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**NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION**

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**ENVIRONMENTAL DATA SERVICE**

Thomas S. Austin, Director

## **Solar - Geophysical Data**

NO. 388 DECEMBER 1976

**Part II (Comprehensive Reports)**

DATA FOR  
JUNE 1976  
MAY 1976  
& MISCELLANEA

**NATIONAL GEOPHYSICAL AND SOLAR - TERRESTRIAL DATA CENTER  
BOULDER, COLORADO**

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# SOLAR - GEOPHYSICAL DATA

1

No. 388

Issued in two parts

Hope I. Leighton, Editor

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Solar - Terrestrial Data Services Division

## CONTENTS

### Part I (Prompt Reports)

|                         | Page   |
|-------------------------|--------|
| Index for 1975 and 1976 | 2      |
| Data for November 1976  | 3-22   |
| Data for October 1976   | 23-118 |

### Part II (Comprehensive Reports)

|                         |       |
|-------------------------|-------|
| Index for 1975 and 1976 | 2     |
| Data for June 1976      | 3-19  |
| Data for May 1976       | 21-30 |



JUNE 1976 DATA

Contents

|   | Page  |
|---|-------|
| <u>Active Regions</u>   | 4     |
| <u>Synoptic Solar Map</u>   | 5     |
| <u>Solar Flares</u>   |       |
| H $\alpha$ Solar Flares (Standardized Data)                               | 6-9   |
| Daily Flare Indices   | 10    |
| No-Flare-Patrol Chart   | 11    |
| <u>Solar Radio Waves</u>  |       |
| Worldwide Outstanding Occurrences<br>at Fixed Frequencies                 | 12-13 |
| <u>Energetic Solar Particles and Plasma</u>                               | 14-19 |
| <u>Magnetograms of Geomagnetic Storm</u><br>(None produced for June 1976) |       |

ACTIVE REGIONS

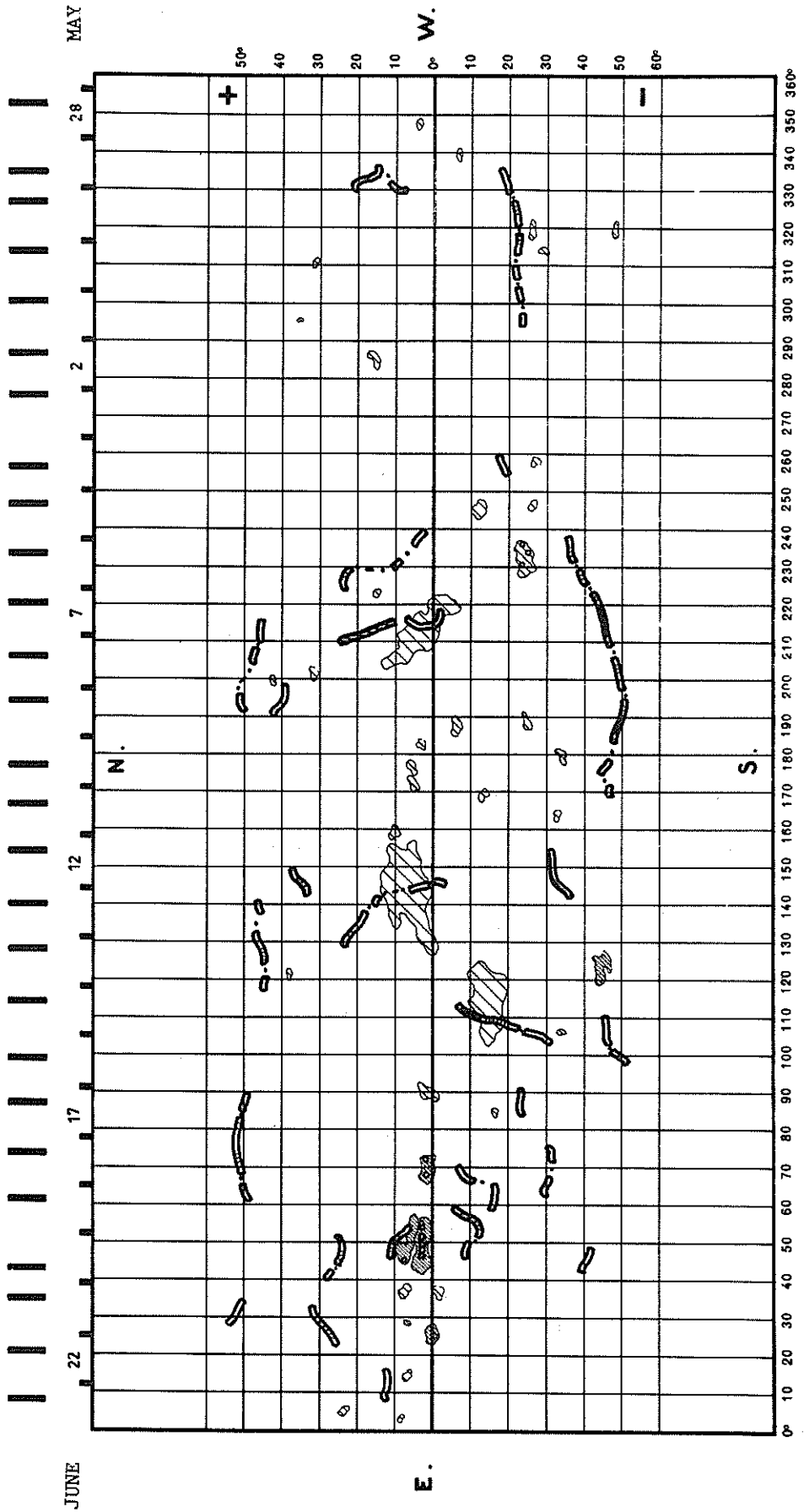
CARRINGTON ROTATION 1642

(May 27 - June 23, 1976)

| Region No. | Coordinates<br>Lat. Long. | Age at<br>CMP | IMP. | Spot-<br>less<br>Region | Region No. in<br>Rotation 1641 | Activity at<br>West Limb                               |
|------------|---------------------------|---------------|------|-------------------------|--------------------------------|--|
| 1          | 4°N 348°                  | -1            | 1    | x                       |                                | disappeared  |
| 2          | 26 S 319                  | -2            | 2    | x                       |                                | disappeared  |
| 3          | 24 S 233                  | -2            | 2    |                         |                                | stable   |
| 4          | 24 S 189                  | -3            | 1    | x                       |                                | decreasing   |
| 5          | 6 S 187                   | +2            | 1    | x                       |                                | disappeared  |
| 6          | 34 S 179                  | -1            | 1    | x                       |                                | dispersed  |
| 7          | 6 N 172                   | +4            | 1    | x                       |                                | disappeared  |
| 8          | 33 S 164                  | +5            | 1    | x                       |                                | disappeared  |
| 9          | 44 S 120                  | +3            | 1    | x                       |                                | decreasing   |
| 10         | 2 N 89                    | +5            | 1    | x                       |                                | disappeared  |
| 11         | 2 N 69                    | -2            | 2    | x                       |                                | decreasing, no<br>spot at the limb                     |
| 12         | 7 N 50                    | >6            | 2    |                         |                                | decreasing, no<br>spot at the limb                     |
| 13         | 3 N 49                    | >6            | 3    |                         |                                | spot at the limb<br>decreasing, no<br>spot at the limb |
| 14         | 8 N 36                    | +4            | 1    | x                       |                                | spot at the limb<br>decreasing, no<br>spot at the limb |
| 15         | 1 S 36                    | +6            | 1    | x                       |                                | disappeared  |
| 16         | 1 N 25                    | -2            | 2    |                         |                                | disappeared  |
| 17         | 7 N 13                    | +2            | 1    | x                       |                                | decreasing, no<br>spot at the limb                     |
| 18         | 24 N 4                    | -5            | 1    | x                       |                                | disappeared  |
| 19         | 9 N 3                     | +5            | 1    | x                       |                                | ?<br>disappeared                                       |

SYNOPTIC SOLAR MAP  
CARRINGTON ROTATION 1642  
MAY 27 TO JUNE 23, 1976

MEUDON OBSERVATORY



6  
Jun 76

H $\alpha$  SOLAR FLARES  
JUNE 1976

| OBSERVATORY | OBSERVED UT |       |            |        | LOCATION        |                 |                  |                     |         | DURATION | IMPORTANCE | OBS. |      | MEASUREMENTS |         |            | REMARKS |           |             |
|-------------|-------------|-------|------------|--------|-----------------|-----------------|------------------|---------------------|---------|----------|------------|------|------|--------------|---------|------------|---------|-----------|-------------|
|             | DATE        | START | MAX. PHASE | END    | APPROX          |                 | CENTRAL DISTANCE | MCNATH PLAGE REGION | CNR DAY |          |            | MIL  | COND | TYPE         | TIME UT | MEAS. AREA |         | CORR AREA |             |
|             |             |       |            |        | LAT.            | MER. DIST.      |                  |                     |         |          |            |      |      |              |         |            |         |           | MIL of Dist |
|             | 01          | 1719  | 1720       |        | NO FLARE PATROL |                 |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
|             | 01          | 1723  | 1730       |        | NO FLARE PATROL |                 |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
|             | 01          | 1810  | 1906       |        | NO FLARE PATROL |                 |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
|             | 01          | 1954  | 2016       |        | NO FLARE PATROL |                 |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
|             | 01          | 2025  | 2045       |        | NO FLARE PATROL |                 |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
|             | 02          | 1819  | 1921       |        | NO FLARE PATROL |                 |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
|             | 02          | 1948  | 2137       |        | NO FLARE PATROL |                 |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
|             | 03          | 1916  | 2032       |        | NO FLARE PATROL |                 |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
|             | 04          | 0126  | 0132       |        | NO FLARE PATROL |                 |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
|             | 05          | 1610  | 1622       |        | NO FLARE PATROL |                 |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
|             | 05          | 1632  | 1635       |        | NO FLARE PATROL |                 |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
|             | 05          | 2105  | 2117       |        | NO FLARE PATROL |                 |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
|             | 06          | 1927  | 2143       |        | NO FLARE PATROL |                 |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
|             | 06          | 2147  | 2200       |        | NO FLARE PATROL |                 |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
|             | 06          | 2210  | 2216       |        | NO FLARE PATROL |                 |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
|             | 06          | 2219  | 2220       |        | NO FLARE PATROL |                 |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
|             | 07          | 2048  | 2123       |        | NO FLARE PATROL |                 |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
| 445         | WEND        | 08    | 1228       |        | 1244            | S25             | W30              | .621                | 14259   | 6.3      | 16         | -N   |      |              |         |            |         |           |             |
| 446         | WEND        | 08    | 1304       |        | 1312            | S24             | W29              | .603                | 14259   | 6.4      | 8          | -F   |      |              |         |            |         |           |             |
| 447         | MCMA        | 08    | 1510       | 1514   | 1516            | S13             | E24              | .457                | 14262   | 10.4     | 6          | -F   | C    | 1514         | 30      | .4         | DH      |           |             |
| GRP63448    |             | 08    | 1640+7     | 1650+1 | 1714            | S24             | W34              | .654                | 14259   | 6.1      | 34         | -F   |      |              |         | 25         | .3      | DH        |             |
|             | MCMA        | 08    | 1640       | 1650   | 17150           | S25             | W33              | .651                | 14259   | 6.2      | 35D        | -N   | C    | 1650         | 30      | .4         | DH      |           |             |
|             | HTPR        | 08    | 1647       | 1651   | 1713            | S24             | W35              | .665                | 14259   | 6.1      | 26         | -F   | C    | 1651         | 20      | .2         |         |           |             |
|             |             | 08    | 2129       | 2214   |                 | NO FLARE PATROL |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
|             |             | 09    | 0200       | 0215   |                 | NO FLARE PATROL |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
| 449         | MONT        | 09    | 0846       | 0847   | 0851            | S25             | W40              | .722                | 14259   | 6.4      | 5          | -F   | C    | 0847         | 40      |            |         |           |             |
| GRP63450    |             | 09    | 0908+3     | 0910+5 | 0921            | S23             | W43              | .741                | 14259   | 6.2      | 13         | -F   |      |              |         | 30         | .4      | D         |             |
|             | HTPR        | 09    | 0908       | 0913   | 0920            | S22             | W44              | .747                | 14259   | 6.1      | 12         | -N   | C    | 0913         | 10      | .1         |         |           |             |
|             | CATA        | 09    | 0910       | 0910   | 0925            | S24             | W43              | .746                | 14259   | 6.2      | 15         | -N   | 2    | P            | 0910    | 28         | .4      |           |             |
|             | UPIC        | 09    | 0910       | 0915   | 0915U           | S23             | W43              | .741                | 14259   | 6.2      | 5D         | -F   | C    | 0915         | 41      |            |         |           |             |
|             | MEUD        | 09    | 0911       | 0914   | 0920            | S23             | W43              | .741                | 14259   | 6.2      | 9          | -F   | C    | 0914         | 30      | .4         | D       |           |             |
|             | MONT        | 09    | 0911       | 0913   | 0921            | S25             | W40              | .722                | 14259   | 6.4      | 10         | -F   | C    | 0913         | 40      |            | D       |           |             |
|             |             | 09    | 1959       | 2019   |                 | NO FLARE PATROL |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
| 451         | UPIC        | 10    | 0449       | 0505   | 0525            | S23             | W53              | .834                | 14259   | 6.2      | 36         | -F   | P    | 0505         | 20      |            |         |           |             |
| GRP63452    |             | 10    | 0639       | 0642   | 0650            | S24             | W53              | .837                | 14259   | 6.3      | 11         | -F   |      |              |         | 19         | .3      |           |             |
|             | HTPR        | 10    | 0639       | 0642   | 0650            | S23             | W54              | .843                | 14259   | 6.2      | 11         | -F   | C    | 0642         | 10      | .2         |         |           |             |
|             | MONT        | 10    | 0643E      | 0643   | 0650            | S25             | W53              | .840                | 14259   | 6.3      | 7D         | -F   | C    | 0643         | 20      |            |         |           |             |
| GRP63453    |             | 10    | 1044+1     | 1045+5 | 1055            | S25             | W55              | .856                | 14259   | 6.3      | 11         | -F   |      |              |         | 30         | .6      |           |             |
|             | RAMY        | 10    | 1044       | 1050   | 1055            | S26             | W55              | .859                | 14259   | 6.3      | 11         | -F   | 3    | C            |         | 44         |         |           |             |
|             | HTPR        | 10    | 1045       | 1045   | 1055            | S24             | W56              | .861                | 14259   | 6.2      | 10         | -N   | C    | 1045         | 20      | .3         |         |           |             |
|             |             | 10    | 2002       | 2016   |                 | NO FLARE PATROL |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
|             |             | 10    | 2104       | 2143   |                 | NO FLARE PATROL |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
|             |             | 10    | 2210       | 2215   |                 | NO FLARE PATROL |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
| 454         | HTPR        | 11    | 1542       | 1554   | 1624            | S45             | E40              | .845                | 14267   | 14.7     | 42         | -F   | C    | 1554         | 10      | .1         |         |           |             |
|             |             | 11    | 2005       | 2040   |                 | NO FLARE PATROL |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
| GRP63455    |             | 12    | 0740+5     | 0747+3 | 0759            | S45             | E30              | .797                | 14267   | 14.6     | 19         | -F   |      |              |         | 45         | .7      | EG        |             |
|             | CATA        | 12    | 0740       | 0750   | 0815            | S46             | E30              | .805                | 14267   | 14.6     | 35         | -F   | 2    | C            | 0750    | 56         | 1.0     |           |             |
|             | HTPR        | 12    | 0745       | 0748   | 0754            | S45             | E30              | .797                | 14267   | 14.6     | 9          | -F   | C    | 0748         | 30      | .4         | E       |           |             |
|             | MONT        | 12    | 0745       | 0747   | 0803            | S46             | E31              | .809                | 14267   | 14.6     | 18         | -F   | C    | 0747         | 60      |            | G       |           |             |
|             | ATHN        | 12    | 0747E      | 0748   | 0751            | S45             | E29              | .792                | 14267   | 14.5     | 4D         | -N   | 4    | C            |         | 32         |         | DE        |             |
| 456         | HTPR        | 12    | 1230       | 1234   | 1240            | S45             | E28              | .787                | 14267   | 14.6     | 10         | -F   | C    | 1234         | 30      | .4         | E       |           |             |
|             |             | 12    | 2047       | 2117   |                 | NO FLARE PATROL |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
|             |             | 12    | 2127       | 2200   |                 | NO FLARE PATROL |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
|             |             | 13    | 0010       | 0032   |                 | NO FLARE PATROL |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
|             |             | 13    | 0108       | 0130   |                 | NO FLARE PATROL |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
|             |             | 13    | 2132       | 2204   |                 | NO FLARE PATROL |                  |                     |         |          |            |      |      |              |         |            |         |           |             |
|             |             | 13    | 2208       | 0008   |                 | NO FLARE PATROL |                  |                     |         |          |            |      |      |              |         |            |         |           |             |

Note: Although these flare listings give all reported events, not all possible brightenings are reported. Thresholds of reporting vary from observatory to observatory.





8  
Jun 76

H $\alpha$  SOLAR FLARES  
JUNE 1976

| OBSERVATORY                              | OBSERVED UT |              |               |                 | LOCATION |               |                     |                         |             | DURATION<br>MIN. | IMPORTANCE | OBS.<br>COND. TYPE | MEASUREMENTS |               |               | REMARKS |             |         |     |          |   |
|--|-------------|--------------|---------------|-----------------|----------|---------------|---------------------|-------------------------|-------------|------------------|------------|--------------------|--------------|---------------|---------------|---------|-------------|---------|-----|----------|---|
|  | DATE<br>JUN | START        | MAX. PHASE    | END             | APPROX.  |               | CENTRAL<br>DISTANCE | MATH<br>PLAGE<br>REGION | OBS.<br>DAY |                  |            |                    | TIME<br>UT   | MEAS.<br>AREA | CORR.<br>AREA |         |             |         |     |          |   |
|  |             |              |               |                 | LAT.     | MER.<br>DIST. |                     |                         |             |                  |            |                    |              |               |               |         | MIN. of Dia | Sq. Deg |     |          |   |
| GRP63474<br>CULG<br>HTPR<br>ATHN         | 17          | 0635         | 0617          | 0634            | N01      | E40           | .643                | 14275                   | 20.3        | 29               | -N         | P                  | 0617         | 30            | .4            | E       |             |         |     |          |   |
|  | 17          | 0605         | 0617          | 0634D           | N01      | E40           | .643                | 14275                   | 20.3        | 290              | -F         |                    |              |               |               |         |             |         |     |          |   |
|  | 17          | 0613         | 0613          | 0706            | N02      | E40           | .643                | 14275                   | 20.3        | 47               | -B         |                    |              |               |               |         | C           | 0618    | 60  | .7       | E |
|  | 17          | 0616         | 0619          | 0630            | N01      | E41           | .656                | 14275                   | 20.3        | 14               | -N         |                    |              |               |               |         | 2           | 0619    | 114 | 252.0    |   |
| GRP63475<br>ATHN<br>ISTA<br>CATA         | 17          | 0710         | 0712          | 0735            | N01      | E40           | .643                | 14275                   | 20.3        | 25               | -N         | 2                  | 0712         | 49            | 11.0          | F       |             |         |     |          |   |
|  | 17          | 0710         | 0712          | 0721            | N01      | E41           | .656                | 14275                   | 20.4        | 11               | -N         |                    |              |               |               |         |             |         |     |          |   |
|  | 17          | 0710         | 0712          | 0745            | N02      | E40           | .643                | 14275                   | 20.3        | 35               | -N         |                    |              |               |               |         |             |         |     |          |   |
|  | 17          | 0715         | 0720          | 0735            | N01      | E40           | .643                | 14275                   | 20.3        | 20               | -B         |                    |              |               |               |         | 2           | 0720    | 64  | 1.1      |   |
| GRP63476<br>HTPR<br>ATHN<br>ZURI<br>CATA | 17          | 0801         | 0807          | 0820            | N02      | E38           | .616                | 14275                   | 20.2        | 19               | -N         | 2                  | 0808         | 30            | .3            | E       |             |         |     |          |   |
|  | 17          | 0801         | 0808          | 0822            | N02      | E39           | .629                | 14275                   | 20.3        | 21               | -F         |                    |              |               |               |         |             |         |     |          |   |
|  | 17          | 0804         | 0807          | 0817            | N02      | E38           | .616                | 14275                   | 20.2        | 13               | -N         |                    |              |               |               |         | C           | 0807    | 33  | 0.0      |   |
|  | 17          | 0805         | 0813          | 0819            | N02      | E40           | .643                | 14275                   | 20.3        | 14               | -N         |                    |              |               |               |         | C           | 0813    | 80  | 1.1      |   |
|  | 17          | 0805         | 0810          | 0820D           | N02      | E36           | .588                | 14275                   | 20.0        | 150              | -B         |                    |              |               |               |         | 2           | 0810    | 84  | 1.1      |   |
| GRP63477<br>ATHN<br>MCMA<br>RAMY         | 17          | 1523         | 1525          | 1534            | N02      | E32           | .530                | 14275                   | 20.0        | 11               | -B         | 4                  | 1524         | 50            | .6            | DHZ     |             |         |     |          |   |
|  | 17          | 1523         | 1525          | 1536            | N01      | E32           | .530                | 14275                   | 20.0        | 13               | -B         |                    |              |               |               |         |             |         |     |          |   |
|  | 17          | 1524E        | 1524E         | 1524D           | N03      | E33           | .545                | 14275                   | 20.1        |                  | -B         |                    |              |               |               |         | P           | 48      |     | Z        |   |
|  | 17          | 1527E        | 1527U         | 1531            | N03      | E32           | .530                | 14275                   | 20.0        | 40               | -F         |                    |              |               |               |         | 2           | 45      | .4  | JH<br>DE |   |
| 478 MCMA                                 | 17          | 1641E        | 1645          | 1655D           | N03      | E32           | .530                | 14275                   | 20.1        | 140              | -F         | C                  | 1645         | 100           | 1.2           | E       |             |         |     |          |   |
|  | 17          | 2600         | 2122          | NO FLARE PATROL |          |               |                     |                         |             |                  |            |                    |              |               |               |         |             |         |     |          |   |
| 479 MCMA                                 | 17          | 2155         | 2159          | 2249D           | N03      | E31           | .515                | 14275                   | 20.2        | 540              | -F         | C                  | 2159         | 40            | .5            | D       |             |         |     |          |   |
|  | 17          | 2249         | 0009          | NO FLARE PATROL |          |               |                     |                         |             |                  |            |                    |              |               |               |         |             |         |     |          |   |
|  | 18          | 0029         | 0045          | NO FLARE PATROL |          |               |                     |                         |             |                  |            |                    |              |               |               |         |             |         |     |          |   |
| 480 UPIC                                 | 18          | 0945         | 1000          | 1030            | N03      | E25           | .423                | 14275                   | 20.3        | 45               | -F         | P                  | 1000         | 82            |               |         |             |         |     |          |   |
|  | 18          | 1106         | 1130          | 1227D           | N03      | E24           | .407                | 14275                   | 20.3        | 81               | -F         |                    |              |               |               | D       |             |         |     |          |   |
| GRP63481<br>MCMA<br>UPIC<br>ZURI         | 18          | 1106E        | 1130          | 1300D           | N03      | E23           | .391                | 14275                   | 20.2        | 140              | -N         | C                  | 1120         | 40            | .5            | D       |             |         |     |          |   |
|  | 18          | 1115         | 1130          | 1135D           | N02      | E24           | .407                | 14275                   | 20.3        | 200              | -F         | P                  | 1130         | 61            |               |         |             |         |     |          |   |
|  | 18          | 1157E        | 1159          | 1227            | N03      | E24           | .407                | 14275                   | 20.3        | 300              | -F         | P                  | 1159         | 50            | .6            |         |             |         |     |          |   |
|  | 18          | 2201         | 2300          | NO FLARE PATROL |          |               |                     |                         |             |                  |            |                    |              |               |               |         |             |         |     |          |   |
| 482 HTPR                                 | 19          | 0910         | 0913          | 0917            | N02      | E09           | .157                | 14275                   | 20.1        | 7                | -F         | C                  | 0913         | 20            | .2            | E       |             |         |     |          |   |
| 483 HTPR                                 | 19          | 1534         | 1535          | 1541            | N02      | E07           | .122                | 14275                   | 20.2        | 7                | -F         | C                  | 1535         | 20            | .2            | E       |             |         |     |          |   |
|  | 19          | 2340         | 2353          | NO FLARE PATROL |          |               |                     |                         |             |                  |            |                    |              |               |               |         |             |         |     |          |   |
|  | 20          | 0032         | 0104          | NO FLARE PATROL |          |               |                     |                         |             |                  |            |                    |              |               |               |         |             |         |     |          |   |
|  | 20          | 0115         | 0132          | NO FLARE PATROL |          |               |                     |                         |             |                  |            |                    |              |               |               |         |             |         |     |          |   |
|  | 20          | 0145         | 0152          | NO FLARE PATROL |          |               |                     |                         |             |                  |            |                    |              |               |               |         |             |         |     |          |   |
|  | 20          | 0204         | 0205          | NO FLARE PATROL |          |               |                     |                         |             |                  |            |                    |              |               |               |         |             |         |     |          |   |
| 484 CATA                                 | 20          | 0910         | 0930          | 1010            | N03      | W22           | .375                | 14282                   | 13.7        | 60               | -F         | 2                  | 0930         | 56            | .6            |         |             |         |     |          |   |
|  | 20          | 1929         | 2002          | NO FLARE PATROL |          |               |                     |                         |             |                  |            |                    |              |               |               |         |             |         |     |          |   |
|  | 20          | 2030         | 2125          | NO FLARE PATROL |          |               |                     |                         |             |                  |            |                    |              |               |               |         |             |         |     |          |   |
|  | 20          | 2208         | 2235          | NO FLARE PATROL |          |               |                     |                         |             |                  |            |                    |              |               |               |         |             |         |     |          |   |
|  | 20          | 2301         | 2311          | NO FLARE PATROL |          |               |                     |                         |             |                  |            |                    |              |               |               |         |             |         |     |          |   |
|  | 20          | 2317         | 2337          | NO FLARE PATROL |          |               |                     |                         |             |                  |            |                    |              |               |               |         |             |         |     |          |   |
| 485 ATHN                                 | 21          | 1402E        | 1404          | 1412            | N03      | W19           | .326                | 14275                   | 20.2        | 100              | -F         | 4                  | C            | 48            |               | DE      |             |         |     |          |   |
|  | 21          | 2010         | 2131          | NO FLARE PATROL |          |               |                     |                         |             |                  |            |                    |              |               |               |         |             |         |     |          |   |
|  | 21          | 2146         | 2200          | NO FLARE PATROL |          |               |                     |                         |             |                  |            |                    |              |               |               |         |             |         |     |          |   |
| 486 TACH                                 | 22          | 0308E<br>IMP | 1 NO<br>CULG1 | 3359<br>PALE1   | S26      | E70           | .956                | 14287                   | 27.4        | 510              | ?F         | P                  | 0309         | 253           | 3.1           | BE      |             |         |     |          |   |
| GRP63487<br>MONT<br>HTPR<br>ARCE         | 22          | 0814+1       | 0817+1        | 0325            | S26      | E70           | .956                | 14287                   | 27.6        | 11               | -N         | C                  | 0817         | 25            |               | DH      |             |         |     |          |   |
|  | 22          | 0814         | 0817          | 0819            | S25      | E70           | .955                | 14287                   | 27.6        | 5                | -F         |                    |              |               |               |         |             |         |     |          |   |
|  | 22          | 0815         | 0818          | 0825            | S27      | E70           | .957                | 14287                   | 27.6        | 10               | -N         |                    |              |               |               |         | C           | 0818    | 30  | .6       | O |
|  | 22          | 0820E        |               | 0830            | S25      | E69           | .950                | 14287                   | 27.5        | 100              | -N         |                    |              |               |               |         | C           | 0825    | 29  |          | H |
| 488 MCMA                                 | 22          | 1323E        |               | 1408D           | N02      | W52           | .768                | 14282                   | 18.7        | 400              | -N         | C                  | 1329         | 25            | .5            | D       |             |         |     |          |   |

# H $\alpha$ SOLAR FLARES

JUNE 1976

| OBSERVATORY                      | OBSERVED UT |        |                 |                 | LOCATION        |              |                     |                           | DURATION<br>MIN. | IMPOR-<br>TANCE | OBS<br>COND TYPE | MEASUREMENTS |            |               | REMARKS |              |
|----------------------------------|-------------|--------|-----------------|-----------------|-----------------|--------------|---------------------|---------------------------|------------------|-----------------|------------------|--------------|------------|---------------|---------|--------------|
|                                  | DATE        | START  | MAX. PHASE      | END             | APPROX          |              | CENTRAL<br>DISTANCE | MCNATH<br>PLAGE<br>REGION |                  |                 |                  | CNR<br>DAY   | TIME<br>UT | MEAS.<br>AREA |         | CORR<br>AREA |
|                                  |             |        |                 |                 | LAT.            | MER.<br>DIST |                     |                           |                  |                 |                  |              |            |               |         |              |
| JUN                              |             |        |                 |                 |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
| GRP63489<br>HTPR<br>MCMA<br>ZURI | 22          | 1404+3 | 1412            | 1425            | S26             | E68          | .947                | 14287                     | 27.7             | 21              | -N               | C            | 1412       | 40            | .9      | EH           |
|                                  | 22          | 140+   | 1412            | 1425            | S27             | E67          | .943                | 14287                     | 27.6             | 21              | -N               | P            | 1408       | 50            | .9      |              |
|                                  | 22          | 1405   |                 | 14080           | S25             | E68          | .945                | 14287                     | 27.7             | 30              | -N               | P            | 1411       | 30            | .9      |              |
|                                  | 22          | 1407   | 1411            | 1411            | S26             | E68          | .947                | 14287                     | 27.7             | 4               | -N               | P            |            | 50            |         |              |
|                                  | 22          | 1845   | 1903            |                 | NO FLARE PATROL |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 22          | 1930   | 1952            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 22          | 2000   | 2012            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 22          | 2015   | 2025            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
| 490 HTPR                         | 23          | 0536   | 0542            | 0544            | S28             | E58          | .892                | 14287                     | 27.6             | 8               | -F               | C            | 0542       | 10            | .1      |              |
|                                  | 23          | 1754   | 1811            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 23          | 1645   | 2013            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 23          | 2110   | 2142            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 23          | 2158   | 2202            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 23          | 2208   | 2228            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 24          | 0106   | 0122            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 24          | 0134   | 0156            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 24          | 0211   | 0226            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 24          | 0235   | 0257            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 24          | 1846   | 2128            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 24          | 2215   | 2233            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 24          | 2240   | 2246            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 24          | 2251   | 2257            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 24          | 2310   | 2318            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
| 24                               | 2320        | 2348   | NO FLARE PATROL |                 |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
| 24                               | 2358        | 0141   | NO FLARE PATROL |                 |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
| 25                               | 0148        | 0153   | NO FLARE PATROL |                 |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
| 491 HTPR                         | 25          | 0800   | 0805            | 0808            | S01             | W45          | .708                | 14291                     | 22.0             | 8               | -F               | C            | 0805       | 10            | .1      |              |
|                                  | 25          | 1858   | 2004            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 25          | 2026   | 2049            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 25          | 2056   | 2119            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 25          | 2128   | 2213            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
| 492 HTPR                         | 25          | 2338   | 0000            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 26          | 1632   |                 | 1644            | N06             | W80          | .984                | 14275                     | 20.7             | 12              | -F               | * C          | 1635       | 10            | .2      |              |
|                                  | 26          | 1931   | 1948            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 26          | 2020   | 2036            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 26          | 2138   | 2156            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 26          | 2255   | 0010            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 27          | 0018   | 0030            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 27          | 1857   | 1910            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 27          | 1931   | 1948            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 27          | 2019   | 2041            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 27          | 2101   | 2144            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 27          | 2303   | 2348            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 28          | 0026   | 0044            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 28          | 2031   | 2139            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 28          | 2214   | 2224            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 28          | 2238   | 2330            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 29          | 0017   | 0035            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 29          | 0155   | 0207            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 29          | 1928   | 1954            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
|                                  | 29          | 2026   | 2049            | NO FLARE PATROL |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
| 29                               | 2139        | 2145   | NO FLARE PATROL |                 |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
| 29                               | 2208        | 2214   | NO FLARE PATROL |                 |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
| 29                               | 2218        | 0106   | NO FLARE PATROL |                 |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
| 30                               | 1846        | 1913   | NO FLARE PATROL |                 |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
| 30                               | 1915        | 1922   | NO FLARE PATROL |                 |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |
| 30                               | 2005        | 2045   | NO FLARE PATROL |                 |                 |              |                     |                           |                  |                 |                  |              |            |               |         |              |

"Remarks":

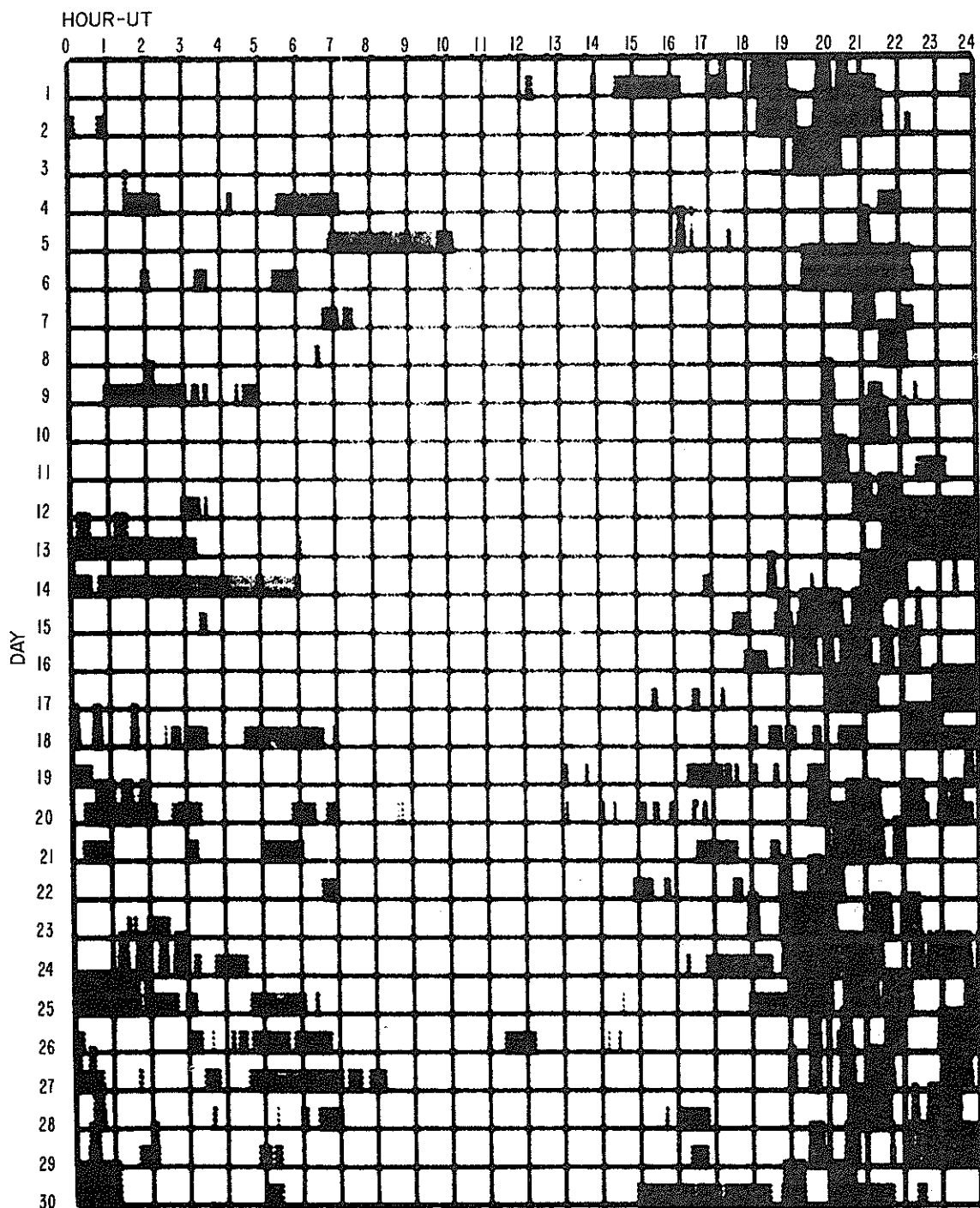
- A = Eruptive prominence whose base is less than 90° from central meridian.
- B = Probably the end of a more important flare.
- C = Invisible 10 minutes before.
- D = Brilliant point.
- E = Two or more brilliant points.
- F = Several eruptive centers.
- G = No visible spots in the neighborhood.
- H = Flare accompanied by a 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 calcium II lines H and K.
- P = Flare shows helium D<sub>3</sub> in emission.
- Q = Flare shows the Balmer continuum in emission.
- R = Marked asymmetry in H $\alpha$  line suggests ejection of high velocity material.
- S = Brightness follows disappearance of filament (same position).
- T = Region active all day.
- U = Two bright branches, parallel (||) or converging (Y).
- V = Occurrence of an explosive phase: important and abrupt expansion in about a minute with or without important 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.

| JUNE 1976 |             | DAILY FLARE INDICES<br>Includes all Flares |        |             |          |
|-----------|-------------|--|--------|-------------|----------|
| Date      | Flare Index | HR. OBS.                                   | Date   | Flare Index | HR. OBS. |
| 760601    | 0.00        | 22.2                                       | 760611 | 1.90        | 23.4     |
| 760602    | 0.00        | 21.2                                       | 760612 | 3.06        | 23.0     |
| 760603    | 0.00        | 22.7                                       | 760613 | 0.00        | 20.7     |
| 760604    | 0.00        | 23.9                                       | 760614 | .87         | 22.7     |
| 760605    | 0.00        | 23.6                                       | 760615 | 4.91        | 21.7     |
| 760606    | 0.00        | 21.4                                       | 760616 | 15.46       | 22.3     |
| 760607    | 0.00        | 23.4                                       | 760617 | 33.01       | 21.3     |
| 760608    | 10.68       | 23.3                                       | 760618 | 10.66       | 22.6     |
| 760609    | 2.42        | 23.4                                       | 760619 | 10.60       | 23.8     |
| 760610    | 2.50        | 23.0                                       | 760620 | 5.28        | 20.6     |
|           |             |  | 760621 | 5.57        | 22.4     |
|           |             |  | 760622 | 3.07        | 23.0     |
|           |             |  | 760623 | .92         | 21.3     |
|           |             |  | 760624 | 0.00        | 17.2     |
|           |             |  | 760625 | 2.10        | 20.9     |
|           |             |  | 760626 | .90         | 21.8     |
|           |             |  | 760627 | 0.00        | 21.5     |
|           |             |  | 760628 | 0.00        | 21.5     |
|           |             |  | 760629 | 0.00        | 19.7     |
|           |             |  | 760630 | 0.00        | 22.8     |

When no Flare Index is given, it is 0 for that day.

INTERVALS OF NO FLARE PATROL OBSERVATION  
FOR PRECEDING SOLAR FLARE TABLE  
JUNE 1976



Observatories included in total patrol:

|           |                |            |                |          |             |
|-----------|----------------|------------|----------------|----------|-------------|
| Arcetri   | Haute Provence | Kharkov    | McMath-Hulbert | Ramey    | Voroshilov  |
| Athenes   | Herstmonceux   | Kiev       | Meudon         | Tachkent | Wendelstein |
| Bucharest | Huancayo       | Kodaikanal | Mitaka         | Tehran   | Zürich      |
| Catania   | Hurbanovo      | Locarno    | Monte Mario    | Upice    |             |
| Culgoora  | Istanboul      | Manila     | Palehua        |          |             |

Times of no flare patrol are shown by the shaded area for each day divided into times of no cinematographic patrol (bottom half of day) and times of neither visual nor cinematographic patrol (top half of day).

12  
Jun 76

SOLAR RADIO EMISSION  
OUTSTANDING OCCURRENCES  
JUNE 1976

| JUN 1976  | FREQUENCY STATION | TYPE      | STARTING TIME | TIME OF MAXIMUM | DURATION | FLUX DENSITY<br>$10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$ |      | INT | POLARIZATION OR REMARKS |     |  |    |
|-----------|-------------------|-----------|---------------|-----------------|----------|---|------|-----|-------------------------|-----|--|----|
|           |                   |           | UT            | UT              | MINUTES  | PEAK  | MEAN |     |                         |     |  |    |
| 1         | 4995 BOUL         | 45 C      | 1713.5        | 1717.5          | 4        | 12  | 3    |     |                         |     |  |    |
|           | 4995 BOUL         | 45 C      | 1741          | 1747.5          | 7.5      | 12  | 3    |     |                         |     |  |    |
| 2         | 9240 ARCE         | 1 S       | 0635          | 0635.2          | 0.5      |   |      |     |                         |     |  |    |
|           | 4995 BOUL         | 45 C      | 1511.5        | 1514            | 5.5      | 23  | 7    |     |                         |     |  |    |
|           | 2695 BOUL         | 40 F      | 1513          | 1521.5          | 8.5      | 18  | 3    |     |                         |     |  |    |
|           | 2695 BOUL         | 8 S       | 1856          | 1856.5          | 2.5      | 39  | 13   |     |                         |     |  |    |
|           | 2695 BOUL         | 8 S       | 1901          | 1901.5          | 1        | 21  | 7    |     |                         |     |  |    |
| 3         | 9240 ARCE         | 1 S       | 1400.7        | 1400.9          | 0.5      |   |      |     |                         |     |  |    |
| 5         | 18 MCMA           | 6         | 1405          | 1407            | 2        |   |      | 1   |                         |     |  |    |
|           |                   |           |               |                 |          |   |      |     |                         |     |  |    |
| 7         | 2695 BOUL         | 1 S       | 1712          | 1713.5          | 3        | 3   | 1    |     |                         |     |  |    |
|           | 4995 BOUL         | 8 S       | 1718          | 1718            | 1.5      | 86  | 36   |     |                         |     |  |    |
| 9         | 550 KIEV          | 6 S       | 1112.7        | 1113            | 1        | 7   |      |     |                         |     |  |    |
|           | 550 KIEV          | 41 F      | 1300 E        | 1302            | 5.5      | 6   |      |     |                         |     |  |    |
| 10        | 808 ONDR          | 8 S       | 1003.6        | 1003.6          | 0.2      | 12  |      |     |                         |     |  |    |
|           | 260 ONDR          | 8 S       | 1005          | 1005            | 0.2      | 4   |      |     |                         |     |  |    |
|           | 9240 ARCE         | 1 S       | 1059.5        | 1059.7          | 0.7      |   |      |     |                         |     |  |    |
|           | 9240 ARCE         | 1 S       | 1120.5        | 1120.8          | 0.8      |   |      |     |                         |     |  |    |
| 11        | 245 SGMR          | 6 S       | 1910.8        | 1911.1          | 1.2      | 11.7  | 2.3  |     |                         |     |  |    |
|           | 2695 SGMR         | 4 S/F     | 1929.8        | 1930.4          | 1.3      | 23.2  | 7    |     |                         |     |  |    |
| 12        | 18 MCMA           | 6         | 2118          | 2120            | 2        |   |      | 1   |                         |     |  |    |
| 13        | 18 MCMA           | 6         | 1906          | 1908            | 2        |   |      | 1   |                         |     |  |    |
| 15        | 550 KIEV          | 6 S       | 1136.5        | 1136.8          | 1.5      | 9   |      |     |                         |     |  |    |
|           | 550 KIEV          | 40 F      | 1145          | 1151            | 6.2      | 6   |      |     |                         |     |  |    |
|           | 9240 ARCE         | 41 F      | 1208.5        | 1218            | 44.6     |   |      |     |                         |     |  |    |
|           | 9240 ARCE         | 2 S/F     | 1208.5        | 1209.1          | 1.3      |   |      |     |                         |     |  |    |
|           | 9240 ARCE         | 40 F      | 1217.4        | 1218            | 1.8      |   |      |     |                         |     |  |    |
|           | 9240 ARCE         | 40 F      | 1245          | 1245.9          | 1.7      |   |      |     |                         |     |  |    |
|           | 9240 ARCE         | 1 S       | 1251.7        | 1252            | 0.8      |   |      |     |                         |     |  |    |
|           | 9240 ARCE         | 1 S       | 1350.1        | 1350.4          | 0.8      |   |      |     |                         |     |  |    |
|           | 245 SGMR          | 6 S       | 1627.1        | 1628.1          | 1.8      | 22.6  | 6.8  |     |                         |     |  |    |
|           | 18 MCMA           | 6         | 1629          | 1630            | 2        |   |      |     |                         |     |  |    |
|           | 18 MCMA           | 6         | 1752          | 1753            | 2        |   |      |     |                         |     |  |    |
|           | 18 MCMA           | 6         | 1805          | 1810            | 5        |   |      |     |                         |     |  |    |
|           | 1420 BOUL         | 8 S       | 1900.5        | 1901.5          | 2        | 4   | 1    |     |                         |     |  |    |
|           | 16                | 1000 TYKH | 5 S           | 0345.3          | 0345.6   | 0.7   | 1.5  |     |                         | 0.4 |  | OL |
|           |                   | 3100 CRIM | 1 S           | 1157            | 1159     | 7   | 3    |     |                         | 1   |  |    |
| 9240 ARCE |                   | 20 GRF    | 1157.3        | 1225.9          | 48       |   |      |     |                         |     |  |    |
| 2800 OTTA |                   | 1 S       | 1158          | 1159            | 8        | 2.8   | 1.6  |     |                         |     |  |    |
| 3100 CRIM |                   | 3 S       | 1205          | 1205.5          | 5        | 8   | 3    |     |                         |     |  |    |
| 245 SGMR  |                   | 6 S       | 1221.3        | 1225.7          | 12.5     | 12.9  | 3.9  |     |                         |     |  |    |
| 410 SGMR  |                   | 6 S       | 1222          | 1226            | 10.3     | 4.4   | 1.7  |     |                         |     |  |    |
| 9500 POTS |                   | 20 GRF    | 1222          | 1227            | 28       | 10  |      |     |                         |     |  |    |
| 606 SGMR  |                   | 1 S       | 1223.7        | 1225.5          | 5.3      | 4.8   | 1.4  |     |                         |     |  |    |
| 1470 POTS |                   | 2 S/F     | 1224          | 1227            | 6        | 4.9   | 1.4  |     |                         |     |  |    |
| 2695 SGMR |                   | 2 S/F     | 1224.1        | 1225.6          | 5.1      | 8.5   | 2.5  |     |                         |     |  |    |
| 1415 SGMR |                   | 2 S/F     | 1225          | 1226.8          | 4.5      | 5.5   | 1.7  |     |                         |     |  |    |
| 4995 SGMR |                   | 1 S       | 1225.5        | 1226            | 3.6      | 4   | 1.2  |     |                         |     |  |    |
| 228 HARS  |                   | 8 S       | 1225.7        | 1226.3          | 1.3      | 65  | 25   |     |                         |     |  |    |
| 2800 OTTA |                   | 2 S/F     | 1225 E        | 1225.5          | 4.0      | 9.8   |      |     |                         |     |  |    |
| 1470 POTS |                   | 1 S       | 1311.7        | 1312.1          | 1.3      | 2.7   | 1    |     |                         |     |  |    |
| 2800 OTTA |                   | 20 GRF    | 1311.8        | 1312.1          | 16       | 1.8   | 0.8  |     |                         |     |  |    |
| 2800 OTTA |                   | 32 ABS    | 1410          | 1520            | 110      | 1.8   | 0.9  |     |                         |     |  |    |
| 2800 OTTA |                   | 32 ABS    | 1720          | 1820            | 140      | 1.8   | 0.9  |     |                         |     |  |    |
| 2800 OTTA |                   | 8 S       | 1951.2        | 1951.2          | 0.5      | 0.8   | 0.4  |     |                         |     |  |    |
| 2800 OTTA |                   | 1 S       | 2030          | 2031.5          | 3        | 1   | 0.5  |     |                         |     |  |    |
| 2800 OTTA |                   |           | 2030          |                 | 60       | 0.8   |      |     |                         |     |  |    |
| 4995 BOUL |                   | 40 F      | 2041          | 2044.5          | 9.5      | 14  | 5    |     |                         |     |  |    |
| 2695 BOUL |                   | 8 S       | 2045          | 2046.5          | 2        | 6   | 2    |     |                         |     |  |    |
| 4995 BOUL |                   | 45 C      | 2110.5        | 2112.5          | 11.5     | 10  | 3    |     |                         |     |  |    |
| 2695 BOUL |                   | 8 S       | 2119.5        | 2120.5          | 1.5      | 4   | 1    |     |                         |     |  |    |
| 2800 OTTA |                   | 20 GRF    | 2205          | 2221            | 30       | 1.2   | 0.6  |     |                         |     |  |    |
| 2695 PENT |                   | 21 GRF    | 2307          | 2320            | 95       | 2.8   | 1.4  |     |                         |     |  |    |
| 9400 TYKH |                   | 45 C      | 2308          | 2315.8          | 12       | 33  | 8    |     |                         |     |  |    |
| 9400 TYKH |                   | 29 PBI    | 2320          |                 | 60       | 6   | 2    |     |                         |     |  |    |
| 3750 TYKH | 45 C              | 2310      | 2315.9        | 10              | 22       | 5   |      |     |                         |     |  |    |
| 3750 TYKH | 29 PBI            | 2320      |               | 70              | 2        | 1   |      |     |                         |     |  |    |
| 2000 TYKH | 45 C              | 2310      | 2315.9        | 8               | 4.2      | 1.4   |      |     |                         |     |  |    |
| 2000 TYKH | 29 PBI            | 2318      |               | 50              | 1.5      | 0.7   |      |     |                         |     |  |    |
| 9500 HIRA | 5 S               | 2310      | 2315.8        | 11              |          |   |      |     |                         |     |  |    |
| 2695 HANI | 4 S/F             | 2311      | 2316          | 17.5            | 12.6     | 3.8   |      |     |                         |     |  |    |
| 1415 HANI | 2 S/F             | 2312      | 2316          | 16.5            | 1.6      | .8  |      |     |                         |     |  |    |
| 4995 HANI | 4 S/F             | 2312      | 2316          | 13.5            | 36.3     | 6   |      |     |                         |     |  |    |
| 1420 BOUL | 45 C              | 2312.5    | 2316          | 5.5             | 2        | 1   |      |     |                         |     |  |    |

SOLAR RADIO EMISSION  
OUTSTANDING OCCURRENCES

JUNE 1976

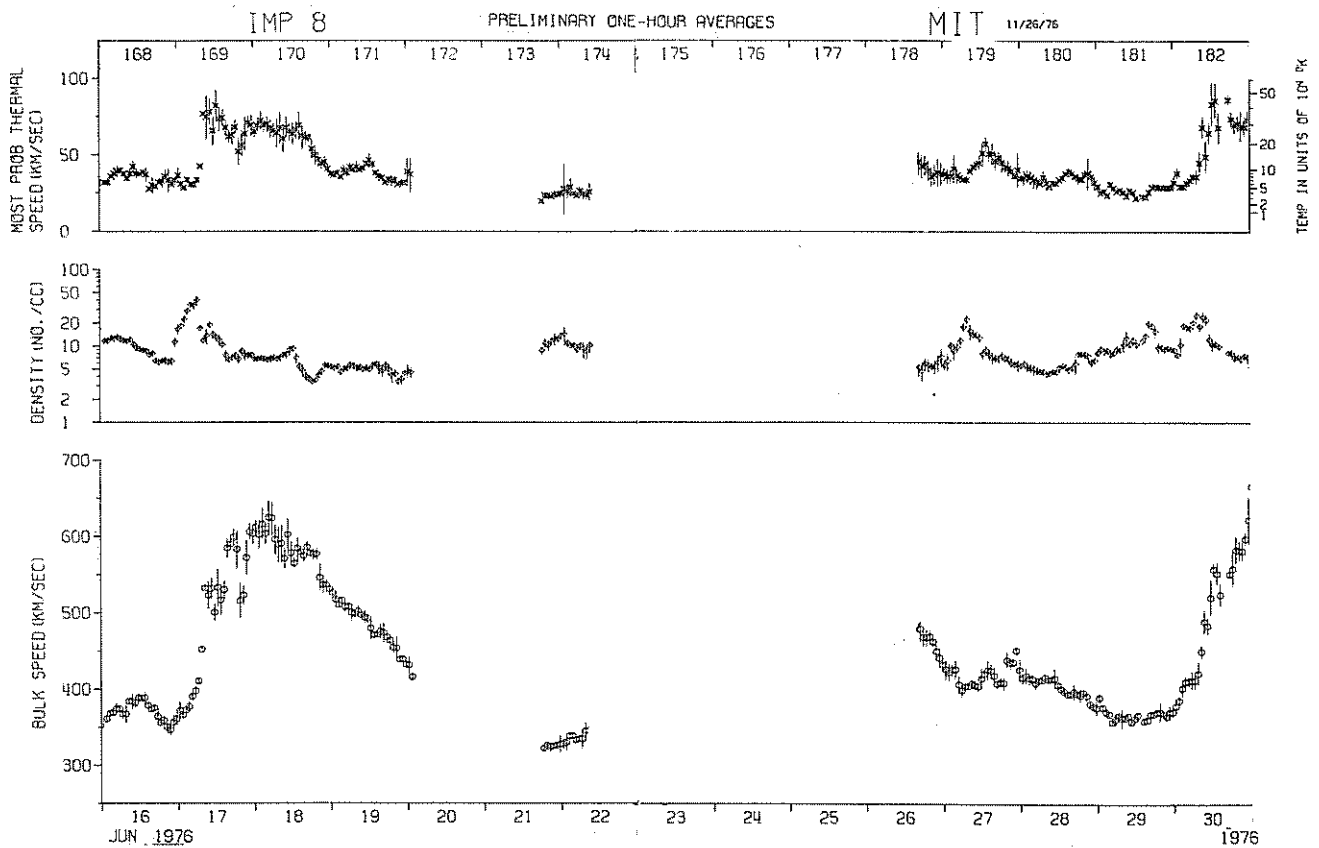
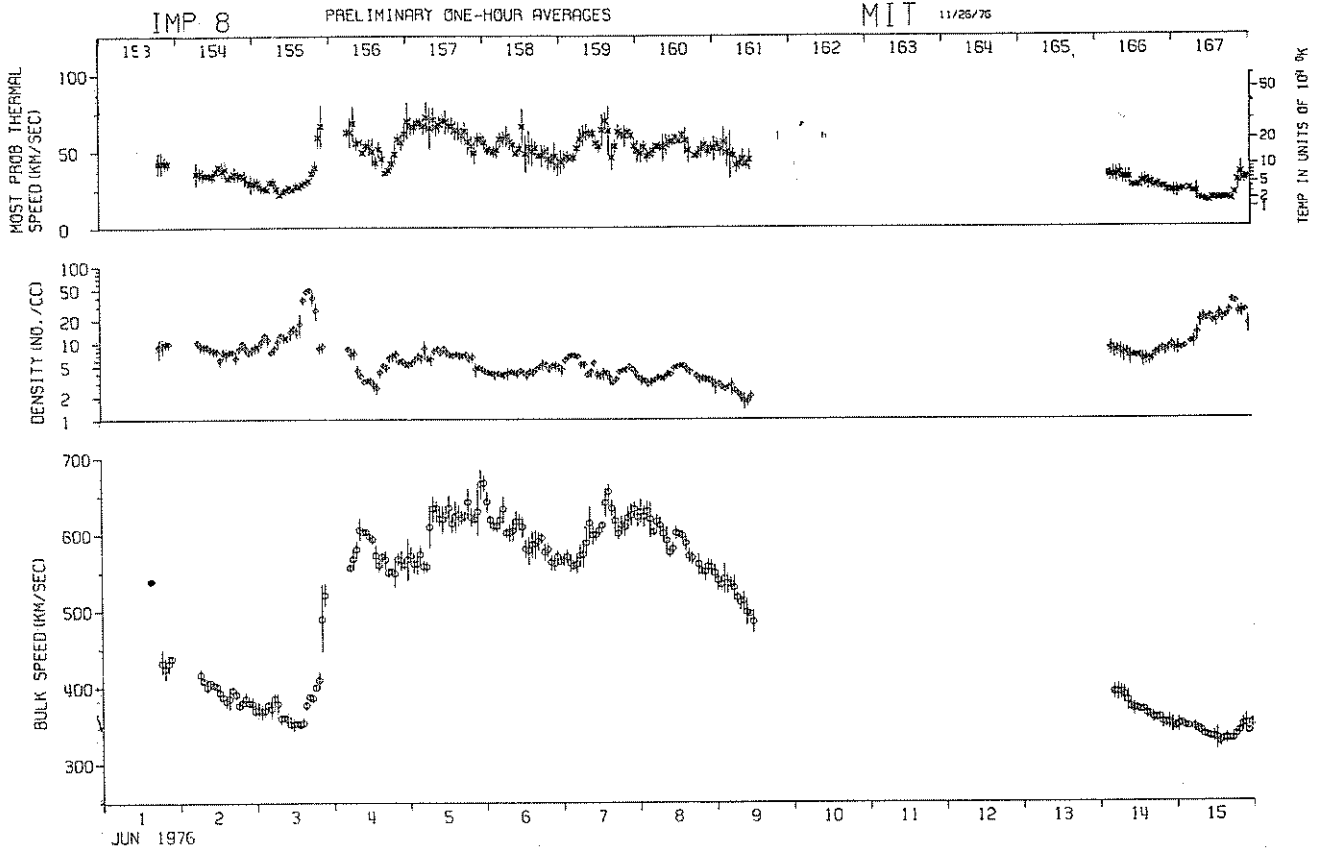
| JUN 1976  | FREQUENCY STATION | TYPE   | STARTING TIME | TIME OF MAXIMUM | DURATION | FLUX DENSITY<br>$10^{-22} \text{ Wm}^{-2} \text{ Hz}^{-1}$ |      | INT | POLARIZATION OR REMARKS |
|-----------|-------------------|--------|---------------|-----------------|----------|--|------|-----|-------------------------|
|           |                   |        | UT            | UT              | MINUTES  | PEAK   | MEAN |     |                         |
| 17        | 2695 PENT         | 2 S/F  | 2312.7        | 2316            | 7        | 9  | 3    |     |                         |
|           | 8800 MANI         | 4 S/F  | 2312.7        | 2316            | 15.8     | 30.7   | 7.1  |     |                         |
|           | 4995 BOUL         | 45 C   | 2312          | 2315.5          | 6.5      | 27   | 7    |     |                         |
|           | 2695 BOUL         | 45 C   | 2313          | 2317            | 11.5     | 10   | 3    |     |                         |
|           | 260 ONDR          | 43 NS  | 0520          |                 | 580      | 7  |      |     |                         |
|           | 9100 GORK         | 21 GRF | 0551 E        | 0618            | 55.3     | 4  | 2.8  |     |                         |
|           | 9100 GORK         | 1 S    | 0615          | 0616.3          | 3        | 4  | 2    |     |                         |
|           | 550 KIEV          | 27 RF  | 0641.5        | 0644.2          | 8.5      | 1.7  |      |     |                         |
|           | 550 KIEV          | 27 RF  | 0706          | 0709            | 9.2      | 1.7  |      |     |                         |
|           | 550 KIEV          | 25 R   | 0721.5        |                 |          | 2  |      |     |                         |
|           | 127 TORN          | 7 C    | 1025.3        | 1025.9          | 1        | 12   | 5    |     |                         |
|           | 2800 OTTA         | 27 RF  | 1215          |                 | 205      | 1.4  | 1    |     |                         |
|           | 2800 OTTA         | 24 R   | 1215          | 1245            | 30       | 1.4  | 0.8  |     |                         |
|           | 9240 ARCE         | 1 S    | 1226.1        | 1226.2          | 0.5      |  |      |     |                         |
|           | 2800 OTTA         | 24P R  | 1245          |                 | 90       | 1.4  |      |     |                         |
| 2695 BOUL | 3 S               | 1343.5 | 1344          | 2               | 3        | 1  |      |     |                         |
| 4995 BOUL | 45 C              | 1343.5 | 1346.5        | 3.5             | 30       | 8  |      |     |                         |
| 4995 BOUL | 45 C              | 1415   | 1417          | 20              | 20       | 6  |      |     |                         |
| 2800 OTTA | 26A FAL           | 1415   | 1540          | 85              | 1.4      | 0.7  |      |     |                         |
| 4995 BOUL | 3 S               | 1515.5 | 1517.5        | 4               | 13       | 4  |      |     |                         |
| 2695 SGMR | 2 S/F             | 1523.7 | 1523.8        | 1.2             | 2        | .6   |      |     |                         |
| 806 SGMR  | 4 S/F             | 1523.8 | 1524          | .4              | 15.5     | 4.6  |      |     |                         |
| 2800 OTTA | 1 S               | 1527   | 1527.1        | 1               | 1.8      | 0.8  |      |     |                         |
| 4995 BOUL | 3 S               | 2204   | 2206          | 5               | 16       | 6  |      |     |                         |
| 2695 BOUL | 1 S               | 2256   | 2256.5        | 1.5             | 4        | 1  |      |     |                         |
| 18        | 260 ONDR          | 44 NS  | 0546 E        |                 | 224      | 21   |      |     |                         |
|           | 9240 ARCE         | 1 S    | 0827.1        | 0827.2          | 0.6      |  |      |     |                         |
|           | 9240 ARCE         | 1 S    | 0836.2        | 0836.3          | 0.7      |  |      |     |                         |
|           | 9240 ARCE         | 1 S    | 1017.3        | 1017.4          | 0.5      |  |      |     |                         |
|           | 9240 ARCE         | 1 S    | 1037.1        | 1037.2          | 0.4      |  |      |     |                         |
|           | 260 ONDR          | 8 S    | 1250.3        | 1250.3          | 0.3      | 8  |      |     |                         |
|           | 2695 BOUL         | 8 S    | 1502.5        | 1504.5          | 3        | 7  | 2    |     |                         |
|           | 2695 BOUL         | 8 S    | 1616.5        | 1617.5          | 3        | 11   | 4    |     |                         |
|           | 2695 BOUL         | 8 S    | 1619.5        | 1620.5          | 4        | 16   | 5    |     |                         |
| 19        | 260 ONDR          | 44 NS  | 0544 E        |                 | 565 0    | 20   |      |     |                         |
|           | 207 VORO          | 44 NS  | 2100          | 2250            | 240      | 9  |      |     |                         |
|           | 550 KIEV          | 40 F   | 1405          | 1414            | 17       | 3  |      |     |                         |
| 20        | 200 GORK          | 44 NS  | 0301 E        |                 | 419 0    |  | 5    |     |                         |
|           | 260 ONDR          | 44 NS  | 0522 E        |                 | 358      | 12   |      |     |                         |
|           | 18 MCMA           | 6      | 1602          | 1603            | 2        |  |      | 1   |                         |
| 21        | 550 KIEV          | 25 R   | 1150          | 1456 U          | 2 U      | 3  |      |     | 1                       |
|           | 18 MCMA           | 6      | 1454          |                 |          |  |      |     |                         |
| 22        | 9240 ARCE         | 45 C   | 1208.3        | 1208.8          | 1.5      |  |      |     |                         |
|           | 2800 OTTA         | 20 GRF | 1410          | 1440            | 115      | 1  | 0.5  |     |                         |
|           | 18 MCMA           | 6      | 1915          | 1918            | 3        |  |      |     | 1                       |
| 23        | 9240 ARCE         | 28 PRE | 0808.9        |                 | 5.5      |  |      |     | RECORD DISTURBED        |
|           | 9240 ARCE         |        | 0814.4        | 0814.8          | 0.7      |  |      |     | INTERFERENCE            |
|           | 9240 ARCE         | 46 C   | 0814.4        | 0816.9          | 3.6      |  |      |     |                         |
|           | 9240 ARCE         |        | 0815.1        | 0815.7          | 1.3      |  |      |     |                         |
|           | 9240 ARCE         |        | 0816.4        | 0816.9          | 1.6      |  |      |     |                         |
|           | 9240 ARCE         | 29 PBI | 0818          |                 | 16       |  |      |     |                         |
|           | 550 KIEV          | 24 R   | 0909.2        |                 |          | 2.4  |      |     |                         |
|           | 550 KIEV          | 6 S    | 1101.5        | 1102            | 1.5      | 8.5  |      |     |                         |
| 2695 BOUL | 2 SF              | 1935.5 | 1937.5        | 3.5             | 4        | 1  |      |     |                         |
| 24        | 9240 ARCE         | 1 S    | 0844.1        | 0844.3          | 0.8      |  |      |     | INTERFERENCE            |
| 25        | 550 KIEV          | 7 S    | 1243.5        | 1246.4          | 11.5     | 11   |      |     |                         |
| 27        | 260 ONDR          | 8 S    | 0745.7        | 0745.7          | 0.2      | 13   |      |     |                         |
|           | 18 MCMA           | 6      | 1528          | 1530            | 2        |  |      |     | 1                       |
|           | 18 MCMA           | 42     | 2324          | 2329            | 7        |  |      |     | 1                       |
| 28        | 4995 BOUL         | 8 S    | 2233.5        | 2234            | 1        | 43   | 14   |     |                         |
| 29        | 9500 POTS         | 4 S/F  | 1047          | 1047.8          | 3        | 11   |      |     |                         |
|           | 4995 BOUL         | 1 S    | 1559          | 1600            | 2        | 12   | 4    |     |                         |
|           | 4995 BOUL         | 8 S    | 1605          | 1605.5          | 1.5      | 18   | 6    |     |                         |
| 30        | 3100 CRIM         | 24 R   | 0800          | 0940            |          | 4  |      |     |                         |
|           | 9240 ARCE         | 3 S    | 0820.4        | 0820.7          | 0.8      |  |      |     |                         |
|           | 228 HARS          | 47 C   | 1240          | 1255            | 32       | 40   | 7    |     |                         |

Reports received from the following observatories:

|                         |                   |                       |                 |                      |                              |
|-------------------------|-------------------|-----------------------|-----------------|----------------------|------------------------------|
| ARCE = Arcetri          | DWIN = Dwingelloo | GORK = Gorky          | KIEV = Kiev     | OTTA = Ottawa        | SYDN = Sydney                |
| BERL = Berlin-Adlershof | HARS = Harestua   | HIRA = Hiraiso        | MANI = Manila   | POTS = Potsdam       | TORN = Torun                 |
| BORD = Bordeaux         | HUAH = Huancayo   | MCMA = McMath-Hulbert | ONDR = Ondrejov | SAOP = Sao Paulo     | TYKW = Toyokawa              |
| BOUL = Boulder          | IRKU = Irkutsk    |                       |                 | SGMR = Sagamore Hill | TRST = Trieste               |
| CRIM = Simferopol       |                   |                       |                 |                      | VORO = Voroshilov (Ussurisk) |

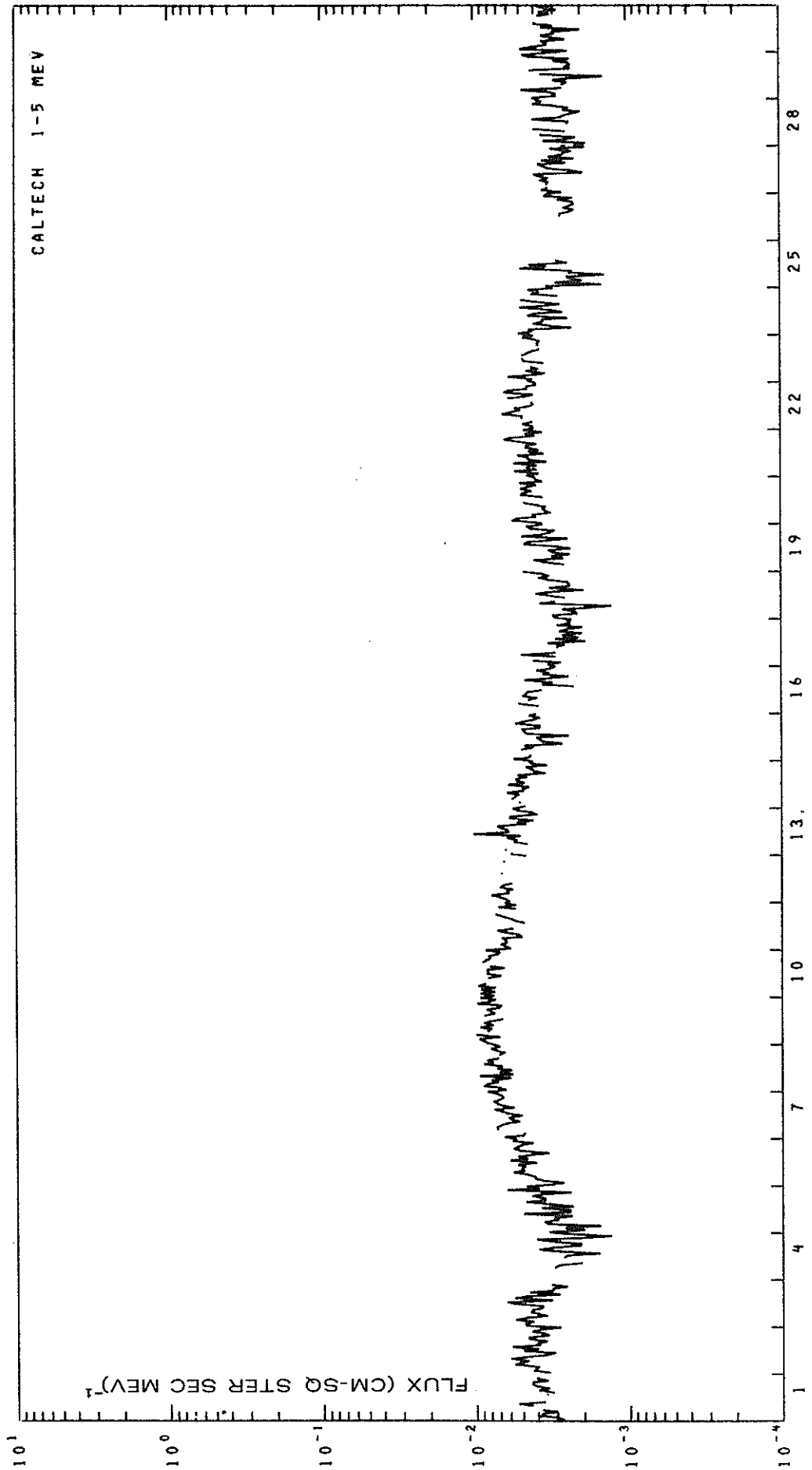
14  
Jun 76

# IMP 7 AND 8 SOLAR WIND PLASMA JUNE 1976



# IMP 7 AND 8 ELECTRONS

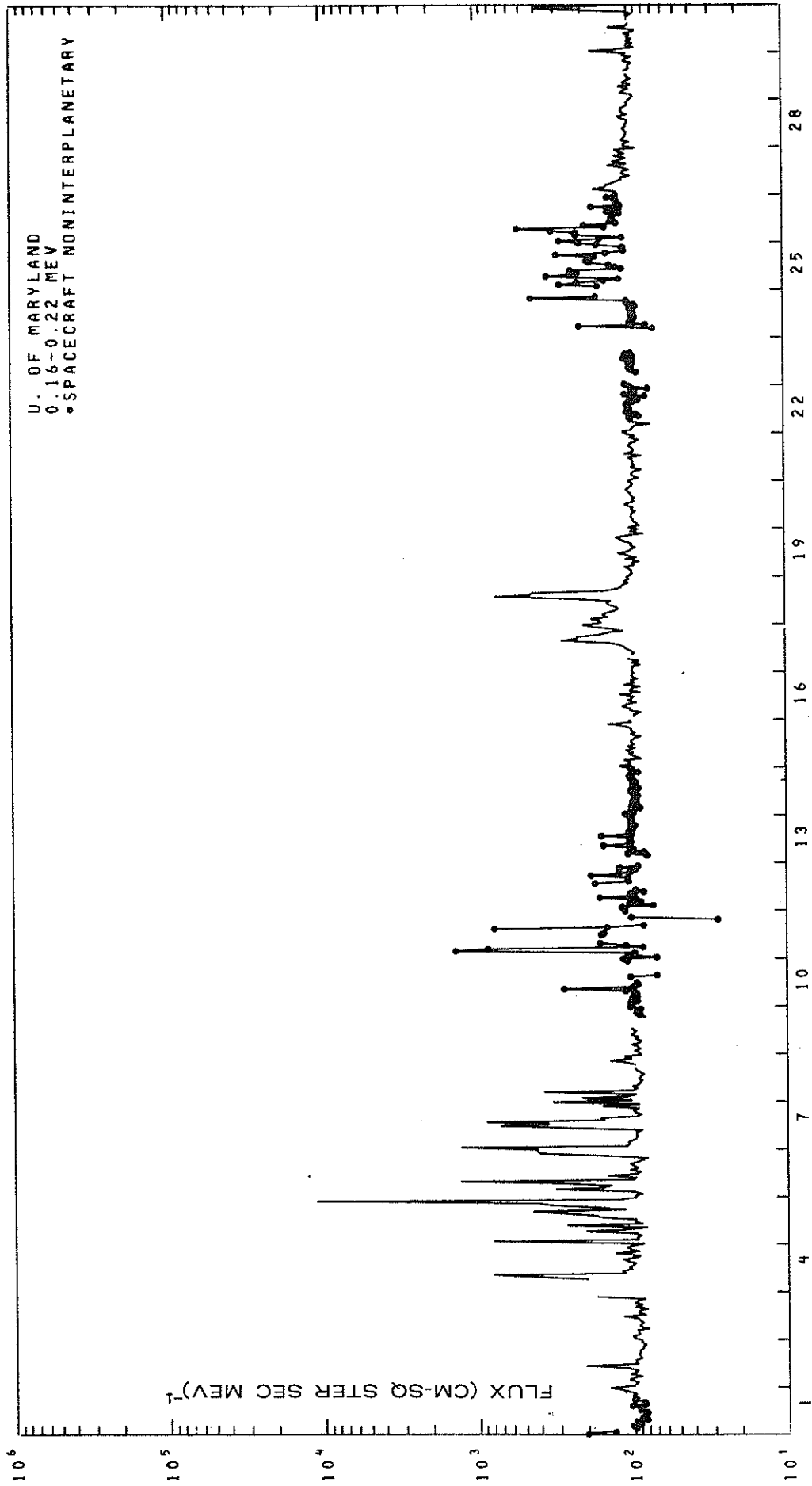
JUNE 1976





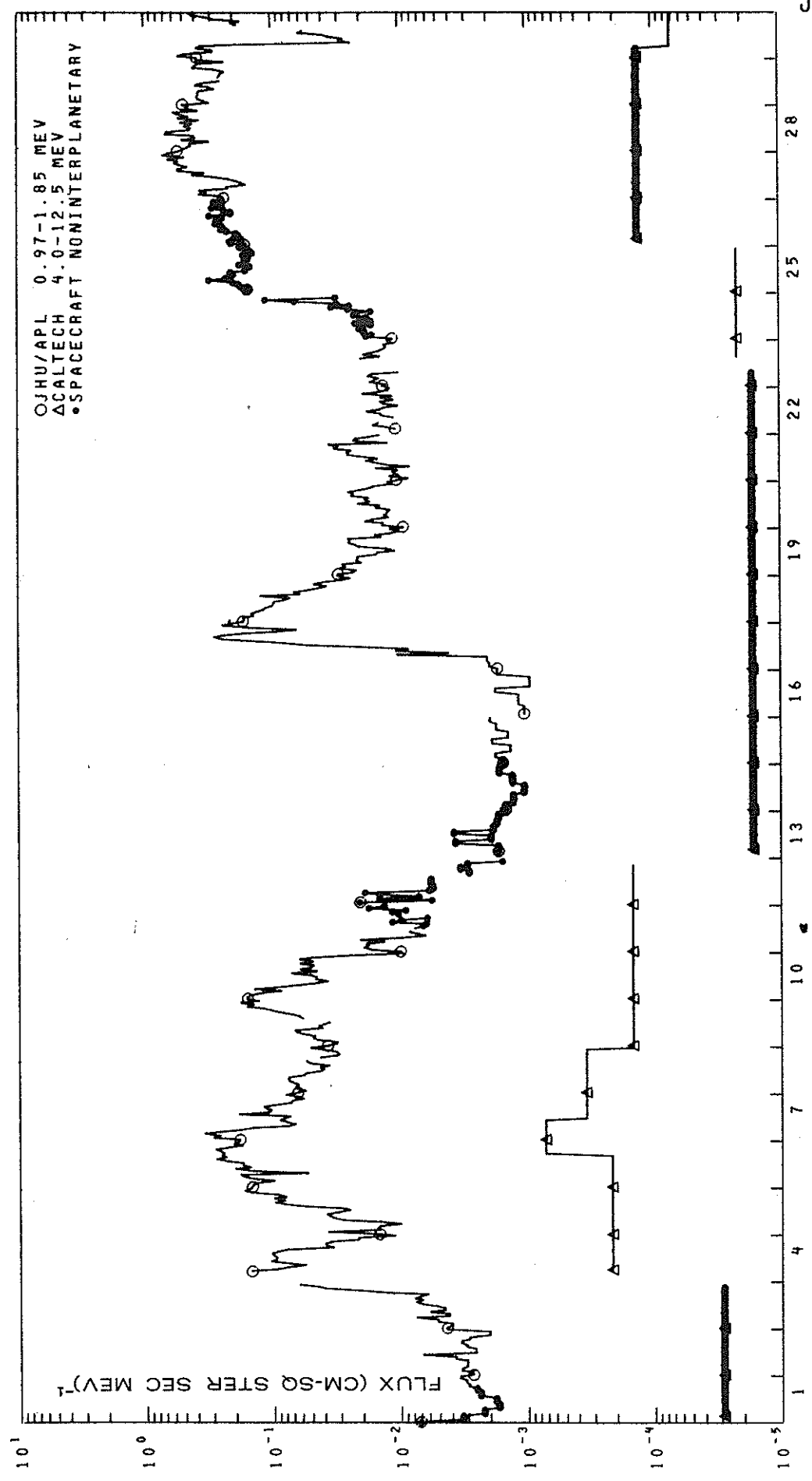
# IMP 7 AND 8 LOW ENERGY PROTONS

JUNE 1976



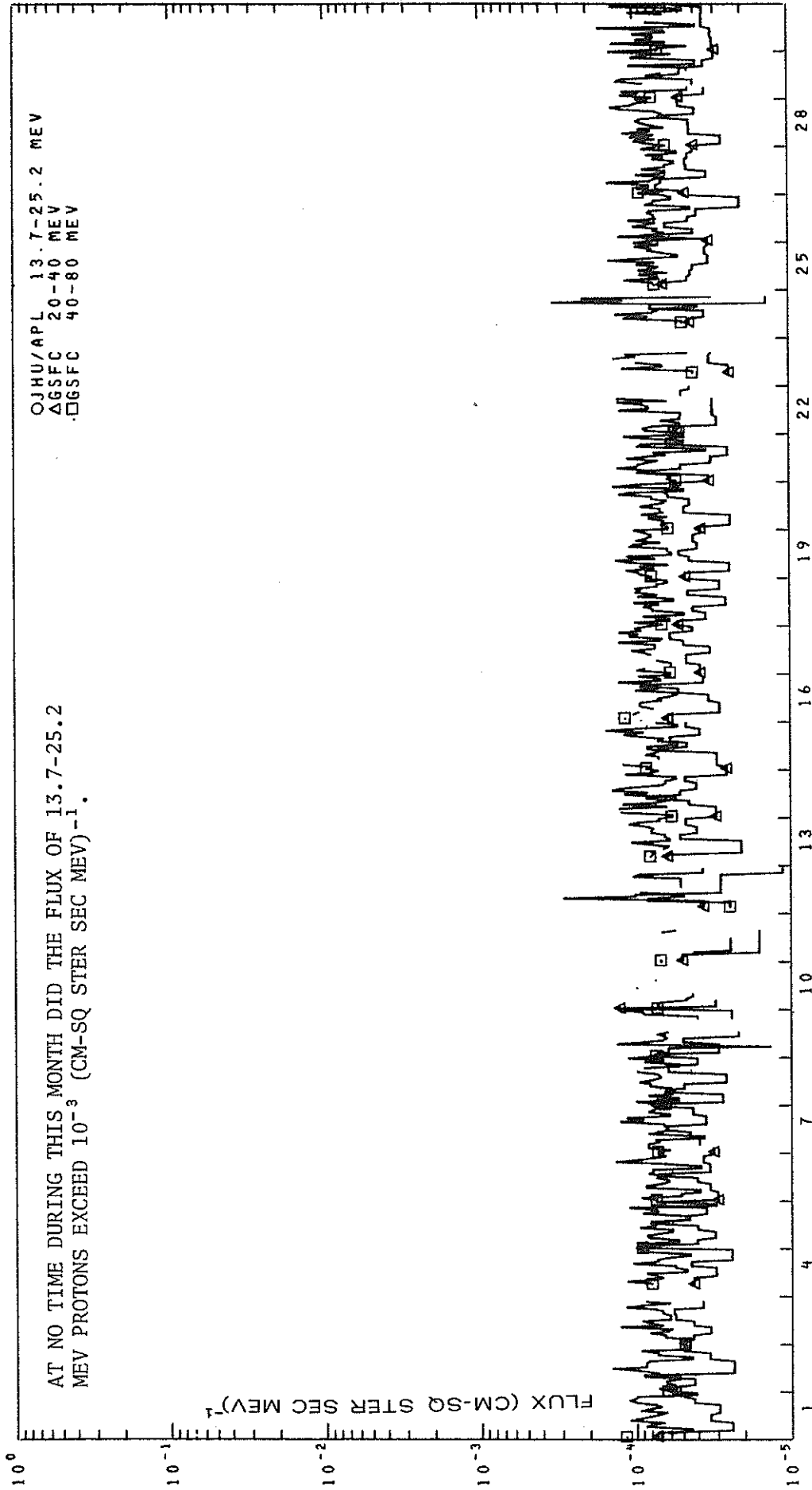
# IMP 7 AND 8 INTERMEDIATE ENERGY PROTONS

JUNE 1976



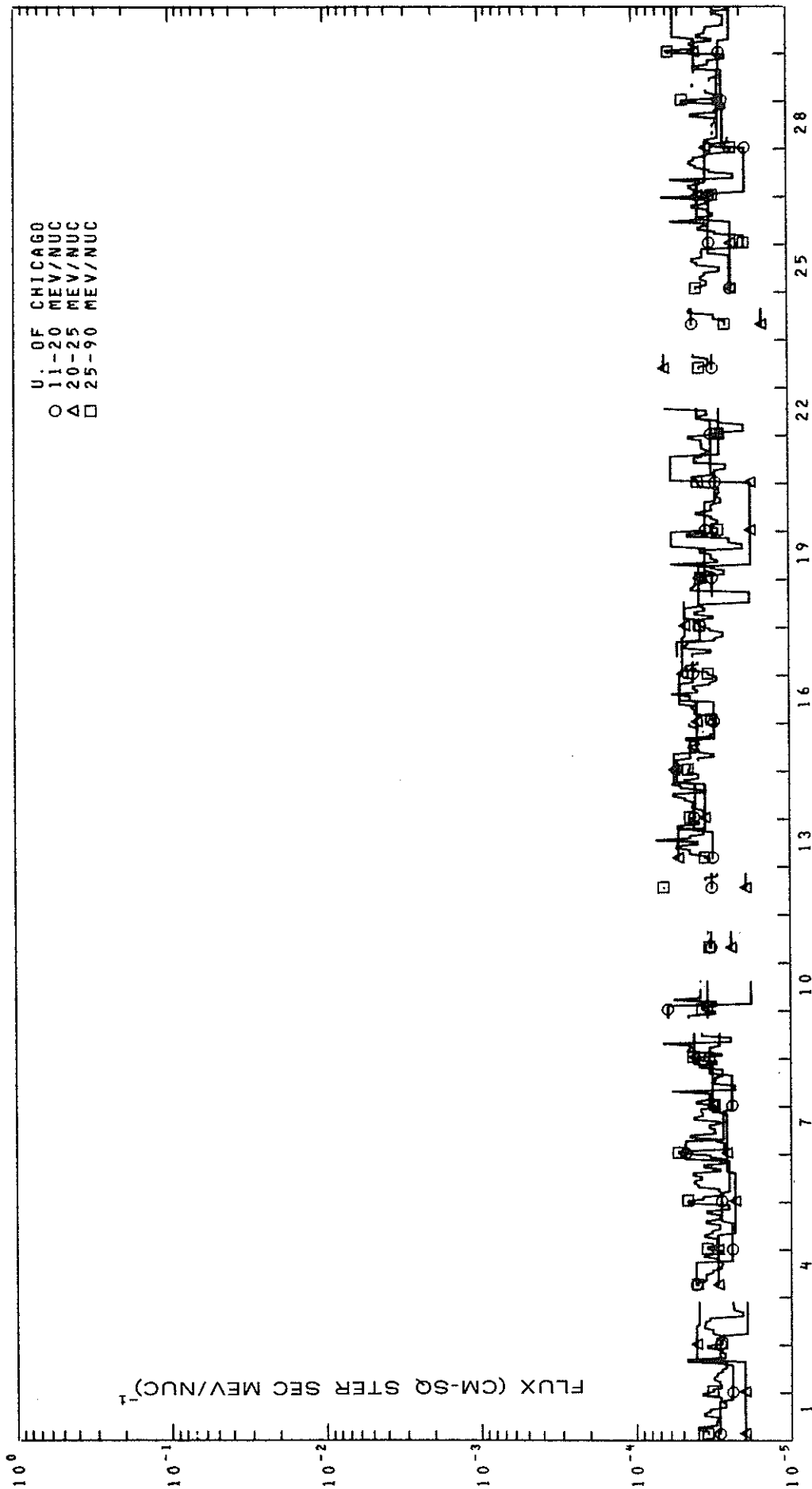
# IMP 7 AND 8 HIGH ENERGY PROTONS

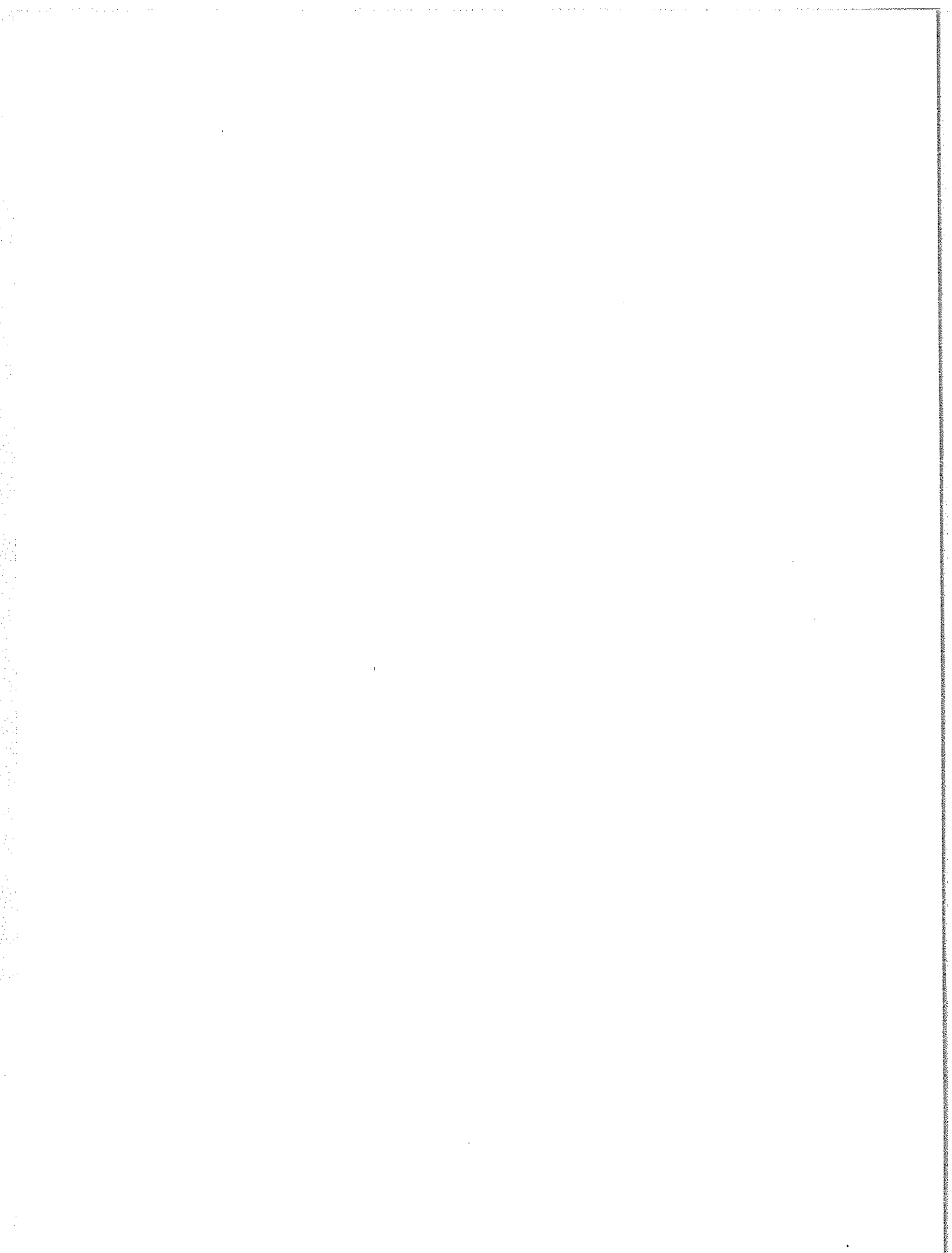
JUNE 1976



# IMP 7 AND 8 ALPHA PARTICLES

JUNE 1976





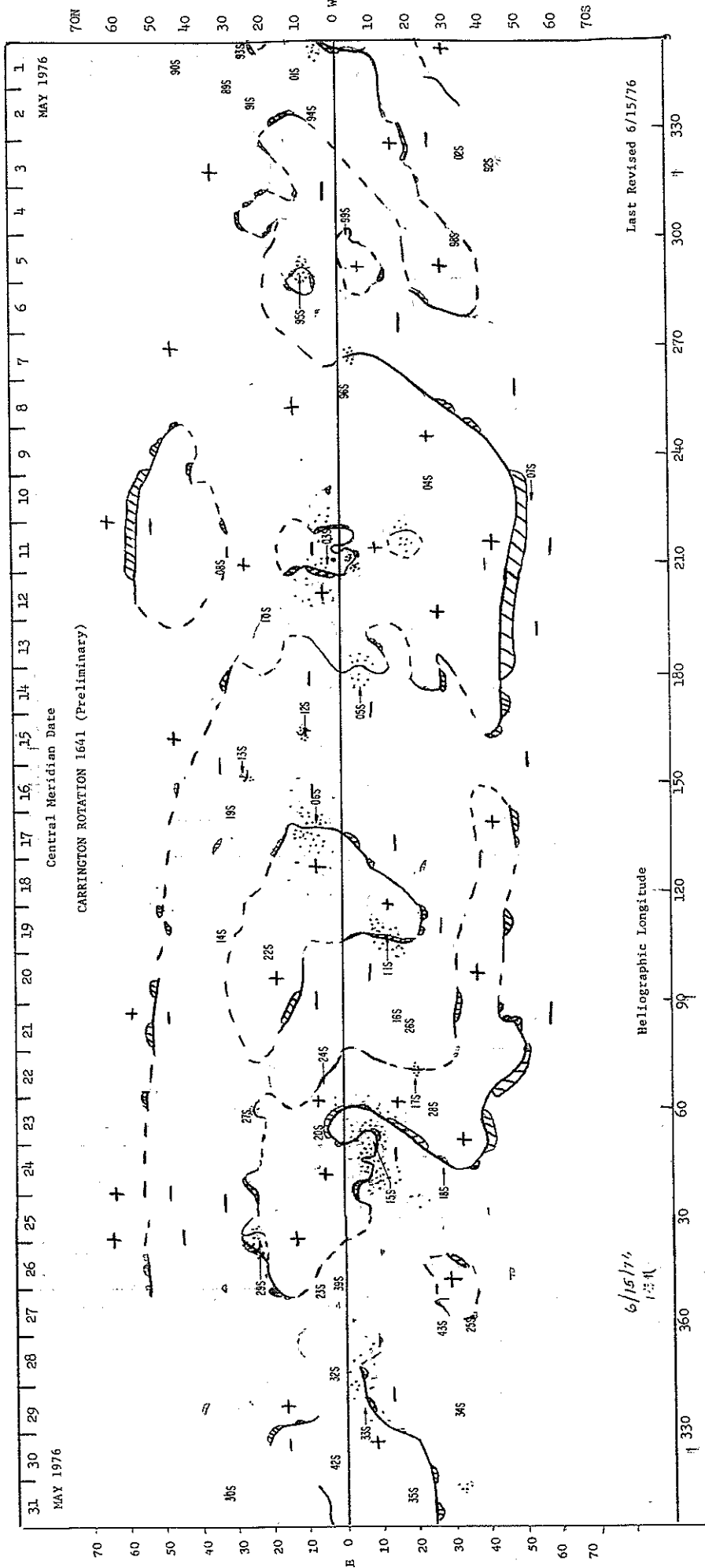
MAY 1976 DATA

Contents

|  | Page  |
|--|-------|
| <u>H<math>\alpha</math> Synoptic Chart</u> | 22    |
| <u>Abbreviated Calendar Record</u>         | 23-30 |
| <u>Regional Flare Index</u>                | 30    |

# ABBREVIATED CALENDAR RECORD H $\alpha$ SYNOPTIC CHART

MAY 1976



# ABBREVIATED CALENDAR RECORD

23  
May 76

|               |  | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |  |
|---------------|--|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|
| <b>FLARES</b> |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| <b>Bursts</b> | cm   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|               | dm   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|               | m  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|               | Dkm  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| SID           |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| X-Rays        |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Ap 10         | Kp   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|               | sc   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| <b>Aurora</b> | USSR   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|               | W.E.   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Cosmic Rays   |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Green Corona  | E Limb 7 days earlier: NE- no data      SE- no data      W Limb 7 days later: NW-      SW- |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Indices       | Rz: 35      IO cm flux: 76      Flare: 5/22.7      Ca: 6.2      Ip: 0      Ia: 6           |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Solar Regions | (14193) N15      (14190) N43      (14201) N11      (14189) N29                             |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Sunspots      |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |

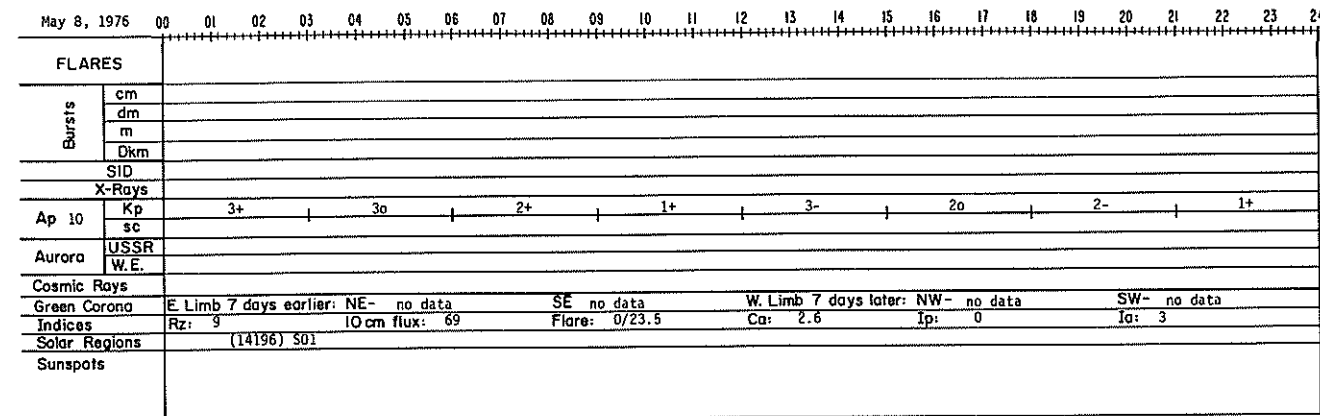
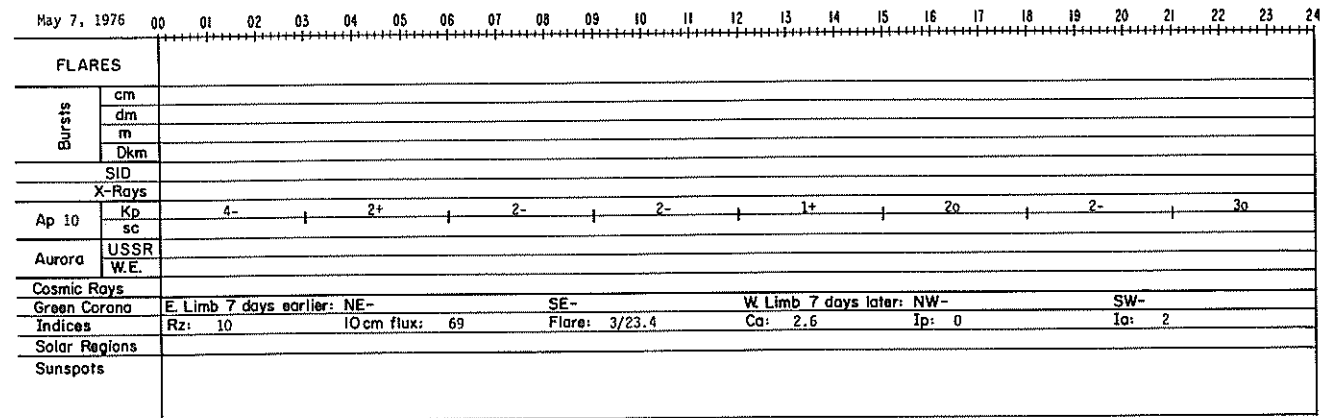
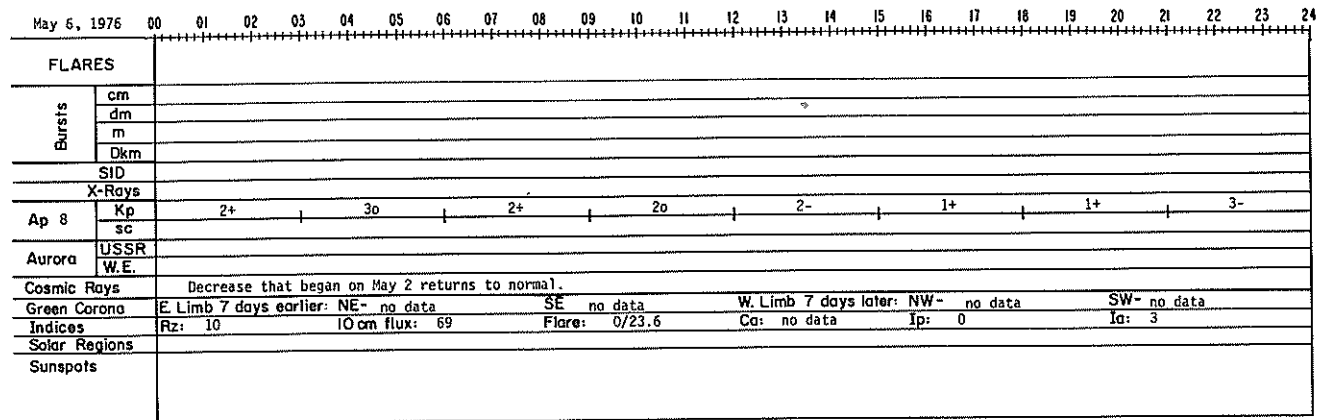
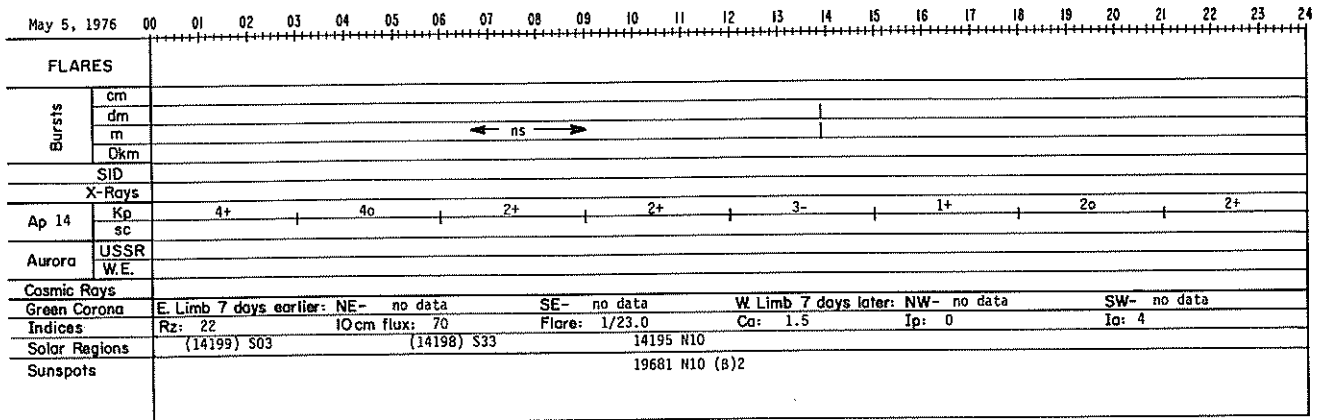
|               |  | 00   | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |  |
|---------------|--|--|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|
| <b>FLARES</b> |  |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| <b>Bursts</b> | cm   |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|               | dm   |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|               | m  |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|               | Dkm  |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| SID           |  |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| X-Rays        |  |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Ap 580        | Kp   |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|               | sc   |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| <b>Aurora</b> | USSR   | φ = 60° 2000 (R;R1)  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|               | W.E.   |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Cosmic Rays   |  | Decrease of about 5% begins late in day, reaches a maximum near 2400 and returns to normal on May 6. |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Green Corona  | E Limb 7 days earlier: NE-      SE- no data      W Limb 7 days later: NW-      SW- |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Indices       | Rz: 26      IO cm flux: 73      Flare: 0/23.1      Ca: 4.6      Ip: 0      Ia: 5   |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Solar Regions | (14191) N23      14194 N07   |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Sunspots      |  |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |

|               |  | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |  |
|---------------|--|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|
| <b>FLARES</b> |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| <b>Bursts</b> | cm   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|               | dm   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|               | m  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|               | Dkm  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| SID           |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| X-Rays        |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Ap 94D        | Kp   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|               | sc   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| <b>Aurora</b> | USSR   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|               | W.E.   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Cosmic Rays   |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Green Corona  | E Limb 7 days earlier: NE- no data      SE- no data      W Limb 7 days later: NW-      SW- |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Indices       | Rz: 25      IO cm flux: 71      Flare: 0/23.3      Ca: 2.8      Ip: 0      Ia: 6           |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Solar Regions | (14202) S33      (14192) S42   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Sunspots      |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |

|               |   | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |  |
|---------------|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|
| <b>FLARES</b> |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| <b>Bursts</b> | cm  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|               | dm  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|               | m   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|               | Dkm   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| SID           |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| X-Rays        |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Ap 20D        | Kp  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|               | sc  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| <b>Aurora</b> | USSR  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|               | W.E.  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Cosmic Rays   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Green Corona  | E Limb 7 days earlier: NE- no data      SE no data      W Limb 7 days later: NW- no data      SW- no data |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Indices       | Rz: 8      IO cm flux: 70      Flare: 11/23.8      Ca: 1.7      Ip: 0      Ia: 7                          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Solar Regions |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Sunspots      |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |



24  
May 76



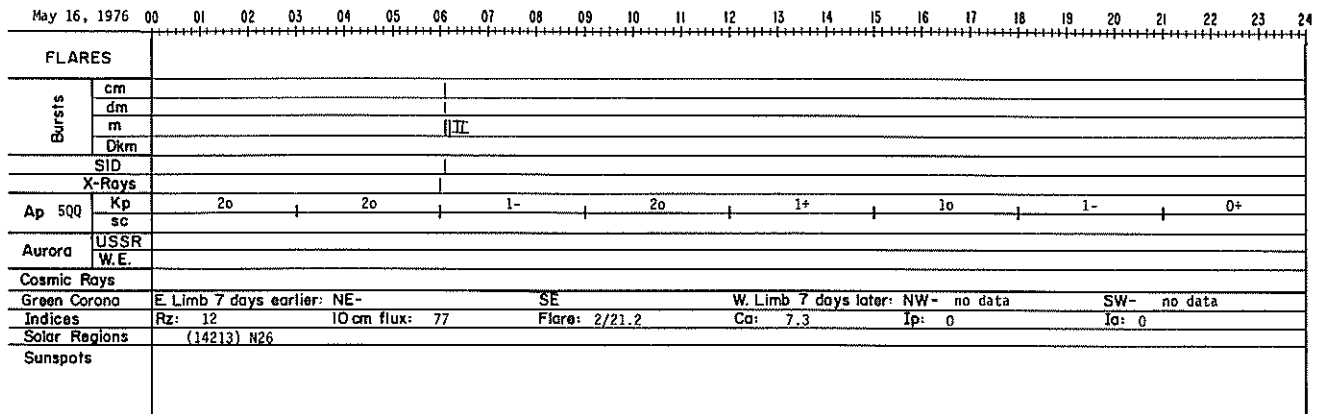
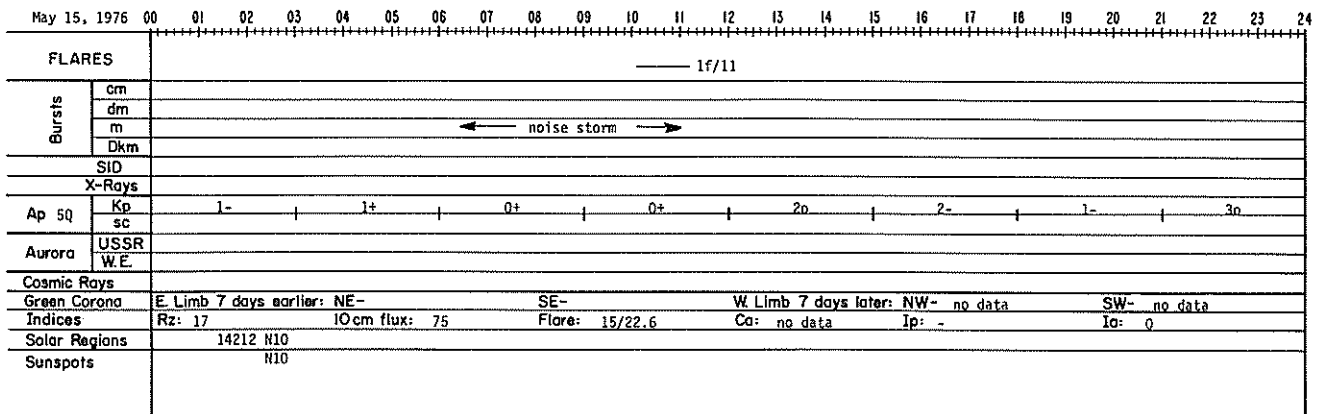
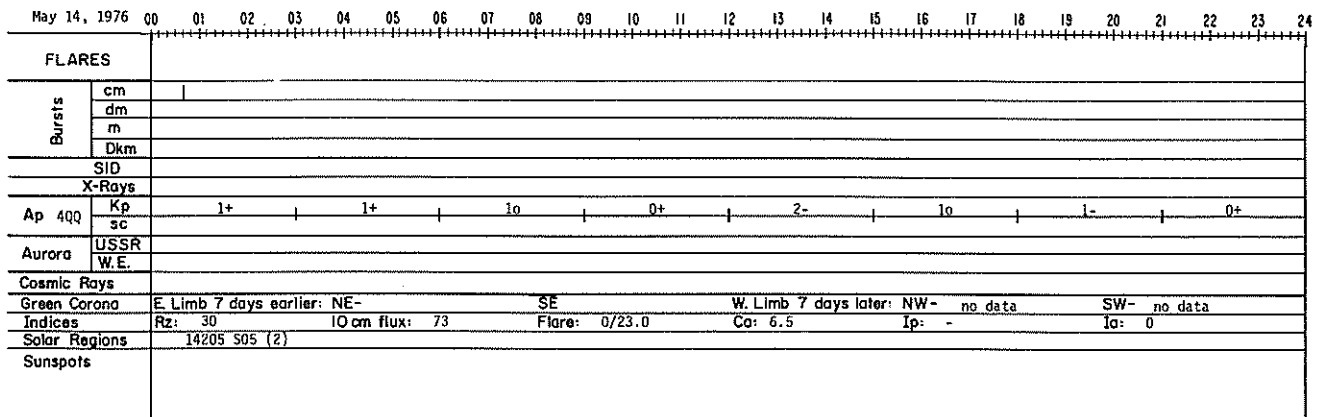
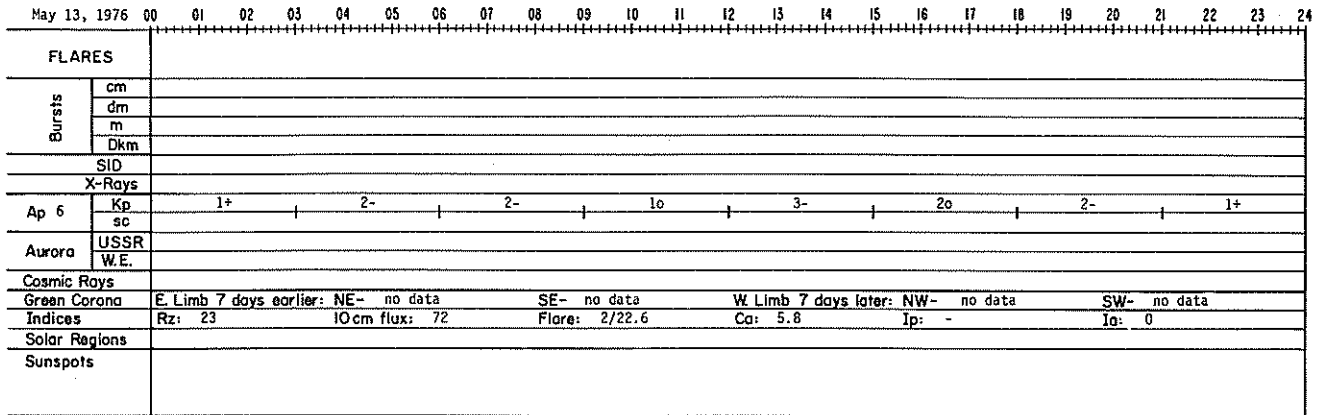
| May 9, 1976   |                             | 00             | 01 | 02 | 03 | 04 | 05 | 06            | 07      | 08 | 09 | 10 | 11 | 12 | 13                        | 14      | 15 | 16 | 17 | 18 | 19 | 20  | 21      | 22 | 23 | 24 |  |  |
|---------------|-----------------------------|----------------|----|----|----|----|----|---------------|---------|----|----|----|----|----|---------------------------|---------|----|----|----|----|----|-----|---------|----|----|----|--|--|
| FLARES        |                             |                |    |    |    |    |    |               |         |    |    |    |    |    |                           |         |    |    |    |    |    |     |         |    |    |    |  |  |
| Bursts        | cm                          |                |    |    |    |    |    |               |         |    |    |    |    |    |                           |         |    |    |    |    |    |     |         |    |    |    |  |  |
|               | dm                          |                |    |    |    |    |    |               |         |    |    |    |    |    |                           |         |    |    |    |    |    |     |         |    |    |    |  |  |
|               | m                           |                |    |    |    |    |    |               |         |    |    |    |    |    |                           |         |    |    |    |    |    |     |         |    |    |    |  |  |
|               | Dkm                         |                |    |    |    |    |    |               |         |    |    |    |    |    |                           |         |    |    |    |    |    |     |         |    |    |    |  |  |
| SID           |                             |                |    |    |    |    |    |               |         |    |    |    |    |    |                           |         |    |    |    |    |    |     |         |    |    |    |  |  |
| X-Rays        |                             |                |    |    |    |    |    |               |         |    |    |    |    |    |                           |         |    |    |    |    |    |     |         |    |    |    |  |  |
| Ap 4Q         | Kp                          | 3-             |    | 2- |    |    |    | 1o            |         |    |    | 0+ |    |    |                           | 1-      |    |    |    | 1o |    |     | 0+      |    |    | 1- |  |  |
|               | sc                          |                |    |    |    |    |    |               |         |    |    |    |    |    |                           |         |    |    |    |    |    |     |         |    |    |    |  |  |
| Aurora        | USSR                        |                |    |    |    |    |    |               |         |    |    |    |    |    |                           |         |    |    |    |    |    |     |         |    |    |    |  |  |
|               | W.E.                        |                |    |    |    |    |    |               |         |    |    |    |    |    |                           |         |    |    |    |    |    |     |         |    |    |    |  |  |
| Cosmic Rays   |                             |                |    |    |    |    |    |               |         |    |    |    |    |    |                           |         |    |    |    |    |    |     |         |    |    |    |  |  |
| Green Corona  | E. Limb 7 days earlier: NE- |                |    |    |    |    |    | SE-           |         |    |    |    |    |    | W. Limb 7 days later: NW- | no data |    |    |    |    |    | SW- | no data |    |    |    |  |  |
| Indices       | Rz: 8                       | 10 cm flux: 69 |    |    |    |    |    | Flare: 0/20.8 | Ca: 3.3 |    |    |    |    |    | Ip: 0                     | Ia: 0   |    |    |    |    |    |     |         |    |    |    |  |  |
| Solar Regions |                             |                |    |    |    |    |    |               |         |    |    |    |    |    |                           |         |    |    |    |    |    |     |         |    |    |    |  |  |
| Sunspots      |                             |                |    |    |    |    |    |               |         |    |    |    |    |    |                           |         |    |    |    |    |    |     |         |    |    |    |  |  |

| May 10, 1976  |                             | 00             | 01 | 02 | 03 | 04 | 05 | 06            | 07      | 08 | 09 | 10 | 11 | 12          | 13                        | 14    | 15 | 16 | 17 | 18 | 19 | 20  | 21 | 22 | 23 | 24 |  |  |
|---------------|-----------------------------|----------------|----|----|----|----|----|---------------|---------|----|----|----|----|-------------|---------------------------|-------|----|----|----|----|----|-----|----|----|----|----|--|--|
| FLARES        |                             |                |    |    |    |    |    |               |         |    |    |    |    |             |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
| Bursts        | cm                          |                |    |    |    |    |    |               |         |    |    |    |    |             |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
|               | dm                          |                |    |    |    |    |    |               |         |    |    |    |    |             |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
|               | m                           |                |    |    |    |    |    |               |         |    |    |    |    |             |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
|               | Dkm                         |                |    |    |    |    |    |               |         |    |    |    |    |             |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
| SID           |                             |                |    |    |    |    |    |               |         |    |    |    |    |             |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
| X-Rays        |                             |                |    |    |    |    |    |               |         |    |    |    |    |             |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
| Ap 6Q         | Kp                          | 0+             |    |    |    | 2o |    |               |         | 1+ |    |    |    | 1o          |                           |       |    | 2o |    |    | 3o |     |    | 2- |    | 1- |  |  |
|               | sc                          |                |    |    |    |    |    |               |         |    |    |    |    |             |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
| Aurora        | USSR                        |                |    |    |    |    |    |               |         |    |    |    |    |             |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
|               | W.E.                        |                |    |    |    |    |    |               |         |    |    |    |    |             |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
| Cosmic Rays   |                             |                |    |    |    |    |    |               |         |    |    |    |    |             |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
| Green Corona  | E. Limb 7 days earlier: NE- | no data        |    |    |    |    |    | SE-           | no data |    |    |    |    |             | W. Limb 7 days later: NW- |       |    |    |    |    |    | SW- |    |    |    |    |  |  |
| Indices       | Rz: 10                      | 10 cm flux: 70 |    |    |    |    |    | Flare: 0/22.2 | Ca: 4.0 |    |    |    |    |             | Ip: 0                     | Ia: 0 |    |    |    |    |    |     |    |    |    |    |  |  |
| Solar Regions |                             | (14204) S25    |    |    |    |    |    |               |         |    |    |    |    | (14207) S53 |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
| Sunspots      |                             |                |    |    |    |    |    |               |         |    |    |    |    |             |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |

| May 11, 1976  |                             | 00  | 01 | 02 | 03 | 04 | 05 | 06            | 07      | 08 | 09 | 10 | 11 | 12          | 13                        | 14    | 15 | 16 | 17 | 18 | 19 | 20  | 21 | 22 | 23 | 24 |  |  |
|---------------|-----------------------------|---|----|----|----|----|----|---------------|---------|----|----|----|----|-------------|---------------------------|-------|----|----|----|----|----|-----|----|----|----|----|--|--|
| FLARES        |                             |   |    |    |    |    |    |               |         |    |    |    |    |             |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
| Bursts        | cm                          |   |    |    |    |    |    |               |         |    |    |    |    |             |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
|               | dm                          |   |    |    |    |    |    |               |         |    |    |    |    |             |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
|               | m                           |   |    |    |    |    |    |               |         |    |    |    |    |             |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
|               | Dkm                         |   |    |    |    |    |    |               |         |    |    |    |    |             |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
| SID           |                             |   |    |    |    |    |    |               |         |    |    |    |    |             |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
| X-Rays        |                             |   |    |    |    |    |    |               |         |    |    |    |    |             |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
| Ap 11         | Kp                          | 2o  |    |    |    | 2o |    |               |         | 3o |    |    |    | 2o          |                           |       |    | 2o |    |    | 2o |     |    | 4- |    | 3o |  |  |
|               | sc                          |   |    |    |    |    |    |               |         |    |    |    |    |             |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
| Aurora        | USSR                        |   |    |    |    |    |    |               |         |    |    |    |    |             |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
|               | W.E.                        |   |    |    |    |    |    |               |         |    |    |    |    |             |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
| Cosmic Rays   |                             |   |    |    |    |    |    |               |         |    |    |    |    |             |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
| Green Corona  | E. Limb 7 days earlier: NE- |   |    |    |    |    |    | SE-           |         |    |    |    |    |             | W. Limb 7 days later: NW- |       |    |    |    |    |    | SW- |    |    |    |    |  |  |
| Indices       | Rz: 16                      | 10 cm flux: 71  |    |    |    |    |    | Flare: 0/21.1 | Ca: 6.1 |    |    |    |    |             | Ip: 0                     | Ia: 2 |    |    |    |    |    |     |    |    |    |    |  |  |
| Solar Regions |                             | 14203 N03 (3)   |    |    |    |    |    |               |         |    |    |    |    | (14206) N31 |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
| Sunspots      |                             | 19682 N00 (ap)5<br>(19683) N06 α CMP May 12<br>19684 N03 (β)1<br>(19687) S03 (γ)3 |    |    |    |    |    |               |         |    |    |    |    |             |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |

| May 12, 1976  |                             | 00             | 01 | 02 | 03 | 04 | 05 | 06            | 07      | 08 | 09 | 10 | 11 | 12 | 13                        | 14    | 15 | 16 | 17 | 18 | 19 | 20  | 21 | 22 | 23 | 24 |  |  |
|---------------|-----------------------------|----------------|----|----|----|----|----|---------------|---------|----|----|----|----|----|---------------------------|-------|----|----|----|----|----|-----|----|----|----|----|--|--|
| FLARES        |                             |                |    |    |    |    |    |               |         |    |    |    |    |    |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
| Bursts        | cm                          |                |    |    |    |    |    |               |         |    |    |    |    |    |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
|               | dm                          |                |    |    |    |    |    |               |         |    |    |    |    |    |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
|               | m                           |                |    |    |    |    |    |               |         |    |    |    |    |    |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
|               | Dkm                         |                |    |    |    |    |    |               |         |    |    |    |    |    |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
| SID           |                             |                |    |    |    |    |    |               |         |    |    |    |    |    |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
| X-Rays        |                             |                |    |    |    |    |    |               |         |    |    |    |    |    |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
| Ap 7          | Kp                          | 3o             |    | 2- |    |    |    | 2o            |         |    |    | 2- |    |    | 2-                        |       |    | 2- |    |    | 2- |     |    | 1+ |    | 2- |  |  |
|               | sc                          |                |    |    |    |    |    |               |         |    |    |    |    |    |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
| Aurora        | USSR                        |                |    |    |    |    |    |               |         |    |    |    |    |    |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
|               | W.E.                        |                |    |    |    |    |    |               |         |    |    |    |    |    |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
| Cosmic Rays   |                             |                |    |    |    |    |    |               |         |    |    |    |    |    |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
| Green Corona  | E. Limb 7 days earlier: NE- |                |    |    |    |    |    | SE-           |         |    |    |    |    |    | W. Limb 7 days later: NW- |       |    |    |    |    |    | SW- |    |    |    |    |  |  |
| Indices       | Rz: 17                      | 10 cm flux: 71 |    |    |    |    |    | Flare: 0/23.7 | Ca: 6.6 |    |    |    |    |    | Ip: -                     | Ia: 1 |    |    |    |    |    |     |    |    |    |    |  |  |
| Solar Regions |                             | (14210) N20    |    |    |    |    |    |               |         |    |    |    |    |    |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |
| Sunspots      |                             |                |    |    |    |    |    |               |         |    |    |    |    |    |                           |       |    |    |    |    |    |     |    |    |    |    |  |  |

26  
May 76



| May 17, 1976  |                             | 00             | 01 | 02 | 03 | 04 | 05            | 06 | 07 | 08 | 09            | 10          | 11 | 12 | 13 | 14                        | 15    | 16 | 17 | 18 | 19      | 20    | 21 | 22 | 23 | 24              |  |  |  |  |
|---------------|-----------------------------|----------------|----|----|----|----|---------------|----|----|----|---------------|-------------|----|----|----|---------------------------|-------|----|----|----|---------|-------|----|----|----|-----------------|--|--|--|--|
| FLARES        |                             |                |    |    |    |    |               |    |    |    |               |             |    |    |    |                           |       |    |    |    |         |       |    |    |    |                 |  |  |  |  |
| Bursts        | cm                          |                |    |    |    |    |               |    |    |    |               |             |    |    |    |                           |       |    |    |    |         |       |    |    |    |                 |  |  |  |  |
|               | dm                          |                |    |    |    |    |               |    |    |    |               |             |    |    |    |                           |       |    |    |    |         |       |    |    |    |                 |  |  |  |  |
|               | m                           |                |    |    |    |    |               |    |    |    |               |             |    |    |    |                           |       |    |    |    |         |       |    |    |    |                 |  |  |  |  |
|               | Dkm                         |                |    |    |    |    |               |    |    |    |               |             |    |    |    |                           |       |    |    |    |         |       |    |    |    |                 |  |  |  |  |
| SID           |                             |                |    |    |    |    |               |    |    |    |               |             |    |    |    |                           |       |    |    |    |         |       |    |    |    |                 |  |  |  |  |
| X-Rays        |                             |                |    |    |    |    |               |    |    |    |               |             |    |    |    |                           |       |    |    |    |         |       |    |    |    |                 |  |  |  |  |
| Ap 40Q        | Kp                          | 0+             |    |    |    |    |               |    |    |    |               |             |    |    |    |                           |       |    |    |    |         |       |    |    |    |                 |  |  |  |  |
|               | sc                          |                |    |    |    |    |               |    |    |    |               |             |    |    |    |                           |       |    |    |    |         |       |    |    |    |                 |  |  |  |  |
| Aurora        | USSR                        |                |    |    |    |    |               |    |    |    |               |             |    |    |    |                           |       |    |    |    |         |       |    |    |    |                 |  |  |  |  |
|               | W.E.                        |                |    |    |    |    |               |    |    |    |               |             |    |    |    |                           |       |    |    |    |         |       |    |    |    |                 |  |  |  |  |
| Cosmic Rays   |                             |                |    |    |    |    |               |    |    |    |               |             |    |    |    |                           |       |    |    |    |         |       |    |    |    |                 |  |  |  |  |
| Green Corona  | E. Limb 7 days earlier: NE- |                |    |    |    |    |               |    |    |    | SE-           |             |    |    |    | W. Limb 7 days later: NW- |       |    |    |    | no data |       |    |    |    | SW- no data     |  |  |  |  |
| Indices       | Rz: 18                      | IO cm flux: 75 |    |    |    |    | Flare: 1/22.0 |    |    |    |               | Ca: no data |    |    |    |                           | Ip: - |    |    |    |         | Ia: 0 |    |    |    |                 |  |  |  |  |
| Solar Regions | (14219) N30                 |                |    |    |    |    |               |    |    |    | 14206 N07 (3) |             |    |    |    |                           |       |    |    |    |         |       |    |    |    | 19685 N07 (ap)2 |  |  |  |  |
| Sunspots      |                             |                |    |    |    |    |               |    |    |    |               |             |    |    |    |                           |       |    |    |    |         |       |    |    |    |                 |  |  |  |  |

| May 18, 1976  |                                     | 00             | 01 | 02 | 03 | 04 | 05             | 06 | 07 | 08 | 09          | 10      | 11 | 12 | 13 | 14                                | 15    | 16 | 17 | 18 | 19          | 20    | 21 | 22 | 23 | 24 |  |
|---------------|-------------------------------------|----------------|----|----|----|----|----------------|----|----|----|-------------|---------|----|----|----|-----------------------------------|-------|----|----|----|-------------|-------|----|----|----|----|--|
| FLARES        |                                     |                |    |    |    |    |                |    |    |    |             |         |    |    |    |                                   |       |    |    |    |             |       |    |    |    |    |  |
| Bursts        | cm                                  |                |    |    |    |    |                |    |    |    |             |         |    |    |    |                                   |       |    |    |    |             |       |    |    |    |    |  |
|               | dm                                  |                |    |    |    |    |                |    |    |    |             |         |    |    |    |                                   |       |    |    |    |             |       |    |    |    |    |  |
|               | m                                   |                |    |    |    |    |                |    |    |    |             |         |    |    |    |                                   |       |    |    |    |             |       |    |    |    |    |  |
|               | Dkm                                 |                |    |    |    |    |                |    |    |    |             |         |    |    |    |                                   |       |    |    |    |             |       |    |    |    |    |  |
| SID           |                                     |                |    |    |    |    |                |    |    |    |             |         |    |    |    |                                   |       |    |    |    |             |       |    |    |    |    |  |
| X-Rays        |                                     |                |    |    |    |    |                |    |    |    |             |         |    |    |    |                                   |       |    |    |    |             |       |    |    |    |    |  |
| Ap 30Q        | Kp                                  | 0+             |    |    |    |    |                |    |    |    |             |         |    |    |    |                                   |       |    |    |    |             |       |    |    |    |    |  |
|               | sc                                  |                |    |    |    |    |                |    |    |    |             |         |    |    |    |                                   |       |    |    |    |             |       |    |    |    |    |  |
| Aurora        | USSR                                |                |    |    |    |    |                |    |    |    |             |         |    |    |    |                                   |       |    |    |    |             |       |    |    |    |    |  |
|               | W.E.                                |                |    |    |    |    |                |    |    |    |             |         |    |    |    |                                   |       |    |    |    |             |       |    |    |    |    |  |
| Cosmic Rays   |                                     |                |    |    |    |    |                |    |    |    |             |         |    |    |    |                                   |       |    |    |    |             |       |    |    |    |    |  |
| Green Corona  | E. Limb 7 days earlier: NE- no data |                |    |    |    |    |                |    |    |    | SE- no data |         |    |    |    | W. Limb 7 days later: NW- no data |       |    |    |    | SW- no data |       |    |    |    |    |  |
| Indices       | Rz: 8                               | IO cm flux: 74 |    |    |    |    | Flare: 16/22.9 |    |    |    |             | Ca: 6.9 |    |    |    |                                   | Ip: - |    |    |    |             | Ia: 0 |    |    |    |    |  |
| Solar Regions |                                     |                |    |    |    |    |                |    |    |    |             |         |    |    |    |                                   |       |    |    |    |             |       |    |    |    |    |  |
| Sunspots      |                                     |                |    |    |    |    |                |    |    |    |             |         |    |    |    |                                   |       |    |    |    |             |       |    |    |    |    |  |

| May 19, 1976  |                                     | 00             | 01 | 02 | 03 | 04 | 05            | 06 | 07 | 08 | 09          | 10      | 11 | 12 | 13 | 14                        | 15    | 16 | 17 | 18 | 19  | 20    | 21 | 22 | 23 | 24 |  |
|---------------|-------------------------------------|----------------|----|----|----|----|---------------|----|----|----|-------------|---------|----|----|----|---------------------------|-------|----|----|----|-----|-------|----|----|----|----|--|
| FLARES        |                                     |                |    |    |    |    |               |    |    |    |             |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |
| Bursts        | cm                                  |                |    |    |    |    |               |    |    |    |             |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |
|               | dm                                  |                |    |    |    |    |               |    |    |    |             |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |
|               | m                                   |                |    |    |    |    |               |    |    |    |             |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |
|               | Dkm                                 |                |    |    |    |    |               |    |    |    |             |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |
| SID           |                                     |                |    |    |    |    |               |    |    |    |             |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |
| X-Rays        |                                     |                |    |    |    |    |               |    |    |    |             |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |
| Ap 12         | Kp                                  | 1-             |    |    |    |    |               |    |    |    |             |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |
|               | sc                                  |                |    |    |    |    |               |    |    |    |             |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |
| Aurora        | USSR                                |                |    |    |    |    |               |    |    |    |             |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |
|               | W.E.                                |                |    |    |    |    |               |    |    |    |             |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |
| Cosmic Rays   |                                     |                |    |    |    |    |               |    |    |    |             |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |
| Green Corona  | E. Limb 7 days earlier: NE- no data |                |    |    |    |    |               |    |    |    | SE- no data |         |    |    |    | W. Limb 7 days later: NW- |       |    |    |    | SW- |       |    |    |    |    |  |
| Indices       | Rz: 20                              | IO cm flux: 72 |    |    |    |    | Flare: 1/24.0 |    |    |    |             | Ca: 7.7 |    |    |    |                           | Ip: 0 |    |    |    |     | Ia: 1 |    |    |    |    |  |
| Solar Regions | 14211 S12                           |                |    |    |    |    |               |    |    |    | (14214) N33 |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |
| Sunspots      |                                     |                |    |    |    |    |               |    |    |    |             |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |

| May 20, 1976  |                                     | 00             | 01 | 02 | 03 | 04 | 05            | 06 | 07 | 08 | 09          | 10      | 11 | 12 | 13 | 14                        | 15    | 16 | 17 | 18 | 19  | 20    | 21 | 22 | 23 | 24 |  |
|---------------|-------------------------------------|----------------|----|----|----|----|---------------|----|----|----|-------------|---------|----|----|----|---------------------------|-------|----|----|----|-----|-------|----|----|----|----|--|
| FLARES        |                                     |                |    |    |    |    |               |    |    |    |             |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |
| Bursts        | cm                                  |                |    |    |    |    |               |    |    |    |             |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |
|               | dm                                  |                |    |    |    |    |               |    |    |    |             |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |
|               | m                                   |                |    |    |    |    |               |    |    |    |             |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |
|               | Dkm                                 |                |    |    |    |    |               |    |    |    |             |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |
| SID           |                                     |                |    |    |    |    |               |    |    |    |             |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |
| X-Rays        |                                     |                |    |    |    |    |               |    |    |    |             |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |
| Ap 19D        | Kp                                  | 4-             |    |    |    |    |               |    |    |    |             |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |
|               | sc                                  |                |    |    |    |    |               |    |    |    |             |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |
| Aurora        | USSR                                |                |    |    |    |    |               |    |    |    |             |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |
|               | W.E.                                |                |    |    |    |    |               |    |    |    |             |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |
| Cosmic Rays   |                                     |                |    |    |    |    |               |    |    |    |             |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |
| Green Corona  | E. Limb 7 days earlier: NE- no data |                |    |    |    |    |               |    |    |    | SE- no data |         |    |    |    | W. Limb 7 days later: NW- |       |    |    |    | SW- |       |    |    |    |    |  |
| Indices       | Rz: 20                              | IO cm flux: 71 |    |    |    |    | Flare: 0/23.5 |    |    |    |             | Ca: 8.7 |    |    |    |                           | Ip: - |    |    |    |     | Ia: 0 |    |    |    |    |  |
| Solar Regions |                                     |                |    |    |    |    |               |    |    |    |             |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |
| Sunspots      |                                     |                |    |    |    |    |               |    |    |    |             |         |    |    |    |                           |       |    |    |    |     |       |    |    |    |    |  |

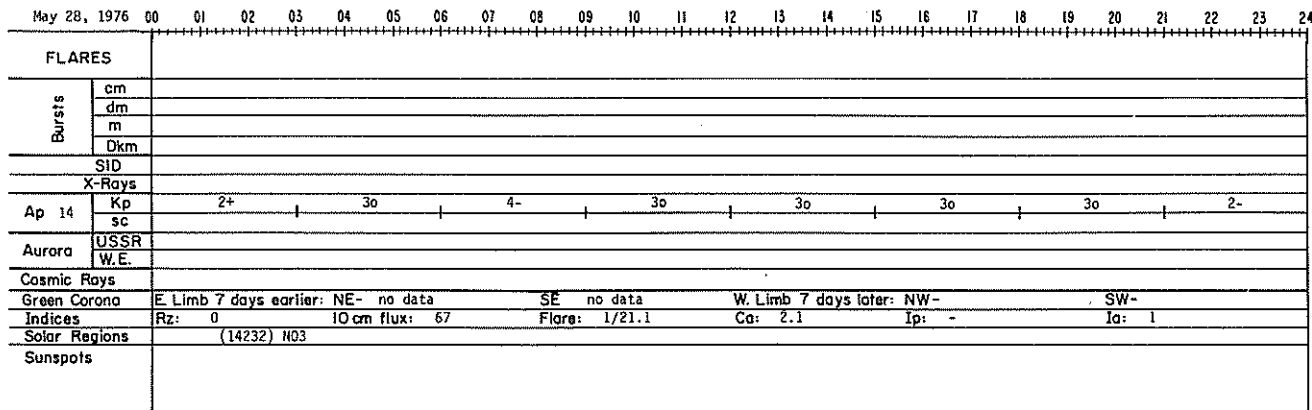
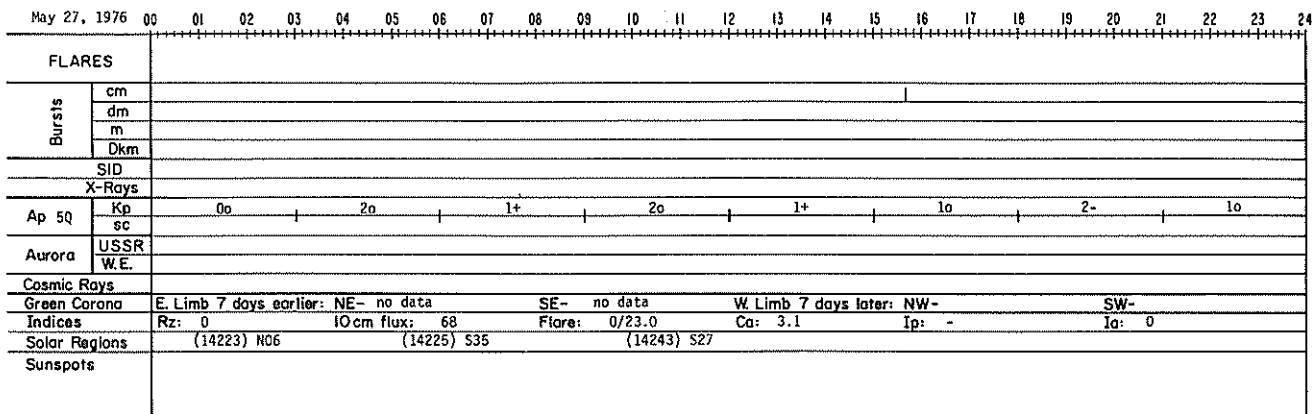
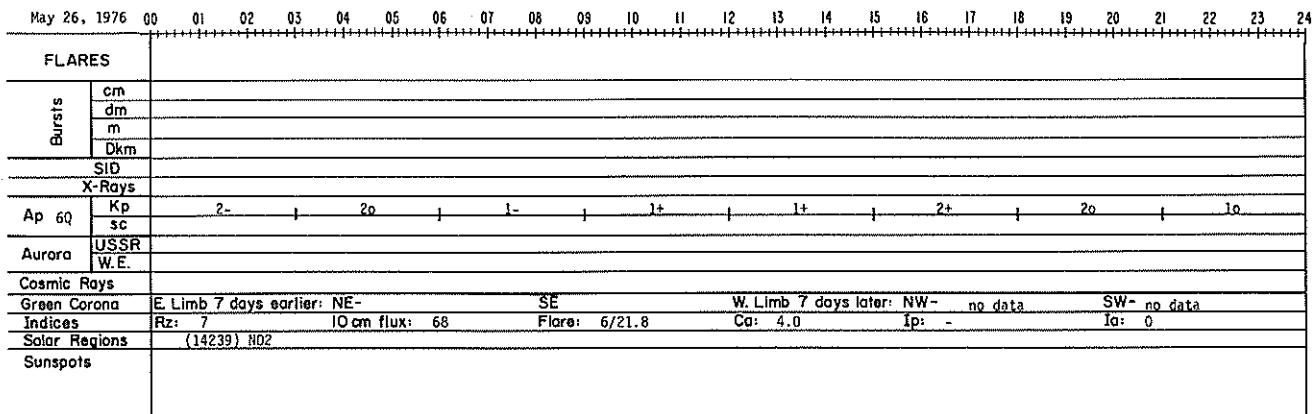
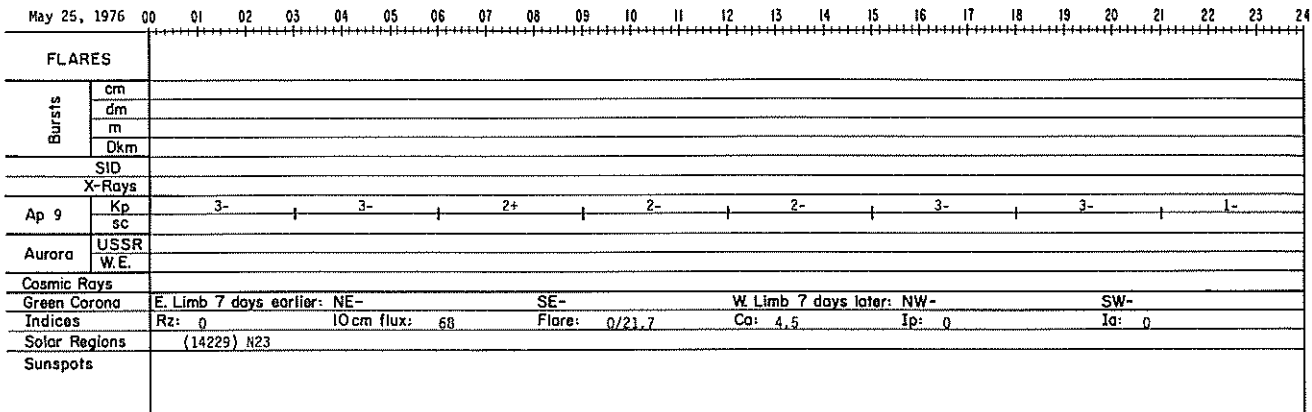
28  
May 76

| May 21, 1976  |                              | 00             | 01 | 02 | 03 | 04 | 05 | 06 | 07            | 08  | 09 | 10          | 11 | 12 | 13 | 14      | 15                        | 16    | 17 | 18    | 19 | 20 | 21 | 22  | 23 | 24 |  |
|---------------|------------------------------|----------------|----|----|----|----|----|----|---------------|-----|----|-------------|----|----|----|---------|---------------------------|-------|----|-------|----|----|----|-----|----|----|--|
| FLARES        |                              |                |    |    |    |    |    |    |               |     |    |             |    |    |    |         |                           |       |    |       |    |    |    |     |    |    |  |
| Bursts        | cm                           |                |    |    |    |    |    |    |               |     |    |             |    |    |    |         |                           |       |    |       |    |    |    |     |    |    |  |
|               | dm                           |                |    |    |    |    |    |    |               |     |    |             |    |    |    |         |                           |       |    |       |    |    |    |     |    |    |  |
|               | m                            |                |    |    |    |    |    |    |               |     |    |             |    |    |    |         |                           |       |    |       |    |    |    |     |    |    |  |
|               | Dkm                          |                |    |    |    |    |    |    |               |     |    |             |    |    |    |         |                           |       |    |       |    |    |    |     |    |    |  |
| SID           |                              |                |    |    |    |    |    |    |               |     |    |             |    |    |    |         |                           |       |    |       |    |    |    |     |    |    |  |
| X-Rays        |                              |                |    |    |    |    |    |    |               |     |    |             |    |    |    |         |                           |       |    |       |    |    |    |     |    |    |  |
| Ap 11         | Kp                           | 4-             |    |    |    | 3- |    |    |               | 2-  |    |             |    | 2- |    |         |                           |       | 3- |       |    |    |    |     |    |    |  |
|               | sc                           |                |    |    |    |    |    |    |               |     |    |             |    |    |    |         |                           |       |    |       |    |    |    |     |    |    |  |
| Aurora        | USSR                         |                |    |    |    |    |    |    |               |     |    |             |    |    |    |         |                           |       |    |       |    |    |    |     |    |    |  |
|               | W.E.                         |                |    |    |    |    |    |    |               |     |    |             |    |    |    |         |                           |       |    |       |    |    |    |     |    |    |  |
| Cosmic Rays   |                              |                |    |    |    |    |    |    |               |     |    |             |    |    |    |         |                           |       |    |       |    |    |    |     |    |    |  |
| Green Corona  | E. Limb 7 days earlier: NE-  |                |    |    |    |    |    |    |               | SE- |    |             |    |    |    |         | W. Limb 7 days later: NW- |       |    |       |    |    |    | SW- |    |    |  |
| Indices       | Rz: 14                       | IO cm flux: 72 |    |    |    |    |    |    | Flare: 9/22.0 |     |    |             |    |    |    | Ca: 9.9 |                           | Ip: - |    | Ia: 0 |    |    |    |     |    |    |  |
| Solar Regions | (14216) S15                  |                |    |    |    |    |    |    |               |     |    | (14226) S19 |    |    |    |         |                           |       |    |       |    |    |    |     |    |    |  |
| Sunspots      | (19691) S16 (ap)1 CMP May 20 |                |    |    |    |    |    |    |               |     |    |             |    |    |    |         |                           |       |    |       |    |    |    |     |    |    |  |

| May 22, 1976  |                                     | 00             | 01 | 02 | 03 | 04 | 05 | 06 | 07             | 08         | 09 | 10          | 11 | 12 | 13 | 14      | 15                                | 16    | 17 | 18    | 19 | 20 | 21 | 22          | 23 | 24 |  |
|---------------|-------------------------------------|----------------|----|----|----|----|----|----|----------------|------------|----|-------------|----|----|----|---------|-----------------------------------|-------|----|-------|----|----|----|-------------|----|----|--|
| FLARES        |                                     |                |    |    |    |    |    |    |                |            |    |             |    |    |    |         |                                   |       |    |       |    |    |    |             |    |    |  |
| Bursts        | cm                                  |                |    |    |    |    |    |    |                |            |    |             |    |    |    |         |                                   |       |    |       |    |    |    |             |    |    |  |
|               | dm                                  |                |    |    |    |    |    |    |                |            |    |             |    |    |    |         |                                   |       |    |       |    |    |    |             |    |    |  |
|               | m                                   |                |    |    |    |    |    |    |                |            |    |             |    |    |    |         |                                   |       |    |       |    |    |    |             |    |    |  |
|               | Dkm                                 |                |    |    |    |    |    |    |                |            |    |             |    |    |    |         |                                   |       |    |       |    |    |    |             |    |    |  |
| SID           |                                     |                |    |    |    |    |    |    |                |            |    |             |    |    |    |         |                                   |       |    |       |    |    |    |             |    |    |  |
| X-Rays        |                                     |                |    |    |    |    |    |    |                |            |    |             |    |    |    |         |                                   |       |    |       |    |    |    |             |    |    |  |
| Ap 11         | Kp                                  | 2+             |    |    |    | 20 |    |    |                | 3+         |    |             |    | 2- |    |         |                                   |       | 2+ |       |    |    |    |             |    |    |  |
|               | sc                                  |                |    |    |    |    |    |    |                |            |    |             |    |    |    |         |                                   |       |    |       |    |    |    |             |    |    |  |
| Aurora        | USSR                                |                |    |    |    |    |    |    |                |            |    |             |    |    |    |         |                                   |       |    |       |    |    |    |             |    |    |  |
|               | W.E.                                |                |    |    |    |    |    |    |                |            |    |             |    |    |    |         |                                   |       |    |       |    |    |    |             |    |    |  |
| Cosmic Rays   |                                     |                |    |    |    |    |    |    |                |            |    |             |    |    |    |         |                                   |       |    |       |    |    |    |             |    |    |  |
| Green Corona  | E. Limb 7 days earlier: NE- no data |                |    |    |    |    |    |    |                | SE no data |    |             |    |    |    |         | W. Limb 7 days later: NW- no data |       |    |       |    |    |    | SW- no data |    |    |  |
| Indices       | Rz: 7                               | IO cm flux: 71 |    |    |    |    |    |    | Flare: 21/20.8 |            |    |             |    |    |    | Ca: 9.0 |                                   | Ip: - |    | Ia: 1 |    |    |    |             |    |    |  |
| Solar Regions | 14217 S20                           |                |    |    |    |    |    |    |                |            |    | (14224) N05 |    |    |    |         |                                   |       |    |       |    |    |    |             |    |    |  |
| Sunspots      | (19692) S19 (ap)1                   |                |    |    |    |    |    |    |                |            |    |             |    |    |    |         |                                   |       |    |       |    |    |    |             |    |    |  |

| May 23, 1976  |   | 00             | 01 | 02 | 03 | 04 | 05 | 06 | 07            | 08          | 09 | 10          | 11 | 12 | 13 | 14      | 15                                     | 16    | 17 | 18    | 19 | 20 | 21 | 22               | 23 | 24 |  |
|---------------|---|----------------|----|----|----|----|----|----|---------------|-------------|----|-------------|----|----|----|---------|--|-------|----|-------|----|----|----|------------------|----|----|--|
| FLARES        |   |                |    |    |    |    |    |    |               |             |    |             |    |    |    |         |  |       |    |       |    |    |    |                  |    |    |  |
| Bursts        | cm  |                |    |    |    |    |    |    |               |             |    |             |    |    |    |         |  |       |    |       |    |    |    |                  |    |    |  |
|               | dm  |                |    |    |    |    |    |    |               |             |    |             |    |    |    |         |  |       |    |       |    |    |    |                  |    |    |  |
|               | m   |                |    |    |    |    |    |    |               |             |    |             |    |    |    |         |  |       |    |       |    |    |    |                  |    |    |  |
|               | Dkm   |                |    |    |    |    |    |    |               |             |    |             |    |    |    |         |  |       |    |       |    |    |    |                  |    |    |  |
| SID           |   |                |    |    |    |    |    |    |               |             |    |             |    |    |    |         |  |       |    |       |    |    |    |                  |    |    |  |
| X-Rays        |   |                |    |    |    |    |    |    |               |             |    |             |    |    |    |         |  |       |    |       |    |    |    |                  |    |    |  |
| Ap 14         | Kp  | 10             |    |    |    |    |    |    |               | 40          |    |             |    | 3+ |    |         |  |       | 4- |       |    |    |    |                  |    |    |  |
|               | sc  |                |    |    |    |    |    |    |               |             |    |             |    |    |    |         |  |       |    |       |    |    |    |                  |    |    |  |
| Aurora        | USSR  |                |    |    |    |    |    |    |               |             |    |             |    |    |    |         |  |       |    |       |    |    |    |                  |    |    |  |
|               | W.E.  |                |    |    |    |    |    |    |               |             |    |             |    |    |    |         |  |       |    |       |    |    |    |                  |    |    |  |
| Cosmic Rays   |   |                |    |    |    |    |    |    |               |             |    |             |    |    |    |         |  |       |    |       |    |    |    |                  |    |    |  |
| Green Corona  | E. Limb 7 days earlier: NE- no data                           |                |    |    |    |    |    |    |               | SE- no data |    |             |    |    |    |         | W. Limb 7 days later: NW- no data 355° |       |    |       |    |    |    | SW- no data 180° |    |    |  |
| Indices       | Rz: 15  | IO cm flux: 70 |    |    |    |    |    |    | Flare: 4/23.1 |             |    |             |    |    |    | Ca: 7.6 |  | Ip: - |    | Ia: 1 |    |    |    |                  |    |    |  |
| Solar Regions | (14228) S24   |                |    |    |    |    |    |    |               |             |    | (14227) N26 |    |    |    |         |  |       |    |       |    |    |    |                  |    |    |  |
| Sunspots      | 14215 S08 (4)<br>19689 S09 (a)2<br>19690 S08 (af)2 CMP May 24 |                |    |    |    |    |    |    |               |             |    |             |    |    |    |         |  |       |    |       |    |    |    |                  |    |    |  |

| May 24, 1976  |                             | 00             | 01 | 02 | 03 | 04 | 05 | 06 | 07            | 08 | 09 | 10 | 11 | 12 | 13 | 14      | 15                        | 16    | 17 | 18    | 19 | 20 | 21 | 22  | 23 | 24 |  |
|---------------|-----------------------------|----------------|----|----|----|----|----|----|---------------|----|----|----|----|----|----|---------|---------------------------|-------|----|-------|----|----|----|-----|----|----|--|
| FLARES        |                             |                |    |    |    |    |    |    |               |    |    |    |    |    |    |         |                           |       |    |       |    |    |    |     |    |    |  |
| Bursts        | cm                          |                |    |    |    |    |    |    |               |    |    |    |    |    |    |         |                           |       |    |       |    |    |    |     |    |    |  |
|               | dm                          |                |    |    |    |    |    |    |               |    |    |    |    |    |    |         |                           |       |    |       |    |    |    |     |    |    |  |
|               | m                           |                |    |    |    |    |    |    |               |    |    |    |    |    |    |         |                           |       |    |       |    |    |    |     |    |    |  |
|               | Dkm                         |                |    |    |    |    |    |    |               |    |    |    |    |    |    |         |                           |       |    |       |    |    |    |     |    |    |  |
| SID           |                             |                |    |    |    |    |    |    |               |    |    |    |    |    |    |         |                           |       |    |       |    |    |    |     |    |    |  |
| X-Rays        |                             |                |    |    |    |    |    |    |               |    |    |    |    |    |    |         |                           |       |    |       |    |    |    |     |    |    |  |
| Ap 6Q         | Kp                          | 20             |    |    |    |    |    |    |               | 20 |    |    |    | 2- |    |         |                           |       |    | 2-    |    |    |    |     |    |    |  |
|               | sc                          |                |    |    |    |    |    |    |               |    |    |    |    |    |    |         |                           |       |    |       |    |    |    |     |    |    |  |
| Aurora        | USSR                        |                |    |    |    |    |    |    |               |    |    |    |    |    |    |         |                           |       |    |       |    |    |    |     |    |    |  |
|               | W.E.                        |                |    |    |    |    |    |    |               |    |    |    |    |    |    |         |                           |       |    |       |    |    |    |     |    |    |  |
| Cosmic Rays   |                             |                |    |    |    |    |    |    |               |    |    |    |    |    |    |         |                           |       |    |       |    |    |    |     |    |    |  |
| Green Corona  | E. Limb 7 days earlier: NE- |                |    |    |    |    |    |    |               | SE |    |    |    |    |    |         | W. Limb 7 days later: NW- |       |    |       |    |    |    | SW- |    |    |  |
| Indices       | Rz: 8                       | IO cm flux: 69 |    |    |    |    |    |    | Flare: 0/21.7 |    |    |    |    |    |    | Ca: 7.5 |                           | Ip: - |    | Ia: 0 |    |    |    |     |    |    |  |
| Solar Regions | (14218) S28                 |                |    |    |    |    |    |    |               |    |    |    |    |    |    |         |                           |       |    |       |    |    |    |     |    |    |  |
| Sunspots      |                             |                |    |    |    |    |    |    |               |    |    |    |    |    |    |         |                           |       |    |       |    |    |    |     |    |    |  |



30  
May 76

| May 29, 1976  |                                    | 00             | 01 | 02 | 03 | 04 | 05 | 06          | 07            | 08 | 09 | 10 | 11 | 12 | 13                               | 14      | 15 | 16 | 17 | 18 | 19 | 20          | 21    | 22 | 23 | 24 |  |  |  |       |  |  |  |  |  |  |
|---------------|------------------------------------|----------------|----|----|----|----|----|-------------|---------------|----|----|----|----|----|----------------------------------|---------|----|----|----|----|----|-------------|-------|----|----|----|--|--|--|-------|--|--|--|--|--|--|
| FLARES        |                                    |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
| Bursts        | cm                                 |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
|               | dm                                 |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
|               | m                                  |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
|               | Dkm                                |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
| SID           |                                    |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
| X-Rays        |                                    |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
| Ap 220        | Kp                                 | 3o             |    |    |    | 3o |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
|               | sc                                 |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
| Aurora        | USSR                               |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
|               | W.E.                               |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
| Cosmic Rays   |                                    |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
| Green Corona  | E Limb 7 days earlier: NE- no data |                |    |    |    |    |    | SE- no data |               |    |    |    |    |    | W Limb 7 days later: NW- no data |         |    |    |    |    |    | SW- no data |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
| Indices       | Rz: 0                              | IO cm flux: 66 |    |    |    |    |    |             | Flare: 0/22.6 |    |    |    |    |    |                                  | Ca: 1.2 |    |    |    |    |    |             | Ip: - |    |    |    |  |  |  | Ia: 1 |  |  |  |  |  |  |
| Solar Regions | (14233) S05                        |                |    |    |    |    |    |             |               |    |    |    |    |    | (14234) S31                      |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
| Sunspots      |                                    |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |

| May 30, 1976  |                                    | 00             | 01 | 02 | 03 | 04 | 05 | 06          | 07            | 08 | 09 | 10 | 11 | 12 | 13                               | 14      | 15 | 16 | 17 | 18 | 19 | 20          | 21    | 22 | 23 | 24 |  |  |  |       |  |  |  |  |  |  |
|---------------|------------------------------------|----------------|----|----|----|----|----|-------------|---------------|----|----|----|----|----|----------------------------------|---------|----|----|----|----|----|-------------|-------|----|----|----|--|--|--|-------|--|--|--|--|--|--|
| FLARES        |                                    |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
| Bursts        | cm                                 |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
|               | dm                                 |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
|               | m                                  |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
|               | Dkm                                |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
| SID           |                                    |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
| X-Rays        |                                    |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
| Ap 17         | Kp                                 | 4o             |    |    |    | 3o |    |             |               | 2+ |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
|               | sc                                 |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
| Aurora        | USSR                               |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
|               | W.E.                               |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
| Cosmic Rays   |                                    |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
| Green Corona  | E Limb 7 days earlier: NE- no data |                |    |    |    |    |    | SE- no data |               |    |    |    |    |    | W Limb 7 days later: NW- no data |         |    |    |    |    |    | SW- no data |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
| Indices       | Rz: 0                              | IO cm flux: 66 |    |    |    |    |    |             | Flare: 0/23.5 |    |    |    |    |    |                                  | Ca: 0.4 |    |    |    |    |    |             | Ip: - |    |    |    |  |  |  | Ia: 4 |  |  |  |  |  |  |
| Solar Regions | (14242) N03                        |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
| Sunspots      |                                    |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |

| May 31, 1976  |                                    | 00             | 01 | 02 | 03 | 04 | 05 | 06          | 07            | 08 | 09 | 10 | 11 | 12 | 13                               | 14      | 15 | 16 | 17 | 18 | 19 | 20          | 21    | 22 | 23 | 24 |  |  |  |       |  |  |  |  |  |  |
|---------------|------------------------------------|----------------|----|----|----|----|----|-------------|---------------|----|----|----|----|----|----------------------------------|---------|----|----|----|----|----|-------------|-------|----|----|----|--|--|--|-------|--|--|--|--|--|--|
| FLARES        |                                    |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
| Bursts        | cm                                 |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
|               | dm                                 |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
|               | m                                  |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
|               | Dkm                                |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
| SID           |                                    |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
| X-Rays        |                                    |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
| Ap 9          | Kp                                 | 2o             |    |    |    | 3- |    |             |               | 3- |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
|               | sc                                 |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
| Aurora        | USSR                               |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
|               | W.E.                               |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
| Cosmic Rays   |                                    |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
| Green Corona  | E Limb 7 days earlier: NE- no data |                |    |    |    |    |    | SE- no data |               |    |    |    |    |    | W Limb 7 days later: NW- no data |         |    |    |    |    |    | SW- no data |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
| Indices       | Rz: 0                              | IO cm flux: 67 |    |    |    |    |    |             | Flare: 0/20.6 |    |    |    |    |    |                                  | Ca: 0.2 |    |    |    |    |    |             | Ip: 0 |    |    |    |  |  |  | Ia: 1 |  |  |  |  |  |  |
| Solar Regions | (14230) N32                        |                |    |    |    |    |    |             |               |    |    |    |    |    | (14235) S18                      |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |
| Sunspots      |                                    |                |    |    |    |    |    |             |               |    |    |    |    |    |                                  |         |    |    |    |    |    |             |       |    |    |    |  |  |  |       |  |  |  |  |  |  |

REGIONAL FLARE INDEX  
INCLUDES ALL FLARES

| MC MATH<br>PLAGE NO. | LAT | CHP DATE   | DATE<br>FIRST FLARE | DATE<br>LAST FLARE | FLARE-INDEX<br>SUM | FLARE-INDEX<br>MEAN | TOTAL NO.<br>OF FLARES |
|----------------------|-----|------------|---------------------|--------------------|--------------------|---------------------|------------------------|
| 14195                | N10 | 76/05/05.8 | 76/05/04            | 76/05/07           | 14.18              | 3.55                | 4                      |
| 14203                | N 3 | 76/05/11.8 | 76/05/05            | 76/05/17           | 13.15              | 1.01                | 9                      |
| 14206                | N 7 | 76/05/17.4 | 76/05/13            | 76/05/19           | 3.24               | .46                 | 2                      |
| 14211                | S12 | 76/05/19.7 | 76/05/13            | 76/05/26           | 18.21              | 1.30                | 6                      |
| 14217                | S21 | 76/05/22.7 | 76/05/21            | 76/05/21           | .89                | .89                 | 1                      |
| 14215                | S 8 | 76/05/23.9 | 76/05/18            | 76/05/26           | 43.20              | 4.80                | 12                     |

Note:

Because of differences in method of calculation, the dates of Central Meridian Passage for the McMath Plage Regions vary somewhat from those given elsewhere. Any region not listed here produced no flares during its disk passage.

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- UAG-36 "An Atlas of Extreme Ultraviolet Flashes of Solar Flares Observed Via Sudden Frequency Deviations During the ATM-SKYLAB Missions", price 55 cents.
- UAG-37 "Auroral Electrojet Magnetic Activity Indices AE (10) for 1966", price 75 cents.
- UAG-38 "Master Station List for Solar-Terrestrial Physics Data at WDC-A for Solar-Terrestrial Physics", price \$1.60.
- UAG-39 "Auroral Electrojet Magnetic Activity Indices AE (11) for 1971", by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Environmental Data Service, February 1975, 144 pages, price \$2.05.
- UAG-40 "H-Alpha Synoptic Charts of Solar Activity For the Period of Skylab Observations, May, 1973-March, 1974", by Patrick S. McIntosh, NOAA Environmental Research Laboratory, February 1975, 32 pages, price 56 cents.
- UAG-41 "H-Alpha Synoptic Charts of Solar Activity During the First Year of Solar Cycle 20, October, 1964 - August, 1965", by Patrick S. McIntosh, NOAA Environmental Research Laboratory, and Jerome T. Nolte, American Science and Engineering, Cambridge, Massachusetts, March 1975, 25 pages, price 48 cents.
- UAG-42 "Observations of Jupiter's Sporadic Radio Emission in the Range 7.6-80 MHz 10 December 1971 through 21 March 1975", by James W. Warwick, George A. Dulk, and Anthony C. Riddle, Department of Astro-Geophysics, University of Colorado, Boulder, Colorado 80302, April 1975, 49 pages, price \$1.15.
- UAG-43 "Catalog of Observation Times of Ground-Based Skylab-Coordinated Solar Observing Programs", compiled by Helen E. Coffey, World Data Center A for Solar-Terrestrial Physics, May 1975, 159 pages, price \$3.00.
- UAG-44 "Synoptic Maps of Solar 9.1 cm Microwave Emission from June 1962 to August 1973", by Werner Graf and Ronald N. Bracewell, Radio Astronomy Institute, Stanford University, Stanford, California 94305, May 1975, 183 pages, price \$2.55.
- UAG-45 "Auroral Electrojet Magnetic Activity Indices AE (11) for 1972", by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Environmental Data Service, May 1975, 144 pages, price \$2.10.
- UAG-46 "Interplanetary Magnetic Field Data 1963-1974", by Joseph H. King, National Space Science Data Center, NASA Goddard Space Flight Center, Greenbelt, Maryland 20771, June 1975, 382 pages, price \$2.95.
- UAG-47 "Auroral Electrojet Magnetic Activity Indices AE (11) for 1973", by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Environmental Data Service, June 1975, 144 pages, price \$2.10.



- UAG-48A "Synoptic Observations of the Solar Corona during Carrington Rotations 1580-1596 (11 October 1971 - 15 January 1973)", [Reissue with quality images] by R. A. Howard, M. J. Koomen, D. J. Michels, R. Tousey, C. R. Detwiler, D. E. Roberts, R. T. Seal and J. D. Whitney, E. O. Hulbert Center for Space Research, NRL, Washington, D. C. 20375 and R. T. and S. F. Hansen, C. J. Garcia and E. Yasukawa, High Altitude Observatory, NCAR, Boulder, Colorado 80303, February 1976, 200 pages, price \$4.27.
- UAG-49 "Catalog of Standard Geomagnetic Variation Data", prepared by Environmental Data Service, NOAA, Boulder, Colorado, August 1975, 125 pages, price \$1.85.
- UAG-50 "High-Latitude Supplement to the URSI Handbook on Ionogram Interpretation and Reduction", by W. R. Piggott, British Antarctic Survey, c/o SRC, Appleton Laboratory, Ditton Park, Slough, England, October 1975, 292 pages, price \$4.00.
- UAG-51 "Synoptic Maps of Solar Coronal Hole Boundaries Derived from He II 304Å Spectroheliograms from the Manned Skylab Missions", by J. D. Bohlin and D. M. Rubenstein, E. O. Hulbert Center for Space Research, Naval Research Laboratory, Washington, D. C. 20375 U.S.A., November 1975, 30 pages, price 54 cents.
- UAG-52 "Experimental Comprehensive Solar Flare Indices for Certain Flares, 1970-1974", compiled by Helen W. Dodson and E. Ruth Hedeman, McMath-Hulbert Observatory, The University of Michigan, 895 Lake Angelus Road North, Pontiac, Michigan 48055 U.S.A., November 1975, 27 pages, price 60 cents.
- UAG-53 "Description and Catalog of Ionospheric F-Region Data, Jicamarca Radar Observatory (November 1966 - April 1969)", by W. L. Clark and T. E. Van Zandt, Aeronomy Laboratory, NOAA, Boulder, Colorado 80302 and J. P. McClure, University of Texas at Dallas, Dallas, Texas 75230, April 1976, 10 pages, price 33 cents.
- UAG-54 "Catalog of Ionosphere Vertical Soundings Data", prepared by Environmental Data Service, NOAA, Boulder, Colorado 80302, April 1976, 130 pages, price \$2.10.
- UAG-55 "Equivalent Ionospheric Current Representations by a New Method, Illustrated for 8-9 November 1969 Magnetic Disturbances", by Y. Kamide, Cooperative Institute for Research in Environmental Sciences, University of Colorado, Boulder, Colorado 80302 and Geophysical Institute, University of Alaska, Fairbanks, Alaska 99701, H. W. Kroehl, Data Studies Division, NOAA/EDS/NGSDC, Boulder, Colorado 80302, M. Kanamitsu, Advanced Study Program, National Center for Atmospheric Research, Boulder, Colorado 80303, J. H. Allen, Data Studies Division, NOAA/EDS/NGSDC, Boulder, Colorado 80302, and S.-I. Akasofu, Geophysical Institute, University of Alaska, Fairbanks, Alaska 99701, April 1976, 91 pages, price \$1.60.
- UAG-56 "Iso-intensity Contours of Ground Magnetic H Perturbations for the December 16-18, 1971 Geomagnetic Storm", by Y. Kamide, Cooperative Institute for Research in Environmental Sciences, University of Colorado, Boulder, Colorado 80302 and Geophysical Institute, University of Alaska, Fairbanks, Alaska 99701 (currently Guest worker at Data Studies Division, NOAA/EDS/NGSDC, Boulder, Colorado 80302), April 1976, 37 pages, price \$1.39.
- UAG-57 "Manual on Ionospheric Absorption Measurements", edited by K. Rawer, Institut für Physikalische Weltraumforschung, Freiburg, G.F.R., June 1976, 202 pages, price \$4.27.
- UAG-58 "ATS6 Radio Beacon Electron Content Measurements at Boulder, July 1974 - May 1975", by R. B. Fritz, Space Environment Laboratory (currently with Wave Propagation Laboratory), NOAA, Boulder, Colorado 80301 USA, September 1976, 61 pages, price \$1.04.



**WORLD DATA CENTER A**  
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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."