1519 | 1530 | N28 | W40 | 4860 | 10 | 5.5 | 14 | SF | | | C | 1519 | 20 | 0.3 | |
| 0038 | | 08 | 16067 | 16088 | 1620 | S25 | E50 | 4869A | 10 | 12.5 | 14 | SF | | | | | 20 | 0.3 | EF |
| | HTPR | 08 | 1606 | 1608 | 1614 | S25 | E50 | 4869A | 10 | 12.5 | 8 | SF | | | C | 1608 | 30 | 0.3 | E |
| | RAMY | 08 | 1613 | 1616 | 1626 | S25 | E50 | 4869A | 10 | 12.5 | 13 | SF | | 3 | C | | 11 | | F |
| 0039 | RAMY | 08 | 2056 | 2056 | 2101 | N29 | W47 | 4860 | 10 | 5.2 | 5 | SF | | 2 | C | | 11 | | |
| | | 08 | 2355 | | 2400 | No Flare Patrol | | | | | | | | | | | | | |
| | | 09 | 0000 | | 0008 | No Flare Patrol | | | | | | | | | | | | | |
| | | 09 | 0016 | | 0020 | No Flare Patrol | | | | | | | | | | | | | |
| | | 09 | 0026 | | 0029 | No Flare Patrol | | | | | | | | | | | | | |
| 0040 | | 09 | 0227 | 02284 | 0236 | N33 | W08 | 4862 | 10 | 8.5 | 9 | SF | | | | | 41 | 1.1 | CDF |
| | VORO | 09 | 0221E | 0228U | 0244D | N33 | W08 | 4862 | 10 | 8.5 | 23D | SF | | | C | 0228 | 90 | 1.1 | CD |
| | PALE | 09 | 0227 | 0228 | 0234 | N32 | W09 | 4862 | 10 | 8.4 | 7 | SF | | 3 | C | | 14 | | F |
| | LEAR | 09 | 0230E | 0232 | 0238 | N33 | W06 | 4862 | 10 | 8.6 | 8D | SF | | 3 | C | | 20 | | F |
| | | 09 | 0319 | | 0321 | No Flare Patrol | | | | | | | | | | | | | |
| | | 09 | 0331 | | 0341 | No Flare Patrol | | | | | | | | | | | | | |
| | | 09 | 0346 | | 0434 | No Flare Patrol | | | | | | | | | | | | | |
| | | 09 | 0442 | | 0449 | No Flare Patrol | | | | | | | | | | | | | |
| 0041 | ABST | 09 | 0606 | 0608 | 0711 | N30 | W49 | 4860 | 10 | 5.4 | 65 | SF | | | C | 0608 | 70 | 1.2 | D |
| 0042 | HTPR | 09 | 0706E | | 1030 | S25 | E15 | 4864 | 10 | 10.4 | 204D | SF | | | C | 0728 | 20 | 0.2 | E |
| 0043 | HTPR | 09 | 1143 | 1143 | 1146 | N20 | E80 | 4866 | 10 | 15.6 | 3 | SF | | | C | 1143 | 20 | | E |
| 0044 | HOLL | 09 | 2237 | 2241 | 2251 | N30 | W53 | 4860 | 10 | 5.8 | 14 | SF | | 3 | C | | 30 | | |
| | | 10 | 0006 | | 0103 | No Flare Patrol | | | | | | | | | | | | | |
| | | 10 | 0117 | | 0233 | No Flare Patrol | | | | | | | | | | | | | |
| | | 10 | 0259 | | 0337 | No Flare Patrol | | | | | | | | | | | | | |

# H - ALPHA S O L A R F L A R E S

OCTOBER 1987

| Grp # | Sta | Day | Start (UT) | Max (UT) | End (UT) | Lat | CMD | NOAA/ USAF Region | CMP Mo | CMP Day | Dur (Min) | Imp | Opt | Xray | Obs See | Obs Type | Area Measurement Time (UT) | Area Measurement Apparent ($10^{-6}$ Disk) | Area Measurement Corr (Sq Deg) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0045 | KHAR | 10 | 0802 | | 0806 | N26 | E90 | | 10 | 17.3 | 4 | SF | | | | V | 0803 | | | DL |
| | | 10 | 1006 | | 1039 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 10 | 1049 | | 1059 | No Flare Patrol | | | | | | | | | | | | | | |
| 0046 | | 10 | 1229 | 1243 | 1245 | S23 | W82 | | 10 | 4.2 | 16 | SF | | | | | | 15 | | |
| | RAMY | 10 | 1229 | 1243 | 1245 | S25 | W79 | | 10 | 4.4 | 16 | SF | | 3 | | C | | 15 | | |
| | SVTO | 10 | 1230E | | 1300D | S21 | W85 | | 10 | 4.0 | 30D | SF | | 2 | | C | | | | |
| 0047 | RAMY | 10 | 1230 | 1234 | 1301 | N29 | W59 | 4860 | 10 | 5.9 | 31 | SF | | 3 | | C | | 75 | | FH |
| 0048 | RAMY | 10 | 1336 | 1339 | 1342 | N28 | W62 | 4860 | 10 | 5.7 | 6 | SF | | 3 | | C | | 21 | | |
| | | 10 | 2121 | | 2132 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 10 | 2121 | | 2132 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 10 | 2138 | | 2144 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 10 | 2139 | | 2144 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 11 | 0333 | | 0353 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 11 | 0436 | | 0459 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 11 | 1031 | | 1043 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 11 | 1031 | | 1055 | No Flare Patrol | | | | | | | | | | | | | | |
| 0049 | | 11 | 2131* | 2131* | 3342 | N21 | E50 | 4866 | 10 | 15.7 | 731 | SF | | | | | | 38 | | F |
| | HOLL | 11 | 2131 | 2131 | 2143 | N20 | E57 | 4866 | 10 | 16.2 | 12 | SF | | 3 | | C | | 14 | | |
| | HOLL | 12 | 2126 | 2130 | 2142 | N22 | E43 | 4866 | 10 | 16.2 | 16 | SF | | 3 | | C | | 63 | | F |
| | | 11 | 2238 | | 2259 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 11 | 2238 | | 2301 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 12 | 0314 | | 0337 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 12 | 1022 | | 1034 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 12 | 1022 | | 1102 | No Flare Patrol | | | | | | | | | | | | | | |
| 0050 | KHAR | 12 | 1047 | 1049 | 1058 | S42 | W90 | | 10 | 5.1 | 11 | SF | | | | P | 1049 | | | DH |
| 0051 | KHAR | 12 | 1128E | 1130U | 1135D | S43 | W90 | | 10 | 5.1 | 7D | SF | | | | V | 1130 | | | D |
| 0052 | KHAR | 12 | 1130E | 1133U | 1148D | S22 | W90 | | 10 | 5.6 | 18D | SN | | | | P | 1133 | | | Y |
| | | 12 | 1333 | | 1339 | No Flare Patrol | | | | | | | | | | | | | | |
| 0053 | HOLL | 12 | 2147 | 2215 | 2245 | N22 | E42 | 4866 | 10 | 16.1 | 58 | SN | | 3 | | C | | 36 | | F |
| | | 12 | 2324 | | 2326 | No Flare Patrol | | | | | | | | | | | | | | |
| 0054 | HOLL | 12 | 2337 | 2337 | 2341 | N22 | E40 | 4866 | 10 | 16.0 | 4 | SF | | 3 | | C | | 19 | | F |
| 0055 | MITK | 13 | 0447 | 0449 | 0526 | S35 | E20 | 4867 | 10 | 14.8 | 39 | SB | | | | C | 0449 | 130 | | EG |
| 0056 | HTPR | 13 | 0810 | 0817 | 0824 | N26 | W33 | | 10 | 10.8 | 14 | SF | | | | C | 0817 | 10 | 0.1 | |
| 0057 | RAMY | 13 | 1337 | 1338 | 1351 | N19 | E34 | 4866 | 10 | 16.2 | 14 | SF | | 3 | | C | | 15 | | F |
| | | 13 | 2056 | | 2126 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 13 | 2056 | | 2126 | No Flare Patrol | | | | | | | | | | | | | | |
| 0058 | HOLL | 13 | 2127E | 2127 | 2159D | N18 | E29 | 4866 | 10 | 16.1 | 32D | SF | | 3 | | C | | 65 | | |
| | | 13 | 2200 | | 2226 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 13 | 2200 | | 2226 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 13 | 2230 | | 2237 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 13 | 2230 | | 2237 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 13 | 2325 | | 2332 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 14 | 0035 | | 0118 | No Flare Patrol | | | | | | | | | | | | | | |
| 0059 | | 14 | 1115 | 11171 | 1132 | S34 | E04 | | 10 | 14.8 | 17 | SN | | | | | | 31 | 0.6 | CEJ |
| | KAND | 14 | 1115 | 1117 | 1130 | S35 | E03 | | 10 | 14.7 | 15 | SN | | | | P | 1117 | 42 | 0.6 | CEJ |
| | RAMY | 14 | 1115 | 1118 | 1135 | S34 | E06 | | 10 | 14.9 | 20 | SF | | 3 | | C | | 20 | | |
| 0060 | RAMY | 14 | 1245 | 1253 | 1312 | S23 | E03 | 4870 | 10 | 14.8 | 27 | SF | | 3 | | C | | 16 | | H |

# H - ALPHA S O L A R F L A R E S

OCTOBER 1987

| Grp # | Sta | Day | Start (UT) | Max (UT) | End (UT) | Lat | CMD | NOAA/ USAF Region | CMP Mo | CMP Day | Dur (Min) | Imp | Opt | Xray | See | Obs Type | Time (UT) | Area Measurement Apparent ($10^{-6}$ Disk) | Corr (Sq Deg) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0061 | | 14 | 1632 | 1632 | 1638 | S23 | E01 | 4870 | 10 | 14.8 | 6 | SF | | | | | | 24 | | |
| | RAMY | 14 | 1632 | 1632 | 1638 | S23 | E01 | 4870 | 10 | 14.8 | 6 | SF | | | 3 | C | | 14 | | |
| | HOLL | 14 | 1632E | 1632U | 1651D | S23 | E01 | 4870 | 10 | 14.8 | 19D | SF | | | 2 | C | | 34 | | |
| | | 14 | 1652 | | 1710 | No Flare Patrol | | | | | | | | | | | | | | |
| 0062 | PALE | 14 | 1655 | 1658 | 1703 | N20 | E13 | 4866 | 10 | 15.7 | 8 | SF | | | 2 | C | | 17 | | FH |
| 0063 | HOLL | 14 | 1759 | 1800 | 1815 | N23 | E12 | 4866 | 10 | 15.7 | 16 | SF | | | 2 | C | | 14 | | |
| | | 15 | 0336 | | 0459 | No Flare Patrol | | | | | | | | | | | | | | |
| 0064 | ABST | 15 | 0541 | 0542 | 0545 | N23 | E07 | 4866 | 10 | 15.8 | 4 | SN | | | | C | 0542 | 140 | 1.5 | E |
| 0065 | ABST | 15 | 0653 | 0655 | 0720 | N21 | E03 | 4866 | 10 | 15.5 | 27 | SF | | | | C | 0655 | 131 | 1.4 | E |
| | | 15 | 0835 | | 0857 | No Flare Patrol | | | | | | | | | | | | | | |
| 0066 | | 15 | 09007 | 09073 | 0941 | N23 | E11 | 4866 | 10 | 16.2 | 41 | SN | C | 1.3 | | | | 85 | 1.2 | DEFR |
| | BUCA | 15 | 0900 | 0907 | 0954 | N23 | E13 | 4866 | 10 | 16.4 | 54 | SN | | | | C | 0907 | 129 | 1.4 | E |
| | ABST | 15 | 0901 | 0910 | 0957 | N24 | E10 | 4866 | 10 | 16.1 | 56 | SN | | | | C | 0910 | 87 | 1.0 | D |
| | SVTO | 15 | 0906 | 0907U | 0927 | N22 | E10 | 4866 | 10 | 16.1 | 21 | SN | C | 1.3 | 3 | C | | 92 | | F |
| | LEAR | 15 | 0907 | 0909U | 0925 | N24 | E11 | 4866 | 10 | 16.2 | 18 | SF | C | 1.3 | 3 | C | | 33 | | R |
| 0067 | | 15 | 0929 | 0929* | 0952 | S21 | W13 | 4870 | 10 | 14.4 | 23 | SF | | | | | | 38 | 0.4 | D |
| | BUCA | 15 | 0929 | 0929 | 1003 | S20 | W12 | 4870 | 10 | 14.5 | 34 | SF | | | | C | 0929 | 54 | 0.6 | D |
| | KAND | 15 | 0937E | 0939 | 0942 | S22 | W14 | 4870 | 10 | 14.3 | 5D | SF | | | | P | 0939 | 21 | 0.3 | D |
| 0068 | | 15 | 1108 | 11122 | 1126 | N20 | E06 | 4866 | 10 | 15.9 | 18 | SB | C | 4.5 | | | | 70 | 0.7 | EFKT |
| | KAND | 15 | 1108 | 1112 | 1120 | N19 | E06 | 4866 | 10 | 15.9 | 12 | SN | C | 4.5 | | P | 1112 | 62 | 0.7 | EFKT |
| | SVTO | 15 | 1108 | 1114 | 1129 | N22 | E07 | 4866 | 10 | 16.0 | 21 | SB | C | 4.5 | 3 | C | | 77 | | F |
| | RAMY | 15 | 1110E | | 1129 | N18 | E05 | 4866 | 10 | 15.8 | 19D | SB | C | 4.5 | 3 | C | | 71 | | F |
| 0069 | RAMY | 15 | 1140E | | 1148 | S31 | E90 | | 10 | 22.6 | 8D | SN | | | 3 | C | | | | |
| 0070 | RAMY | 15 | 1318 | 1318 | 1326 | S26 | W42 | 4869 | 10 | 12.3 | 8 | SF | | | 3 | C | | 13 | | |
| 0071 | | 15 | 1716 | 17162 | 1724 | S26 | W43 | 4869 | 10 | 12.4 | 8 | SF | | | | | | 39 | | |
| | HOLL | 15 | 1716 | 1716 | 1724 | S26 | W42 | 4869 | 10 | 12.4 | 8 | SF | | | 3 | C | | 35 | | |
| | RAMY | 15 | 1716 | 1718 | 1728D | S27 | W44 | 4869 | 10 | 12.3 | 12D | SF | | | 2 | C | | 43 | | |
| 0072 | HOLL | 15 | 1750 | 1756 | 1805 | S26 | W43 | 4869 | 10 | 12.4 | 15 | SF | | | 3 | C | | 42 | | |
| | | 15 | 1847 | | 1855 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 15 | 1847 | | 1855 | No Flare Patrol | | | | | | | | | | | | | | |
| 0073 | HOLL | 15 | 1904 | 1905 | 1917 | N22 | E00 | 4866 | 10 | 15.8 | 13 | SF | | | 3 | C | | 16 | | |
| | | 15 | 1942 | | 2015 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 15 | 1942 | | 2015 | No Flare Patrol | | | | | | | | | | | | | | |
| 0074 | HOLL | 15 | 2016E | 2016U | 2056D | S23 | W14 | 4870 | 10 | 14.8 | 40D | SF | | | 3 | C | | 32 | | F |
| 0075 | HOLL | 15 | 2021 | 2023 | 2032 | S26 | W43 | 4869 | 10 | 12.5 | 11 | SF | | | 3 | C | | 15 | | |
| 0076 | HOLL | 15 | 2027 | 2027 | 2035D | N22 | W02 | 4866 | 10 | 15.7 | 8D | SF | | | 3 | C | | 11 | | |
| 0077 | | 15 | 2057 | 2102 | 2126 | N22 | E00 | 4866 | 10 | 15.9 | 29 | SF | C | 1.0 | | | | 48 | | F |
| | RAMY | 15 | 2057 | 2102 | 2118 | N23 | E03 | 4866 | 10 | 16.1 | 21 | SF | C | 1.0 | 2 | C | | 24 | | F |
| | HOLL | 15 | 2057 | 2102 | 2134 | N22 | W02 | 4866 | 10 | 15.7 | 37 | SF | C | 1.0 | 3 | C | | 71 | | F |
| 0078 | HOLL | 15 | 2152 | 2154 | 2217 | S23 | W17 | 4870 | 10 | 14.6 | 25 | SF | | | 3 | C | | 25 | | F |
| 0079 | VORO | 15 | 2253E | 2315U | 2337D | N18 | E01 | 4866 | 10 | 16.0 | 44D | 1F | | | | C | 2315 | 269 | 2.8 | DIJT |
| | | 15 | 2319 | | 2324 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 15 | 2334 | | 2341 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 15 | 2345 | | 2348 | No Flare Patrol | | | | | | | | | | | | | | |
| 0080 | VORO | 15 | 2349 | 2414 | 2437 | N17 | E01 | 4866 | 10 | 16.1 | 48 | 1F | | | | C | 2414 | 269 | 2.8 | IJT |

# H - ALPHA S O L A R F L A R E S

OCTOBER 1987

| Grp # | Sta | Day | Start (UT) | Max (UT) | End (UT) | Lat | CMD | NOAA/ USAF Region | CMP Mo | CMP Day | Dur (Min) | Imp Opt | Imp Xray | See | Obs Type | Area Measurement Time (UT) | Area Measurement Apparent ($10^{-6}$ Disk) | Area Measurement Corr (Sq Deg) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 16 | 0134 | | 0147 | No Flare Patrol | | | | | | | | | | | | | |
| | | 16 | 0151 | | 0158 | No Flare Patrol | | | | | | | | | | | | | |
| | | 16 | 0331 | | 0457 | No Flare Patrol | | | | | | | | | | | | | |
| 0081 | ABST | 16 | 0614 | 0615 | 0621 | N22 | W01 | 4866 | 10 | 16.2 | 7 | SF | | | C | 0615 | 70 | 0.7 | E |
| 0082 | | 16 | 09162 | 09181 | 0924 | S23 | W24 | 4870 | 10 | 14.5 | 8 | SN | C 2.1 | | | | 21 | | F |
| | LEAR | 16 | 0916 | 0919 | 0923 | S24 | W24 | 4870 | 10 | 14.5 | 7 | SF | C 2.1 | 3 | C | | 21 | | F |
| | KANZ | 16 | 0918 | 0918 | 0926 | S22 | W24 | 4870 | 10 | 14.5 | 8 | SN | | 2 | | | | | |
| 0083 | | 16 | 09505 | 09587 | 1027 | N22 | W09 | 4866 | 10 | 15.7 | 37 | 1B | M 1.7 | | | | 200 | 2.2 | EFITY |
| | TACH | 16 | 0950 | 1005 | 1053 | N23 | W07 | 4866 | 10 | 15.9 | 63 | 1B | | | C | 1005 | 192 | 2.1 | FY |
| | ABST | 16 | 0951E | 0958 | 1022D | N22 | W09 | 4866 | 10 | 15.7 | 31D | 1N | | | P | 0958 | 201 | 2.2 | E |
| | KANZ | 16 | 0951 | 0959 | 1013 | N21 | W10 | 4866 | 10 | 15.6 | 22 | 1N | | 2 | | | | | |
| | KAND | 16 | 0955 | 0959 | 1015 | N21 | W11 | 4866 | 10 | 15.6 | 20 | 1B | M 1.7 | | P | 0959 | 208 | 2.2 | EFIT |
| 0084 | KAND | 16 | 1030 | 1031 | 1035 | N23 | W07 | 4866 | 10 | 15.9 | 5 | SF | | | P | 1031 | 21 | 0.2 | DIT |
| 0085 | KAND | 16 | 1120 | 1121 | 1128 | N24 | W10 | 4866 | 10 | 15.7 | 8 | SN | | | P | 1121 | 21 | 0.2 | DIT |
| 0086 | RAMY | 16 | 1140E | | 1148 | S31 | E90 | | 10 | 23.6 | 8D | SN | | 3 | C | | | | |
| | | 16 | 1157 | | 1213 | No Flare Patrol | | | | | | | | | | | | | |
| | | 16 | 1157 | | 1213 | No Flare Patrol | | | | | | | | | | | | | |
| 0087 | KAND | 16 | 1247 | 1255 | 1305 | N21 | W04 | 4866 | 10 | 16.2 | 18 | SN | | | P | 1255 | 31 | 0.3 | DIT |
| 0088 | RAMY | 16 | 1358 | 1505 | 1551 | N17 | W07 | 4866 | 10 | 16.0 | 113 | SF | | 3 | C | | 96 | | F |
| | | 16 | 1401 | | 1625 | No Flare Patrol | | | | | | | | | | | | | |
| | | 16 | 1401 | | 1625 | No Flare Patrol | | | | | | | | | | | | | |
| 0089 | RAMY | 16 | 1526 | 1538 | 1549 | S22 | W24 | 4870 | 10 | 14.8 | 23 | SF | | 3 | C | | 12 | | F |
| 0090 | RAMY | 16 | 1546 | 1553 | 1607 | S28 | W57 | 4869 | 10 | 12.2 | 21 | SF | | 3 | C | | 28 | | |
| 0091 | HOLL | 16 | 1803 | 1803 | 1809 | N21 | W11 | 4866 | 10 | 15.9 | 6 | SF | | 3 | C | | 18 | | F |
| 0092 | | 16 | 1840* | 1840* | 1900 | N24 | W10 | 4866 | 10 | 16.0 | 20 | SF | | | | | 22 | | F |
| | HOLL | 16 | 1840 | 1840 | 1851 | N24 | W08 | 4866 | 10 | 16.1 | 11 | SF | | 3 | C | | 17 | | |
| | HOLL | 16 | 1852 | 1856 | 1908 | N23 | W13 | 4866 | 10 | 15.8 | 16 | SF | | 3 | C | | 26 | | F |
| | | 16 | 1949 | | 2016 | No Flare Patrol | | | | | | | | | | | | | |
| | | 16 | 1949 | | 2016 | No Flare Patrol | | | | | | | | | | | | | |
| 0093 | HOLL | 16 | 2032 | 2037 | 2103 | N18 | W08 | 4866 | 10 | 16.2 | 31 | SF | | 3 | C | | 31 | | F |
| 0094 | HOLL | 16 | 2039 | 2045 | 2107 | S22 | W25 | 4870 | 10 | 14.9 | 28 | SF | | 3 | C | | 21 | | |
| 0095 | HOLL | 16 | 2256 | 2259 | 2314 | S27 | W58 | 4869 | 10 | 12.4 | 18 | SF | | 3 | C | | 14 | | |
| | | 17 | 0017 | | 0108 | No Flare Patrol | | | | | | | | | | | | | |
| | | 17 | 0134 | | 0139 | No Flare Patrol | | | | | | | | | | | | | |
| 0096 | TACH | 17 | 0646 | 0649 | 0713 | N20 | W02 | | 10 | 17.1 | 27 | 1B | | | C | 0649 | 204 | 2.1 | E |
| 0097 | | 17 | 0658 | 0700 | 0707 | S26 | W50 | 4869 | 10 | 13.4 | 9 | SB | | | | | 102 | 1.9 | DH |
| | TACH | 17 | 0658 | 0700 | 0707 | S27 | W50 | 4869 | 10 | 13.4 | 9 | SB | | | C | 0700 | 102 | 1.9 | D |
| | KHAR | 17 | 0700E | | 0705D | S25 | W50 | 4869 | 10 | 13.4 | 5D | SN | | | P | 0701 | | | DH |
| 0098 | | 17 | 0726E | 0735U | 0735 | S24 | W32 | 4870 | 10 | 14.8 | 9D | SF | | | | | | | D |
| | KHAR | 17 | 0726E | | 0732 | S23 | W33 | 4870 | 10 | 14.8 | 6D | SF | | | V | 0726 | | | D |
| | KHAR | 17 | 0733E | 0735U | 0738 | S25 | W30 | 4870 | 10 | 15.0 | 5D | SF | | | V | 0735 | | | D |
| 0099 | KHAR | 17 | 0813E | 0814U | 0820 | S24 | W32 | 4870 | 10 | 14.9 | 7D | SF | | | V | 0814 | | | D |
| 0100 | ABST | 17 | 0852 | 0855 | 0903 | N23 | W02 | | 10 | 17.2 | 11 | SF | | | C | 0855 | 61 | 0.7 | D |
| | | 17 | 1051 | | 1057 | No Flare Patrol | | | | | | | | | | | | | |
| | | 17 | 1051 | | 1057 | No Flare Patrol | | | | | | | | | | | | | |

# H - ALPHA SOLAR FLARES

## OCTOBER 1987

| Grp # | Sta | Day | Start (UT) | Max (UT) | End (UT) | Lat | CMD | NOAA/ USAF Region | CMP Mo | CMP Day | Dur (Min) | Imp | Opt | Xray | See | Obs Type | Time (UT) | Area Measurement Apparent ($10^{-6}$ Disk) | Corr (Sq Deg) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 17 | 1137 | | 1143 | No Flare Patrol | | | | | | | | | | | | | | |
| 0101 | | 17 | 1218 | 1218 | 1228 | N22 | W19 | 4866 | 10 | 16.0 | 10 | SN | | | | | | 55 | | |
| | RAMY | 17 | 1218 | 1218 | 1228 | N21 | W17 | 4866 | 10 | 16.2 | 10 | SF | | | 3 | C | | 11 | | |
| | SVTO | 17 | 1222E | | 1228D | N22 | W21 | 4866 | 10 | 15.9 | 6D | SB | | | 1 | C | | 99 | | |
| 0102 | | 17 | 12211 | 12233 | 1300 | S24 | W35 | 4870 | 10 | 14.8 | 39 | 1B | M | 1.4 | | | | 121 | | F |
| | RAMY | 17 | 1221 | 1223 | 1301 | S25 | W36 | 4870 | 10 | 14.7 | 40 | 1B | M | 1.4 | 3 | C | | 143 | | F |
| | SVTO | 17 | 1222E | | 1228D | S24 | W37 | 4870 | 10 | 14.6 | 6D | SB | | | 1 | C | | 99 | | |
| | KANZ | 17 | 1222 | 1226 | 1258 | S24 | W33 | 4870 | 10 | 15.0 | 36 | 1N | | | 2 | | | | | |
| 0103 | KANZ | 17 | 1343 | 1347 | 1351 | S24 | W34 | 4870 | 10 | 14.9 | 8 | SN | | | 2 | | | | | |
| 0104 | | 17 | 13444 | 13501 | 1415 | N19 | W20 | 4866 | 10 | 16.0 | 31 | 1N | C | 1.6 | | | | 170 | 2.2 | EFU |
| | RAMY | 17 | 1344 | 1350 | 1410 | N18 | W20 | 4866 | 10 | 16.0 | 26 | 1N | C | 1.6 | 3 | C | | 119 | | F |
| | KANZ | 17 | 1347 | 1351 | 1403D | N19 | W19 | 4866 | 10 | 16.1 | 16D | 1F | | | 2 | | | | | |
| | HTPR | 17 | 1348 | 1350 | 1420 | N20 | W20 | 4866 | 10 | 16.0 | 32 | 1B | | | | C | 1350 | 220 | 2.2 | EU |
| 0105 | HTPR | 17 | 1552 | 1556 | 1558 | S23 | W36 | 4870 | 10 | 14.9 | 6 | SF | | | | C | 1556 | 40 | 0.5 | E |
| | | 17 | 1706 | | 1730 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 17 | 1706 | | 1730 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 17 | 1741 | | 1753 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 17 | 1741 | | 1753 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 17 | 1801 | | 1815 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 17 | 1801 | | 1815 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 17 | 1910 | | 1917 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 17 | 1910 | | 1917 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 17 | 1934 | | 1938 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 17 | 1934 | | 1938 | No Flare Patrol | | | | | | | | | | | | | | |
| 0106 | HOLL | 17 | 2012 | 2013 | 2025D | N22 | W29 | 4866 | 10 | 15.6 | 13D | SF | | | 3 | C | | 25 | | FH |
| 0107 | HOLL | 17 | 2030 | 2038 | 2047 | S26 | W37 | 4870 | 10 | 15.0 | 17 | SF | | | 3 | C | | 21 | | FH |
| 0108 | HOLL | 17 | 2049 | 2055 | 2104 | N15 | W24 | 4866 | 10 | 16.0 | 15 | SF | | | 3 | C | | 13 | | F |
| 0109 | HOLL | 17 | 2055 | 2103 | 2117 | S25 | W73 | 4869 | 10 | 12.2 | 22 | SF | | | 3 | C | | 25 | | H |
| 0110 | HOLL | 17 | 2108 | 2115 | 2121 | N22 | W26 | 4866 | 10 | 15.9 | 13 | SF | | | 3 | C | | 16 | | |
| 0111 | HOLL | 17 | 2142 | 2146 | 2155 | S25 | W73 | 4869 | 10 | 12.2 | 13 | SF | | | 3 | C | | 17 | | |
| 0112 | HOLL | 17 | 2157 | 2204 | 2233 | S26 | W75 | 4869 | 10 | 12.1 | 36 | SF | | | 3 | C | | 36 | | |
| 0113 | | 17 | 2207 | 2241 | 2348 | S24 | W40 | 4870 | 10 | 14.8 | 101 | 1N | C | 7.7 | | | | 85 | | EF |
| | HOLL | 17 | 2207 | 2241 | 2348 | S25 | W39 | 4870 | 10 | 14.9 | 101 | 1N | C | 7.7 | 3 | C | | 98 | | FE |
| | LEAR | 17 | 2235E | 2240U | 2246D | S24 | W42 | 4870 | 10 | 14.7 | 11D | SF | C | 7.7 | 3 | C | | 72 | | E |
| 0114 | HOLL | 17 | 2240 | 2241 | 2245 | S29 | W67 | 4869 | 10 | 12.7 | 5 | SF | | | 3 | C | | 17 | | |
| 0115 | | 17 | 2254 | 2257* | 2406 | S26 | W80 | 4869 | 10 | 11.7 | 72 | 1N | | | | | | 64 | | EFGH |
| | HOLL | 17 | 2254 | 2257 | 2411 | S26 | W74 | 4869 | 10 | 12.2 | 77 | SF | | | 3 | C | | 27 | | FH |
| | MITK | 17 | 2336E | 2341 | 2402 | S26 | W85 | 4869 | 10 | 11.4 | 26D | 1N | | | | C | 2341 | 100 | | EG |
| 0116 | HOLL | 17 | 2355 | 2358 | 2403 | S23 | W44 | 4870 | 10 | 14.6 | 8 | SF | | | 3 | C | | 31 | | |
| 0117 | MANI | 18 | 0115 | 0125 | 0130 | S25 | W72 | 4869 | 10 | 12.5 | 15 | SF | | | 2 | P | | | | |
| 0118 | LEAR | 18 | 0525 | 0530 | 0550 | N22 | W27 | 4866 | 10 | 16.1 | 25 | SN | C | 1.1 | 2 | C | | 48 | | Y |
| 0119 | KHAR | 18 | 0726E | | 0743 | S26 | W87 | 4869 | 10 | 11.5 | 17D | SF | | | | V | 0731 | | | H |
| 0120 | KHAR | 18 | 0743E | 0744U | 0750 | N26 | W31 | 4866 | 10 | 15.9 | 7D | SF | | | | V | 0743 | | | D |
| 0121 | KHAR | 18 | 0755E | 0800U | 0815D | S26 | W87 | 4869 | 10 | 11.6 | 20D | SF | | | | V | 0800 | | | H |
| 0122 | KHAR | 18 | 0831 | 0833U | 0844D | S26 | W87 | 4869 | 10 | 11.6 | 13D | SF | | | | V | 0833 | | | |

# H - ALPHA S O L A R F L A R E S

OCTOBER 1987

| Grp # | Sta | Day | Start (UT) | Max (UT) | End (UT) | Lat | CMD | NOAA/ USAF Region | CMP Mo | CMP Day | Dur (Min) | Imp | Opt | Xray | See | Obs Type | Time (UT) | Area Measurement Apparent ($10^{-6}$ Disk) | Area Measurement Corr (Sq Deg) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0123 | | 18 | 0835 | 0837 | 0846 | N24 | W30 | 4866 | 10 | 16.0 | 11 | SF | | | | | | 48 | | DE |
| | KHAR | 18 | 0834E | 0835U | 0848 | N26 | W31 | 4866 | 10 | 15.9 | 14D | SF | | | | V | 0835 | | | D |
| | URUM | 18 | 0835 | 0837 | 0845 | N23 | W29 | 4866 | 10 | 16.1 | 10 | SF | | | | C | | 48 | | E |
| 0124 | | 18 | 0855 | 0859 | 0910 | S25 | W84 | 4869 | 10 | 11.9 | 15 | 1N | | | | | | 64 | | DH |
| | KHAR | 18 | 0855 | 0859U | 0908 | S27 | W88 | 4869 | 10 | 11.5 | 13 | 1N | | | | V | 0859 | | | H |
| | URUM | 18 | 0855 | 0859 | 0911 | S23 | W80 | 4869 | 10 | 12.2 | 16 | SF | | | | C | | 64 | | D |
| 0125 | URUM | 18 | 0940 | 0955 | 0955D | S23 | W76 | 4869 | 10 | 12.5 | 15D | SN | | | | C | | 48 | | D |
| 0126 | KHAR | 18 | 1018E | | 1033 | S27 | W44 | 4870 | 10 | 15.0 | 15D | SN | | | | V | 1018 | | | D |
| 0127 | KHAR | 18 | 1035E | 1037 | 1044 | S26 | W88 | 4869 | 10 | 11.6 | 9D | SN | | | | V | 1037 | | | H |
| 0128 | KHAR | 18 | 1043 | 1046U | 1055D | S32 | E73 | 4873 | 10 | 24.2 | 12D | SN | | | | V | 1046 | | | D |
| | | 18 | 1201 | | 1210 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 18 | 1223 | | 1235 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 18 | 1240 | | 1416 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 18 | 1304 | | 1344 | No Flare Patrol | | | | | | | | | | | | | | |
| 0129 | HOLL | 18 | 1547 | 1554 | 1556 | S25 | W87 | 4869 | 10 | 11.9 | 9 | SF | | | 3 | C | | 19 | | |
| 0130 | URUM | 18 | 0815E | 0815U | 0837 | S24 | W72 | 4869 | 10 | 12.8 | 22D | SF | | | | C | | 48 | | D |
| 0131 | HOLL | 18 | 1627 | 1627 | 1631 | S26 | W48 | 4870 | 10 | 14.9 | 4 | SF | | | 3 | C | | 17 | | |
| 0132 | HOLL | 18 | 1635 | 1635 | 1640 | S25 | W87 | 4869 | 10 | 11.9 | 5 | SF | | | 3 | C | | 13 | | |
| 0133 | | 18 | 17483 | 17512 | 1804 | S25 | W50 | 4870 | 10 | 14.9 | 16 | SF | C | 1.0 | | | | 30 | | F |
| | HOLL | 18 | 1748 | 1753 | 1811 | S25 | W50 | 4870 | 10 | 14.9 | 23 | SF | C | 1.0 | 3 | C | | 48 | | F |
| | PALE | 18 | 1751 | 1751 | 1758 | S25 | W51 | 4870 | 10 | 14.8 | 7 | SF | C | 1.0 | 3 | C | | 11 | | |
| 0134 | PALE | 18 | 1839 | 1840 | 1847 | S25 | W52 | 4870 | 10 | 14.7 | 8 | SF | | | 3 | C | | 11 | | |
| 0135 | HOLL | 18 | 2013 | 2013 | 2017 | S24 | W84 | 4869 | 10 | 12.3 | 4 | SF | | | 3 | C | | 20 | | |
| 0136 | HOLL | 18 | 2013 | 2014 | 2017 | S26 | W50 | 4870 | 10 | 14.9 | 4 | SF | | | 3 | C | | 17 | | |
| 0137 | HOLL | 18 | 2056 | 2056 | 2100 | S24 | W53 | 4870 | 10 | 14.8 | 4 | SF | | | 3 | C | | 29 | | |
| 0138 | HOLL | 18 | 2121 | 2125 | 2133 | S24 | W85 | 4869 | 10 | 12.3 | 12 | SF | | | 3 | C | | 35 | | |
| | | 18 | 2200 | | 2214 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 18 | 2200 | | 2229 | No Flare Patrol | | | | | | | | | | | | | | |
| 0139 | PALE | 19 | 0021E | 0021U | 0022D | S25 | W90 | 4869 | 10 | 12.0 | 1D | SF | | | 3 | C | | | | |
| | | 19 | 0139 | | 0207 | No Flare Patrol | | | | | | | | | | | | | | |
| 0140 | | 19 | 0826 | 0830 | 0840 | S27 | W56 | 4870 | 10 | 15.0 | 14 | SN | | | | | | 64 | | D |
| | URUM | 19 | 0826 | 0830 | 0834D | S27 | W55 | 4870 | 10 | 15.1 | 8D | SN | | | | C | | 64 | | D |
| | KHAR | 19 | 0830E | | 0840 | S27 | W58 | 4870 | 10 | 14.8 | 10D | SF | | | | V | 0830 | | | D |
| 0141 | KHAR | 19 | 1108E | 1110U | 1116 | S27 | W59 | 4870 | 10 | 14.9 | 8D | SF | | | | V | 1112 | | | DL |
| | | 19 | 1457 | | 1529 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 19 | 1523 | | 1529 | No Flare Patrol | | | | | | | | | | | | | | |
| 0142 | HOLL | 19 | 1645 | 1647 | 1709 | S25 | W62 | 4870 | 10 | 14.9 | 24 | SF | | | 3 | C | | 22 | | |
| | | 19 | 1655 | | 1716 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 19 | 1655 | | 1716 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 19 | 1722 | | 1725 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 19 | 1722 | | 1725 | No Flare Patrol | | | | | | | | | | | | | | |
| 0143 | | 19 | 18367 | 18431 | 1848 | S25 | W62 | 4870 | 10 | 15.0 | 12 | SF | | | | | | 18 | | |
| | HOLL | 19 | 1836 | 1844 | 1851 | S26 | W61 | 4870 | 10 | 15.0 | 15 | SF | | | 3 | C | | 22 | | |
| | PALE | 19 | 1843 | 1843 | 1846 | S24 | W63 | 4870 | 10 | 14.9 | 3 | SF | | | 3 | C | | 14 | | |

# H - ALPHA S O L A R F L A R E S

## OCTOBER 1987

| Grp # | Sta | Day | Start (UT) | Max (UT) | End (UT) | Lat | CMD | NOAA/ USAF Region | CMP Mo | CMP Day | Dur (Min) | Imp Opt | Imp Xray | Obs See | Obs Type | Area Measurement Time (UT) | Area Measurement Apparent ($10^{-6}$ Disk) | Area Measurement Corr (Sq Deg) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0144 | HOLL | 19 | 1859 | 1903 | 1936 | N20 | W47 | 4866 | 10 | 16.2 | 37 | SF | | 3 | C | | 42 | | F |
| 0145 | | 19 | 23353 | 23401 | 2352 | S26 | W65 | 4870 | 10 | 14.9 | 17 | SF | | | | | 62 | | H |
| | HOLL | 19 | 2335 | 2341 | 2357 | S26 | W64 | 4870 | 10 | 15.0 | 22 | SF | | 3 | C | | 28 | | H |
| | LEAR | 19 | 2338 | 2340 | 2348 | S26 | W66 | 4870 | 10 | 14.8 | 10 | SF | | 3 | C | | 95 | | |
| 0146 | | 20 | 00044 | 00066 | 0019 | S26 | W65 | 4870 | 10 | 14.9 | 15 | SF | C 2.3 | | | | 53 | | |
| | LEAR | 20 | 0004 | 0006 | 0016 | S26 | W65 | 4870 | 10 | 14.9 | 12 | SF | C 2.3 | 3 | C | | 71 | | |
| | HOLL | 20 | 0005 | 0007 | 0019D | S24 | W63 | 4870 | 10 | 15.1 | 14D | SF | C 2.3 | 3 | C | | 32 | | |
| | PALE | 20 | 0005 | 0011 | 0018 | S27 | W70 | 4870 | 10 | 14.5 | 13 | SF | C 2.3 | 3 | C | | 57 | | |
| | MANI | 20 | 0008 | 0012 | 0022 | S29 | W62 | 4870 | 10 | 15.1 | 14 | SN | | 2 | P | | | | |
| 0147 | KHAR | 20 | 0730E | | 0752 | S43 | E23 | 4872 | 10 | 22.2 | 22D | SN | | | V | 0730 | | | EH |
| 0148 | KHAR | 20 | 0743E | 0744U | 0747D | S35 | E46 | 4873 | 10 | 24.0 | 4D | SF | | | V | 0744 | | | D |
| 0149 | | 20 | 0844 | 0845 | 0852 | S26 | W71 | 4870 | 10 | 14.8 | 8 | 1N | | | | | 174 | | EV |
| | ABST | 20 | 0844 | 0845 | 0850D | S26 | W70 | 4870 | 10 | 14.9 | 6D | 1N | | | C | 0845 | 174 | | EV |
| | KHAR | 20 | 0844 | 0846U | 0852 | S25 | W72 | 4870 | 10 | 14.8 | 8 | SN | | | V | 0846 | | | E |
| 0150 | KHAR | 20 | 0943 | | 0955D | S25 | W72 | 4870 | 10 | 14.8 | 12D | SF | | | V | 0943 | | | |
| 0151 | HTPR | 20 | 1204E | | 1222D | S42 | E19 | 4872 | 10 | 22.1 | 18D | SF | | | C | 1210 | 20 | 0.2 | |
| 0152 | HOLL | 20 | 1812 | 1813 | 1819 | N21 | W66 | 4866 | 10 | 15.7 | 7 | SF | | 3 | C | | 20 | | |
| | | 20 | 2047 | | 2125 | No Flare Patrol | | | | | | | | | | | | | |
| 0153 | HOLL | 20 | 2137 | 2139 | 2140 | N21 | W70 | 4866 | 10 | 15.5 | 3 | SF | | 3 | C | | 17 | | |
| 0154 | HOLL | 20 | 2206 | 2208 | 2216 | S32 | E40 | 4873 | 10 | 24.1 | 10 | SF | | 3 | C | | 14 | | |
| 0155 | YUNN | 21 | 0020 | 0023 | 0039 | N23 | W69 | 4866 | 10 | 15.7 | 19 | SN | | | C | | 80 | | |
| | | 21 | 0704 | | 0842 | No Flare Patrol | | | | | | | | | | | | | |
| | | 21 | 0846 | | 0852 | No Flare Patrol | | | | | | | | | | | | | |
| 0156 | KHAR | 21 | 0850E | | 0855D | N17 | W75 | 4866 | 10 | 15.7 | 5D | SF | | | V | 0850 | | | D |
| | | 21 | 0854 | | 0858 | No Flare Patrol | | | | | | | | | | | | | |
| | | 21 | 0903 | | 1046 | No Flare Patrol | | | | | | | | | | | | | |
| 0157 | KHAR | 21 | 1011 | | 1035D | S24 | W90 | 4870 | 10 | 14.5 | 24D | SN | | | V | 1011 | | | E |
| | | 21 | 1036 | | 1046 | No Flare Patrol | | | | | | | | | | | | | |
| | | 21 | 1048 | | 1112 | No Flare Patrol | | | | | | | | | | | | | |
| | | 21 | 1048 | | 1112 | No Flare Patrol | | | | | | | | | | | | | |
| | | 21 | 1308 | | 1328 | No Flare Patrol | | | | | | | | | | | | | |
| | | 21 | 1330 | | 1343 | No Flare Patrol | | | | | | | | | | | | | |
| | | 21 | 1402 | | 1404 | No Flare Patrol | | | | | | | | | | | | | |
| | | 21 | 1958 | | 2010 | No Flare Patrol | | | | | | | | | | | | | |
| | | 21 | 1958 | | 2010 | No Flare Patrol | | | | | | | | | | | | | |
| 0158 | | 21 | 2106 | 2107 | 2116 | S42 | E04 | 4872 | 10 | 22.2 | 10 | SF | | | | | 19 | | |
| | HOLL | 21 | 2106 | 2107 | 2115 | S42 | E05 | 4872 | 10 | 22.3 | 9 | SF | | 3 | C | | 18 | | |
| | RAMY | 21 | 2106 | 2107 | 2116 | S43 | E03 | 4872 | 10 | 22.1 | 10 | SF | | 3 | C | | 20 | | |
| | | 21 | 2140 | | 2326 | No Flare Patrol | | | | | | | | | | | | | |
| | | 21 | 2151 | | 2249 | No Flare Patrol | | | | | | | | | | | | | |
| | | 22 | 1051 | | 1104 | No Flare Patrol | | | | | | | | | | | | | |
| 0159 | RAMY | 22 | 2020 | 2022 | 2035 | S35 | E12 | 4873 | 10 | 23.8 | 15 | SF | | 3 | C | | 38 | | |
| | | 22 | 2122 | | 2220 | No Flare Patrol | | | | | | | | | | | | | |
| | | 22 | 2122 | | 2326 | No Flare Patrol | | | | | | | | | | | | | |
| | | 22 | 2304 | | 2309 | No Flare Patrol | | | | | | | | | | | | | |
| 0160 | KHAR | 23 | 0758 | | 0804 | N24 | W32 | | 10 | 20.8 | 6 | SF | | | V | 0758 | | | |
| 0161 | KHAR | 23 | 0804 | | 0814 | S47 | W11 | 4872 | 10 | 22.4 | 10 | SF | | | V | 0804 | | | H |

# H - ALPHA S O L A R F L A R E S

OCTOBER 1987

| Grp # | Sta | Day | Start (UT) | Max (UT) | End (UT) | Lat | CMD | NOAA/ USAF Region | CMP Mo | CMP Day | Dur (Min) | Imp Opt | Imp Xray | Imp See | Obs Type | Area Measurement Time (UT) | Area Measurement Apparent ($10^{-6}$ Disk) | Area Measurement Corr (Sq Deg) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 23 | 1031 | | 1044 | No Flare Patrol | | | | | | | | | | | | | |
| | | 23 | 1537 | | 1556 | No Flare Patrol | | | | | | | | | | | | | |
| | | 23 | 1537 | | 1556 | No Flare Patrol | | | | | | | | | | | | | |
| | | 23 | 1604 | | 1738 | No Flare Patrol | | | | | | | | | | | | | |
| | | 23 | 1604 | | 1738 | No Flare Patrol | | | | | | | | | | | | | |
| | | 23 | 1838 | | 1910 | No Flare Patrol | | | | | | | | | | | | | |
| | | 23 | 1838 | | 1910 | No Flare Patrol | | | | | | | | | | | | | |
| | | 23 | 2131 | | 2138 | No Flare Patrol | | | | | | | | | | | | | |
| | | 23 | 2131 | | 2138 | No Flare Patrol | | | | | | | | | | | | | |
| | | 24 | 0040 | | 0059 | No Flare Patrol | | | | | | | | | | | | | |
| | | 24 | 0040 | | 0130 | No Flare Patrol | | | | | | | | | | | | | |
| | | 24 | 0142 | | 0218 | No Flare Patrol | | | | | | | | | | | | | |
| | | 24 | 0831 | | 1123 | No Flare Patrol | | | | | | | | | | | | | |
| | | 24 | 0906 | | 0909 | No Flare Patrol | | | | | | | | | | | | | |
| | | 24 | 1236 | | 1257 | No Flare Patrol | | | | | | | | | | | | | |
| 0162 | RAMY | 24 | 1308 | 1308 | 1313 | N31 | E77 | 4875 | 10 | 30.6 | 5 | SF | | 3 | C | | 19 | | |
| 0163 | RAMY | 24 | 1432 | 1432 | 1451 | N31 | E73 | 4875 | 10 | 30.4 | 19 | SF | | 3 | C | | 13 | | |
| 0164 | RAMY | 24 | 1513 | 1517 | 1520 | N30 | E75 | 4875 | 10 | 30.5 | 7 | SF | | 3 | C | | 12 | | |
| | | 24 | 2220 | | 2242 | No Flare Patrol | | | | | | | | | | | | | |
| | | 24 | 2255 | | 2259 | No Flare Patrol | | | | | | | | | | | | | |
| 0165 | YUNN | 25 | 0604 | 0605U | 0605D | N31 | E71 | 4875 | 10 | 30.8 | 1D | SN | | | P | 0605 | 161 | | D |
| | | 25 | 0901 | | 1154 | No Flare Patrol | | | | | | | | | | | | | |
| 0166 | SVTO | 25 | 1023 | 1024 | 1041 | S24 | W60 | 4876 | 10 | 20.8 | 18 | SF | | 2 | C | | 26 | | F |
| 0167 | HOLL | 25 | 1755 | 1804 | 1811 | N35 | E66 | 4875 | 10 | 31.0 | 16 | SF | C 1.1 | 3 | C | | 68 | | |
| 0168 | HOLL | 25 | 1928 | 1942 | 1945 | N32 | E61 | 4875 | 10 | 30.6 | 17 | SF | | 3 | C | | 12 | | |
| | | 25 | 2113 | | 2131 | No Flare Patrol | | | | | | | | | | | | | |
| | | 25 | 2113 | | 2131 | No Flare Patrol | | | | | | | | | | | | | |
| | | 25 | 2141 | | 2207 | No Flare Patrol | | | | | | | | | | | | | |
| | | 25 | 2141 | | 2207 | No Flare Patrol | | | | | | | | | | | | | |
| | | 26 | 0031 | | 0649 | No Flare Patrol | | | | | | | | | | | | | |
| | | 26 | 0714 | | 1116 | No Flare Patrol | | | | | | | | | | | | | |
| | | 26 | 0931 | | 1037 | No Flare Patrol | | | | | | | | | | | | | |
| | | 26 | 1103 | | 1116 | No Flare Patrol | | | | | | | | | | | | | |
| | | 26 | 1258 | | 1323 | No Flare Patrol | | | | | | | | | | | | | |
| | | 26 | 1353 | | 1410 | No Flare Patrol | | | | | | | | | | | | | |
| | | 26 | 1656 | | 1717 | No Flare Patrol | | | | | | | | | | | | | |
| 0169 | HOLL | 26 | 2142 | 2148 | 2154 | N31 | E51 | 4875 | 10 | 30.9 | 12 | SF | | 3 | C | | 25 | | |
| | | 26 | 2207 | | 2307 | No Flare Patrol | | | | | | | | | | | | | |
| | | 26 | 2212 | | 2247 | No Flare Patrol | | | | | | | | | | | | | |
| | | 26 | 2318 | | 2349 | No Flare Patrol | | | | | | | | | | | | | |
| | | 27 | 0641 | | 1417 | No Flare Patrol | | | | | | | | | | | | | |
| 0170 | KHAR | 27 | 0836 | | 0840D | N26 | E43 | 4875 | 10 | 30.7 | 4D | SF | | | V | 0836 | | | DL |
| 0171 | KHAR | 27 | 0853 | 0853U | 0900 | S21 | E62 | 4878 | 11 | 1.1 | 7 | SF | | | V | 0853 | | | DL |
| 0172 | KHAR | 27 | 0958 | 1000 | 1006 | S21 | E62 | 4878 | 11 | 1.2 | 8 | SF | | | V | 1000 | | | DL |
| | | 27 | 1041 | | 1147 | No Flare Patrol | | | | | | | | | | | | | |
| | | 27 | 1225 | | 1335 | No Flare Patrol | | | | | | | | | | | | | |
| | | 27 | 1346 | | 1359 | No Flare Patrol | | | | | | | | | | | | | |
| | | 27 | 1616 | | 1632 | No Flare Patrol | | | | | | | | | | | | | |
| | | 27 | 1616 | | 1632 | No Flare Patrol | | | | | | | | | | | | | |
| | | 27 | 1657 | | 1709 | No Flare Patrol | | | | | | | | | | | | | |
| | | 27 | 1832 | | 1838 | No Flare Patrol | | | | | | | | | | | | | |
| | | 27 | 2143 | | 2203 | No Flare Patrol | | | | | | | | | | | | | |
| | | 27 | 2143 | | 2203 | No Flare Patrol | | | | | | | | | | | | | |
| | | 27 | 2224 | | 2228 | No Flare Patrol | | | | | | | | | | | | | |

# H - ALPHA S O L A R F L A R E S

## OCTOBER 1987

| Grp # | Sta | Day | Start (UT) | Max (UT) | End (UT) | Lat | CMD | NOAA/ USAF Region | CMP Mo | CMP Day | Dur (Min) | Imp | Opt | Xray | See | Obs Type | Time (UT) | Area Measurement Apparent ($10^{-6}$ Disk) | Corr (Sq Deg) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 27 | 2250 | | 2333 | No Flare Patrol | | | | | | | | | | | | | | |
| 0173 | | 28 | 0125* | 0153* | 0302 | S25 | E59 | 4878 | 11 | 1.6 | 97 | 1N | C | 2.3 | | | | 124 | | EFU |
| | MITK | 28 | 0125 | 0153 | 0312 | S25 | E60 | 4878 | 11 | 1.7 | 107 | 1N | | | | C | 0153 | 150 | | E |
| | LEAR | 28 | 0132E | 0150U | 0247 | S26 | E59 | 4878 | 11 | 1.6 | 75D | 1N | C | 2.3 | 3 | C | | 182 | | UF |
| | PALE | 28 | 0231 | 0234 | 0308 | S25 | E59 | 4878 | 11 | 1.7 | 37 | SN | | | 2 | C | | 40 | | F |
| | | 28 | 0710 | | 0758 | No Flare Patrol | | | | | | | | | | | | | | |
| 0174 | KHAR | 28 | 0733E | | 0754 | S21 | W17 | 4881 | 10 | 27.0 | 21D | SF | | | | V | 0733 | | | D |
| | | 28 | 0809 | | 1458 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 28 | 1115 | | 1157 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 28 | 1215 | | 1250 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 28 | 1357 | | 1458 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 28 | 1524 | | 1534 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 28 | 1524 | | 1534 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 28 | 1544 | | 1735 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 28 | 1544 | | 1735 | No Flare Patrol | | | | | | | | | | | | | | |
| 0175 | HOLL | 28 | 1742 | 1743 | 1751 | S22 | W19 | 4881 | 10 | 27.3 | 9 | SF | | | 3 | C | | 18 | | |
| | | 28 | 1845 | | 1851 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 28 | 1845 | | 1851 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 28 | 1934 | | 1940 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 28 | 1934 | | 1940 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 28 | 1947 | | 1954 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 28 | 1947 | | 1954 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 28 | 2012 | | 2032 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 28 | 2012 | | 2032 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 28 | 2139 | | 2146 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 28 | 2139 | | 2146 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 28 | 2312 | | 2338 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 29 | 0401 | | 0411 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 29 | 0626 | | 0645 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 29 | 0712 | | 1110 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 29 | 1056 | | 1110 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 29 | 1200 | | 1212 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 29 | 1200 | | 1212 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 29 | 1230 | | 1724 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 29 | 1350 | | 1359 | No Flare Patrol | | | | | | | | | | | | | | |
| | | 29 | 1456 | | 1510 | No Flare Patrol | | | | | | | | | | | | | | |
| 0176 | PALE | 29 | 2309 | 2309 | 2313 | S22 | W40 | 4881 | 10 | 26.9 | 4 | SF | | | 3 | C | | 14 | | |
| | | 30 | 0331 | | 0359 | No Flare Patrol | | | | | | | | | | | | | | |
| 0177 | HTPR | 30 | 0848 | 0849 | 0910 | S21 | E18 | 4878 | 10 | 31.7 | 22 | SF | | | | C | 0849 | 60 | 0.6 | E |
| 0178 | HTPR | 30 | 0915 | 0918 | 0922 | N27 | E06 | 4875 | 10 | 30.8 | 7 | SF | | | | C | 0918 | 20 | 0.2 | E |
| 0179 | HTPR | 30 | 1145 | 1146 | 1151 | S21 | W51 | 4881 | 10 | 26.6 | 6 | SF | | | | C | 1146 | 10 | 0.2 | |
| 0180 | HTPR | 30 | 1320 | 1325 | 1350 | S21 | W52 | 4881 | 10 | 26.6 | 30 | SF | | | | C | 1325 | 30 | 0.5 | E |
| 0181 | HTPR | 30 | 1448 | 1452 | 1500 | N28 | E05 | 4875 | 10 | 31.0 | 12 | SN | | | | C | 1452 | 80 | 0.9 | E |
| 0182 | HTPR | 30 | 1510 | 1515 | 1535 | N31 | E01 | 4875 | 10 | 30.7 | 25 | SF | | | | C | 1515 | 10 | 0.1 | |
| | | 30 | 1556 | | 1617 | No Flare Patrol | | | | | | | | | | | | | | |
| 0183 | HOLL | 30 | 1605E | 1605U | 1618 | S25 | E24 | 4878 | 11 | 1.5 | 13D | SF | | | 3 | C | | 11 | | F |
| 0184 | HOLL | 30 | 1634 | 1634 | 1644 | S25 | W49 | 4881 | 10 | 26.9 | 10 | SF | | | 3 | C | | 14 | | |
| 0185 | | 30 | 2003* | 20202 | 2038 | S22 | W51 | 4881 | 10 | 26.9 | 35 | SF | | | | | | 32 | | |
| | HOLL | 30 | 2003 | 2020 | 2047 | S22 | W50 | 4881 | 10 | 27.0 | 44 | SF | | | 3 | C | | 39 | | |
| | PALE | 30 | 2021 | 2022 | 2028 | S22 | W52 | 4881 | 10 | 26.8 | 7 | SF | | | 3 | C | | 25 | | |
| 0186 | HOLL | 30 | 2127 | 2141 | 2215 | N30 | W04 | 4875 | 10 | 30.6 | 48 | SF | | | 2 | C | | 95 | | F |

# H - ALPHA SOLAR FLARES

OCTOBER 1987

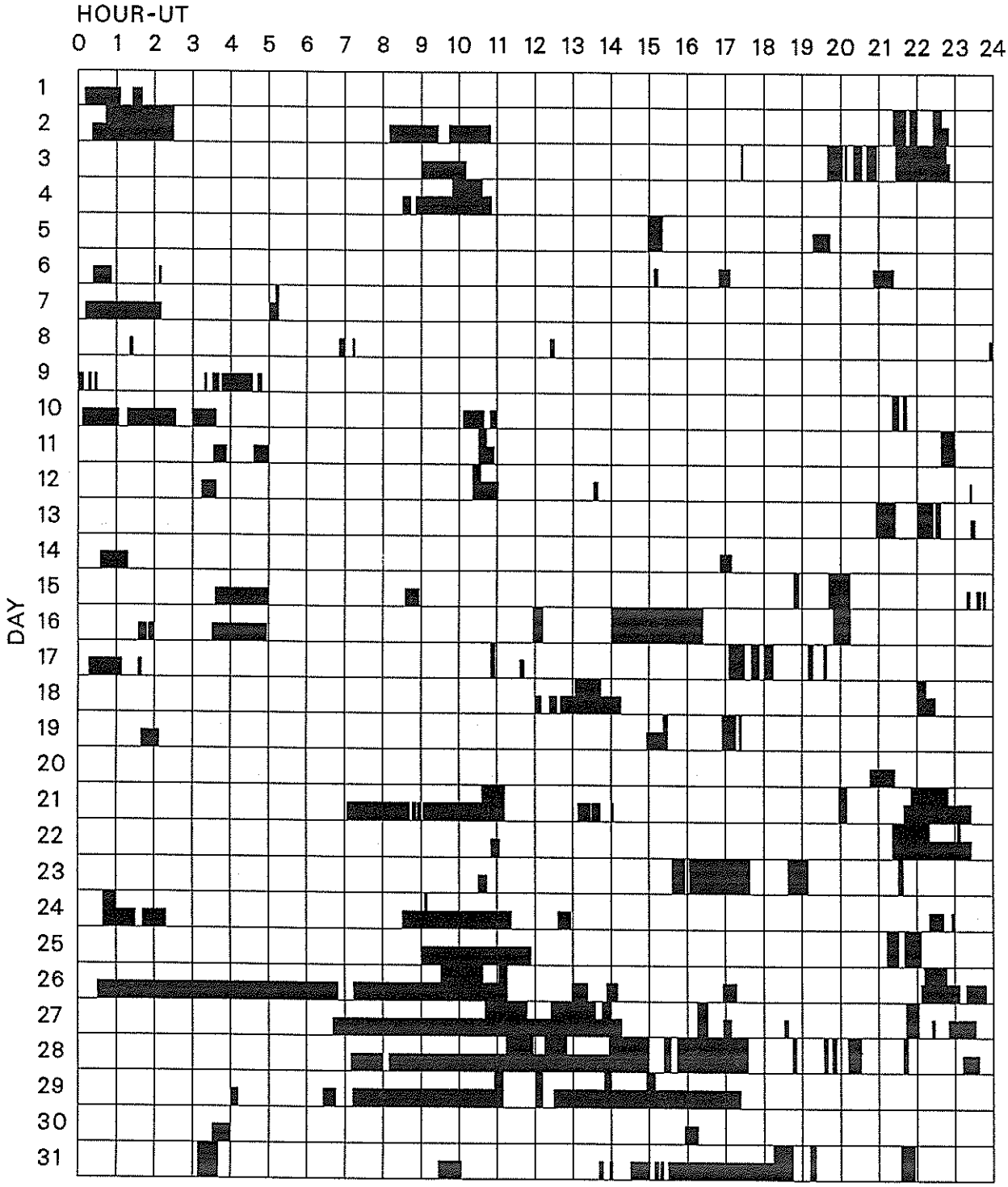
| Grp # | Sta | Day | Start (UT) | Max (UT) | End (UT) | Lat | CMD | NOAA/ USAF Region | CMP Mo | CMP Day | Dur (Min) | Imp Opt | Imp Xray | Obs See | Obs Type | Time (UT) | Area Measurement Apparent ($10^{-6}$ Disk) | Area Measurement Corr (Sq Deg) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0187 | LEAR | 30 | 2301 | 2302 | 2304 | N34 | E04 | 4875 | 10 | 31.3 | 3 | SF | 3 | | C | | 15 | | F |
| | | 31 | 0308 | | 0340 | No Flare Patrol | | | | | | | | | | | | | |
| | | 31 | 0308 | | 0340 | No Flare Patrol | | | | | | | | | | | | | |
| 0188 | LEAR | 31 | 0858 | 0902 | 0903 | S23 | W56 | 4881 | 10 | 27.0 | 5 | SF | 3 | | C | | 14 | | |
| | | 31 | 0927 | | 1003 | No Flare Patrol | | | | | | | | | | | | | |
| | | 31 | 1342 | | 1347 | No Flare Patrol | | | | | | | | | | | | | |
| | | 31 | 1358 | | 1402 | No Flare Patrol | | | | | | | | | | | | | |
| | | 31 | 1431 | | 1501 | No Flare Patrol | | | | | | | | | | | | | |
| | | 31 | 1509 | | 1515 | No Flare Patrol | | | | | | | | | | | | | |
| | | 31 | 1518 | | 1522 | No Flare Patrol | | | | | | | | | | | | | |
| | | 31 | 1530 | | 1845 | No Flare Patrol | | | | | | | | | | | | | |
| | | 31 | 1815 | | 1845 | No Flare Patrol | | | | | | | | | | | | | |
| | | 31 | 1912 | | 1921 | No Flare Patrol | | | | | | | | | | | | | |
| | | 31 | 1912 | | 1921 | No Flare Patrol | | | | | | | | | | | | | |
| | | 31 | 2135 | | 2156 | No Flare Patrol | | | | | | | | | | | | | |
| | | 31 | 2135 | | 2156 | No Flare Patrol | | | | | | | | | | | | | |

"Remarks"

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

# INTERVALS OF NO FLARE PATROL OBSERVATION
## FOR PRECEDING SOLAR FLARE TABLE

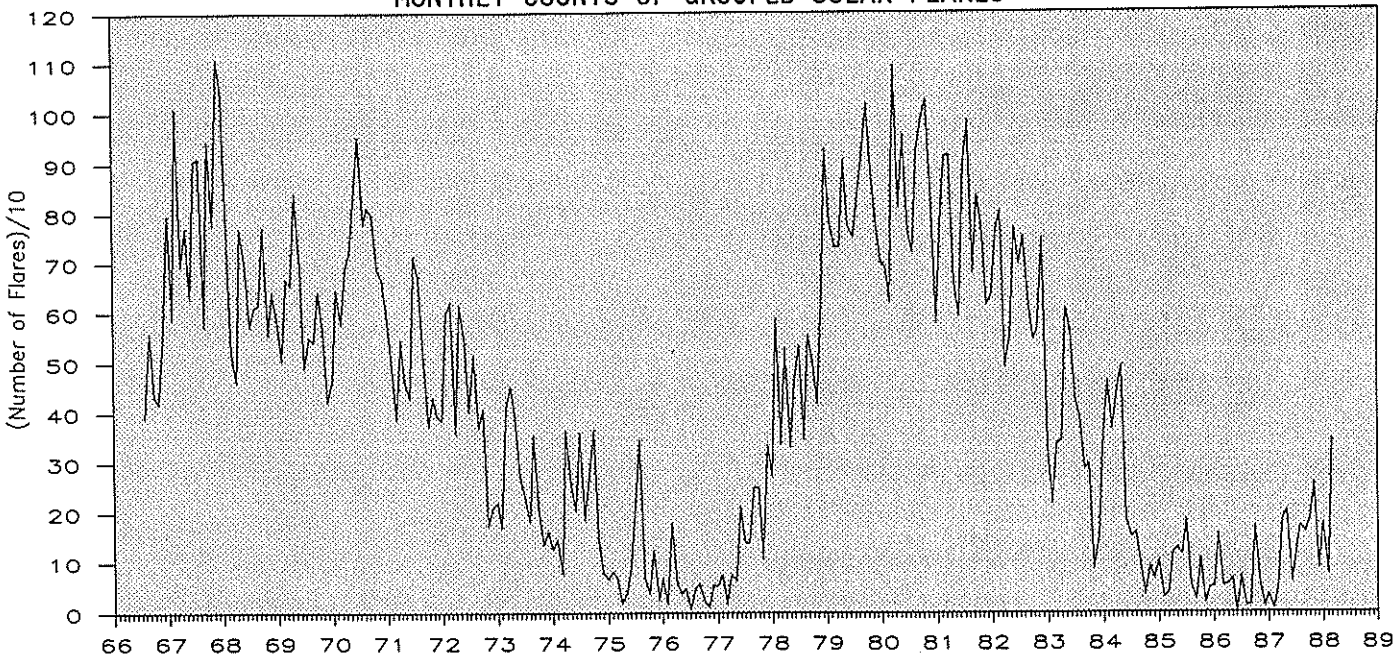
## OCTOBER 1987




Times of no flare patrol, shown here as shaded areas, combine reports from the observatories listed below. Portions of a panel completely shaded mark dates and times of no patrol of any kind, that is, of neither visual nor cinematographic; portions of a panel with only the bottom half shaded mark times of strictly visual patrol.

| | | | | |
|---|---|---|---|---|
| Abastumani | Istanbul | Learmonth | Palehua | Tashkent |
| Bucharest | Kandilli | Lvov | Peking | Urumqi |
| Haute Provence | Kanzelhoehe | Manila | Ramey | Voroshilov |
| Holloman | Kharkov | Mitaka | San Vito | Yunnan |

MONTHLY COUNTS OF GROUPED SOLAR FLARES*




| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1966 | | | | | | | | 391 | 558 | 432 | 417 | 543 | 2341 |
| 1967 | 796 | 589 | 1009 | 694 | 771 | 629 | 907 | 911 | 573 | 946 | 775 | 1109 | 9709 |
| 1968 | 1037 | 773 | 519 | 460 | 768 | 697 | 573 | 611 | 616 | 772 | 556 | 640 | 8022 |
| 1969 | 581 | 504 | 669 | 655 | 839 | 694 | 489 | 551 | 540 | 643 | 566 | 422 | 7153 |
| 1970 | 466 | 646 | 578 | 688 | 722 | 836 | 954 | 780 | 811 | 797 | 687 | 667 | 8632 |
| 1971 | 598 | 505 | 387 | 546 | 461 | 430 | 713 | 673 | 518 | 375 | 431 | 394 | 6031 |
| 1972 | 384 | 599 | 621 | 361 | 614 | 541 | 404 | 515 | 371 | 408 | 175 | 210 | 5203 |
| 1973 | 221 | 171 | 410 | 453 | 388 | 270 | 232 | 182 | 353 | 201 | 136 | 163 | 3180 |
| 1974 | 127 | 148 | 79 | 364 | 255 | 204 | 360 | 187 | 270 | 366 | 153 | 81 | 2594 |
| 1975 | 68 | 82 | 69 | 19 | 42 | 85 | 196 | 346 | 68 | 38 | 127 | 25 | 1165 |
| 1976 | 69 | 18 | 180 | 60 | 38 | 48 | 6 | 47 | 57 | 23 | 13 | 55 | 614 |
| 1977 | 54 | 77 | 18 | 76 | 64 | 210 | 140 | 140 | 250 | 252 | 107 | 336 | 1724 |
| 1978 | 274 | 588 | 338 | 526 | 330 | 460 | 533 | 346 | 554 | 499 | 418 | 648 | 5514 |
| 1979 | 926 | 781 | 731 | 731 | 907 | 772 | 750 | 821 | 901 | 1018 | 888 | 786 | 10012 |
| 1980 | 703 | 689 | 621 | 1092 | 811 | 956 | 763 | 720 | 924 | 988 | 1027 | 838 | 10132 |
| 1981 | 578 | 782 | 914 | 915 | 658 | 592 | 893 | 982 | 680 | 836 | 773 | 615 | 9218 |
| 1982 | 631 | 766 | 803 | 490 | 553 | 769 | 696 | 753 | 615 | 544 | 564 | 748 | 7932 |
| 1983 | 332 | 220 | 337 | 346 | 609 | 561 | 427 | 389 | 289 | 298 | 88 | 152 | 4048 |
| 1984 | 353 | 461 | 366 | 440 | 492 | 185 | 151 | 161 | 95 | 36 | 92 | 69 | 2901 |
| 1985 | 104 | 29 | 38 | 119 | 129 | 116 | 185 | 53 | 25 | 108 | 19 | 50 | 975 |
| 1986 | 51 | 158 | 54 | 56 | 68 | 3 | 71 | 12 | 14 | 174 | 56 | 13 | 730 |
| 1987 | 36 | 7 | 51 | 188 | 203 | 59 | 128 | 174 | 159 | 188 | 256 | 88 | 1537 |
| 1988 | 177 | 77 | 343 | | | | | | | | | | 597 |

*Flare counts are preliminary from July 1982 to present. In particular, the monthly totals for the last 6 months may change significantly, as more sites submit their reports. The term "grouped" means that observations of the same event by different stations have been lumped together and counted as one.

# SOLAR RADIO EMISSION--OUTSTANDING OCCURRENCES

## OCTOBER 1987

| Day | Freq | Sta | Type | | Start (UT) | Time of Maximum (UT) | Duration (Min) | Flux Density Peak ($10^{-22}$ W/m$^2$ Hz) | Flux Density Mean ($10^{-22}$ W/m$^2$ Hz) | Int | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 536 | ONDR | 8 | S | 1311.7 | 1311.8 | 0.3 | 1.0 | | | |
| | 536 | ONDR | 8 | S | 1457.8 | 1457.9 | 0.3 | 5.0 | | | |
| | 2800 | OTTA | 8 | S | 1529.6 | 1529.8 | 5.0 | 10.8 | 1.3 | | |
| | 9400 | HUAN | 1 | S | 1619.4 | 1620.8 | 3.8 | 2.5 | 1.5 | | |
| | 2800 | OTTA | 1 | S | 1819.2 | 1819.4 | 5.0 | 2.3 | 1.2 | | |
| 02 | 260 | ONDR | 44 | NS | 0809.0E | 0859.5 | 429.0D | 1.4U | | | |
| | 2800 | OTTA | 20 | GRF | 1715.0 | 1745.0 | 180.0D | 2.7 | | | |
| ┌ | 9400 | HUAN | 2 | S/F | 1918.6 | 1920.3 | 4.1 | 3.8 | 0.6 | | |
| └ | 9400 | HUAN | | | 1918.6 | 1920.9 | | 4.5 | | | |
| 03 | 260 | ONDR | 44 | NS | 0809.0E | 1058.3 | 347.0D | 2.0U | | | |
| | 9400 | HUAN | 20 | GRF | 1233.0 | 1240.2 | 18.6 | 3.5 | 2.0 | | |
| | 9400 | HUAN | 1 | S | 1536.7 | 1539.3 | 5.6 | 2.8 | 1.4 | | |
| | 2800 | OTTA | 28 | PRE | 1645.0 | 1648.8 | 4.9 | 9.5 | 5.6 | | |
| ┌ | 2800 | OTTA | 22 | GRF | 1648.8 | 1709.5 | 95.0D | 6.1 | | | |
| └ | 2800 | OTTA | 1 | S | 1719.8 | 1720.8 | 3.1 | 2.3 | 1.1 | | |
| 04 | 200 | GORK | 43 | NS | 0715.0 | | 24.5D | | 5.0 | | |
| └ | 260 | ONDR | 44 | NS | 0816.0E | 1417.6 | 361.6D | 6.0U | | | |
| | 204 | IZMI | 41 | F | 1136.0 | 1139.0 | 4.0 | 70.0 | | | |
| | 2800 | OTTA | 32 | ABS | 1612.0 | 1630.0 | 44.0 | -1.6 | | | |
| | 2800 | OTTA | 20 | GRF | 1658.0 | 1715.0 | 40.0 | 1.8 | | | |
| | 9400 | HUAN | 1 | S | 2036.1 | 2039.1 | 5.1 | 3.1 | 0.9 | | |
| ┌ | 9400 | TYKW | 5 | S | 2141.0 | 2144.0 | 8.0U | 6.0 | 2.0U | | INTERFERENCE |
| └ | 3750 | TYKW | 5 | S | 2141.0 | 2143.5 | 8.0 | 2.0 | 0.7 | | |
| | 3750 | TYKW | 45 | C | 2210.0 | 2212.3 | 4.0 | 5.0 | 2.5 | | |
| | 3750 | TYKW | 29 | PBI | 2214.0 | | 20.0 | 2.0 | 1.0 | | |
| 05 | 200 | HIRA | 43 | NS | 0354.0 | 0432.0 | 106.0 | 8.0 | 2.0 | | |
| ├ | 245 | LEAR | 44 | NS | 0421.0E | 0803.0 | 345.0D | 54.0 | | | QL=5 ST=3 TYP=1 |
| ├ | 200 | GORK | 44 | NS | 0432.0E | | 43.3D | | 0.5 | | |
| ├ | 204 | IZMI | 44 | NS | 0600.0E | | 360.0D | 15.0 | | | |
| ├ | 221 | ABST | 43 | NS | 0700.0 | 1019.0 | 240.0 | 18.0 | | | QL= ST= TYP=1 |
| ├ | 33 | UPIC | 43 | NS | 0809.0 | | 329.0 | | | | |
| ├ | 29 | UPIC | 43 | NS | 0809.4 | | 328.6 | | | | |
| ├ | 245 | SGMR | 43 | NS | 1105.0 | 1603.0 | 653.0D | 120.0 | | | QL=5 ST=2 TYP=1 |
| ├ | 245 | SVTO | 43 | NS | 1112.0 | 1318.0 | 294.0D | 110.0 | | | QL=1 ST=2 TYP=1 |
| ├ | 245 | PALE | 43 | NS | 1653.0 | 1750.0 | 668.0D | 100.0 | | | QL=5 ST=2 TYP=1 |
| ├ | 410 | PALE | 43 | NS | 1702.0 | 1725.0 | 98.0D | 26.0 | | | QL=5 ST=2 TYP=1 |
| ├ | 410 | SGMR | 44 | NS | 1715.0E | 1735.0 | 283.0D | 19.0 | | | QL=5 ST=2 TYP=1 |
| ├ | 200 | HIRA | 44 | NS | 2045.0E | 2312.0 | 600.0D | 7.0 | 2.0 | | WR |
| └ | 245 | LEAR | 44 | NS | 2218.0E | 2259.0 | 538.0D | 56.0 | | | QL=5 ST=3 TYP=1 |
| | 2000 | TYKW | 20 | GRF | 0225.0 | 0240.0 | 55.0 | 1.0 | 0.5 | | |
| | 200 | GORK | 2 | S/F | 0529.5 | 0529.9 | 1.7 | 30.0 | | | |
| | 650 | GORK | 2 | S/F | 0549.7 | 0550.1 | 0.7 | 3.8 | | | |
| ┌ | 650 | GORK | 21 | GRF | 0600.4U | | 164.6U | 3.0 | | | |
| ├ | 200 | GORK | 4 | S/F | 0641.3 | 0642.5 | 6.5 | 45.0 | | | |
| ├ | 650 | GORK | 45 | C | 0642.2 | 0642.4 | 0.7 | 7.0 | | | |
| └ | 650 | GORK | | | 0642.2 | 0642.8 | | 73.0 | | | |
| | 3100 | CRIM | 1 | S | 0751.0 | 0751.5 | 1.0 | 4.0 | 1.0 | | |
| | 650 | GORK | 1 | S | 0803.2 | 0803.7 | 0.6 | 2.6 | | | |
| ┌ | 245 | LEAR | 8 | S | 0809.0E | 0809.0 | 1.0D | 100.0 | | | QL=5 ST=2 TYP=5 |
| └ | 650 | GORK | 1 | S | 0809.3 | 0809.7 | 0.7 | 3.0 | | | |
| | 200 | GORK | 4 | S/F | 0839.0 | 0839.7 | 1.1 | 50.0D | | | |
| | 650 | GORK | 41 | F | 0957.0 | | 3.9 | 2.0 | | | |
| | 200 | GORK | 41 | F | 1024.4 | 1025.6 | 16.8 | 5.0D | | | |
| | 200 | GORK | | | 1024.4 | 1034.8 | | 50.0 | | | |
| | 9400 | HUAN | 1 | S | 1336.4 | 1338.2 | 3.6 | 3.9 | 1.8 | | |
| | 2800 | OTTA | 22 | GRF | 1559.3 | 1605.1 | 11.2 | 3.4 | 1.2 | | |
| | 245 | PALE | 8 | S | 1651.0E | 1651.0 | 2.0D | 32.0 | | | QL=5 ST=2 TYP=3 |
| ┌ | 200 | HIRA | 4 | S/F | 2130.0 | 2132.0 | 8.0 | 400.0 | | | QL= ST= TYP=3 |
| ├ | 100 | HIRA | 4 | S/F | 2130.0 | 2132.0 | 7.0 | 1000.0 | | | QL= ST= TYP=3 |
| ├ | 100 | HIRA | 46 | C | 2131.0 | 2136.3 | 10.0 | 940.0 | 146.0 | | WL |
| ├ | 200 | HIRA | 46 | C | 2131.4 | 2132.1 | 7.3 | 340.0 | 90.0 | | WR |
| ├ | 1000 | TYKW | 45 | C | 2132.0 | 2132.6 | 3.0 | 20.0 | 4.0 | | |
| ├ | 2800 | OTTA | 41 | F | 2132.0 | 2133.0 | 6.8 | 11.6 | 3.5 | | |
| ├ | 245 | PALE | 8 | S | 2132.0E | 2132.0 | 1.0D | 230.0 | | | QL=5 ST=2 TYP=5 |
| ├ | 410 | PALE | 8 | S | 2132.0E | 2133.0 | 1.0D | 150.0 | | | QL=5 ST=2 TYP=5 |
| └ | 1415 | PALE | 8 | S | 2132.0E | 2132.0 | 1.0D | 64.0 | | | QL=5 ST=2 TYP=5 |

# SOLAR RADIO EMISSION--OUTSTANDING OCCURRENCES

OCTOBER 1987

| Day | Freq | Sta | Type | | Start (UT) | Time of Maximum (UT) | Duration (Min) | Flux Density Peak ($10^{-22}$ W/m$^2$ Hz) | Flux Density Mean ($10^{-22}$ W/m$^2$ Hz) | Int | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 05 | 610 | PALE | 8 | S | 2132.0E | 2132.0 | 1.0D | 80.0 | | | QL=5 ST=2 TYP=5 |
| | 610 | SGMR | 8 | S | 2132.0E | 2132.0 | 1.0D | 78.0 | | | QL=5 ST=2 TYP=5 |
| | 410 | SGMR | 8 | S | 2132.0E | 2132.0 | 1.0D | 130.0 | | | QL=5 ST=2 TYP=5 |
| | 1415 | SGMR | 8 | S | 2132.0E | 2132.0 | 1.0D | 39.0 | | | QL=5 ST=2 TYP=3 |
| | 2000 | TYKW | 45 | C | 2132.5 | 2133.0 | 1.5 | 31.0 | 5.0 | | RAIN |
| 06 | 200 | GORK | 44 | NS | 0432.0E | | 37.3D | | 10.0 | | |
| | 204 | IZMI | 43 | NS | 0600.0 | | 180.0 | 15.0 | | | |
| | 260 | ONDR | 44 | NS | 0740.0E | 0945.0U | 365.0D | | | | |
| | 204 | IZMI | 44 | NS | 0900.0E | | 180.0D | 25.0 | | | |
| | 245 | SVTO | 43 | NS | 0901.0 | 1322.0 | 316.0D | 57.0 | | | QL=1 ST=2 TYP=1 |
| | 245 | SGMR | 44 | NS | 1107.0E | 1941.0 | 650.0D | 120.0 | | | QL=5 ST=3 TYP=1 |
| | 245 | PALE | 44 | NS | 1830.0E | 1932.0 | 272.0D | 150.0 | | | QL=5 ST=2 TYP=1 |
| | 500 | HIRA | 41 | F | 0405.0 | 0428.5 | 88.0 | 3.0 | | | 0 |
| | 200 | GORK | 4 | S/F | 0630.7 | 0631.7 | 1.4 | 50.0 | | | |
| | 650 | GORK | 1 | S | 0631.0 | 0631.5 | 0.8 | 3.0 | | | |
| | 3000 | POTS | 21 | GRF | 1055.0E | 1121.2 | 75.0U | 7.0 | | | |
| | 1470 | POTS | 20 | GRF | 1107.0 | 1135.0 | 118.0 | 4.0 | | | |
| | 430 | KRAK | 40 | F | 1240.5E | 1247.3 | 25.0D | 4.0 | 2.0 | | |
| | 100 | HIRA | 46 | C | 2053.4 | 2058.1 | 13.9 | 3200.0U | 450.0U | | 0 SUNRISE |
| | 200 | HIRA | 46 | C | 2054.7 | 2058.0 | 5.3 | 1700.0U | 250.0U | | 0 SUNRISE |
| | 1000 | TYKW | 45 | C | 2207.0 | 2207.6 | 1.5 | 16.0 | 3.0 | | |
| 07 | 245 | LEAR | 44 | NS | 0056.0E | 0120.0 | 137.0D | 82.0 | | | QL=5 ST=2 TYP=1 |
| | 245 | PALE | 44 | NS | 0113.0E | 0125.0 | 118.0D | 59.0 | | | QL=3 ST=2 TYP=1 |
| | 204 | IZMI | 44 | NS | 0600.0E | | 240.0D | 2.5 | | | |
| | 200 | HIRA | 43 | NS | 0615.2 | 0638.0 | 73.0 | 45.0 | 18.0 | | MR |
| | 245 | LEAR | 44 | NS | 0620.0E | 0630.0 | 227.0D | 100.0 | | | QL=5 ST=3 TYP=1 |
| | 260 | ONDR | 44 | NS | 0735.0E | 1155.0 | 445.0D | 10.0 | | | |
| | 536 | ONDR | 44 | NS | 0820.0E | 0940.0 | 380.0D | 33.0U | | | |
| | 410 | LEAR | 44 | NS | 2216.0E | 2308.0 | 190.0D | 17.0 | | | QL=5 ST=2 TYP=1 |
| | 245 | LEAR | 43 | NS | 2216.0 | 2343.0 | 711.0D | 130.0 | | | QL=5 ST=2 TYP=1 |
| | 200 | HIRA | 43 | NS | 2313.0 | 0017.0 | 540.0D | 56.0 | 5.0 | | MR |
| | 245 | PALE | 44 | NS | 2323.0E | 2342.0 | 276.0D | 130.0 | | | QL=3 ST=2 TYP=1 |
| | 100 | HIRA | 42 | SER | 0040.4 | 0054.1 | 27.7 | 1000.0D | | | |
| | 200 | HIRA | 42 | SER | 0043.2 | 0053.5 | 13.0 | 6500.0 | | | 0 |
| | 245 | LEAR | 48 | C | 0044.0E | 0054.0 | 12.0D | 4900.0 | | | QL=5 ST=2 TYP=8 |
| | 2000 | TYKW | 45 | C | 0044.8 | 0045.3 | 1.5 | 6.0 | 1.5 | | |
| | 1000 | TYKW | 5 | S | 0045.0 | 0045.4 | 1.0 | 2.0 | 0.7 | | |
| | 1000 | TYKW | 45 | C | 0051.0 | 0053.8 | 5.0 | 2.5 | 0.7 | | |
| | 245 | PALE | 49 | GB | 0053.0E | 0054.0 | 1.0D | 3600.0 | | | QL=1 ST=2 TYP=6 |
| | 2000 | TYKW | 5 | S | 0053.5 | 0054.2 | 2.0 | 1.5 | 0.5 | | |
| | 3750 | TYKW | 45 | C | 0053.5 | 0054.5 | 2.0 | 2.5 | 1.0 | | |
| | 200 | HIRA | 27 | RF | 0107.0 | 0135.6 | 44.0 | 21.0 | 6.0 | | WR |
| | 500 | HIRA | 46 | C | 0238.0 | 0242.2 | 9.0 | 40.0 | 12.0 | | WR |
| | 2000 | TYKW | 45 | C | 0239.0 | 0242.3 | 12.0 | 5.0 | 1.5 | | |
| | 1000 | TYKW | 45 | C | 0239.0 | 0243.9 | 14.0 | 22.0 | 3.0 | | |
| | 3750 | TYKW | 20 | GRF | 0240.0 | 0251.0 | 45.0 | 3.0 | 1.5 | | |
| | 610 | PALE | 8 | S | 0242.0E | 0242.0 | 2.0D | 42.0 | | | QL=5 ST=2 TYP=3 |
| | 410 | PALE | 8 | S | 0242.0E | 0243.0 | 2.0D | 36.0 | | | QL=5 ST=2 TYP=3 |
| | 1415 | PALE | 8 | S | 0242.0E | 0243.0 | 1.0D | 14.0 | | | QL=5 ST=2 TYP=3 |
| | 9400 | TYKW | 20 | GRF | 0243.0 | 0251.0 | 40.0 | 2.0 | 1.0 | | |
| | 245 | PALE | 8 | S | 0243.0E | 0244.0 | 1.0D | 12.0 | | | QL=3 ST=2 TYP=3 |
| | 2000 | TYKW | 29 | PBI | 0251.0 | | 35.0 | 1.0 | 0.5 | | |
| | 200 | GORK | 27 | RF | 0612.0 | 0633.2 | 22.3 | 70.0 | | | |
| | 650 | GORK | 22 | GRF | 0621.9 | | 136.1 | 7.0 | | | |
| | 2000 | TYKW | 45 | C | 0633.0 | 0633.8 | 1.5 | 4.0 | 1.0 | | |
| | 650 | GORK | 22 | GRF | 0849.4 | 0853.2 | 76.0 | 2.0 | | | |
| | 2950 | GORK | 21 | GRF | 0852.0 | 0900.0 | 42.0 | 2.2 | | | |
| | 1470 | POTS | 2 | S/F | 0853.7 | 0854.5 | 1.8 | 5.0 | | | |
| | 3000 | POTS | 2 | S/F | 0853.9 | 0854.3 | 1.8 | 3.0 | | | |
| | 2950 | GORK | 1 | S | 0853.9 | 0854.5 | 1.2 | 2.5 | | | |
| | 204 | IZMI | 4 | S/F | 1131.0 | 1132.0 | 1.0 | 40.0 | 20.0 | | |
| | 204 | IZMI | 5 | S | 1155.0 | 1159.0 | 5.5 | 78.0 | 65.0 | | |
| 08 | 200 | GORK | 44 | NS | 0455.0E | | 48.8D | | 5.0 | | |
| | 204 | IZMI | 44 | NS | 0600.0E | | 360.0D | 15.0 | | | |
| | 260 | ONDR | 44 | NS | 0714.0E | 1142.0 | 446.0D | 10.0 | | | |
| | 245 | PALE | 4 | S/F | 0146.0E | 0146.0 | 37.0D | 110.0 | | | QL=3 ST=2 TYP=5 |
| | 536 | ONDR | 8 | S | 0819.2 | 0819.3 | 0.1 | 6.0 | | | |

# SOLAR RADIO EMISSION--OUTSTANDING OCCURRENCES

## OCTOBER 1987

| Day | Freq | Sta | Type | | Start (UT) | Time of Maximum (UT) | Duration (Min) | Flux Density Peak ($10^{-22}$ W/m$^2$ Hz) | Flux Density Mean ($10^{-22}$ W/m$^2$ Hz) | Int | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 08 | 245 | PALE | 4 | S/F | 2326.0E | | 37.0D | 120.0 | | | QL=5 ST=3 TYP=5 |
| 09 | 260 | ONDR | 44 | NS | 0810.0E | 1247.0U | 400.0D | 16.0U | | | |
| | 200 | HIRA | 46 | C | 0224.4 | 0228.4 | 6.7 | 84.0 | 37.0 | | 0 |
| | 245 | LEAR | 48 | C | 0225.0E | 0226.0 | 6.0D | 180.0 | | | QL=5 ST=2 TYP=8 |
| | 245 | PALE | 4 | S/F | 0225.0E | 0225.0 | 4.0D | 99.0 | | | QL=5 ST=3 TYP=5 |
| | 204 | IZMI | 41 | F | 0628.0 | 0631.5 | 4.0 | 110.0 | | | |
| | 500 | HIRA | 8 | S | 0630.6 | 0631.1 | 0.6 | 22.0 | | | 0 |
| | 234 | POTS | 4 | S/F | 0630.7 | 0630.8 | 1.8 | 70.0 | 5.0 | | |
| | 30 | POTS | 4 | S/F | 0630.9 | 0630.9 | 2.3 | 4000.0 | 500.0 | | |
| | 245 | LEAR | 8 | S | 0924.0E | 0925.0 | 2.0D | 67.0 | | | QL=5 ST=2 TYP=5 |
| | 204 | IZMI | 5 | S | 0924.0 | 0925.3 | 1.9 | 40.0 | 20.0 | | |
| | 234 | POTS | 4 | S/F | 0924.0 | 0925.3 | 2.2 | 100.0 | 15.0 | | |
| | 40 | POTS | 4 | S/F | 0924.6 | 0925.3 | 2.0 | 1900.0 | 40.0 | | |
| | 9400 | TYKW | 20 | GRF | 2320.0 | 2335.0 | 60.0 | 2.0 | 1.0 | | |
| | 3750 | TYKW | 20 | GRF | 2328.0 | 2332.0 | 45.0 | 1.0 | 0.5 | | |
| 10 | 260 | ONDR | 44 | NS | 0810.0E | 0959.0U | 407.0D | 10.0U | | | |
| | 3750 | TYKW | 5 | S | 0226.5 | 0228.6 | 3.5 | 4.0 | 1.5 | | |
| | 2000 | TYKW | 5 | S | 0227.5 | 0228.3 | 2.5 | 1.0 | 0.3 | | |
| | 3750 | TYKW | 29 | PBI | 0230.0 | | 10.0 | 1.0 | 0.5 | | |
| | 2950 | GORK | 1 | S | 0812.7 | 0813.1 | 1.0 | 1.0 | | | |
| | 245 | LEAR | 8 | S | 0916.0E | 0916.0 | 1.0D | 560.0 | | | QL=3 ST=3 TYP=5 |
| | 245 | SVTO | 4 | S/F | 0916.0E | 0916.0 | 316.0D | 61.0 | | | QL=5 ST=2 TYP=5 |
| | 536 | ONDR | 41 | F | 1001.3 | 1008.4 | 7.2 | 10.0 | | | |
| | 9400 | HUAN | 1 | S | 1241.2 | 1242.5 | 4.3 | 4.3 | 2.2 | | |
| | 9400 | HUAN | 20 | GRF | 1326.7 | 1334.3 | 20.5 | 7.1 | 2.6 | | |
| 11 | 260 | ONDR | 44 | NS | 0800.0E | 1236.0E | 410.0D | | | | |
| | 9400 | TYKW | 5 | S | 0007.3 | 0007.8 | 2.5 | 15.0 | 4.0 | | |
| | 3750 | TYKW | 20 | GRF | 0146.0 | 0150.0 | 30.0U | 1.5 | 0.7 | | INTERFERENCE |
| | 3750 | TYKW | 20 | GRF | 0355.0 | 0400.0 | 40.0 | 1.5 | 0.7 | | |
| | 2800 | OTTA | 32 | ABS | 1535.0 | 1548.0 | 45.0 | -1.1 | | | |
| | 2800 | OTTA | 22 | GRF | 1648.0 | 1652.0 | | 2.3 | | | |
| | 9400 | HUAN | 1 | S | 1736.7 | 1738.1 | 3.5 | 3600.0 | 700.0 | | |
| | 9400 | TYKW | 5 | S | 2231.3 | 2231.9 | 1.5 | 8.0 | 2.0 | | |
| | 3750 | TYKW | 5 | S | 2314.8 | 2315.3 | 1.5 | 1.5 | 0.5 | | |
| 12 | 260 | ONDR | 44 | NS | 0803.0E | 1256.0U | 407.0D | | | | |
| | 245 | PALE | 43 | NS | 1926.0 | 0243.0 | 508.0D | 26.0 | | | QL=5 ST=2 TYP=1 |
| | 200 | HIRA | 44 | NS | 2050.0E | 0553.0 | 660.0D | 39.0 | 19.0 | | MR |
| | 245 | LEAR | 43 | NS | 2212.0 | 0634.0 | 717.0D | 74.0 | | | QL=5 ST=2 TYP=1 |
| | 536 | ONDR | 41 | F | 0830.0 | 0926.0 | 159.4 | 18.0 | | | |
| | 2950 | GORK | 20 | GRF | 0936.0 | 0941.0 | 21.0 | 18.0 | | | |
| | 2950 | GORK | 20 | GRF | 1024.8 | 1037.0 | 24.5 | 2.6 | | | |
| | 2800 | OTTA | 20 | GRF | 1525.0 | 1605.0 | 90.0 | 1.4 | | | |
| 13 | 245 | SVTO | 43 | NS | 0517.0 | 1258.0 | 636.0D | 110.0 | | | QL=1 ST=2 TYP=1 |
| | 204 | IZMI | 44 | NS | 0600.0E | | 360.0D | 40.0 | | | |
| | 127 | TORN | 44 | NS | 0620.0E | | 46.0D | | 2.0 | | |
| | 260 | ONDR | 44 | NS | 0850.0E | 1216.0U | 350.0D | | | | |
| | 234 | POTS | 43 | NS | 1209.0 | 1356.0U | 170.0D | 38.0U | | | |
| | 245 | PALE | 43 | NS | 1644.0 | 0229.0 | 670.0D | 83.0 | | | QL=5 ST=2 TYP=1 |
| | 200 | HIRA | 44 | NS | 2050.0E | | 120.0D | | 3.0 | | WR |
| | 245 | LEAR | 43 | NS | 2212.0 | 0945.0 | 717.0D | 380.0 | | | QL=5 ST=2 TYP=1 |
| | 1000 | TYKW | 45 | C | 0008.0 | 0015.0 | 50.0 | 4.0 | 1.0 | | |
| | 1000 | TYKW | 45 | C | 0120.0 | 0139.7 | 30.0 | 1.5 | 0.5 | | |
| | 2000 | TYKW | 21 | GRF | 0230.0 | 0250.0 | 60.0 | 1.0 | 0.5 | | |
| | 9400 | TYKW | 20 | GRF | 0230.0 | 0255.0 | 70.0 | 2.0 | 1.0 | | |
| | 3750 | TYKW | 21 | GRF | 0240.0 | 0255.0 | 50.0 | 1.5 | 0.7 | | |
| | 3750 | TYKW | 31 | ABS | 0330.0 | 0355.0 | 85.0 | -1.5 | -0.7 | | |
| | 2000 | TYKW | 31 | ABS | 0330.0 | 0350.0 | 80.0 | -1.0 | -0.5 | | |
| | 1000 | TYKW | 45 | C | 0541.0 | 0545.3 | 10.0 | 2.5 | 1.0 | | |
| | 1000 | TYKW | 45 | C | 0610.0 | 0619.0 | 13.0 | 4.0 | 1.5 | | |
| | 536 | ONDR | 8 | S | 1131.8 | 1131.9 | 0.3 | 26.0 | | | |
| | 2800 | OTTA | 20 | GRF | 1308.0 | 1344.0 | 120.0D | 1.6 | | | |
| | 9400 | HUAN | 1 | S | 1909.0 | 1913.0 | 6.6 | 2.4 | 1.2 | | |
| | 2700 | PENT | 1 | S | 1925.4 | 1926.2 | 4.6 | 3.3 | 1.0 | | |
| | 2700 | PENT | 24 | R | 1930.0 | | 300.0D | | | | |

SOLAR RADIO EMISSION--OUTSTANDING OCCURRENCES

OCTOBER 1987

| Day | Freq | Sta | Type | | Start (UT) | Time of Maximum (UT) | Duration (Min) | Flux Density Peak ($10^{-22}$ W/m$^2$ Hz) | Flux Density Mean ($10^{-22}$ W/m$^2$ Hz) | Int | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 200 | HIRA | 43 | NS | 0125.0 | 0620.0 | 360.0D | 86.0 | 28.0 | | MR |
| | 410 | LEAR | 44 | NS | 0216.0E | 0404.0 | 473.0D | 30.0 | | | QL=5 ST=2 TYP=1 |
| | 221 | ABST | 43 | NS | 0500.0 | 0850.0 | 360.0 | 24.0 | | | QL= ST= TYP=1 |
| | 245 | SVTO | 43 | NS | 0518.0 | 1056.0 | 633.0D | 510.0 | | | QL=5 ST=2 TYP=1 |
| | 410 | SVTO | 43 | NS | 0558.0 | 0609.0 | 593.0D | 57.0 | | | QL=5 ST=2 TYP=1 |
| | 204 | IZMI | 44 | NS | 0600.0E | | 360.0D | 100.0 | | | |
| | 234 | POTS | 44 | NS | 0601.0E | 0941.0U | 539.0D | 150.0U | | | |
| | 127 | TORN | 44 | NS | 0620.0E | | 52.0D | | 40.0 | | |
| | 260 | ONDR | 44 | NS | 0740.0E | 0946.0U | 206.0D | 15.0U | | | |
| | 430 | KRAK | 44 | NS | 0805.0E | 0944.5 | 355.0D | 56.0 | 12.0 | | |
| | 536 | ONDR | 44 | NS | 0810.0E | 1403.0 | 353.0D | 24.0 | | | |
| | 810 | KRAK | 43 | NS | 0931.5 | 1115.5 | 270.0D | 6.0 | 2.0 | | |
| | 610 | SGMR | 44 | NS | 1116.0E | 1433.0 | 764.0D | 36.0 | | | QL=5 ST=3 TYP=1 |
| | 410 | SGMR | 44 | NS | 1116.0E | 1418.0 | 764.0D | 43.0 | | | QL=5 ST=3 TYP=1 |
| | 245 | SGMR | 44 | NS | 1116.0E | 1125.0 | 764.0D | 97.0 | | | QL=5 ST=3 TYP=1 |
| | 245 | PALE | 43 | NS | 1645.0 | 2109.0 | 668.0 | 96.0 | | | QL=5 ST=2 TYP=1 |
| | 200 | HIRA | 44 | NS | 2050.0E | 2343.0U | 660.0D | 49.0U | 25.0U | | MR |
| | 245 | LEAR | 43 | NS | 2210.0 | 0146.0 | 720.0D | 170.0 | | | QL=5 ST=2 TYP=1 |
| | 410 | LEAR | 43 | NS | 2210.0 | 0142.0 | 720.0D | 33.0 | | | QL=5 ST=2 TYP=1 |
| | 3750 | TYKW | 20 | GRF | 0200.0 | 0203.0 | 30.0 | 1.0 | 0.5 | | |
| | 500 | HIRA | 27 | RF | 0330.0 | 0413.0 | 105.0 | 8.0 | 2.0 | | WR |
| | 500 | HIRA | 27 | RF | 0603.0 | 0635.0 | 65.0 | 9.0 | 4.0 | | WR |
| | 9100 | GORK | 1 | S | 0712.0 | 0712.4 | 0.7 | 7.2 | 3.0 | | |
| | 9300 | KISV | 1 | S | 0712.3 | 0712.5 | 1.0 | 8.0 | | | |
| | 650 | GORK | 22 | GRF | 0716.0E | | 19.0D | 28.0 | | | |
| | 2950 | GORK | 22 | GRF | 0809.4 | 0918.0 | 80.0D | 3.3 | | | |
| | 950 | GORK | 22 | GRF | 0904.0 | 0936.0 | 32.0D | 8.5 | | | |
| | 234 | POTS | 42 | SER | 1040.5 | 1040.6 | 12.0 | 900.0 | 20.0 | | |
| | 2800 | OTTA | 22 | GRF | 1608.0 | 1624.0 | 240.0 | 1.9 | | | |
| | 2800 | OTTA | 22 | GRF | 1815.0 | | 290.0 | 2.8 | | | |
| | 245 | PALE | 8 | S | 1922.0E | 1922.0 | 1.0D | 96.0 | | | QL=5 ST=2 TYP=5 |
| | 2800 | OTTA | 1 | S | 2033.0 | 2034.4 | 2.2 | 3.2 | 2.4 | | |
| | 2800 | OTTA | 30 | PBI | 2035.2 | 2035.2 | 7.0 | 1.6 | 0.5 | | |
| | 3750 | TYKW | 20 | GRF | 2320.0 | 2334.0 | 60.0 | 1.0 | 0.5 | | |
| 15 | 410 | SVTO | 43 | NS | 0520.0 | 0546.0 | 630.0D | 46.0 | | | QL=5 ST=2 TYP=1 |
| | 245 | SVTO | 43 | NS | 0520.0 | 0633.0 | 630.0D | 190.0 | | | QL=1 ST=2 TYP=1 |
| | 234 | POTS | 44 | NS | 0550.0E | 1211.0U | 550.0D | 55.0 | | | |
| | 204 | IZMI | 44 | NS | 0600.0E | | 360.0D | 62.0 | | | |
| | 127 | TORN | 44 | NS | 0620.0E | | 46.0D | | 5.0 | | |
| | 260 | ONDR | 44 | NS | 0738.0E | | 426.0D | | | | |
| | 536 | ONDR | 44 | NS | 0927.0E | 1201.5U | 282.0D | | | | |
| | 245 | SGMR | 43 | NS | 1117.0 | 1314.0 | 624.0D | 120.0 | | | QL=5 ST=2 TYP=1 |
| | 610 | SGMR | 43 | NS | 1117.0 | 1323.0 | 624.0D | 22.0 | | | QL=5 ST=2 TYP=1 |
| | 410 | SGMR | 43 | NS | 1117.0 | 2112.0 | 624.0D | 37.0 | | | QL=5 ST=2 TYP=1 |
| | 410 | PALE | 43 | NS | 1645.0 | 0001.0 | 566.0D | 63.0 | | | QL=3 ST=2 TYP=1 |
| | 245 | PALE | 43 | NS | 1645.0 | 1707.0 | 566.0D | 260.0 | | | QL=3 ST=2 TYP=1 |
| | 100 | HIRA | 44 | NS | 2050.0E | 2205.0 | 180.0D | 180.0 | 65.0 | | |
| | 200 | HIRA | 44 | NS | 2050.0E | 2200.0 | 660.0D | 152.0 | 38.0 | | MR |
| | 410 | LEAR | 44 | NS | 2210.0E | 2224.0 | 110.0D | 7.0 | | | QL=5 ST=1 TYP=1 |
| | 410 | LEAR | 44 | NS | 2210.0E | 2315.0 | 110.0D | 15.0 | | | QL=5 ST=1 TYP=1 |
| | 245 | LEAR | 44 | NS | 2210.0E | 2317.0 | 110.0D | 220.0 | | | QL=5 ST=1 TYP=1 |
| | 2000 | TYKW | 5 | S | 0139.0 | 0145.0 | 13.0 | 1.0 | 0.5 | | |
| | 2000 | TYKW | 20 | GRF | 0210.0 | 0240.0 | 70.0 | 1.0 | 0.5 | | |
| | 3750 | TYKW | 20 | GRF | 0225.0 | 0250.0 | 60.0 | 1.5 | 0.7 | | |
| | 9400 | TYKW | 20 | GRF | 0230.0 | 0250.0 | 60.0U | 2.0 | 1.0 | | RAIN |
| | 2000 | TYKW | 20 | GRF | 0335.0 | 0350.0 | 70.0 | 1.0 | 0.5 | | |
| | 3750 | TYKW | 21 | GRF | 0335.0 | 0353.0 | 100.0 | 3.0 | 1.5 | | |
| | 3750 | TYKW | 20 | GRF | 0408.0 | 0410.0 | 30.0 | 1.5 | 0.7 | | |
| | 2950 | GORK | 23 | GRF | 0511.5 | 1112.0 | 438.0D | 8.4 | | | |
| | 3750 | TYKW | 5 | S | 0539.0 | 0540.3 | 2.0 | 3.5 | 2.0 | | |
| | 3750 | TYKW | 30 | PBI | 0541.0 | | 60.0 | 2.0 | 1.0 | | |
| | 2000 | TYKW | 21 | GRF | 0550.0 | 0610.0 | 45.0 | 1.0 | 0.5 | | |
| | 3750 | TYKW | 5 | S | 0554.0 | 0555.2 | 3.0 | 2.0 | 0.5 | | INTERFERENCE |
| | 2000 | TYKW | 45 | C | 0554.0 | 0559.8 | 13.0 | 2.0 | 0.5 | | |
| | 2000 | TYKW | 45 | C | 0649.0 | 0650.9 | 5.0 | 4.0 | 1.0 | | |
| | 3750 | TYKW | 20 | GRF | 0650.0 | 0700.0 | 35.0 | 3.0 | 1.5 | | |
| | 1000 | TYKW | 45 | C | 0650.0 | 0650.8 | 1.5 | 5.0 | 1.0 | | |
| | 3100 | CRIM | 20 | GRF | 0650.0 | 0657.0 | 23.0 | 2.0 | 1.0 | | |
| | 950 | GORK | 2 | S/F | 0651.0 | 0651.3 | 1.3 | 3.6 | 1.8 | | |

# SOLAR RADIO EMISSION--OUTSTANDING OCCURRENCES

## OCTOBER 1987

| Day | Freq | Sta | Type | | Start (UT) | Time of Maximum (UT) | Duration (Min) | Flux Density Peak ($10^{-22}$ W/m$^2$ Hz) | Flux Density Mean ($10^{-22}$ W/m$^2$ Hz) | Int | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | 9100 | GORK | 20 | GRF | 0651.0 | 0702.8 | 28.8 | 3.6 | | | |
| | 650 | GORK | 1 | S | 0651.2 | 0651.3 | 1.0 | 2.0 | | | |
| | 2000 | TYKW | 29 | PBI | 0654.0 | | 20.0 | 1.0 | 0.5 | | |
| | 650 | GORK | 8 | S | 0754.0 | 0754.0 | 3.0 | 29.0 | | | |
| | 950 | GORK | 8 | S | 0755.3 | 0755.7 | 6.0 | 17.0 | | | |
| | 9500 | POTS | 20 | GRF | 0858.0 | 0907.0 | 66.0 | 8.0 | | | |
| | 9100 | GORK | 20 | GRF | 0859.0 | 0908.8 | 34.0 | 5.3 | | | |
| | 33 | UPIC | 42 | SER | 0927.2 | 0937.0 | 12.0 | | | | |
| | 29 | UPIC | 42 | SER | 0927.2 | 0937.8 | 12.0 | | | | |
| | 3100 | CRIM | 1 | S | 1020.6 | 1020.7 | 0.5 | 3.0 | 1.0 | | |
| | 3100 | CRIM | 20 | GRF | 1051.0 | 1111.2 | 37.0 | 6.0 | 2.0 | | |
| | 9100 | GORK | 21 | GRF | 1102.7 | 1112.5 | 87.0D | 16.0 | | | |
| | 5900 | KISV | | | 1105.4 | 1118.1 | | 8.0 | | | |
| | 5900 | KISV | 46 | C | 1105.4 | 1111.1 | 29.0 | 21.0 | | | |
| | 5900 | KISV | | | 1105.4 | 1107.5 | | 10.0 | | | |
| | 9300 | KISV | 45 | C | 1105.5 | 1107.6 | 14.0 | 26.0 | | | |
| | 9300 | KISV | | | 1105.6 | 1111.1 | | 19.0 | | | |
| | 3000 | POTS | 29 | PBI | 1106.0U | 1108.5 | 54.0U | 8.0 | | | |
| | 9500 | POTS | 29 | PBI | 1106.5 | 1107.6 | 44.0 | 23.0 | | | |
| | 9100 | GORK | 1 | S | 1107.2 | 1107.5 | 1.1 | 19.0 | 10.0 | | |
| | 950 | GORK | 1 | S | 1107.3 | 1108.3 | 1.5 | 0.7 | | | |
| | 15000 | KISV | | | 1107.4 | 1111.1 | | 10.0 | | | |
| | 15000 | KISV | 21 | GRF | 1107.4 | 1107.6 | 17.0 | 35.0 | | | |
| | 9100 | GORK | 2 | S/F | 1110.3 | 1111.2 | 1.5 | 11.0 | 5.0 | | |
| | 2950 | GORK | 1 | S | 1110.3 | 1111.2 | 1.5 | 2.9 | 1.5 | | |
| | 9300 | KISV | 1 | S | 1117.8 | 1118.1 | 1.0 | 3.0 | | | |
| | 30 | POTS | 4 | S/F | 1139.9 | 1140.4 | 0.7 | 120.0 | 6.0 | | |
| | 234 | POTS | 4 | S/F | 1140.0 | 1140.4 | 0.8 | 770.0 | 35.0 | | |
| | 9400 | HUAN | 1 | S | 1211.7 | 1213.2 | 3.5 | 5.1 | 2.0 | | |
| | 9400 | HUAN | 2 | S/F | 1217.6 | 1219.8 | 10.0 | 5.9 | 2.4 | | |
| | 2700 | PENT | 22 | GRF | 1620.0 | 1625.0 | 95.0 | 2.0 | | | |
| | 245 | PALE | 8 | S | 1646.0E | 1647.0 | 1.0D | 67.0 | | | QL=5 ST=2 TYP=5 |
| | 410 | PALE | 8 | S | 1646.0E | 1647.0 | 1.0D | 13.0 | | | QL=5 ST=2 TYP=3 |
| | 2700 | PENT | 22 | GRF | 1900.0 | | 60.0 | | | | |
| | 245 | PALE | 8 | S | 1916.0E | 1917.0 | 1.0D | 240.0 | | | QL=3 ST=2 TYP=5 |
| | 2700 | PENT | 22 | GRF | 2005.0 | 2013.0 | 40.0 | 6.0 | | | |
| | 2700 | PENT | 22 | GRF | 2055.0 | 2057.0 | 30.0 | 3.0 | | | |
| | 2000 | TYKW | 45 | C | 2151.0 | 2151.8 | 7.0 | 7.0 | 1.0 | | |
| | 1000 | TYKW | 45 | C | 2151.0 | 2153.9 | 6.5 | 3.0 | 1.0 | | |
| | 245 | PALE | 48 | C | 2200.0E | 2204.0 | 7.0D | 190.0 | | | QL=3 ST=2 TYP=8 |
| | 410 | PALE | 8 | S | 2205.0E | 2205.0 | 1.0D | 39.0 | | | QL=3 ST=2 TYP=3 |
| | 3750 | TYKW | 21 | GRF | 2255.0 | 2306.0 | 50.0 | 3.0 | 1.5 | | RAIN |
| | 1000 | TYKW | 45 | C | 2255.0 | 2255.3 | 2.5 | 3.0 | 0.7 | | |
| | 1000 | TYKW | | | 2303.0 | 2338.0 | | 2.0 | | | |
| | 1000 | TYKW | 45 | C | 2303.0 | 2312.4 | 80.0 | 15.0 | 1.0 | | |
| | 1000 | TYKW | | | 2303.0 | 2308.5 | | 10.0 | | | |
| | 2000 | TYKW | 28 | PRE | 2308.0 | 2308.8 | 4.0 | 3.0 | 1.0 | | |
| | 3750 | TYKW | 28 | PRE | 2308.0 | 2308.8 | 4.0 | 2.0 | 0.7 | | |
| | 2000 | TYKW | 45 | C | 2312.0 | 2314.3 | 8.0 | 10.0 | 3.0 | | |
| | 3750 | TYKW | 45 | C | 2312.0 | 2314.3 | 8.0 | 7.0 | 2.5 | | |
| | 3750 | TYKW | 20 | GRF | 2353.0 | 2358.0 | 50.0 | 2.0 | 1.0 | | |
| 16 | 245 | PALE | 44 | NS | 0051.0E | 1720.0 | 1389.0D | 42.0 | | | QL=5 ST=1 TYP=1 |
| | 245 | SVTO | 43 | NS | 0521.0 | 0957.0 | 627.0D | 280.0 | | | QL=1 ST=2 TYP=1 |
| | 204 | IZMI | 44 | NS | 0600.0E | | 360.0D | 80.0 | | | |
| | 234 | POTS | 44 | NS | 0603.0E | 0828.0U | 537.0D | 65.0U | | | |
| | 127 | TORN | 44 | NS | 0620.0E | | 21.0D | | 43.0 | | |
| | 260 | ONDR | 44 | NS | 0730.0E | 0958.0 | 504.0D | | | | |
| | 536 | ONDR | 44 | NS | 0830.0E | 0957.4 | 342.0D | 56.0 | | | |
| | 245 | SGMR | 44 | NS | 1118.0E | 1419.0 | 622.0D | 65.0 | | | QL=5 ST=2 TYP=1 |
| | 245 | PALE | 44 | NS | 1649.0E | 1720.0 | 431.0D | 34.0 | | | QL=5 ST=3 TYP=1 |
| | 200 | HIRA | 44 | NS | 2050.0E | 0603.0 | 660.0D | 30.0 | 15.0 | | MR |
| | 410 | LEAR | 43 | NS | 2208.0 | 0551.0 | 722.0D | 17.0 | | | QL=5 ST=3 TYP=1 |
| | 245 | LEAR | 43 | NS | 2208.0 | 0547.0 | 722.0D | 92.0 | | | QL=5 ST=3 TYP=1 |
| | 245 | LEAR | 43 | NS | 2210.0 | 2317.0 | 720.0D | 220.0 | | | QL=5 ST=2 TYP=1 |
| | 410 | LEAR | 8 | S | 0052.0E | 0053.0 | 1.0D | 280.0 | | | QL=5 ST=2 TYP=5 |
| | 1000 | TYKW | 45 | C | 0105.0 | 0115.0 | 20.0 | 2.5 | 1.0 | | |
| | 3750 | TYKW | 20 | GRF | 0140.0 | 0153.0 | 40.0 | 1.5 | 0.7 | | RAIN |
| | 3750 | TYKW | 21 | GRF | 0242.0 | 0255.0 | 45.0 | 2.0 | 1.0 | | |
| | 3750 | TYKW | 5 | S | 0315.0 | 0315.7 | 3.0 | 4.0 | 1.0 | | |

SOLAR RADIO EMISSION--OUTSTANDING OCCURRENCES

OCTOBER 1987

| Day | Freq | Sta | Type | | Start (UT) | Time of Maximum (UT) | Duration (Min) | Flux Density Peak ($10^{-22}$ W/m$^2$ Hz) | Flux Density Mean ($10^{-22}$ W/m$^2$ Hz) | Int | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | 3750 | TYKW | 21 | GRF | 0332.0 | 0340.0 | 30.0 | 2.0 | 1.0 | | |
| | 3750 | TYKW | 5 | S | 0342.0 | 0342.8 | 4.0 | 5.0 | 1.0 | | |
| | 3750 | TYKW | 20 | GRF | 0408.0 | 0412.0 | 30.0 | 2.0 | 1.0 | | |
| | 245 | LEAR | 8 | S | 0509.0E | 0510.0 | 1.0D | 290.0 | | | QL=5 ST=2 TYP=5 |
| | 2950 | GORK | 21 | GRF | 0611.0 | 0618.0 | 23.0 | 1.9 | | | |
| | 2950 | GORK | 4 | S/F | 0613.0 | 0623.0 | 29.0 | 11.0 | | | QL= ST= TYP=3 |
| | 2950 | GORK | 1 | S | 0613.3 | 0613.6 | 1.0 | 1.3 | | | |
| | 650 | GORK | 4 | S/F | 0619.9 | 0620.5 | 3.1 | 34.5 | | | |
| | 500 | HIRA | 7 | C | 0620.5 | 0623.4 | 4.5 | 95.0 | 34.0 | | 0 |
| | 950 | GORK | 45 | C | 0622.7 | 0623.4 | 1.7 | 18.0 | | | |
| | 950 | GORK | | | 0622.7 | 0623.7 | | 135.0 | | | |
| | 2000 | TYKW | 45 | C | 0622.7 | 0624.8 | 3.5 | 40.0 | 6.0 | | |
| | 5900 | KISV | 29 | PBI | 0622.8 | 0624.2 | 11.0 | 4.0 | | | |
| | 5900 | KISV | 2 | S/F | 0622.8 | 0623.7 | 1.5 | 10.0 | | | |
| | 9300 | KISV | 2 | S/F | 0622.8 | 0623.7 | 1.0 | 7.0 | | | |
| | 9100 | GORK | 1 | S | 0622.9 | 0623.7 | 3.5 | 54.0 | 20.0 | | |
| | 1000 | TYKW | 45 | C | 0623.0 | 0623.5 | 2.0 | 20.0 | 2.0 | | |
| | 3750 | TYKW | 5 | S | 0623.0 | 0623.7 | 3.0 | 8.0 | 2.0 | | |
| | 5900 | KISV | 4 | S/F | 0623.0 | | 16.0 | | | | |
| | 2695 | SVTO | 4 | S/F | 0623.0E | 0623.0 | | 28.0 | | | QL=5 ST=2 TYP=3 |
| | 4995 | SVTO | 8 | S | 0623.0E | 0623.0 | 1.0D | 19.0 | | | QL=5 ST=2 TYP=3 |
| | 1415 | SVTO | 8 | S | 0623.0E | 0623.0 | 1.0D | 44.0 | | | QL=5 ST=2 TYP=3 |
| | 3100 | CRIM | 45 | C | 0623.0 | 0624.9 | 3.0 | 7.0 | | | |
| | 2950 | GORK | 45 | C | 0623.1 | 0623.7 | 2.0 | 9.9 | | | |
| | 2950 | GORK | | | 0623.1 | 0624.8 | | 8.4 | | | |
| | 8800 | SVTO | 4 | S/F | 0625.0E | 0625.0 | | 24.0 | | | QL=5 ST=2 TYP=3 |
| | 650 | GORK | 21 | GRF | 0718.0U | | 68.9U | 3.0 | | | |
| | 950 | GORK | 1 | S | 0737.2 | 0737.6 | 6.0 | 23.0 | | | |
| | 650 | GORK | 1 | S | 0737.3 | 0737.4 | 3.0 | 6.4 | | | |
| | 650 | GORK | 1 | S | 0739.6 | 0739.7 | 2.0 | 3.0 | | | |
| | 950 | GORK | 4 | S/F | 0739.8 | 0740.0 | 4.0 | 2.5 | | | |
| | 2950 | GORK | 23 | GRF | 0751.0 | 1009.0 | 186.6 | 5.6 | | | |
| | 245 | LEAR | 49 | GB | 0818.0E | 0818.0 | 1.0D | 550.0 | | | QL=5 ST=2 TYP=6 |
| | 245 | SVTO | 49 | GB | 0818.0E | 0818.0 | 1.0D | 650.0 | | | QL=1 ST=2 TYP=6 |
| | 650 | GORK | 21 | GRF | 0903.3 | | 23.6 | 1.5 | | | |
| | 3000 | POTS | 4 | S/F | 0916.0 | 0917.2 | 2.0 | 12.0 | | | |
| | 650 | GORK | 46 | C | 0916.1 | 0916.9 | 1.5 | 45.0 | | | |
| | 5900 | KISV | 45 | C | 0916.2 | 0917.4 | 1.7 | 29.0 | | | |
| | 950 | GORK | 46 | C | 0916.4 | 0917.0 | 1.3 | 30.0 | | | |
| | 2950 | GORK | 3 | S | 0916.4 | 0917.2 | 1.6 | 11.6 | | | |
| | 9100 | GORK | 20 | GRF | 0916.4 | 0917.4 | 13.4 | 7.0 | | | |
| | 3013 | IZMI | 41 | F | 0916.5 | 0917.0 | 3.5 | 12.0 | | | |
| | 3100 | CRIM | 45 | C | 0916.5 | 0917.1 | 5.0 | 10.0 | 3.0 | | |
| | 1470 | POTS | 4 | S/F | 0916.5 | 0917.2 | 2.1 | 16.0 | | | |
| | 9500 | POTS | 21 | GRF | 0916.5 | 0916.7 | 14.0 | 5.0 | | | |
| | 430 | KRAK | 8 | S | 0916.5 | 0916.8 | 0.5 | 64.0 | | | |
| | 810 | KRAK | 2 | S/F | 0916.5 | 0917.9 | 1.5 | 90.0U | 30.0U | | |
| | 810 | KRAK | 8 | S | 0919.5 | 0920.0 | 0.5 | 15.0U | | | |
| | 810 | KRAK | 4 | S/F | 0953.2 | 0954.5U | 3.0U | 130.0U | 12.0U | | |
| | 430 | KRAK | 45 | C | 0956.5 | 0956.8 | 5.0 | 100.0 | 27.0 | | |
| | 9300 | KISV | 1 | S | 0916.6 | 0917.0 | 1.0 | 4.0 | | | |
| | 9300 | KISV | 20 | GRF | 0916.6 | 0918.3 | 10.0 | 2.0 | | | |
| | 1415 | SVTO | 4 | S/F | 0917.0E | 0917.0 | | 20.0 | | | QL=5 ST=2 TYP=3 |
| | 2695 | SVTO | 4 | S/F | 0917.0E | 0917.0 | | 25.0 | | | QL=5 ST=2 TYP=3 |
| | 5900 | KISV | 29 | PBI | 0917.7 | 0917.7 | 8.2 | 10.0 | | | |
| | 1470 | POTS | 4 | S/F | 0919.0 | 0919.5 | 1.5 | 13.0 | | | |
| | 950 | GORK | 4 | S/F | 0919.3 | 0919.8 | 1.1 | 7.5 | | | |
| | 2950 | GORK | 4 | S/F | 0919.4 | 0919.6 | 0.8 | 7.1 | | | |
| | 650 | GORK | 1 | S | 0919.5 | 0919.6 | 0.3 | 3.0 | | | |
| | 3000 | POTS | 2 | S/F | 0919.5 | 0919.6 | 1.0 | 6.0 | | | |
| | 650 | GORK | 23 | GRF | 0930.5 | | 50.1 | 11.5 | | | |
| | 3100 | CRIM | 28 | PRE | 0946.0 | 0951.9 | 8.0 | 4.0 | 1.0 | | |
| | 3000 | POTS | 45 | C | 0946.0 | 0957.9 | 89.0 | 290.0 | | | |
| | 1470 | POTS | 45 | C | 0947.0 | 1000.6 | 98.0 | 70.0 | | | |
| | 9300 | KISV | 46 | C | 0949.5 | 0959.0U | 10.9U | 33.0D | | | |
| | 5900 | KISV | 46 | C | 0949.9 | 0959.9U | 22.0 | 57.0D | | | |
| | 33 | UPIC | 42 | SER | 0950.7 | | 150.1 | | | | |
| | 29 | UPIC | 42 | SER | 0950.8 | | 150.2 | | | | |
| | 234 | POTS | 46 | C | 0953.0 | 0958.0 | 128.0 | 275.0 | | | |
| | 3100 | CRIM | 47 | GB | 0954.0 | 0958.0 | 11.0 | 104.0 | 35.0 | | |

# SOLAR RADIO EMISSION--OUTSTANDING OCCURRENCES

## OCTOBER 1987

| Day | Freq | Sta | Type | | Start (UT) | Time of Maximum (UT) | Duration (Min) | Flux Density Peak ($10^{-22}$ W/m$^2$ Hz) | Flux Density Mean ($10^{-22}$ W/m$^2$ Hz) | Int | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | 950 | GORK | 46 | C | 0954.7 | 0958.0 | 5.2 | 175.0 | | | |
| | 2950 | GORK | 46 | C | 0954.7 | 0957.9 | 4.8 | 166.0 | | | |
| | 9100 | GORK | | | 0954.8 | 0958.4 | | 355.0 | | | |
| | 9100 | GORK | | | 0954.8 | 0959.8 | | 285.0 | | | |
| | 9100 | GORK | 46 | C | 0954.8 | 0957.8 | 6.8 | 655.0 | | | |
| | 2695 | SVTO | 48 | C | 0955.0E | | 7.0D | 170.0 | | | QL=5 ST=2 TYP=8 |
| | 3013 | IZMI | 45 | C | 0955.0 | 0958.0 | 11.0 | 131.0 | 100.0 | | |
| | 4995 | SVTO | 4 | S/F | 0955.0E | 0957.0 | 10.0D | 350.0 | | | QL=5 ST=2 TYP=5 |
| | 30 | POTS | 49 | GB | 0955.0 | 0956.0 | 45.0 | 32000.0 | | | |
| | 9500 | POTS | 45 | C | 0955.0 | 0958.0 | 83.0 | 650.0 | | | |
| | 650 | GORK | | | 0955.8 | 0959.1 | | 163.0 | | | |
| | 650 | GORK | 46 | C | 0955.8 | 0957.9 | 5.5 | 245.0 | | | |
| | 8800 | LEAR | 4 | S/F | 0956.0E | 0957.0 | 6.0D | 400.0 | | | QL=5 ST=2 TYP=5 |
| | 2695 | LEAR | 48 | C | 0956.0E | 1000.0 | 5.0D | 150.0 | | | QL=5 ST=2 TYP=8 |
| | 4995 | LEAR | 4 | S/F | 0956.0E | 0957.0 | 6.0D | 220.0 | | | QL=5 ST=2 TYP=5 |
| | 610 | SVTO | 4 | S/F | 0956.0E | 0958.0 | 6.0D | 250.0 | | | QL=1 ST=2 TYP=5 |
| | 1415 | SVTO | 48 | C | 0956.0E | 1000.0 | 6.0D | 100.0 | | | QL=5 ST=2 TYP=8 |
| | 8800 | SVTO | 48 | C | 0956.0E | 0957.0 | 12.0D | 730.0 | | | QL=5 ST=2 TYP=8 |
| | 15400 | SVTO | 48 | C | 0956.0E | 0957.0 | 20.0D | 390.0 | | | QL=5 ST=2 TYP=8 |
| | 15000 | KISV | 4 | S/F | 0956.8 | 0958.0U | 9.2 | 61.0D | | | |
| | 610 | LEAR | 4 | S/F | 0957.0E | 0958.0 | 3.0D | 170.0 | | | QL=5 ST=2 TYP=5 |
| | 15400 | LEAR | 4 | S/F | 0957.0E | 0958.0 | 4.0D | 260.0 | | | QL=5 ST=2 TYP=5 |
| | 245 | LEAR | 4 | S/F | 0957.0E | 0958.0 | 3.0D | 460.0 | | | QL=5 ST=2 TYP=5 |
| | 1415 | LEAR | 48 | C | 0957.0E | 1000.0 | 4.0D | 110.0 | | | QL=5 ST=2 TYP=8 |
| | 410 | LEAR | 4 | S/F | 0957.0E | 0958.0 | 4.0D | 73.0 | | | QL=5 ST=2 TYP=5 |
| | 410 | SVTO | 4 | S/F | 0957.0E | 0957.0 | 3.0D | 100.0 | | | QL=5 ST=2 TYP=5 |
| | 245 | SVTO | 4 | S/F | 0957.0E | 0957.0 | 3.0D | 100.0 | | | QL=5 ST=2 TYP=5 |
| | 950 | GORK | 29 | PBI | 0959.9 | 1000.0 | 50.2 | 84.0 | | | |
| | 430 | KRAK | 46 | C | 1001.5 | 1017.3 | 45.5 | 110.0 | 14.0 | | |
| | 9300 | KISV | 29 | PBI | 1001.6 | 1001.6 | 21.0 | 22.0 | | | |
| | 9100 | GORK | 29 | PBI | 1002.4 | 1002.4 | 14.8D | 65.0 | | | |
| | 3100 | CRIM | 29 | PBI | 1005.0 | 1005.0 | 16.0 | 5.0 | 3.0 | | |
| | 650 | GORK | 8 | S | 1012.3 | 1012.4 | 0.4 | 52.0 | | | |
| | 2800 | OTTA | 1 | S | 1244.0 | 1246.0 | 8.0 | 2.0 | | | |
| | 2800 | OTTA | 1 | S | 1312.0 | 1318.0 | 11.0 | 1.8 | | | |
| | 9400 | HUAN | 1 | S | 1452.6 | 1453.7 | 3.8 | 3.5 | 0.8 | | |
| | 9400 | HUAN | 1 | S | 1501.8 | 1504.9 | 7.8 | 6.9 | 2.4 | | |
| | 1415 | SVTO | 8 | S | 1504.0E | 1505.0 | 1.0D | 43.0 | | | QL=5 ST=2 TYP=3 |
| | 2695 | SVTO | 8 | S | 1504.0E | 1505.0 | 1.0D | 36.0 | | | QL=5 ST=2 TYP=3 |
| | 4995 | SVTO | 8 | S | 1504.0E | 1505.0 | 1.0D | 41.0 | | | QL=5 ST=2 TYP=3 |
| | 2800 | OTTA | 8 | S | 1504.4 | 1505.0 | 1.4 | 23.9 | 12.0 | | |
| | 2800 | OTTA | 29 | PBI | 1505.5 | 1505.5 | 6.8 | 5.2 | | | |
| | 2800 | OTTA | 20 | GRF | 1515.0 | | 85.0 | 2.0 | | | |
| | 9400 | HUAN | 21 | GRF | 1544.8 | 1600.6 | 47.5 | 2.9 | 0.9 | | |
| | 9400 | HUAN | 1 | S | 1551.5 | 1552.5 | 2.9 | 2.3 | 1.2 | | |
| | 9400 | HUAN | 2 | S/F | 1605.5 | 1606.7 | 3.2 | 2.3 | 1.7 | | |
| | 9400 | HUAN | | | 1623.2 | 1627.3 | | 2.9 | | | |
| | 9400 | HUAN | 2 | S/F | 1623.2 | 1624.7 | 5.0 | 3.5 | 0.8 | | |
| | 2800 | OTTA | 1 | S | 1852.2 | 1852.6 | 3.0 | 8.5 | | | |
| | 2700 | PENT | 20 | GRF | 2002.0 | 2008.0 | 60.0 | 2.0 | | | |
| 17 | 410 | SVTO | 43 | NS | 0522.0 | 0546.0 | 624.0D | 47.0 | | | QL=5 ST=2 TYP=1 |
| | 245 | SVTO | 43 | NS | 0522.0 | 0546.0 | 624.0D | 97.0 | | | QL=5 ST=2 TYP=1 |
| | 204 | IZMI | 44 | NS | 0600.0E | | 360.0D | 35.0 | | | |
| | 234 | POTS | 43 | NS | 0600.0 | 0648.0U | 230.0D | 28.0 | | | |
| | 260 | ONDR | 44 | NS | 0730.0E | 1318.0U | 400.0D | | | | |
| | 245 | LEAR | 43 | NS | 2208.0 | 0243.0 | 723.0D | 64.0 | | | QL=5 ST=2 TYP=1 |
| | 3750 | TYKW | 21 | GRF | 0044.0 | 0057.0 | 105.0 | 1.5 | 0.7 | | RAIN |
| | 2000 | TYKW | 20 | GRF | 0045.0 | 0051.0 | 100.0 | 1.0 | 0.5 | | |
| | 3750 | TYKW | 5 | S | 0203.0 | 0203.5 | 9.0 | 3.0 | 1.0 | | |
| | 9500 | GORK | 1 | S | 0705.4 | 0705.6 | 0.6 | 5.0 | | | |
| | 650 | GORK | 1 | S | 0705.5 | 0705.9 | 0.6 | 5.6 | | | |
| | 430 | KRAK | 42 | SER | 0811.0E | 1114.3 | 360.0D | 74.0 | | | |
| | 536 | ONDR | 40 | F | 0908.0E | 1124.2 | 305.0U | 44.0 | | | |
| | 950 | GORK | 1 | S | 1041.2 | 1041.5 | 0.5 | 3.0 | | | |
| | 650 | GORK | 8 | S | 1041.4 | 1041.5 | 0.5 | 27.0 | 6.5 | | |
| | 2950 | GORK | 21 | GRF | 1112.1 | 1118.7 | 12.0 | 1.4 | | | |
| | 2950 | GORK | 1 | S | 1114.6 | 1115.4 | 2.2 | 2.1 | | | |
| | 650 | GORK | | | 1121.9 | 1124.2 | | 90.0 | | | |
| | 650 | GORK | 41 | F | 1121.9 | 1122.3 | 0.3 | 1.9 | | | |

SOLAR RADIO EMISSION--OUTSTANDING OCCURRENCES

OCTOBER 1987

| Day | Freq | Sta | Type | | Start (UT) | Time of Maximum (UT) | Duration (Min) | Flux Density Peak ($10^{-22}$ W/m$^2$ Hz) | Flux Density Mean ($10^{-22}$ W/m$^2$ Hz) | Int | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 2950 | GORK | 3 | S | 1122.0 | 1122.4 | 0.8 | 6.0 | | | |
| | 1470 | POTS | 42 | SER | 1122.0 | 1124.4 | 3.0 | 8.0 | | | |
| | 3000 | POTS | 42 | SER | 1122.0 | 1124.4 | 2.7 | 9.0 | | | |
| | 3100 | CRIM | 42 | SER | 1122.0 | 1122.5 | 3.0 | 6.0 | 2.0 | | |
| | 3100 | CRIM | | | 1122.0 | 1124.5 | | 7.0 | | | |
| | 3013 | IZMI | 41 | F | 1122.0 | 1124.5 | 3.0 | 8.0 | | | |
| | 810 | KRAK | 8 | S | 1122.2 | 1122.4 | 0.3 | 2.0 | | | |
| | 950 | GORK | 41 | F | 1122.2 | 1122.5 | 2.3 | 1.8 | | | |
| | 810 | KRAK | 2 | S/F | 1124.0 | 1124.3 | 0.5 | 53.0U | 2.0 | | |
| | 2950 | GORK | 3 | S | 1124.1 | 1124.4 | 0.6 | 7.8 | | | |
| | 1470 | POTS | 1 | S | 1145.8 | 1146.5 | 1.7 | 4.0 | | | |
| | 650 | GORK | 46 | C | 1145.9 | 1146.7 | 3.2 | 18.0 | | | |
| | 810 | KRAK | 8 | S | 1146.0 | 1146.3 | 0.5 | 16.0U | | | |
| | 3100 | CRIM | 1 | S | 1146.0 | 1146.5 | 1.0 | 7.0 | 2.0 | | |
| | 2950 | GORK | 3 | S | 1146.0 | 1146.6 | 1.2 | 9.1 | | | |
| | 3000 | POTS | 3 | S | 1146.2 | 1146.5 | 0.9 | 10.0 | | | |
| | 950 | GORK | 1 | S | 1146.4 | 1146.6 | 0.6 | 2.0 | | | |
| | 3013 | IZMI | 5 | S | 1146.5 | 1147.0 | 0.5 | 8.0 | 4.0 | | |
| | 245 | SVTO | 4 | S/F | 1220.0E | 1220.0 | | 420.0 | | | QL=1 ST=2 TYP=5 |
| | 3000 | POTS | 29 | PBI | 1220.5 | 1222.0 | 75.0 | 15.0 | | | |
| | 3100 | CRIM | 1 | S | 1221.0 | 1222.0 | 5.0 | 9.0 | 3.0 | | |
| | 9500 | POTS | 29 | PBI | 1221.0 | 1224.0 | 34.0 | | | | |
| | 1470 | POTS | 3 | S | 1221.0 | 1222.2 | 3.0 | 6.0 | | | |
| | 810 | KRAK | 2 | S/F | 1221.8 | 1221.9 | 0.5 | 34.0U | 4.0 | | |
| | 2800 | OTTA | 1 | S | 1346.0 | 1348.5 | 4.5 | 11.6 | 6.9 | | |
| | 3000 | POTS | 4 | S/F | 1346.5 | 1348.7 | 9.0 | 14.0 | | | |
| | 2695 | SGMR | 4 | S/F | 1347.0E | 1348.0 | 6.0D | 13.0 | | | QL=5 ST=3 TYP=3 |
| | 4995 | SGMR | 4 | S/F | 1347.0E | 1348.0 | 6.0D | 14.0 | | | QL=5 ST=3 TYP=3 |
| | 1415 | SGMR | 48 | C | 1348.0E | 1349.0 | 5.0D | 65.0 | | | QL=5 ST=3 TYP=8 |
| | 9400 | HUAN | 2 | S/F | 1348.2 | 1349.2 | 3.4 | 6.2 | 3.6 | | |
| | 1470 | POTS | 8 | S | 1348.5 | 1349.1 | 1.2 | 53.0 | | | |
| | 2800 | OTTA | 29 | PBI | 1350.5 | 1350.5 | 20.0D | 5.2 | | | |
| | 2700 | PENT | 1 | S | 2009.2 | 2010.5 | 2.0 | 7.9 | 4.7 | | |
| | 2700 | PENT | 29 | PBI | 2011.2 | 2011.2 | 1.8 | 4.4 | | | |
| | 2700 | PENT | 1 | S | 2210.0 | 2210.5 | 1.5 | 3.8 | 1.7 | | |
| | 3750 | TYKW | 20 | GRF | 2236.0 | 2242.0 | 35.0 | 5.0 | 2.5 | | |
| | 9400 | TYKW | 20 | GRF | 2236.0 | 2244.0 | 30.0 | 8.0 | 4.0 | | |
| | 3750 | TYKW | 21 | GRF | 2317.0 | 2330.0 | 43.0D | 2.0 | 1.0D | | |
| | 9400 | TYKW | 21 | GRF | 2320.0 | 2335.0 | 40.0 | 2.0 | 1.0 | | |
| | 1000 | TYKW | 45 | C | 2354.3 | 2354.4 | 0.5 | 3.0 | 0.7 | | |
| | 2000 | TYKW | 45 | C | 2356.0 | 2359.2 | 4.0 | 16.0 | 3.0 | | |
| | 1000 | TYKW | 45 | C | 2357.0 | 2359.0 | 3.0 | 22.0 | 2.0 | | |
| | 410 | LEAR | 8 | S | 2357.0E | 2359.0 | 2.0D | 71.0 | | | QL=5 ST=2 TYP=5 |
| | 610 | LEAR | 8 | S | 2357.0E | 2359.0 | 2.0D | 83.0 | | | QL=5 ST=2 TYP=5 |
| 18 | 245 | PALE | 44 | NS | 0109.0E | 0227.0 | 1371.0D | 47.0 | | | QL=5 ST=3 TYP=1 |
| | 200 | HIRA | 44 | NS | 0150.0E | 0313.0 | 360.0D | 17.0 | 4.0 | | WR |
| | 245 | SVTO | 43 | NS | 0523.0 | 1443.0 | 622.0D | 75.0 | | | QL=1 ST=2 TYP=1 |
| | 127 | TORN | 44 | NS | 0620.0E | | 7.0D | | 4.0 | | |
| | 260 | ONDR | 44 | NS | 0730.0E | | 450.0D | | | | |
| | 245 | SGMR | 43 | NS | 1121.0 | 1420.0 | 615.0D | 63.0 | | | QL=5 ST=2 TYP=1 |
| | 245 | LEAR | 44 | NS | 2252.0E | 2328.0 | 88.0D | 43.0 | | | QL=5 ST=2 TYP=1 |
| | 810 | KRAK | 8 | S | 0939.8 | 0940.0 | 0.2 | 15.0 | | | |
| | 810 | KRAK | 8 | S | 0940.5 | 0940.5 | 0.1 | 5.0 | | | |
| | 3750 | TYKW | 31 | ABS | 0003.0E | 0045.0 | 210.0D | -4.0 | -2.0D | | |
| | 245 | PALE | 4 | S/F | 0033.0E | 0033.0 | | 32.0 | | | QL=5 ST=2 TYP=3 |
| | 245 | PALE | 8 | S | 0211.0E | 0211.0 | 2.0D | 70.0 | | | QL=5 ST=2 TYP=5 |
| | 3750 | TYKW | 5 | S | 0355.5 | 0356.8 | 3.5 | 1.5 | 0.5 | | |
| | 3750 | TYKW | 5 | S | 0436.5 | 0347.4 | 3.5 | 1.5 | 0.5 | | |
| | 9400 | TYKW | 20 | GRF | 0523.0 | 0525.0 | 35.0 | 3.0 | 1.5 | | |
| | 2000 | TYKW | 45 | C | 0523.0 | 0524.2 | 3.0 | 8.0 | 3.5 | | |
| | 1000 | TYKW | 45 | C | 0523.0 | 0524.3 | 3.0 | 5.0 | 1.5 | | |
| | 3750 | TYKW | 5 | S | 0523.0 | 0524.7 | 3.0 | 8.0 | 4.0 | | |
| | 3100 | CRIM | 1 | S | 0523.0 | 0524.9 | 6.0 | 9.0 | 3.0 | | |
| | 2950 | GORK | 3 | S | 0523.1 | 0524.6 | 2.5 | 10.3 | | | |
| | 9100 | GORK | 22 | GRF | 0523.1 | 0528.8 | 21.4 | 5.5 | | | |
| | 500 | HIRA | 41 | F | 0523.2 | 0524.0 | 1.8 | 27.0 | | | WR |
| | 950 | GORK | 1 | S | 0523.9 | 0524.3 | 1.4 | 4.5 | | | |
| | 650 | GORK | 1 | S | 0523.9 | 0524.3 | 1.6 | 5.0 | 2.0 | | |
| | 2950 | GORK | 29 | PBI | 0525.6 | 0525.6 | 21.6 | 4.0 | | | |

# SOLAR RADIO EMISSION--OUTSTANDING OCCURRENCES

## OCTOBER 1987

| Day | Freq | Sta | Type | | Start (UT) | Time of Maximum (UT) | Duration (Min) | Flux Density Peak ($10^{-22}$ W/m$^2$ Hz) | Flux Density Mean ($10^{-22}$ W/m$^2$ Hz) | Int | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 3750 | TYKW | 29 | PBI | 0526.0 | | 30.0 | 2.0 | 1.0 | | |
| | 2000 | TYKW | 29 | PBI | 0526.0 | | 30.0 | 2.0 | 1.0 | | |
| | 5900 | KISV | | | 0741.0 | 0743.5 | | 7.0 | | | |
| | 5900 | KISV | 21 | GRF | 0741.0 | 0742.6 | 10.2 | 9.0 | | | |
| | 2950 | GORK | 1 | S | 0742.0 | 0742.3 | 0.6 | 1.8 | 0.9 | | |
| | 950 | GORK | 29 | PBI | 0742.5 | 0742.5 | 8.7 | 1.1 | 0.5 | | |
| | 650 | GORK | 8 | S | 0806.5 | 0806.7 | 0.5 | 16.0 | | | |
| | 950 | GORK | 2 | S/F | 0806.6 | 0806.7 | 0.5 | 13.0 | | | |
| | 5900 | KISV | 21 | GRF | 0826.5 | 0837.5 | 20.0 | 2.0 | | | |
| | 2950 | GORK | 1 | S | 0834.5 | 0835.1 | 4.3 | 1.1 | 0.5 | | |
| | 15000 | KISV | 2 | S/F | 0948.0 | 0949.7 | 5.0 | 6.0 | | | |
| | 204 | IZMI | 5 | S | 1108.0 | 1109.0 | 6.0 | 300.0 | 200.0 | | |
| | 29 | UPIC | 45 | C | 1108.8 | 1112.4 | 4.7 | | | | |
| | 33 | UPIC | 45 | C | 1110.8U | 1112.6 | 2.2U | | | | |
| | 245 | PALE | 4 | S/F | 1654.0E | 1654.0 | | 47.0 | | | QL=5 ST=2 TYP=3 |
| | 245 | PALE | 8 | S | 2327.0E | 2327.0 | 1.0D | 34.0 | | | QL=5 ST=2 TYP=3 |
| | 9400 | TYKW | 21 | GRF | 2345.0 | 0010.0 | 80.0 | 2.0 | 1.0 | | |
| 19 | 245 | LEAR | 44 | NS | 0110.0E | 0907.0 | 541.0D | 38.0 | | | QL=5 ST=2 TYP=1 |
| | 245 | SVTO | 43 | NS | 0524.0 | 0826.0 | 619.0D | 74.0 | | | QL=5 ST=2 TYP=1 |
| | 260 | ONDR | 44 | NS | 0800.0E | 1012.0 | 330.0D | 12.0U | | | |
| | 245 | LEAR | 44 | NS | 0810.0E | 0924.0 | 121.0D | 51.0 | | | QL=5 ST=3 TYP=1 |
| | 204 | IZMI | 43 | NS | 1015.0 | | 105.0 | 10.0 | | | |
| | 9400 | TYKW | 5 | S | 0044.0 | 0044.5 | 2.0 | 3.0 | 1.0 | | |
| | 3750 | TYKW | 5 | S | 0114.0 | 0114.6 | 1.5 | 1.5 | 0.5 | | |
| | 2000 | TYKW | 45 | C | 0120.5 | 0120.6 | 0.5 | 4.0 | 1.0 | | |
| | 3750 | TYKW | 45 | C | 0529.0 | 0529.6 | 2.0 | 1.5 | 0.5 | | |
| | 9400 | TYKW | 45 | C | 0529.0 | 0529.7 | 2.0 | 16.0 | 5.0 | | |
| | 9100 | GORK | 2 | S/F | 0529.0 | 0529.7 | 1.9 | 15.0 | 5.0 | | |
| | 245 | SVTO | 4 | S/F | 0829.0E | 0829.0 | | 130.0 | | | QL=5 ST=2 TYP=5 |
| | 2950 | GORK | 1 | S | 1006.3 | 1006.4 | 0.3 | 3.6 | 1.8 | | |
| | 245 | PALE | 20 | GRF | 2014.0E | 2016.0 | 3.0D | 23.0 | | | QL=5 ST=2 TYP=2 |
| | 410 | PALE | 20 | GRF | 2014.0E | 2016.0 | 3.0D | 20.0 | | | QL=5 ST=2 TYP=2 |
| | 610 | PALE | 20 | GRF | 2015.0E | 2016.0 | 1.0D | 13.0 | | | QL=5 ST=2 TYP=2 |
| 20 | 410 | SVTO | 43 | NS | 0525.0 | 0559.0 | 617.0D | 46.0 | | | QL=5 ST=2 TYP=1 |
| | 260 | ONDR | 44 | NS | 0740.0E | 0957.7 | 410.0D | 7.0 | | | |
| | 3750 | TYKW | 5 | S | 0010.5 | 0011.3 | 3.0 | 1.5 | 0.5 | | |
| | 9400 | TYKW | 5 | S | 0010.5 | 0011.3 | 8.0 | 3.0 | 1.0 | | |
| | 9400 | TYKW | 5 | S | 0358.5 | 0359.4 | 3.0 | 2.0 | 1.0 | | |
| | 3750 | TYKW | 5 | S | 0358.5 | 0359.5 | 4.0 | 1.0 | 0.3 | | |
| | 5900 | KISV | 45 | C | 0843.9 | 0845.2 | 4.0 | 8.0 | | | |
| | 5900 | KISV | | | 0843.9 | 0844.4 | | 3.0 | | | |
| 21 | 260 | ONDR | 44 | NS | 0920.0E | 1300.0U | 280.0D | 5.0U | | | |
| | 9400 | TYKW | 45 | C | 0538.0 | 0539.6 | 3.0 | 4.0 | 1.5 | | |
| | 536 | ONDR | 41 | F | 0928.0 | 1054.0 | 86.0U | 21.0 | | | |
| | 8800 | SGMR | 4 | S/F | 1742.0E | 1744.0 | 3.0D | 300.0 | | | QL=1 ST=2 TYP=5 |
| | 9400 | HUAN | 1 | S | 2123.5 | 2125.0 | 5.8 | 4.1 | 1.9 | | |
| | 2000 | TYKW | 45 | C | 2217.0 | 2217.5 | 1.5 | 13.0 | 1.0 | | |
| | 2000 | TYKW | | | 2217.0 | 2217.9 | | 11.0 | | | |
| | 500 | HIRA | 8 | S | 2217.5 | 2217.7 | 0.2 | 29.0 | | | 0 |
| | 2000 | TYKW | 5 | S | 2228.0 | 2228.7 | 1.5 | 1.0 | 0.3 | | |
| | 3750 | TYKW | 5 | S | 2228.0 | 2228.7 | 2.0 | 1.0 | 0.3 | | |
| | 9400 | TYKW | 5 | S | 2325.5 | 2326.0 | 1.5 | 3.0 | 1.0 | | |
| 22 | 260 | ONDR | 44 | NS | 0914.0E | 1053.0 | 347.0D | 2.0 | | | |
| | 5900 | KISV | | | 0831.2 | 0832.2 | | 3.0 | | | |
| | 5900 | KISV | 21 | GRF | 0831.2 | 0831.7 | 13.9 | 5.0 | | | |
| | 2800 | OTTA | 1 | S | 2018.0 | 2022.0 | 5.0 | 4.5 | 2.9 | | |
| 23 | 260 | ONDR | 41 | F | 0802.6 | 0803.1 | 0.8 | 2.0 | | | |
| 24 | 9400 | HUAN | 1 | S | 1838.4 | 1841.8 | 6.7 | 4.0 | 2.5 | | |
| 25 | 3100 | CRIM | 20 | GRF | 0825.5 | 0830.5 | 68.0 | 2.4 | 1.0 | | |
| | 3100 | CRIM | 4 | S/F | 0826.0 | 0830.0 | 8.0 | 2.0 | | | QL= ST= TYP=3 |
| | 2800 | OTTA | 22 | GRF | 1750.0 | 1805.0 | 45.0 | 1.3 | | | |
| 26 | 260 | ONDR | 44 | NS | 0927.0E | 1114.9 | 273.0D | 6.0 | | | |

# SOLAR RADIO EMISSION--OUTSTANDING OCCURRENCES

OCTOBER 1987

| Day | Freq | Sta | Type | | Start (UT) | Time of Maximum (UT) | Duration (Min) | Flux Density Peak ($10^{-22}$ W/m$^2$ Hz) | Flux Density Mean ($10^{-22}$ W/m$^2$ Hz) | Int | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 26 | 950 | GORK | 2 | S/F | 0633.7 | 0634.0 | 0.8 | 11.0 | | | |
| | 650 | GORK | 1 | S | 0633.8 | 0633.9 | 0.7 | 4.0 | | | |
| | 3100 | CRIM | | | 1158.3 | 1206.0 | | 5.0 | 3.0 | | |
| | 3100 | CRIM | 45 | C | 1158.3 | 1202.2 | 23.0 | 3.0 | | | |
| | 3100 | CRIM | | | 1158.3 | 1209.9 | | 4.0 | | | |
| | 536 | ONDR | 8 | S | 1206.3 | 1206.4 | 0.9 | 36.0 | | | |
| | 9400 | HUAN | 1 | S | 1510.0 | 1512.4 | 5.4 | 6.8 | 1.4 | | |
| | 9400 | HUAN | 22 | GRF | 1536.6 | 1554.5 | 41.7 | 8.1 | 4.9 | | |
| | 3750 | TYKW | 20 | GRF | 2230.0 | 2310.0 | 120.0 | 1.5 | 0.7 | | |
| | 9400 | TYKW | 5 | S | 2322.5 | 2324.2 | 4.5 | 3.0 | 1.0 | | |
| 27 | 200 | HIRA | 43 | NS | 2300.0 | 0600.0 | 520.0D | 4.0 | 2.0 | | |
| | 536 | ONDR | 8 | S | 1006.7 | 1006.7 | 0.3 | 6.0 | | | |
| | 536 | ONDR | 41 | F | 1242.4 | 1245.2 | 6.9 | 11.0 | | | |
| | 3750 | TYKW | 21 | GRF | 2305.0 | 2352.0 | 250.0 | 3.0 | 1.5 | | |
| | 1000 | TYKW | 21 | GRF | 2340.0 | 2355.0 | 210.0 | 1.5 | 0.7 | | |
| | 2000 | TYKW | 21 | GRF | 2340.0 | 2355.0 | 210.0 | 1.5 | 0.7 | | |
| 28 | 410 | LEAR | 44 | NS | 0125.0E | 0131.0 | | 24.0 | | | QL=1 ST=2 TYP=1 |
| | 245 | LEAR | 44 | NS | 0128.0E | 0131.0 | | 13.0 | | | QL=1 ST=2 TYP=1 |
| | 204 | IZMI | 43 | NS | 0600.0 | | 360.0 | 10.0 | | | |
| | 260 | ONDR | 44 | NS | 0810.0E | 1123.2 | 350.0D | 5.0U | | | |
| | 200 | HIRA | 44 | NS | 2055.0E | 2326.0 | 640.0D | 9.0 | 5.0 | | |
| | 245 | LEAR | 43 | NS | 2159.0 | 0728.0 | 737.0D | 95.0 | | | QL=5 ST=2 TYP=1 |
| | 2000 | TYKW | 20 | GRF | 0013.0 | 0027.0 | 50.0 | 1.5 | 0.7 | | |
| | 2000 | TYKW | 5 | S | 0113.0 | 0114.4 | 2.0 | 3.0 | 1.5 | | |
| | 2000 | TYKW | 30 | PBI | 0115.0 | | 100.0 | 1.5 | 0.7 | | |
| | 1000 | TYKW | 21 | GRF | 0120.0 | 0146.0 | 100.0 | 1.0 | 0.5 | | |
| | 2000 | TYKW | 45 | C | 0122.0 | 0131.9 | 14.0 | 4.0 | 1.0 | | |
| | 3750 | TYKW | 20 | GRF | 0125.0 | 0216.0 | 180.0 | 3.0 | 1.5 | | |
| | 1000 | TYKW | 45 | C | 0130.0 | 0133.2 | 6.0 | 22.0 | 4.0 | | |
| | 3750 | TYKW | 5 | S | 0130.5 | 0131.2 | 6.0 | 1.0 | 0.3 | | |
| | 1415 | LEAR | 8 | S | 0132.0E | 0133.0 | 2.0D | 19.0 | | | QL=1 ST=2 TYP=3 |
| | 610 | LEAR | 8 | S | 0133.0E | 0133.0 | 1.0D | 4.0 | | | QL=1 ST=2 TYP=3 |
| | 2000 | TYKW | 20 | GRF | 0138.0 | 0148.0 | 75.0 | 2.0 | 1.0 | | |
| | 3750 | TYKW | 21 | GRF | 0139.0 | 0151.0 | 75.0 | 2.0 | 1.0 | | |
| | 1000 | TYKW | 5 | S | 0139.0 | 0140.1 | 3.0 | 1.0 | 0.3 | | |
| | 3750 | TYKW | 20 | GRF | 0223.0 | 0232.0 | 30.0 | 1.0 | 0.5 | | |
| | 3750 | TYKW | 21 | GRF | 0403.0 | 0420.0 | 130.0 | 1.0 | 0.5 | | |
| | 3750 | TYKW | 20 | GRF | 0500.0 | 0530.0 | 70.0 | 1.5 | 0.7 | | |
| | 1470 | POTS | 4 | S/F | 1307.4 | 1307.8 | 1.6 | 10.0 | | | |
| | 536 | ONDR | 8 | S | 1318.7 | 1318.7 | 1.3 | 5.0 | | | |
| | 9400 | HUAN | 1 | S | 1336.9 | 1339.5 | 3.8 | 3.7 | 0.6 | | |
| | 9400 | HUAN | 1 | S | 1708.9 | 1710.8 | 3.6 | 3.1 | 1.0 | | |
| | 9400 | HUAN | 1 | S | 1722.3 | 1724.0 | 3.9 | 2.5 | 1.0 | | |
| | 9400 | HUAN | 20 | GRF | 2032.4 | 2051.0 | 33.8 | 3.7 | 3.2 | | |
| | 9400 | HUAN | 2 | S/F | 2115.4 | 2117.8 | 9.0 | 2.5 | 2.2 | | |
| | 9400 | HUAN | 1 | S | 2126.6 | 2128.8 | 5.0 | 5.5 | 1.7 | | |
| | 3750 | TYKW | 20 | GRF | 2230.0 | 2300.0 | 80.0 | 2.0 | 1.0 | | |
| 29 | 245 | SVTO | 43 | NS | 0536.0 | 0723.0 | 593.0D | 61.0 | | | QL=1 ST=2 TYP=1 |
| | 260 | ONDR | 44 | NS | 0750.0E | 1025.0 | 370.0D | 7.0U | | | |
| | 127 | TORN | 44 | NS | 0830.0E | | 18.0D | | 4.0 | | |
| | 245 | PALE | 43 | NS | 1936.0 | 2236.0 | 486.0D | 54.0 | | | QL=5 ST=2 TYP=1 |
| | 200 | HIRA | 44 | NS | 2055.0E | 0030.0 | 640.0D | 6.0 | 3.0 | | |
| | 245 | LEAR | 44 | NS | 2159.0E | 0728.0 | 569.0D | 95.0 | | | QL=5 ST=2 TYP=1 |
| | 3750 | TYKW | 32 | ABS | 0230.0 | 0330.0 | 150.0 | -1.0 | -0.5 | | |
| | 9400 | TYKW | 32 | ABS | 0235.0 | 0300.0 | 110.0 | -3.0 | -1.5 | | |
| | 2000 | TYKW | 32 | ABS | 0300.0 | 0340.0 | 120.0 | -1.0 | -0.5 | | |
| | 9400 | HUAN | 1 | S | 1659.2 | 1701.8 | 6.5 | 4.4 | 1.9 | | |
| | 9400 | HUAN | 20 | GRF | 1728.7 | 1746.5 | 37.6 | 5.9 | 2.4 | | |
| | 3750 | TYKW | 20 | GRF | 2300.0 | 2330.0 | 110.0 | 1.5 | 0.7 | | |
| | 1000 | TYKW | 45 | C | 2327.0 | 2327.5 | 4.0 | 4.0 | 1.0 | | |
| 30 | 245 | SVTO | 43 | NS | 0537.0 | 0650.0 | 591.0D | 61.0 | | | QL=1 ST=2 TYP=1 |
| | 204 | IZMI | 43 | NS | 0600.0 | | 360.0 | 10.0 | | | |
| | 127 | TORN | 44 | NS | 0620.0E | | 33.0D | | 1.2 | | |
| | 234 | POTS | 44 | NS | 0630.0E | 1032.0U | 510.0D | 33.0U | | | |
| | 260 | ONDR | 44 | NS | 0805.0E | 1100.0U | 335.0D | | | | |
| | 245 | SGMR | 43 | NS | 1644.0 | 1807.0 | 274.0D | 53.0 | | | QL=5 ST=2 TYP=1 |

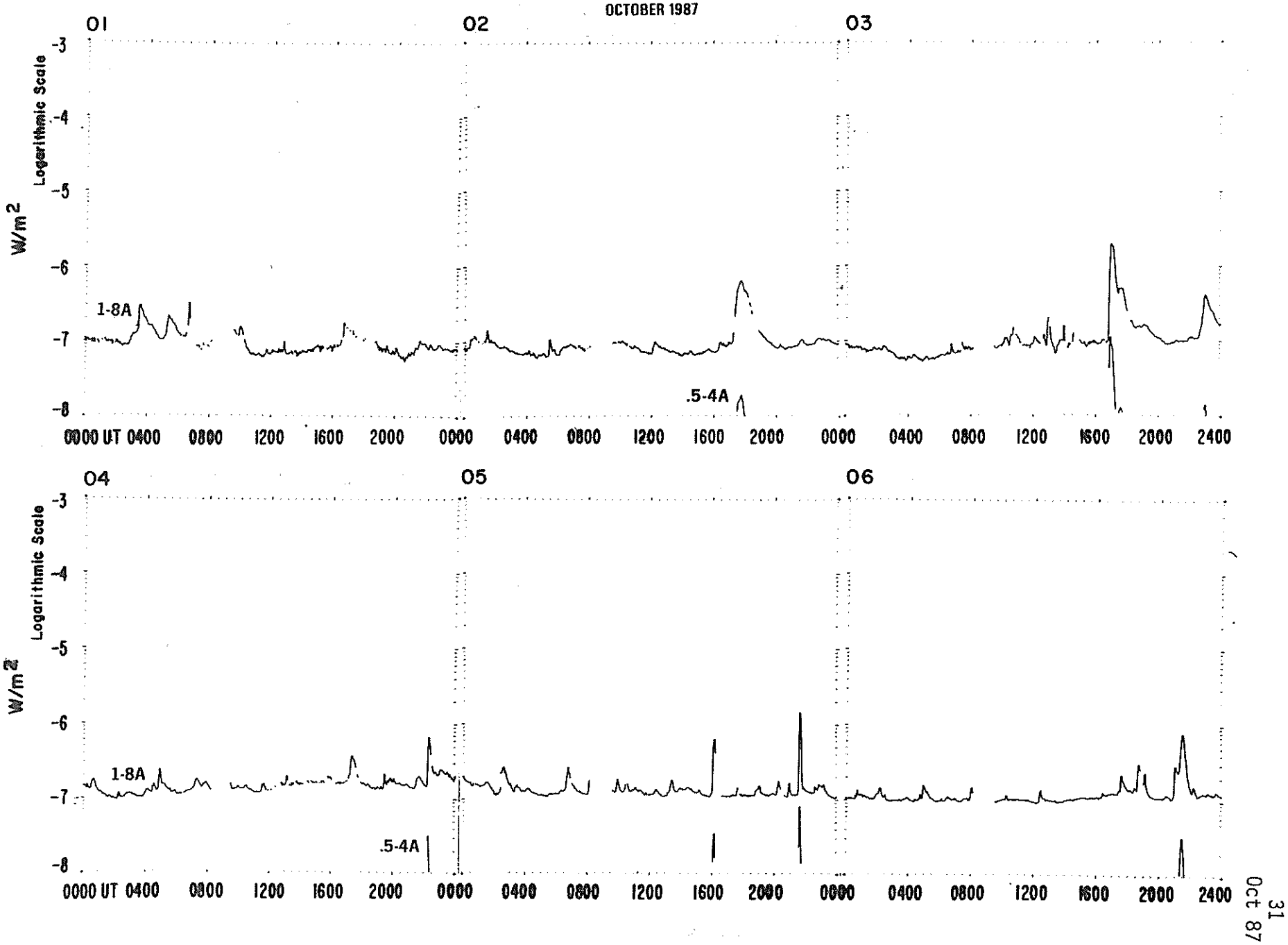
# SOLAR RADIO EMISSION--OUTSTANDING OCCURRENCES

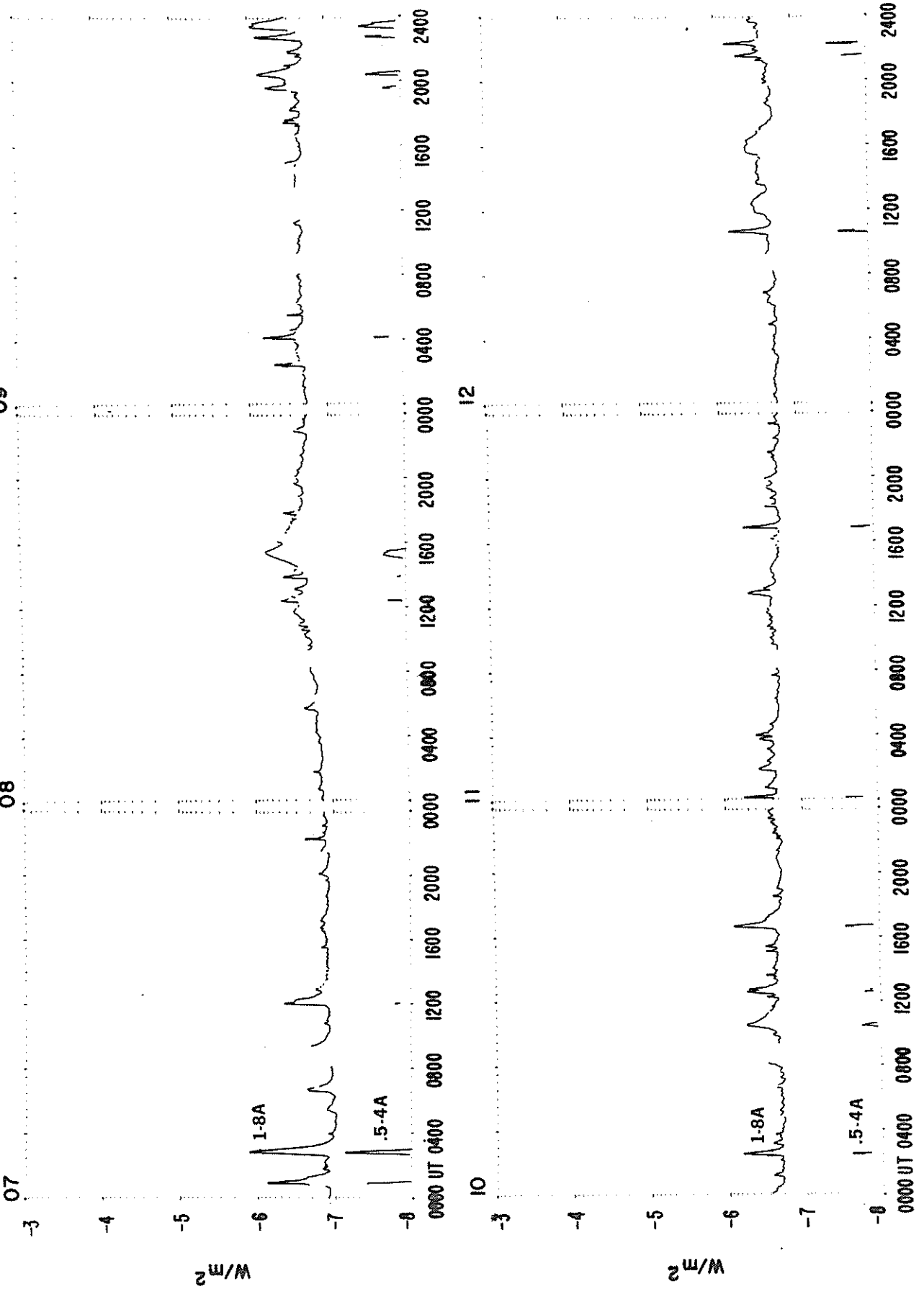
## OCTOBER 1987

| Day | Freq | Sta | Type | | Start (UT) | Time of Maximum (UT) | Duration (Min) | Flux Density Peak ($10^{-22}$ W/m$^2$ Hz) | Flux Density Mean ($10^{-22}$ W/m$^2$ Hz) | Int | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 | 410 | SGMR | 43 | NS | 1644.0 | 1743.0 | 274.0D | 17.0 | | | QL=5 ST=2 TYP=1 |
| | 245 | PALE | 43 | NS | 2046.0 | 2244.0 | 415.0D | 120.0 | | | QL=5 ST=2 TYP=1 |
| | 200 | HIRA | 44 | NS | 2055.0E | 0100.0 | 640.0D | 50.0 | 44.0 | | |
| | 100 | HIRA | 44 | NS | 2055.0E | 0147.0 | 640.0D | 850.0 | 500.0 | | |
| | 410 | LEAR | 43 | NS | 2159.0 | 0555.0 | 737.0D | 59.0 | | | QL=5 ST=2 TYP=1 |
| | 245 | LEAR | 43 | NS | 2159.0 | 0802.0 | 737.0D | 110.0 | | | QL=5 ST=2 TYP=1 |
| | 3750 | TYKW | 20 | GRF | 0440.0 | 0520.0 | 120.0 | 1.5 | 0.7 | | |
| | 2000 | TYKW | 20 | GRF | 0440.0 | 0520.0 | 120.0 | 1.0 | 0.5 | | |
| | 2800 | OTTA | 32 | ABS | 1455.0 | 1520.0 | 80.0 | -3.8 | | | |
| | 9400 | HUAN | 1 | S | 2017.0 | 2020.7 | 7.2 | 36.0 | 10.0 | | |
| | 245 | PALE | 4 | S/F | 2055.0E | 2055.0 | | 110.0 | | | QL=5 ST=2 TYP=5 |
| | 245 | PALE | 4 | S/F | 2103.0E | 2103.0 | 3.0D | 130.0 | | | QL=5 ST=2 TYP=5 |
| | 245 | PALE | 8 | S | 2117.0E | 2117.0 | 2.0D | 140.0 | | | QL=5 ST=2 TYP=5 |
| | 9400 | HUAN | 2 | S/F | 2127.0 | 2128.9 | 6.4 | 5.7 | 1.2 | | |
| | 9400 | TYKW | 20 | GRF | 2145.0U | 2220.0 | 110.0U | 6.0 | 3.0 | | RAIN |
| | 200 | HIRA | 48 | C | 2158.1 | 2356.1 | 152.0 | 750.0 | 118.0 | | |
| | 3750 | TYKW | 21 | GRF | 2200.0U | 2240.0 | 170.0U | 4.0 | 2.0 | | |
| | 2000 | TYKW | 21 | GRF | 2200.0U | 2230.0 | 230.0U | 3.0 | 1.5 | | |
| | 1000 | TYKW | 5 | S | 2203.0 | 2203.9 | 2.0 | 3.0 | 0.7 | | |
| | 100 | HIRA | 48 | C | 2205.0U | 2356.0U | 158.0D | 1000.0D | 210.0D | | |
| | 1000 | TYKW | 5 | S | 2214.0 | 2214.4 | 1.0 | 5.0 | 1.5 | | |
| | 1000 | TYKW | 45 | C | 2306.0 | 2320.2 | 19.0 | 15.0 | 3.0 | | |
| | 610 | LEAR | 48 | C | 2317.0E | 2321.0 | 7.0D | 270.0 | | | QL=5 ST=2 TYP=8 |
| | 610 | PALE | 48 | C | 2317.0E | 2321.0 | 7.0D | 270.0 | | | QL=5 ST=2 TYP=8 |
| | 410 | PALE | 8 | S | 2319.0E | 2321.0 | 2.0D | 14.0 | | | QL=5 ST=2 TYP=3 |
| | 1000 | TYKW | 30 | PBI | 2325.0 | | 145.0 | 2.0 | 1.0 | | |
| | 245 | LEAR | 48 | C | 2330.0E | 2355.0 | 39.0D | 400.0 | | | QL=5 ST=2 TYP=8 |
| | 610 | LEAR | 48 | C | 2331.0E | 2337.0 | 33.0D | 180.0 | | | QL=5 ST=2 TYP=8 |
| | 610 | PALE | 48 | C | 2331.0E | 2337.0 | 33,0D | 160.0 | | | QL=5 ST=2 TYP=8 |
| | 1000 | TYKW | 28 | PRE | 2332.0 | 2348.0 | 16.0 | 2.5 | 1.5 | | |
| | 410 | PALE | 20 | GRF | 2336.0E | 2357.0 | 29.0D | 99.0 | | | QL=5 ST=2 TYP=2 |
| | 3750 | TYKW | 20 | GRF | 2337.0 | 2358.0 | 50.0 | 1.5 | 0.7 | | |
| | 245 | PALE | 20 | GRF | 2338.0E | 2358.0 | 28.0D | 230.0 | | | QL=5 ST=2 TYP=2 |
| | 410 | LEAR | 4 | S/F | 2341.0E | 2357.0 | 23.0D | 100.0 | | | QL=5 ST=2 TYP=5 |
| | 2000 | TYKW | 45 | C | 2345.0 | 0000.9 | 45.0 | 5.0 | 1.5 | | |
| | 1000 | TYKW | 45 | C | 2348.0 | 2358.1 | 25.0 | 428.0 | 80.0D | | |
| | 1415 | LEAR | 4 | S/F | 2353.0E | 2357.0 | 16.0D | 69.0 | | | QL=1 ST=2 TYP=5 |
| | 1415 | PALE | 4 | S/F | 2354.0E | 2357.0 | 4.0D | 75.0 | | | QL=5 ST=2 TYP=5 |
| 31 | 410 | SVTO | 43 | NS | 0538.0 | 0909.0 | 588.0D | 32.0 | | | QL=5 ST=2 TYP=1 |
| | 245 | SVTO | 43 | NS | 0538.0 | 1105.0 | 588.0D | 100.0 | | | QL=5 ST=2 TYP=1 |
| | 204 | IZMI | 44 | NS | 0600.0E | | 360.0D | 40.0 | | | |
| | 234 | POTS | 44 | NS | 0640.0E | 1148.0U | 455.0D | 55.0U | | | |
| | 260 | ONDR | 44 | NS | 0820.0E | | 300.0D | | | | |
| | 245 | SGMR | 43 | NS | 1138.0 | 1227.0 | 578.0D | 65.0 | | | QL=5 ST=2 TYP=1 |
| | 410 | SGMR | 43 | NS | 1138.0 | 1211.0 | 578.0D | 11.0 | | | QL=5 ST=2 TYP=1 |
| | 245 | PALE | 43 | NS | 1654.0 | 0321.0 | 646.0D | 150.0 | | | QL=5 ST=2 TYP=1 |
| | 410 | PALE | 43 | NS | 1913.0 | 0202.0 | 507.0D | 31.0 | | | QL=5 ST=2 TYP=1 |
| | 200 | HIRA | 44 | NS | 2100.0E | 0203.0 | 620.0D | 112.0 | 24.0 | | ML |
| | 100 | HIRA | 44 | NS | 2100.0E | 2250.0 | 620.0D | 80.0 | 28.0 | | |
| | 245 | LEAR | 43 | NS | 2157.0 | 0321.0 | 741.0D | 190.0 | | | QL=5 ST=2 TYP=1 |
| | 1000 | TYKW | 29 | PBI | 0013.0 | | 70.0 | 1.0 | 0.5 | | |
| | 2000 | TYKW | 32 | ABS | 0330.0 | 0420.0 | 140.0 | -1.5 | -0.7 | | |
| | 3750 | TYKW | 32 | ABS | 0342.0 | 0410.0 | 120.0 | -1.5 | -0.7 | | |
| | 1000 | TYKW | 45 | C | 0345.5 | 0345.6 | 1.0 | 38.0 | 3.0 | | |
| | 536 | ONDR | 41 | F | 0930.0E | 1142.0U | | 3.0 | | | |
| | 245 | PALE | 4 | S/F | 1714.0E | 1716.0 | 3.0D | 67.0 | | | QL=5 ST=2 TYP=5 |

# GOES 6 X-RAYS

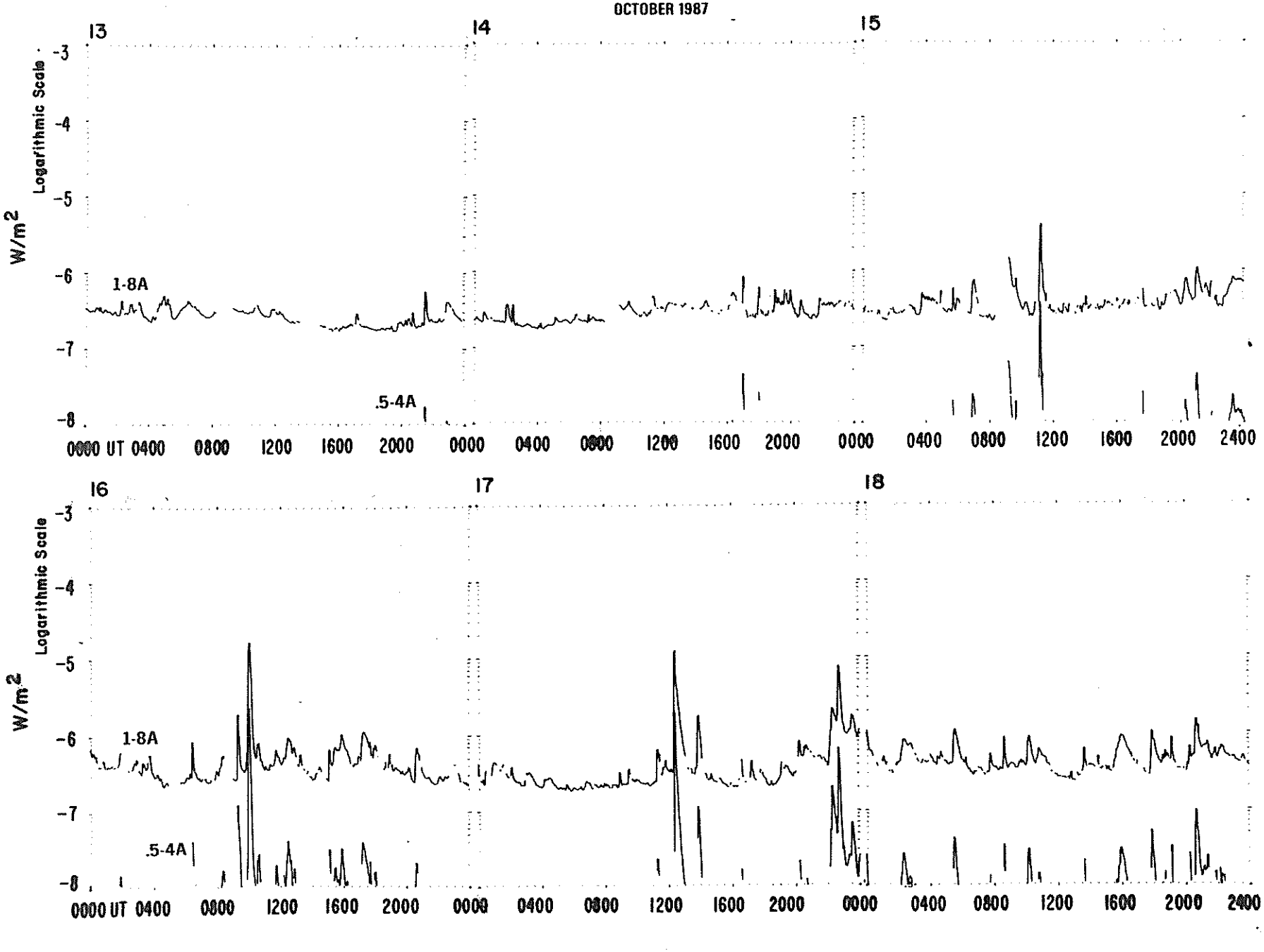
OCTOBER 1987




GOES 6 X-RAYS
OCTOBER 1987
07
08
09
10
11
12
1-8A
.5-4A
W/m²
-3
-4
-5
-6
-7
-8
0000 UT 0400 0800 1200 1600 2000 0000 0400 0800 1200 1600 2000 0000 0400 0800 1200 1600 2000 2400

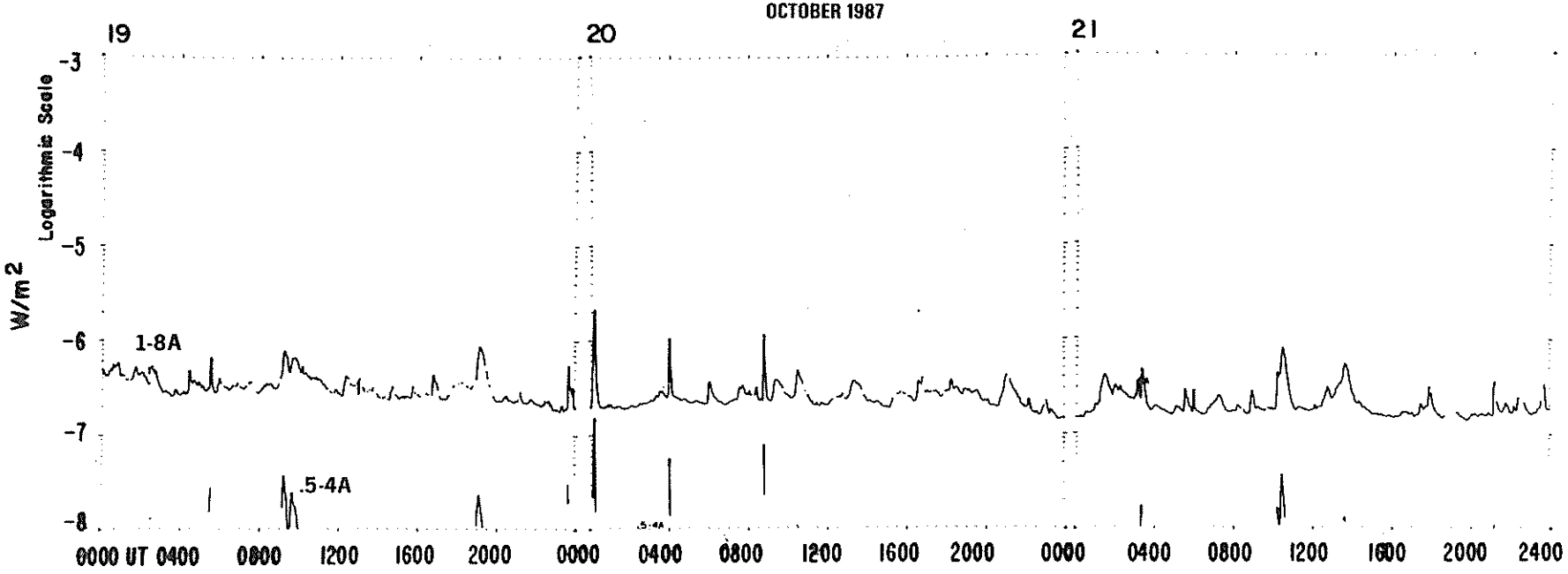
# GOES 6 X-RAYS

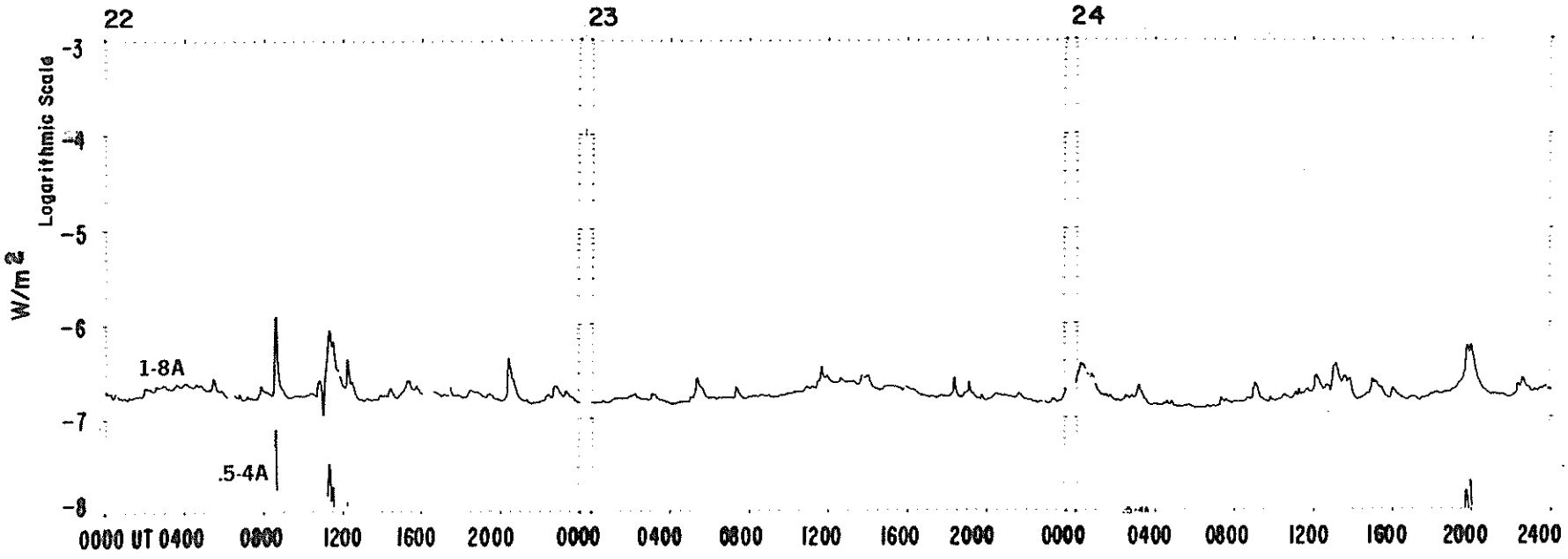
OCTOBER 1987



# GOES 6 X-RAYS

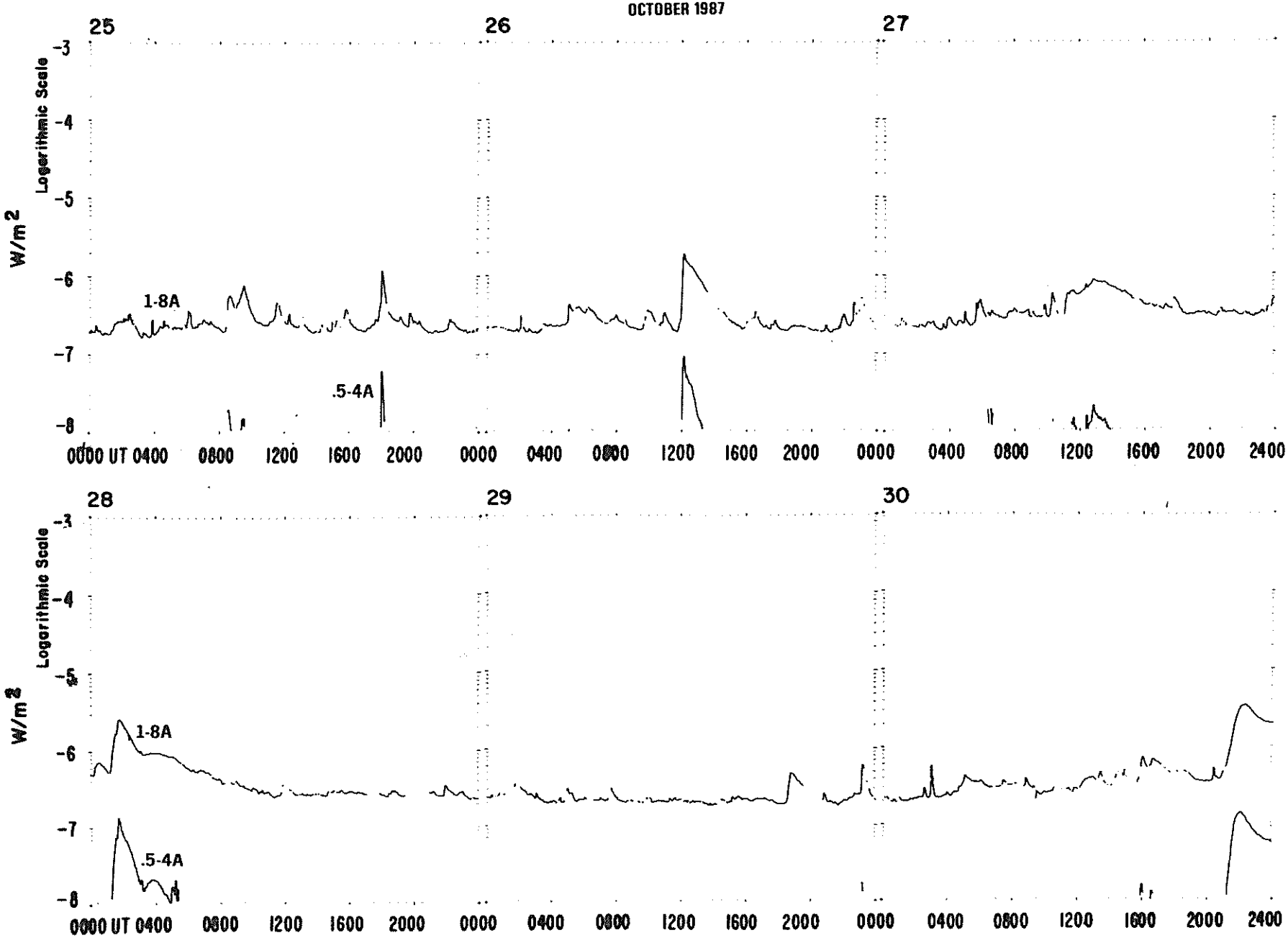
OCTOBER 1987

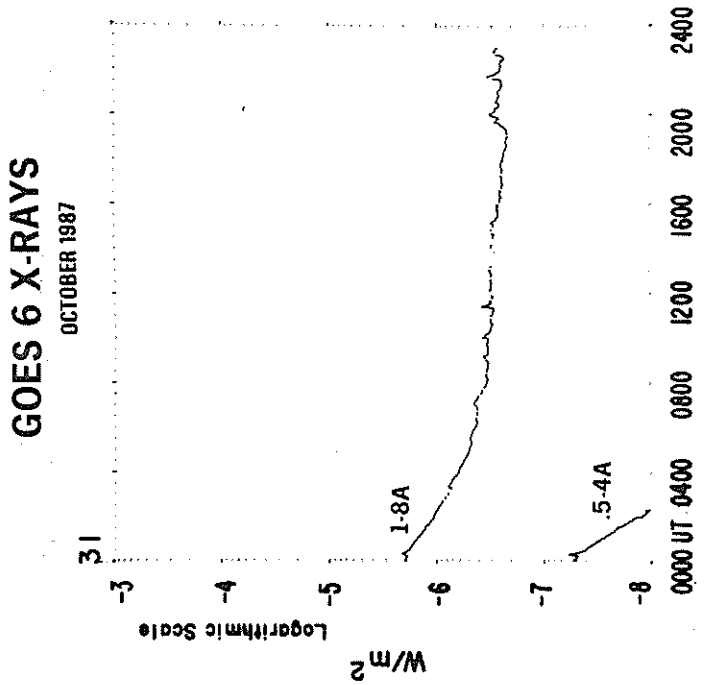


# GOES 6 X-RAYS

OCTOBER 1987




GOES 6 X-RAYS
OCTOBER 1987
31
-3
-4
-5
-6
-7
-8
Logarithmic Scale
W/m2
1-8A
.5-4A
0000 UT
0400
0800
1200
1600
2000
2400

# GOES S O L A R X-RAY F L A R E S

**Preliminary Listing**

October 1987

| Day | Start (UT) | Max (UT) | End (UT) | Lat | CMD | Imp Opt | Xray | NOAA/ USAF Region |
|---|---|---|---|---|---|---|---|---|
| 01 | 0324 | 0332 | 0346 | | | | B3.0 | |
| 01 | 0634 | 0640 | 0643 | | | | B3.3 | |
| 01 | 1639 | 1643 | 1712 | | | | B1.4 | |
| 01 | 1818 | 1821 | 1823 | | | | B1.6 | |
| 02 | 0526 | 0530 | 0535 | | | | B1.0 | |
| 02 | 1721 | 1732 | 1814 | S24 | E29 | SF | B6.3 | 4859 |
| 03 | 0841 | 0844 | 0848 | | | | B1.0 | |
| 03 | 1300 | 1300 | 1324 | N30 | E28 | SF | B2.1 | 4860 |
| 03 | 1551 | 1553 | 1724D | S23 | E15 | 1F | C1.8 | 4859 |
| 04 | 0450 | 0456 | 0459 | | | | B2.4 | |
| 04 | 1922 | 1926 | 1930 | | | | B2.1 | |
| 04 | 2212 | 2213 | 2231 | N29 | E09 | SF | B6.8 | 4860 |
| 05 | 0951 | 0956 | 1002 | | | | B1.5 | |
| 05 | 1600 | 1605 | 1623 | N34 | E33 | SN | B6.1 | 4862 |
| 05 | 2051 | 2055 | 2100 | | | | B1.7 | |
| 05 | 2133 | 2135 | 2148 | N35 | E32 | SB | C1.5 | 4862 |
| 06 | 1836E | 1840 | 1906 | N32 | E20 | SF | B3.1 | 4862 |
| 06 | 2104 | 2105 | 2206 | N33 | E20 | SF | B8.0 | 4862 |
| 07 | 0050 | 0055 | 0111 | N33 | E16 | SF | B7.7 | 4862 |
| 07 | 0240 | 0250 | 0304 | N32 | E16 | SF | C1.3 | 4862 |
| 07 | 0638 | 0644 | 0653 | N32 | E15 | SF | B2.2 | 4862 |
| 07 | 0850 | 0854 | 0903 | N33 | E12 | SF | C1.2 | 4862 |
| 07 | 1157 | 1158 | 1230 | N32 | E12 | SF | B4.6 | 4862 |
| 07 | 2214 | 2215 | 2228 | N31 | W30 | SF | B2.3 | 4860 |
| 08 | 1222 | 1227 | 1234 | | | | B4.2 | |
| 08 | 1350 | 1355 | 1401 | | | | B3.9 | |
| 09 | 0227 | 0228 | 0234 | N32 | W09 | SF | B4.6 | 4862 |
| 09 | 0405 | 0410 | 0414 | | | | B6.6 | |
| 09 | 0531 | 0534 | 0537 | | | | B3.1 | |
| 09 | 1208 | 1211 | 1214 | | | | B3.8 | |
| 09 | 1725 | 1728 | 1733 | | | | B3.3 | |
| 09 | 1735 | 1738 | 1740 | | | | B3.0 | |
| 09 | 1929 | 1937 | 1943 | | | | B5.7 | |
| 09 | 2020 | 2026 | 2033 | | | | B7.3 | |
| 09 | 2237 | 2241 | 2251 | N30 | W53 | SF | B7.8 | 4860 |
| 09 | 2312 | 2325 | 2344 | | | | B9.2 | |
| 10 | 0226 | 0233 | 0239 | | | | B6.6 | |
| 10 | 0811 | 0816 | 0821 | | | | B7.2 | |
| 10 | 0852 | 0856 | 0902 | | | | B3.7 | |
| 10 | 1229 | 1243 | 1245 | S25 | W79 | SF | B5.6 | 4859 |
| 10 | 1504 | 1507 | 1510 | | | | B3.1 | |
| 10 | 1633 | 1640 | 1647 | | | | B8.1 | |
| 11 | 0006 | 0010 | 0014 | | | | B6.0 | |
| 11 | 0357 | 0401 | 0407 | | | | B3.8 | |
| 11 | 1648 | 1654 | 1658 | | | | B5.0 | |
| 12 | 1033 | 1039 | 1043 | | | | B6.8 | |
| 12 | 2126 | 2130 | 2142 | N22 | E43 | SF | B5.3 | 4866 |
| 12 | 2147 | 2215 | 2245 | N22 | E42 | SN | B7.5 | 4866 |
| 13 | 2127 | 2127 | 2159 | N18 | E29 | SF | B5.7 | 4866 |
| 14 | 0201 | 0205 | 0213 | | | | B3.7 | |
| 14 | 0225 | 0230 | 0232 | | | | B3.8 | |
| 14 | 0711 | 0714 | 0716 | | | | B3.0 | |
| 14 | 1655 | 1658 | 1703 | N20 | E13 | SF | B8.3 | 4866 |
| 14 | 1759 | 1800 | 1815 | N23 | E12 | SF | B6.5 | 4866 |
| 14 | 1838 | 1843 | 1846 | | | | B4.7 | |
| 14 | 1858 | 1901 | 1906 | | | | B5.3 | |
| 14 | 1955 | 1959 | 2002 | | | | B5.6 | |
| 14 | 2034 | 2038 | 2045 | | | | B4.0 | |
| 14 | 2145 | 2149 | 2200 | | | | B4.2 | |
| 15 | 0341 | 0345 | 0357 | | | | B5.1 | |
| 15 | 0455 | 0458 | 0500 | | | | B5.2 | |
| 15 | 0538 | 0542 | 0545 | | | | B6.2 | |
| 15 | 0650 | 0701 | 0710 | | | | B7.3 | |
| 15 | 0907 | 0909 | 0925 | N24 | E11 | SF | C1.3 | 4866 |
| 15 | 1108 | 1114 | 1129 | N22 | E07 | SB | C4.5 | 4866 |
| 15 | 1402 | 1405 | 1407 | | | | B3.8 | |
| 15 | 1735 | 1738 | 1740 | | | | B5.1 | |
| 15 | 2057 | 2102 | 2134 | N22 | W02 | SF | C1.0 | 4866 |
| 15 | 2152 | 2154 | 2217 | S23 | W17 | SF | B7.0 | 4870 |
| 16 | 0315 | 0318 | 0327 | | | | B4.5 | |
| 16 | 0622 | 0626 | 0629 | | | | B9.1 | |
| 16 | 0916 | 0919 | 0923 | S24 | W24 | SF | C2.1 | 4870 |
| 16 | 0950 | 1002 | 1010 | | | | M1.7 | 4866 |
| 16 | 1029 | 1033 | 1041 | | | | B8.5 | |
| 16 | 1312 | 1316 | 1320 | | | | B5.9 | |
| 16 | 1358 | 1505 | 1551 | N17 | W07 | SF | B6.8 | 4866 |
| 16 | 1707 | 1719 | 1737 | | | | C1.1 | |
| 16 | 1803 | 1803 | 1809 | N21 | W11 | SF | B7.8 | 4866 |
| 16 | 2032 | 2037 | 2103 | N18 | W08 | SF | B7.1 | 4866 |
| 16 | 2356 | 0000 | 0003 | | | | B4.4 | |
| 17 | 0025 | 0029 | 0034 | | | | B3.5 | |
| 17 | 0256 | 0314 | 0327 | | | | B3.3 | |
| 17 | 0853 | 0856 | 0858 | | | | B3.3 | |
| 17 | 0927 | 0931 | 0936 | | | | B3.6 | |
| 17 | 1116 | 1116 | 1127 | N18 | W19 | SF | B6.5 | 4866 |
| 17 | 1221 | 1223 | 1301 | S25 | W36 | 1B | M1.4 | 4870 |
| 17 | 1344 | 1350 | 1410 | N18 | W20 | 1N | C1.6 | 4866 |
| 17 | 1633 | 1636 | 1638 | | | | B5.0 | |
| 17 | 1709 | 1713 | 1718 | | | | B4.5 | |
| 17 | 1903 | 1907 | 1913 | | | | B4.3 | |
| 17 | 2012 | 2013 | 2025D | N22 | W29 | SF | B7.8 | 4866 |
| 17 | 2207 | 2241 | 2348 | S25 | W39 | 1N | C7.7 | 4870 |
| 17 | 2327 | 2331 | 2340 | | | | C1.7 | |
| 18 | 0525 | 0530 | 0550 | N22 | W27 | SN | C1.1 | |
| 18 | 0741 | 0745 | 0751 | | | | B5.2 | 4866 |
| 18 | 0833 | 0838 | 0841 | | | | B8.7 | |
| 18 | 1002 | 1012 | 1019 | | | | B8.9 | |
| 18 | 1336 | 1340 | 1342 | | | | B6.3 | |
| 18 | 1547 | 1554 | 1556 | S25 | W87 | SF | B9.0 | 4869 |
| 18 | 1748 | 1753 | 1811 | S25 | W50 | SF | C1.0 | 4870 |
| 18 | 1903 | 1907 | 1909 | | | | C1.0 | |
| 18 | 2013 | 2013 | 2017 | S24 | W84 | SF | B6.9 | 4869 |
| 18 | 2033 | 2048 | 2050 | | | | C1.8 | |

# GOES S O L A R X-RAY F L A R E S

**Preliminary Listing**

October 1987

| Day | Start (UT) | Max (UT) | End (UT) | Lat | CMD | Opt | Imp Xray | NOAA/ USAF Region |
|---|---|---|---|---|---|---|---|---|
| 19 | 0229 | 0233 | 0246 | | | | B5.5 | |
| 19 | 0425 | 0428 | 0430 | | | | B4.8 | |
| 19 | 0528 | 0530 | 0533 | | | | B7.0 | |
| 19 | 0908 | 0915 | 0926 | | | | B7.9 | |
| 19 | 1645 | 1647 | 1709 | S25 | W62 | SF | B4.5 | 4870 |
| 19 | 1859 | 1903 | 1936 | N20 | W47 | SF | B8.8 | 4866 |
| 19 | 2335 | 2341 | 2357 | S26 | W64 | SF | B6.3 | 4870 |
| 20 | 0005 | 0011 | 0018 | S27 | W70 | SF | C2.3 | 4870 |
| 20 | 0356 | 0401 | 0403 | | | | C1.2 | |
| 20 | 0555 | 0603 | 0610 | | | | B3.6 | |
| 20 | 0843 | 0847 | 0850 | | | | C1.2 | |
| 20 | 1024 | 1030 | 1039 | | | | B4.7 | |
| 21 | 0114 | 0129 | 0142 | | | | B3.7 | |
| 21 | 0317 | 0322 | 0327 | | | | B4.9 | |
| 21 | 0528 | 0532 | 0539 | | | | B2.9 | |
| 21 | 0555 | 0558 | 0600 | | | | B2.8 | |
| 21 | 0850 | 0856 | 0901 | | | | B2.8 | |
| 21 | 1007 | 1027 | 1039 | | | | B8.0 | |
| 21 | 1749 | 1753 | 1758 | | | | B3.1 | |
| 21 | 2106 | 2107 | 2116 | S43 | E03 | SF | B3.5 | 4872 |
| 22 | 0831 | 0836 | 0840 | | | | C1.2 | |
| 22 | 1112 | 1120 | 1136 | | | | B9.1 | |
| 22 | 1211 | 1215 | 1218 | | | | B4.4 | |
| 22 | 2020 | 2022 | 2035 | S35 | E12 | SF | B4.3 | 4873 |
| 23 | 1818 | 1821 | 1826 | | | | B2.4 | |
| 24 | 1308 | 1308 | 1313 | N31 | E77 | SF | B3.6 | 4875 |
| 24 | 1939 | 1957 | 2005 | | | | B5.8 | |
| 25 | 0349 | 0353 | 0355 | | | | B2.8 | |
| 25 | 0900E | 0935 | 1000D | | | | B7.0 | |
| 25 | 0827 | 0837 | 0855 | | | | B5.6 | |
| 25 | 1755 | 1804 | 1811 | N35 | E66 | SF | C1.1 | 4875 |
| 25 | 1928 | 1942 | 1945 | N32 | E61 | SF | B3.4 | 4875 |
| 26 | 0501 | 0506 | 0518 | | | | B4.2 | |
| 26 | 1201 | 1211 | 1212 | S25 | E75 | SF | C1.8 | 4878 |
| 26 | 2233 | 2237 | 2242 | | | | B4.5 | |
| 27 | 0456 | 0459 | 0502 | | | | B3.3 | |
| 27 | 0538 | 0555 | 0604 | | | | B4.7 | |
| 27 | 1017 | 1021 | 1026 | | | | B5.3 | |
| 28 | 0116E | 0149 | 0252D | | | | C2.3 | |
| 29 | 2309 | 2309 | 2313 | S22 | W40 | SF | B6.1 | 4881 |
| 30 | 0259 | 0302 | 0306 | | | | B5.6 | |
| 30 | 2102 | 2215 | 0045D | | | | C3.3 | |

## Preliminary GOES Satellite Data
Daily Average X-ray Background

September 1986 - October 1987

| Day | 1986 Nov | Dec | 1987 Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | B2.7 | <A1.0 | <A1.3 | <A1.0 | <A1.0 | A1.1 | A4.9 | A4.8 | --- | B1.2 | B1.1 | A6.8 |
| 2 | A9.0 | <A1.0 | <A1.0 | <A1.0 | <A1.0 | <A1.0 | A5.0 | A3.2 | A1.7 | B1.2 | B1.3 | A6.8 |
| 3 | A5.1 | <A1.0 | <A1.0 | <A1.0 | <A1.0 | <A1.0 | A8.8 | A2.7 | A1.4 | B1.0 | B1.3 | A7.7 |
| 4 | A8.6 | <A1.0 | <A1.0 | <A1.0 | <A1.0 | A2.2 | A8.6 | A2.7 | A1.3 | A6.7 | B1.3 | B1.2 |
| 5 | A6.1 | <A1.0 | <A1.0 | <A1.0 | <A1.0 | A2.3 | A8.1 | A2.3 | A1.2 | A6.5 | B1.4 | B1.1 |
| 6 | A7.0 | <A1.0 | <A1.0 | <A1.0 | A2.6 | B2.7 | A8.0 | A2.0 | A1.3 | A6.9 | B1.4 | B1.0 |
| 7 | A3.6 | <A1.0 | <A1.0 | <A1.0 | A4.1 | --- | A6.5 | A1.9 | A1.5 | B1.7 | B2.7 | B1.1 |
| 8 | A2.5 | <A1.0 | <A1.0 | <A1.0 | A5.2 | --- | A5.9 | A1.9 | A5.0 | B2.8 | B2.2 | B1.7 |
| 9 | A2.1 | A1.6 | <A1.0 | <A1.0 | A3.1 | --- | A5.3 | A2.8 | A3.5 | B2.1 | B1.6 | B2.1 |
| 10 | <A1.0 | A1.6 | <A1.0 | <A1.0 | A1.9 | B2.2 | A5.7 | A6.3 | A3.2 | B2.3 | B1.7 | B2.0 |
| 11 | <A1.0 | <A1.0 | <A1.0 | <A1.0 | A2.2 | B1.9 | A4.8 | A8.5 | A2.7 | B2.9 | B1.6 | B1.8 |
| 12 | A2.3 | <A1.0 | <A1.0 | <A1.0 | A3.0 | B1.6 | A4.9 | A8.7 | A1.9 | B2.9 | B1.3 | B1.7 |
| 13 | A6.2 | <A1.0 | <A1.0 | <A1.0 | A2.6 | B1.4 | A9.5 | A8.8 | A1.9 | B2.6 | B1.2 | B2.3 |
| 14 | A4.0 | <A1.0 | <A1.0 | <A1.0 | A5.3 | B1.4 | B1.8 | A7.9 | A3.3 | B1.9 | A9.5 | B2.1 |
| 15 | A4.1 | <A1.0 | <A1.0 | <A1.0 | A1.9 | B1.2 | B2.0 | A7.3 | A4.3 | B1.2 | A7.1 | B2.2 |
| 16 | A3.9 | <A1.0 | <A1.0 | <A1.0 | <A1.0 | B2.2 | B2.8 | A7.1 | A5.3 | B1.4 | A4.6 | B2.6 |
| 17 | A3.2 | <A1.0 | <A1.0 | <A1.0 | <A1.0 | B2.6 | B1.9 | A8.9 | A4.0 | B1.1 | A5.2 | B2.1 |
| 18 | A3.4 | <A1.0 | <A1.0 | <A1.0 | <A1.0 | B2.9 | B1.9 | A8.6 | A5.2 | B1.1 | A3.8 | B2.6 |
| 19 | A3.0 | <A1.0 | <A1.0 | <A1.0 | A1.0 | B2.2 | B2.0 | A7.4 | B1.1 | B1.2 | A4.7 | B2.4 |
| 20 | A3.3 | <A1.0 | <A1.0 | <A1.0 | A1.3 | B1.5 | B1.8 | A6.4 | B1.8 | B1.3 | A7.6 | B1.7 |
| 21 | A2.1 | <A1.0 | <A1.0 | <A1.0 | A1.5 | A7.2 | B2.1 | A7.7 | B2.0 | B1.6 | A5.9 | B1.5 |
| 22 | A2.3 | <A1.0 | A2.5 | <A1.0 | A1.4 | A3.5 | B2.4 | B1.2 | --- | B1.6 | A5.0 | B1.6 |
| 23 | A2.1 | <A1.0 | A1.3 | <A1.0 | A1.7 | A2.1 | B1.6 | A9.7 | B3.9 | B1.5 | A3.4 | B1.4 |
| 24 | A4.4 | <A1.0 | <A1.0 | A1.7 | A5.3 | A2.2 | B3.1 | B1.1 | B3.5 | B1.5 | A3.7 | B1.4 |
| 25 | A2.9 | <A1.0 | <A1.0 | A2.3 | A4.2 | A1.8 | B4.9 | A9.5 | B3.4 | B1.4 | A3.0 | B1.8 |
| 26 | A1.3 | <A1.0 | A1.7 | A2.3 | A3.8 | A1.4 | B3.6 | A8.3 | B3.6 | B1.1 | A2.7 | B1.9 |
| 27 | A1.2 | <A1.0 | <A1.0 | A1.5 | A3.2 | A1.7 | B2.3 | A5.5 | B3.7 | B1.1 | A7.6 | B2.5 |
| 28 | <A1.0 | <A1.0 | <A1.0 | <A1.0 | A2.2 | A1.7 | B2.3 | A4.6 | B3.2 | A8.6 | B1.0 | B2.7 |
| 29 | <A1.0 | <A1.0 | <A1.0 | | A1.2 | A1.7 | B1.4 | A4.0 | B2.2 | A6.6 | A9.8 | B1.9 |
| 30 | <A1.0 | <A1.0 | <A1.0 | | A1.2 | A2.6 | B1.4 | A3.9 | B1.6 | A7.6 | A7.0 | B2.7 |
| 31 | | <A1.0 | <A1.0 | | <A1.0 | | A6.7 | | B1.4 | B1.3 | | B2.7 |

# MASS EJECTIONS FROM THE SUN

## OCTOBER 1987

| Sta | Day | Observed UT LStart | Max | End | Location $RA^{o}$ | $R/R_{o}$ | Freq or Wavelength | Kind of Event |
|---|---|---|---|---|---|---|---|---|
| PALE | Oct 07 | 0041.0 | | 0100.0 | | | Meter | IV |
| KHAR | Oct 08 | 0855 E | 0904 U | 0940 D | 121 | 0.90 | H-alpha | S |
| KHAR | Oct 08 | 0942 | | 0952 | 309 | 0.44 | H-alpha | S |
| KHAR | Oct 08 | 1019 | 1022 U | 1037 D | 305 | 0.45 | H-alpha | S |
| KHAR | Oct 09 | 0745 | | 0752 | 232 | 1.00 | H-alpha | S |
| KHAR | Oct 09 | 0850 | | 0910 | 067 | 1.00 | H-alpha | S |
| KHAR | Oct 10 | 0715 E | | 0727 | 168 | 0.48 | H-alpha | S |
| KHAR | Oct 12 | 1100 E | 1130 U | 1148 D | 248 | 1.00 | H-alpha | S |
| WEIS | Oct 16 | 0955.9 | | 1009 | | | 260-30 MHz | II |
| SVTO | Oct 16 | 0956.0 | | 1012.0 | | | Meter | IV |
| LEAR | Oct 16 | 0957.0 | | 1010.0 | | | Meter | II |
| LEAR | Oct 16 | 0959.0 | | 1010.0 | | | Meter | IV |
| SVTO | Oct 16 | 1001.0 | | 1008.0 | | | Meter | II |
| KHAR | Oct 17 | 0700 E | 0701 U | 0718 D | 123 | 1.00 | H-alpha | S |
| KHAR | Oct 17 | 0702 E | 0705 U | 0725 D | 223 | 0.68 | H-alpha | S |
| KHAR | Oct 17 | 0837 E | 0838 U | 0852 | 219 | 0.68 | H-alpha | S |
| KHAR | Oct 18 | 0726 E | | 0748 | 245 | 1.00 | H-alpha | S |
| KHAR | Oct 18 | 0746 | | 0753 D | 243 | 1.00 | H-alpha | S |
| KHAR | Oct 18 | 0755 | | 0912 D | 245 | 1.00 | H-alpha | S |
| KHAR | Oct 18 | 1018 E | | 1055 D | 245 | 1.00 | H-alpha | S |
| KHAR | Oct 19 | 0910 E | 0910 U | 0920 D | 168 | 0.65 | H-alpha | S |
| KHAR | Oct 20 | 0740 E | | 0750 D | 160 | 0.78 | H-alpha | S |
| KHAR | Oct 23 | 0805 E | | 0825 | 190 | 0.80 | H-alpha | S |
| KHAR | Oct 25 | 1110 E | | 1132 D | 121 | 1.00 | H-alpha | S |

**QUALIFIERS ON START, MAX AND END TIMES**
- D = event ended after tabulated time
- E = event began before the tabulated time
- U = uncertain time

**REPORTING STATIONS**
- KHAR = Kharkov
- LEAR = Learmonth
- PALE = Palehua
- SVTO = San Vito
- WEIS = Weissenau

**TYPE OF EVENT**
- A = eruptive active region prominence
- CB = coronal cloud bubble
- D = coronal depletions
- E = coronal enhancement
- EL = coronal expanding loop
- II = Type II radio burst
- IVm = moving Type IV radio burst
- Q = eruptive quiescent prominence
- R = coronal ray or streamer
- S = flare-surge if there is a known flare association
- SP = flare-spray if there is a known flare association
- * = movement may be caused by ionospheric refraction

OCTOBER 1987

| Day | Event Type | Start (UT) | End (UT) | Lat | CMD | CMP Mo | CMP Day | Imp | Extent | Blue Shift (.1 A) | Red Shift (.1 A) | Obs Type | Sta | NOAA/ USAF Reg# | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | AFS | 0401E | 0955D | N30 | E61 | 10 | 6.0 | | 01 | 9 | 9 | E | LEAR | 4860 | |
| 01 | DSD | 1015E | 1427D | S24 | E44 | 10 | 4.8 | | 03 | 9 | 6 | E | SVTO | 4859 | |
| 01 | AFS | 1258E | 1721D | N30 | E52 | 10 | 5.6 | | 02 | 9 | 9 | E | RAMY | 4860 | |
| 01 | ADF | 1258E | 1721D | N34 | E54 | 10 | 5.8 | 1 | 04 | 9 | 9 | E | RAMY | 4860 | |
| 01 | ADF | 1258E | 1721D | S25 | E44 | 10 | 4.9 | 1 | 04 | 8 | 9 | E | RAMY | 4859 | |
| 01 | AFS | 1438E | 0042D | N31 | E50 | 10 | 5.5 | | 02 | 9 | 9 | E | HOLL | 4860 | |
| 01 | ADF | 1438E | 0042D | S25 | E42 | 10 | 4.9 | 1 | 05 | 9 | 9 | E | HOLL | 4859 | |
| 01 | DSD | 1458E | 1555D | N33 | E49 | 10 | 5.5 | | 03 | 9 | 9 | E | SVTO | 4860 | |
| 01 | ASR | 1500E | 1605D | S26 | W90 | 09 | 24.7 | | | 9 | 9 | E | HOLL | 4856 | |
| 01 | ADF | 1505E | 1555D | S16 | E42 | 10 | 4.8 | 1 | 10 | 9 | 9 | E | SVTO | 4859 | |
| 01 | AFS | 1705E | 2333D | N31 | E48 | 10 | 5.5 | | 02 | 9 | 9 | E | PALE | 4860 | |
| 01 | ADF | 2125E | 2333D | S26 | E38 | 10 | 4.8 | 1 | 05 | 9 | 9 | E | PALE | 4859 | |
| 01 | AFS | 2355E | 0042D | N15 | E14 | 10 | 3.0 | | 02 | 9 | 9 | E | HOLL | | |
| 02 | AFS | 0003E | 0104D | N15 | E14 | 10 | 3.1 | | 02 | 9 | 9 | E | LEAR | | |
| 02 | DSD | 0545E | 0740D | N37 | E36 | 10 | 5.1 | | 04 | 9 | 4 | E | SVTO | 4860 | |
| 02 | ADF | 0610E | 1458D | S18 | E31 | 10 | 4.6 | 1 | 06 | 9 | 9 | E | SVTO | 4859 | |
| 02 | ADF | 0610E | 1458D | S25 | E31 | 10 | 4.6 | 1 | 05 | 9 | 9 | E | SVTO | 4859 | |
| 02 | ADF | 0932E | 1458D | S08 | E36 | 10 | 5.1 | 1 | 08 | 9 | 9 | E | SVTO | 4859 | |
| 02 | DSD | 1210E | 1417D | S24 | E31 | 10 | 4.9 | | 02 | 9 | 9 | E | RAMY | 4859 | |
| 02 | ADF | 1210E | 1859D | N33 | E40 | 10 | 5.7 | 1 | 03 | 9 | 9 | E | RAMY | 4860 | |
| 02 | ADF | 1210E | 1859D | S08 | E24 | 10 | 4.3 | 2 | 13 | 9 | 9 | E | RAMY | 4859 | |
| 02 | AFS | 1438E | 0042D | N31 | E50 | 10 | 6.5 | | 02 | 9 | 9 | E | HOLL | 4860 | |
| 02 | ADF | 1610E | 2337D | S07 | E19 | 10 | 4.1 | 1 | 15 | 9 | 9 | E | HOLL | 4859 | |
| 02 | ADF | 1610E | 2337D | S28 | E29 | 10 | 4.9 | 1 | 05 | 9 | 9 | E | HOLL | 4859 | |
| 02 | SDF | 2029E | 1700D | S10 | E22 | 10 | 4.5 | | 09 | 0 | 0 | E | PALE | | |
| 02 | AFS | 2355E | 0042D | N15 | E14 | 10 | 4.0 | | 02 | 9 | 9 | E | HOLL | | |
| 03 | AFS | 0211E | 0950D | N30 | E34 | 10 | 5.8 | | 01 | 9 | 9 | E | LEAR | 4860 | |
| 03 | AFS | 0729E | 1338D | N30 | E30 | 10 | 5.7 | | 04 | 9 | 9 | E | SVTO | 4860 | |
| 03 | ADF | 0735E | 1338D | S21 | E16 | 10 | 4.5 | 1 | 07 | 9 | 9 | E | SVTO | 4859 | |
| 03 | ADF | 0735E | 1338D | S28 | E15 | 10 | 4.5 | 1 | 09 | 9 | 9 | E | SVTO | 4859 | |
| 03 | SDF | 0745E | 0745D | S08 | E13 | 10 | 4.3 | | 05 | 0 | 0 | E | SVTO | 4859 | |
| 03 | AFS | 1125E | 1819D | N28 | E28 | 10 | 5.7 | | 03 | 9 | 9 | E | RAMY | 4860 | |
| 03 | ADF | 1125E | 1819D | S09 | E11 | 10 | 4.3 | 1 | 18 | 9 | 9 | E | RAMY | 4859 | |
| 03 | ADF | 1125E | 1819D | S24 | E16 | 10 | 4.7 | 1 | 17 | 9 | 9 | E | RAMY | 4859 | |
| 03 | DSD | 1235E | 1250D | N32 | E72 | 10 | 9.2 | | 04 | 9 | 9 | E | RAMY | 4862 | Flare Associated |
| 03 | ADF | 1235E | 1819D | N35 | E69 | 10 | 9.0 | 1 | 04 | 7 | 9 | E | RAMY | 4862 | |
| 03 | DSD | 1303E | 1530D | N30 | E29 | 10 | 5.8 | | 03 | 9 | 9 | E | RAMY | 4860 | Flare Associated |
| 03 | AFS | 1450E | 1804D | N33 | E68 | 10 | 9.0 | | 02 | 9 | 9 | E | HOLL | 4862 | |
| 03 | AFS | 1453E | 2020D | N29 | E26 | 10 | 5.6 | | 03 | 7 | 6 | E | HOLL | 4860 | |
| 03 | DSD | 1456E | 1532D | N30 | E28 | 10 | 5.8 | | 02 | 5 | 7 | E | HOLL | 4860 | |
| 03 | ADF | 1456E | 1751D | S25 | E16 | 10 | 4.9 | 2 | 08 | 9 | 9 | E | HOLL | 4859 | |
| 03 | SDF | 1651E | 1751D | S25 | E16 | 10 | 4.9 | 3 | 08 | 9 | 9 | E | HOLL | 4859 | |
| 03 | DSD | 1655 | 1810D | S24 | E13 | 10 | 4.7 | | 07 | 9 | 9 | E | PALE | 4859 | Flare Associated |
| 03 | DSD | 1710E | 1724D | S24 | E13 | 10 | 4.7 | | 02 | 9 | 9 | E | RAMY | 4859 | Flare Associated |
| 03 | AFS | 1710E | 1819D | S23 | E12 | 10 | 4.6 | | 05 | 9 | 9 | E | RAMY | 4859 | |
| 03 | DSD | 1740E | 1855D | S22 | E04 | 10 | 4.0 | | 02 | 9 | 9 | E | PALE | 4861 | |
| 03 | DSD | 1751E | 1930D | S21 | E04 | 10 | 4.0 | 2 | 02 | 9 | 9 | E | HOLL | 4861 | |
| 03 | AFS | 1809E | 2348D | N30 | E24 | 10 | 5.6 | | 03 | 8 | 7 | E | PALE | 4860 | |
| 03 | ADF | 1810E | 2348D | S16 | E07 | 10 | 4.3 | 1 | 12 | 9 | 9 | E | PALE | 4859 | |
| 03 | DSD | 2102E | 2348D | N30 | E16 | 10 | 5.1 | | 02 | 9 | 9 | E | PALE | 4860 | |
| 03 | AFS | 2247E | 0948D | N31 | E22 | 10 | 5.7 | | 02 | 9 | 9 | E | LEAR | 4860 | |
| 04 | DSD | 0135E | 0330D | N31 | E23 | 10 | 5.9 | | 02 | 9 | 9 | E | LEAR | 4860 | |
| 04 | ADF | 0838E | 0903D | N34 | E15 | 10 | 5.5 | 1 | | | | V | KHAR | | |
| 04 | ADF | 0955E | 1012D | S27 | E08 | 10 | 5.0 | 1 | | | | V | KHAR | | |
| 04 | AFS | 1005E | 1506D | N31 | E15 | 10 | 5.6 | | 04 | 9 | 9 | E | SVTO | 4860 | |
| 04 | ADF | 1005E | 1506D | N35 | E44 | 10 | 7.9 | 1 | 04 | 8 | 8 | E | SVTO | 4862 | |
| 04 | ADF | 1005E | 1506D | S07 | W15 | 10 | 3.3 | 1 | 07 | 9 | 9 | E | SVTO | 4859 | |
| 04 | ADF | 1005E | 1506D | S08 | W23 | 10 | 2.7 | 1 | 06 | 9 | 9 | E | SVTO | 4859 | |
| 04 | BSL | 1030E | 1037D | N52 | E90 | 10 | 12.1 | 1- | | | | C | CATA | | |
| 04 | BSL | 1030E | 1045 | S22 | W90 | 09 | 27.6 | 1 | | | | C | CATA | | |
| 04 | AFS | 1137E | 2142D | N29 | E15 | 10 | 5.6 | | 03 | 7 | 7 | E | RAMY | 4860 | |
| 04 | ADF | 1137E | 2142D | S15 | W01 | 10 | 4.4 | 2 | 09 | 9 | 9 | E | RAMY | 4859 | |
| 04 | ADF | 1137E | 2142D | S23 | E02 | 10 | 4.6 | 2 | 13 | 9 | 9 | E | RAMY | 4859 | |
| 04 | AFS | 1357E | 0038D | N29 | E14 | 10 | 5.7 | | 02 | 9 | 9 | E | HOLL | 4860 | |
| 04 | DSD | 1421E | 1534D | N31 | E07 | 10 | 5.1 | | 02 | 9 | 9 | E | HOLL | 4860 | |
| 04 | DSD | 1533E | 2029D | N29 | E10 | 10 | 5.4 | | 05 | 9 | 9 | E | HOLL | 4860 | |
| 04 | DSD | 1538E | 1741D | N29 | E12 | 10 | 5.6 | | 04 | 9 | 9 | E | RAMY | 4860 | |
| 04 | ADF | 1815E | 0352D | S20 | W05 | 10 | 4.4 | | 04 | 9 | 9 | E | PALE | 4859 | |

# ACTIVE PROMINENCES AND FILAMENTS

## OCTOBER 1987

| Day | Event Type | Start (UT) | End (UT) | Lat | CMD | CMP Mo | CMP Day | Imp | Extent | Blue Shift (.1 A) | Red Shift (.1 A) | Obs Type | Sta | NOAA/ USAF Reg# | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 04 | ADF | 1815E | 0352D | S26 | W04 | 10 | 4.4 | | 03 | 9 | 9 | E | PALE | 4859 | |
| 04 | AFS | 1816E | 0352D | N29 | E11 | 10 | 5.6 | 2 | 01 | 8 | 8 | E | PALE | 4860 | |
| 04 | DSD | 1816E | 1828D | N32 | E05 | 10 | 5.1 | | 03 | 9 | 9 | E | PALE | 4860 | |
| 04 | SDF | 1938E | 2046D | N34 | E52 | 10 | 9.0 | | 07 | 0 | 0 | E | RAMY | 4862 | |
| 04 | AFS | 1950E | 2142D | S22 | W02 | 10 | 4.7 | | 03 | 9 | 8 | E | RAMY | 4859 | |
| 04 | DSD | 2040E | 2142D | S23 | W04 | 10 | 4.5 | | 03 | 9 | 9 | E | RAMY | 4859 | |
| 04 | DSD | 2135E | 2142D | N33 | E44 | 10 | 8.4 | | 02 | 9 | 9 | E | RAMY | 4862 | |
| 04 | ADF | 2139E | 0038D | S21 | W05 | 10 | 4.5 | 2 | 07 | 9 | 9 | E | HOLL | 4859 | |
| 04 | ADF | 2245E | 0833D | S17 | W01 | 10 | 4.9 | 1 | 14 | 9 | 9 | E | LEAR | 4859 | |
| 04 | AFS | 2245E | 0951D | N29 | E10 | 10 | 5.7 | | 03 | 9 | 9 | E | LEAR | 4860 | |
| 05 | AFS | 0627E | 1333D | N30 | E07 | 10 | 5.8 | 1 | 04 | 9 | 9 | E | SVTO | 4860 | |
| 05 | DSD | 0704E | 0706D | N31 | W01 | 10 | 5.2 | | 03 | 9 | 9 | E | SVTO | 4860 | |
| 05 | ADF | 0746E | 1333D | S14 | W13 | 10 | 4.3 | 1 | 14 | 9 | 9 | E | SVTO | 4859 | |
| 05 | ADF | 1230E | 1527D | N31 | E03 | 10 | 5.7 | 2 | 05 | 9 | 7 | E | RAMY | 4860 | |
| 05 | DSD | 1230E | 1835D | N33 | E44 | 10 | 9.0 | | 03 | 9 | 9 | E | RAMY | 4862 | |
| 05 | AFS | 1230E | 1853D | N29 | E01 | 10 | 5.6 | | 04 | 9 | 9 | E | RAMY | 4860 | |
| 05 | AFS | 1230E | 1853D | N30 | E03 | 10 | 5.7 | | 02 | 8 | 8 | E | RAMY | 4860 | |
| 05 | ADF | 1230E | 1853D | S10 | W16 | 10 | 4.3 | 2 | 17 | 9 | 8 | E | RAMY | 4859 | |
| 05 | ADF | 1230E | 1853D | S24 | W10 | 10 | 4.7 | 2 | 09 | 9 | 7 | E | RAMY | 4859 | |
| 05 | AFS | 1355E | 0037D | N30 | E00 | 10 | 5.6 | | 03 | 7 | 9 | E | HOLL | 4860 | |
| 05 | DSD | 1614E | 1835D | N32 | W08 | 10 | 5.0 | | 03 | 9 | 9 | E | RAMY | 4860 | |
| 05 | ADF | 1725E | 0037D | S24 | W12 | 10 | 4.8 | | 05 | 9 | 9 | E | HOLL | 4859 | |
| 05 | ADF | 1815E | 2148D | N32 | E34 | 10 | 8.4 | 1 | 04 | 9 | 9 | E | HOLL | 4862 | |
| 05 | DSD | 1835E | 1853D | N32 | E32 | 10 | 8.3 | | 02 | 9 | 9 | E | RAMY | 4862 | |
| 05 | AFS | 2102E | 0328D | N33 | E32 | 10 | 8.4 | | 02 | 9 | 9 | E | PALE | 4862 | |
| 05 | AFS | 2103E | 0328D | N29 | W02 | 10 | 5.7 | | 04 | 9 | 9 | E | PALE | 4860 | |
| 05 | SDF | 2115E | 2148D | N32 | E34 | 10 | 8.6 | 3 | 04 | 9 | 9 | E | HOLL | 4862 | |
| 05 | AFS | 2228E | 0942D | N20 | W01 | 10 | 5.8 | | 02 | 9 | 9 | E | LEAR | 4860 | |
| 06 | BSL | 0103 | 0116D | S22 | W90 | 09 | 29.2 | 1 | | | | C | VORO | | |
| 06 | AFS | 1140E | 1410D | N33 | E24 | 10 | 8.4 | | 02 | 9 | 7 | E | RAMY | 4862 | |
| 06 | AFS | 1140E | 2025D | N28 | W11 | 10 | 5.6 | | 03 | 8 | 9 | E | RAMY | 4860 | |
| 06 | ADF | 1140E | 2025D | S10 | W30 | 10 | 4.2 | 2 | 21 | 9 | 8 | E | RAMY | 4859 | |
| 06 | ADF | 1140E | 2025D | S24 | W24 | 10 | 4.6 | 2 | 17 | 9 | 9 | E | RAMY | 4859 | |
| 06 | DSD | 1420E | 2025D | N33 | E23 | 10 | 8.4 | | 03 | 9 | 9 | E | RAMY | 4862 | |
| 06 | AFS | 1430E | 1540D | N33 | E24 | 10 | 8.5 | | 01 | 8 | 8 | E | HOLL | 4862 | |
| 06 | DSD | 1803E | 2051D | N30 | W04 | 10 | 6.4 | | 02 | 9 | 9 | E | PALE | 4860 | |
| 06 | DSD | 1825E | 0015D | N33 | E21 | 10 | 8.4 | | 02 | 9 | 9 | E | HOLL | 4862 | |
| 06 | ADF | 1928E | 1935D | N33 | E20 | 10 | 8.4 | 1 | 02 | 9 | 9 | E | PALE | 4862 | |
| 06 | AFS | 2255E | 0830D | N30 | W15 | 10 | 5.8 | | 03 | 9 | 9 | E | LEAR | 4860 | |
| 07 | AFS | 0700E | 0948D | N33 | E14 | 10 | 8.4 | | 02 | 9 | 9 | E | LEAR | 4862 | |
| 07 | BSL | 0713E | 1012D | S40 | E90 | 10 | 14.6 | 1 | | | | C | ABST | | |
| 07 | ADF | 1215E | 1722D | S20 | W42 | 10 | 4.3 | 1 | 11 | 9 | 9 | E | RAMY | 4859 | |
| 07 | AFS | 1534E | 0035D | N31 | W25 | 10 | 5.7 | | 02 | 6 | 5 | E | HOLL | 4860 | |
| 07 | AFS | 1720E | 0349D | N20 | W12 | 10 | 6.8 | | 01 | 6 | 6 | E | PALE | | |
| 07 | ADF | 1725E | 2130D | S20 | W44 | 10 | 4.4 | 1 | 02 | 8 | 9 | E | PALE | 4859 | |
| 07 | ADF | 1735E | 0349D | S25 | E42 | 10 | 11.0 | 1 | 01 | 8 | 9 | E | PALE | | |
| 07 | AFS | 1924E | 0035D | N25 | W30 | 10 | 5.5 | 1 | 02 | 9 | 9 | E | HOLL | | |
| 07 | ADF | 2215E | 0010D | N31 | W30 | 10 | 5.5 | 1 | 01 | 9 | 9 | E | PALE | 4860 | |
| 07 | DSD | 2225E | 0349D | N34 | E05 | 10 | 8.3 | | 02 | 9 | 9 | E | PALE | 4862 | |
| 07 | AFS | 2246E | 0041D | N20 | W15 | 10 | 6.8 | | 02 | 9 | 9 | E | LEAR | | |
| 07 | AFS | 2246E | 0942D | N30 | W27 | 10 | 5.8 | | 03 | 9 | 9 | E | LEAR | 4860 | |
| 07 | AFS | 2246E | 0942D | S25 | E38 | 10 | 10.9 | | 02 | 9 | 9 | E | LEAR | | |
| 08 | DSD | 0154 | 0226 | N32 | W32 | 10 | 5.5 | | 03 | 9 | 9 | E | LEAR | 4860 | |
| 08 | ADF | 0233E | 0730D | S26 | E58 | 10 | 12.6 | 3 | 03 | 9 | 9 | E | LEAR | | |
| 08 | BSL | 0645 | 0651D | N48 | W90 | 09 | 30.7 | 1- | | | | C | CATA | | |
| 08 | AFS | 0645E | 0942D | N34 | E01 | 10 | 8.4 | | 02 | 9 | 9 | E | LEAR | 4862 | |
| 08 | BSL | 0726E | 0750D | S89 | E90 | 10 | 16.7 | 1- | | | | C | CATA | | |
| 08 | BSL | 0808E | 1008D | S36 | E90 | 10 | 15.6 | 1 | | | | C | ABST | | |
| 08 | AFS | 0844E | 1220D | N21 | W22 | 10 | 6.7 | | 01 | 8 | 7 | E | SVTO | 4863 | |
| 08 | DSD | 0855E | 0940D | S25 | E60 | 10 | 13.0 | 1 | | | | V | KHAR | | |
| 08 | DSD | 0942 | 0952 | N22 | W23 | 10 | 6.6 | 1 | | | | V | KHAR | | |
| 08 | BSL | 1001E | 1019D | N80 | E90 | 10 | 16.8 | 1- | | | | C | CATA | | |
| 08 | DSD | 1019E | 1037D | N22 | W25 | 10 | 6.5 | 1 | | | | V | KHAR | | |
| 08 | BSL | 1130E | 1143 | N30 | W90 | 10 | 1.4 | 1- | | | | C | CATA | | |
| 08 | ADF | 1240E | 2141D | S19 | W57 | 10 | 4.2 | 1 | 15 | 9 | 9 | E | RAMY | 4859 | |
| 08 | ADF | 1439E | 2141D | N32 | W03 | 10 | 8.4 | 2 | 02 | 8 | 9 | E | RAMY | 4862 | |
| 08 | ADF | 1506E | 0034D | S18 | W58 | 10 | 4.2 | 2 | 13 | 5 | 9 | E | HOLL | 4859 | |

# ACTIVE PROMINENCES AND FILAMENTS

## OCTOBER 1987

| Day | Event Type | Start (UT) | End (UT) | Lat | CMD | CMP Mo | CMP Day | Imp | Extent | Blue Shift (.1 A) | Red Shift (.1 A) | Obs Type | Sta | NOAA/ USAF Reg# | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08 | ADF | 1541E | 2141D | S25 | E50 | 10 | 12.5 | 1 | 03 | 9 | 9 | E | RAMY | | |
| 08 | ASR | 1625 | 2000D | N22 | E90 | 10 | 15.6 | | | 9 | 9 | E | HOLL | | |
| 08 | ASR | 1715E | 0358D | N22 | E90 | 10 | 15.6 | | | 9 | 9 | E | PALE | | |
| 08 | DSD | 1743E | 1805 | N30 | W45 | 10 | 5.2 | | 02 | 9 | 7 | E | PALE | 4860 | |
| 08 | AFS | 1840E | 0358D | S24 | E27 | 10 | 10.9 | | 02 | 8 | 8 | E | PALE | 4864 | |
| 08 | ASR | 1952E | 2141D | N23 | E90 | 10 | 15.8 | | | 8 | 9 | E | RAMY | | |
| 08 | SDF | 2124E | 1210D | S26 | W63 | 10 | 4.0 | | 15 | 0 | 0 | E | RAMY | 4859 | |
| 09 | ASR | 0055E | 0952D | N23 | E90 | 10 | 16.0 | | | 9 | 9 | E | LEAR | | |
| 09 | BSL | 0601E | 1006D | S47 | E90 | 10 | 16.8 | 1 | | | | C | ABST | | |
| 09 | ADF | 0646E | 1544D | N28 | W48 | 10 | 5.5 | 1 | 07 | 7 | 9 | E | SVTO | 4860 | |
| 09 | ADF | 0647E | 1544D | S25 | E41 | 10 | 12.4 | 1 | 06 | 9 | 9 | E | SVTO | | |
| 09 | APR | 0712E | 0915D | S45 | E90 | 10 | 16.8 | 1 | | | | V | KHAR | | |
| 09 | AFS | 0720E | 0903D | S24 | E20 | 10 | 10.8 | | 01 | 9 | 9 | E | LEAR | 4864 | |
| 09 | BSL | 0745 | 0752 | N24 | E90 | 10 | 16.3 | 1 | | | | V | KHAR | | |
| 09 | BSL | 0746E | 0814D | N20 | E90 | 10 | 16.2 | 1 | | | | C | ABST | | |
| 09 | BSL | 0746E | 1006D | S27 | W90 | 10 | 2.3 | 1 | | | | C | ABST | | |
| 09 | BSL | 0850 | 0910 | N24 | E90 | 10 | 16.3 | 1 | | | | V | KHAR | | |
| 09 | AFS | 0915E | 0952D | N33 | W09 | 10 | 8.7 | | 02 | 9 | 9 | E | LEAR | 4862 | |
| 09 | BSL | 1035 | 1050D | N85 | W90 | 10 | 1.0 | 1- | | | | C | CATA | | |
| 09 | BSL | 1040E | 1058D | N23 | E90 | 10 | 16.4 | 1- | | | | C | CATA | | |
| 09 | ASR | 1044E | 1544D | N24 | E90 | 10 | 16.4 | 1 | | 9 | 9 | E | SVTO | 4866 | |
| 09 | BSL | 1111E | 1121D | N22 | E90 | 10 | 16.4 | 1- | | | | C | CATA | | |
| 09 | ADF | 1200E | 2132D | S20 | W71 | 10 | 4.1 | 2 | 14 | 9 | 9 | E | RAMY | 4859 | |
| 09 | SDF | 1332E | 1332D | S25 | W64 | 10 | 4.6 | 3 | 17 | 0 | 0 | E | HOLL | 4859 | |
| 09 | DSD | 1410E | 2132D | S24 | E17 | 10 | 10.9 | | 04 | 9 | 9 | E | RAMY | 4864 | |
| 09 | ADF | 1415E | 1818D | S24 | E15 | 10 | 10.7 | 1 | 02 | 9 | 9 | E | HOLL | 4864 | |
| 09 | DSD | 1818E | 2025D | S23 | E14 | 10 | 10.8 | | 01 | 9 | 9 | E | HOLL | 4864 | |
| 09 | AFS | 1820E | 0329D | S24 | E13 | 10 | 10.8 | | 03 | 9 | 9 | E | PALE | 4864 | |
| 09 | AFS | 2025E | 0005D | S24 | E13 | 10 | 10.8 | | 02 | 9 | 9 | E | HOLL | 4864 | |
| 09 | ASR | 2103E | 2325D | N21 | E82 | 10 | 16.2 | | | 8 | 9 | E | HOLL | 4866 | |
| 09 | SDF | 2132E | 1115D | S20 | W84 | 10 | 3.5 | | 14 | 0 | 0 | E | RAMY | 4859 | |
| 09 | AFS | 2235E | 0004D | S34 | E55 | 10 | 14.3 | | 02 | 9 | 9 | E | LEAR | | |
| 09 | AFS | 2235E | 0950D | S24 | E12 | 10 | 10.9 | | 02 | 9 | 9 | E | LEAR | 4864 | |
| 09 | ADF | 2330E | 0329D | N20 | E75 | 10 | 15.7 | 1 | 02 | 9 | 9 | E | PALE | 4866 | |
| 09 | ADF | 2330E | 0329D | S31 | W54 | 10 | 5.7 | 1 | 03 | 9 | 9 | E | PALE | 4860 | |
| 10 | ADF | 0255E | 0950D | N29 | W60 | 10 | 5.4 | 2 | 07 | 9 | 8 | E | LEAR | 4860 | |
| 10 | DSD | 0715E | 0727 | S22 | E07 | 10 | 10.8 | 1 | | | | V | KHAR | | |
| 10 | BSL | 0716 | 0720 | N26 | W90 | 10 | 3.3 | 1- | | | | C | CATA | | |
| 10 | BSL | 0801E | 1006D | S30 | W90 | 10 | 3.2 | 1 | | | | C | ABST | | |
| 10 | APR | 0803 | 0816D | N26 | E90 | 10 | 17.3 | 1 | | | | V | KHAR | | |
| 10 | ADF | 0914E | 1500D | S24 | E09 | 10 | 11.1 | 1 | 06 | 9 | 9 | E | SVTO | 4864 | |
| 10 | BSL | 1051 | 1106D | N52 | W90 | 10 | 2.8 | 1- | | | | C | CATA | | |
| 10 | AFS | 1108E | 2057D | S24 | E05 | 10 | 10.8 | | 03 | 9 | 9 | E | RAMY | 4864 | |
| 10 | ADF | 1125E | 2057D | N32 | W58 | 10 | 5.9 | 2 | 08 | 9 | 9 | E | RAMY | 4860 | |
| 10 | BSL | 1126E | 1130 | N76 | W90 | 10 | 2.2 | 1- | | | | C | CATA | | |
| 10 | ADF | 1143E | 2129D | N23 | E73 | 10 | 16.1 | 1 | 06 | 9 | 6 | E | RAMY | 4866 | |
| 10 | DSD | 1154E | 1202D | S23 | E06 | 10 | 10.9 | | 03 | 9 | 9 | E | RAMY | 4864 | |
| 10 | SDF | 1230 | 0620 | S43 | E25 | 10 | 12.6 | 1 | | | | C | CATA | | |
| 10 | DSD | 1234E | 1246D | N29 | W60 | 10 | 5.8 | | 04 | 7 | 8 | E | RAMY | 4860 | |
| 10 | AFS | 1420E | 0023D | S23 | E02 | 10 | 10.7 | | 02 | 9 | 9 | E | HOLL | 4864 | |
| 10 | AFS | 1500E | 1550D | S24 | E04 | 10 | 10.9 | | 02 | 9 | 9 | E | SVTO | 4864 | |
| 10 | ADF | 1810E | 0349D | N20 | E64 | 10 | 15.6 | 1 | 04 | 9 | 9 | E | PALE | 4866 | |
| 10 | DSD | 1814E | 1905D | N35 | W26 | 10 | 8.7 | | 04 | 9 | 9 | E | RAMY | 4862 | |
| 10 | ADF | 1815E | 1843D | N36 | W26 | 10 | 8.7 | 1 | 02 | 9 | 9 | E | PALE | 4862 | |
| 10 | AFS | 1855E | 0349D | S24 | W01 | 10 | 10.7 | | 01 | 9 | 9 | E | PALE | 4864 | |
| 10 | DSD | 2137E | 0311D | S23 | W06 | 10 | 10.4 | 1 | 03 | 9 | 9 | E | PALE | 4864 | |
| 10 | AFS | 2240E | 0948D | S24 | W02 | 10 | 10.8 | | 02 | 9 | 9 | E | LEAR | 4864 | |
| 11 | APR | 0738 | 0925 | S38 | W90 | 10 | 4.0 | 1 | | | | V | KHAR | | |
| 11 | BSL | 0803E | 1001D | N20 | E90 | 10 | 18.2 | 1 | | | | C | ABST | | |
| 11 | BSL | 0803E | 1001D | S38 | W90 | 10 | 4.0 | 1 | | | | C | ABST | | |
| 11 | AFS | 0955E | 1250D | S25 | W07 | 10 | 10.9 | | 02 | 9 | 9 | E | SVTO | 4864 | |
| 11 | AFS | 1110E | 2107D | S24 | W08 | 10 | 10.8 | | 04 | 9 | 9 | E | RAMY | 4864 | |
| 11 | ADF | 1115E | 1835D | N33 | W72 | 10 | 5.7 | 2 | 08 | 8 | 9 | E | RAMY | 4860 | |
| 11 | ADF | 1315E | 2040D | N23 | E61 | 10 | 16.2 | 2 | 05 | 9 | 8 | E | RAMY | 4866 | |
| 11 | SDF | 1414E | 1320D | N37 | W26 | 10 | 9.5 | | 04 | 0 | 0 | E | RAMY | 4862 | |
| 11 | AFS | 1445E | 2339D | S25 | W11 | 10 | 10.8 | | 02 | 9 | 9 | E | HOLL | 4864 | |
| 11 | DSD | 1552E | 1552D | S33 | E54 | 10 | 15.9 | | 09 | 9 | 9 | E | RAMY | 4868 | |
| 11 | AFS | 1655E | 2020D | S24 | W11 | 10 | 10.8 | | 03 | 9 | 9 | E | PALE | 4864 | |

# ACTIVE PROMINENCES AND FILAMENTS

## OCTOBER 1987

| Day | Event Type | Start (UT) | End (UT) | Lat | CMD | CMP Mo | CMP Day | Imp | Extent | Blue Shift (.1 A) | Red Shift (.1 A) | Obs Type | Sta | NOAA/ USAF Reg# | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | ADF | 1659E | 2020D | S30 | E67 | 10 | 17.0 | 1 | 21 | 9 | 9 | E | PALE | 4868 | |
| 12 | AFS | 0011E | 0514D | S24 | W15 | 10 | 10.8 | | 03 | 9 | 9 | E | LEAR | 4864 | |
| 12 | AFS | 0514E | 0942D | S30 | E58 | 10 | 16.8 | | 02 | 9 | 9 | E | LEAR | 4868 | |
| 12 | BSL | 0940 | 0957D | S26 | W90 | 10 | 5.4 | 1- | | | | C | CATA | | |
| 12 | BSL | 0945E | 0952D | N57 | W90 | 10 | 4.6 | 1- | | | | C | CATA | | |
| 12 | APR | 1050 | 1116 | S42 | W90 | 10 | 5.1 | 1 | | | | V | KHAR | | |
| 12 | BSL | 1100E | 1148D | S22 | W90 | 10 | 5.5 | 1 | | | | V | KHAR | | |
| 12 | BSL | 1127E | 1225D | S23 | W90 | 10 | 5.5 | 2 | | | | C | CATA | | |
| 12 | ASR | 1140E | 1228D | S23 | W90 | 10 | 5.5 | | | 9 | 9 | E | RAMY | 4859 | |
| 12 | AFS | 1220E | 1405D | S24 | E00 | 10 | 12.5 | | 02 | 9 | 9 | E | SVTO | | |
| 12 | ADF | 1220E | 1551D | N21 | E44 | 10 | 15.9 | 1 | 06 | 9 | 9 | E | SVTO | 4866 | |
| 12 | BSL | 1225E | 1240D | N02 | W90 | 10 | 5.8 | 1- | | | | C | CATA | | |
| 12 | ASR | 1323E | 1712D | N30 | W90 | 10 | 5.5 | | | 7 | 6 | E | RAMY | 4860 | |
| 12 | AFS | 1340E | 1448D | S26 | W02 | 10 | 12.4 | | 03 | 9 | 9 | E | RAMY | | |
| 12 | AFS | 1513E | 1735D | S31 | E55 | 10 | 17.0 | | 02 | 9 | 7 | E | HOLL | 4868 | |
| 12 | AFS | 2218E | 0354D | S24 | W27 | 10 | 10.8 | | 03 | 9 | 9 | E | PALE | 4864 | |
| 12 | AFS | 2228E | 0354D | S26 | W07 | 10 | 12.4 | | 01 | 9 | 9 | E | PALE | 4869 | |
| 12 | DSD | 2230E | 2305D | S24 | W10 | 10 | 12.2 | | 02 | 9 | 9 | E | PALE | 4869 | |
| 12 | AFS | 2339E | 0942D | S26 | W09 | 10 | 12.3 | | 01 | 9 | 9 | E | LEAR | 4869 | |
| 12 | ADF | 2339E | 0942D | S31 | E47 | 10 | 16.7 | 1 | 21 | 9 | 9 | E | LEAR | 4868 | |
| 13 | AFS | 0520E | 0942D | N21 | E37 | 10 | 16.0 | | 03 | 9 | 9 | E | LEAR | 4866 | |
| 13 | BSL | 0602E | 0838D | S40 | W90 | 10 | 5.9 | 1 | | | | C | ABST | | |
| 13 | BSL | 0626 | 0630D | S73 | E90 | 10 | 21.5 | 1- | | | | C | CATA | | |
| 13 | BSL | 0630E | 0652D | N33 | W90 | 10 | 6.1 | 1- | | | | C | CATA | | |
| 13 | AFS | 0700E | 0854D | S25 | E17 | 10 | 14.6 | | 02 | 9 | 9 | E | SVTO | | |
| 13 | AFS | 0700E | 0854D | S26 | W13 | 10 | 12.3 | | 04 | 9 | 9 | E | SVTO | 4869 | |
| 13 | BSL | 0742E | 0750 | N30 | W90 | 10 | 6.2 | 1- | | | | C | CATA | | |
| 13 | SDF | 0942E | 2252D | S30 | E37 | 10 | 16.3 | | 05 | 9 | 9 | E | LEAR | 4868 | |
| 13 | BSL | 1130E | 1137D | N89 | E90 | 10 | 21.9 | 1- | | | | C | CATA | | |
| 13 | BSL | 1215E | 1223D | S25 | W90 | 10 | 6.5 | 1- | | | | C | CATA | | |
| 13 | AFS | 1325E | 1813D | S23 | E17 | 10 | 14.9 | | 01 | 9 | 9 | E | RAMY | 4870 | |
| 13 | ADF | 1325E | 1813D | S26 | E25 | 10 | 15.5 | 2 | 12 | 9 | 9 | E | RAMY | 4868 | |
| 13 | ADF | 1325E | 1813D | S27 | W06 | 10 | 13.1 | 1 | 04 | 9 | 9 | E | RAMY | 4869 | |
| 13 | AFS | 1325E | 1813D | S27 | W15 | 10 | 12.4 | | 03 | 9 | 9 | E | RAMY | 4869 | |
| 13 | AFS | 1712E | 2035D | S27 | W18 | 10 | 12.3 | | 02 | 9 | 9 | E | PALE | 4869 | |
| 13 | AFS | 1715E | 2035D | S25 | E15 | 10 | 14.9 | | 01 | 9 | 9 | E | PALE | | |
| 13 | ADF | 1825E | 2035D | S35 | E13 | 10 | 14.8 | 1 | 02 | 7 | 9 | E | PALE | 4867 | |
| 13 | AFS | 2238E | 2347D | S26 | W21 | 10 | 12.3 | | 04 | 9 | 9 | E | HOLL | 4869 | |
| 13 | AFS | 2247E | 0952D | N22 | E23 | 10 | 15.7 | | 02 | 9 | 9 | E | LEAR | 4866 | |
| 13 | AFS | 2247E | 0952D | S26 | W19 | 10 | 12.5 | | 03 | 9 | 9 | E | LEAR | 4869 | |
| 13 | AFS | 2247E | 0952D | S35 | E11 | 10 | 14.8 | | 02 | 9 | 9 | E | LEAR | 4867 | |
| 14 | ADF | 0630E | 1123D | N18 | E27 | 10 | 16.3 | 1 | 08 | 9 | 9 | E | SVTO | 4866 | |
| 14 | AFS | 0630E | 1123D | S23 | E06 | 10 | 14.7 | | 03 | 9 | 5 | E | SVTO | 4870 | |
| 14 | AFS | 0630E | 1123D | S26 | W25 | 10 | 12.3 | | 05 | 9 | 9 | E | SVTO | 4869 | |
| 14 | DSD | 0800E | 1123D | N19 | E15 | 10 | 15.5 | | 02 | 9 | 9 | E | SVTO | 4866 | |
| 14 | AFS | 0840E | 1123D | S24 | E05 | 10 | 14.7 | | 03 | 9 | 9 | E | SVTO | 4870 | |
| 14 | DSD | 0845E | 1054D | N22 | E18 | 10 | 15.7 | | 02 | 9 | 9 | E | SVTO | 4866 | |
| 14 | BSL | 1136E | 1145D | S78 | E90 | 10 | 22.8 | 1- | | | | C | CATA | | |
| 14 | BSL | 1136E | 1155D | N86 | W90 | 10 | 6.1 | 1- | | | | C | CATA | | |
| 14 | BSL | 1212E | 1212 | N67 | E90 | 10 | 22.6 | 1- | | | | C | CATA | | |
| 14 | AFS | 1228E | 1639D | S24 | E04 | 10 | 14.8 | | 02 | 9 | 9 | E | RAMY | 4870 | |
| 14 | ADF | 1228E | 1639D | S28 | E17 | 10 | 15.8 | 2 | 08 | 9 | 9 | E | RAMY | 4868 | |
| 14 | DSD | 1228E | 1639D | S28 | W26 | 10 | 12.5 | | 02 | 9 | 9 | E | RAMY | 4869 | |
| 14 | DSD | 1252E | 1433D | S24 | E03 | 10 | 14.8 | | 02 | 9 | 9 | E | RAMY | 4870 | Flare Associated |
| 14 | DSD | 1537E | 1651D | S28 | E00 | 10 | 14.6 | | 02 | 9 | 9 | E | HOLL | 4870 | |
| 14 | DSD | 1600E | 1639D | S22 | E01 | 10 | 14.7 | | 02 | 9 | 9 | E | RAMY | 4870 | |
| 14 | DSD | 1655E | 1830D | S20 | E13 | 10 | 15.7 | | 03 | 9 | 9 | E | PALE | 4866 | Flare Associated |
| 14 | ADF | 1715E | 1902D | S24 | E00 | 10 | 14.7 | 1 | 02 | 7 | 9 | E | HOLL | 4870 | |
| 14 | AFS | 1715E | 0344D | S25 | E00 | 10 | 14.7 | | 03 | 9 | 9 | E | PALE | 4870 | |
| 14 | AFS | 1715E | 0344D | S26 | W29 | 10 | 12.5 | | 02 | 9 | 9 | E | PALE | 4869 | |
| 14 | DSD | 1732E | 2250D | S23 | W01 | 10 | 14.6 | | 03 | 9 | 9 | E | PALE | 4870 | |
| 14 | ASR | 1736E | 1755 | S29 | E90 | 10 | 21.8 | | | 9 | 9 | E | PALE | | |
| 14 | AFS | 1750E | 0344D | N23 | E13 | 10 | 15.7 | | 04 | 9 | 9 | E | PALE | 4866 | |
| 14 | DSD | 1908E | 2025D | N23 | E15 | 10 | 15.9 | | 02 | 9 | 9 | E | PALE | 4866 | |
| 14 | ASR | 1927E | 0344D | N26 | E90 | 10 | 21.8 | | | 9 | 9 | E | PALE | | |
| 14 | AFS | 2242E | 0952D | N22 | E10 | 10 | 15.7 | | 03 | 9 | 9 | E | LEAR | 4866 | |
| 15 | AFS | 0350E | 0952D | S24 | W05 | 10 | 14.8 | | 03 | 9 | 9 | E | LEAR | 4870 | |

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| Day | Event Type | Start (UT) | End (UT) | Lat | CMD | CMP Mo | CMP Day | Imp | Extent | Blue Shift (.1 A) | Red Shift (.1 A) | Obs Type | Sta | NOAA/ USAF Reg# | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | BSL | 0553E | 1005D | N40 | E90 | 10 | 22.6 | 1 | | | | C | ABST | | |
| 15 | ADF | 0710E | 0952D | N19 | E06 | 10 | 15.7 | 1 | 04 | 9 | 9 | E | LEAR | 4866 | |
| 15 | BSL | 0756E | 0806D | S17 | E90 | 10 | 22.2 | 1- | | | | C | CATA | | |
| 15 | AFS | 0919E | 1445D | S26 | W39 | 10 | 12.3 | | 03 | 7 | 9 | E | SVTO | 4869 | |
| 15 | AFS | 0920E | 1445D | S24 | W09 | 10 | 14.7 | | 04 | 9 | 9 | E | SVTO | 4870 | |
| 15 | AFS | 0920E | 1445D | S31 | E18 | 10 | 16.8 | | 03 | 9 | 9 | E | SVTO | 4868 | |
| 15 | BSL | 0947E | 0956D | S67 | W90 | 10 | 7.3 | 1- | | | | C | CATA | | |
| 15 | DSD | 1005E | 1010 | N19 | W11 | 10 | 14.6 | 1 | | | | C | CATA | | |
| 15 | ADF | 1006E | 1445D | S24 | W14 | 10 | 14.3 | 2 | 06 | 9 | 9 | E | SVTO | 4870 | |
| 15 | BSL | 1203E | 1215D | S73 | E90 | 10 | 23.7 | 1- | | | | C | CATA | | |
| 15 | BSL | 1217E | 1217 | N15 | W90 | 10 | 8.7 | 1- | | | | C | CATA | | |
| 15 | DSD | 1450E | 2030D | N19 | E03 | 10 | 15.8 | | 03 | 9 | 9 | E | HOLL | 4866 | |
| 15 | ADF | 1500E | 2020D | S17 | W14 | 10 | 14.6 | 2 | 07 | 9 | 9 | E | RAMY | 4870 | |
| 15 | ADF | 1500E | 2020D | S17 | W14 | 10 | 14.6 | 2 | 07 | 9 | 9 | E | RAMY | 4870 | |
| 15 | ADF | 1500E | 2146D | N17 | E03 | 10 | 15.8 | 2 | 04 | 9 | 9 | E | RAMY | 4866 | |
| 15 | AFS | 1500E | 2146D | S25 | W11 | 10 | 14.8 | | 03 | 9 | 9 | E | RAMY | 4870 | |
| 15 | DSD | 1715 | 0023D | N19 | E01 | 10 | 15.8 | | 04 | 9 | 9 | E | HOLL | 4866 | |
| 15 | AFS | 1725E | 0023D | S24 | W12 | 10 | 14.8 | | 03 | 8 | 8 | E | HOLL | 4870 | |
| 15 | AFS | 2238E | 0949D | N22 | W04 | 10 | 15.6 | | 02 | 9 | 9 | E | LEAR | 4866 | |
| 15 | AFS | 2238E | 0949D | S24 | W16 | 10 | 14.7 | | 03 | 9 | 9 | E | LEAR | 4870 | |
| 15 | AFS | 2238E | 0949D | S26 | W46 | 10 | 12.4 | | 03 | 9 | 9 | E | LEAR | 4869 | |
| 15 | DSD | 2249 | 0159D | N22 | W04 | 10 | 15.6 | | 02 | 9 | 9 | E | LEAR | 4866 | |
| 15 | DSD | 2338E | 0054D | S24 | W16 | 10 | 14.7 | | 03 | 9 | 9 | E | LEAR | 4870 | |
| 15 | SDF | 2350E | 0236 | S28 | W05 | 10 | 15.6 | | 11 | 9 | 9 | E | LEAR | 4868 | |
| 16 | ADF | 0615E | 0949D | N18 | W06 | 10 | 15.8 | 2 | 05 | 9 | 9 | E | LEAR | 4866 | |
| 16 | DSD | 0820E | 0836 | N18 | W08 | 10 | 15.7 | | 03 | 9 | 9 | E | LEAR | 4866 | |
| 16 | DSD | 1005E | 1010 | N19 | W11 | 10 | 15.6 | 1 | | | | C | CATA | | |
| 16 | DSD | 1105E | 1110D | S25 | W22 | 10 | 14.7 | | 03 | 9 | 9 | E | RAMY | 4870 | |
| 16 | ADF | 1105E | 1706D | S26 | W21 | 10 | 14.8 | 2 | 06 | 9 | 9 | E | RAMY | 4870 | |
| 16 | ADF | 1125E | 1706D | N19 | W06 | 10 | 16.0 | 2 | 07 | 9 | 9 | E | RAMY | 4866 | |
| 16 | ADF | 1125E | 1706D | N26 | W05 | 10 | 16.1 | 2 | 06 | 9 | 8 | E | RAMY | 4866 | |
| 16 | DSD | 1225E | 1615D | N17 | W11 | 10 | 15.7 | | 04 | 9 | 9 | E | RAMY | 4866 | |
| 16 | ADF | 1225E | 1706D | N19 | W09 | 10 | 15.8 | 2 | 06 | 7 | 7 | E | RAMY | 4866 | |
| 16 | ASR | 1225E | 1706D | S31 | E90 | 10 | 23.6 | | | 9 | 8 | E | RAMY | | |
| 16 | DSD | 1554E | 1615D | S24 | W25 | 10 | 14.7 | | 03 | 9 | 9 | E | RAMY | 4870 | Flare Associated |
| 16 | DSD | 1615E | 1706D | N23 | W09 | 10 | 16.0 | | 03 | 9 | 9 | E | RAMY | 4866 | |
| 16 | BSD | 1720 | 1800D | N20 | W04 | 10 | 16.4 | | 05 | 9 | 9 | E | HOLL | 4866 | |
| 16 | ADF | 1723E | 0016D | N18 | W10 | 10 | 16.0 | 1 | 06 | 9 | 9 | E | HOLL | 4866 | |
| 16 | DSD | 1841 | 2245D | N24 | W08 | 10 | 16.2 | | 05 | 9 | 9 | E | HOLL | 4866 | |
| 16 | ASR | 1910E | 2335D | S31 | E88 | 10 | 23.7 | | | 9 | 9 | E | HOLL | | |
| 16 | AFS | 2110E | 0016D | S23 | W24 | 10 | 15.0 | | 03 | 9 | 9 | E | HOLL | 4870 | |
| 16 | AFS | 2231E | 0952D | S24 | W28 | 10 | 14.8 | | 02 | 9 | 9 | E | LEAR | 4870 | |
| 16 | AFS | 2245E | 0952D | N21 | W12 | 10 | 16.0 | | 02 | 9 | 9 | E | LEAR | 4866 | |
| 16 | ASR | 2315E | 0130D | S33 | E83 | 10 | 23.6 | | | 9 | 6 | E | LEAR | | |
| 17 | ADF | 0230E | 0952D | N24 | W11 | 10 | 16.2 | 2 | 05 | 9 | 9 | E | LEAR | 4866 | |
| 17 | BSL | 0700E | 0718D | S33 | E90 | 10 | 24.4 | 1 | | | | V | KHAR | | |
| 17 | DSD | 0702E | 0725D | S26 | W32 | 10 | 14.8 | 1 | | | | V | KHAR | | |
| 17 | ADF | 0808E | 1145D | N21 | W17 | 10 | 16.0 | | 03 | 9 | 9 | E | SVTO | 4866 | |
| 17 | DSD | 0837E | 0852 | S27 | W29 | 10 | 15.1 | 1 | | | | V | KHAR | | |
| 17 | DSD | 1115E | 1253D | N18 | W19 | 10 | 16.0 | | 03 | 9 | 9 | E | RAMY | 4866 | Flare Associated |
| 17 | AFS | 1116E | 1253D | S25 | W34 | 10 | 14.8 | | 03 | 9 | 9 | E | RAMY | 4866 | |
| 17 | ADF | 1116E | 1630D | N18 | W21 | 10 | 15.9 | 2 | 08 | 9 | 9 | E | RAMY | 4866 | |
| 17 | ADF | 1116E | 1630D | N28 | W17 | 10 | 16.1 | 2 | 08 | 9 | 9 | E | RAMY | 4866 | |
| 17 | AFS | 1550E | 0012D | S24 | W36 | 10 | 14.9 | | 02 | 9 | 9 | E | HOLL | 4870 | |
| 17 | ADF | 1550E | 2232D | N18 | W24 | 10 | 15.8 | 1 | 08 | 9 | 9 | E | HOLL | 4866 | |
| 17 | ADF | 1550E | 2232D | N27 | W21 | 10 | 16.0 | 1 | 05 | 9 | 9 | E | HOLL | 4866 | |
| 17 | ASR | 1630E | 1630D | S34 | E90 | 10 | 24.9 | | | 9 | 9 | E | RAMY | | |
| 17 | ASR | 1939E | 2045D | S32 | E77 | 10 | 23.9 | 2 | | 9 | 9 | E | HOLL | | |
| 17 | DSD | 2012 | 2106D | N18 | W28 | 10 | 15.7 | 2 | 08 | 9 | 9 | E | HOLL | 4866 | Flare Associated |
| 17 | DSD | 2031E | 2109D | S27 | W37 | 10 | 15.0 | 2 | 02 | 9 | 9 | E | HOLL | 4870 | Flare Associated |
| 17 | ASR | 2038E | 2040D | S26 | W74 | 10 | 12.1 | 2 | | 9 | 9 | E | HOLL | 4869 | |
| 17 | BSD | 2038E | 2047D | S26 | W74 | 10 | 12.1 | 2 | 03 | 9 | 9 | E | HOLL | 4869 | |
| 17 | DSD | 2055 | 2345D | S25 | W70 | 10 | 12.4 | 2 | 05 | 9 | 9 | E | HOLL | 4869 | Flare Associated |
| 17 | DSD | 2210E | 2308D | S24 | W41 | 10 | 14.7 | 2 | 02 | 9 | 9 | E | HOLL | 4870 | Flare Associated |
| 17 | AFS | 2320E | 0945D | S25 | W42 | 10 | 14.7 | | 02 | 9 | 9 | E | LEAR | 4870 | |
| 17 | ASR | 2330E | 0945D | S25 | W70 | 10 | 12.5 | | | 9 | 9 | E | LEAR | 4869 | |
| 17 | DSD | 2345E | 0012D | S28 | W68 | 10 | 12.7 | 2 | 04 | 9 | 9 | E | HOLL | 4869 | Flare Associated |
| 17 | DSD | 2358E | 0012D | S24 | W46 | 10 | 14.4 | 2 | 05 | 9 | 9 | E | HOLL | 4870 | |
| 18 | BSL | 0726E | 0748D | S25 | W90 | 10 | 11.3 | 1 | | | | V | KHAR | | |

# ACTIVE PROMINENCES AND FILAMENTS

## OCTOBER 1987

| Day | Event Type | Start (UT) | End (UT) | Lat | CMD | CMP Mo | CMP Day | Imp | Extent | Blue Shift (.1 A) | Red Shift (.1 A) | Obs Type | Sta | NOAA/ USAF Reg# | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | BSL | 0740E | 0751D | N80 | E90 | 10 | 26.7 | 1- | | | | C | CATA | | |
| 18 | BSL | 0746 | 0753D | S27 | W90 | 10 | 11.3 | 1 | | | | V | KHAR | | |
| 18 | BSL | 0755 | 0912D | S25 | W90 | 10 | 11.3 | 1 | | | | V | KHAR | | |
| 18 | BSL | 0805E | 0830D | S55 | E90 | 10 | 26.1 | 1- | | | | C | CATA | | |
| 18 | BSL | 0825E | 0836D | S48 | E90 | 10 | 25.9 | 1- | | | | C | CATA | | |
| 18 | BSL | 0915E | 0925D | S73 | W90 | 10 | 10.1 | 1- | | | | C | CATA | | |
| 18 | BSL | 0920E | 0931D | S74 | E90 | 10 | 26.6 | 1- | | | | C | CATA | | |
| 18 | BSL | 0931E | 0941D | N83 | W90 | 10 | 10.0 | 1- | | | | C | CATA | | |
| 18 | ASR | 1005E | 1506D | S29 | W90 | 10 | 11.4 | | | 9 | 9 | E | SVTO | 4869 | |
| 18 | BSL | 1018E | 1055D | S25 | W90 | 10 | 11.4 | 1 | | | | V | KHAR | | |
| 18 | BSL | 1156E | 1207D | N24 | W90 | 10 | 11.5 | 1- | | | | C | CATA | | |
| 18 | BSL | 1207E | 1212D | N15 | E90 | 10 | 25.3 | 1- | | | | C | CATA | | |
| 18 | BSL | 1216E | 1226D | N27 | W90 | 10 | 11.5 | 1- | | | | C | CATA | | |
| 18 | BSL | 1216E | 1226D | N84 | E90 | 10 | 26.9 | 1- | | | | C | CATA | | |
| 18 | BSL | 1216E | 1226D | N86 | W90 | 10 | 10.1 | 1- | | | | C | CATA | | |
| 18 | ADF | 1420E | 1900D | N27 | W32 | 10 | 16.1 | | 06 | 9 | 8 | E | HOLL | 4866 | |
| 18 | ASR | 1420E | 2158D | S25 | W79 | 10 | 12.5 | | | 9 | 9 | E | HOLL | 4869 | |
| 18 | AFS | 1545E | 1900D | N16 | E03 | 10 | 18.9 | | 02 | 8 | 8 | E | HOLL | | |
| 18 | ASR | 1648E | 0032D | S25 | W90 | 10 | 11.7 | | | 9 | 9 | E | PALE | 4869 | |
| 18 | AFS | 1648E | 2244D | N16 | E03 | 10 | 18.9 | | 01 | 9 | 9 | E | PALE | | |
| 18 | AFS | 1740E | 0032D | S33 | E65 | 10 | 23.9 | | 03 | 9 | 9 | E | PALE | 4873 | |
| 18 | AFS | 1932E | 0019D | S34 | E64 | 10 | 23.9 | | 03 | 8 | 8 | E | HOLL | 4873 | |
| 18 | ASR | 2215E | 0945D | S24 | W86 | 10 | 12.3 | | | 9 | 9 | E | LEAR | 4869 | |
| 18 | ASR | 2308E | 0019D | S24 | W86 | 10 | 12.3 | | | 7 | 6 | E | HOLL | 4869 | |
| 18 | AFS | 2317E | 0019D | S23 | W54 | 10 | 14.8 | | 02 | 9 | 9 | E | HOLL | 4870 | |
| 19 | AFS | 0245E | 0945D | S25 | W53 | 10 | 15.0 | | 03 | 9 | 9 | E | LEAR | 4870 | |
| 19 | AFS | 0532E | 0945D | S36 | E58 | 10 | 23.9 | | 03 | 9 | 9 | E | LEAR | 4873 | |
| 19 | APR | 0709E | 0810D | N38 | E90 | 10 | 26.6 | 1 | | | | C | ABST | | |
| 19 | ADF | 0800E | 0925D | S32 | E60 | 10 | 24.1 | 1 | | | | V | KHAR | | |
| 19 | BSL | 0820 | 0831 | S26 | E90 | 10 | 26.3 | 1- | | | | C | CATA | | |
| 19 | BSL | 0827E | 0831 | N16 | W90 | 10 | 12.5 | 1- | | | | C | CATA | | |
| 19 | AFS | 0840E | 1505D | N16 | W09 | 10 | 18.7 | | 02 | 9 | 9 | E | SVTO | 4874 | |
| 19 | BSL | 0851 | 0916 | S26 | E90 | 10 | 26.4 | 1- | | | | C | CATA | | |
| 19 | DSD | 0910E | 0920 | S35 | E10 | 10 | 20.2 | 1 | | | | V | KHAR | | |
| 19 | AFS | 0915E | 1522D | S33 | E61 | 10 | 24.2 | | 02 | 9 | 9 | E | SVTO | 4873 | |
| 19 | AFS | 0915E | 1522D | S33 | E63 | 10 | 24.4 | | 02 | 9 | 9 | E | SVTO | 4873 | |
| 19 | APR | 0945E | 1100D | N48 | E90 | 10 | 27.0 | 1 | | | | V | KHAR | | |
| 19 | ADF | 0952E | 1000 | S29 | W60 | 10 | 14.7 | 1 | | | | V | KHAR | | |
| 19 | ADF | 1012 | 1018 | S29 | W60 | 10 | 14.7 | 1 | | | | V | KHAR | | |
| 19 | BSL | 1048E | 1051 | N36 | W90 | 10 | 12.2 | 1- | | | | C | CATA | | |
| 19 | ADF | 1105E | 1118 | S29 | W60 | 10 | 14.7 | 1 | | | | V | KHAR | | |
| 19 | DSD | 1720 | 1836D | S33 | W54 | 10 | 15.4 | | 03 | 9 | 9 | E | HOLL | 4870 | |
| 19 | AFS | 1726E | 0021D | S23 | W61 | 10 | 15.0 | | 02 | 8 | 8 | E | PALE | 4870 | |
| 19 | AFS | 1736E | 0043D | S32 | E52 | 10 | 23.8 | | 01 | 9 | 9 | E | PALE | 4873 | |
| 19 | AFS | 1810E | 0043D | S42 | E29 | 10 | 22.1 | | 01 | 9 | 9 | E | PALE | 4872 | |
| 19 | DSD | 2010E | 0043D | S32 | E51 | 10 | 23.9 | | 03 | 9 | 9 | E | PALE | 4873 | |
| 19 | DSD | 2018E | 2102D | S32 | E49 | 10 | 23.7 | | 04 | 9 | 9 | E | HOLL | 4873 | |
| 19 | AFS | 2220E | 0953D | S26 | W66 | 10 | 14.8 | | 02 | 9 | 9 | E | LEAR | 4870 | |
| 19 | DSD | 2220E | 0953D | S36 | E49 | 10 | 23.9 | | 03 | 9 | 9 | E | LEAR | 4873 | |
| 20 | ADF | 0535E | 0953D | N26 | W57 | 10 | 15.8 | 1 | 06 | 9 | 9 | E | LEAR | 4866 | |
| 20 | AFS | 0535E | 0953D | S41 | E23 | 10 | 22.1 | | 02 | 9 | 9 | E | LEAR | 4872 | |
| 20 | APR | 0704E | 1003D | N38 | E90 | 10 | 27.6 | 1 | | | | C | ABST | | |
| 20 | DSD | 0740 | 0750D | S44 | E20 | 10 | 22.0 | 1 | | | | V | KHAR | | |
| 20 | BSL | 0809E | 0821D | N09 | W90 | 10 | 13.6 | 1- | | | | C | CATA | | |
| 20 | ADF | 0819E | 1442D | N25 | W55 | 10 | 16.1 | 1 | 06 | 9 | 9 | E | SVTO | 4866 | |
| 20 | ADF | 0823E | 1442D | S15 | E27 | 10 | 22.4 | 1 | 05 | 8 | 8 | E | SVTO | | |
| 20 | ADF | 0826E | 1442D | S43 | E22 | 10 | 22.2 | 1 | 05 | 9 | 9 | E | SVTO | 4872 | |
| 20 | ADF | 0832E | 1442D | S33 | E41 | 10 | 23.6 | 1 | 06 | 9 | 9 | E | SVTO | 4873 | |
| 20 | SDF | 1235 | 0626 | N40 | E15 | 10 | 21.7 | 1 | | | | C | CATA | | |
| 20 | ADF | 1304E | 1754D | N23 | W60 | 10 | 15.9 | 1 | 04 | 9 | 9 | E | RAMY | 4866 | |
| 20 | ADF | 1304E | 1754D | S33 | E42 | 10 | 23.9 | 2 | 02 | 9 | 9 | E | RAMY | 4873 | |
| 20 | AFS | 1304E | 1754D | S43 | E19 | 10 | 22.1 | | 02 | 9 | 9 | E | RAMY | 4872 | |
| 20 | AFS | 1502E | 2235D | S42 | E17 | 10 | 22.0 | | 02 | 9 | 9 | E | HOLL | 4872 | |
| 20 | ADF | 2320E | 0945D | N22 | W64 | 10 | 16.0 | 2 | 04 | 9 | 9 | E | LEAR | 4866 | |
| 21 | APR | 0005 | 0126D | S40 | W90 | 10 | 13.7 | 1 | | | | C | VORO | | |
| 21 | AFS | 0135E | 0945D | S34 | E36 | 10 | 23.9 | | 03 | 9 | 9 | E | LEAR | 4873 | |
| 21 | AFS | 0135E | 0945D | S43 | E13 | 10 | 22.1 | | 02 | 9 | 9 | E | LEAR | 4872 | |
| 21 | ASR | 0240E | 0945D | S24 | W78 | 10 | 15.1 | | | 8 | 6 | E | LEAR | 4870 | |

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| Day | Event Type | Start (UT) | End (UT) | Lat | CMD | CMP Mo | CMP Day | Imp | Extent | Blue Shift (.1 A) | Red Shift (.1 A) | Obs Type | Sta | NOAA/ USAF Reg# | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21 | APR | 0620E | 0945D | S25 | W90 | 10 | 14.3 | 1 | | 9 | 9 | E | LEAR | 4870 | |
| 21 | APR | 0725E | 1007 | S42 | W90 | 10 | 13.9 | 1 | | | | V | KHAR | | |
| 21 | APR | 0725E | 1030 | S24 | W90 | 10 | 14.3 | 1 | | | | V | KHAR | | |
| 21 | BSL | 0736E | 0817D | S07 | W90 | 10 | 14.6 | 1- | | | | C | CATA | | |
| 21 | BSL | 0829E | 1004D | S40 | W90 | 10 | 14.0 | 1 | | | | C | ABST | | |
| 21 | BSL | 0851E | 1004D | S30 | W90 | 10 | 14.3 | 1 | | | | C | ABST | | |
| 21 | BSL | 0915E | 0934D | S61 | E90 | 10 | 29.3 | 1- | | | | C | CATA | | |
| 21 | BSL | 0934E | 0941D | N55 | W90 | 10 | 13.6 | 1- | | | | C | CATA | | |
| 21 | ADF | 1009E | 1515D | N23 | W78 | 10 | 15.4 | 1 | 06 | 8 | 8 | E | SVTO | 4866 | |
| 21 | BSL | 1020E | 1030D | N80 | W90 | 10 | 13.1 | 1- | | | | C | CATA | | |
| 21 | BSL | 1120E | 1131D | N59 | W90 | 10 | 13.6 | 1- | | | | C | CATA | | |
| 21 | BSL | 1120E | 1131D | S79 | E90 | 10 | 29.8 | 1- | | | | C | CATA | | |
| 21 | BSL | 1217 | 1227D | S71 | W90 | 10 | 13.3 | 1- | | | | C | CATA | | |
| 21 | ADF | 1230E | 1515D | S34 | E25 | 10 | 23.5 | 1 | 03 | 9 | 9 | E | SVTO | 4873 | |
| 21 | DSD | 1235E | 1515D | S15 | E12 | 10 | 22.4 | | 03 | 9 | 9 | E | SVTO | | |
| 21 | ADF | 1336E | 2033D | N27 | W76 | 10 | 15.6 | 2 | 12 | 8 | 6 | E | RAMY | 4866 | |
| 21 | ASR | 1336E | 2150D | S25 | W90 | 10 | 14.6 | | | 9 | 9 | E | RAMY | 4870 | |
| 21 | ASR | 1420E | 2121D | S25 | W90 | 10 | 14.6 | | | 9 | 9 | E | HOLL | 4870 | |
| 21 | AFS | 1422E | 1754D | S41 | E07 | 10 | 22.2 | | 02 | 9 | 9 | E | HOLL | 4872 | |
| 21 | ADF | 1754E | 2121D | S43 | E07 | 10 | 22.3 | 2 | 04 | 9 | 9 | E | HOLL | 4872 | |
| 21 | AFS | 2030E | 2150D | S42 | E03 | 10 | 22.1 | | 02 | 8 | 8 | E | RAMY | 4872 | |
| 21 | ASR | 2310E | 0240D | S25 | W90 | 10 | 15.0 | | | 9 | 9 | E | LEAR | 4870 | |
| 21 | AFS | 2310E | 0240D | S35 | E20 | 10 | 23.6 | | 02 | 9 | 9 | E | LEAR | 4873 | |
| 21 | AFS | 2310E | 0908D | S43 | E02 | 10 | 22.1 | | 03 | 9 | 9 | E | LEAR | 4872 | |
| 22 | ADF | 0656E | 1438D | N25 | W63 | 10 | 17.4 | 1 | 04 | 8 | 8 | E | SVTO | 4866 | |
| 22 | BSL | 0701E | 0720D | S05 | W90 | 10 | 15.6 | 1 | | | | C | CATA | | |
| 22 | BSL | 0731E | 0739D | S03 | W90 | 10 | 15.6 | 1- | | | | C | CATA | | |
| 22 | BSL | 0802E | 1005D | S30 | W90 | 10 | 15.2 | 1 | | | | C | ABST | | |
| 22 | BSL | 0920E | 0928D | N77 | W90 | 10 | 14.1 | 1- | | | | C | CATA | | |
| 22 | AFS | 0921E | 1438D | S33 | E22 | 10 | 24.1 | | 03 | 9 | 9 | E | SVTO | 4873 | |
| 22 | BSL | 0928E | 0946D | N16 | W90 | 10 | 15.6 | 1- | | | | C | CATA | | |
| 22 | BSL | 0951E | 0951 | N17 | W90 | 10 | 15.6 | 1- | | | | C | CATA | | |
| 22 | BSL | 1003 | 1010 | N17 | W90 | 10 | 15.6 | 1- | | | | C | CATA | | |
| 22 | BSL | 1030E | 1050D | N16 | W90 | 10 | 15.6 | 1- | | | | C | CATA | | |
| 22 | BSL | 1046E | 1101D | N87 | W90 | 10 | 14.0 | 1- | | | | C | CATA | | |
| 22 | BSL | 1105E | 1105 | N78 | E90 | 10 | 30.8 | 1- | | | | C | CATA | | |
| 22 | ASR | 1143E | 1930D | S29 | W89 | 10 | 15.5 | | | 7 | 7 | E | RAMY | 4870 | |
| 22 | ASR | 1152E | 1930D | S41 | W89 | 10 | 15.2 | | | 9 | 5 | E | RAMY | 4868 | |
| 22 | AFS | 1156E | 2121D | S34 | E16 | 10 | 23.8 | | 03 | 9 | 6 | E | RAMY | 4873 | |
| 22 | ADF | 1156E | 2121D | S36 | E14 | 10 | 23.6 | 2 | 07 | 9 | 8 | E | RAMY | 4873 | |
| 22 | AFS | 1210E | 1935D | N16 | E49 | 10 | 26.2 | | 02 | 5 | 5 | E | RAMY | 4874 | |
| 22 | AFS | 1300E | 1735D | S01 | W18 | 10 | 21.2 | | 02 | 5 | 8 | E | RAMY | | |
| 22 | ADF | 1355E | 1950D | N18 | W49 | 10 | 18.8 | 2 | 05 | 6 | 4 | E | RAMY | 4874 | |
| 22 | ADF | 2320E | 0835D | S49 | W11 | 10 | 22.0 | 1 | 05 | 9 | 9 | E | LEAR | 4872 | |
| 23 | AFS | 0545E | 0852D | S42 | W18 | 10 | 21.8 | | 01 | 9 | 9 | E | LEAR | 4872 | |
| 23 | BSL | 0736E | 1008D | S55 | W90 | 10 | 15.5 | 1 | | | | C | ABST | | |
| 23 | ASR | 0750E | 0852D | N30 | E90 | 10 | 30.4 | | | 9 | 9 | E | LEAR | | |
| 23 | DSD | 0805 | 0825 | S48 | W12 | 10 | 22.3 | 1 | | | | V | KHAR | | |
| 23 | BSL | 0857E | 0901 | N60 | W90 | 10 | 15.4 | 1- | | | | C | CATA | | |
| 23 | BSL | 0936 | 1005D | N22 | W90 | 10 | 16.5 | 1- | | | | C | CATA | | |
| 23 | BSL | 0946E | 0950D | N63 | W90 | 10 | 15.4 | 1- | | | | C | CATA | | |
| 23 | BSL | 0946E | 1005D | N20 | W90 | 10 | 16.5 | 1- | | | | C | CATA | | |
| 23 | BSL | 1011E | 1029D | N27 | W90 | 10 | 16.4 | 1- | | | | C | CATA | | |
| 23 | AFS | 1130E | 1956D | N34 | E12 | 10 | 24.4 | | 02 | 9 | 9 | E | RAMY | | |
| 23 | ADF | 1508E | 1956D | S18 | W15 | 10 | 22.5 | 2 | 05 | 9 | 9 | E | RAMY | | |
| 24 | APR | 0030 | 0300D | N52 | W90 | 10 | 16.3 | 1 | | | | C | VORO | | |
| 24 | ASR | 0130E | 0141D | N34 | E85 | 10 | 30.8 | | | 8 | 9 | E | PALE | | |
| 24 | BSL | 0645E | 0720D | N34 | E90 | 10 | 31.4 | 1- | | | | C | CATA | | |
| 24 | ASR | 0645E | 0945D | N38 | E90 | 10 | 31.5 | | | 6 | 9 | E | SVTO | | |
| 24 | BSD | 0645E | 1142D | N38 | E85 | 10 | 31.1 | | 05 | 6 | 9 | E | SVTO | | |
| 24 | ADF | 0710E | 0945D | S43 | W24 | 10 | 22.3 | 1 | 03 | 3 | 7 | E | SVTO | 4872 | |
| 24 | BSL | 0745E | 0803D | N34 | E90 | 10 | 31.5 | 1- | | | | C | CATA | | |
| 24 | BSL | 0810E | 0815 | N33 | E90 | 10 | 31.5 | 1- | | | | C | CATA | | |
| 24 | BSL | 0846E | 0900D | N62 | E90 | 11 | 1.3 | 1- | | | | C | CATA | | |
| 24 | AFS | 0915E | 0941D | S16 | W25 | 10 | 22.5 | | 02 | 9 | 9 | E | LEAR | | |
| 24 | ADF | 0945E | 1402D | N34 | E85 | 10 | 31.2 | 1 | 03 | 9 | 9 | E | SVTO | | |
| 24 | SDF | 1005 | 1031 | S14 | W28 | 10 | 22.3 | 1 | | | | C | CATA | | |
| 24 | BSL | 1010E | 1023D | N34 | E90 | 10 | 31.6 | 1- | | | | C | CATA | | |

# ACTIVE PROMINENCES AND FILAMENTS

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| Day | Event Type | Start (UT) | End (UT) | Lat | CMD | CMP Mo | CMP Day | Imp | Extent | Blue Shift (.1 A) | Red Shift (.1 A) | Obs Type | Sta | NOAA/ USAF Reg# | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 | BSL | 1010E | 1023D | N57 | E90 | 11 | 1.2 | 1- | | | | C | CATA | | |
| 24 | ADF | 1042E | 1402D | S16 | W25 | 10 | 22.5 | 1 | 03 | 8 | 8 | E | SVTO | | |
| 24 | ASR | 1043E | 1142D | N39 | E90 | 10 | 31.7 | | | 8 | 8 | E | SVTO | | |
| 24 | DSD | 1140E | 1351D | N31 | E78 | 10 | 30.6 | | 04 | 9 | 9 | E | RAMY | | |
| 24 | AFS | 1140E | 1935D | S25 | W48 | 10 | 20.8 | | 02 | 9 | 9 | E | RAMY | | |
| 24 | ADF | 1215E | 2119D | S15 | W30 | 10 | 22.2 | 2 | 04 | 7 | 6 | E | RAMY | | |
| 24 | BSL | 1226E | 1241D | N33 | E90 | 10 | 31.7 | 1- | | | | C | CATA | | |
| 24 | ASR | 1226E | 1935D | N34 | E77 | 10 | 30.6 | | | 9 | 9 | E | RAMY | 4875 | |
| 24 | DSD | 1530E | 2119D | N29 | E77 | 10 | 30.7 | | 03 | 9 | 9 | E | RAMY | 4875 | |
| 24 | AFS | 1530E | 2119D | N32 | E75 | 10 | 30.6 | | 03 | 9 | 9 | E | RAMY | 4875 | |
| 24 | DSD | 2300E | 0754D | N31 | E66 | 10 | 30.2 | | 01 | 9 | 9 | E | LEAR | 4875 | |
| 24 | DSD | 2310E | 0035D | S25 | W55 | 10 | 20.7 | | 02 | 9 | 9 | E | LEAR | 4876 | |
| 25 | DSD | 0117E | 0248D | N29 | E73 | 10 | 30.8 | | 02 | 9 | 9 | E | PALE | 4875 | |
| 25 | AFS | 0117E | 0248D | N31 | E76 | 10 | 31.0 | | 01 | 9 | 9 | E | PALE | 4875 | |
| 25 | BSD | 0125E | 0248D | N31 | E77 | 10 | 31.1 | | 02 | 9 | 9 | E | PALE | 4875 | |
| 25 | AFS | 0450E | 0942D | N31 | E67 | 10 | 30.5 | | 02 | 9 | 9 | E | LEAR | 4875 | |
| 25 | BSL | 0750 | 0750 | S26 | E90 | 11 | 1.3 | 1- | | | | C | CATA | | |
| 25 | BSL | 0915E | 0925D | N61 | E90 | 11 | 2.3 | 1- | | | | C | CATA | | |
| 25 | AFS | 0930E | 1406D | S24 | W59 | 10 | 20.8 | | 02 | 9 | 9 | E | SVTO | 4876 | |
| 25 | AFS | 0940E | 1406D | N31 | E69 | 10 | 30.8 | | 02 | 9 | 9 | E | SVTO | 4875 | |
| 25 | BSL | 0955E | 1001 | S26 | E90 | 11 | 1.4 | 1- | | | | C | CATA | | |
| 25 | BSL | 0955E | 1001 | S79 | E90 | 11 | 2.7 | 1- | | | | C | CATA | | |
| 25 | ADF | 1020E | 1040D | N32 | E73 | 10 | 31.2 | 1 | | | | V | KHAR | | |
| 25 | BSL | 1100E | 1106 | S26 | E90 | 11 | 1.4 | 1- | | | | C | CATA | | |
| 25 | BSD | 1107E | 1125D | N32 | E71 | 10 | 31.1 | | 02 | 9 | 9 | E | SVTO | 4875 | |
| 25 | BSL | 1110 | 1132 | S31 | E90 | 11 | 1.6 | 1 | | | | V | KHAR | | |
| 25 | APR | 1128E | 1406D | S26 | E90 | 11 | 1.5 | | | 9 | 9 | E | SVTO | | |
| 25 | BSL | 1130E | 1140D | S27 | E90 | 11 | 1.5 | 1- | | | | C | CATA | | |
| 25 | BSL | 1135E | 1215D | S28 | E90 | 11 | 1.5 | 1- | | | | C | CATA | | |
| 25 | BSL | 1200E | 1235 | S22 | E90 | 11 | 1.4 | 1- | | | | C | CATA | | |
| 25 | AFS | 1224E | 2025D | N31 | E68 | 10 | 30.9 | | 02 | 9 | 9 | E | RAMY | 4875 | |
| 25 | AFS | 1224E | 2025D | S26 | W64 | 10 | 20.5 | | 01 | 9 | 9 | E | RAMY | 4876 | |
| 25 | ADF | 1224E | 2025D | S36 | W24 | 10 | 23.6 | 2 | 04 | 9 | 9 | E | RAMY | 4873 | |
| 25 | BSL | 1235E | 1235 | S27 | E90 | 11 | 1.5 | 1- | | | | C | CATA | | |
| 25 | DSD | 1240E | 1935D | N32 | E68 | 10 | 30.9 | | 02 | 9 | 9 | E | RAMY | 4875 | |
| 25 | ADF | 1455E | 1914D | N32 | E66 | 10 | 30.8 | 2 | 08 | 6 | 9 | E | HOLL | 4875 | |
| 25 | ASR | 1555E | 2025D | S25 | E90 | 11 | 1.6 | | | 9 | 9 | E | RAMY | | |
| 25 | ASR | 1645E | 2342D | S23 | E90 | 11 | 1.6 | | | 9 | 9 | E | HOLL | | |
| 25 | ASR | 2239E | 0930D | S24 | E90 | 11 | 1.9 | | | 9 | 9 | E | LEAR | | |
| 26 | ADF | 0140E | 0930D | N33 | E61 | 10 | 30.9 | 1 | 03 | 9 | 9 | E | LEAR | 4875 | |
| 26 | AFS | 0405E | 0930D | N25 | E10 | 10 | 26.9 | | 01 | 9 | 9 | E | LEAR | | |
| 26 | SDF | 0603E | 2300D | S40 | E90 | 11 | 2.6 | 3 | 12 | 0 | 0 | E | LEAR | | |
| 26 | EPL | 0655 | 0730 | S23 | E90 | 11 | 2.2 | 1- | | | | C | CATA | | |
| 26 | BSL | 0708 | 0720D | S32 | W90 | 10 | 19.2 | 1- | | | | C | CATA | | |
| 26 | EPL | 0800 | 0840 | S23 | E90 | 11 | 2.3 | 1- | | | | C | CATA | | |
| 26 | BSL | 1005E | 1005 | N76 | W90 | 10 | 18.1 | 1- | | | | C | CATA | | |
| 26 | AFS | 1040E | 1348D | N25 | E06 | 10 | 26.9 | | 02 | 9 | 9 | E | SVTO | | |
| 26 | APR | 1130E | 1416D | S25 | W89 | 10 | 19.6 | 2 | | 9 | 9 | E | RAMY | | |
| 26 | ADF | 1130E | 1416D | S38 | W39 | 10 | 23.3 | 1 | 03 | 9 | 9 | E | RAMY | 4873 | |
| 26 | APR | 1140E | 1348D | S25 | E90 | 11 | 2.4 | 2 | | 9 | 9 | E | SVTO | | |
| 26 | APR | 1152 | 1214D | S20 | E90 | 11 | 2.4 | 2 | | | | C | ABST | | |
| 26 | EPL | 1154E | 1245 | S28 | E90 | 11 | 2.5 | 2 | | | | C | CATA | | |
| 26 | ASR | 1205E | 1350D | S25 | W75 | 10 | 20.7 | | | 9 | 9 | E | RAMY | | |
| 26 | AFS | 1655E | 0336D | N24 | E02 | 10 | 26.8 | | 02 | 9 | 9 | E | PALE | 4877 | |
| 26 | AFS | 1740E | 0336D | N03 | W27 | 10 | 24.7 | | 02 | 9 | 9 | E | PALE | | |
| 26 | ADF | 1745E | 0336D | N27 | E53 | 10 | 30.9 | 1 | 05 | 9 | 9 | E | PALE | 4875 | |
| 26 | DSD | 1745E | 0336D | N28 | E52 | 10 | 30.8 | | 03 | 9 | 9 | E | PALE | 4875 | |
| 26 | AFS | 1909E | 2200D | N24 | E01 | 10 | 26.9 | | 03 | 9 | 9 | E | HOLL | 4877 | |
| 26 | DSD | 1910E | 2211D | N32 | E52 | 10 | 30.9 | | 03 | 7 | 9 | E | HOLL | 4875 | |
| 26 | SDF | 2158E | 2355 | S40 | E90 | 11 | 3.2 | | 10 | 0 | 0 | E | PALE | | |
| 26 | DSD | 2200E | 2211D | N24 | E00 | 10 | 26.9 | | 02 | 9 | 9 | E | HOLL | 4877 | |
| 26 | AFS | 2328E | 1010D | N33 | E46 | 10 | 30.6 | | 02 | 9 | 9 | E | LEAR | 4875 | |
| 26 | AFS | 2329E | 0210D | N24 | W04 | 10 | 26.7 | | 02 | 9 | 9 | E | LEAR | 4877 | |
| 26 | ASR | 2330E | 0800D | S35 | E90 | 11 | 3.2 | | | 8 | 7 | E | LEAR | | |
| 26 | ASR | 2330E | 1010D | S24 | W90 | 10 | 20.0 | | | 9 | 9 | E | LEAR | 4876 | |
| 26 | APR | 2340E | 0800D | N53 | W90 | 10 | 19.3 | 1 | | 8 | 7 | E | LEAR | | |
| 27 | ASR | 0001E | 0110D | S25 | W90 | 10 | 20.0 | | | 9 | 9 | E | PALE | 4876 | |
| 27 | AFS | 0125E | 0336D | S22 | W02 | 10 | 26.9 | | 02 | 9 | 9 | E | PALE | | |

# ACTIVE PROMINENCES AND FILAMENTS

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| Day | Event Type | Start (UT) | End (UT) | Lat | CMD | CMP Mo | CMP Day | Imp | Extent | Blue Shift (.1 A) | Red Shift (.1 A) | Obs Type | Sta | NOAA/ USAF Reg# | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27 | ADF | 0210E | 1010D | N35 | E53 | 10 | 31.3 | 1 | 05 | 9 | 9 | E | LEAR | 4875 | |
| 27 | APR | 0535E | 0956D | N09 | W90 | 10 | 20.5 | 1 | | | | V | KHAR | | |
| 27 | AFS | 0620E | 1010D | N21 | E61 | 10 | 31.9 | | 02 | 9 | 9 | E | LEAR | 4878 | |
| 27 | AFS | 0715E | 0910D | S35 | W42 | 10 | 23.9 | | 03 | 9 | 9 | E | LEAR | 4873 | |
| 27 | ASF | 0722 | 0755D | N28 | E44 | 10 | 30.7 | 1 | | | | V | KHAR | | |
| 27 | ADF | 0728E | 0920D | S18 | E67 | 11 | 1.4 | 1 | | | | V | KHAR | | |
| 27 | ADF | 0735E | 0825 | S31 | E80 | 11 | 2.6 | 1 | | | | V | KHAR | | |
| 27 | DSD | 0750E | 0830D | N22 | E61 | 11 | 1.0 | | 04 | 9 | 9 | E | LEAR | 4878 | |
| 27 | ADF | 0805 | 0823 | N28 | E44 | 10 | 30.8 | 1 | | | | V | KHAR | | |
| 27 | ADF | 0830 | 0903 | S19 | E60 | 10 | 31.9 | 1 | | | | V | KHAR | | |
| 27 | ADF | 0836 | 0855 | N28 | E44 | 10 | 30.8 | 1 | | | | V | KHAR | | |
| 27 | APR | 0855 | 0906 | N09 | E90 | 11 | 3.1 | 1 | | | | V | KHAR | | |
| 27 | ADF | 0957 | 1040D | S19 | E60 | 11 | 1.0 | 1 | | | | V | KHAR | | |
| 27 | SDF | 1336E | 1456D | S45 | E90 | 11 | 4.0 | | 10 | 0 | 0 | E | HOLL | | |
| 27 | ADF | 1447E | 2335D | S33 | W46 | 10 | 24.0 | 1 | 04 | 7 | 9 | E | HOLL | 4873 | |
| 27 | AFS | 1449E | 2335D | N31 | E40 | 10 | 30.8 | | 04 | 9 | 9 | E | HOLL | 4875 | |
| 27 | ASR | 1452E | 2205D | S24 | W90 | 10 | 20.7 | | | 9 | 9 | E | HOLL | 4876 | |
| 27 | AFS | 1502E | 2335D | S22 | W05 | 10 | 27.2 | | 04 | 9 | 9 | E | HOLL | 4881 | |
| 27 | AFS | 1720E | 0316D | N30 | E40 | 10 | 30.9 | | 02 | 9 | 9 | E | PALE | 4875 | |
| 27 | ADF | 1720E | 0316D | S34 | W49 | 10 | 23.8 | 1 | 03 | 8 | 9 | E | PALE | 4873 | |
| 27 | AFS | 1745E | 0316D | S23 | W07 | 10 | 27.2 | | 02 | 9 | 9 | E | PALE | 4881 | |
| 27 | AFS | 1820E | 0316D | S20 | E56 | 11 | 1.0 | | 01 | 9 | 9 | E | PALE | 4878 | |
| 27 | AFS | 2224E | 1003D | N32 | E35 | 10 | 30.7 | | 03 | 9 | 9 | E | LEAR | 4875 | |
| 27 | ADF | 2233E | 0810D | S34 | W52 | 10 | 23.8 | 1 | 05 | 9 | 6 | E | LEAR | 4873 | |
| 27 | AFS | 2237E | 1003D | S22 | W09 | 10 | 27.2 | | 02 | 9 | 8 | E | LEAR | 4881 | |
| 27 | DSD | 2310E | 2335D | N24 | W12 | 10 | 27.0 | | 02 | 9 | 9 | E | HOLL | 4877 | |
| 27 | AFS | 2315E | 1003D | N24 | W15 | 10 | 26.8 | | 02 | 9 | 9 | E | LEAR | 4877 | |
| 28 | DSD | 0132E | 0235D | S29 | E61 | 11 | 1.8 | | 05 | 9 | 9 | E | LEAR | 4878 | Flare Associated |
| 28 | AFS | 0530E | 1003D | S21 | E48 | 10 | 31.9 | | 03 | 9 | 9 | E | LEAR | 4878 | |
| 28 | ADF | 0810E | 0842D | S21 | W18 | 10 | 27.0 | 1 | | | | V | KHAR | | |
| 28 | AFS | 1002E | 1055D | S22 | W15 | 10 | 27.3 | | 02 | 9 | 9 | E | SVTO | 4881 | |
| 28 | ADF | 1030E | 1055D | S37 | E58 | 11 | 2.1 | 1 | 10 | 9 | 9 | E | SVTO | 4878 | |
| 28 | AFS | 1045E | 1055D | N32 | E33 | 10 | 31.1 | | 03 | 9 | 9 | E | SVTO | 4875 | |
| 28 | AFS | 1251E | 1506D | S22 | W16 | 10 | 27.3 | | 03 | 9 | 9 | E | RAMY | 4881 | |
| 28 | AFS | 1502E | 2335D | S22 | W05 | 10 | 28.2 | | 04 | 9 | 9 | E | HOLL | | |
| 28 | ADF | 1825E | 2225D | N31 | E25 | 10 | 30.7 | 2 | 05 | 9 | 9 | E | HOLL | 4875 | |
| 28 | ADF | 1830E | 2339D | S33 | E53 | 11 | 2.0 | 2 | 13 | 9 | 9 | E | HOLL | 4878 | |
| 28 | AFS | 1833E | 2339D | S22 | W20 | 10 | 27.2 | | 04 | 9 | 9 | E | HOLL | 4881 | |
| 28 | AFS | 2225E | 2339D | N31 | E24 | 10 | 30.8 | | 03 | 9 | 9 | E | HOLL | 4875 | |
| 28 | AFS | 2258E | 1003D | N30 | E21 | 10 | 30.6 | | 02 | 9 | 9 | E | LEAR | 4875 | |
| 28 | ADF | 2308E | 1003D | S28 | E51 | 11 | 1.9 | 1 | 12 | 9 | 9 | E | LEAR | 4878 | |
| 28 | AFS | 2310E | 1003D | S22 | W22 | 10 | 27.3 | | 03 | 9 | 9 | E | LEAR | 4881 | |
| 29 | AFS | 0039E | 0143D | N31 | E22 | 10 | 30.8 | | 02 | 9 | 9 | E | PALE | 4875 | |
| 29 | AFS | 0039E | 0143D | S23 | W26 | 10 | 27.0 | | 02 | 9 | 9 | E | PALE | 4881 | |
| 29 | ADF | 0708E | 0748D | S29 | E45 | 11 | 1.8 | 1 | | | | V | KHAR | | |
| 29 | AFS | 0715E | 1455D | N39 | E19 | 10 | 30.8 | | 03 | 8 | 8 | E | SVTO | 4875 | |
| 29 | ADF | 0716E | 1455D | S25 | E35 | 11 | 1.0 | 1 | 22 | 9 | 9 | E | SVTO | 4878 | |
| 29 | AFS | 0720E | 1455D | S22 | W25 | 10 | 27.4 | | 04 | 9 | 9 | E | SVTO | 4881 | |
| 29 | ADF | 1013E | 1039D | S29 | E45 | 11 | 1.9 | 1 | | | | V | KHAR | | |
| 29 | ADF | 1514E | 1756D | S23 | E35 | 11 | 1.3 | 2 | 13 | 9 | 9 | E | RAMY | 4878 | |
| 29 | AFS | 1925E | 1932D | S22 | E32 | 11 | 1.3 | | 03 | 9 | 9 | E | PALE | 4878 | |
| 29 | ADF | 1925E | 1932D | S24 | E35 | 11 | 1.5 | | 03 | 9 | 9 | E | PALE | 4878 | |
| 29 | AFS | 2010E | 0342D | S22 | W37 | 10 | 27.0 | | 01 | 9 | 9 | E | PALE | 4881 | |
| 29 | ADF | 2051E | 2336D | S35 | E25 | 10 | 31.9 | 1 | 07 | 9 | 9 | E | HOLL | 4878 | |
| 29 | AFS | 2225E | 1006D | N30 | E06 | 10 | 30.4 | | 02 | 9 | 9 | E | LEAR | 4875 | |
| 29 | AFS | 2229E | 2240D | N24 | W40 | 10 | 26.8 | | 02 | 9 | 9 | E | LEAR | 4877 | |
| 29 | ADF | 2312E | 1006D | S27 | E39 | 11 | 2.0 | 1 | 12 | 9 | 9 | E | LEAR | 4878 | |
| 29 | AFS | 2335E | 0342D | N31 | E08 | 10 | 30.6 | | 01 | 9 | 9 | E | PALE | 4875 | |
| 30 | AFS | 0200E | 1006D | S20 | E22 | 10 | 31.8 | | 02 | 9 | 9 | E | LEAR | 4878 | |
| 30 | SDF | 0342E | 1641 | S30 | E17 | 10 | 31.5 | | 07 | 0 | 0 | E | PALE | | |
| 30 | SDF | 0342E | 1641 | S38 | E14 | 10 | 31.3 | | 11 | 0 | 0 | E | PALE | | |
| 30 | ADF | 0430E | 1006D | N34 | E08 | 10 | 30.8 | 1 | 07 | 9 | 5 | E | LEAR | 4875 | |
| 30 | BSL | 0802E | 0810D | S88 | W90 | 10 | 21.9 | 1- | | | | C | CATA | | |
| 30 | AFS | 1115E | 1535D | S22 | W43 | 10 | 27.2 | | 03 | 9 | 7 | E | RAMY | 4881 | |
| 30 | ADF | 1115E | 2117D | N25 | E25 | 11 | 1.4 | 2 | 11 | 9 | 9 | E | RAMY | 4878 | |
| 30 | DSD | 1150E | 1535D | S19 | E19 | 10 | 31.9 | | 04 | 9 | 9 | E | RAMY | 4878 | |
| 30 | SDF | 1337E | 1337D | S13 | E03 | 10 | 30.8 | | 21 | 0 | 0 | E | HOLL | | |
| 30 | SDF | 1337E | 1337D | S39 | E17 | 10 | 31.9 | | 06 | 0 | 0 | E | HOLL | | |

# ACTIVE PROMINENCES AND FILAMENTS

## OCTOBER 1987

| Day | Event Type | Start (UT) | End (UT) | Lat | CMD | CMP Mo | CMP Day | Imp | Extent | Blue Shift (.1 A) | Red Shift (.1 A) | Obs Type | Sta | NOAA/ USAF Reg# | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 | ASR | 1415E | 1730D | S90 | W34 | 10 | 27.4 | | | 9 | 8 | E | RAMY | 4873 | |
| 30 | ADF | 1450E | 2318D | S22 | E16 | 10 | 31.8 | 2 | 21 | 9 | 9 | E | HOLL | 4878 | |
| 30 | SDF | 1650E | 1652D | S33 | E22 | 11 | 1.4 | 3 | 07 | 9 | 7 | E | HOLL | 4878 | |
| 30 | SDF | 1658E | 1658D | S41 | E31 | 11 | 2.2 | 3 | 07 | 0 | 0 | E | RAMY | 4878 | |
| 30 | DSD | 2010E | 2045D | N28 | W08 | 10 | 30.2 | | 03 | 9 | 9 | E | PALE | 4875 | |
| 30 | ADF | 2310E | 1005D | S23 | E11 | 10 | 31.8 | 1 | 20 | 9 | 9 | E | LEAR | 4878 | |
| 30 | DSD | 2315E | 0530D | N37 | E01 | 10 | 31.0 | | 07 | 9 | 9 | E | LEAR | 4875 | |
| 30 | AFS | 2315E | 1005D | N31 | E00 | 10 | 31.0 | | 03 | 9 | 9 | E | LEAR | 4875 | |
| 31 | SDF | 0224E | 1936 | N24 | E55 | 11 | 4.3 | | 36 | 0 | 0 | E | PALE | | |
| 31 | DSD | 0620E | 0913D | S23 | W61 | 10 | 26.6 | | 04 | 4 | 8 | E | SVTO | 4881 | |
| 31 | ADF | 0620E | 0913D | S28 | W62 | 10 | 26.4 | 1 | 04 | 4 | 8 | E | SVTO | 4881 | |
| 31 | BSL | 0624 | 0630 | S25 | E90 | 11 | 7.2 | 1- | | | | C | CATA | | |
| 31 | BSL | 0655 | 0700D | S25 | E90 | 11 | 7.3 | 1- | | | | C | CATA | | |
| 31 | BSL | 0720E | 0736D | N68 | W90 | 10 | 23.2 | 1- | | | | C | CATA | | |
| 31 | BSL | 0720E | 0740 | S25 | E90 | 11 | 7.3 | 1- | | | | C | CATA | | |
| 31 | BSL | 0725E | 0736D | S23 | E90 | 11 | 7.2 | 1- | | | | C | CATA | | |
| 31 | BSL | 0740E | 0740 | S69 | E90 | 11 | 8.5 | 1- | | | | C | CATA | | |
| 31 | BSL | 0824 | 0831D | S74 | E90 | 11 | 8.6 | 1- | | | | C | CATA | | |
| 31 | DSD | 0830E | 0843D | S21 | W59 | 10 | 26.8 | | 03 | 9 | 9 | E | LEAR | 4881 | |
| 31 | DSD | 0835E | 0913D | S21 | E09 | 11 | 1.0 | | 03 | 9 | 9 | E | SVTO | 4878 | |
| 31 | DSD | 0910E | 1005D | S21 | W60 | 10 | 26.8 | | 03 | 9 | 9 | E | LEAR | 4881 | |
| 31 | SDF | 0913E | 0110D | S21 | W13 | 10 | 30.4 | | 20 | 0 | 0 | E | LEAR | | |
| 31 | DSD | 1116E | 1243D | S23 | W55 | 10 | 27.2 | | 02 | 9 | 9 | E | SVTO | 4881 | |
| 31 | ADF | 1128E | 1814D | S25 | E14 | 11 | 1.6 | 1 | 13 | 9 | 9 | E | RAMY | 4878 | |
| 31 | DSD | 1250E | 1340D | S21 | W54 | 10 | 27.4 | | 02 | 9 | 9 | E | RAMY | 4881 | |
| 31 | AFS | 1846E | 0242D | S23 | W66 | 10 | 26.7 | | 01 | 9 | 9 | E | PALE | 4881 | |
| 31 | ADF | 1846E | 1901D | S27 | E10 | 11 | 1.6 | 1 | 15 | 9 | 9 | E | PALE | 4878 | |
| 31 | DSD | 1846E | 2028D | S24 | W69 | 10 | 26.4 | | 03 | 9 | 9 | E | PALE | 4881 | |
| 31 | AFS | 1953E | 2226D | S24 | E03 | 11 | 1.1 | | 02 | 9 | 9 | E | PALE | 4878 | |
| 31 | ASR | 2050 | 0242D | S26 | E78 | 11 | 6.9 | | | 9 | 9 | E | PALE | | |
| 31 | AFS | 2300E | 1005D | S23 | W62 | 10 | 27.2 | | 02 | 9 | 9 | E | LEAR | 4875 | |
| 31 | ADF | 2300E | 2309D | S27 | E08 | 11 | 1.6 | 2 | 16 | 9 | 9 | E | LEAR | 4878 | |
| 31 | DSD | 2315E | 0530D | N37 | E01 | 11 | 1.0 | | 07 | 9 | 9 | E | LEAR | 4875 | |

ADF = Active Dark Filament
AFS = Arch Filament System
APR = Active Prominence
ASR = Active Surge Region
BSD = Bright Surge on Disk
BSL = Bright Surge on Limb
CAP = CAP Prominence (Tandberg-Hanssen)
CRN = Coronal Rain
DSD = Dark Surge on Disk
EPL = Eruptive Prominence on Limb
LPS = Loops
MDP = Mound Prominence
SDF = Sudden Disappearing Filament
SPY = Spray
SSB = Solar Sector Boundary

For SOLAR SECTOR BOUNDARY REPORTS, the latitude field contains the Carrington longitude of the point where a neutral line crosses the solar equator. The comments field may contain the Carrington longitude and central meridian distance of two more intersection points.

The EXTENT field for limb events is the radial extent above the limb in hundredths of solar radius. For disk events this field contains the heliographic extent in whole degrees.

The remark "Bright Emission 1/3" indicates that bright emission was observed 1/3 of time.
The remark "Normal Emission 1/3" indicates that normal emission was observed 1/3 of time.

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

# WORLD DATA CENTER A
## FOR
## SOLAR-TERRESTRIAL PHYSICS

The ICSU Panel on WDCs has recommended that it would be appropriate courtesy to acknowledge in publications that data were obtained from the originating station or investigator through the intermediary of the WDCs. The following statement is suggested:

"Data used in this study were provided by WDC-A for Solar-Terrestrial Physics, NOAA E/GC2, 325 Broadway, Boulder Colorado 80303, USA."