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## ENVIRONMENTAL DATA SERVICE

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NO. 354

FEBRUARY 1974

Part II (Comprehensive Reports)

DATA FOR  
AUGUST 1973  
JULY 1973  
& MISCELLANEA

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

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# SOLAR - GEOPHYSICAL DATA

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No. 354

Issued in two parts

Hope I. Leighton, Editor

J. Virginia Lincoln, Director  
Solar - Terrestrial Data Services Division

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For explanations of the data contained herein see *Descriptive Text* published as supplement to February 1974 *Solar-Geophysical Data* (Number 354).

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# SOLAR FLARES Confirmed AUGUST 1973

| OBSERVATORY | OBSERVED UT |       |       |                 | LOCATION     |            |                  |                     |         | DURATION MIN. | IM-PORTANCE | OBS. COND. TYPE | MEASUREMENTS |                     |                     |               |             | REMARKS |
|-------------|-------------|-------|-------|-----------------|--------------|------------|------------------|---------------------|---------|---------------|-------------|-----------------|--------------|---------------------|---------------------|---------------|-------------|---------|
|             | DATE AUG    | START | END   | MAX. PHASE      | APPROX. LAT. | HER. DIST. | CENTRAL DISTANCE | MCNATH PLAGE REGION | CMP DAY |               |             |                 | TIME UT      | MEAS. AREA Sq. Deg. | CORR. AREA Sq. Deg. | MAX. WIDTH Hc | MAX. INT. % |         |
| GRP49286    | 01          | 0642  | 0705  | 0644            | S06          | W10        | .266             | 12460               | 31.5    | 23            | -N          |                 |              | 1.13                |                     |               |             | 7 7 7 8 |
| CATA        | 01          | 0640  | 0720  | 0645            | S04          | W13        | .280             | 12460               | 31.3    | 40            | -B          | 3 C             | 0645         | 1.16                | 1.20                |               | (214)       | Z       |
| ATHN        | 01          | 0640  | 0655  | 0644            | S07          | W11        | .290             | 12460               | 31.5    | 150           | -N          | 2 C             |              | .66                 |                     |               |             | F       |
| TEHR        | 01          | 0641  | 0656  | 0644            | S06          | W08        | .246             | 12460               | 31.7    | 15            | -N          | 3 C             |              | .45                 |                     |               |             | F       |
| CRON        | 01          | 0642E | 0702  |                 | S06          | W11        | .277             | 12460               | 31.5    | 200           | -N          | V               |              | .90                 |                     |               |             |         |
| MONT        | 01          | 0643E | 0706  | 0643            | S07          | W10        | .279             | 12460               | 31.5    | 230           | -N          | C               | 0643         | .52                 |                     |               |             |         |
| BUCA        | 01          | 0644E | 0708D |                 | S05          | W11        | .265             | 12460               | 31.5    | 240           | -N          | P               | 0648         | 1.10                | 1.10                |               |             |         |
| WEND        | 01          | 0647  | 0658  |                 | S05          | W09        | .242             | 12460               | 31.6    | 11            | 1F          | V               |              | 3.09                |                     |               |             |         |
| GRP49287    | 01          | 1140  | 1159  | 1145            | S09          | W13        | .336             | 12460               | 31.5    | 19            | --N         |                 |              | .81                 |                     |               |             | 4 4 4 7 |
| CANR        | 01          | 1138  | 1200  | 1141            | S06          | W14        | .314             | 12460               | 31.4    | 22            | -N          | V               | 1141         | 1.20                | 1.20                |               |             |         |
| TEHR        | 01          | 1139  | 1158  | 1143            | S09          | W15        | .359             | 12460               | 31.4    | 19            | -N          | 2 C             |              | .64                 |                     |               |             | F       |
| RANY        | 01          | 1142  | 1200  | 1146            | S12          | W06        | .321             | 12460               | 1.0     | 18            | -N          | 3 C             |              | .56                 |                     |               |             | F       |
| ATHN        | 01          | 1151E | 1153D | 1151U           | S07          | W15        | .337             | 12460               | 31.4    | 20            | -N          | 3 V             |              | .83                 |                     |               |             | F       |
| GRP49289    | 01          | 1752  | 1835  | 1756            | S17          | W17        | .474             | 12460               | 31.5    | 43            | --F         |                 |              | 1.40                |                     |               |             | 2 1 1 2 |
| CANR        | 01          | 1752  | 1835  | 1756            | S17          | W17        | .474             | 12460               | 31.5    | 43            | -F          | V               |              | 1.40                |                     |               |             |         |
| PALE        | 01          | 1809E | 1817D | 1812            | S06          | W18        | .366             | 12460               | 31.4    | 80            | -F          | 2 C             |              | .45                 |                     |               |             | F       |
| GRP49290    | 01          | 1754  | 1828  | 1805            | S10          | E84        | .996             | 12472               | 8.0     | 34            | --F         |                 |              | .43                 |                     |               |             | 2 2 2 3 |
| CANR        | 01          | 1754  | 1828  | 1801            | S09          | E85        | .998             | 12472               | 8.1     | 34            | -F          | V               |              | .40                 |                     |               |             |         |
| PALE        | 01          | 1809E | 1817D | 1809U           | S11          | E82        | .993             | 12472               | 7.9     | 80            | -N          | 2 C             |              | .45                 |                     |               |             |         |
| 291 PALE    | 01          | 1909E | 1925  | 1910            | S13          | E85        | .998             | 12472               | 8.2     | 160           | -N          | 3 C             |              | .45                 |                     |               |             | 2       |
| 292 PALE    | 01          | 1910  | 1916  | 1912            | S06          | W18        | .366             | 12460               | 31.4    | 6             | --F         | 3 C             |              | .27                 |                     |               |             | F 2     |
|             | 01          | 2207  | 2215  | NO FLARE PATROL |              |            |                  |                     |         |               |             |                 |              |                     |                     |               |             |         |
| GRP49295    | 02          | 0407  | 0440  | 0418            | S07          | W22        | .429             | 12460               | 31.5    | 33            | -N          |                 |              | 1.54                |                     |               |             | 5 4 4 7 |
| TEHR        | 02          | 0407E | 0440  | 0410U           | S08          | W20        | .411             | 12460               | 31.7    | 330           | -N          | 4 V             |              | 1.34                |                     |               |             | F       |
| ATHN        | 02          | 0410E | 0439  | 0410U           | S07          | W23        | .443             | 12460               | 31.4    | 290           | -N          | 2 C             |              | .83                 |                     |               |             | F       |
| MITK        | 02          | 0411E | 0449D |                 | S08          | W23        | .451             | 12460               | 31.4    | 380           | 1N          | C               | 0411         | 2.17                | 2.40                |               |             | E       |
| TACH        | 02          | 0412E | 0433  | 0417            | S06          | W23        | .436             | 12460               | 31.5    | 210           | -N          | V               | 0417         | 1.83                | 2.02                | 2.39          | 53          | 0       |
| PALE        | 02          | 0432E | 0442D | 0433            | S08          | W24        | .464             | 12460               | 31.4    | 100           | -N          | 2 C             |              | 1.34                |                     |               |             | F       |
| GRP49296    | 02          | 0443  | 0455  | 0449            | S10          | E70        | .948             | 12472               | 7.4     | 12            | -B          |                 |              | .48                 |                     |               |             | 2 2 2 6 |
| MITK        | 02          | 0443  | 0449D |                 | S09          | E70        | .947             | 12472               | 7.4     | 60            | -B          | C               | 0449         | .62                 |                     |               |             | 0       |
| ATHN        | 02          | 0448E | 0455  | 0449            | S10          | E70        | .948             | 12472               | 7.5     | 70            | -N          | 3 V             |              | .33                 |                     |               |             | F       |
| GRP49297    | 02          | 1249  | 1258  | 1250            | S11          | E68        | .938             | 12472               | 7.6     | 9             | --F         |                 |              | .44                 |                     |               |             | 3 3 3 7 |
| CANR        | 02          | 1248  | 1256  | 1250            | S08          | E67        | .929             | 12472               | 7.6     | 8             | -F          | V               | 1250         | .60                 |                     |               |             |         |
| CATA        | 02          | 1250  | 1300D | 1250            | S11          | E64        | .913             | 12472               | 7.3     | 100           | -N          | 3 P             | 1250         | .29                 | .71                 |               | (162)       |         |
| UPIO        | 02          | 1252E | 1255U |                 | S13          | E74        | .970             | 12472               | 8.1     | 30            | -F          | P               | 1252         | .42                 |                     |               |             |         |
| GRP49298    | 02          | 1844  | 1900  | 1846            | S08          | W31        | .557             | 12460               | 31.5    | 16            | --N         |                 |              | .60                 |                     |               |             | 2 2 2 2 |
| PALE        | 02          | 1843  | 1910  | 1846            | S09          | W31        | .563             | 12460               | 31.5    | 27            | -N          | 3 V             |              | .88                 |                     |               |             | SDE     |
| MCMA        | 02          | 1844  | 1850  |                 | S07          | W31        | .552             | 12460               | 31.5    | 6             | -N          | C               | 1847         | .31                 | .40                 |               |             | EJ      |
|             | 02          | 2003  | 2020  | NO FLARE PATROL |              |            |                  |                     |         |               |             |                 |              |                     |                     |               |             |         |
|             | 02          | 2044  | 2133  | NO FLARE PATROL |              |            |                  |                     |         |               |             |                 |              |                     |                     |               |             |         |
|             | 02          | 2134  | 2140  | NO FLARE PATROL |              |            |                  |                     |         |               |             |                 |              |                     |                     |               |             |         |
| GRP49301    | 03          | 0613  | 0635  | 0616            | S13          | E63        | .909             | 12472               | 8.0     | 22            | -N          |                 |              | .68                 |                     |               |             | 3 3 3 7 |
| CATA        | 03          | 0610E | 0640  | 0610            | S14          | E60        | .889             | 12472               | 7.8     | 300           | -N          | 3 P             | 0610         | .58                 | 1.26                |               | (178)       |         |
| ATHN        | 03          | 0615  | 0630  | 0620            | S13          | E66        | .929             | 12472               | 8.2     | 15            | -N          | 3 C             |              | .33                 |                     |               |             | DE      |
| MITK        | 03          | 0615  | 0626D | 0618            | S12          | E63        | .907             | 12472               | 8.0     | 110           | 1N          | C               | 0618         | 1.13                | 2.60                |               |             | D       |
| 305 MITK    | 03          | 2240E | 2316  | 2242            | S22          | E49        | .824             | 12472               | 7.6     | 360           | 1N          | C               | 2242         | 1.96                | 3.40                |               |             | E 3     |
| GRP49306    | 04          | 0235  | 0247  | 0239            | S09          | E45        | .735             | 12472               | 7.5     | 12            | -N          |                 |              | 1.03                |                     |               |             | 2 2 2 3 |
| PALE        | 04          | 0233E | 0247  | 0240            | S08          | E44        | .720             | 12472               | 7.4     | 140           | -N          | 2 C             |              | .72                 |                     |               |             | DE      |
| MITK        | 04          | 0236  | 0239D | 0238            | S09          | E46        | .746             | 12472               | 7.6     | 30            | -N          | C               | 0238         | 1.34                | 2.00                |               |             | E       |
| GRP49308    | 04          | 0610  | 0718  | 0643            | N11          | W37        | .601             | 12461               | 1.5     | 68            | -F          |                 |              | 1.00                |                     |               |             | 2 2 2 8 |
| ABST        | 04          | 0610  | 0718  | 0643            | N11          | W36        | .587             | 12461               | 1.6     | 68            | 1F          | C               | 0643         | 1.71                | 2.10                |               |             | FGK     |
| ARCE        | 04          | 0644E | 0645D |                 | N10          | W37        | .600             | 12461               | 1.5     | 10            | -N          | P               | 0644         | .29                 | .40                 |               |             |         |
| GRP49309    | 04          | 0632  | 0737  | 0654            | N06          | E24        | .405             | 12474               | 6.1     | 65            | --F         |                 |              | 1.28                |                     |               |             | 4 3 2 6 |
| CATA        | 04          | 0626E | 0631D | 0629            | N04          | E25        | .422             | 12474               | 6.1     | 50            | -N          | 3 P             | 0629         | .29                 | .32                 |               | (162)       |         |
| ISTA        | 04          | 0630  | 0730  |                 | N06          | E21        | .356             | 12474               | 5.8     | 60            | -F          |                 |              |                     |                     |               |             | B       |
| ABST        | 04          | 0634  | 0740D | 0654            | N07          | E25        | .420             | 12474               | 6.1     | 700           | -F          | P               | 0654         | 1.80                | 2.00                |               |             | FK      |
| ARCE        | 04          | 0644E | 0724D |                 | N06          | E26        | .436             | 12474               | 6.2     | 400           | -N          | C               | 0645         | .75                 | .80                 |               |             | TB      |
| GRP49310    | 04          | 0653  | 0714  | 0701            | S14          | E47        | .774             | 12472               | 7.8     | 21            | --F         |                 |              | .52                 |                     |               |             | 2 2 2 7 |
| CATA        | 04          | 0650  | 0700D | 0700            | S14          | E46        | .764             | 12472               | 7.7     | 100           | -N          | 3 P             | 0700         | .58                 | .89                 |               | (158)       |         |
| ABST        | 04          | 0656  | 0714  | 0702            | S13          | E47        | .770             | 12472               | 7.8     | 18            | -F          | C               | 0702         | .45                 | .70                 |               |             | DJ      |

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# SOLAR FLARES

## Confirmed

### AUGUST 1973

| OBSERVATORY                                                               | OBSERVED UT |       |       |            | LOCATION        |                    |                  |                     |         | DURATION MIN. | IM-PORTANCE | OBS. COND. TYPE | MEASUREMENTS |                     |                     |               |             | REMARKS     |
|---------------------------------------------------------------------------|-------------|-------|-------|------------|-----------------|--------------------|------------------|---------------------|---------|---------------|-------------|-----------------|--------------|---------------------|---------------------|---------------|-------------|-------------|
|                                                                           | DATE AUG    | START | END   | MAX. PHASE | APPROX. LAT.    | APPROX. MER. DIST. | CENTRAL DISTANCE | MCMATH PLAGE REGION | CMP DAY |               |             |                 | TIME UT      | HEAS. AREA Sq. Deg. | CORR. AREA Sq. Deg. | MAX. WIDTH Ha | MAX. INT. % |             |
| GRP49311                                                                  | 04          | 0725  | 0743  | 0725       | S14             | E47                | .774             | 12472               | 7.8     | 18            | --F         |                 |              | .83                 |                     |               |             | 2 2 2 7     |
| ABST                                                                      | 04          | 0724E | 0736  | 0725       | S13             | E47                | .770             | 12472               | 7.8     | 120           | -F          | P               | 0725         | 1.08                | 1.70                |               |             | E           |
| CATA                                                                      | 04          | 0725  | 0750  | 0725       | S14             | E46                | .764             | 12472               | 7.8     | 25            | -F          | 1 C             | 0725         | .58                 | .89                 |               | (145)       |             |
| GRP49313                                                                  | 04          | 0844  | 0918  | 0851       | N06             | E24                | .405             | 12474               | 6.2     | 34            | --F         |                 |              | .29                 |                     |               |             | 2 2 2 8     |
| MONT                                                                      | 04          | 0844  | 0918  | 0851       | N07             | E25                | .420             | 12474               | 6.2     | 34            | -N          | C               | 0851         | .10                 |                     |               |             | OH          |
| ARCE                                                                      | 04          | 0845E | 09100 |            | N05             | E23                | .389             | 12474               | 6.1     | 250           | -F          | C               | 0850         | .48                 | .50                 |               |             |             |
| 318 MCHA                                                                  | 04          | 1450  | 1500  | 1453       | S05             | W61                | .882             | 12460               | 31.0    | 10            | -N          | C               | 1453         | .52                 | 1.10                |               |             | E4 4        |
| 319 PALE                                                                  | 04          | 2217  | 2222  | 2219       | N14             | E62                | .878             | 12475               | 9.6     | 5             | --F         | 3 C             |              | .55                 |                     |               |             | 3           |
| 321 PALE                                                                  | 05          | 0155E | 0216  | 0157       | S07             | W64                | .908             | 12460               | 31.3    | 210           | --N         | 3 V             |              | .31                 |                     |               |             | DE 2        |
|                                                                           | 05          | 1906  | 1909  |            | NO FLARE PATROL |                    |                  |                     |         |               |             |                 |              |                     |                     |               |             |             |
|                                                                           | 05          | 1931  | 2029  |            | NO FLARE PATROL |                    |                  |                     |         |               |             |                 |              |                     |                     |               |             |             |
| GRP49325                                                                  | 05          | 2336  | 0009  | 2344       | N06             | E01                | .017             | 12474               | 6.1     | 33            | -N          |                 |              | 1.19                |                     |               |             | 3 3 3 3     |
| CRON                                                                      | 05          | 2335E | 2350  |            | N05             | E01                | .025             | 12474               | 6.1     | 150           | -N          | V               |              | 1.60                |                     |               |             |             |
| PALE                                                                      | 05          | 2336  | 2355  | 2339       | N06             | E01                | .017             | 12474               | 6.1     | 19            | -N          | 2 C             |              | .72                 |                     |               |             | DE          |
| MANI                                                                      | 05          | 2339E | 0022  | 2348       | N07             | E00                | .017             | 12474               | 6.0     | 430           | -N          | 2 C             | 2348         | 1.24                | 1.24                |               |             | FU          |
| PALE                                                                      | 06          | 0007  | 0015  | 0010       | N06             | E01                | .017             | 12474               | 6.1     | 8             | -F          | 2 C             |              | .27                 |                     |               |             | F           |
| PALE                                                                      | 06          | 0017  | 00190 | 0018       | N06             | E01                | .017             | 12474               | 6.1     | 20            | -F          | 2 C             |              | .27                 |                     |               |             | F           |
| GRP49326                                                                  | 05          | 2357  | 0010  | 2359       | N09             | W60                | .862             | 12461               | 1.5     | 13            | --F         |                 |              | .87                 |                     |               |             | 2 2 2 3     |
| MANI                                                                      | 05          | 2355  | 23590 | 2358       | N08             | W61                | .871             | 12461               | 1.4     | 40            | -F          | 2 C             | 2358         | .83                 | 1.53                |               |             | F           |
| PALE                                                                      | 05          | 2358  | 0010  | 0000       | N10             | W59                | .853             | 12461               | 1.6     | 12            | -F          | 2 C             |              | .91                 |                     |               |             | F           |
| GRP49327                                                                  | 06          | 0137  | 0237  | 0151       | N06             | W01                | .017             | 12474               | 6.0     | 60            | -N          |                 |              | 1.77                |                     |               |             | 4 3 3 5     |
| CRON                                                                      | 06          | 0115E | 01400 |            | N05             | E00                | .019             | 12474               | 6.1     | 250           | -N          | V               |              | 1.40                |                     |               |             |             |
| MITK                                                                      | 06          | 0129E | 02370 | 0145       | N06             | W02                | .035             | 12474               | 5.9     | 680           | 1N          | C               | 0145         | 2.27                | 2.30                |               |             | FU          |
| MANI                                                                      | 06          | 0137E | 02120 | 0155       | N08             | W02                | .048             | 12474               | 5.9     | 350           | -N          | 2 C             | 0155         | 1.96                | 1.96                |               |             | F           |
| PALE                                                                      | 06          | 0146  | 02200 | 0153       | N06             | W01                | .017             | 12474               | 6.0     | 340           | -N          | 1 C             |              | 1.08                |                     |               |             | F           |
| GRP49328                                                                  | 06          | 0356  | 0430  | 0404       | N06             | W03                | .052             | 12474               | 5.9     | 34            | --N         |                 |              | .91                 |                     |               |             | 2 2 2 6     |
| TEHR                                                                      | 06          | 0356  | 0430  | 0405       | N06             | W05                | .087             | 12474               | 5.8     | 34            | -N          | 4 C             |              | .94                 |                     |               |             | U Z         |
| PALE                                                                      | 06          | 0400E | 04230 | 0402       | N06             | W01                | .017             | 12474               | 6.1     | 230           | -N          | 2 V             |              | .88                 |                     |               |             | UOE         |
| 9 STATIONS REPORTING GROUP 49331. 2 STATIONS OBSERVING AND NOT REPORTING. |             |       |       |            |                 |                    |                  |                     |         |               |             |                 |              |                     |                     |               |             |             |
| GRP49331                                                                  | 06          | 0625  | 0711  | 0631       | N07             | W05                | .088             | 12474               | 5.9     | 46            | 1N          |                 |              | 3.06                |                     |               |             | 7 7 7 10    |
| CATA                                                                      | 06          | 0605E | 07300 | 0625       | N07             | W05                | .088             | 12474               | 5.9     | 850           | 1B          | 3 P             | 0625         | 4.05                | 4.07                |               | (309)       | TZ          |
| WEND                                                                      | 06          | 0624E | 0743  |            | N07             | W05                | .088             | 12474               | 5.9     | 790           | 2N          | V               |              | 7.22                |                     |               |             |             |
| ATHN                                                                      | 06          | 0625  | 0659  | 0629       | N07             | W04                | .071             | 12474               | 6.0     | 34            | -N          | 2 C             |              | 1.32                |                     |               |             | F           |
| TEHR                                                                      | 06          | 0627E | 0644  | 0629       | N06             | W06                | .104             | 12474               | 5.8     | 170           | -B          | 4 V             |              | .99                 |                     |               |             | U Z         |
| BUCA                                                                      | 06          | 0628E | 07050 |            | N07             | W04                | .071             | 12474               | 6.0     | 370           | 1N          | P               | 0629         | 2.76                | 2.60                |               |             | T           |
| UPIC                                                                      | 06          | 0630E | 0639  | 0632       | N07             | W06                | .105             | 12474               | 5.8     | 90            | 1N          | P               | 0632         | 2.31                |                     |               |             |             |
| MONT                                                                      | 06          | 0633E | 0736  | 0639       | N07             | W04                | .071             | 12474               | 6.0     | 630           | 1N          | C               | 0639         | 2.78                |                     |               |             |             |
| 49331                                                                     | 06          | 0642  | 0736  | 0642       | N07             | W05                | .088             | 12474               | 5.9     | 54            | *-B         |                 |              | 1.72                |                     |               |             | 2 2 2 11    |
| MANI                                                                      | 06          | 0642E | 07030 | 06420      | N08             | W05                | .093             | 12474               | 5.9     | 210           | -B          | 2 C             | 0642         | 1.24                | 1.24                |               |             | F           |
| ARCE                                                                      | 06          | 0650E | 07360 |            | N06             | W05                | .087             | 12474               | 5.9     | 460           | 1B          | C               | 0650         | 2.20                | 2.20                |               |             | TBF         |
| 49332                                                                     | 06          | 0837  | 0935  | 0849       | N07             | W06                | .105             | 12474               | 5.9     | 58            | *1N         |                 |              | 2.69                |                     |               |             | 10 10 10 12 |
| ARCE                                                                      | 06          | 0828E | 09300 |            | N06             | W06                | .104             | 12474               | 5.9     | 620           | 1N          | C               | 0855         | 2.33                | 2.30                |               |             | KF          |
| CATA                                                                      | 06          | 0835  | 10000 | 0846       | N07             | W06                | .105             | 12474               | 5.9     | 850           | 1B          | 3 P             | 0846         | 3.76                | 3.78                |               | (263)       | TZ          |
| WEND                                                                      | 06          | 0837  | 1058  | 0843       | N07             | W05                | .088             | 12474               | 6.0     | 141           | 2B          | C               |              | 8.25                |                     |               |             |             |
| ATHN                                                                      | 06          | 0839  | 0923  | 0843       | N07             | W07                | .122             | 12474               | 5.8     | 44            | -B          | 2 C             |              | 1.49                |                     |               |             | F           |
| ZURI                                                                      | 06          | 0840  | 09440 | 0852       | N07             | W06                | .105             | 12474               | 5.9     | 640           | 1N          | C               | 0852         | 2.32                | 2.32                |               |             |             |
| CANR                                                                      | 06          | 0840  | 0925  | 0858       | N07             | W05                | .088             | 12474               | 6.0     | 45            | 1N          | V               | 0858         | 2.80                | 2.80                |               |             |             |
| CANR                                                                      | 06          | 0840  | 08540 | 0854       | N07             | W04                | .071             | 12474               | 6.1     | 140           | 1N          | V               | 0854         | 2.40                | 2.40                |               |             |             |
| MONT                                                                      | 06          | 0841  | 0936  | 0847       | N07             | W05                | .088             | 12474               | 6.0     | 55            | 1B          | C               | 0847         | 2.48                |                     |               |             |             |
| HEUD                                                                      | 06          | 0843E | 0900  |            | N07             | W06                | .105             | 12474               | 5.9     | 170           | -N          | C               | 0845         | 1.03                | 1.00                |               |             | E           |
| UPIC                                                                      | 06          | 0845E | 0856  |            | N08             | W04                | .077             | 12474               | 6.1     | 110           | -F          | P               | 0845         | .85                 |                     |               |             | T           |
| TEHR                                                                      | 06          | 0848E | 0930  | 0852       | N06             | W06                | .104             | 12474               | 5.9     | 420           | -B          | 4 V             |              | 1.55                |                     |               |             | F           |
| GRP49333                                                                  | 06          | 0847  | 1050  | 1009       | N07             | W05                | .088             | 12474               | 6.0     | 123           | 1N          |                 |              | 5.29                |                     |               |             | 5 2 2 13    |
| CRON                                                                      | 06          | 0847E | 09280 |            | N06             | W04                | .069             | 12474               | 6.1     | 410           | -N          | V               |              | 1.50                |                     |               |             |             |
| KHAR                                                                      | 06          | 0852E | 10500 |            | N07             | W06                | .105             | 12474               | 5.9     | 1180          | 2N          | C               | 0923         | 9.08                | 9.00                |               |             | E           |
| UPIC                                                                      | 06          | 0918E | 09540 |            | N07             | W07                | .122             | 12474               | 5.9     | 360           | -N          | P               | 0936         | 1.68                |                     |               |             | T           |
| UPIC                                                                      | 06          | 0918E | 09540 |            | N08             | W02                | .048             | 12474               | 6.2     | 360           | -N          | P               | 0936         | .63                 |                     |               |             | T           |
| TEHR                                                                      | 06          | 0945E | 1010  | 0950       | N06             | W06                | .104             | 12474               | 6.0     | 250           | -N          | 3 V             |              | .52                 |                     |               |             | F           |
| RAMY                                                                      | 06          | 1026E | 1108  | 10280      | N06             | W09                | .156             | 12474               | 5.8     | 420           | -F          | 3 C             |              | 1.03                |                     |               |             | F           |

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# SOLAR FLARES

## Confirmed

### AUGUST 1973

| OBSERVATORY                                                                | OBSERVED UT |       |       |               | LOCATION |               |                     |                           |            | DURATION<br>MIN. | IM-<br>POR-<br>TANCE | OBS.<br>COND. TYPE | MEASUREMENTS |                           |                           |                                 |                   | REMARKS |
|----------------------------------------------------------------------------|-------------|-------|-------|---------------|----------|---------------|---------------------|---------------------------|------------|------------------|----------------------|--------------------|--------------|---------------------------|---------------------------|---------------------------------|-------------------|---------|
|                                                                            | DATE<br>AUG | START | END   | MAX.<br>PHASE | APPROX.  |               | CENTRAL<br>DISTANCE | MCMATH<br>FLAGE<br>REGION | CMP<br>DAY |                  |                      |                    | TIME<br>UT   | MEAS.<br>AREA<br>Sq. Deg. | CORR.<br>AREA<br>Sq. Deg. | MAX.<br>WIDTH<br>H <sub>g</sub> | MAX.<br>INT.<br>% |         |
|                                                                            |             |       |       |               | LAT.     | MER.<br>DIST. |                     |                           |            |                  |                      |                    |              |                           |                           |                                 |                   |         |
| 10 STATIONS REPORTING GROUP 49335. 3 STATIONS OBSERVING AND NOT REPORTING. |             |       |       |               |          |               |                     |                           |            |                  |                      |                    |              |                           |                           |                                 |                   |         |
| GRP49335                                                                   | 06          | 1402  | 1430  | 1412          | N07      | W09           | .156                | 12474                     | 5.9        | 28               | -N                   |                    |              | 1.37                      |                           |                                 | 6 6 5 12          |         |
| WEND                                                                       | 06          | 1330E | 1430D |               | N07      | W11           | .190                | 12474                     | 5.7        | 600              | 1F                   | V                  |              | 3.09                      |                           |                                 | F                 |         |
| TEHR                                                                       | 06          | 1358E | 1430  | 1415          | N06      | W06           | .104                | 12474                     | 6.1        | 320              | -N                   | 4 V                |              | .41                       |                           |                                 | F                 |         |
| RAHY                                                                       | 06          | 1403  | 1434  | 1408          | N06      | W10           | .173                | 12474                     | 5.8        | 31               | -N                   | 3 C                |              | 1.49                      |                           |                                 | F                 |         |
| HUAN                                                                       | 06          | 1405  | 1427  | 1414          | N06      | W09           | .156                | 12474                     | 5.9        | 22               | 1N                   | 2 C                | 1414         |                           |                           |                                 | E                 |         |
| UPIC                                                                       | 06          | 1408  | 1428  | 1414          | N08      | W11           | .192                | 12474                     | 5.8        | 20               | -N                   | P                  | 1414         | .85                       |                           |                                 | T                 |         |
| UPIC                                                                       | 06          | 1408  | 1439U |               | N08      | W08           | .142                | 12474                     | 6.0        | 310              | -F                   | P                  | 1413         | .42                       |                           |                                 | EKT               |         |
| ATHN                                                                       | 06          | 1409E | 1432  | 1411          | N07      | W09           | .156                | 12474                     | 5.9        | 230              | -N                   | 2 C                |              | .99                       |                           |                                 | F H               |         |
| 49335                                                                      | 06          | 1411  | 1442  | 1423          | N07      | W08           | .139                | 12474                     | 6.0        | 31               | *-N                  |                    |              | 2.28                      |                           |                                 | 4 2 2 11          |         |
| KHAR                                                                       | 06          | 1141E | 1212D |               | N07      | W07           | .122                | 12474                     | 6.0        | 310              | 2F                   | C                  | 1145         | 7.37                      | 7.30                      |                                 | BEH               |         |
| MCHA                                                                       | 06          | 1150E | 1449  |               | N06      | W09           | .156                | 12474                     | 5.8        | 1790             | -N                   | C                  | 1201         | 1.03                      | 1.00                      |                                 | ELK               |         |
| CATA                                                                       | 06          | 1405  | 1455  | 1425          | N07      | W09           | .156                | 12474                     | 5.9        | 50               | 1N                   | 3 C                | 1425         | 3.76                      | 3.81                      | (170)                           | TZ                |         |
| CANR                                                                       | 06          | 1416  | 1429  | 1421          | N07      | W07           | .122                | 12474                     | 6.1        | 13               | -N                   | V                  | 1421         | .80                       | .80                       |                                 |                   |         |
| 49335                                                                      | 06          | 1436  | 1448  | 1437          | N07      | W07           | .122                | 12474                     | 6.1        | 12               | *-N                  |                    |              | .42                       |                           |                                 | 2 2 2 9           |         |
| HUAN                                                                       | 06          | 1436  | 1450  | 1437          | N07      | W06           | .105                | 12474                     | 6.2        | 14               | -N                   | 1 C                | 1437         | .41                       | .42                       |                                 | E                 |         |
| UPIC                                                                       | 06          | 1436  | 1446  |               | N07      | W07           | .122                | 12474                     | 6.1        | 10               | -N                   | P                  | 1439         | .42                       |                           |                                 | T                 |         |
| GRP49337                                                                   | 06          | 1619  | 1640  | 1624          | N07      | W10           | .173                | 12474                     | 5.9        | 21               | -F                   |                    |              | 1.76                      |                           |                                 | 4 4 3 7           |         |
| ARCE                                                                       | 06          | 1600E | 1630D |               | N10      | W06           | .124                | 12474                     | 6.2        | 300              | -N                   | C                  | 1627         | .75                       | .80                       |                                 | E                 |         |
| HUAN                                                                       | 06          | 1619  | 1627  | 1623          | N06      | W09           | .156                | 12474                     | 6.0        | 8                | -F                   | 1 C                | 1623         |                           |                           |                                 |                   |         |
| MCHA                                                                       | 06          | 1619  | 1654D | 1624          | N06      | W11           | .190                | 12474                     | 5.9        | 350              | -N                   | C                  | 1624         | 1.44                      | 1.50                      |                                 | EH                |         |
| WEND                                                                       | 06          | 1620E | 1650D |               | N07      | W13           | .224                | 12474                     | 5.7        | 300              | 1F                   | V                  |              | 3.09                      |                           |                                 |                   |         |
| GRP49338                                                                   | 06          | 1717  | 1753  | 1724          | N06      | W10           | .173                | 12474                     | 6.0        | 36               | -N                   |                    |              | 1.27                      |                           |                                 | 3 3 2 5           |         |
| MCHA                                                                       | 06          | 1713E | 1809D |               | N06      | W12           | .207                | 12474                     | 5.8        | 560              | -N                   | P                  | 1719         | 1.29                      | 1.30                      |                                 | EL                |         |
| PALE                                                                       | 06          | 1719E | 1746  | 1724U         | N05      | W09           | .157                | 12474                     | 6.0        | 270              | -N                   | 2 V                |              | 1.24                      |                           |                                 | OE                |         |
| HUAN                                                                       | 06          | 1720  | 1744  | 1724          | N07      | W09           | .156                | 12474                     | 6.0        | 24               | -N                   | 1 C                | 1724         |                           |                           |                                 | H                 |         |
| 339 PALE                                                                   | 06          | 1856E | 1906  | 1856U         | N08      | W10           | .175                | 12474                     | 6.0        | 100              | --N                  | 2 C                |              | .36                       |                           |                                 | OE 2              |         |
| GRP49340                                                                   | 06          | 1933  | 1957  | 1944          | N07      | W12           | .207                | 12474                     | 5.9        | 24               | --N                  |                    |              | .54                       |                           |                                 | 2 2 2 2           |         |
| MCHA                                                                       | 06          | 1933E | 1953D |               | N07      | W13           | .224                | 12474                     | 5.8        | 200              | -N                   | P                  | 1938         | .62                       | .60                       |                                 | E                 |         |
| PALE                                                                       | 06          | 1933  | 1942  | 1934          | N06      | W10           | .173                | 12474                     | 6.1        | 9                | -F                   | 2 V                |              | .26                       |                           |                                 | OE                |         |
| PALE                                                                       | 06          | 1937  | 1957  | 1944          | N08      | W11           | .192                | 12474                     | 6.0        | 20               | -N                   | 2 C                |              | .45                       |                           |                                 | OE                |         |
| GRP49341                                                                   | 06          | 2240  | 2254  | 2244          | N07      | W14           | .241                | 12474                     | 5.9        | 14               | --F                  |                    |              | .54                       |                           |                                 | 2 2 2 3           |         |
| PALE                                                                       | 06          | 2240E | 2252  | 2243U         | N06      | W15           | .257                | 12474                     | 5.8        | 120              | -F                   | 2 V                |              | .46                       |                           |                                 | F                 |         |
| HANI                                                                       | 06          | 2245E | 2255D | 2245U         | N08      | W13           | .226                | 12474                     | 6.0        | 100              | -N                   | 1 C                | 2245         | .62                       | .63                       |                                 | F                 |         |
| GRP49342                                                                   | 06          | 2306  | 2319  | 2307          | N07      | W11           | .190                | 12474                     | 6.1        | 13               | --N                  |                    |              | .44                       |                           |                                 | 2 2 2 4           |         |
| HANI                                                                       | 06          | 2305E | 2310  | 2305U         | N08      | W10           | .175                | 12474                     | 6.2        | 50               | -N                   | 1 C                | 2305         | .41                       | .42                       |                                 | F                 |         |
| PALE                                                                       | 06          | 2306  | 2328  | 2317          | N06      | W12           | .207                | 12474                     | 6.1        | 22               | -N                   | 3 V                |              | .46                       |                           |                                 | OE                |         |
| PALE                                                                       | 06          | 2306  | 2328  | 2309          | N06      | W12           | .207                | 12474                     | 6.1        | 22               | -F                   | 3 V                |              | .62                       |                           |                                 | OE                |         |
| GRP49345                                                                   | 07          | 0034  | 0050  | 0037          | N07      | W13           | .224                | 12474                     | 6.0        | 16               | --N                  |                    |              | .63                       |                           |                                 | 3 3 3 5           |         |
| HANI                                                                       | 07          | 0031  | 0051  | 0035U         | N08      | W12           | .209                | 12474                     | 6.1        | 20               | -F                   | 2 C                | 0035         | .83                       | .84                       |                                 | FU                |         |
| PALE                                                                       | 07          | 0034  | 0045  | 0037          | N07      | W13           | .224                | 12474                     | 6.0        | 11               | -N                   | 1 C                |              | .55                       |                           |                                 | OE                |         |
| CRON                                                                       | 07          | 0037  | 0055  | 0040          | N06      | W15           | .257                | 12474                     | 5.9        | 18               | -N                   | V                  | 0040         | .50                       |                           |                                 |                   |         |
| GRP49348                                                                   | 07          | 0730  | 0741  | 0733          | N07      | W17           | .291                | 12474                     | 6.0        | 11               | --N                  |                    |              | .44                       |                           |                                 | 4 4 4 8           |         |
| BUCA                                                                       | 07          | 0730E | 0742D |               | N08      | W15           | .259                | 12474                     | 6.2        | 120              | -F                   | C                  | 0732         | 1.10                      | 1.10                      |                                 | E                 |         |
| TEHR                                                                       | 07          | 0730  | 0741  | 0733          | N03      | W17           | .296                | 12474                     | 6.0        | 11               | -N                   | 3 V                |              | .25                       |                           |                                 | OE                |         |
| CRON                                                                       | 07          | 0730E | 0741  |               | N07      | W18           | .307                | 12474                     | 6.0        | 110              | -N                   | V                  |              | .38                       |                           |                                 |                   |         |
| MONT                                                                       | 07          | 0731  | 0741  | 0733          | N08      | W17           | .292                | 12474                     | 6.0        | 10               | -N                   | C                  | 0733         | .10                       |                           |                                 | D                 |         |
| GRP49351                                                                   | 07          | 1134  | 1215  | 1147          | N06      | W23           | .389                | 12474                     | 5.8        | 41               | --F                  |                    |              | .49                       |                           |                                 | 5 3 3 12          |         |
| MONT                                                                       | 07          | 0958  | 1010  | 1003          | N05      | W19           | .325                | 12474                     | 6.0        | 12               | -F                   | C                  | 1003         | .10                       |                           |                                 |                   |         |
| KHAR                                                                       | 07          | 1002  | 1203D | 1027          | N07      | W21           | .356                | 12474                     | 5.8        | 1210             | 2F                   | C                  | 1027         | 4.88                      | 5.20                      |                                 | EH                |         |
| ARCE                                                                       | 07          | 1130E | 1200D |               | N06      | W24           | .405                | 12474                     | 5.7        | 300              | -F                   | C                  | 1145         | .33                       | .40                       |                                 | H                 |         |
| CANR                                                                       | 07          | 1132  | 1215  | 1150          | N07      | W21           | .356                | 12474                     | 5.9        | 43               | -F                   | V                  |              | .50                       |                           |                                 |                   |         |
| UPIC                                                                       | 07          | 1141  | 1157U | 1144U         | N06      | W23           | .389                | 12474                     | 5.8        | 160              | -F                   | P                  | 1144         | .63                       |                           |                                 | K                 |         |
| GRP49352                                                                   | 07          | 1307  | 1333  | 1314          | N07      | W23           | .388                | 12474                     | 5.8        | 26               | -N                   |                    |              | 1.13                      |                           |                                 | 4 4 4 8           |         |
| CATA                                                                       | 07          | 1245  | 1335  | 1310          | N07      | W24           | .404                | 12474                     | 5.7        | 50               | -B                   | 3 C                | 1310         | 1.44                      | 1.58                      | (214)                           | T                 |         |
| CANR                                                                       | 07          | 1259  | 1316D | 1316          | N07      | W21           | .356                | 12474                     | 6.0        | 170              | -N                   | V                  | 1316         | .80                       | .80                       |                                 |                   |         |
| MCHA                                                                       | 07          | 1310E | 1324D | 1313          | N06      | W24           | .405                | 12474                     | 5.7        | 140              | -N                   | C                  | 1313         | .83                       | .90                       |                                 | E                 |         |
| HUAN                                                                       | 07          | 1311  | 1330  | 1315          | N06      | W23           | .389                | 12474                     | 5.8        | 19               | -N                   | 1 C                | 1315         | 1.44                      | 1.57                      |                                 | ET                |         |
| GRP49353                                                                   | 07          | 1425  | 1450  | 1426          | N07      | W24           | .404                | 12474                     | 5.8        | 25               | --N                  |                    |              | .80                       |                           |                                 | 3 2 2 6           |         |
| ARCE                                                                       | 07          | 1354  | 1450D | 1359          | N07      | W26           | .436                | 12474                     | 5.6        | 560              | -N                   | C                  | 1359         | .75                       | .80                       |                                 |                   |         |
| HUAN                                                                       | 07          | 1425  | 1437  | 1427U         | N06      | W23           | .389                | 12474                     | 5.9        | 12               | -F                   | 1 C                | 1427         | .72                       | .78                       |                                 |                   |         |
| CATA                                                                       | 07          | 1425  | 1430D | 1425          | N07      | W24           | .404                | 12474                     | 5.8        | 50               | -B                   | 3 P                | 1425         | .87                       | .95                       | (209)                           | T                 |         |
| GRP49355                                                                   | 07          | 1700  | 1702  | 1701          | N06      | W28           | .467                | 12474                     | 5.6        | 2                | --F                  |                    |              | .54                       |                           |                                 | 2 2 2 5           |         |
| PALE                                                                       | 07          | 1659E | 1702D | 1701U         | N06      | W28           | .467                | 12474                     | 5.6        | 30               | -F                   | 2 V                |              | .67                       |                           |                                 | OE                |         |
| HUAN                                                                       | 07          | 1700  | 1702  | 1701          | N06      | W27           | .452                | 12474                     | 5.7        | 2                | -F                   | 1 C                | 1701         | .41                       | .47                       |                                 |                   |         |

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Aug 73SOLAR FLARES  
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| OBSERVATORY | OBSERVED UT |       |       |            | LOCATION                |                  |                       |         | DURATION | IM-POR-TANCE | OBS. COND. TYPE | MEASUREMENTS |                     |                     |               |             | REMARKS  |
|-------------|-------------|-------|-------|------------|-------------------------|------------------|-----------------------|---------|----------|--------------|-----------------|--------------|---------------------|---------------------|---------------|-------------|----------|
|             | DATE AUG    | START | END   | MAX. PHASE | APPROX. LAT. MER. DIST. | CENTRAL DISTANCE | MCARTHUR PLAGE REGION | CMP DAY |          |              |                 | TIME UT      | MEAS. AREA Sq. Deg. | CORR. AREA Sq. Deg. | MAX. WIDTH Ha | MAX. INT. % |          |
| GRP49358    | 07          | 1837  | 1853  | 1847       | N06                     | W24              | .405 12474            | 6.0     | 16       | -N           |                 |              | 1.19                |                     |               |             | 3 3 2 3  |
| PALE        | 07          | 1837  | 1859  | 1848       | N06                     | W23              | .389 12474            | 6.1     | 22       | -N           | 3               | V            | 1.34                |                     |               |             | DE       |
| PALE        | 07          | 1837  | 1859  | 1840       | N06                     | W23              | .389 12474            | 6.1     | 22       | -F           | 3               | V            | .72                 |                     |               |             | DE       |
| HUAN        | 07          | 1837  | 1842  | 1838       | N06                     | W23              | .389 12474            | 6.1     | 5        | -F           | 1               | C            | 1838                | .46                 | .50           |             |          |
| CANR        | 07          | 1838  | 1846  | 1846       | N06                     | W25              | .420 12474            | 5.9     | 80       | -N           |                 | V            |                     |                     |               |             |          |
| PALE        | 07          | 1845  | 1854  | 1847       | N09                     | W23              | .390 12474            | 6.1     | 9        | -N           | 2               | C            |                     | .63                 |               |             | DE H     |
| HUAN        | 07          | 1845  | 1851  | 1846       | N08                     | W23              | .389 12474            | 6.1     | 6        | -N           | 1               | C            | 1846                | 1.03                | 1.12          |             | H        |
| 359 PALE    | 07          | 1914E | 1933  | 1916U      | N06                     | W27              | .452 12474            | 5.8     | 19D      | --F          | 3               | V            |                     | .52                 |               |             | DE 2     |
| 360 PALE    | 07          | 2021  | 2026  | 2023       | N06                     | W24              | .405 12474            | 6.0     | 5        | --F          | 3               | V            |                     | .26                 |               |             | 2        |
| 361 PALE    | 07          | 2136E | 2143  | 2137       | S08                     | E45              | .732 12476            | 11.3    | 7D       | --F          | 2               | C            |                     | .45                 |               |             | F 3      |
| 362 PALE    | 07          | 2307  | 2328  | 2308       | N07                     | W29              | .482 12474            | 5.8     | 21       | --F          | 3               | V            |                     | .36                 |               |             | F 3      |
| 363 PALE    | 07          | 2315  | 2331  | 2326       | N07                     | W29              | .482 12474            | 5.8     | 16       | --F          | 2               | C            |                     | .36                 |               |             | 3        |
| GRP49366    | 08          | 0550  | 0646  | 0633       | N06                     | W31              | .512 12474            | 5.9     | 56       | --F          |                 |              | .63                 |                     |               |             | 3 3 3 8  |
| ABST        | 08          | 0550E | 0654  | 0609       | N08                     | W35              | .570 12474            | 5.6     | 64D      | -F           |                 | P            | 0609                | 1.18                | 1.40          |             | FJ       |
| ABST        | 08          | 0604  | 0654  | 0633       | N08                     | W30              | .497 12474            | 6.0     | 50       | -F           |                 | C            | 0633                | .99                 | 1.10          |             | FJ       |
| TEHR        | 08          | 0631  | 0644  | 0633       | N05                     | W30              | .498 12474            | 6.0     | 13       | -N           | 4               | C            |                     | .28                 |               |             | DE       |
| UPIC        | 08          | 0636E | 0641  |            | N06                     | W31              | .512 12474            | 5.9     | 50       | -F           |                 | P            | 0639                | .63                 |               |             |          |
| GRP49368    | 08          | 0921  | 0929  | 0922       | N08                     | W37              | .598 12474            | 5.6     | 8        | --N          |                 |              | .20                 |                     |               |             | 2 2 2 8  |
| CATA        | 08          | 0920  | 0930  | 0920       | N09                     | W37              | .598 12474            | 5.6     | 10       | -N           | 3               | C            | 0920                | .29                 | .36           | (162)       |          |
| MONT        | 08          | 0922  | 0928  | 0924       | N06                     | W36              | .585 12474            | 5.7     | 6        | -N           |                 | C            | 0924                | .10                 |               |             | D        |
| GRP49369    | 08          | 1003  | 1019  | 1005       | N06                     | W32              | .527 12474            | 6.0     | 16       | --N          |                 |              | .58                 |                     |               |             | 5 5 5 9  |
| MONT        | 08          | 1001  | 1016  | 1003       | N05                     | W32              | .528 12474            | 6.0     | 15       | -N           |                 | C            | 1003                | .52                 |               |             | OH       |
| TEHR        | 08          | 1002  | 1023  | 1005       | N04                     | W29              | .484 12474            | 6.2     | 21       | -N           | 4               | C            |                     | .36                 |               |             | DE       |
| CANR        | 08          | 1003  | 1015  | 1005       | N07                     | W33              | .541 12474            | 5.9     | 12       | -F           |                 | V            | 1005                | .50                 | .60           |             |          |
| CATA        | 08          | 1005  | 1020  | 1005       | N09                     | W32              | .527 12474            | 6.0     | 15       | -N           | 3               | C            | 1005                | .87                 | 1.02          | (170)       |          |
| UPIC        | 08          | 1008E | 1021  |            | N06                     | W33              | .542 12474            | 5.9     | 13D      | -F           |                 | P            | 1008                | .63                 |               |             |          |
| GRP49370    | 08          | 1706  | 1724  | 1709       | N06                     | W36              | .585 12474            | 6.0     | 18       | -N           |                 |              | .85                 |                     |               |             | 3 3 3 5  |
| PALE        | 08          | 1705  | 1710D | 1709       | N08                     | W36              | .584 12474            | 6.0     | 5D       | -N           | 2               | C            |                     | .72                 |               |             |          |
| CANR        | 08          | 1706  | 1724  | 1708       | N05                     | W36              | .586 12474            | 6.0     | 18       | -F           |                 | V            | 1.00                |                     |               |             |          |
| MCHA        | 08          | 1709E | 1709D |            | N06                     | W36              | .585 12474            | 6.0     |          | -N           |                 | P            | 1709                | .83                 | 1.00          |             | E        |
|             | 08          | 1959  | 2003  |            |                         |                  |                       |         |          |              |                 |              |                     |                     |               |             |          |
|             | 08          | 2010  | 2018  |            |                         |                  |                       |         |          |              |                 |              |                     |                     |               |             |          |
|             | 08          | 2200  | 2217  |            |                         |                  |                       |         |          |              |                 |              |                     |                     |               |             |          |
|             | 08          | 2243  | 2245  |            |                         |                  |                       |         |          |              |                 |              |                     |                     |               |             |          |
|             | 08          | 2248  | 2251  |            |                         |                  |                       |         |          |              |                 |              |                     |                     |               |             |          |
| GRP49380    | 09          | 0940  | 1004  | 0943       | N15                     | W70              | .965 12471            | 3.7     | 24       | -N           |                 |              | .45                 |                     |               |             | 5 5 4 8  |
| MONT        | 09          | 0939  | 0955  | 0942       | N15                     | W80              | .981 12471            | 3.4     | 16       | -N           |                 | C            | 0942                | .31                 |               |             | D        |
| TEHR        | 09          | 0940  | 0959  | 0944       | N13                     | W73              | .951 12471            | 3.9     | 19       | -N           | 3               | C            |                     | .21                 |               |             | DE       |
| CATA        | 09          | 0940  | 1005  | 0940       | N18                     | W79              | .977 12471            | 3.5     | 25       | 1N           | 3               | C            | 0940                | .58                 |               | (162)       | T        |
| ISTA        | 09          | 0941  | 1008  |            | N16                     | W74              | .956 12471            | 3.9     | 27       | -F           |                 |              |                     |                     |               |             |          |
| CANR        | 09          | 0942  | 1012  | 0946       | N13                     | W74              | .957 12471            | 3.9     | 30       | -N           |                 | V            |                     | .70                 |               |             |          |
| GRP49381    | 09          | 1025  | 1042  | 1033       | N14                     | W76              | .966 12471            | 3.7     | 17       | --N          |                 |              | .19                 |                     |               |             | 2 2 2 7  |
| MONT        | 09          | 1024  | 1045D | 1036       | N14                     | W79              | .978 12471            | 3.5     | 21D      | -N           |                 | C            | 1045                | .21                 |               |             | D        |
| TEHR        | 09          | 1026  | 1039  | 1030       | N13                     | W73              | .951 12471            | 4.0     | 13       | -N           | 3               | C            |                     | .17                 |               |             | F        |
| GRP49383    | 09          | 1152  | 1206  | 1157       | N08                     | W47              | .727 12474            | 6.0     | 14       | --F          |                 |              | .42                 |                     |               |             | 4 4 4 10 |
| CATA        | 09          | 1150  | 1205  | 1155       | N11                     | W46              | .715 12474            | 6.0     | 15       | -N           | 3               | C            | 1155                | .58                 | .82           | (195)       |          |
| MEUD        | 09          | 1151  | 1203  | 1155       | N07                     | W48              | .739 12474            | 5.9     | 12       | -F           |                 | C            | 1155                | .41                 | .60           |             | D        |
| ATHN        | 09          | 1152  | 1204  | 1155       | N08                     | W46              | .715 12474            | 6.0     | 12       | -F           | 1               | C            |                     | .33                 |               |             | DE       |
| RAMY        | 09          | 1154  | 1156D | 1156       | N07                     | W45              | .703 12474            | 6.1     | 20       | -N           | 2               | C            |                     | .31                 |               |             | DE       |
| RAMY        | 09          | 1159  | 1213D | 1201       | N07                     | W47              | .727 12474            | 6.0     | 14D      | -N           | 3               | V            |                     | .34                 |               |             | DE       |
| GRP49385    | 09          | 1415  | 1427  | 1418       | N08                     | W48              | .739 12474            | 6.0     | 12       | --F          |                 |              | .35                 |                     |               |             | 6 6 6 9  |
| ATHN        | 09          | 1414  | 1425  | 1418       | N06                     | W48              | .740 12474            | 6.0     | 11       | -F           | 2               | C            |                     | .33                 |               |             | DE       |
| RAMY        | 09          | 1414  | 1428  | 1415U      | N07                     | W47              | .727 12474            | 6.1     | 14       | -F           | 3               | C            |                     | .46                 |               |             | DE       |
| CATA        | 09          | 1415  | 1430  | 1420       | N11                     | W47              | .727 12474            | 6.1     | 15       | -N           | 3               | C            | 1420                | .29                 | .42           | (170)       |          |
| MEUD        | 09          | 1415  | 1425  | 1418       | N07                     | W49              | .751 12474            | 5.9     | 10       | -F           |                 | C            | 1418                | .41                 | .60           |             | D        |
| HUAN        | 09          | 1415  | 1426  | 1417       | N08                     | W47              | .727 12474            | 6.1     | 11       | -F           | 1               | C            | 1417                | .21                 | .30           |             |          |
| CANR        | 09          | 1415  | 1425  | 1418       | N06                     | W49              | .751 12474            | 5.9     | 10       | -N           |                 | V            | 1418                | .40                 | .60           |             |          |



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| OBSERVATORY | OBSERVED UT |       |       |               | LOCATION        |               |                     |                           |            | DURATION<br>MIN. | IM-<br>POR-<br>TANCE | OBS.<br>COND. TYPE | MEASUREMENTS |                           |                           |                                 |                   | REMARKS |
|-------------|-------------|-------|-------|---------------|-----------------|---------------|---------------------|---------------------------|------------|------------------|----------------------|--------------------|--------------|---------------------------|---------------------------|---------------------------------|-------------------|---------|
|             | DATE<br>AUG | START | END   | MAX.<br>PHASE | APPROX.         |               | CENTRAL<br>DISTANCE | MCNATH<br>FLARE<br>REGION | CMP<br>DAY |                  |                      |                    | TIME<br>UT   | MEAS.<br>AREA<br>Sq. Deg. | CORR.<br>AREA<br>Sq. Deg. | MAX.<br>WIDTH<br>H <sub>α</sub> | MAX.<br>INT.<br>% |         |
|             |             |       |       |               | LAT.            | MER.<br>DIST. |                     |                           |            |                  |                      |                    |              |                           |                           |                                 |                   |         |
| GRP49387    | 09          | 1551  | 1600  | 1553          | N08             | W49           | .750                | 12474                     | 6.0        | 9                | --N                  |                    |              |                           |                           |                                 |                   | 7 7 7 9 |
| CANR        | 09          | 1550  | 1600  | 1553          | N06             | W50           | .763                | 12474                     | 5.9        | 10               | --N                  | V                  | 1553         | .45                       | .60                       |                                 |                   |         |
| CATA        | 09          | 1550  | 1600  | 1550          | N11             | W48           | .739                | 12474                     | 6.1        | 10               | --B                  | 3 C                | 1550         | .58                       | .86                       |                                 |                   | (245) D |
| MCMA        | 09          | 1551  | 1559  | 1555          | N09             | W49           | .750                | 12474                     | 6.0        | 8                | --N                  | C                  | 1555         | .41                       | .60                       |                                 |                   | O       |
| ATHN        | 09          | 1551  | 1602  | 1555          | N08             | W49           | .750                | 12474                     | 6.0        | 11               | --N                  | 2 C                |              | .50                       |                           |                                 |                   | DE      |
| HEUD        | 09          | 1551  | 1559  | 1554          | N07             | W50           | .762                | 12474                     | 5.9        | 8                | --N                  | C                  | 1554         | .52                       | .80                       |                                 |                   | O       |
| ARCE        | 09          | 1551  | 1559  | 1553          | N08             | W50           | .762                | 12474                     | 5.9        | 8                | --B                  | C                  | 1553         | .36                       | .50                       |                                 |                   | O       |
| HUAN        | 09          | 1551  | 1559  | 1554          | N07             | W49           | .751                | 12474                     | 6.0        | 8                | --N                  | 2 C                | 1554         | .36                       | .53                       |                                 |                   | O       |
| GRP49388    | 09          | 2140  | 2153  | 2148          | N08             | W52           | .784                | 12474                     | 6.0        | 13               | --F                  |                    |              | .24                       |                           |                                 |                   | 2 2 2 4 |
| HUAN        | 09          | 2140  | 2150  | 2147U         | N07             | W52           | .784                | 12474                     | 6.0        | 10               | --F                  | 1 C                | 2147         | .21                       | .32                       |                                 |                   | O       |
| PALE        | 09          | 2141E | 2156D | 2148U         | N09             | W51           | .773                | 12474                     | 6.1        | 150              | --N                  | 2 C                |              | .27                       |                           |                                 |                   | F       |
| 389 HANI    | 09          | 2337E | 2347  | 2337U         | N09             | W52           | .783                | 12474                     | 6.1        | 100              | --N                  | 1                  | 2337         | .41                       | .66                       |                                 |                   | 2       |
| GRP49390    | 09          | 2337  | 2350  | 2344          | S07             | W34           | .594                | 12472                     | 7.4        | 13               | --F                  |                    |              | .88                       |                           |                                 |                   | 2 2 2 4 |
| HANI        | 09          | 2337E | 2350  | 2339U         | S05             | W33           | .571                | 12472                     | 7.5        | 130              | --N                  | 1                  | 2339         | .62                       | .76                       |                                 |                   |         |
| PALE        | 09          | 2347E | 2348D | 2348U         | S08             | W34           | .599                | 12472                     | 7.4        | 10               | --F                  | 2 V                |              | 1.13                      |                           |                                 |                   | F       |
| 391 HANI    | 09          | 2359  | 0008  | 0001          | N09             | W53           | .794                | 12474                     | 6.0        | 9                | --N                  | 1                  | 0001         | .31                       | .50                       |                                 |                   | 2       |
| GRP49392    | 10          | 0014  | 0037  | 0022          | N08             | W54           | .805                | 12474                     | 6.0        | 23               | --N                  |                    |              | 1.17                      |                           |                                 |                   | 3 3 3 3 |
| NITK        | 10          | 0014  | 0034  | 0016          | N07             | W55           | .815                | 12474                     | 5.9        | 20               | 1N                   | C                  | 0016         | 1.34                      | 2.30                      |                                 |                   |         |
| HANI        | 10          | 0018E | 0037  | 0021          | N10             | W53           | .794                | 12474                     | 6.0        | 190              | --N                  | 1                  | 0021         | .93                       | 1.49                      |                                 |                   | H       |
| PALE        | 10          | 0028E | 0039D | 0029U         | N07             | W53           | .795                | 12474                     | 6.0        | 110              | --N                  | 2 V                |              | 1.24                      |                           |                                 |                   | F       |
| 393 HANI    | 10          | 0151  | 0155  | 0152          | N08             | W55           | .815                | 12474                     | 6.0        | 4                | --N                  | 2                  | 0152         | .62                       | 1.03                      |                                 |                   | 3       |
|             | 10          | 2139  | 2140  |               | NO FLARE PATROL |               |                     |                           |            |                  |                      |                    |              |                           |                           |                                 |                   |         |
|             | 10          | 2153  | 2156  |               | NO FLARE PATROL |               |                     |                           |            |                  |                      |                    |              |                           |                           |                                 |                   |         |
|             | 10          | 2202  | 2211  |               | NO FLARE PATROL |               |                     |                           |            |                  |                      |                    |              |                           |                           |                                 |                   |         |
|             | 10          | 2216  | 2225  |               | NO FLARE PATROL |               |                     |                           |            |                  |                      |                    |              |                           |                           |                                 |                   |         |
|             | 10          | 2232  | 2238  |               | NO FLARE PATROL |               |                     |                           |            |                  |                      |                    |              |                           |                           |                                 |                   |         |

| OBSERVATORY                                      | OBSERVED UT |       |       |               | LOCATION        |               |                     |                            |            | DURATION<br>MIN. | IM-<br>POR-<br>TANCE | OBS.<br>COND. TYPE | MEASUREMENTS |                           |                           |                     |                   | REMARKS |
|--------------------------------------------------|-------------|-------|-------|---------------|-----------------|---------------|---------------------|----------------------------|------------|------------------|----------------------|--------------------|--------------|---------------------------|---------------------------|---------------------|-------------------|---------|
|                                                  | DATE<br>AUG | START | END   | MAX.<br>PHASE | APPROX.         |               | CENTRAL<br>DISTANCE | MOONATH<br>PLAGE<br>REGION | CMP<br>DAY |                  |                      |                    | TIME<br>UT   | MEAS.<br>AREA<br>Sq. Deg. | CORR.<br>AREA<br>Sq. Deg. | MAX.<br>WIDTH<br>Hc | MAX.<br>INT.<br>% |         |
|                                                  |             |       |       |               | LAT.            | NER.<br>DIST. |                     |                            |            |                  |                      |                    |              |                           |                           |                     |                   |         |
| GRP49410<br>HEUD<br>MCHA                         | 21          | 1344  | 1433  | 1407          | N12             | E90           | 1.000               | 12497                      | 28.3       | 49               | 1F                   |                    |              | 3.09                      |                           |                     |                   | 2 2 1 8 |
|                                                  | 21          | 1344E | 1430  |               | N10             | E90           | 1.000               | 12497                      | 28.3       | 460              | 2N                   | C                  | 1359         | 3.09                      |                           |                     |                   |         |
|                                                  | 21          | 1405E | 1435  | 1407          | N14             | E90           | 1.000               | 12497                      | 28.3       | 300              | 1F                   | P                  | 1407         |                           |                           |                     | A                 |         |
|                                                  | 22          | 2143  | 2151  |               | NO FLARE PATROL |               |                     |                            |            |                  |                      |                    |              |                           |                           |                     |                   |         |
| 413 CATA                                         | 24          | 0710  | 0735  | 0715          | N12             | H21           | .363                | 12488                      | 22.7       | 25               | --F                  | 3 C                | 0715         | .87                       | .93                       | (138)               |                   | 4       |
|                                                  | 24          | 1950  | 1955  |               | NO FLARE PATROL |               |                     |                            |            |                  |                      |                    |              |                           |                           |                     |                   |         |
|                                                  | 24          | 2003  | 2008  |               | NO FLARE PATROL |               |                     |                            |            |                  |                      |                    |              |                           |                           |                     |                   |         |
|                                                  | 24          | 2019  | 2125  |               | NO FLARE PATROL |               |                     |                            |            |                  |                      |                    |              |                           |                           |                     |                   |         |
| GRP49417<br>ATHN<br>UPIC<br>UPIC<br>RAMY         | 25          | 1312  | 1326  | 1316          | N12             | H27           | .455                | 12488                      | 23.5       | 14               | --F                  |                    |              | .99                       |                           |                     |                   | 3 3 3 9 |
|                                                  | 25          | 1310E | 1322  | 1311          | N10             | H28           | .467                | 12488                      | 23.4       | 120              | -N                   | 3 C                |              | .50                       |                           |                     | OE                |         |
|                                                  | 25          | 1313E | 1317U |               | N12             | H29           | .485                | 12488                      | 23.4       | 40               | 1F                   | P                  | 1313         | 2.10                      |                           |                     | F                 |         |
|                                                  | 25          | 1313E | 1317U |               | N14             | H25           | .431                | 12488                      | 23.7       | 40               | -F                   | P                  | 1313         | .63                       |                           |                     |                   |         |
|                                                  | 25          | 1314  | 1329  | 1316          | N12             | H27           | .455                | 12488                      | 23.5       | 15               | -F                   | 3 C                |              | .37                       |                           |                     | F                 |         |
| GRP49418<br>HUAN<br>MCHA<br>PALE                 | 25          | 1742  | 1803  | 1748          | N12             | H30           | .500                | 12488                      | 23.5       | 21               | --N                  |                    |              | .57                       |                           |                     |                   | 3 3 3 5 |
|                                                  | 25          | 1742  | 1751D | 1747          | N12             | H29           | .485                | 12488                      | 23.6       | 90               | -F                   | 1 P                | 1747         | .46                       | .54                       |                     | E                 |         |
|                                                  | 25          | 1743E | 1758D | 1746          | N12             | H32           | .529                | 12488                      | 23.3       | 150              | -N                   | C                  | 1746         | .62                       | .70                       |                     | E                 |         |
|                                                  | 25          | 1750E | 1803  | 1751          | N11             | H30           | .498                | 12488                      | 23.5       | 130              | -N                   | 2 C                |              | .63                       |                           |                     | OE                |         |
|                                                  | 26          | 1902  | 1905  |               | NO FLARE PATROL |               |                     |                            |            |                  |                      |                    |              |                           |                           |                     |                   |         |
|                                                  | 26          | 1911  | 1919  |               | NO FLARE PATROL |               |                     |                            |            |                  |                      |                    |              |                           |                           |                     |                   |         |
|                                                  | 26          | 1925  | 2006  |               | NO FLARE PATROL |               |                     |                            |            |                  |                      |                    |              |                           |                           |                     |                   |         |
|                                                  | 26          | 2202  | 2243  |               | NO FLARE PATROL |               |                     |                            |            |                  |                      |                    |              |                           |                           |                     |                   |         |
|                                                  | 26          | 2246  | 2251  |               | NO FLARE PATROL |               |                     |                            |            |                  |                      |                    |              |                           |                           |                     |                   |         |
|                                                  | 26          | 2246  | 2251  |               | NO FLARE PATROL |               |                     |                            |            |                  |                      |                    |              |                           |                           |                     |                   |         |
| GRP49421<br>KHAR<br>KHAR<br>CATA<br>KHAR<br>TEHR | 27          | 0917  | 0957  | 0928          | N04             | E20           | .344                | 12503                      | 28.9       | 40               | -N                   |                    |              | .97                       |                           |                     |                   | 3 3 3 7 |
|                                                  | 27          | 0909E | 0927D |               | N03             | E26           | .442                | 12503                      | 29.3       | 180              | 1N                   | C                  | 0918         | 1.96                      | 2.10                      |                     | 0                 |         |
|                                                  | 27          | 0909E | 0954D | 0927          | N03             | E19           | .331                | 12503                      | 28.8       | 450              | -N                   | C                  | 0927         | 1.70                      | 1.80                      |                     | 0                 |         |
|                                                  | 27          | 0920  | 1020  | 0925          | N04             | E20           | .344                | 12503                      | 28.9       | 60               | -N                   | 3 C                | 0925         | .87                       | .92                       | (158)               |                   |         |
|                                                  | 27          | 0921E | 0927D |               | N06             | E20           | .340                | 12503                      | 28.9       | 60               | -N                   | C                  | 0924         | 1.13                      | 1.20                      |                     | D                 |         |
|                                                  | 27          | 0923  | 0937  | 0931          | N03             | E20           | .347                | 12503                      | 28.9       | 14               | -F                   | 3 C                |              | .88                       |                           |                     | OE                |         |
|                                                  | 27          | 0923  | 0937  | 0931          | N03             | E20           | .347                | 12503                      | 28.9       | 14               | -F                   | 3 C                |              | .88                       |                           |                     | OE                |         |
| GRP49422<br>CATA<br>TEHR<br>CANR                 | 27          | 1040  | 1111  | 1049          | N03             | E20           | .347                | 12503                      | 28.9       | 31               | --F                  |                    |              | .55                       |                           |                     |                   | 3 3 3 6 |
|                                                  | 27          | 1040  | 1105D | 1050          | N03             | E19           | .331                | 12503                      | 28.9       | 250              | -N                   | 3 P                | 1050         | .58                       | .61                       | (162)               |                   |         |
|                                                  | 27          | 1040  | 1127  | 1047          | N03             | E20           | .347                | 12503                      | 28.9       | 47               | -F                   | 2 C                |              | .28                       |                           |                     | OE                |         |
|                                                  | 27          | 1040  | 1100  |               | N04             | E21           | .360                | 12503                      | 29.0       | 20               | -F                   | V                  |              | .80                       |                           |                     |                   |         |
| GRP49426<br>RAMY<br>RAMY<br>MCHA                 | 27          | 1658  | 1727  | 1711          | N12             | H60           | .860                | 12488                      | 23.2       | 29               | -N                   |                    |              | .63                       |                           |                     |                   | 2 2 2 4 |
|                                                  | 27          | 1658E | 1729  | 1715          | N11             | H59           | .851                | 12488                      | 23.3       | 310              | -N                   | 4 C                |              | .74                       |                           |                     | OE                |         |
|                                                  | 27          | 1658E | 1729  | 1706          | N11             | H59           | .851                | 12488                      | 23.3       | 310              | -N                   | 4 C                |              | .56                       |                           |                     | OE                |         |
|                                                  | 27          | 1700E | 1725  | 1707          | N12             | H60           | .860                | 12488                      | 23.2       | 250              | -N                   | C                  | 1707         | .52                       | 1.00                      |                     | E                 |         |
|                                                  | 27          | 2041  | 2059  |               | NO FLARE PATROL |               |                     |                            |            |                  |                      |                    |              |                           |                           |                     |                   |         |
|                                                  | 27          | 2041  | 2059  |               | NO FLARE PATROL |               |                     |                            |            |                  |                      |                    |              |                           |                           |                     |                   |         |
| 427 HUAN                                         | 27          | 2102  | 2104D |               | N05             | E22           | .374                | 12503                      | 29.5       | 20               | --F                  | 1 P                | 2102         | .21                       | .22                       |                     | 0                 | 2       |
|                                                  | 27          | 2104  | 2117  |               | NO FLARE PATROL |               |                     |                            |            |                  |                      |                    |              |                           |                           |                     |                   |         |
|                                                  | 27          | 2123  | 2157  |               | NO FLARE PATROL |               |                     |                            |            |                  |                      |                    |              |                           |                           |                     |                   |         |
|                                                  | 27          | 2158  | 2230  |               | NO FLARE PATROL |               |                     |                            |            |                  |                      |                    |              |                           |                           |                     |                   |         |
| 428 MITK                                         | 28          | 0322  | 0345  | 0328          | N03             | E16           | .283                | 12503                      | 29.3       | 23               | --F                  | C                  | 0328         | .93                       | 1.00                      |                     | E                 | 3       |
| GRP49431<br>MONT<br>ATHN                         | 29          | 0947  | 0958  | 0950          | N13             | H85           | .994                | 12488                      | 23.0       | 11               | --F                  |                    |              | .22                       |                           |                     |                   | 2 2 2 5 |
|                                                  | 29          | 0947  | 0955  | 0950          | N13             | H83           | .989                | 12488                      | 23.2       | 8                | -F                   | C                  | 0950         | .10                       |                           |                     |                   |         |
|                                                  | 29          | 0948E | 1001  | 0950          | N13             | H87           | .997                | 12488                      | 22.9       | 130              | -F                   | 3 V                |              | .33                       |                           |                     | OE                |         |
| GRP49433<br>RAMY<br>HUAN                         | 29          | 1650  | 1704  | 1652          | S14             | E75           | .976                | 12507                      | 4.3        | 14               | --F                  |                    |              | .20                       |                           |                     |                   | 2 2 2 5 |
|                                                  | 29          | 1650  | 1707  | 1652          | S14             | E75           | .976                | 12507                      | 4.3        | 17               | -F                   | 3 C                |              | .19                       |                           |                     | OE                |         |
|                                                  | 29          | 1658E | 1700  |               | S14             | E74           | .972                | 12507                      | 4.3        | 20               | -F                   | 1 P                | 1659         | .21                       |                           |                     | D                 |         |
| GRP49434<br>CANR<br>RAMY                         | 29          | 1723  | 1759  | 1728          | S14             | E74           | .972                | 12507                      | 4.3        | 36               | --F                  |                    |              | .32                       |                           |                     |                   | 2 2 2 4 |
|                                                  | 29          | 1723  | 1800  | 1727          | S13             | E75           | .975                | 12507                      | 4.3        | 37               | -F                   |                    |              | .40                       |                           |                     |                   |         |
|                                                  | 29          | 1726E | 1758  | 1729          | S14             | E73           | .968                | 12507                      | 4.2        | 320              | -F                   | 3 C                |              | .23                       |                           |                     | OE                |         |
|                                                  | 29          | 1858  | 1905  |               | NO FLARE PATROL |               |                     |                            |            |                  |                      |                    |              |                           |                           |                     |                   |         |
|                                                  | 29          | 1908  | 1953  |               | NO FLARE PATROL |               |                     |                            |            |                  |                      |                    |              |                           |                           |                     |                   |         |

10  
Aug 73

# SOLAR FLARES Confirmed

AUGUST 1973

| OBSERVATORY | OBSERVED UT |       |       |               | LOCATION        |               |                     |                           | DURATION<br>MIN. | IM-<br>POR-<br>TANCE | OBS.<br>COND. TYPE | MEASUREMENTS |                           |                           |                     |                   | REMARKS |
|-------------|-------------|-------|-------|---------------|-----------------|---------------|---------------------|---------------------------|------------------|----------------------|--------------------|--------------|---------------------------|---------------------------|---------------------|-------------------|---------|
|             | DATE<br>AUG | START | END   | MAX.<br>PHASE | APPROX.<br>LAT. | MER.<br>DIST. | CENTRAL<br>DISTANCE | MCNATH<br>PLAGE<br>REGION | OMP<br>DAY       |                      |                    | TIME<br>UT   | MEAS.<br>AREA<br>Sq. Deg. | CORR.<br>AREA<br>Sq. Deg. | MAX.<br>WIDTH<br>Hc | MAX.<br>INT.<br>% |         |
|             | 29          | 1956  | 2111  | NO FLARE      | PATROL          |               |                     |                           |                  |                      |                    |              |                           |                           |                     |                   |         |
| 437 MANI    | 29          | 2230E | 2237D | 2230U         | N02             | H08           | .165                | 12503                     | 29.3             | 7D                   | --N                | 1            | 2230                      | .31                       | .32                 |                   | 2       |
| GRP49439    | 30          | 0857  | 0915  | 0902          | N04             | H18           | .312                | 12503                     | 29.0             | 18                   | --F                |              |                           | .20                       |                     |                   | 2 2 2 7 |
| HONT        | 30          | 0854  | 0914  | 0858          | N04             | H17           | .296                | 12503                     | 29.1             | 20                   | -F                 |              | 0858                      | .10                       |                     |                   |         |
| CATA        | 30          | 0900  | 0915D | 0905          | N04             | H18           | .312                | 12503                     | 29.0             | 15D                  | -N                 | 1            | P 0905                    | .29                       | .30                 | (155)             |         |
| GRP49443    | 30          | 1243  | 1301  | 1246          | S13             | E59           | .883                | 12507                     | 4.0              | 18                   | --F                |              |                           | .40                       |                     |                   | 2 2 2 4 |
| ATHN        | 30          | 1241  | 1254  | 1245          | S13             | E57           | .867                | 12507                     | 3.8              | 13                   | -N                 | 3            | C                         | .33                       |                     |                   | OE      |
| RAMY        | 30          | 1245  | 1308  | 1247          | S12             | E61           | .896                | 12507                     | 4.1              | 23                   | -F                 | 4            | C                         | .46                       |                     |                   | OE      |
| GRP49444    | 30          | 1934  | 1955  | 1938          | S11             | E55           | .845                | 12507                     | 3.9              | 21                   | -N                 |              |                           | .63                       |                     |                   | 3 3 3 3 |
| PALE        | 30          | 1934E | 2003  | 1937          | S10             | E55           | .842                | 12507                     | 3.9              | 29D                  | -N                 | 3            | V                         | .77                       |                     |                   | OE      |
| HUAN        | 30          | 1938E | 1940D |               | S11             | E55           | .845                | 12507                     | 3.9              | 20                   | -N                 | 2            | P                         | .46                       | .86                 |                   | E       |
| RAMY        | 30          | 1939E | 1947  | 1939U         | S11             | E54           | .836                | 12507                     | 3.9              | 80                   | -N                 | 3            | C                         | .65                       |                     |                   | DE      |
| 445 PALE    | 30          | 1952E | 2013  | 1955U         | N02             | H06           | .137                | 12511                     | 30.4             | 21D                  | --F                | 3            | V                         | .36                       |                     |                   | OE      |
| 446 PALE    | 30          | 2023  | 2027D | 2024          | N15             | E83           | .989                | 12510                     | 6.1              | 4D                   | --N                | 3            | V                         | .21                       |                     |                   | 2       |
| 447 PALE    | 30          | 2041E | 2051  | 2043          | N17             | E83           | .988                | 12510                     | 6.1              | 10D                  | --N                | 3            | V                         | .21                       |                     |                   | OE      |
| GRP49450    | 30          | 2348  | 0008  | 2354          | S11             | E52           | .818                | 12507                     | 3.9              | 20                   | -N                 |              |                           | 1.06                      |                     |                   | 3 3 3 4 |
| PALE        | 30          | 2346  | 0011  | 2352          | S12             | E52           | .820                | 12507                     | 3.9              | 25                   | -N                 | 2            | V                         | 1.24                      |                     |                   | F       |
| CRON        | 30          | 2350  | 0005  | 2353          | S13             | E51           | .814                | 12507                     | 3.8              | 15                   | -N                 |              |                           | .70                       |                     |                   |         |
| MANI        | 30          | 2355E | 0008D | 2356U         | S08             | E52           | .809                | 12507                     | 3.9              | 13D                  | -F                 | 1            |                           | 2356                      | 1.24                | 2.03              |         |
| GRP49456    | 31          | 0751  | 0806  | 0758          | S16             | E48           | .797                | 12507                     | 3.9              | 15                   | -N                 |              |                           | .95                       |                     |                   | 6 6 6 6 |
| ATHN        | 31          | 0750  | 0759D | 0754          | S15             | E48           | .793                | 12507                     | 3.9              | 9D                   | -N                 | 3            | V                         | .83                       |                     |                   | OE      |
| ABST        | 31          | 0751  | 0804  | 0758          | S17             | E51           | .828                | 12507                     | 4.2              | 13                   | 1N                 |              | C 0758                    | 1.35                      | 2.30                | 72                | D       |
| CRON        | 31          | 0752E | 0809  |               | S15             | E49           | .803                | 12507                     | 4.0              | 17D                  | -N                 |              | V                         | .70                       |                     |                   |         |
| HEUD        | 31          | 0754E | 0802  |               | S16             | E47           | .788                | 12507                     | 3.9              | 8D                   | -N                 |              | C 0757                    | .52                       | .80                 |                   | CD      |
| TEHR        | 31          | 0755E | 0807  | 0759          | S16             | E47           | .788                | 12507                     | 3.9              | 12D                  | -N                 | 4            | V                         | .83                       |                     |                   | F       |
| CATA        | 31          | 0800E | 0800D | 0800          | S17             | E47           | .792                | 12507                     | 3.9              |                      | 1N                 | 3            | P 0800                    | 1.44                      | 2.37                | (17D)             |         |
| GRP49458    | 31          | 1350  | 1407  | 1352          | S12             | E44           | .740                | 12507                     | 3.9              | 17                   | --N                |              |                           | .64                       |                     |                   | 3 3 3 6 |
| RAMY        | 31          | 1349  | 1405  | 1351          | S11             | E46           | .758                | 12507                     | 4.0              | 16                   | -N                 | 4            | C                         | .46                       |                     |                   | OE      |
| CATA        | 31          | 1350  | 1350D | 1350          | S14             | E43           | .739                | 12507                     | 3.8              |                      | -N                 | 3            | P                         | .87                       | 1.29                | (195)             |         |
| CANR        | 31          | 1350  | 1408  | 1354          | S10             | E44           | .732                | 12507                     | 3.9              | 18                   | -F                 |              | V                         | .60                       |                     |                   |         |
| GRP49459    | 31          | 1407  | 1413  | 1407          | N14             | E77           | .969                | 12510                     | 6.4              | 6                    | -F                 |              |                           | .49                       |                     |                   | 2 2 2 6 |
| ATHN        | 31          | 1407E | 1412D | 1407U         | N13             | E74           | .956                | 12510                     | 6.1              | 5D                   | -N                 | 3            | V                         | .66                       |                     |                   | OE      |
| HEUD        | 31          | 1408E | 1413  |               | N15             | E80           | .980                | 12510                     | 6.6              | 5D                   | -F                 |              | C 1408                    | .31                       |                     |                   |         |
| GRP49460    | 31          | 1415  | 1430  | 1419          | S12             | E44           | .740                | 12507                     | 3.9              | 15                   | --F                |              |                           | .54                       |                     |                   | 2 2 2 3 |
| CANR        | 31          | 1412  | 1430  | 1417          | S11             | E43           | .725                | 12507                     | 3.8              | 18                   | -F                 |              | V                         | .70                       |                     |                   |         |
| RAMY        | 31          | 1417  | 1430  | 1420          | S12             | E44           | .740                | 12507                     | 3.9              | 13                   | -F                 | 4            | C                         | .37                       |                     |                   | OE      |
| GRP49464    | 31          | 1929  | 1940  | 1931          | N14             | E79           | .977                | 12510                     | 6.7              | 11                   | -N                 |              |                           | .35                       |                     |                   | 3 3 2 3 |
| RAMY        | 31          | 1928  | 1941  | 1931          | N14             | E79           | .977                | 12510                     | 6.7              | 13                   | -N                 | 3            | C                         | .28                       |                     |                   | OE      |
| PALE        | 31          | 1930E | 1943  | 1931U         | N16             | E76           | .964                | 12510                     | 6.5              | 13D                  | -N                 | 1            | V                         | .41                       |                     |                   | F       |
| MGMA        | 31          | 1930  | 1937  | 1931          | N13             | E83           | .989                | 12510                     | 7.0              | 7                    | -B                 |              | C 1931                    |                           |                     |                   |         |
|             | 31          | 2108  | 2129  | NO FLARE      | PATROL          |               |                     |                           |                  |                      |                    |              |                           |                           |                     |                   |         |
| 465 PALE    | 31          | 2202E | 2205  | 2203U         | N04             | H19           | .328                | 12511                     | 30.5             | 3D                   | --F                | 2            | V                         | .62                       |                     |                   | F       |
|             | 31          | 2250  | 2252  | NO FLARE      | PATROL          |               |                     |                           |                  |                      |                    |              |                           |                           |                     |                   |         |

In the importance column "--" signifies the subflare has been confirmed by the NOAA grouping program but is not included in the I.A.U. Quarterly Bulletin on Solar Activity. These subflares are also not included in the Flare Index below.

## DAILY FLARE INDICES

| Date   | Flare Index | HR OBS | Date   | Flare Index | HR OBS | Date   | Flare Index | HR OBS |
|--------|-------------|--------|--------|-------------|--------|--------|-------------|--------|
| 730801 | 7.81        | 23.9   | 730809 | 1.07        | 24.0   | 730822 | 0.00        | 23.9   |
| 730802 | 13.89       | 22.8   | 730810 | 9.25        | 23.5   | 730824 | 0.00        | 22.7   |
| 730803 | 22.72       | 24.0   | 730811 | 0.00        | 23.9   | 730826 | 0.00        | 22.4   |
| 730804 | 12.30       | 24.0   | 730816 | 0.00        | 22.5   | 730827 | 7.06        | 22.4   |
| 730805 | 7.61        | 23.0   | 730818 | 0.00        | 23.4   | 730829 | 0.00        | 21.9   |
| 730806 | 286.60      | 24.0   | 730819 | 0.00        | 22.4   | 730830 | 8.02        | 24.0   |
| 730807 | 14.21       | 24.0   | 730820 | 0.00        | 22.4   | 730831 | 6.70        | 23.6   |
| 730808 | 3.81        | 23.4   | 730821 | 50.39       | 24.0   |        |             |        |

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

# SOLAR FLARES

## Unconfirmed

### AUGUST 1973

| OBSERVATORY | OBSERVED UT |       |       |               | LOCATION        |               |                     |                           | DURATION<br>MIN. | IM-<br>POR-<br>TANCE | OBS.<br>COND. | TYPE | MEASUREMENTS |                           |                           |                                 |                   | REMARKS  |
|-------------|-------------|-------|-------|---------------|-----------------|---------------|---------------------|---------------------------|------------------|----------------------|---------------|------|--------------|---------------------------|---------------------------|---------------------------------|-------------------|----------|
|             | DATE<br>AUG | START | END   | MAX.<br>PHASE | APPROX.<br>LAT. | MER.<br>DIST. | CENTRAL<br>DISTANCE | MCMATH<br>PLAGE<br>REGION | CMP<br>DAY       |                      |               |      | TIME<br>UT   | MEAS.<br>AREA<br>Sq. Deg. | CORR.<br>AREA<br>Sq. Deg. | MAX.<br>WIDTH<br>H <sub>g</sub> | MAX.<br>INT.<br>% |          |
| 285 ATHN    | 01          | 0405E | 0423  | 0407          | S06             | W09           | .256                | 12460                     | 31.5             | 180                  | -F            | 1    | C            |                           | .33                       |                                 |                   | DE 8     |
| 288 RMY     | 01          | 1416  | 1427  | 1422          | S10             | E79           | .986                | 12472                     | 7.5              | 11                   | -N            | 3    | C            |                           | .66                       |                                 |                   | DE 7     |
| 293 PALE    | 02          | 0229E | 0238  | 0230          | S07             | W22           | .429                | 12460                     | 31.5             | 90                   | -F            | 2    | C            |                           | .27                       |                                 |                   | F 5      |
| 294 PALE    | 02          | 0239  | 0249  | 0242          | S10             | W74           | .968                | 12470                     | 27.6             | 10                   | -F            | 2    | C            |                           | .27                       |                                 |                   | 5        |
| 299 TEHR    | 03          | 0400  | 0440  | 0413          | S09             | W22           | .446                | 12460                     | 1.5              | 40                   | -N            | 4    | C            |                           | 1.28                      |                                 |                   | F 7      |
| 300 TEHR    | 03          | 0446  | 0453  | 0448          | S08             | E70           | .947                | 12472                     | 8.4              | 7                    | -N            | 4    | C            |                           | .28                       |                                 |                   | F 7      |
| GRP49302    | 03          | 0706  | 0743  | 0719          | S13             | E62           | .902                | 12472                     | 7.9              | 37                   | -F            |      |              | 1.11                      |                           |                                 |                   | 2 2 2 9  |
| ABST        | 03          | 0706E | 07520 | 0719          | S14             | E63           | .911                | 12472                     | 8.0              | 460                  | 1F            | P    | 0719         | 1.80                      | 4.10                      |                                 |                   | D        |
| MONT        | 03          | 0712E | 0733  | 0718          | S11             | E61           | .891                | 12472                     | 7.9              | 210                  | -N            | C    | 0718         | .41                       |                           |                                 |                   |          |
| 303 MONT    | 03          | 0918  | 0929  | 0924          | S11             | E60           | .883                | 12472                     | 7.9              | 11                   | -N            | C    | 0924         | .10                       |                           |                                 |                   | D 7      |
| 304 PALE    | 03          | 2151E | 21560 | 21530         | S06             | W47           | .748                | 12460                     | 31.4             | 50                   | -F            | 1    | C            |                           | .72                       |                                 |                   | F 4      |
| 307 ABST    | 04          | 0458E | 0622  | 0521          | N07             | E25           | .420                | 12474                     | 6.1              | 840                  | -F            | P    | 0521         | 1.80                      | 2.00                      |                                 |                   | FK 5     |
| 312 ARCE    | 04          | 0803  | 0810  | 0805          | N06             | E25           | .420                | 12474                     | 6.2              | 7                    | -N            | C    | 0805         | .61                       | .70                       |                                 |                   | 8        |
| 314 MONT    | 04          | 0928  | 1000  | 0934          | N07             | E25           | .420                | 12474                     | 6.3              | 32                   | -N            | C    | 0934         | .21                       |                           |                                 |                   | EH 6     |
| 315 MONT    | 04          | 1031  | 1041  | 1034          | S07             | W53           | .814                | 12460                     | 31.5             | 10                   | -N            | C    | 1034         | .10                       |                           |                                 |                   | D 6      |
| 316 MONT    | 04          | 1035  | 1045  | 1040          | S05             | W59           | .865                | 12460                     | 31.0             | 10                   | -N            | C    | 1040         | .21                       |                           |                                 |                   | D 6      |
| 317 RMY     | 04          | 1410  | 1417  | 1411          | S08             | W59           | .870                | 12460                     | 31.2             | 7                    | -F            | 3    | C            |                           | .28                       |                                 |                   | DE 5     |
| 320 VORO    | 04          | 2336  | 2350  | 2338          | N06             | E00           | .000                | 12474                     | 5.0              | 14                   | -B            | C    | 2338         | .46                       | .45                       |                                 | 70                | EJL6 4   |
| 322 PALE    | 05          | 0227E | 0249  | 0228          | N06             | E12           | .207                | 12474                     | 6.0              | 220                  | -F            | 3    | V            |                           | .15                       |                                 |                   | DE 3     |
| 323 MEND    | 05          | 1629  | 16450 |               | N06             | E04           | .069                | 12474                     | 6.0              | 160                  | 1F            | P    |              | 3.09                      |                           |                                 |                   | 7        |
| 324 PALE    | 05          | 1837E | 1850  | 1840          | N06             | E03           | .052                | 12474                     | 6.0              | 130                  | -F            | 2    | C            |                           | .27                       |                                 |                   | F 4      |
| 329 CRON    | 06          | 0440E | 04500 |               | N06             | W02           | .035                | 12474                     | 6.0              | 100                  | -F            | V    | 0440         | 1.40                      |                           |                                 |                   | 7        |
| GRP49330    | 06          | 0502  | 0547  | 0543          | N07             | W05           | .088                | 12474                     | 5.8              | 45                   | -F            |      |              | 3.21                      |                           |                                 |                   | 2 2 2 8  |
| MEND        | 06          | 0502  | 05440 |               | N07             | W04           | .071                | 12474                     | 5.9              | 420                  | 1N            | P    |              | 5.16                      |                           |                                 |                   |          |
| UPIC        | 06          | 0540E | 0547  | 0543          | N07             | W05           | .088                | 12474                     | 5.9              | 70                   | -F            | P    | 0543         | 1.26                      |                           |                                 |                   | T        |
| 332 MONT    | 06          | 0646  | 0714  | 0651          | S06             | E67           | .927                | 12476                     | 11.3             | 28                   | -F            | C    | 0651         | .10                       |                           |                                 |                   | 10       |
| GRP49334    | 06          | 1231  | 1253  | 1231          | N06             | W07           | .121                | 12474                     | 6.0              | 22                   | -N            |      |              | .21                       |                           |                                 |                   | 2 2 1 11 |
| TEHR        | 06          | 1231E | 1300  | 12310         | N06             | W06           | .104                | 12474                     | 6.1              | 290                  | -N            | 3    | V            |                           | .21                       |                                 |                   | F        |
| HUAN        | 06          | 1234E | 1245  |               | N06             | W07           | .121                | 12474                     | 6.0              | 110                  | -N            | 1    | P            | 1238                      |                           |                                 |                   | T        |
| 336 RMY     | 06          | 1500  | 1514  | 1502          | N06             | W10           | .173                | 12474                     | 5.9              | 14                   | -N            | 3    | C            |                           | .46                       |                                 |                   | DE 9     |
| 343 PALE    | 06          | 2358E | 0012  | 0001          | N08             | W60           | .862                | 12461                     | 2.5              | 140                  | -F            | 3    | V            |                           | .98                       |                                 |                   | F 5      |
| GRP49344    | 06          | 2359  | 0013  | 0001          | N06             | W12           | .207                | 12474                     | 6.1              | 14                   | -N            |      |              | .72                       |                           |                                 |                   | 2 2 2 5  |
| PALE        | 06          | 2358  | 0014  | 0000          | N06             | W12           | .207                | 12474                     | 6.1              | 16                   | -N            | 3    | V            |                           | .72                       |                                 |                   | DE       |
| PALE        | 06          | 2358  | 0014  | 0008          | N06             | W12           | .207                | 12474                     | 6.1              | 16                   | -N            | 3    | V            |                           | .62                       |                                 |                   | DE       |
| HANI        | 07          | 0000  | 0011  | 0002          | N06             | W11           | .190                | 12474                     | 6.2              | 11                   | -N            | 2    |              | 0002                      | .72                       | .74                             |                   | F        |
| 346 PALE    | 07          | 0143  | 0210  | 0151          | N06             | W16           | .274                | 12474                     | 5.9              | 27                   | -N            | 2    | V            |                           | .98                       |                                 |                   | DE 5     |
| 347 PALE    | 07          | 0258E | 03020 | 02590         | N06             | W17           | .291                | 12474                     | 5.8              | 40                   | -F            | 2    | V            |                           | .36                       |                                 |                   | F 5      |
| 349 KHAR    | 07          | 0903E | 0934  |               | N06             | W22           | .373                | 12474                     | 5.7              | 310                  | -F            | C    | 0909         | 1.36                      | 1.40                      |                                 |                   | D 11     |
| 350 UPIC    | 07          | 0906  | 0920  | 09070         | S08             | E52           | .807                | 12476                     | 11.3             | 14                   | -F            | P    | 0907         | .21                       |                           |                                 |                   | D 11     |
| 354 HUAN    | 07          | 1602  | 1607  | 1604          | N06             | W26           | .436                | 12474                     | 5.7              | 5                    | -F            | 1    | C            | 1604                      | .31                       | .34                             |                   | 8        |
| 356 PALE    | 07          | 1719  | 17240 | 1720          | N04             | W27           | .454                | 12474                     | 5.7              | 50                   | -N            | 2    | C            |                           | .45                       |                                 |                   | F 5      |
| 357 PALE    | 07          | 1814  | 1823  | 1816          | N06             | W24           | .405                | 12474                     | 6.0              | 9                    | -N            | 3    | V            |                           | .41                       |                                 |                   | F 4      |
| 364 PALE    | 08          | 0406  | 04150 | 0408          | N06             | W30           | .497                | 12474                     | 5.9              | 90                   | -F            | 2    | V            |                           | .41                       |                                 |                   | 6        |
| 365 TEHR    | 08          | 0515E | 0535  | 0520          | N05             | W33           | .543                | 12474                     | 5.7              | 200                  | -N            | 4    | V            |                           | .15                       |                                 |                   | DE 5     |

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## Unconfirmed

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| OBSERVATORY | OBSERVED UT |       |       |               | LOCATION                         |                     |                          |            |            | DURATION<br>MIN. | IM-<br>POR-<br>TANCE | OBS.<br>COND. TYPE | MEASUREMENTS              |                           |                             |                   |          | REMARKS |
|-------------|-------------|-------|-------|---------------|----------------------------------|---------------------|--------------------------|------------|------------|------------------|----------------------|--------------------|---------------------------|---------------------------|-----------------------------|-------------------|----------|---------|
|             | DATE<br>AUG | START | END   | MAX.<br>PHASE | APPROX.<br>LAT.<br>MER.<br>DIST. | CENTRAL<br>DISTANCE | MCATH<br>PLAGE<br>REGION | CMP<br>DAY | TIME<br>UT |                  |                      |                    | MEAS.<br>AREA<br>Sq. Deg. | CORR.<br>AREA<br>Sq. Deg. | MAX.<br>WIDTH<br>H $\alpha$ | MAX.<br>INT.<br>% |          |         |
| 367 MONT    | 08          | 0759  | 0807  | 0801          | N21                              | W88                 | .997 12461               | 1.7        | 8          | -F               | C                    | 0801               |                           |                           |                             |                   |          | 10      |
| 371 PALE    | 08          | 1707  | 17100 | 1709          | N16                              | W63                 | .886 12471               | 4.0        | 30         | -F               | 2 C                  |                    | .27                       |                           |                             |                   |          | 5       |
| 372 PALE    | 08          | 1912E | 1922  | 1914          | N08                              | W38                 | .612 12474               | 5.9        | 100        | -N               | 2 C                  |                    | .27                       |                           |                             |                   | OE       | 4       |
| 373 PALE    | 08          | 2306E | 2307D | 2306U         | S08                              | W19                 | .402 12472               | 7.5        | 10         | -F               | 2 V                  |                    | .31                       |                           |                             |                   |          | 3       |
| 374 MANI    | 08          | 2340E | 2355  | 2340U         | N08                              | W41                 | .652 12474               | 5.9        | 150        | -N               | 1                    | 2340               | .52                       | .68                       |                             |                   |          | 3       |
| 375 MANI    | 09          | 0341  | 0357  | 0343          | N08                              | W44                 | .691 12474               | 5.9        | 16         | -F               | 2                    | 0343               | .31                       | .43                       |                             |                   |          | 5       |
| GRP49376    | 09          | 0648  | 0651  | 0648          | N14                              | W75                 | .961 12471               | 3.7        | 3          | -F               |                      |                    | .16                       |                           |                             |                   | 2 2 2 7  |         |
| UPIC        | 09          | 0648E | 0652U |               | N14                              | W74                 | .956 12471               | 3.7        | 40         | -F               | P                    | 0650               | .21                       |                           |                             |                   |          |         |
| MONT        | 09          | 0648  | 0650  | 0648          | N13                              | W75                 | .961 12471               | 3.7        | 2          | -F               | C                    | 0648               | .10                       |                           |                             |                   |          |         |
| 377 MONT    | 09          | 0653  | 0654  | 0653          | N12                              | W77                 | .970 12471               | 3.5        | 1          | -F               | C                    | 0653               | .10                       |                           |                             |                   |          | 7       |
| 378 MONT    | 09          | 0757  | 0807  | 0801          | N05                              | W44                 | .692 12474               | 6.0        | 10         | -F               | C                    | 0801               | .10                       |                           |                             |                   |          | 8       |
| GRP49379    | 09          | 0842  | 0900  | 0847          | N13                              | W77                 | .970 12471               | 3.6        | 18         | -F               |                      |                    | .45                       |                           |                             |                   | 2 2 2 9  |         |
| MONT        | 09          | 0838  | 0856  | 0845          | N12                              | W77                 | .970 12471               | 3.6        | 18         | -N               | C                    | 0845               | .10                       |                           |                             |                   | DH       |         |
| CANR        | 09          | 0846  | 0903  | 0849          | N13                              | W77                 | .970 12471               | 3.6        | 17         | -F               | V                    | 0849               | .80                       |                           |                             |                   |          |         |
| 382 RAMY    | 09          | 1130  | 1154D | 1132          | N14                              | W77                 | .970 12471               | 3.7        | 240        | -F               | 4 C                  |                    | .46                       |                           |                             |                   | OE       | 11      |
| 384 MCMA    | 09          | 1256E | 1257D |               | N16                              | W85                 | .994 12471               | 3.2        | 10         | -N               | P                    | 1257               |                           |                           |                             |                   |          | 11      |
| GRP49386    | 09          | 1509  | 1601  | 1537          | N14                              | W81                 | .984 12471               | 3.6        | 52         | -N               |                      |                    | .39                       |                           |                             |                   | 2 2 1 9  |         |
| HUAN        | 09          | 1509  | 1523  | 1515          | N14                              | W80                 | .981 12471               | 3.6        | 14         | -F               | 1 C                  | 1515               | .26                       |                           |                             |                   | O        |         |
| ARCE        | 09          | 1515E | 1615  | 1537          | N14                              | W81                 | .984 12471               | 3.6        | 600        | -B               | C                    | 1537               | .39                       | 1.30                      |                             |                   | H        |         |
| HUAN        | 09          | 1530  | 1547  | 1536          | N14                              | W80                 | .981 12471               | 3.6        | 17         | -F               | 1 C                  | 1536               |                           |                           |                             |                   | E        |         |
| 394 MANI    | 10          | 0552  | 0601D | 0558          | N08                              | W59                 | .853 12474               | 5.8        | 90         | -N               | 2                    | 0558               | .41                       | .74                       |                             |                   |          | 7       |
| GRP49395    | 10          | 0706  | 0728  | 0714          | N15                              | W89                 | .999 12471               | 3.6        | 22         | -F               |                      |                    | .21                       |                           |                             |                   | 2 2 2 10 |         |
| MONT        | 10          | 0706  | 0719  | 0714          | N15                              | W87                 | .997 12471               | 3.8        | 13         | -N               | C                    | 0714               | .21                       |                           |                             |                   |          |         |
| UPIC        | 10          | 0717E | 0736  |               | N15                              | W90                 | 1.000 12471              | 3.6        | 190        | -F               | P                    | 0724               | .21                       |                           |                             |                   |          |         |
| 396 UPIC    | 10          | 0749  | 0810  |               | N15                              | W90                 | 1.000 12471              | 3.6        | 21         | -F               | P                    | 0750               | .21                       |                           |                             |                   |          | 11      |
| 397 ISTA    | 10          | 0855  | 0925  |               | N12                              | W90                 | 1.000 12471              | 3.6        | 30         | -F               |                      |                    |                           |                           |                             |                   |          | 9       |
| 398 MONT    | 10          | 1013  | 1026  | 1017          | N15                              | W88                 | .998 12471               | 3.8        | 13         | -N               | C                    | 1017               | .21                       |                           |                             |                   |          | 9       |
| 399 MONT    | 11          | 0636  | 0640  | 0637          | N06                              | W73                 | .954 12474               | 5.8        | 4          | -N               | C                    | 0637               | .10                       |                           |                             |                   | O        | 8       |
| 400 CATA    | 17          | 0825  | 0850  | 0845          | N15                              | E85                 | .993 12488               | 23.7       | 25         | -F               | 3 C                  | 0845               | .29                       |                           |                             |                   | (138)    | 9       |
| 401 CATA    | 17          | 0950  | 1005  | 0955          | N13                              | W80                 | .981 12475               | 11.4       | 15         | -F               | 3 C                  | 0955               | .29                       |                           |                             |                   | (123)    | 8       |
| GRP49402    | 17          | 1436  | 1500  | 1438          | N18                              | W19                 | .370 12483               | 16.2       | 24         | -F               |                      |                    | .41                       |                           |                             |                   | 2 2 2 9  |         |
| MCMA        | 17          | 1432  | 1450  | 1434          | N18                              | W18                 | .356 12483               | 16.3       | 18         | -N               | C                    | 1434               | .52                       | .50                       |                             |                   | E        |         |
| CANR        | 17          | 1439  | 1509  | 1441          | N18                              | W19                 | .370 12483               | 16.2       | 30         | -F               | V                    |                    | .30                       |                           |                             |                   |          |         |
| 403 PALE    | 17          | 1936E | 1948  | 1937U         | N10                              | E71                 | .941 12488               | 23.1       | 120        | -F               | 3 V                  |                    | .21                       |                           |                             |                   | OE       | 4       |
| 405 ABST    | 19          | 0813E | 0815D | 0814          | N12                              | E57                 | .833 12488               | 23.6       | 20         | -F               | P                    | 0814               | 1.18                      | 2.00                      |                             |                   | EJ       | 9       |
| 406 ABST    | 20          | 0727E | 0732D | 0728          | N12                              | E44                 | .690 12488               | 23.6       | 50         | -F               | P                    | 0728               | .90                       | 1.20                      |                             | 55                | OJ       | 10      |
| 407 RAMY    | 20          | 1408  | 1420  | 1411          | N12                              | E27                 | .456 12488               | 22.6       | 12         | -F               | 3 C                  |                    | .28                       |                           |                             |                   | OE       | 6       |
| 408 PALE    | 20          | 1826E | 1832  | 1827U         | N18                              | E41                 | .662 12488               | 23.8       | 60         | -N               | 2 V                  |                    | .31                       |                           |                             |                   |          | 3       |
| 409 MONT    | 21          | 0831  | 0857  | 0839          | N13                              | E30                 | .502 12488               | 23.6       | 26         | -F               | C                    | 0839               | .10                       |                           |                             |                   |          | 8       |
| 411 PALE    | 21          | 2325E | 2332  | 2327          | N14                              | W58                 | .842 12482               | 17.6       | 70         | -N               | 3 V                  |                    | .26                       |                           |                             |                   | OE       | 4       |
| 412 UPIC    | 23          | 1656E | 1705D |               | N16                              | E90                 | .999 12501               | 30.5       | 90         | -N               | P                    | 1656               | .21                       |                           |                             |                   |          | 3       |
| 414 ABST    | 25          | 0557E | 0617  | 0605          | N10                              | W60                 | .860 12499               | 20.7       | 200        | -F               | P                    | 0605               | .90                       | 1.70                      |                             | 63                | DJT      | 7       |
| 415 ABST    | 25          | 0634  | 0725  | 0643          | N13                              | W27                 | .458 12488               | 23.2       | 51         | -F               | C                    | 0643               | .99                       | 1.10                      |                             | 60                | DJK      | 9       |
| 416 CANR    | 25          | 1000  | 1010  | 1002          | N12                              | W30                 | .500 12488               | 23.2       | 10         | -F               | V                    | 1000               | .20                       | .30                       |                             |                   |          | 7       |
| 419 ABST    | 26          | 0525E | 0539D | 0536          | N12                              | W59                 | .851 12499               | 21.8       | 140        | -F               | P                    | 0536               | .81                       | 1.50                      |                             | 58                | O        | 5       |

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# SOLAR FLARES

## Unconfirmed

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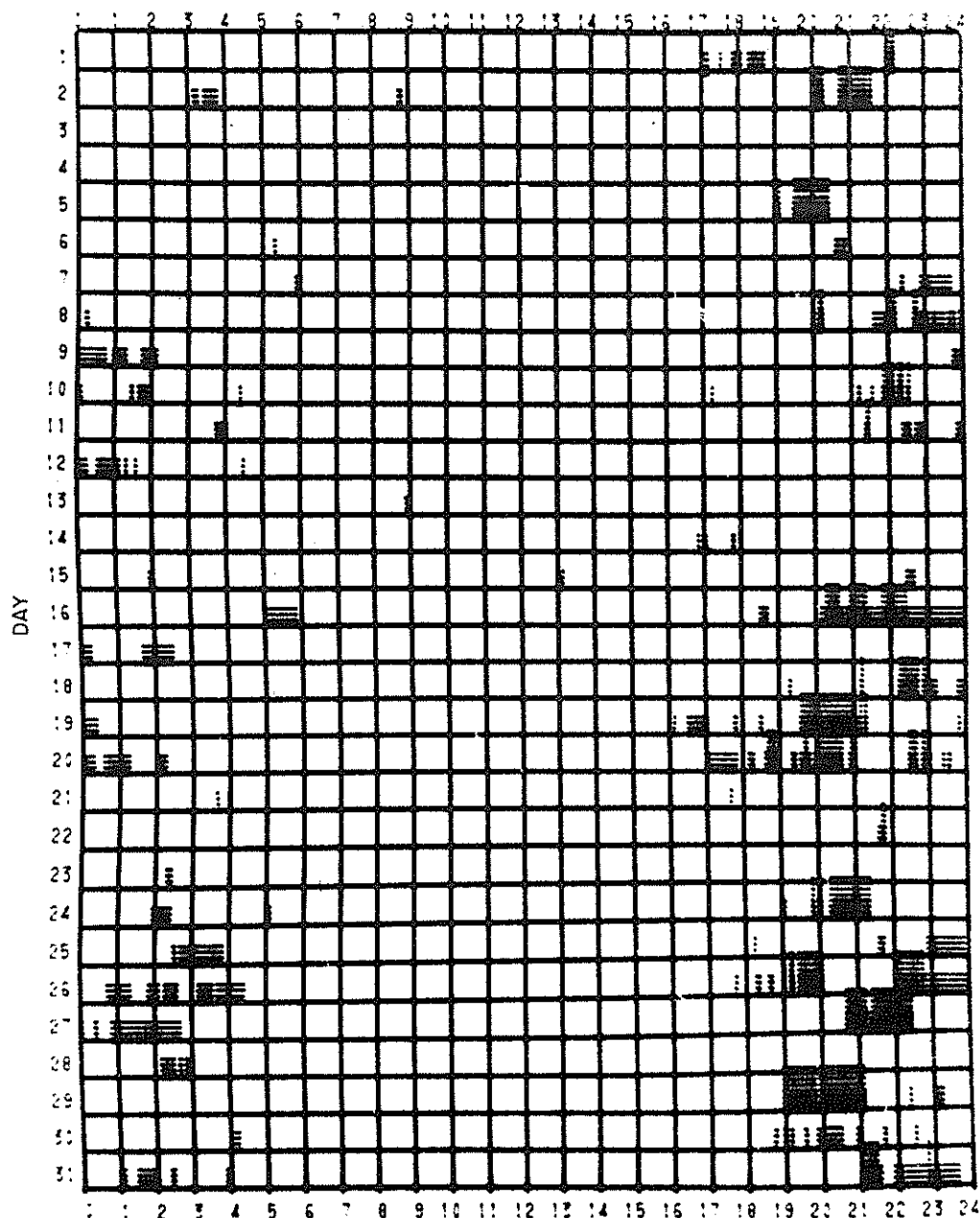
| OBSERVATORY | OBSERVED UT |       |       |               | LOCATION        |                          |                     |                           |            | DURATION<br>MIN. | IM-<br>POR-<br>TANCE | OBS.<br>COND. TYPE | MEASUREMENTS |                           |                           |                                 |                   | REMARKS |
|-------------|-------------|-------|-------|---------------|-----------------|--------------------------|---------------------|---------------------------|------------|------------------|----------------------|--------------------|--------------|---------------------------|---------------------------|---------------------------------|-------------------|---------|
|             | DATE<br>AUG | START | END   | MAX.<br>PHASE | APPROX.<br>LAT. | APPROX.<br>MER.<br>DIST. | CENTRAL<br>DISTANCE | MCARTH<br>PLAGE<br>REGION | CMP<br>DAY |                  |                      |                    | TIME<br>UT   | MEAS.<br>AREA<br>Sq. Deg. | CORR.<br>AREA<br>Sq. Deg. | MAX.<br>WIDTH<br>H <sub>g</sub> | MAX.<br>INT.<br>% |         |
| 420 ATHN    | 26          | 1445  | 1459  | 1448          | N32             | E35                      | .656                | 12500                     | 29.2       | 14               | -F                   | 2 C                |              | .33                       |                           |                                 |                   | DE 7    |
| GRP49423    | 27          | 1200  | 1209  | 1202          | N03             | E25                      | .426                | 12503                     | 29.4       | 9                | -F                   |                    |              | .60                       |                           |                                 |                   | 2 2 2 7 |
| CATA        | 27          | 1200  | 1205  | 1200          | N03             | E24                      | .411                | 12503                     | 29.3       | 5                | -N                   | 3 C                | 1200         | .29                       | .31                       |                                 | (158)             |         |
| ABST        | 27          | 1203E | 12120 | 1203          | N03             | E25                      | .426                | 12503                     | 29.4       | 90               | -F                   | P                  | 1203         | .90                       | 1.00                      |                                 |                   | OK      |
| 424 ABST    | 27          | 1219E | 12390 | 1219          | N03             | E25                      | .426                | 12503                     | 29.4       | 200              | -F                   | P                  | 1219         | .90                       | 1.00                      |                                 |                   | D 8     |
| 425 ABST    | 27          | 1219E | 12390 | 1237          | N02             | E24                      | .414                | 12503                     | 29.3       | 200              | -F                   | P                  | 1237         | .90                       | 1.00                      |                                 |                   | OJ 8    |
| 429 ABST    | 29          | 0514  | 0535  | 0515          | N03             | W02                      | .080                | 12503                     | 29.1       | 21               | -F                   | C                  | 0515         | .80                       | .80                       |                                 | 63                | OK 6    |
| 430 ABST    | 29          | 0540E | 0703  | 0611          | N03             | W03                      | .089                | 12503                     | 29.0       | 830              | -F                   | P                  | 0703         | 1.62                      | 1.60                      |                                 | 62                | FK 3    |
| GRP49432    | 29          | 1123  | 1140  | 1127          | N13             | W87                      | .997                | 12488                     | 22.9       | 17               | -F                   |                    |              | .33                       |                           |                                 |                   | 2 2 1 5 |
| RAMY        | 29          | 1122  | 1140  | 1125          | N13             | W84                      | .992                | 12488                     | 23.2       | 18               | -F                   | 4 C                |              | .28                       |                           |                                 |                   | DE      |
| RAMY        | 29          | 1123E | 1140  | 1125          | N13             | W84                      | .992                | 12488                     | 23.2       | 170              | -F                   | 5 V                |              | .33                       |                           |                                 |                   | DE      |
| ATHN        | 29          | 1129E | 11340 | 1129U         | N13             | W90                      | 1.000               | 12488                     | 22.7       | 50               | -F                   | 3 V                |              |                           |                           |                                 |                   | DE      |
| 435 PALE    | 29          | 1835  | 1842  | 1836          | S17             | E72                      | .966                | 12507                     | 4.2        | 7                | -F                   | 3 V                |              | .26                       |                           |                                 |                   | DE 3    |
| 436 PALE    | 29          | 1843E | 1851  | 1844          | S14             | E74                      | .972                | 12507                     | 4.3        | 80               | -N                   | 3 V                |              | .72                       |                           |                                 |                   | 3       |
| 438 MANI    | 30          | 0215  | 0223D | 0217          | S14             | E16                      | .445                | 12509                     | 31.3       | 80               | -N                   | 2                  | 0217         | .21                       | .22                       |                                 |                   | 6       |
| 440 MONT    | 30          | 1024  | 1032  | 1025          | S09             | E56                      | .849                | 12507                     | 3.6        | 8                | -F                   | C                  | 1025         | .10                       |                           |                                 |                   | 8       |
| GRP49441    | 30          | 1100  | 1123  | 1103          | N04             | W18                      | .312                | 12503                     | 29.1       | 23               | -F                   |                    |              | .61                       |                           |                                 |                   | 2 2 2 8 |
| RAMY        | 30          | 1100  | 1123  | 1103          | N04             | W18                      | .312                | 12503                     | 29.1       | 23               | -F                   | 4 C                |              | .33                       |                           |                                 |                   | DE      |
| ARCE        | 30          | 1105E | 11050 |               | N03             | W17                      | .300                | 12503                     | 29.2       |                  | -F                   | P                  | 1105         | .88                       | .90                       |                                 |                   |         |
| 442 RAMY    | 30          | 1219E | 1223  | 1219U         | S14             | E06                      | .374                | 12509                     | 31.0       | 40               | -F                   | 4 V                |              | .33                       |                           |                                 |                   | DE 4    |
| 448 PALE    | 30          | 2309  | 2324  | 2312          | S12             | E52                      | .820                | 12507                     | 3.9        | 15               | -N                   | 3 V                |              | .62                       |                           |                                 |                   | DE 3    |
| 449 PALE    | 30          | 2336E | 2348  | 2338          | N03             | W23                      | .395                | 12503                     | 29.3       | 120              | -N                   | 2 V                |              | .26                       |                           |                                 |                   | DE 3    |
| 451 MANI    | 31          | 0208  | 0218  | 0213          | N14             | E85                      | .993                | 12510                     | 6.5        | 10               | -F                   | 2                  | 0213         | .52                       | 1.47                      |                                 |                   | 4       |
| GRP49452    | 31          | 0305  | 0314  | 0308          | N13             | E82                      | .987                | 12510                     | 6.3        | 9                | -F                   |                    |              | .51                       |                           |                                 |                   | 2 2 2 5 |
| MANI        | 31          | 0305E | 0314  | 0308          | N13             | E84                      | .992                | 12510                     | 6.4        | 90               | -F                   | 2                  | 0308         | .52                       | 1.44                      |                                 |                   |         |
| CRON        | 31          | 0308E | 0314  |               | N13             | E80                      | .981                | 12510                     | 6.1        | 60               | -N                   | V                  |              | .50                       |                           |                                 |                   |         |
| GRP49453    | 31          | 0535  | 0544  | 0542          | S14             | E50                      | .808                | 12507                     | 4.0        | 9                | -F                   |                    |              | .90                       |                           |                                 |                   | 1 1 1 7 |
| ABST        | 31          | 0535  | 0542  | 0537          | S13             | E50                      | .805                | 12507                     | 4.0        | 7                | -F                   | C                  | 0537         | .72                       | 1.20                      |                                 | 63                | D       |
| ABST        | 31          | 0539  | 0544  | 0542          | S16             | E51                      | .825                | 12507                     | 4.1        | 5                | -F                   | C                  | 0542         | .90                       | 1.40                      |                                 | 69                | D       |
| GRP49454    | 31          | 0600  | 0606  | 0603          | S16             | E51                      | .825                | 12507                     | 4.1        | 6                | -F                   |                    |              | .56                       |                           |                                 |                   | 2 2 2 7 |
| MANI        | 31          | 0559  | 0606  | 0603          | S16             | E51                      | .825                | 12507                     | 4.1        | 7                | -F                   | 2                  | 0603         | .21                       | .35                       |                                 |                   |         |
| ABST        | 31          | 0600  | 0606  | 0603          | S15             | E51                      | .821                | 12507                     | 4.1        | 6                | -N                   | C                  | 0603         | .90                       | 1.40                      |                                 | 76                | F       |
| 455 ABST    | 31          | 0636  | 0813D | 0643          | N13             | E80                      | .981                | 12510                     | 6.3        | 970              | 1N                   | P                  | 0643         | .90                       |                           |                                 | 72                | OK 5    |
| 457 KHAR    | 31          | 1112  | 1135D | 1116          | N04             | W30                      | .500                | 12503                     | 29.2       | 230              | 1N                   | C                  | 1116         | 2.84                      | 3.20                      |                                 |                   | 5       |
| 461 CANR    | 31          | 1509  | 1535  | 1512          | N15             | E77                      | .969                | 12510                     | 6.4        | 26               | -F                   | V                  |              | .40                       |                           |                                 |                   | 3       |
| 462 HUAN    | 31          | 1615E | 1618D |               | S11             | E45                      | .747                | 12507                     | 4.1        | 30               | -F                   | 1 P                | 1616         | .31                       | .45                       |                                 |                   | E 3     |
| 463 CANR    | 31          | 1731  | 1754  | 1735          | N05             | W17                      | .293                | 12511                     | 30.5       | 23               | -F                   | V                  |              | .30                       |                           |                                 |                   | 3       |
| 466 CRON    | 31          | 2357E | 0006  |               | N04             | W21                      | .361                | 12511                     | 30.4       | 90               | -N                   | 8 V                |              | .72                       |                           |                                 |                   | 3       |

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

AUGUST 1973

HOURLY-UT



Observatories included in total patrol:

|            |              |              |            |                |             |
|------------|--------------|--------------|------------|----------------|-------------|
| Abastumani | Carnarvon    | Herstmonceux | Kiev       | McMath-Hulbert | Palehua     |
| Arcetri    | Catania      | Huancayo     | Kodaikanal | Meudon         | Ramey       |
| Athenes    | Culgoora     | Istanboul    | Locarno    | Mitaka         | Tachkent    |
| Bucharest  | Gran Canaria | Kharkov      | Manila     | Monte Mario    | Teheran     |
|            |              | Voroshilov   | Upice      | Zürich         | Wendelstein |

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).

SOLAR RADIO EMISSION  
OUTSTANDING OCCURRENCES

AUGUST 1973

| AUG.<br>1973 | FREQUENCY STATION | TYPE | STARTING<br>TIME | TIME OF<br>MAXIMUM | DURATION | FLUX DENSITY<br>$10^{-22} \text{ Wm}^{-2} \text{ Hz}^{-1}$ |        | INT | REMARKS |
|--------------|-------------------|------|------------------|--------------------|----------|------------------------------------------------------------|--------|-----|---------|
|              |                   |      | UT               | UT                 | MINUTES  | PEAK                                                       | MEAN   |     |         |
| 1            | 3750 TYKW         | 1    | 0328             | 0328.3             | 1        | 3.0                                                        | 1.0    |     |         |
|              | 3750 TYKW         | 1    | 0641             | 0643.5             | 10       | 3.0                                                        | 1.0    |     |         |
|              | 2000 TYKW         | 45   | 0642             | 0643.7             | 6        | 2.0                                                        | 1.0    |     |         |
|              | 210 IZMI          | 6    | 1107.9           | 1108               | .2       | 24.0                                                       |        |     |         |
|              | 2800 OTTA         | 21   | 1125             | 1146.5             | 75       | 2.2                                                        | 1.1    |     |         |
|              | 3000 BERL         | 4    | 1138             | 1141.6             | 23       | 14.0                                                       | 1.5    |     |         |
|              | 1500 BERL         | 1    | 1139             | 1141.4             | 14       | 1.8                                                        |        |     |         |
|              | 8800 SGMR         | 2    | 1140.2           | 1141               | 2        | 5.3                                                        | 1.7    |     |         |
|              | 4995 SGMR         | 2    | 1140.4           | 1141               | 2.9      | 4.4                                                        | 1.5    |     |         |
|              | 3100 CRIM         | 2    | 1140             | 1142               | 4        | 9.0                                                        | 3.0    |     |         |
|              | 2800 OTTA         | 2    | 1140.7           | 1141.5             | 2        | 5.6                                                        | 2.8    |     |         |
|              | 2800 OTTA         | 2    | 1140.9           | 1141               | .6       | 6.0                                                        | 3.0    |     |         |
|              | 2700 PENN         | 45   | 1140.7           | 1141.7             | 2.1      | 26.0                                                       | 4.2    |     |         |
|              | 2695 SGMR         | 46   | 1140.5           | 1140.9             | 1.7      | 10.8                                                       | 8.2    |     |         |
|              | 2695 SGMR         | 46   |                  | 1141.5             |          | 26.0                                                       |        |     |         |
|              | 960 PENN          | 1    | 1140.7           | 1141.3             | 2.3      | 1.0                                                        | 0.4    |     |         |
|              | 606 SGMR          | 2    | 1140.7           | 1141.1             | 1.7      | 3.3                                                        | 1.1    |     |         |
|              | 536 ONDR          | 45   | 1140             | 1141               | 2        | 40.0                                                       |        |     |         |
|              | 410 SGMR          | 6    | 1140.7           | 1141.1             | 2.1      | 1.9                                                        | .6     |     |         |
|              | 260 ONDR          | 45   | 1140             | 1141.5             | 7        | 45.0                                                       |        |     |         |
|              | 245 SGMR          | 6    | 1140.7           | 1145.7             | 6.1      | 29.7                                                       | 9.9    |     |         |
|              | 2800 OTTA         | 8    | 1141.6           | 1141.6             |          | 21.6                                                       |        |     |         |
|              | 2695 CANR         | 45   | 1141             | 1142.5             | 3        | 26.0                                                       | 7.0    |     |         |
|              | 1415 SGMR         | 1    | 1141             | 1141.4             | 2.3      | .6                                                         | .2     |     |         |
|              | 808 ONDR          | 45   | 1141             | 1142.5             | 2        | 60.0                                                       |        |     |         |
|              | 18 MCMA           | 6    | 1302             | 1303               | 2        |                                                            |        | 1   |         |
|              | 283 DWIN          | 45   | 1324             | 1325               | 3        | 10.0                                                       | 3.0    |     |         |
|              | 245 SGMR          | 6    | 1326.9           | 1327.8             | 2.4      | 44.0                                                       | 29.3   |     |         |
|              | 260 ONDR          | 45   | 1327             | 1327.5             | 3        | 25.0                                                       |        |     |         |
|              | 23 POTS           | 45   | 1327.3           | 1327.6             | .7       | 7000.0                                                     | 2000.0 |     |         |
|              | 7000 SAOP         | 20   | 1341.9           |                    | 17.4     | 12.2                                                       |        |     |         |
|              | 7000 SAOP         | 1    | 1431.8           | 1436.2             | 6.4      | 10.1                                                       | 5.5    |     |         |
|              | 2800 OTTA         | 1    | 1753             | 1753.5             | 5        | .8                                                         | 0.4    |     |         |
|              | 18 BOUL           | 41   | 1906             | 1909               | 8        |                                                            |        | 1   |         |
|              | 18 MCMA           |      | 1907             | 1909               | 6        |                                                            |        | 1   |         |
|              | 245 BOUL          | 42   | 1914             | 0011               | 344      |                                                            |        | 2   |         |
| 2            | 9400 TYKW         | 20   | 0400             | 0407               | 50       | 4.0                                                        | 2.0    |     |         |
|              | 3750 TYKW         | 20   | 0400             | 0407               | 60       | 3.0                                                        | 1.0    |     |         |
|              | 1000 TYKW         | 45   | 0400             | 0405.6             | 12       | 3.0                                                        | 1.0    |     |         |
|              | 1420 CRON         | 45   | 0404             | 0407.5             | 4.5      | 4.0                                                        | 1.0    |     |         |
|              | 410 SGMR          | 6    | 1755.2           | 1756.2             | 1.5      | 3.1                                                        | 1.0    |     |         |
|              | 245 SGMR          | 6    | 1755.2           | 1755.5             | 1.6      | 8.8                                                        | 2.2    |     |         |
|              | 2800 OTTA         | 20   | 1843             | 1851               | 80       | 1.4                                                        | 0.8    |     |         |
| 3            | 3100 CRIM         | 1    | 1125             | 1127               | 5        | 3.0                                                        | 1.0    |     |         |
|              | 245 BOUL          | 42   | 2053             | 2107               | 95       |                                                            |        | 1   |         |
|              | 2695 PENT         | 1    | 2235.1           | 2235.7             | 1        | 1.2                                                        | 0.6    |     |         |
|              | 2800 OTTA         | 24   | 2236             |                    | 6        | 1.6                                                        |        |     |         |
| 4            | 18 MCMA           | 6    | 1216             | 1218               | 2        |                                                            |        | 1   |         |
|              | 245 BOUL          | 42   | 1857             | 2054               | 190      |                                                            |        | 1   |         |
| 5            | 18 MCMA           | 6    | 1556             | 1557               | 2        |                                                            |        | 1   |         |
|              | 245 BOUL          | 42   | 2104             | 2131               | 80       |                                                            |        | 1   |         |
|              | 2695 PENT         | 20   | 2332             | 2405               | 110      | 2.2                                                        | 1.6    |     |         |
|              | 1420 BOUL         | 3    | 2356             | 2358               | 5        | 4.0                                                        | 1.0    |     |         |
| 6            | 606 MANI          | 22   | 0202.8           | 0216.4             | 19.7     | 23.7                                                       | 6.4    |     |         |
|              | 1420 CRON         | 3    | 0219             | 0220               | 1.5      | 3.0                                                        | 1.0    |     |         |
|              | 100 HIRA          | 45   | 0319             | 0320               | 2.5      | 1000.0                                                     | 200.0  |     |         |
|              | 100 GORK          | 41   | 0325.8           | 0326               | 2.3      | 300.00                                                     |        |     |         |
|              | 100 GORK          |      | 0325.8           | 0327.6             |          | 300.0                                                      |        |     |         |
|              | 3750 TYKW         | 20   | 0356             | 0410               | 70       | 3.0                                                        | 1.0    |     |         |
|              | 2000 TYKW         | 20   | 0356             | 0415               | 70       | 2.0                                                        | 1.0    |     |         |
|              | 606 MANI          | 8    | 0505.4           | 0505.7             | .9       | 14.2                                                       | 4.7    |     |         |
|              | 234 POTS          | 41   | 0600.7           | 0602.7             | 1.9      | 250.0                                                      | 15.0   |     |         |
|              | 3100 CRIM         | 24   | 0622             | 0625               | 78       | 5.0                                                        | 2.0    |     |         |
|              | 4995 MANI         | 2    | 0623.9           | 0626.3             | 7.5      | 6.0                                                        | 3.0    |     |         |
|              | 2695 MANI         | 2    | 0623.9           | 0625               | 7.2      | 7.5                                                        | 3.0    |     |         |
|              | 9400 TYKW         | 20   | 0624             | 0628               | 90       | 6.0                                                        | 3.0    |     |         |
|              | 3750 TYKW         | 20   | 0624             | 0626.2             | 90       | 4.0                                                        | 2.0    |     |         |
|              | 2000 TYKW         | 20   | 0624             | 0626.2             | 90       | 3.0                                                        | 1.0    |     |         |
|              | 221 ABST          | 6    | 0730.8           | 0731               | .5       | 54.0                                                       |        |     |         |
|              | 210 IZMI          | 41   | 0730.5           | 0730.6             | 1.7      | 94.0                                                       |        |     |         |
|              | 260 ONDR          | 45   | 0731             | 0731               | 2        | 45.0                                                       |        |     |         |
|              | 3100 CRIM         | 1    | 0842             | 0846               | 7        | 4.0                                                        | 1.0    |     |         |
|              | 2800 OTTA         | 22   | 1116             | 1420               | 310      | 4.4                                                        | 2.8    |     |         |
|              | 930 BORD          | 45   | 1145             | 1145.1             | 1        | 9.0                                                        | 2.0    |     |         |
|              | 18 MCMA           | 6    | 1253             | 1254               | 2        |                                                            |        | 1   |         |
|              | 7000 SAOP         | 40   | 1311.2           |                    | 8.2      | 12.6                                                       |        |     |         |
|              | 7000 SAOP         | 20   | 1420.3           |                    | 80.5     | 13.0                                                       |        |     |         |
|              | 315 DWIN          | 43   | 1545             | 1612               | 128      | 20.0                                                       | 5.0    |     |         |
|              | 283 DWIN          | 43   | 1545             | 1554               | 128      | 15.0                                                       | 4.0    |     |         |
|              | 2800 OTTA         | 20   | 1715             | 1722               | 20       | 2.2                                                        | 1.0    |     |         |
|              | 2800 OTTA         | 23   | 1930             |                    | 380      | 3.8                                                        | 2.7    |     |         |
|              | 1415 SGMR         | 2    | 2129.4           | 2130.6             | 1.8      | 2.2                                                        | .9     |     |         |
|              | 606 SGMR          | 2    | 2129.4           | 2130.6             | 1.8      | 2.0                                                        | .8     |     |         |
|              | 245 SGMR          | 6    | 2129             | 2130.5             | 4.1      | 9.4                                                        | 3.8    |     |         |
|              | 606 SGMR          | 1    | 2300.5           | 2300.7             | .9       | 9.4                                                        | 4.0    |     |         |



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# SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

AUGUST 1973

| AUG.<br>1973 | FREQUENCY STATION | TYPE | STARTING<br>TIME | TIME OF<br>MAXIMUM | DURATION | FLUX DENSITY<br>$10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$ |       | INT | REMARKS |
|--------------|-------------------|------|------------------|--------------------|----------|-------------------------------------------------------------|-------|-----|---------|
|              |                   |      | UT               | UT                 | MINUTES  | PEAK                                                        | MEAN  |     |         |
| 7            | 410 SGMR          | 6    | 2300.5           | 2300.8             | .9       | 12.5                                                        | 5.0   |     |         |
|              | 245 SGMR          | 6    | 2300             | 2301               | 2.3      | 42.0                                                        | 16.0  |     |         |
|              | 410 SGMR          | 6    | 2306.5           | 2307.2             | .9       | 3.8                                                         | 1.3   |     |         |
|              | 245 SGMR          | 6    | 2306.4           | 2307.2             | 1.3      | 22.9                                                        | 9.6   |     |         |
|              | 606 SGMR          | 3    | 2307             | 2307.3             | .5       | 10.1                                                        | 2.4   |     |         |
|              | 2695 PENT         | 1    | 2359.5           | 2400               | 1.5      | 1.6                                                         | 0.8   |     |         |
|              | 606 MANI          | 40   | 2359             | 2359.5             | 1.7      | 15.9                                                        | 5.5   |     |         |
|              | 2695 BOUL         | 3    | 0000             | 0001               | 1.5      | 3.0                                                         | 1.0   |     |         |
|              | 208 VORO          | 43   | 0025             | 0048               | 35       | 24.0                                                        |       |     |         |
|              | 3000 BERL         | 1    | 0730             | 0730.2             | 1        | 2.4                                                         | 0.8   |     |         |
|              | 2695 CANR         | 3    | 0730             | 0731               | 1.5      | 4.0                                                         | 1.0   |     |         |
|              | 1500 BERL         | 1    | 0730             | 0730.2             | 1        | 1.9                                                         | 0.7   |     |         |
|              | 1420 CANR         | 3    | 0730             | 0731               | 1.5      | 2.0                                                         | 1.0   |     |         |
|              | 200 GORK          | 6    | 0828             | 0828.1             | .3       | 250.0                                                       | 120.0 |     |         |
|              | 2800 OTTA         | 27   | 1120             |                    | 275      | 3.1                                                         |       |     |         |
|              | 2695 SGMR         | 1    | 1309.1           | 1309.2             | 1.3      | 6.8                                                         | 2.1   |     |         |
|              | 1415 SGMR         | 8    | 1309.3           | 1309.3             | .2       | 41.8                                                        | 13.9  |     |         |
|              | 606 SGMR          | 1    | 1309.2           | 1309.4             | .4       | 5.2                                                         | 1.7   |     |         |
|              | 960 PENN          | 24   | 1733             | 2109.9             |          | 4.2                                                         |       |     |         |
|              | 2700 PENN         | 24   | 1734.8           | 2022.4             |          | 17.4                                                        |       |     |         |
|              | 2800 OTTA         | 23   | 1745             | 1840               | 70       | 2.4                                                         | 1.2   |     |         |
|              | 2800 OTTA         | 1    | 1816             | 1816.2             | .5       | .8                                                          | 0.4   |     |         |
|              | 2800 OTTA         | 1    | 1840.5           | 1840.7             | .5       | 2.4                                                         | 1.2   |     |         |
|              | 2700 PENN         | 1    | 1840.3           | 1840.6             | .5       | 2.2                                                         | 1.8   |     |         |
|              | 960 PENN          | 1    | 1840.4           | 1840.7             | .5       | 3.5                                                         | 0.6   |     |         |
|              | 315 DWIN          | 45   | 1840             | 1841               | 2        | 55.0                                                        | 4.0   |     |         |
|              | 283 DWIN          | 45   | 1840             | 1840               | 2        | 15.0                                                        | 4.0   |     |         |
|              | 1420 CANR         | 8    | 1841.5           | 1842               | 1.5      | 10.0                                                        | 3.0   |     |         |
|              | 7000 SAOP         | 2    | 1844.1           | 1845.2             | 1.8      | 47.3                                                        | 20.0  |     |         |
|              | 7000 SAOP         | 29   | 1845             |                    | 3.5      |                                                             |       |     |         |
|              | 4995 CANR         | 8    | 1844             | 1845.5             | 2        | 18.0                                                        | 6.0   |     |         |
|              | 2700 PENN         | 3    | 1844.7           | 1846.1             | 3.7      | 35.9                                                        | 11.2  |     |         |
|              | 2695 SGMR         | 4    | 1844.9           | 1846.1             | 7.7      | 26.0                                                        | 6.5   |     |         |
|              | 2695 CANR         | 8    | 1844.5           | 1846.5             | 2.5      | 28.0                                                        | 8.0   |     |         |
|              | 10700 PENN        | 3    | 1845             | 1846               | 1        | 15.0                                                        | 10.0  |     |         |
|              | 9400 HUAN         | 1    | 1845.6           | 1846.8             | 1.6      | 10.5                                                        | 4.5   |     |         |
|              | 8800 SGMR         | 46   | 1845.4           | 1845.8             | 4.3      | 17.1                                                        | 4.3   |     |         |
|              | 8800 SGMR         | 46   |                  | 1846.2             |          | 15.6                                                        |       |     |         |
|              | 4995 SGMR         | 46   | 1845.1           | 1845.3             | 5.3      | 20.1                                                        | 5.0   |     |         |
|              | 4995 SGMR         | 46   |                  | 1846.3             |          | 19.5                                                        |       |     |         |
|              | 4995 BOUL         | 8    | 1845             | 1846               | 2        | 22.0                                                        | 8.0   |     |         |
|              | 2800 OTTA         | 4    | 1845             | 1846               | 4        | 21.0                                                        | 7.0   |     |         |
|              | 2695 BOUL         | 8    | 1845             | 1846.5             | 4        | 27.0                                                        | 8.0   |     |         |
|              | 1420 BOUL         | 45   | 1845             | 1847.5             | 5.5      | 56.0                                                        | 20.0  |     |         |
|              | 1415 SGMR         | 4    | 1845.1           | 1846.3             | 7.7      | 127.6                                                       | 31.9  |     |         |
|              | 960 PENN          | 45   | 1845             | 1846.3             | 12.5     | 45.9                                                        | 2.4   |     |         |
|              | 606 SGMR          | 3    | 1845.6           | 1846.2             | 5.4      | 100.3                                                       | 25.1  |     |         |
|              | 410 SGMR          | 6    | 1845.5           | 1845.7             | 5.5      | 30.2                                                        | 7.6   |     |         |
|              | 315 DWIN          | 45   | 1845             |                    | 2        | 70.0D                                                       |       |     |         |
|              | 283 DWIN          | 45   | 1845             |                    | 2        | 70.0D                                                       |       |     |         |
|              | 245 SGMR          | 6    | 1845.6           | 1846               | 6.9      | 54.0                                                        | 13.5  |     |         |
|              | 1420 CANR         | 4    | 1847.5           | 1850               | 3.5      | 88.0                                                        | 30.0  |     |         |
|              | 2800 OTTA         | 20   | 1857             | 1925               | 165      | 3.8                                                         | 1.9   |     |         |
|              | 245 BOUL          | 42   | 2025             | 2030               | 182      |                                                             |       | 1   |         |
| 8            | 100 GORK          | 44   | 0309             |                    | 66       |                                                             | 15.0  |     |         |
|              | 100 GORK          | 6    | 0441             | 0441.2             | .8       | 50.0                                                        |       |     |         |
|              | 8800 ATHN         | 45   | 0616.4           | 0616.8             | 1.4      | 41.0                                                        | 10.3  |     |         |
|              | 536 ONDR          | 5    | 0634.5           | 0634.5             | 1        | 70.0                                                        |       |     |         |
|              | 260 ONDR          | 45   | 0720             | 0720.5             | 10       | 70.0                                                        |       |     |         |
|              | 1500 BERL         | 1    | 1001.7           | 1002.1             | 1        | 3.2                                                         | 0.9   |     |         |
|              | 3000 BERL         | 1    | 1002             | 1002.2             | 1        | 3.2                                                         | 1.2   |     |         |
|              | 2695 CANR         | 3    | 1002             | 1002.5             | 1        | 3.0                                                         | 1.0   |     |         |
|              | 1420 CANR         | 8    | 1002             | 1002.5             | 1        | 4.0                                                         | 1.0   |     |         |
|              | 100 GORK          | 6    | 1059.4           | 1059.6             | .3       | 30.0                                                        | 10.0  |     |         |
|              | 245 SGMR          | 6    | 1250.4           | 1255.1             | 6.7      | 17.9                                                        | 7.2   |     |         |
|              | 2695 SGMR         | 1    | 1254.3           | 1254.6             | 1.4      | 3.2                                                         | 1.3   |     |         |
|              | 1415 SGMR         | 1    | 1254.5           | 1254.6             | .9       | 7.0                                                         | 2.8   |     |         |
|              | 18 MCMA           | 6    | 1254             | 1255               | 2        |                                                             |       | 1   |         |
|              | 2800 OTTA         | 45   | 1704.9           | 1705               | 1        | 1.4                                                         | 0.7   |     |         |
|              | 2800 OTTA         | 45   | 1707             | 1707.5             | 2        | 1.8                                                         | 0.9   |     |         |
|              | 2800 OTTA         | 31   | 1709.5           | 1713               | 10       | .8                                                          | -0.4  |     |         |
|              | 2800 OTTA         | 2    | 1912.5           | 1913               | 1        | 7.2                                                         | 2.4   |     |         |
|              | 2700 PENN         | 3    | 1912.5           | 1913.2             | 1.9      | 10.7                                                        | 1.8   |     |         |
|              | 2695 SGMR         | 2    | 1912.8           | 1913               | .8       | 8.6                                                         | 2.1   |     |         |
|              | 2695 BOUL         | 8    | 1912.5           | 1913.5             | 1        | 10.0                                                        | 3.0   |     |         |
|              | 1420 BOUL         | 8    | 1912.5           | 1913.5             | 1.5      | 48.0                                                        | 17.0  |     |         |
|              | 1415 SGMR         | 4    | 1912.6           | 1913.1             | .9       | 64.8                                                        | 13.4  |     |         |
|              | 960 PENN          | 45   | 1912.5           | 1913.2             | 2.4      | 16.0                                                        | 0.5   |     |         |
|              | 606 SGMR          | 4    | 1913             | 1913.1             | .6       | 27.2                                                        | 6.8   |     |         |
|              | 2695 PENT         | 27   | 2230             |                    | 145      | 1.6                                                         |       |     |         |
| 9            | 100 HIRA          | 45   | 0222.5           | 0222.8             | 1        | 140.0                                                       | 30.0  |     |         |
|              | 100 GORK          | 6    | 0356.8           | 0357               | .6       | 70.0                                                        | 20.0  |     |         |
|              | 100 GORK          | 6    | 0412.8           | 0413.1U            | .9       | 100.0D                                                      |       |     |         |
|              | 315 DWIN          | 43   | 0545             | 0553               | 75       | 35.0                                                        | 3.0   |     |         |
|              | 283 DWIN          | 43   | 0545             | 0616               | 75       | 30.0                                                        | 3.0   |     |         |
|              | 410 SGMR          | 44   | 0948 E           | 1118.7             | 169.2D   | 7.8                                                         |       |     |         |
|              | 245 SGMR          | 44   | 0948 E           | 1932               | 378 D    | 38.8                                                        |       |     |         |

SOLAR RADIO EMISSION  
OUTSTANDING OCCURRENCES

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| AUG.<br>1973 | FREQUENCY STATION | TYPE | STARTING<br>TIME | TIME OF<br>MAXIMUM | DURATION | FLUX DENSITY<br>$10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$ |      | INT | REMARKS |
|--------------|-------------------|------|------------------|--------------------|----------|-------------------------------------------------------------|------|-----|---------|
|              |                   |      | UT               | UT                 | MINUTES  | PEAK                                                        | MEAN |     |         |
| 9            | 260 ONDR          | 44   | 0950             | 1108               | 340      | 45.0                                                        |      |     |         |
|              | 315 DWIN          | 43   | 0955             | 1243               | 310      | 70.0D                                                       | 5.0  |     |         |
|              | 283 DWIN          | 43   | 1025             |                    | 335      |                                                             | 5.0  |     |         |
|              | 204 KIEV          | 44   | 1310             |                    | 160      | 12.0                                                        | 5.0  |     |         |
|              | 3100 CRIM         | 1    | 1055             | 1100               | 5        | 3.0                                                         | 1.0  |     |         |
|              | 1500 BERL         | 22   | 1055.5           | 1059.3             | 5.2      | 1.7                                                         | 0.6  |     |         |
|              | 100 GORK          | 6    | 1056.6           | 1056.8U            | .5       | 100.0D                                                      |      |     |         |
|              | 3000 BERL         | 22   | 1057.5           | 1059.5             | 4.5      | 2.6                                                         | 0.8  |     |         |
|              | 9500 BERL         | 20   | 1058.2           | 1059.5             | 1.6      | 4.0                                                         | 2.0  |     |         |
|              | 2695 CANR         | 3    | 1059             | 1100               | 1.5      | 3.0                                                         | 1.0  |     |         |
|              | 1420 CANR         | 3    | 1059             | 1059.5             | 1        | 2.0                                                         | 1.0  |     |         |
|              | 3000 BERL         | 46   | 1137.5           | 1141.6             | 5        | 11.0                                                        | 2.4  |     |         |
|              | 3000 BERL         | 46   | 1149.5           | 1151               | 9        | 6.2                                                         | 1.5  |     |         |
|              | 10700 PENN        | 3    | 1150             | 1152               | 10       | 15.0                                                        | 4.0  |     |         |
|              | 9500 BERL         | 22   | 1150             | 1152               | 8.5      | 12.0                                                        | 4.0  |     |         |
|              | 8800 ATHN         | 3    | 1150.2           | 1152.2             | 7.4      | 14.4                                                        | 5.4  |     |         |
|              | 8800 SGMR         | 22   | 1150.3           | 1152.3             | 11.8     | 12.9                                                        | 3.2  |     |         |
|              | 4995 ATHN         | 1    | 1150.7           | 1151.8             | 6.3      | 3.9                                                         | 1.3  |     |         |
|              | 4995 SGMR         | 2    | 1150.2           | 1153.2             | 9.4      | 7.5                                                         | 1.9  |     |         |
|              | 4995 CANR         | 45   | 1150             | 1153.5             | 5.5      | 9.0                                                         | 3.0  |     |         |
|              | 3100 CRIM         | 2    | 1150             | 1152               | 9        | 6.0                                                         | 2.0  |     |         |
|              | 2800 OTTA         | 46   | 1150             | 1151.1             | 7        | 6.0                                                         | 3.0  |     |         |
|              | 2700 PENN         | 3    | 1150.9           | 1151.4             | 6.4      | 15.6                                                        | 7.3  |     |         |
|              | 2695 ATHN         | 1    | 1150.6           | 1151.3             | 7        | 3.5                                                         | 1.2  |     |         |
|              | 2695 SGMR         | 2    | 1150.8           | 1151.1             | 7.6      | 6.8                                                         | 1.7  |     |         |
|              | 1500 BERL         | 46   | 1150             | 1151               | 9        | 50.0                                                        | 3.8  |     |         |
|              | 1415 ATHN         | 4    | 1150.8           | 1151               | 6.3      | 48.6                                                        | 5.8  |     |         |
|              | 1415 SGMR         | 40   | 1150.9           | 1151               | 6.2      | 51.7                                                        | 17.2 |     |         |
|              | 960 PENN          | 45   | 1150.9           | 1153.6             | 4.6      | 14.0                                                        | 1.3  |     |         |
|              | 930 BORD          | 40   | 1150             | 1153.5             | 5        | 47.0                                                        | 2.0  |     |         |
|              | 606 SGMR          | 40   | 1150.6           | 1153.6             | 5.2      | 3.8                                                         | 1.2  |     |         |
|              | 2695 CANR         | 45   | 1151.5           | 1152.5             | 7        | 7.0                                                         | 2.0  |     |         |
|              | 1420 CANR         | 45   | 1151             | 1151.5             | 7        | 49.0                                                        | 9.0  |     |         |
|              | 808 ONDR          | 45   | 1152.5           | 1152.5             | 4        | 60.0                                                        |      |     |         |
|              | 7000 SAOP         | 22   | 1153.8           |                    | 34.8     | 37.2                                                        |      |     |         |
|              | 18 MCMA           | 6    | 1318             | 1320               | 2        |                                                             |      |     |         |
|              | 8800 ATHN         | 3    | 1413.7           | 1416               | 5.3      | 23.4                                                        | 7.2  | 1   |         |
|              | 4995 ATHN         | 1    | 1413.6           | 1415.6             | 5.6      | 9.0                                                         | 3.2  |     |         |
|              | 3000 BERL         | 22   | 1413.5           | 1415.8             | 7        | 5.0                                                         | 1.2  |     |         |
|              | 2800 OTTA         | 21   | 1413.5           | 1416.8             | 10       | 2.0                                                         | 1.0  |     |         |
|              | 2700 PENN         | 1    | 1413.9           | 1415.7             | 7.4      | 8.2                                                         | 2.7  |     |         |
|              | 2695 ATHN         | 1    | 1413.3           | 1415.6             | 5.4      | 3.5                                                         | 1.2  |     |         |
|              | 2695 CANR         | 45   | 1413.5           | 1415.5             | 6.5      | 7.0                                                         | 2.0  |     |         |
|              | 1500 BERL         | 46   | 1413.5           | 1415.5             | 9        | 25.0                                                        | 1.8  |     |         |
|              | 1420 BOUL         | 45   | 1413.5           | 1416               | 8        | 24.0                                                        | 6.0  |     |         |
|              | 1420 CANR         | 45   | 1413.5           | 1415.5             | 3        | 26.0                                                        | 6.0  |     |         |
|              | 1415 ATHN         | 4    | 1413.8           | 1415.5             | 5.8      | 26.2                                                        | 3.8  |     |         |
|              | 15400 SGMR        | 4    | 1414.8           | 1415.7             | 7.9      | 19.8                                                        | 5.0  |     |         |
|              | 10700 PENN        | 3    | 1414.7           | 1416.1             | 9.5      | 22.5                                                        | 5.2  |     |         |
|              | 10500 BERN        | 3    | 1414.5           | 1415.6             | 3        |                                                             | 20.0 |     |         |
|              | 9500 BERL         | 3    | 1414.5           | 1416               | 5.5      | 25.0                                                        | 6.0  |     |         |
|              | 9400 HUAN         | 2    | 1414.7           | 1415.8             | 2.9      | 12.0                                                        | 6.6  |     |         |
|              | 8800 SGMR         | 4    | 1414.7           | 1416               | 4.4      | 20.2                                                        | 5.1  |     |         |
|              | 7000 SAOP         | 4    | 1414.3           | 1415.5             | 1.8      | 44.7                                                        | 29.7 |     |         |
|              | 7000 SAOP         | 29   | 1416.1           |                    | 2.9      |                                                             |      |     |         |
|              | 4995 SGMR         | 2    | 1414.6           | 1416               | 4.4      | 7.5                                                         | 1.9  |     |         |
|              | 4995 BOUL         | 3    | 1414             | 1415.5             | 4.5      | 11.0                                                        | 4.0  |     |         |
|              | 4995 CANR         | 3    | 1414.5           | 1415.5             | 4.5      | 11.0                                                        | 4.0  |     |         |
|              | 2800 OTTA         | 2    | 1414.5           | 1415.6             | 2        | 4.8                                                         | 2.4  |     |         |
|              | 2695 SGMR         | 2    | 1414             | 1415               | 5.8      | 6.0                                                         | 1.5  |     |         |
|              | 2695 ROUL         | 45   | 1414.5           | 1416               | 5        | 8.0                                                         | 2.0  |     |         |
|              | 1415 SGMR         | 4    | 1414.1           | 1415.7             | 6.4      | 28.5                                                        | 7.1  |     |         |
|              | 960 PENN          | 45   | 1414.1           | 1415.4             | 2.4      | 18.8                                                        | 1.1  |     |         |
|              | 606 SGMR          | 2    | 1414.7           | 1415.8             | 1.5      | 1.9                                                         | .7   |     |         |
|              | 410 SGMR          | 6    | 1415             | 1415.7             | 1.5      | 6.1                                                         | 2.3  |     |         |
|              | 2800 OTTA         | 1    | 1418             | 1418.3             | 1        | 1.0                                                         | 0.5  |     |         |
|              | 1420 CANR         | 3    | 1544.5           | 1545.5             | 1.5      | 5.0                                                         | 2.0  |     |         |
|              | 1415 ATHN         | 1    | 1544.4           | 1545.6             | 2.9      | 5.8                                                         | 1.9  |     |         |
|              | 1415 SGMR         | 1    | 1544.4           | 1544.7             | 3.1      | 5.7                                                         | 1.4  |     |         |
|              | 4995 ATHN         | 1    | 1545             | 1546               | 2.8      | 2.6                                                         | .6   |     |         |
|              | 4995 SGMR         | 1    | 1545.5           | 1546               | 2.5      | 2.7                                                         | .7   |     |         |
|              | 2800 OTTA         | 1    | 1545             | 1546               | 3        | 3.8                                                         | 1.6  |     |         |
|              | 2700 PENN         | 1    | 1545.2           | 1545.6             | 3.9      | 6.5                                                         | 0.9  |     |         |
|              | 2695 ATHN         | 1    | 1545.3           | 1545.8             | 2.3      | 2.4                                                         | .6   |     |         |
|              | 2695 SGMR         | 1    | 1545.3           | 1545.8             | 3.8      | 4.6                                                         | 1.2  |     |         |
|              | 2695 BOUL         | 3    | 1545.5           | 1546.5             | 3        | 5.0                                                         | 2.0  |     |         |
|              | 1420 BOUL         | 8    | 1545             | 1546               | 1.5      | 5.0                                                         | 2.0  |     |         |
|              | 960 PENN          | 1    | 1545             | 1545.6             | 1.4      | 5.3                                                         | 1.5  |     |         |
|              | 315 DWIN          | 45   | 1545             | 1546               | 2        | 50.0                                                        | 10.0 |     |         |
|              | 283 DWIN          | 45   | 1545             | 1545               | 2        | 15.0                                                        | 5.0  |     |         |
|              | 2695 CANR         | 3    | 1546             | 1546.5             | 3.5      | 6.0                                                         | 2.0  |     |         |
|              | 2700 PENN         | 45   | 1549.8           | 1550.6             | 7.8      | 41.4                                                        | 7.2  |     |         |
|              | 2695 SGMR         | 46   | 1549.9           | 1550.7             | 10.2     | 26.0                                                        | 6.5  |     |         |
|              | 2695 SGMR         | 46   |                  | 1552.4             |          | 11.4                                                        |      |     |         |
|              | 1420 BOUL         | 45   | 1549             | 1550.5             | 9        | 46.0                                                        | 9.0  |     |         |
|              | 15400 SGMR        | 4    | 1550.4           | 1552.3             | 5.4      | 31.6                                                        | 7.9  |     |         |
|              | 10700 PENN        | 3    | 1550.2           | 1552.3             | 9.6      | 33.5                                                        | 7.4  |     |         |
|              | 10500 BERN        | 3    | 1550.4           | 1552.4             | 4        |                                                             | 31.0 |     |         |
|              | 9400 HUAN         | 3    | 1550.4           | 1552.4             | 5.7      | 29.2                                                        | 8.9  |     |         |
|              | 8800 ATHN         | 4    | 1550.2           | 1552.1             | 7.3      | 30.6                                                        | 7.2  |     |         |

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# SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

AUGUST 1973

| AUG.<br>1973 | FREQUENCY STATION | TYPE | STARTING<br>TIME | TIME OF<br>MAXIMUM | DURATION | FLUX DENSITY<br>$10^{-22} \text{ Wm}^{-2} \text{ Hz}^{-1}$ |       | INT | REMARKS |
|--------------|-------------------|------|------------------|--------------------|----------|------------------------------------------------------------|-------|-----|---------|
|              |                   |      | UT               | UT                 | MINUTES  | PEAK                                                       | MEAN  |     |         |
| 9            | 8800 SGMR         | 4    | 1550.4           | 1552.4             | 7.1      | 30.8                                                       | 7.7   | 1   |         |
|              | 4995 ATHN         | 4    | 1550.2           | 1550.7             | 7.3      | 16.8                                                       | 5.2   |     |         |
|              | 4995 SGMR         | 46   | 1550.1           | 1550.6             | 7.3      | 20.4                                                       | 5.1   |     |         |
|              | 4995 SGMR         | 46   |                  | 1552.4             |          | 13.9                                                       |       |     |         |
|              | 4995 BOUL         | 45   | 1550             | 1550               | 6.5      | 25.0                                                       | 7.0   |     |         |
|              | 4995 CANR         | 45   | 1550             | 1551               | 6.5      | 23.0                                                       | 6.0   |     |         |
|              | 2800 OTTA         | 46   | 1550             | 1550.7             | 3.5      | 25.6                                                       | 8.1   |     |         |
|              | 2800 OTTA         | 29   | 1553.5           |                    | 4        | 3.0                                                        | 1.5   |     |         |
|              | 2695 ATHN         | 4    | 1550.1           | 1550.6             | 7.4      | 22.4                                                       | 5.9   |     |         |
|              | 2695 BOUL         | 45   | 1550             | 1551               | 7        | 27.0                                                       | 4.0   |     |         |
|              | 1420 CANR         | 45   | 1550             | 1551               | 6.5      | 44.0                                                       | 10.0  |     |         |
|              | 1415 ATHN         | 45   | 1550.1           | 1550.5             | 6        | 49.9                                                       | 11.5  |     |         |
|              | 1415 SGMR         | 46   | 1550.2           | 1550.6             | 8.3      | 54.9                                                       | 13.7  |     |         |
|              | 1415 SGMR         | 46   |                  | 1552.5             |          | 27.4                                                       |       |     |         |
|              | 960 PENN          | 45   | 1550.2           | 1550.7             | 2.8      | 29.1                                                       | 5.3   |     |         |
|              | 960 PENN          | 29   | 1553             | 1553               | 4.2      | 2.6                                                        | 0.5   |     |         |
|              | 606 SGMR          | 46   | 1550.5           | 1550.6             | 4.5      | 16.6                                                       | 16.2  |     |         |
|              | 606 SGMR          | 46   |                  | 1552.5             |          | 64.9                                                       |       |     |         |
|              | 410 SGMR          | 6    | 1550.4           | 1550.6             | 3.1      | 77.3                                                       | 19.3  |     |         |
|              | 315 DWIN          | 45   | 1550             | 1551               | 3        | 70.00                                                      |       |     |         |
|              | 283 DWIN          | 45   | 1550             |                    | 3        | 70.00                                                      | 5.0   |     |         |
|              | 245 SGMR          | 48   | 1550.4           | 1550.6             | 4.8      | 550.0                                                      | 137.5 |     |         |
|              | 2695 CANR         | 45   | 1551             | 1551.5             | 5.5      | 26.0                                                       | 5.0   |     |         |
|              | 283 DWIN          | 43   | 1740             | 1816               | 55       | 40.0                                                       | 5.0   |     |         |
|              | 315 DWIN          | 43   | 1758             | 1816               | 22       | 40.0                                                       | 5.0   |     |         |
|              | 18 MCMA           | 6    | 2039             | 2041               | 2        |                                                            |       |     |         |
|              | 2800 OTTA         | 2    | 2121             | 2123.2             | 5        | 1.8                                                        | 0.8   |     |         |
|              | 1415 SGMR         | 1    | 2121.8           | 2122.5             | 2.4      | 3.9                                                        | 1.3   |     |         |
|              | 1420 BOUL         | 3    | 2122             | 2123               | 2.5      | 2.0                                                        | 1.0   |     |         |
|              | 2800 OTTA         | 2    | 2141.9           | 2142               | 3        | 2.0                                                        | 0.9   |     |         |
|              | 2695 BOUL         | 3    | 2142             | 2142.5             | 2.5      | 3.0                                                        | 1.0   |     |         |
|              | 1420 BOUL         | 45   | 2142             | 2146.5             | 9        | 1.0                                                        |       |     |         |
|              | 2695 PENT         | 23   | 2205             | 2345               | 140      | 2.6                                                        | 1.2   |     |         |
|              | 3750 TYKW         | 20   | 2330             | 2340               | 50       | 2.0                                                        | 1.0   |     |         |
| 10           | 9400 TYKW         | 1    | 0013.5           | 0014.2             | 1.5      | 3.0                                                        | 1.0   | 1   |         |
|              | 4995 MANI         | 1    | 0013.7           | 0014.4             | 1.5      | 4.0                                                        | 1.3   |     |         |
|              | 4995 BOUL         | 3    | 0013.5           | 0014               | 1        | 8.0                                                        | 3.0   |     |         |
|              | 3750 TYKW         | 1    | 0013.5           | 0014.2             | 1.5      | 7.0                                                        | 3.0   |     |         |
|              | 2695 PENT         | 1    | 0013.7           | 0014.3             | 1.5      | 7.2                                                        | 3.6   |     |         |
|              | 2695 MANI         | 1    | 0013.7           | 0014.4             | 1.4      | 6.0                                                        | 2.4   |     |         |
|              | 1420 CRON         | 8    | 0013.5           | 0014.5             | 2        | 16.0                                                       | 6.0   |     |         |
|              | 1415 MANI         | 3    | 0013.7           | 0014.4             | 1.5      | 10.2                                                       | 3.4   |     |         |
|              | 1000 TYKW         | 1    | 0013.3           | 0014.3             | 1.5      | 15.0                                                       | 3.0   |     |         |
|              | 2695 CRON         | 3    | 0014             | 0015               | 2.5      | 7.0                                                        | 3.0   |     |         |
|              | 2695 BOUL         | 8    | 0014             | 0015               | 1.5      | 10.0                                                       | 3.0   |     |         |
|              | 1420 BOUL         | 8    | 0014             | 0014.5             | 2        | 13.0                                                       | 5.0   |     |         |
|              | 606 MANI          | 46   | 0014             | 0014.2             | 2.3      | 26.2                                                       | 3.1   |     |         |
|              | 2695 PENT         | 20   | 0033             | 0050               | 27       | 1.2                                                        | 0.6   |     |         |
|              | 315 DWIN          | 43   | 0423             |                    | 2        | 70.00                                                      |       |     |         |
|              | 260 ONDR          | 41   | 0610             | 0651.5             | 170      | 25.0                                                       |       |     |         |
|              | 221 ABST          | 6    | 0732.5           | 0732.8             | .5       | 30.0                                                       |       |     |         |
|              | 245 SGMR          | 44   | 0949 E           | 1303.6             | 403 D    | 20.0                                                       |       |     |         |
|              | 260 ONDR          | 41   | 1020             | 1120.5             | 280      | 25.0                                                       |       |     |         |
|              | 204 KIEV          | 44   | 1035             | 1035               | 300 D    | 10.0                                                       | 5.0   |     |         |
|              | 18 MCMA           | 6    | 1227             | 1229               | 3        |                                                            |       |     |         |
|              | 18 MCMA           | 6    | 1507             | 1508               | 2        |                                                            |       |     |         |
|              | 8800 SGMR         | 45   | 1846.5           | 1847.3             | 2.7      | 25.2                                                       | 14.6  |     |         |
|              | 8800 SGMR         | 45   |                  | 1848.4             |          | 44.1                                                       |       |     |         |
|              | 18 MCMA           | 4    | 2044             | 2056               | 12       |                                                            |       |     |         |
|              | 18 MCMA           | 42   | 2136             | 2142               | 8        |                                                            |       |     |         |
|              | 245 BOUL          | 42   | 2316             | 0005               | 88       |                                                            |       |     |         |
| 11           | 100 GORK          | 6    | 0459.3           | 0459.4             | .3       | 25.0                                                       | 10.0  | 1   |         |
|              | 100 GORK          | 6    | 0829.2           | 0829.5             | .5       | 15.0                                                       | 5.0   |     |         |
|              | 100 GORK          | 6    | 0840             | 0840.1             | .2       | 20.0                                                       | 10.0  |     |         |
|              | 260 ONDR          | 45   | 0950             | 0950.5             | 1.5      | 20.0                                                       |       |     |         |
|              | 100 GORK          | 6    | 0955.9           | 0956               | .6       | 65.0                                                       |       |     |         |
|              | 260 ONDR          | 45   | 0957.5           | 0957.5             | 2.5      | 85.0                                                       |       |     |         |
|              | 18 MCMA           | 6    | 1432             | 1433               | 2        |                                                            |       |     |         |
|              | 245 BOUL          | 42   | 1851             | 1949               | 131      |                                                            |       |     |         |
|              | 245 BOUL          | 41   | 2238             | 2240               | 3        |                                                            |       |     |         |
|              | 245 BOUL          | 42   | 2306             | 2334               | 59       |                                                            |       |     |         |
| 12           | 260 ONDR          | 45   | 0642.5           | 0643               | 1.5      | 15.0                                                       |       | 1   |         |
|              |                   |      |                  |                    |          |                                                            |       |     |         |
| 13           | 536 ONDR          | 45   | 0612             | 0612               | 4        | 40.0                                                       |       | 1   |         |
|              | 808 ONDR          | 45   | 0614             | 0615               | 2        | 60.0                                                       |       |     |         |
|              | 260 ONDR          | 45   | 0614             | 0621               | 9        | 80.0                                                       |       |     |         |
|              | 200 GORK          | 41   | 0614.5           | 0615.7             | 6.9      | 40.0                                                       |       |     |         |
|              | 200 GORK          |      | 0614.5           | 0620.9             |          | 45.00                                                      |       |     |         |
|              | 100 GORK          | 49   | 0615.3           | 0615.7             | 26.2     | 70.0                                                       |       |     |         |
|              | 100 GORK          |      | 0615.3           | 0617.9             |          | 80.00                                                      |       |     |         |
|              | 100 GORK          | 6    | 0913.8           | 0915               | .7       | 20.0                                                       |       |     |         |
|              | 100 GORK          | 6    | 1239             | 1239.4             | .8       | 45.0                                                       | 20.0  |     |         |
|              | 100 GORK          | 6    | 1259.8           | 1259.8             | .6       | 75.00                                                      |       |     |         |
|              | 100 GORK          | 6    | 1301.1           | 1301.3             | .3       | 75.00                                                      |       |     |         |
|              | 2800 OTTA         | 24   | 2000             |                    | 85       | 1.4                                                        |       |     |         |
| 14           | 100 GORK          | 6    | 1103.6           | 1103.70            | .7       | 100.00                                                     |       |     |         |

SOLAR RADIO EMISSION  
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| AUG.<br>1973 | FREQUENCY STATION | TYPE | STARTING<br>TIME | TIME OF<br>MAXIMUM | DURATION<br>MINUTES | FLUX DENSITY<br>$10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$ |      | INT | REMARKS |
|--------------|-------------------|------|------------------|--------------------|---------------------|-------------------------------------------------------------|------|-----|---------|
|              |                   |      | UT               | UT                 |                     | PEAK                                                        | MEAN |     |         |
|              | 18 MCMA           | 41   | 1402             | 1404               | 2                   |                                                             |      | 1   |         |
| 15           | 100 GORK          | 6    | 0925.3           | 0925.4             | .4                  | 100.0                                                       | 20.0 |     |         |
|              | 100 GORK          | 6    | 1212.3           | 1212.8U            | .6                  | 100.00                                                      |      |     |         |
| 16           | 10700 PENN        | 3    | 1126             | 1128.7             |                     | 15.7                                                        |      |     |         |
|              | 2700 PENN         | 1    | 1126             | 1128.6             |                     | 7.7                                                         |      |     |         |
|              | 960 PENN          | 1    | 1126             | 1128.1             |                     | 1.4                                                         |      |     |         |
|              | 18 MCMA           | 6    | 1258             | 1300               | 2                   |                                                             |      | 1   |         |
|              | 2695 BOUL         | 3    | 1316             | 1318.5             | 5                   | 7.0                                                         | 3.0  |     |         |
| 17           | 18 MCMA           | 6    | 1655             | 1656               | 2                   |                                                             |      | 1   |         |
|              | 245 BOUL          | 42   | 1851             | 2350               | 326                 |                                                             |      | 2   |         |
| 18           | 7000 SAOP         | 22   | 1248.2           |                    | 41.8                | 8.2                                                         |      |     |         |
|              | 7000 SAOP         | 20   | 1440.8           | 1446.6             | 11.2                | 19.4                                                        |      |     |         |
|              | 7000 SAOP         | 22   | 1502.9           |                    | 17.8                | 15.4                                                        |      |     |         |
|              | 18 MCMA           | 6    | 1542             | 1543               | 2                   |                                                             |      | 1   |         |
|              | 7000 SAOP         | 2    | 1553.6           | 1555.5             | 3.2                 | 11.4                                                        | 6.2  |     |         |
| 20           | 7000 SAOP         | 41   | 1446.8           |                    | 36.4                | 17.1                                                        |      |     |         |
|              | 7000 SAOP         | 32   | 1446.8           |                    | 18.8                | 171.0                                                       |      |     |         |
|              | 7000 SAOP         | 32   | 1506.3           |                    | 5.9                 | 14.0                                                        |      |     |         |
|              | 7000 SAOP         | 32   | 1512.4           |                    | 11.3                | 10.5                                                        |      |     |         |
| 21           | 2800 OTTA         | 25   | 1325             |                    | 245                 | 1.5                                                         |      |     |         |
|              | 2800 OTTA         | 20   | 1325             | 1600               | 245                 | 2.2                                                         | 1.4  |     |         |
|              | 245 SGMR          | 6    | 1409.9           | 1428.5             | 25.1                | 79.3                                                        | 19.8 |     |         |
|              | 410 SGMR          | 6    | 1423.5           | 1428.5             | 9.9                 | 30.6                                                        | 7.6  |     |         |
|              | 606 SGMR          | 1    | 1428.4           | 1428.5             | .3                  | 6.9                                                         | 3.4  |     |         |
|              | 1415 SGMR         | 2    | 1648.9           | 1649.3             | 1.2                 | 9.7                                                         | 3.2  |     |         |
|              | 606 SGMR          | 1    | 1649.4           | 1649.5             | .6                  | 6.1                                                         | 2.0  |     |         |
|              | 2800 OTTA         | 25   | 1730             |                    | 500                 | 1.5                                                         |      |     |         |
|              | 245 BOUL          | 42   | 1953             | 2045               | 224                 |                                                             |      | 1   |         |
| 27           | 260 ONDR          | 45   | 0850             | 0856               | 10                  | 15.0                                                        |      |     |         |
|              | 100 GORK          | 6    | 0914             | 0914.5U            | 2                   | 55.00                                                       |      |     |         |
|              | 260 ONDR          | 45   | 0922.5           | 0922.5             | 7.5                 | 15.0                                                        |      |     |         |
|              | 18 MCMA           | 6    | 1215             | 1216               | 2                   |                                                             |      | 1   |         |
|              | 18 MCMA           | 6    | 1709             | 1710               | 2                   |                                                             |      | 1   |         |
| 23           | 260 ONDR          | 45   | 0834.5           | 0834.5             | 1                   | 15.0                                                        |      |     |         |
|              | 408 TRST          | 45   | 1001.8           | 1001.9             | .6                  | 22.0                                                        | 7.0  |     |         |
|              | 18 MCMA           | 6    | 1142             | 1143               | 2                   |                                                             |      | 1   |         |
|              | 18 MCMA           | 6    | 1214             | 1215               | 1                   |                                                             |      | 1   |         |
| 24           | 18 MCMA           | 42   | 1720             | 1722               | 2                   |                                                             |      | 1   |         |
| 25           | 2800 OTTA         | 20   | 1305             | 1350               | 155                 | 2.0                                                         | 1.0  |     |         |
|              | 18 MCMA           | 42   | 1449             | 1450               | 5                   |                                                             |      | 1   |         |
|              | 18 MCMA           | 41   | 1516             | 1520               | 5                   |                                                             |      | 1   |         |
|              | 18 MCMA           | 42   | 1544             | 1550               | 6                   |                                                             |      | 1   |         |
|              | 18 MCMA           | 6    | 1635             | 1636               | 1                   |                                                             |      | 1   |         |
|              | 2800 OTTA         | 27   | 1735             |                    | 140                 | 1.8                                                         |      |     |         |
|              | 245 BOUL          | 42   | 2250             | 2423               | 133                 |                                                             |      | 2   |         |
| 26           | 2695 CANR         | 8    | 0710             | 0712               | 2.5                 | 4.0                                                         | 1.0  |     |         |
|              | 1420 CANR         | 8    | 0710             | 0711.5             | 2                   | 7.0                                                         | 2.0  |     |         |
|              | 2800 OTTA         | 27   | 1445             |                    | 135                 | .8                                                          |      |     |         |
|              | 245 BOUL          | 42   | 2324             | 0030               | 66                  |                                                             |      | 1   |         |
| 27           | 221 ABST          | 6    | 0955             | 0955.2             | .5                  | 25.0                                                        |      |     |         |
|              | 260 ONDR          | 5    | 1016.5           | 1016.5             | 1                   | 20.0                                                        |      |     |         |
|              | 260 ONDR          | 41   | 1250             | 1335               | 56                  | 30.0                                                        |      |     |         |
|              | 260 ONDR          | 45   | 1419             | 1420               | 5                   | 25.0                                                        |      |     |         |
|              | 2800 OTTA         | 24   | 1700             |                    | 12                  | 2.0                                                         |      |     |         |
|              | 2800 OTTA         | 27   | 1750             |                    | 155                 | 1.4                                                         |      |     |         |
| 28           | 100 GORK          | 44   | 0436             |                    | 17.4                |                                                             | 5.0  |     |         |
|              | 260 ONDR          | 41   | 0950             | 0954.5             | 310                 | 25.0                                                        |      |     |         |
|              | 18 MCMA           | 6    | 1300             | 1302               | 2                   |                                                             |      | 1   |         |
|              | 18 MCMA           | 42   | 1325             | 1327               | 6                   |                                                             |      | 1   |         |
| 29           | 100 GORK          | 6    | 0317.6           | 0317.7U            | .8                  | 40.00                                                       |      |     |         |
|              | 9750 IRKU         | 1    | 0525             | 0528.7             | 6                   | 3.6                                                         | 8.6  |     |         |
|              | 260 ONDR          | 41   | 0848.5           | 0907.5             | 53.5                | 30.0                                                        |      |     |         |
|              | 260 ONDR          | 45   | 1123.5           | 1139               | 18                  | 30.0                                                        |      |     |         |
|              | 18 MCMA           | 6    | 1249             | 1251               | 2                   |                                                             |      | 1   |         |
|              | 18 MCMA           | 41   | 1359             | 1413               | 18                  |                                                             |      | 1   |         |
|              | 18 MCMA           | 6    | 1447             | 1448               | 2                   |                                                             |      | 1   |         |
|              | 606 SGMR          | 3    | 1539.5           | 1540               | 1                   | 12.8                                                        | 4.2  |     |         |
|              | 18 MCMA           | 6    | 1540             | 1541               | 2                   |                                                             |      | 1   |         |
|              | 1415 SGMR         | 41   | 1542.3           | 1542.4             | 3.1                 | 7.1                                                         | 2.3  |     |         |
|              | 225 HARS          | 5    | 1628.5           | 1629               | 1.5                 | 40.0                                                        | 15.0 |     |         |
|              | 245 SGMR          | 6    | 1630.2           | 1630.5             | .9                  | 65.3                                                        | 21.8 |     |         |
|              | 18 MCMA           | 6    | 1630             | 1631               | 1                   |                                                             |      | 1   |         |
|              | 18 MCMA           | 41   | 1657             | 1658               | 4                   |                                                             |      | 1   |         |
|              | 9400 HUAN         | 1    | 1659.3           | 1659.8             | 1.5                 | 10.0                                                        | 4.7  |     |         |
|              | 18 MCMA           | 6    | 1832             | 1833               | 2                   |                                                             |      | 1   |         |
|              | 9400 HUAN         | 1    | 1833.9           | 1835.3             | 3.2                 | 16.6                                                        | 4.7  |     |         |

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# SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

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| AUG.<br>1973 | FREQUENCY STATION | TYPE | STARTING<br>TIME | TIME OF<br>MAXIMUM | DURATION | FLUX DENSITY<br>$10^{-22} \text{ Wm}^{-2} \text{ Hz}^{-1}$ |      | INT | REMARKS |
|--------------|-------------------|------|------------------|--------------------|----------|------------------------------------------------------------|------|-----|---------|
|              |                   |      | UT               | UT                 | MINUTES  | PEAK                                                       | MEAN |     |         |
| 30           | 8800 SGMR         | 4    | 1834.4           | 1835.2             | 4.1      | 24.6                                                       | 8.2  | 1   |         |
|              | 7000 SAOP         | 3    | 1834.1           | 1834.9             | 2.1      | 23.5                                                       | 12.5 |     |         |
|              | 4995 SGMR         | 2    | 1834.3           | 1835.2             | 2.1      | 7.9                                                        | 2.1  |     |         |
|              | 18 MCMA           | 42   | 1841             | 1845               | 5        |                                                            |      |     |         |
|              | 410 SGMR          | 6    | 1843.8           | 1844.1             | .4       | 5.3                                                        | 1.9  |     |         |
|              | 245 SGMR          | 6    | 1843.8           | 1843.8             | .5       | 124.0                                                      | 15.0 |     |         |
|              | 18 MCMA           | 6    | 1845             | 1846               | 2        |                                                            |      | 1   |         |
|              | 7000 SAOP         | 2    | 1851.5           | 1854.4             | 3.3      | 8.0                                                        | 4.0  |     |         |
|              | 2800 OTTA         | 1    | 1852             | 1855               | 6        | 2.0                                                        | 1.0  |     |         |
|              | 18 MCMA           | 6    | 2029             | 2029               | 1        |                                                            |      | 1   |         |
|              | 2800 OTTA         | 20   | 2050             | 2110               | 110      | 2.6                                                        | 1.4  |     |         |
|              | 9750 IRKU         | 1    | 0106.5           | 0107.2             | 3        | 3.6                                                        | 9.6  |     |         |
|              | 260 ONDR          | 44   | 0630             | 0912.5             | 280      | 50.0                                                       |      | 1   |         |
|              | 221 ABST          | 6    | 0703.8           | 0704.2             | 1.2      | 12.0                                                       |      |     |         |
|              | 221 ABST          | 6    | 0725             | 0725.5             | 1        | 8.0                                                        |      |     |         |
|              | 221 ABST          | 6    | 0741.8           | 0742               | .5       | 14.0                                                       |      |     |         |
|              | 221 ABST          | 6    | 0857.2           | 0857.5             | .8       | 12.0                                                       | 3.0  |     |         |
|              | 221 ABST          | 6    | 0956             | 0956.2             | .5       | 17.0                                                       |      |     |         |
|              | 18 MCMA           | 6    | 1244             | 1246               | 3        |                                                            |      |     |         |
|              | 2800 OTTA         | 21   | 1925             | 1950               | 65       | 1.4                                                        | 0.7  |     |         |
|              | 2800 OTTA         | 1    | 1933             | 1936               | 3        | 1.4                                                        | 0.7  |     |         |
|              | 2695 BOUL         | 3    | 2350.5           | 2351               | 1.5      | 4.0                                                        | 1.0  |     |         |
|              | 1420 ROUL         | 3    | 2350.5           | 2351               | 1.5      | 2.0                                                        | 1.0  |     |         |
| 31           | 1415 MANI         | 2    | 0613.2           | 0613.4             | 1        | 2.4                                                        | .5   | 2   |         |
|              | 606 MANI          | 2    | 0613.2           | 0613.4             | 1        | 8.6                                                        | 2.6  |     |         |
|              | 260 ONDR          | 44   | 0640             | 0938               | 270      | 65.0                                                       |      |     |         |
|              | 221 ABST          | 44   | 0700             | 0711               | 240      | 10.0                                                       |      |     |         |
|              | 221 ABST          | 6    | 0710             | 0711               | 1.8      | 44.0                                                       | 6.0  |     |         |
|              | 200 GORK          | 44   | 0805             |                    | 130      |                                                            | 5.0  |     |         |
|              | 245 SGMR          | 44   | 1011 E           | 1335.9             | 784 D    | 79.0                                                       |      |     |         |
|              | 245 BOUL          | 42   | 1247 E           |                    | 734 D    |                                                            |      |     |         |
|              | 208 VORO          | 44   | 2100             | 2350               | 240      | 12.0                                                       |      |     |         |
|              | 221 ABST          | 6    | 0811.2           | 0812.5             | 1.5      | 28.0                                                       | 4.0  |     |         |
|              | 221 ABST          | 6    | 0845.5           | 0846               | .8       | 28.0                                                       | 4.0  |     |         |
|              | 221 ABST          | 6    | 0910             | 0910.2             | .8       | 25.0                                                       |      |     |         |
|              | 221 ABST          | 6    | 0916.8           | 0918               | 1.8      | 25.0                                                       |      | 1   |         |
|              | 200 GORK          | 6    | 0917.6           | 0918.4             | 1.5      | 80.0                                                       |      |     |         |
|              | 100 GORK          | 6    | 0918             | 0918               | 1.6      | 35.00                                                      |      |     |         |
|              | 200 GORK          | 41   | 0926.4           | 0926.5             | 3.2      | 60.0                                                       |      |     |         |
|              | 200 GORK          |      | 0926.4           | 0927.4             |          | 50.0                                                       |      |     |         |
|              | 200 GORK          |      | 0926.4           | 0928.4             |          | 140.0                                                      |      |     |         |
|              | 210 IZMI          | 41   | 0946             | 0947               | 2        | 1000.0                                                     |      |     |         |
|              | 100 GORK          | 41   | 0946.9           | 0947               | 1.9      | 20.0                                                       |      |     |         |
|              | 100 GORK          |      | 0946.9           | 0948               |          | 15.0                                                       |      |     |         |
|              | 18 MCMA           | 6    | 1225             | 1226               | 2        |                                                            |      |     |         |
|              | 2800 OTTA         | 24   | 1235             |                    | 75       | 3.6                                                        |      | 1   |         |
|              | 225 HARS          | 45   | 1318             | 1318.5             | 1        | 80.0                                                       | 25.0 |     |         |
|              | 2800 OTTA         | 20   | 1410 E           | 1418               | 25 D     | 2.6                                                        |      |     |         |
|              | 2800 OTTA         | 20   | 1700             | 1745               | 90       | .9                                                         | 0.5  |     |         |
|              | 2700 PENN         | 3    | 1929.7           | 1930.8             | 2.5      | 16.7                                                       | 4.0  |     |         |
|              | 8800 SGMR         | 2    | 1930.3           | 1930.7             | 3        | 5.9                                                        | 1.5  |     |         |
|              | 4995 SGMR         | 4    | 1930.2           | 1930.8             | 2.9      | 10.5                                                       | 2.7  |     |         |
|              | 4995 BOUL         | 3    | 1930             | 1931               | 2.5      | 13.0                                                       | 4.0  |     |         |
|              | 2800 OTTA         | 3    | 1930             | 1930.7             | 3.5      | 17.0                                                       | 4.2  |     |         |
|              | 2695 SGMR         | 4    | 1930.2           | 1930.7             | 5.7      | 19.4                                                       | 4.9  |     |         |
|              | 2695 BOUL         | 8    | 1930             | 1931               | 4        | 18.0                                                       | 7.0  |     |         |
|              | 1420 ROUL         | 8    | 1930             | 1931               | 3.5      | 10.0                                                       | 3.0  |     |         |
|              | 1415 SGMR         | 2    | 1930.3           | 1931.1             | 4.8      | 9.7                                                        | 2.4  | 1   |         |
|              | 960 PENN          | 1    | 1930.1           | 1931.2             | 2.8      | 5.8                                                        | 1.6  |     |         |
|              | 606 SGMR          | 2    | 1930.3           | 1930.7             | 2.3      | 6.6                                                        | 1.6  |     |         |
|              | 410 SGMR          | 6    | 1930.2           | 1930.3             | 2        | 47.2                                                       | 5.9  |     |         |
|              | 100 HIRA          | 45   | 2222             | 2222.4             | 1        | 95.0                                                       | 20.0 |     |         |

Observatories:

ABST = Abastumani

BERL = Berlin-Adlershof

BERN = Berne

BORD = Bordeaux

BOUL = Boulder

CANR = Canary Islands

CRIM = Simferopol

CRON = Carnarvon

GORK = Gorky

HARS = Harestua

HIRA = Hiraiso

DWIN = Dwingeloo

HUAN = Huancayo

IRKU = Irkutsk

IZMI = Moscow IZMIRAN

KIEV = Kiev

MANI = Manila

MCMA = McMath-Hulbert

ONDR = Ondrejov

OTTA = Ottawa ARO

PENN = Penn. State Univ.

PENT = Penticton

POTS = Potsdam

SAOP = Sao Paulo

SGMR = Sagamore Hill

TRST = Trieste

TYKW = Toyokawa

UPIC = Upice

VORO = Voroshilov

Explanation of Type Code:

1 Simple 1

2 Simple 1F

3 Simple 2

4 Simple 2F

5 Simple

6 Minor

7 Minor +

8 Spike

20 Simple 3

21 Simple 3A

22 Simple 3F

23 Simple 3AF

24 Rise

25 Rise A

26 Fall

27 Rise and Fall

28 Precursor

29 Post Burst Increase

30 Post Burst Increase A

31 Post Burst Decrease

32 Absorption

40 Fluctuation

41 Group of Bursts

42 Series of Bursts

43 Onset of Noise Storm

44 Noise Storm in Progress

45 Complex

46 Complex F

47 Great Burst

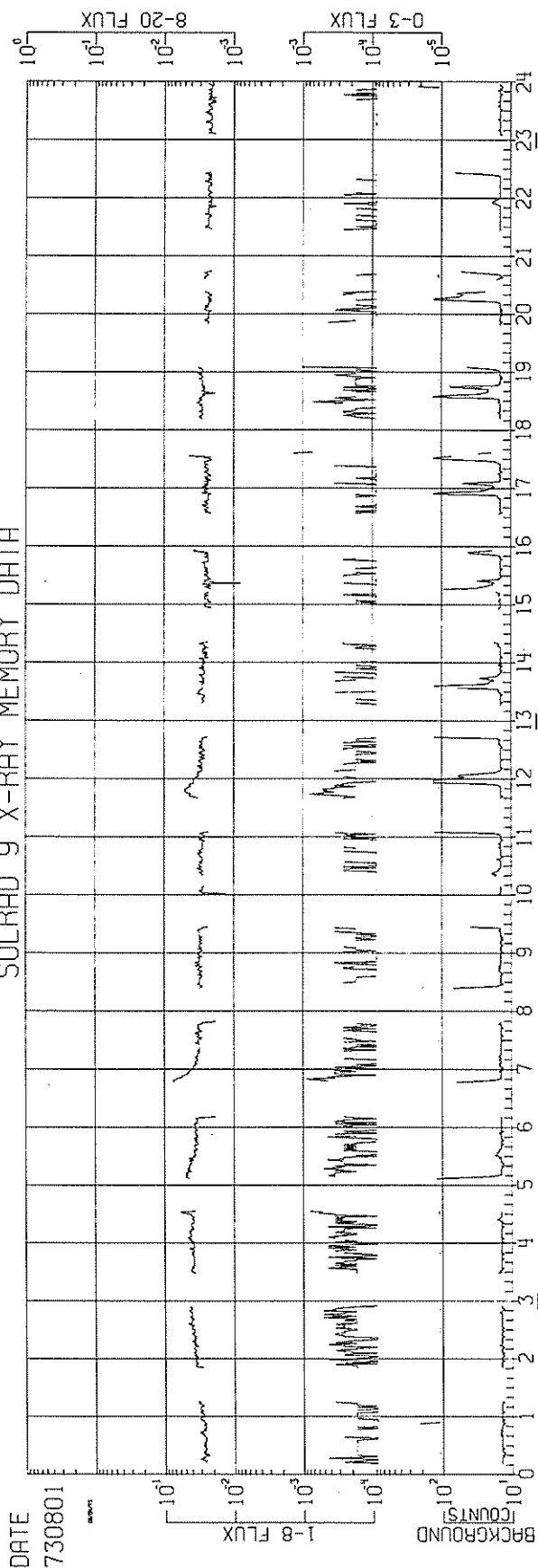
48 Major

49 Major +

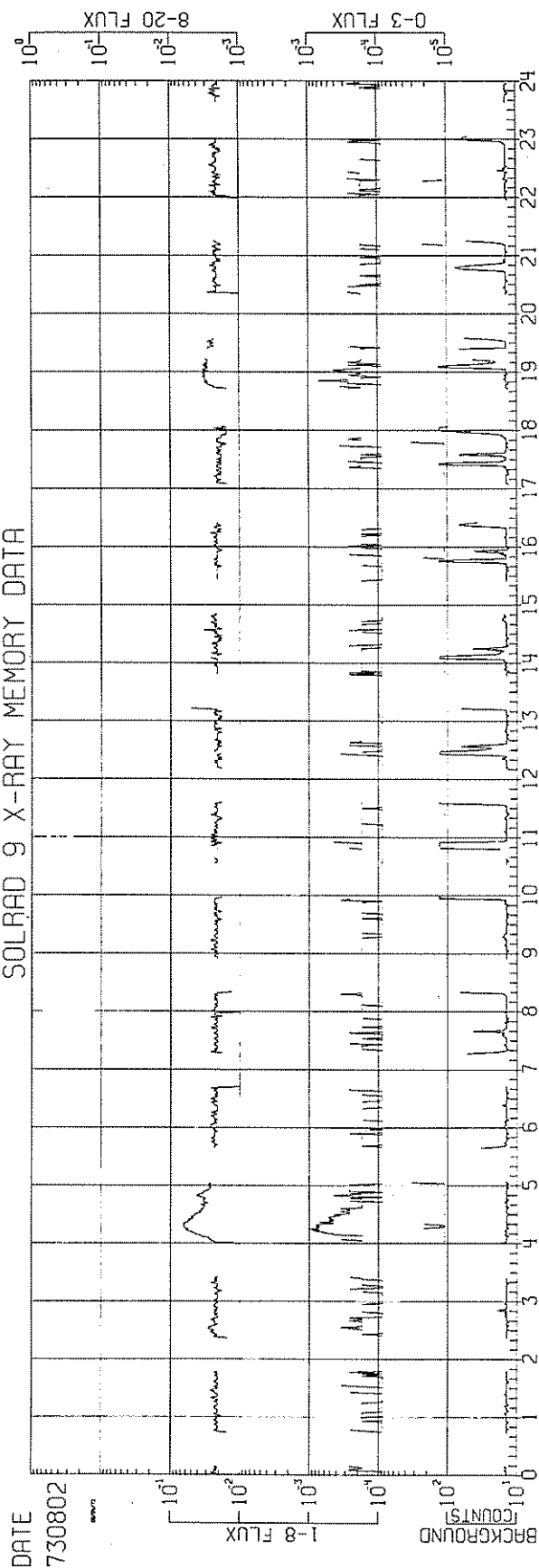
# SOLAR X-RAYS MEASURED BY SATELLITE SOLRAD 9 - EXPLORER 37

AUGUST 1973

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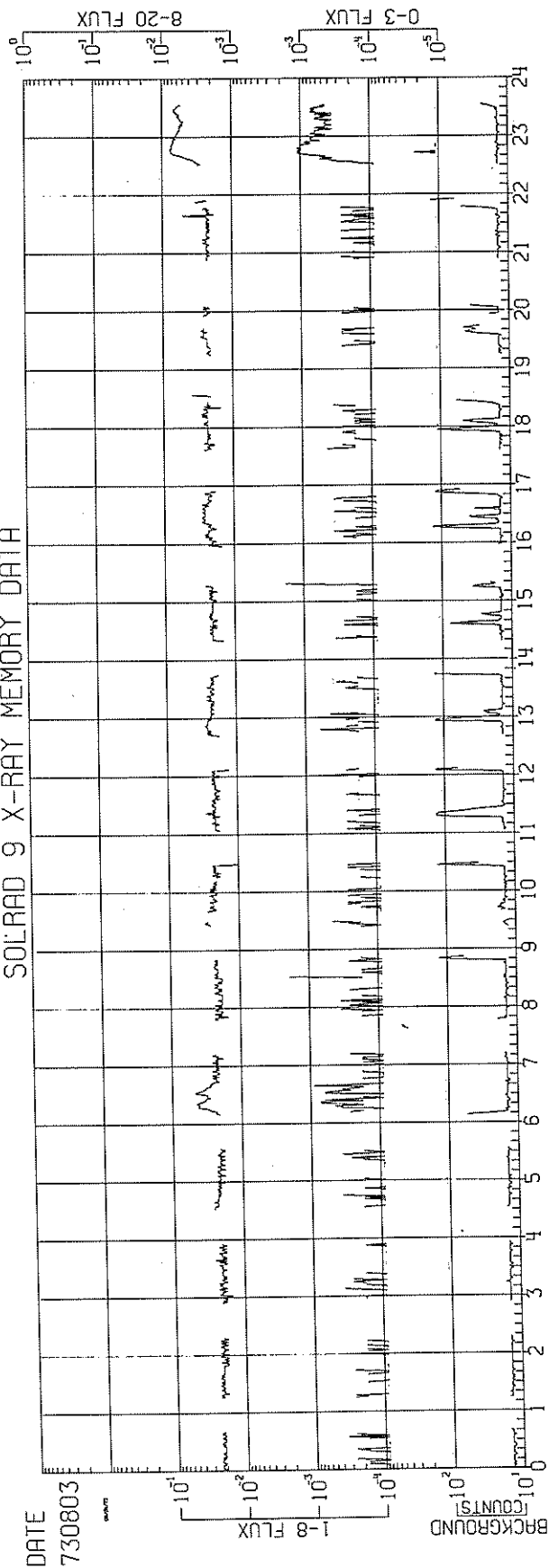


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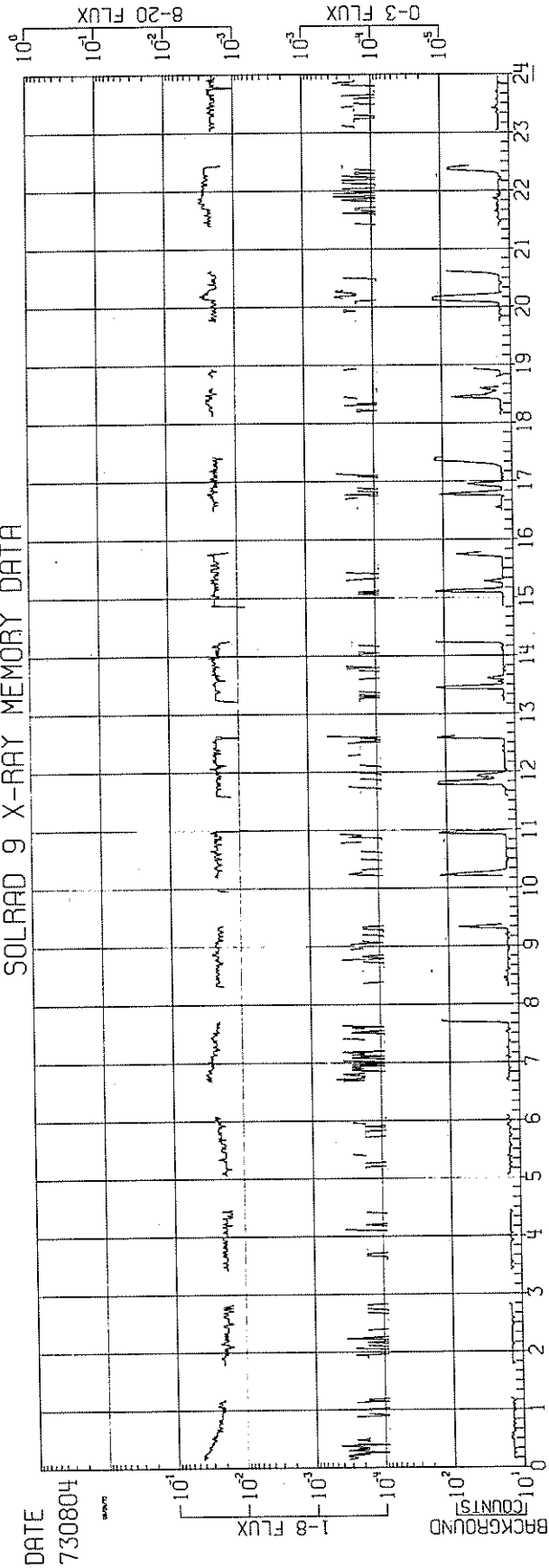


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Aug 73

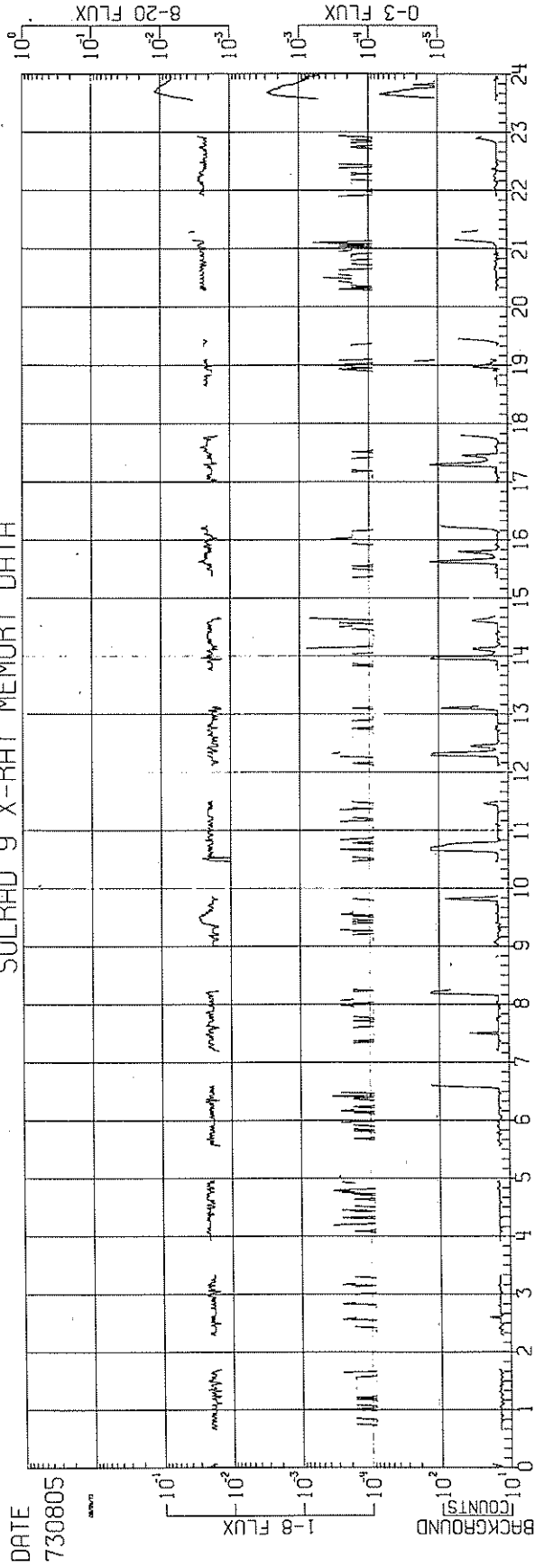
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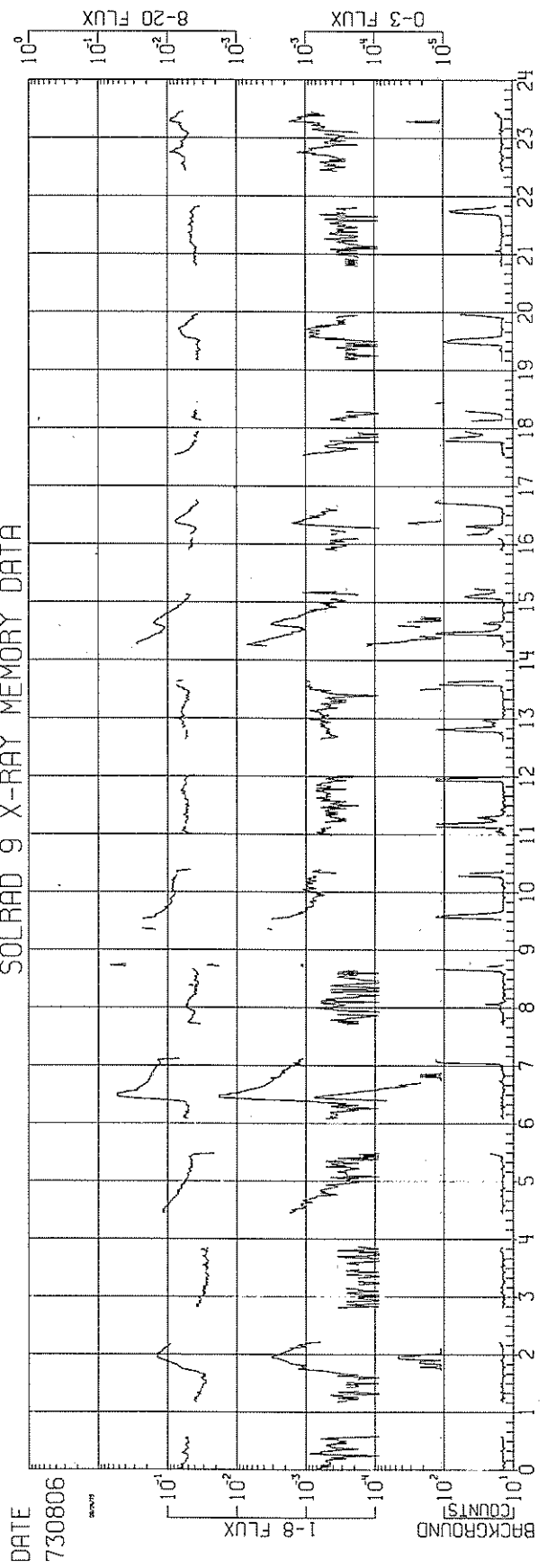
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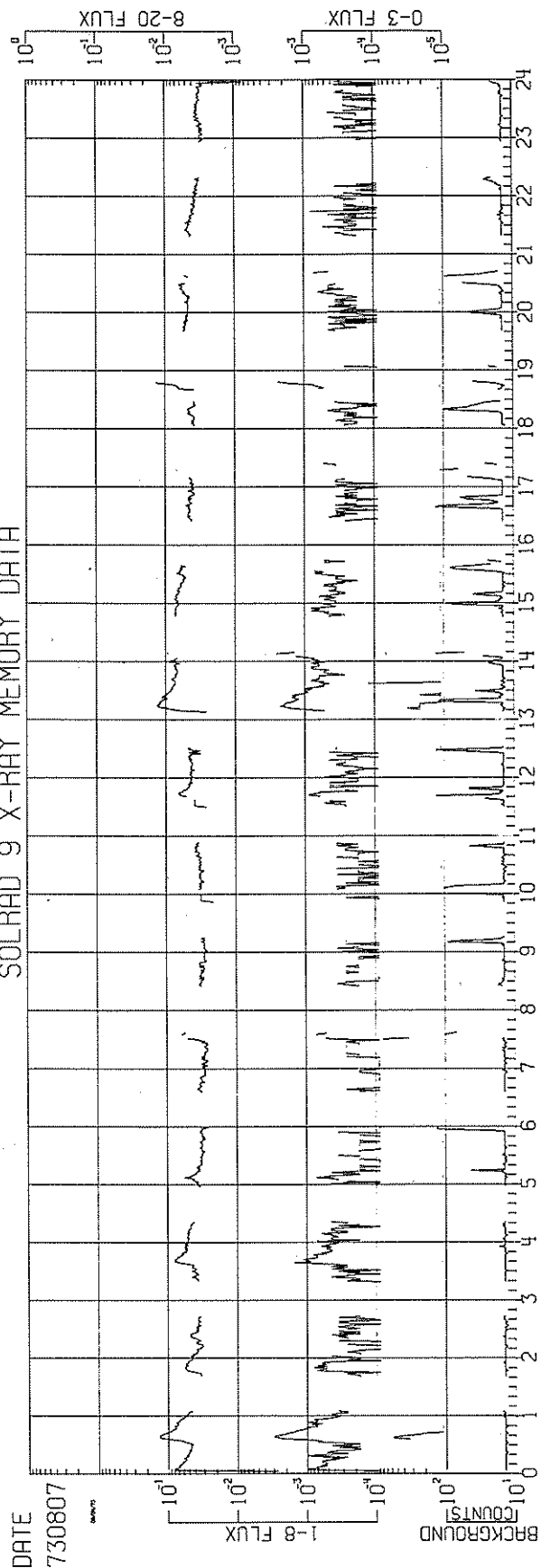
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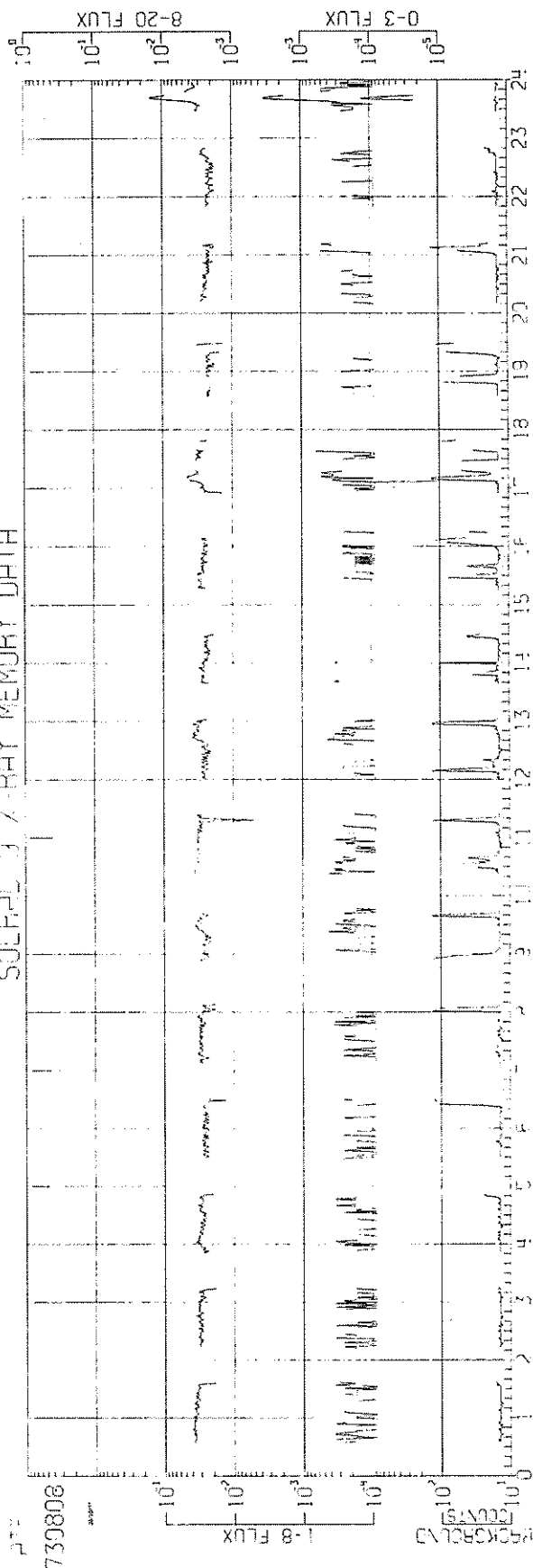


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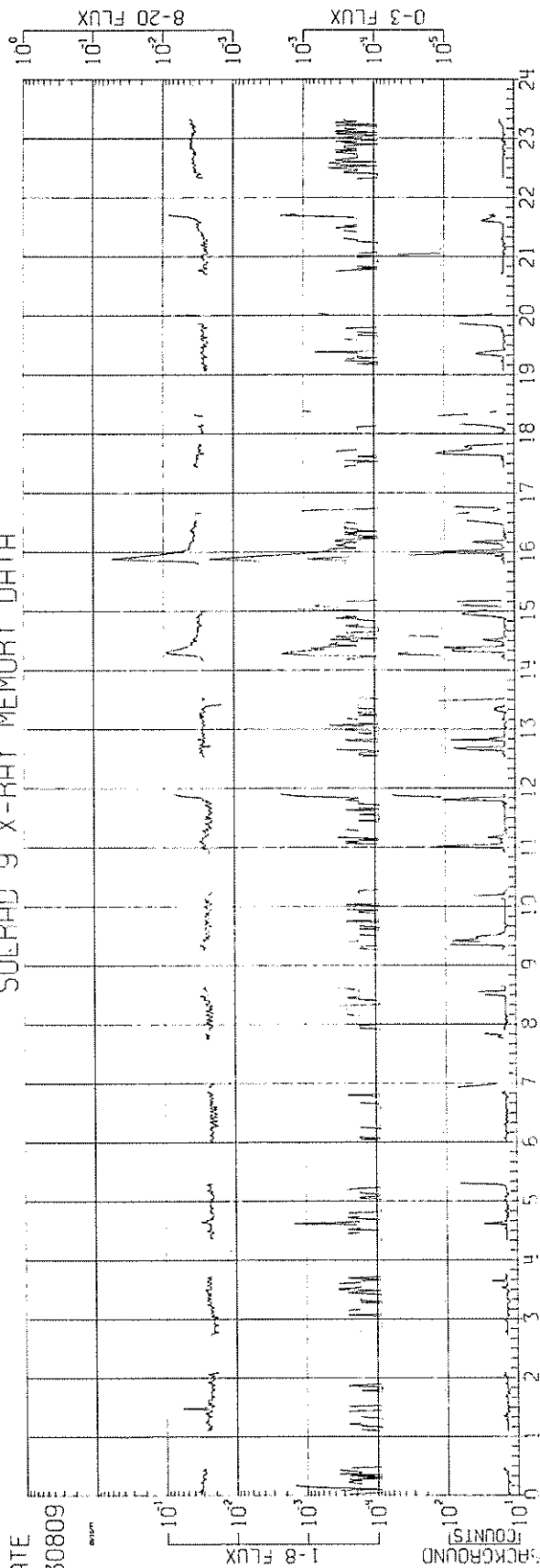


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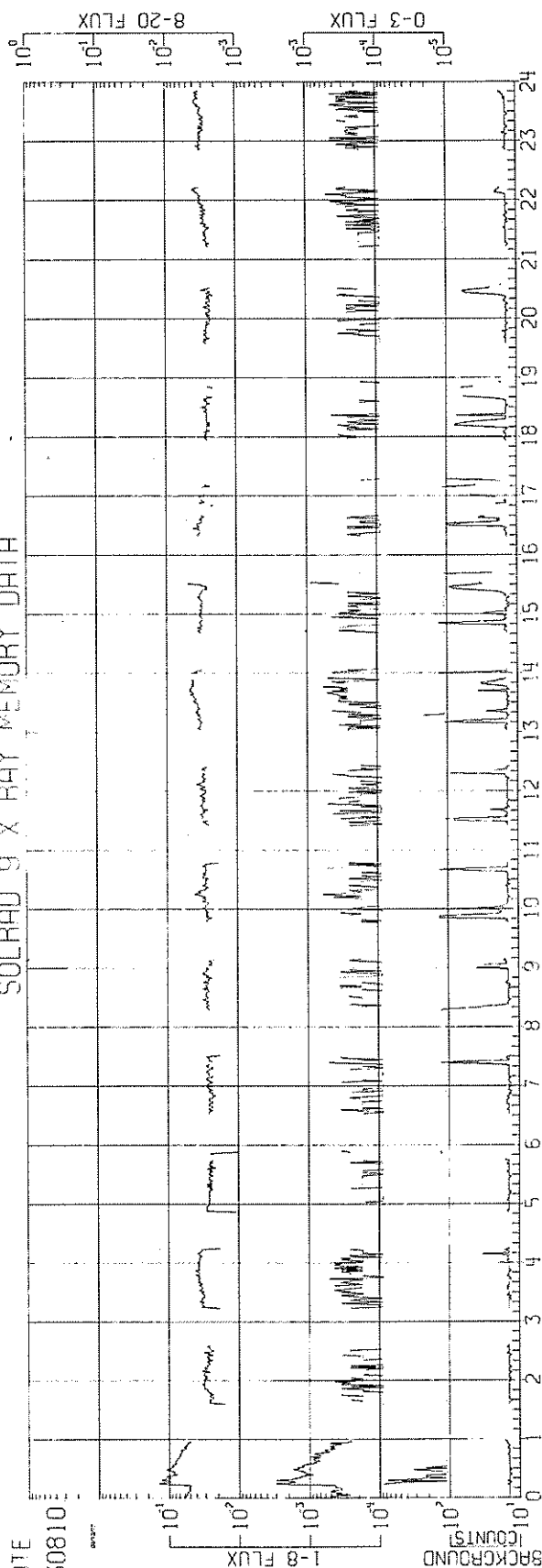
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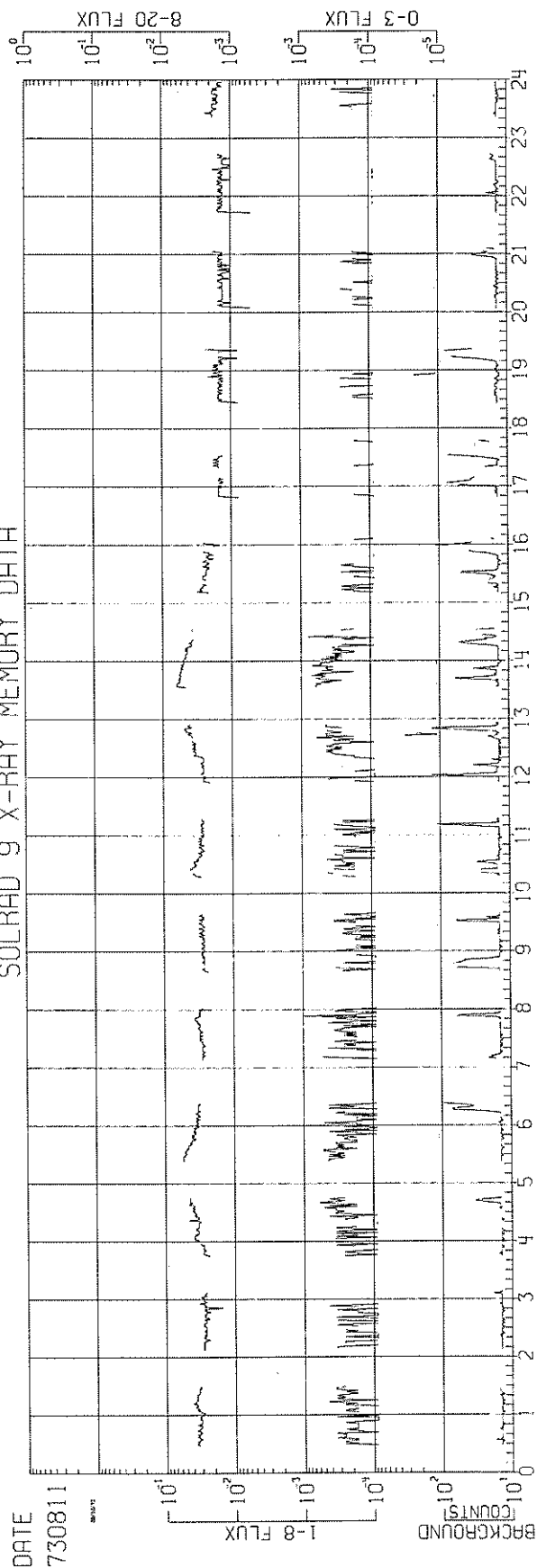
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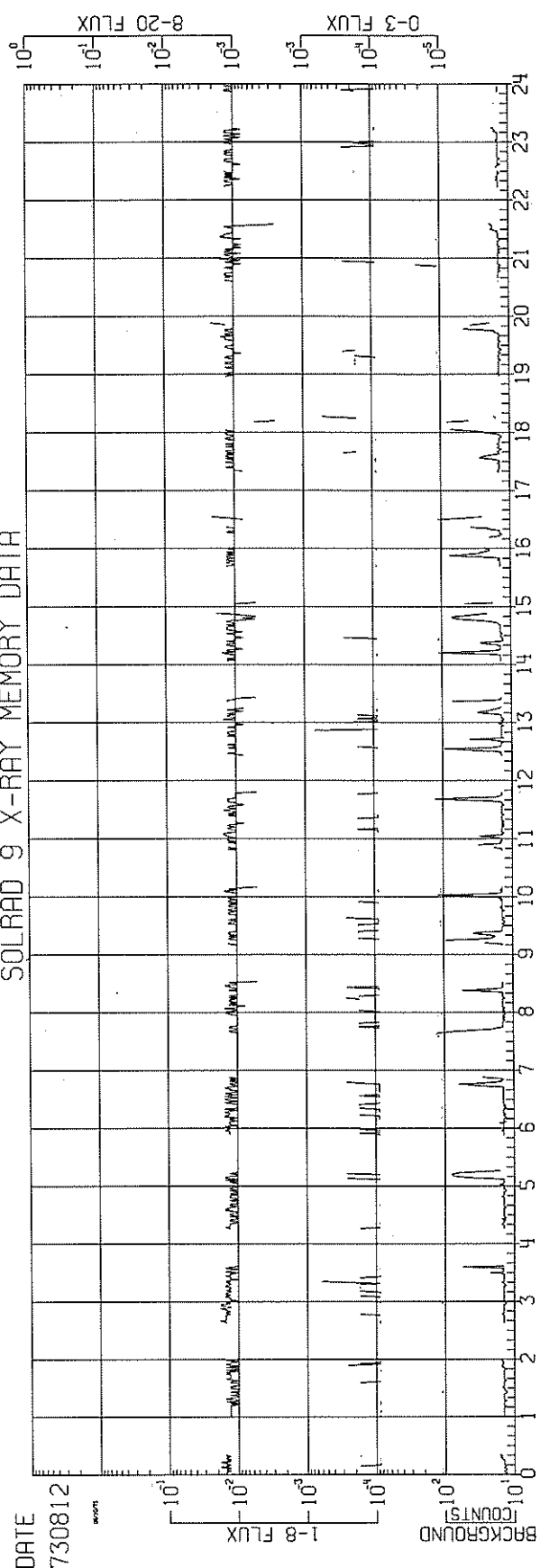


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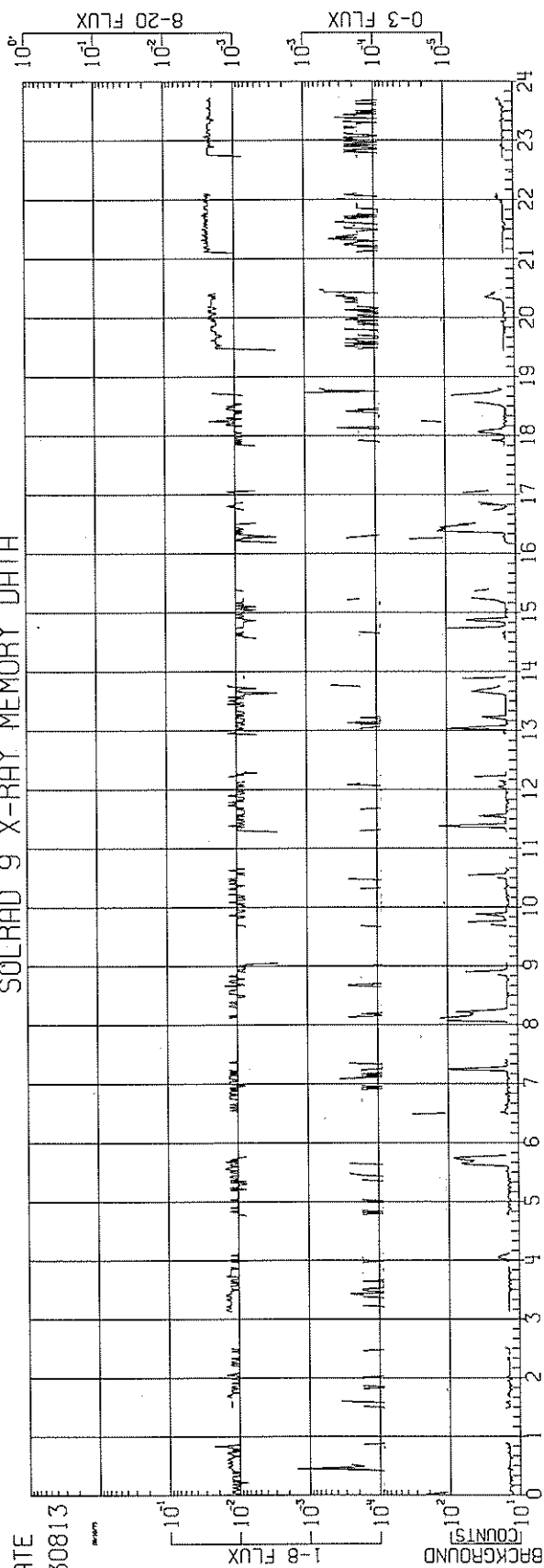


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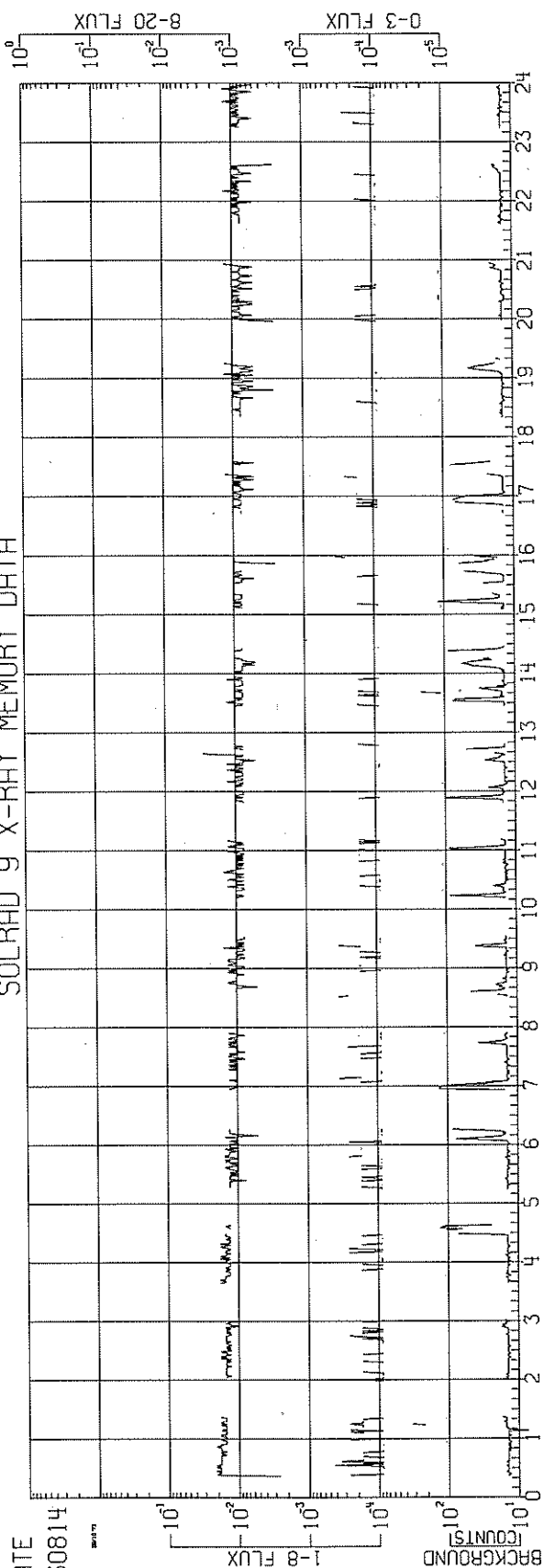
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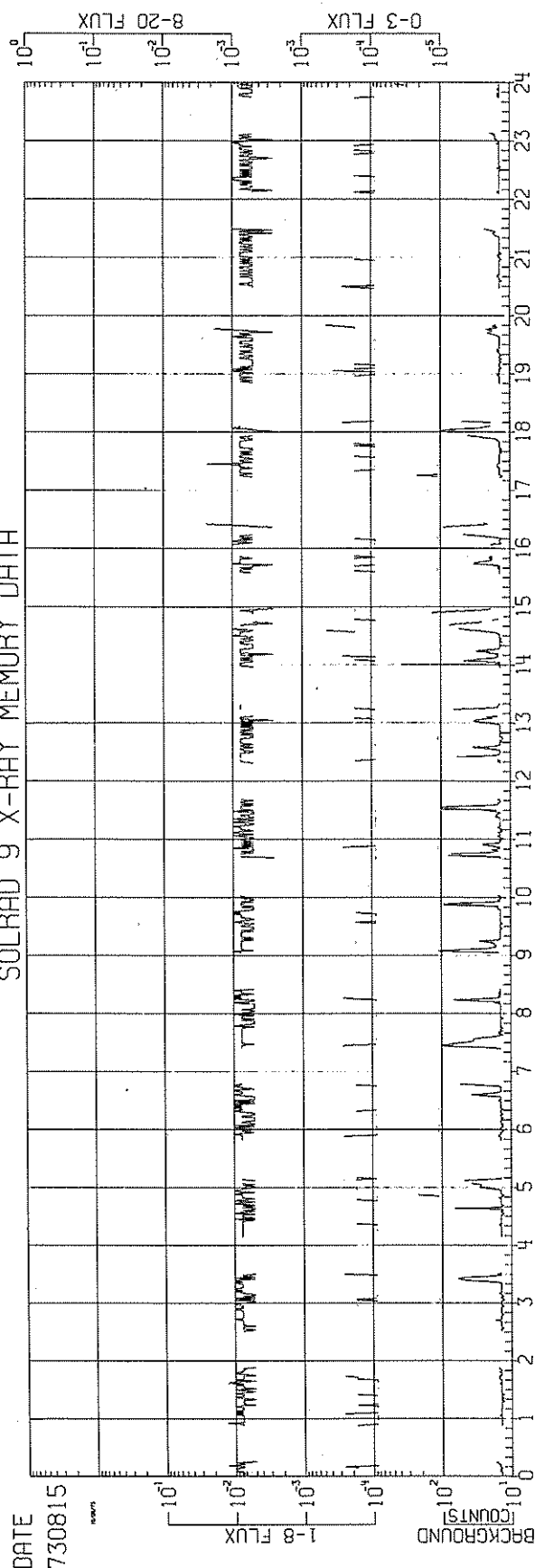
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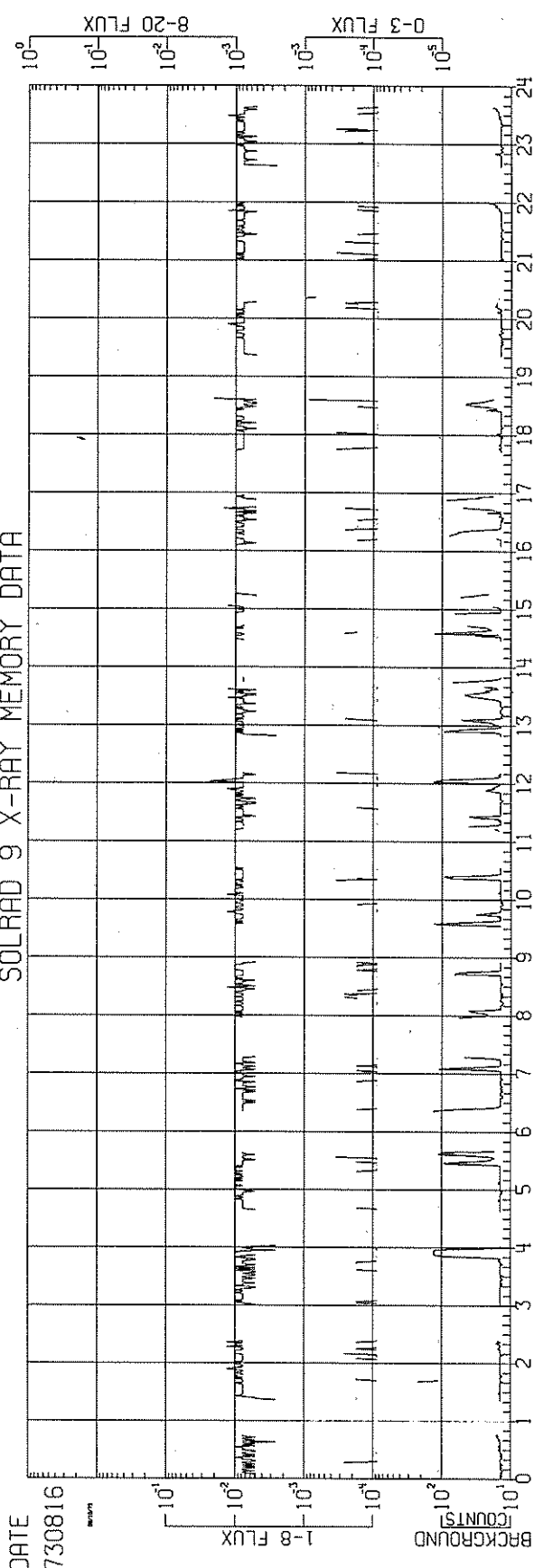


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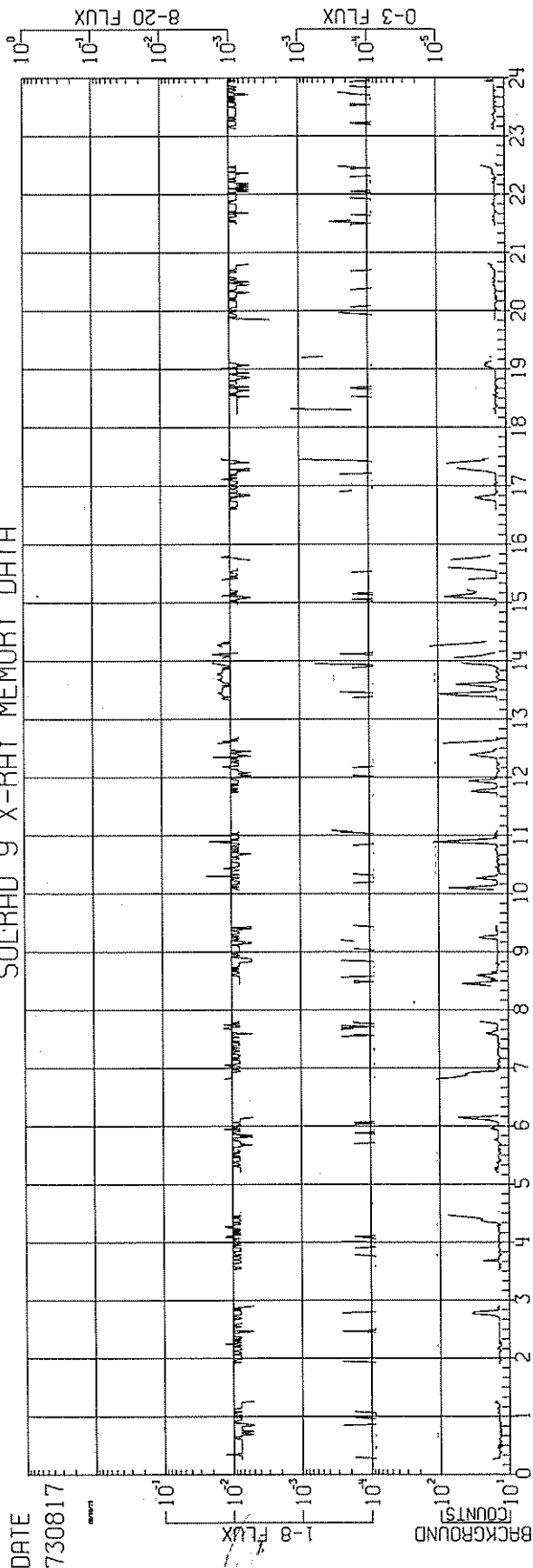
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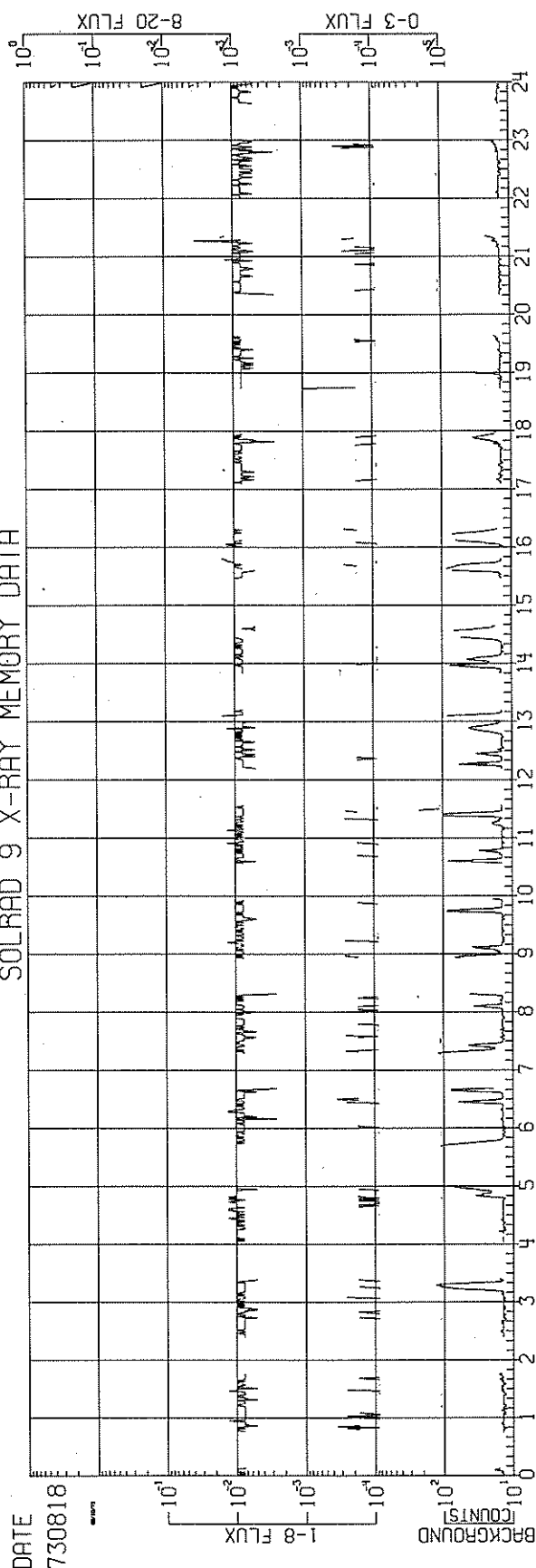
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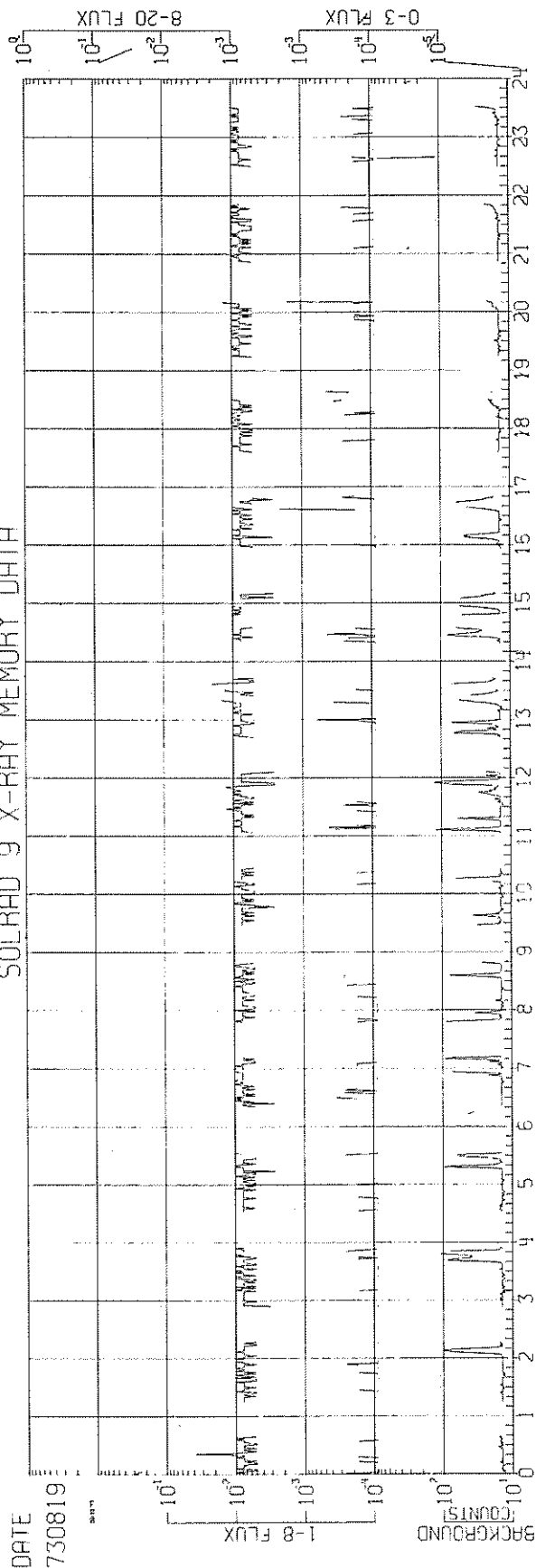


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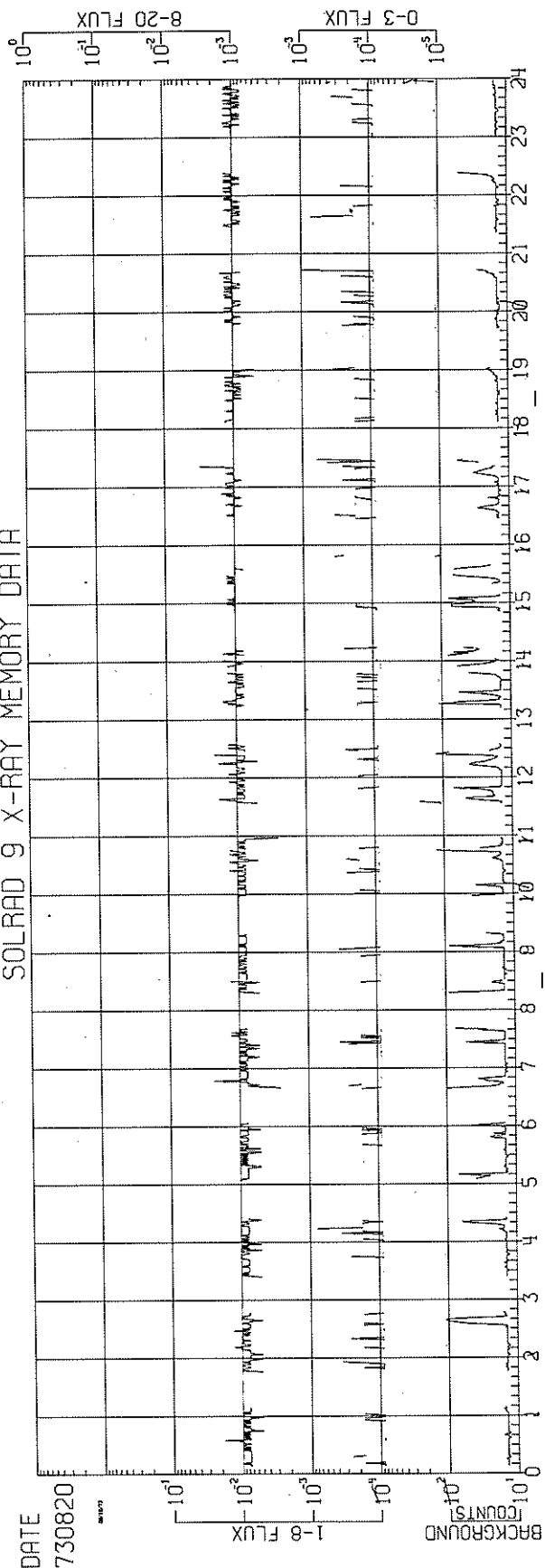


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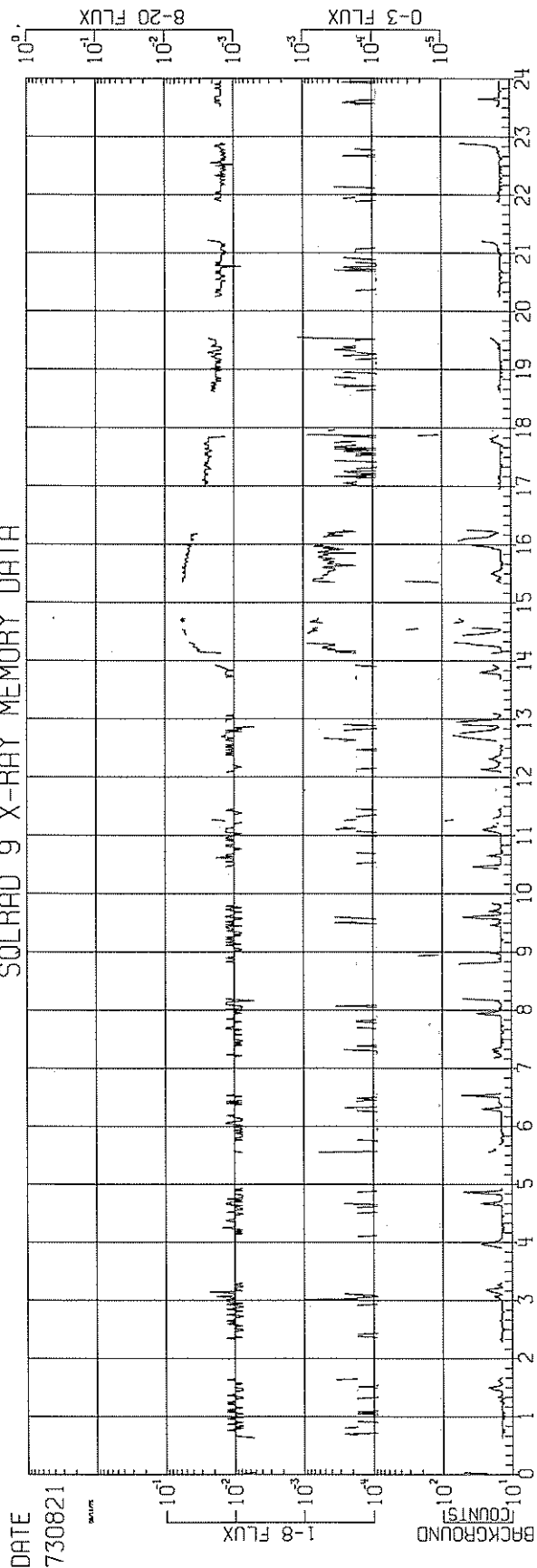
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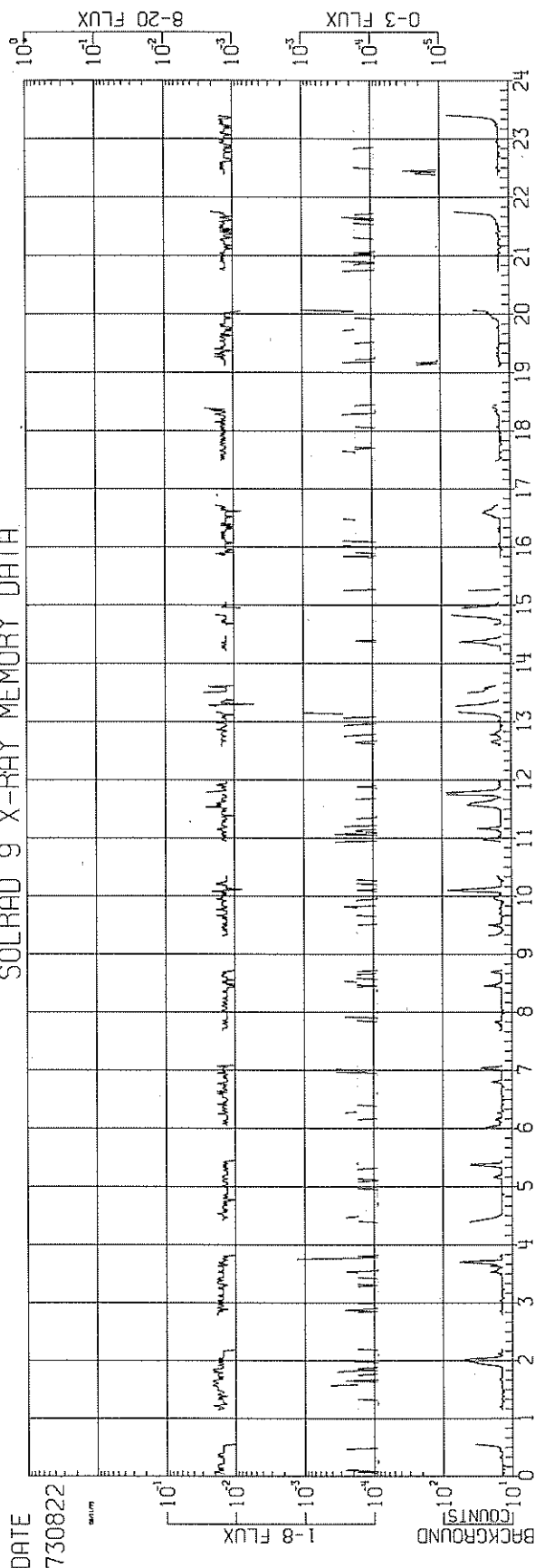
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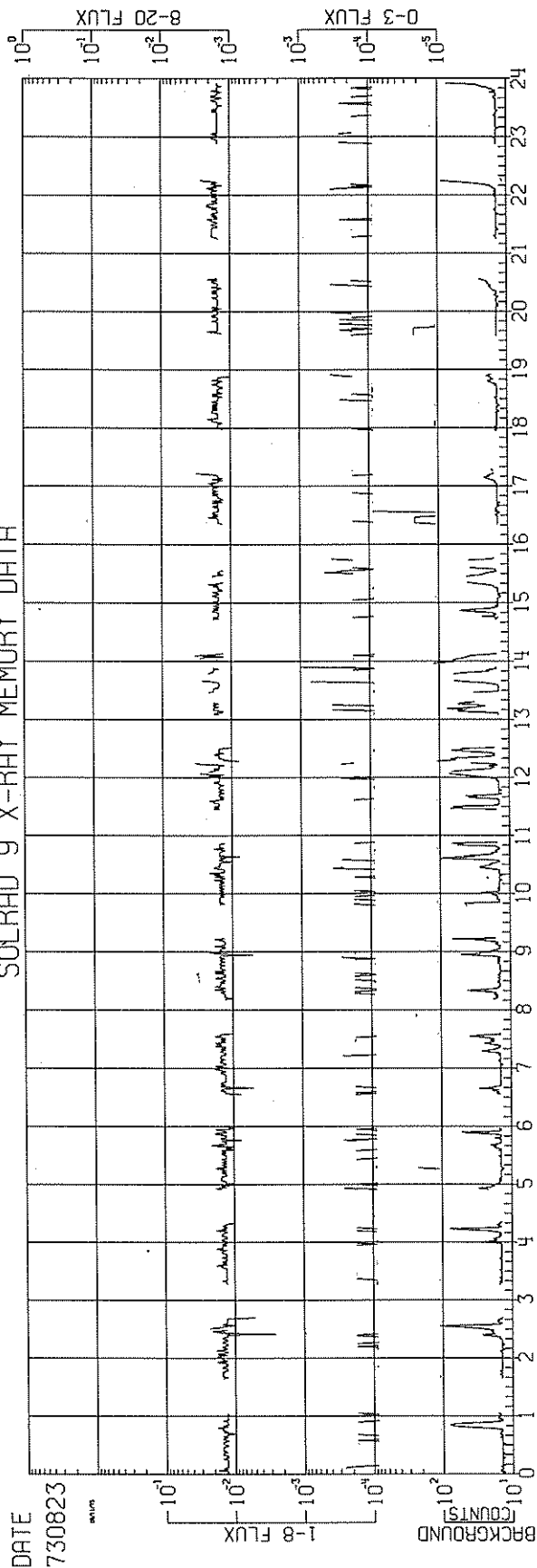
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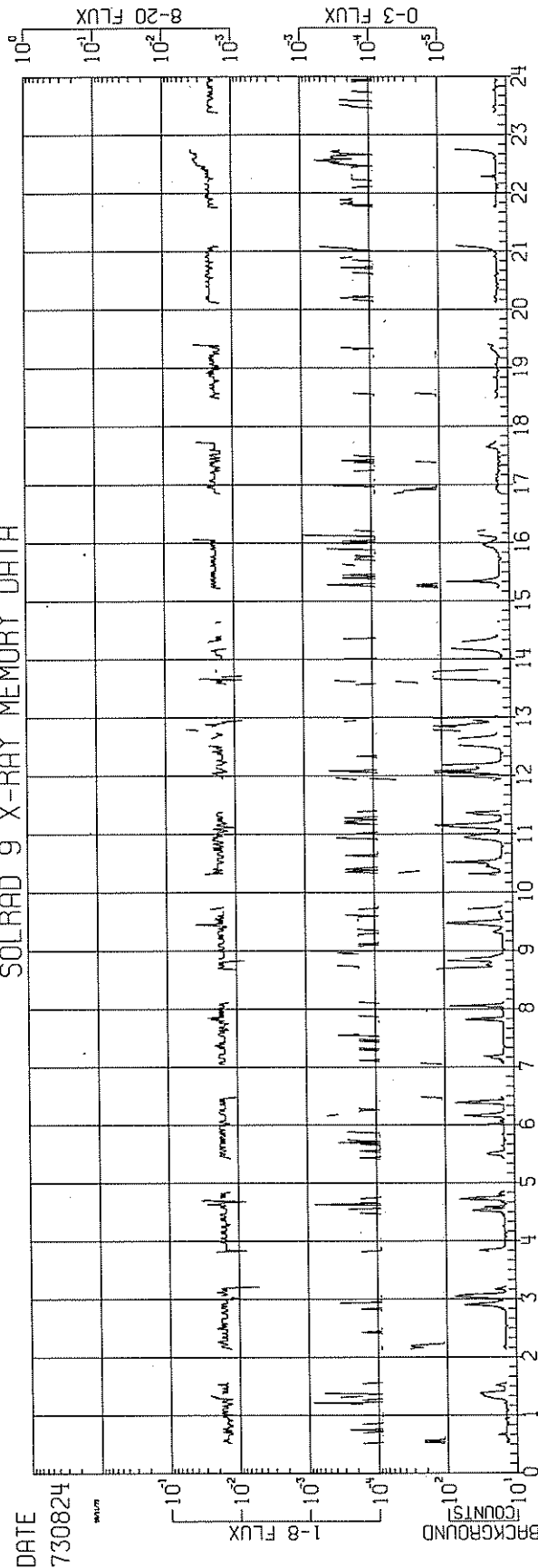


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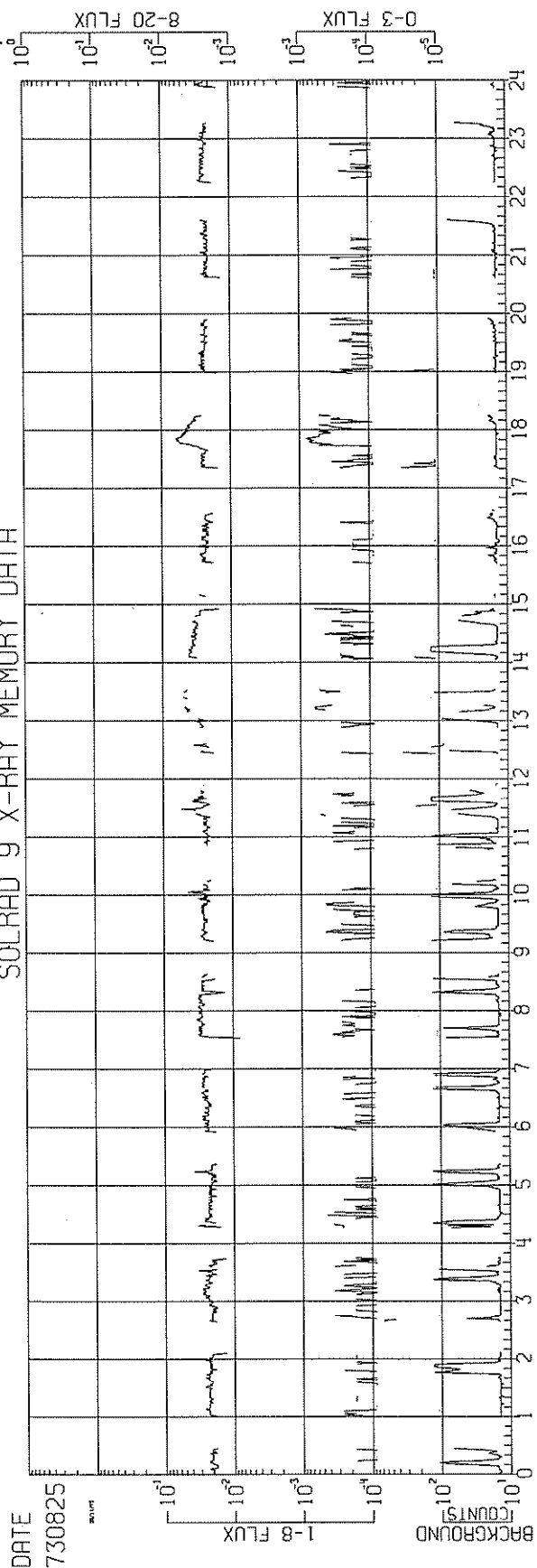
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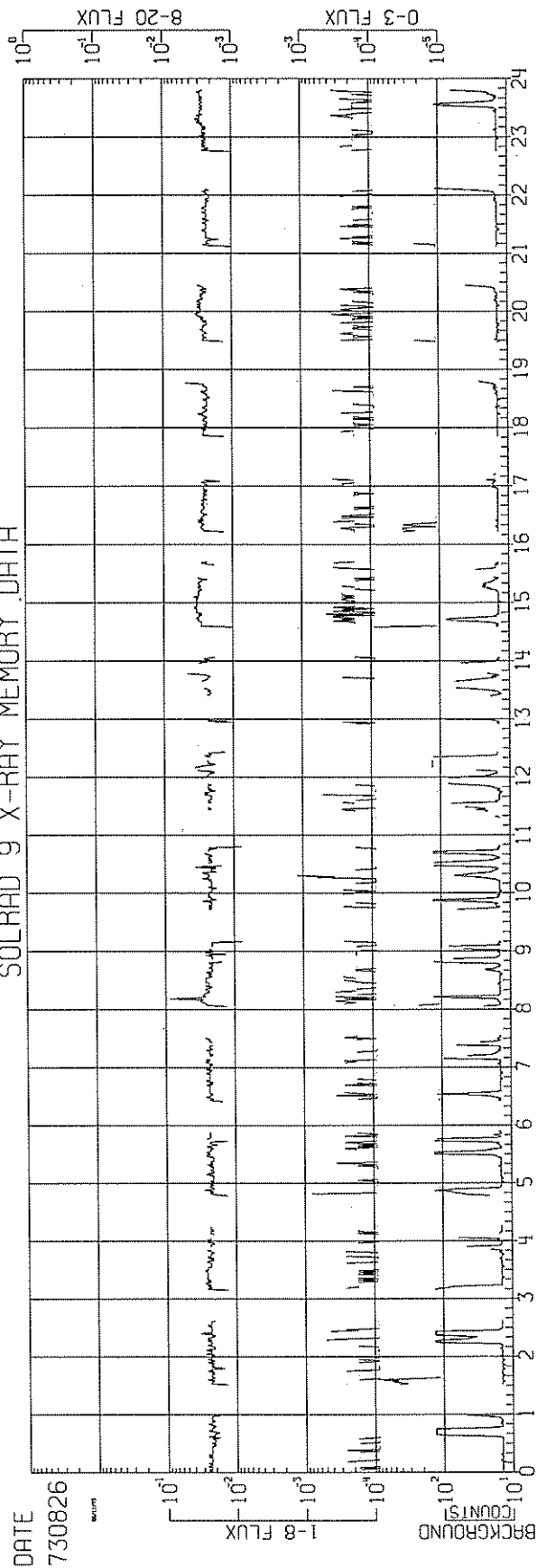
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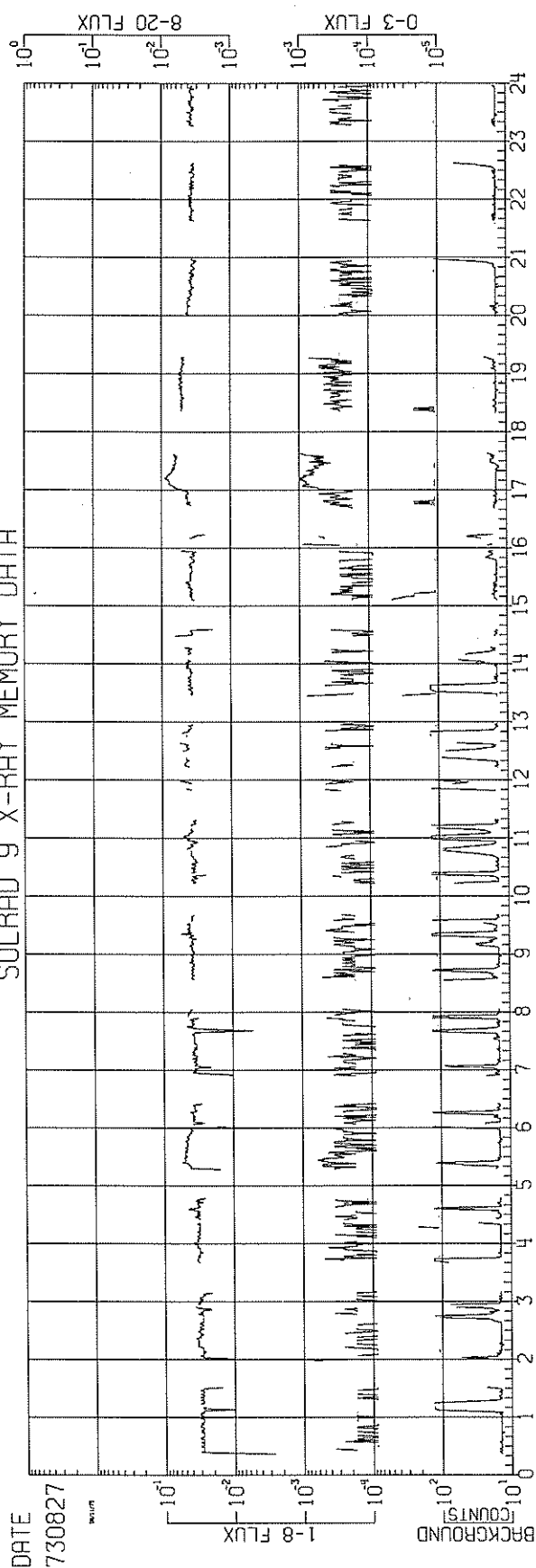


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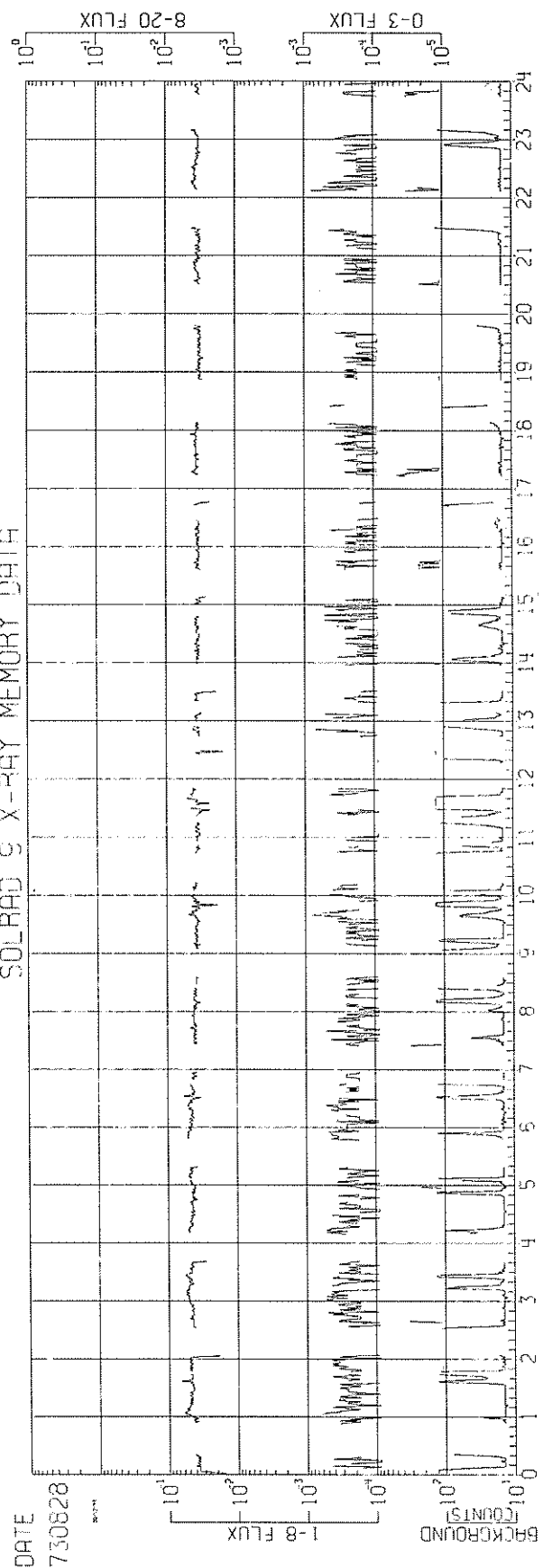


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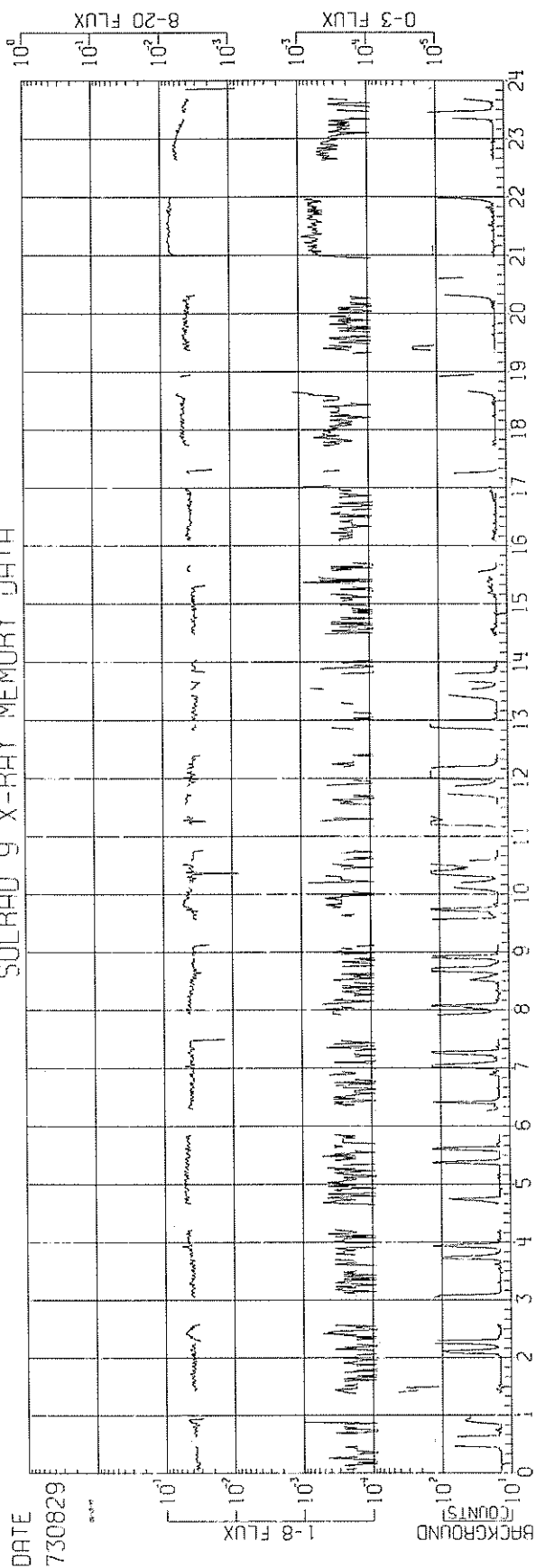
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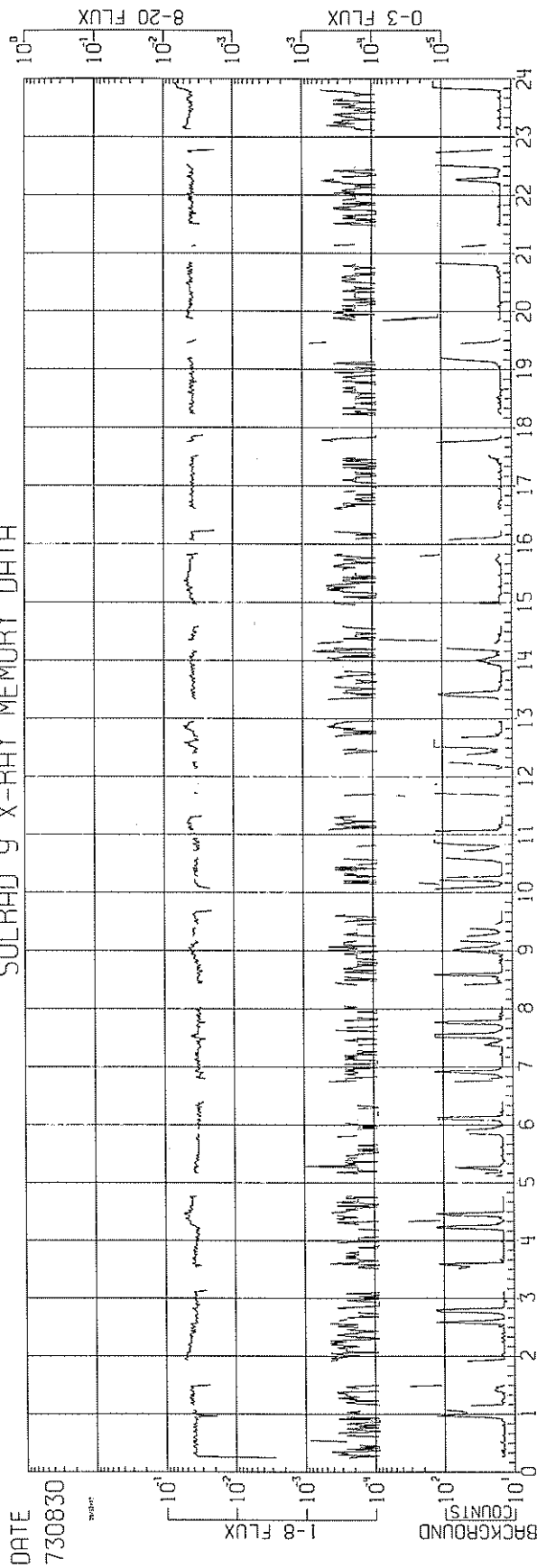
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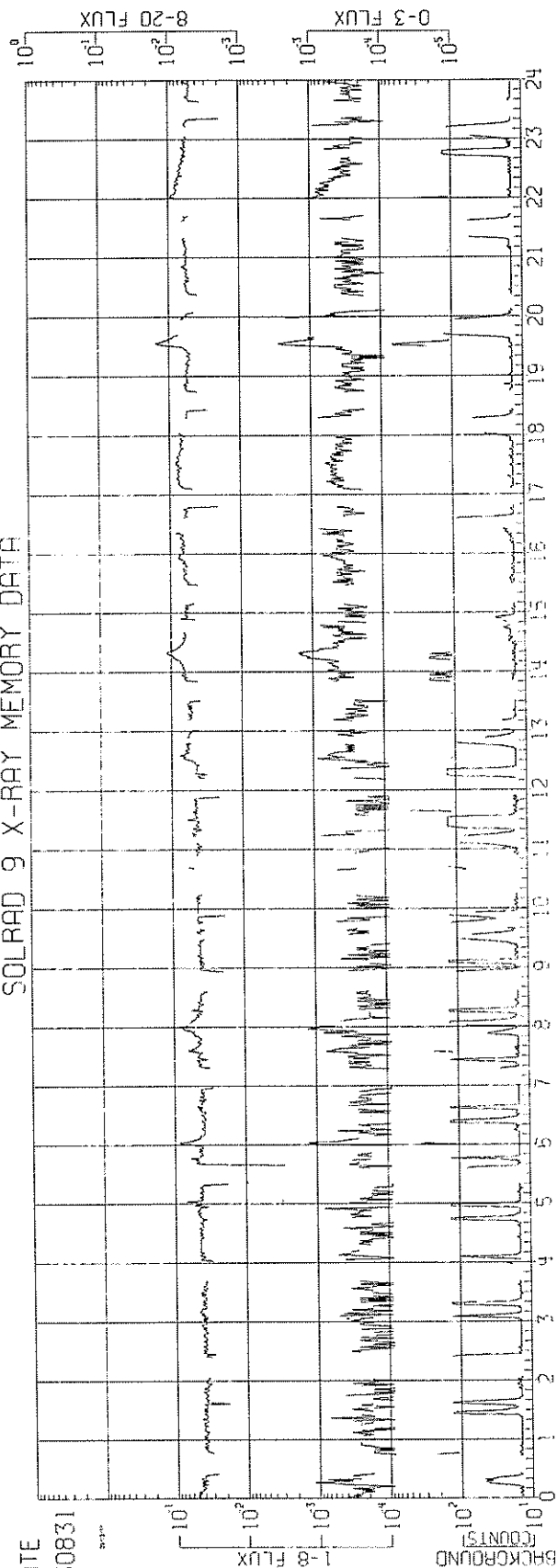
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# SOLRAD 9 X-RAY MEMORY DATA



730831



JULY 1973 DATA

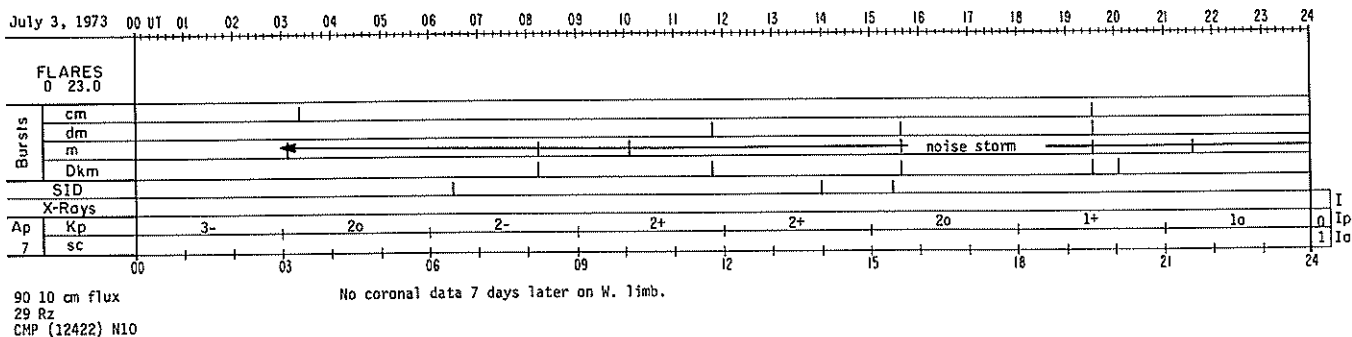
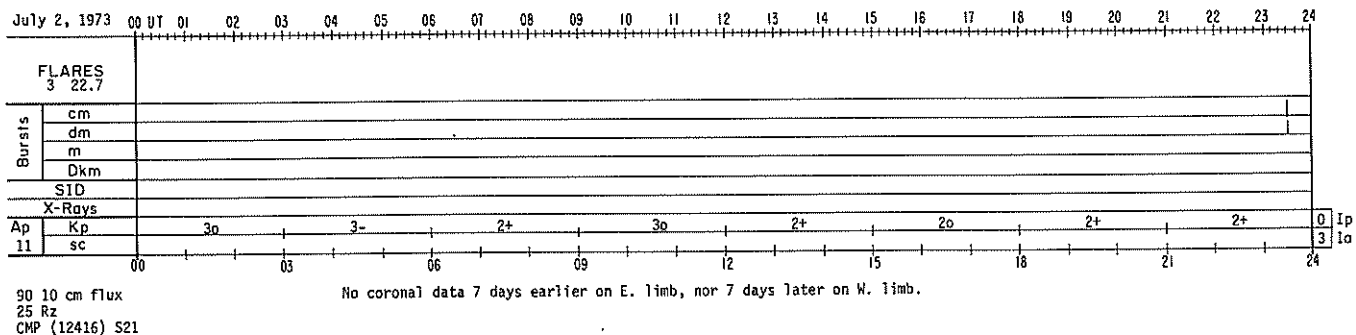
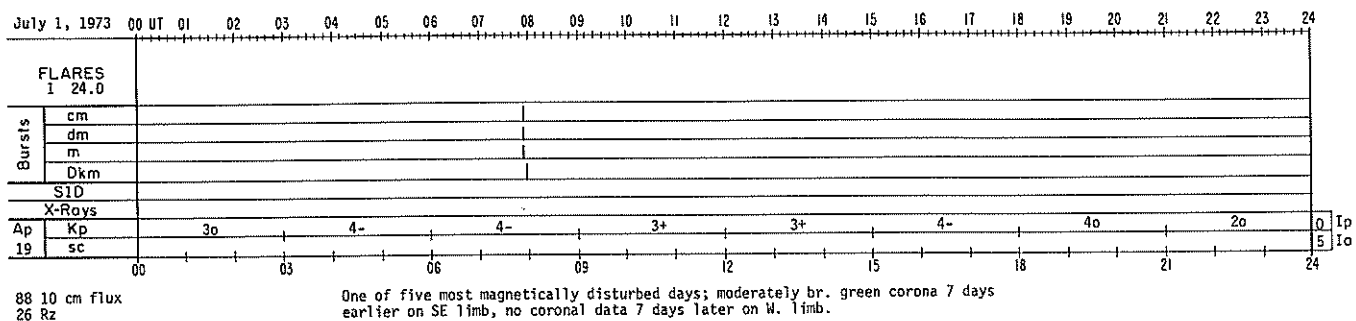
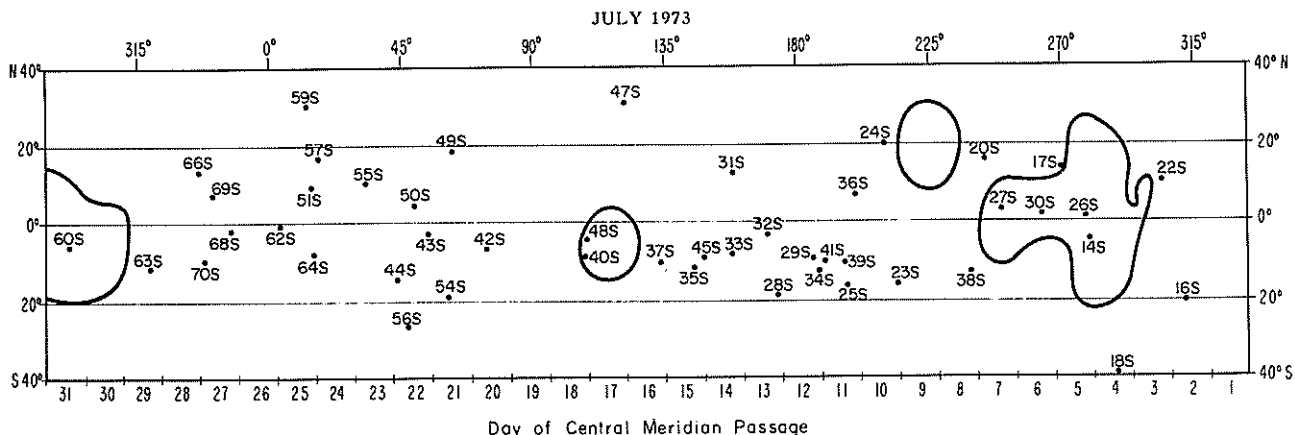
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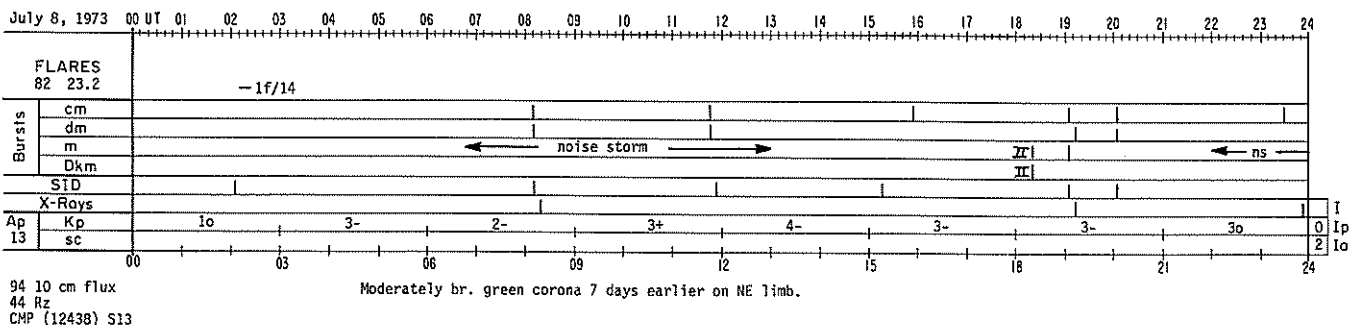
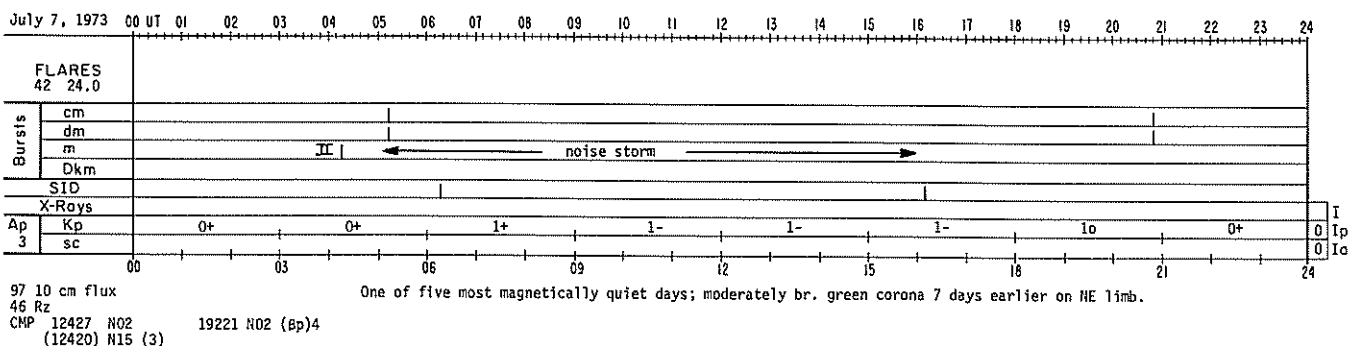
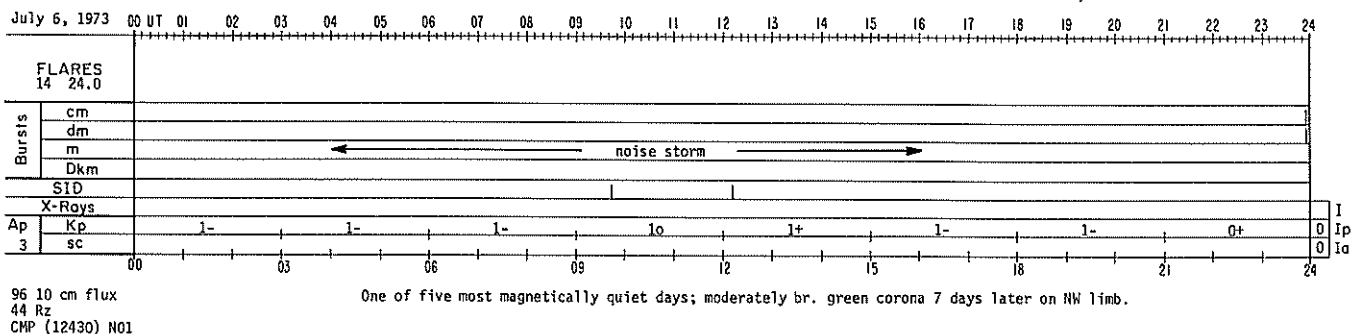
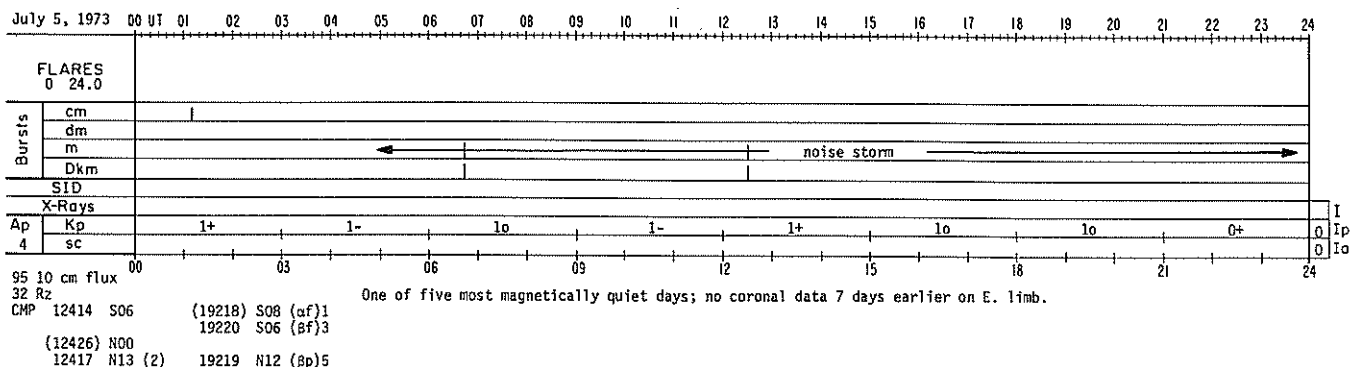
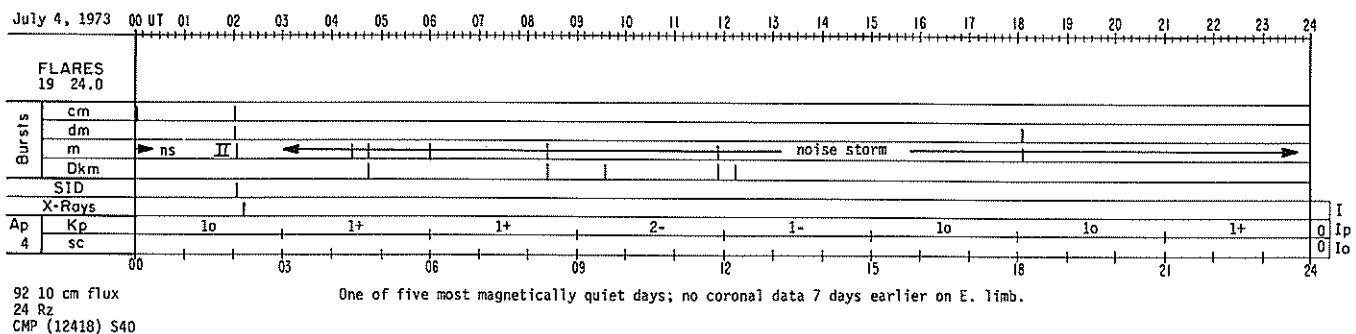
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| <u>Regional Flare Index</u>        | 45    |

For explanations of the data contained herein see *Descriptive Text* published as supplement to February 1974 *Solar-Geophysical Data* (Number 354).

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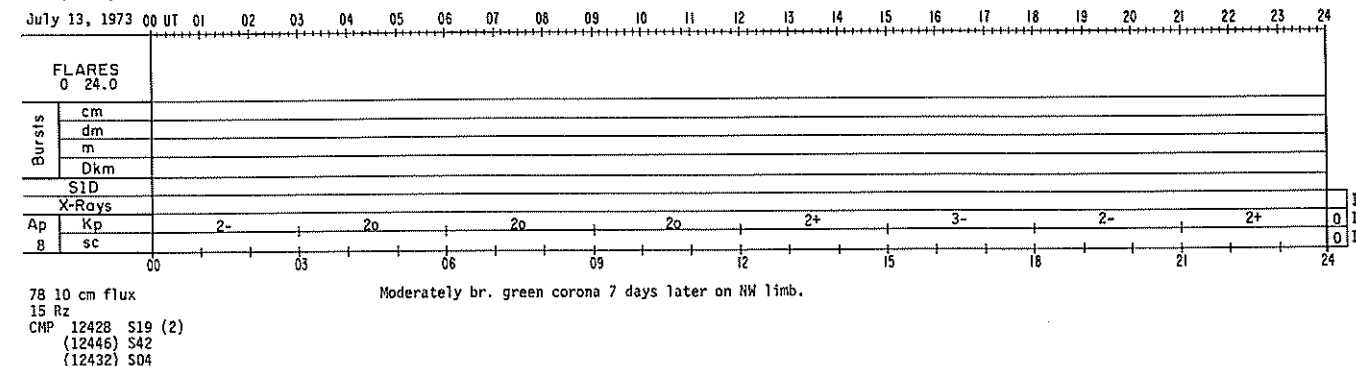
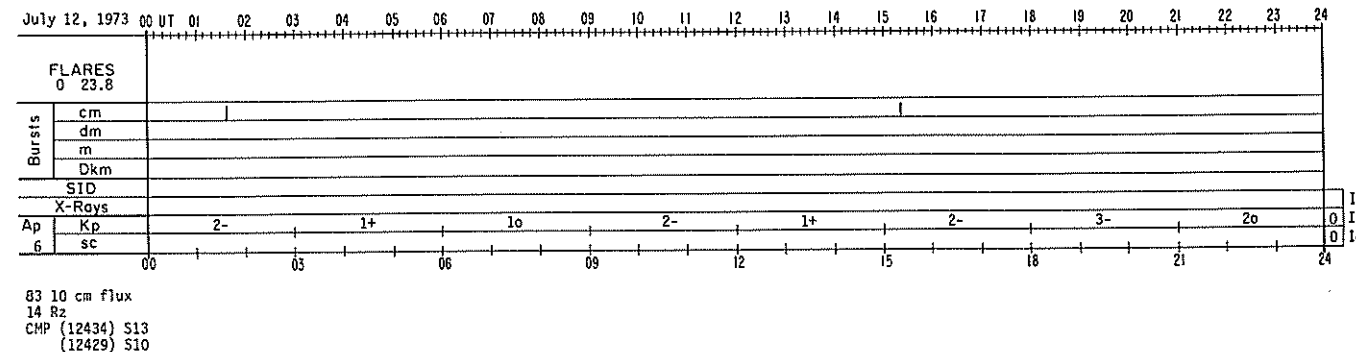
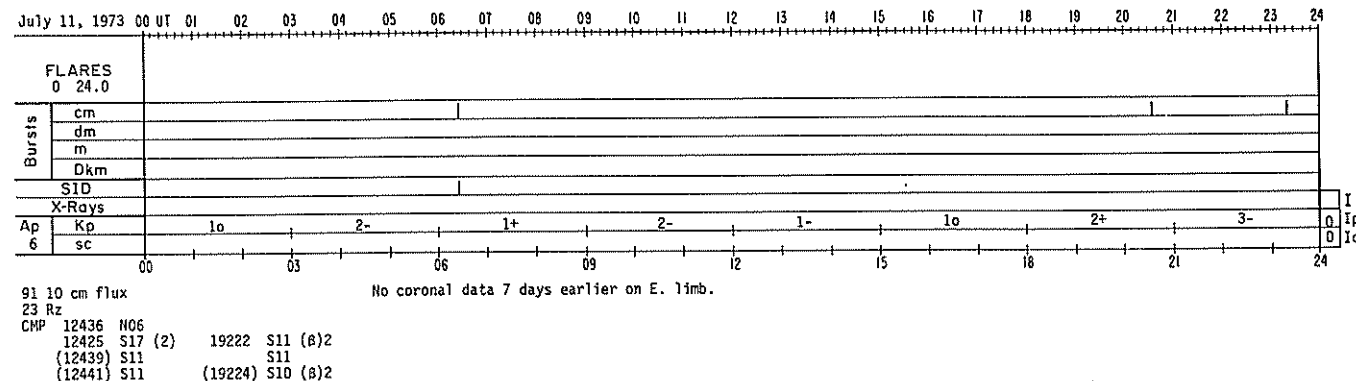
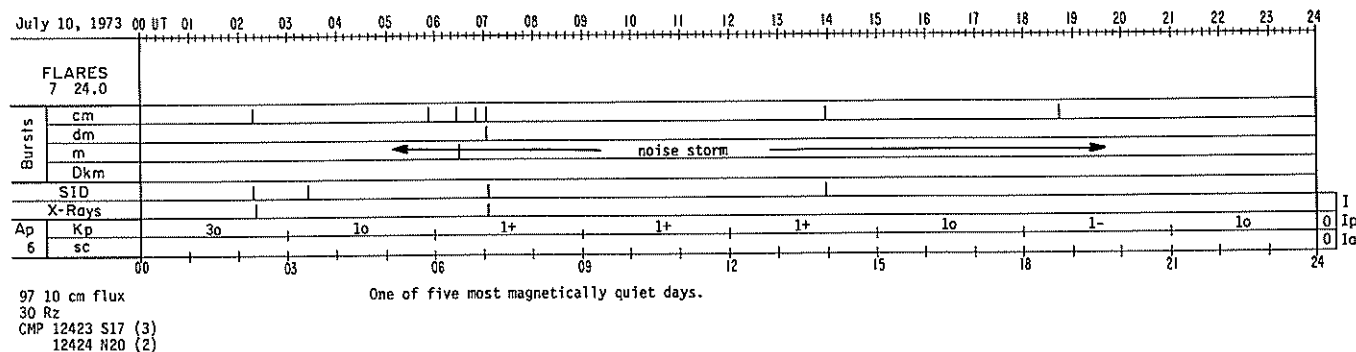
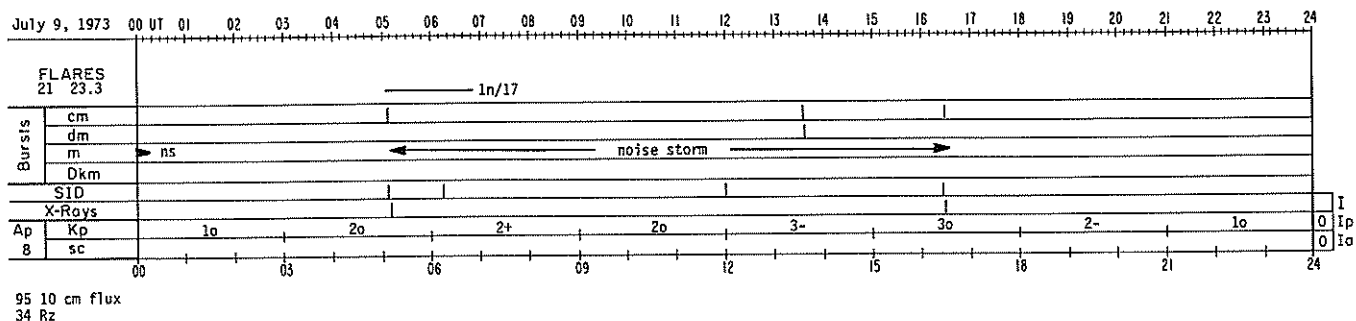
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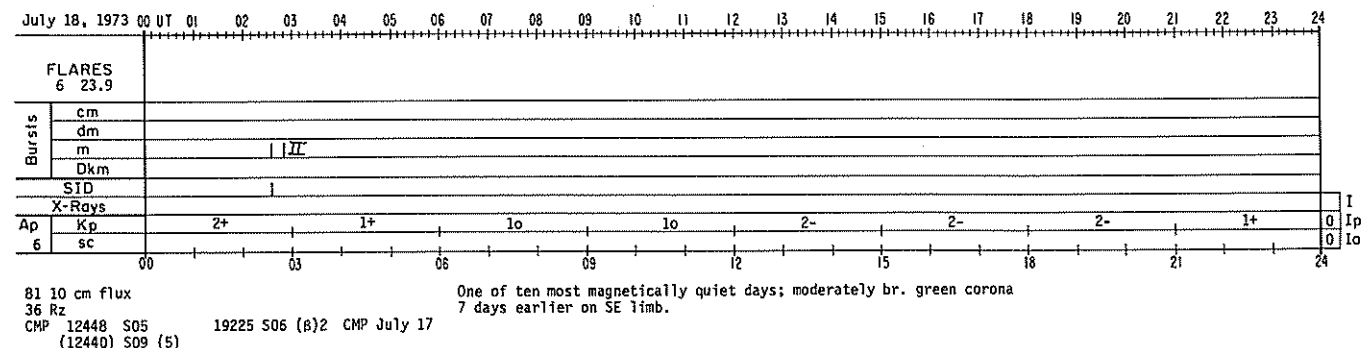
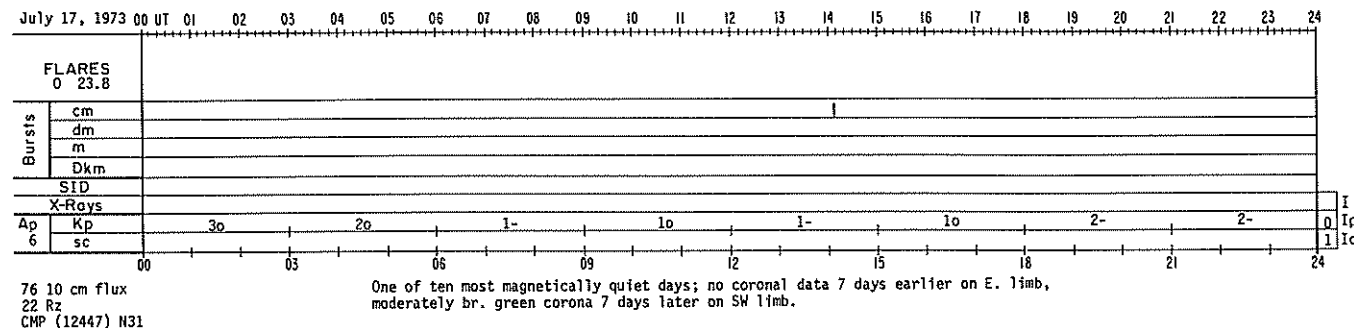
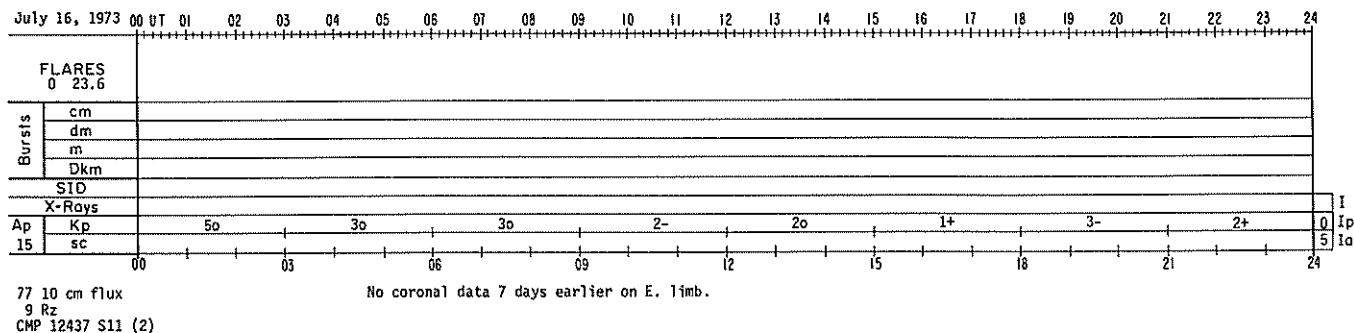
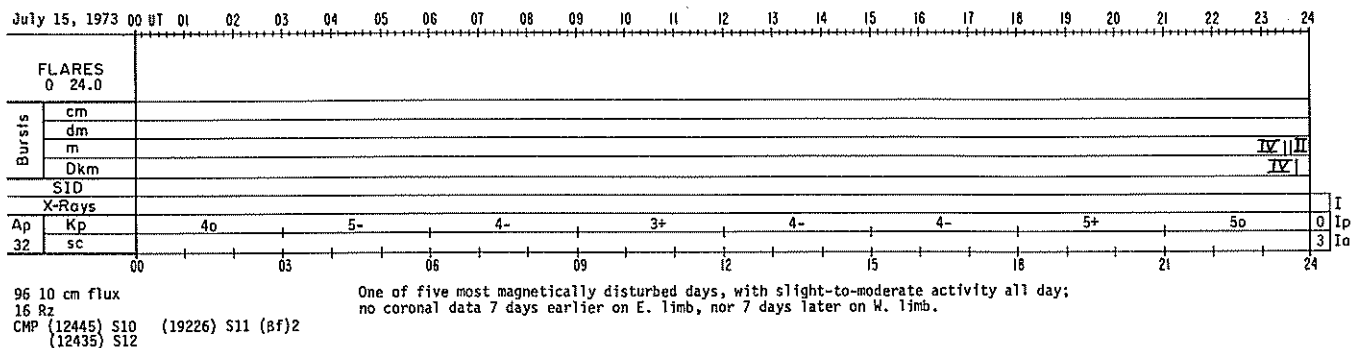
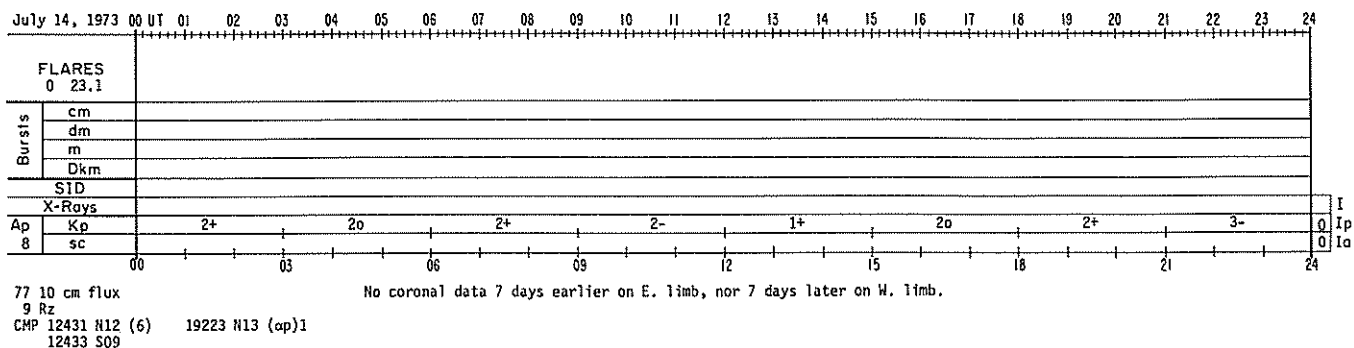




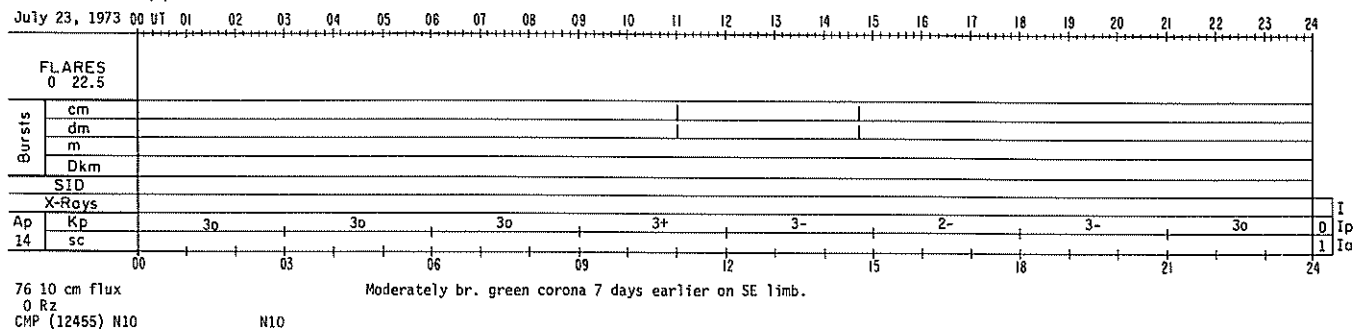
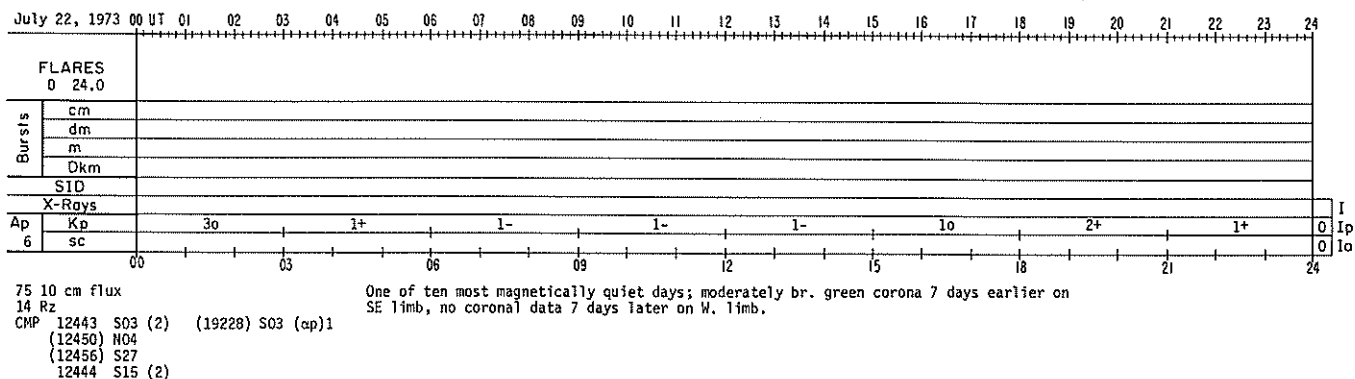
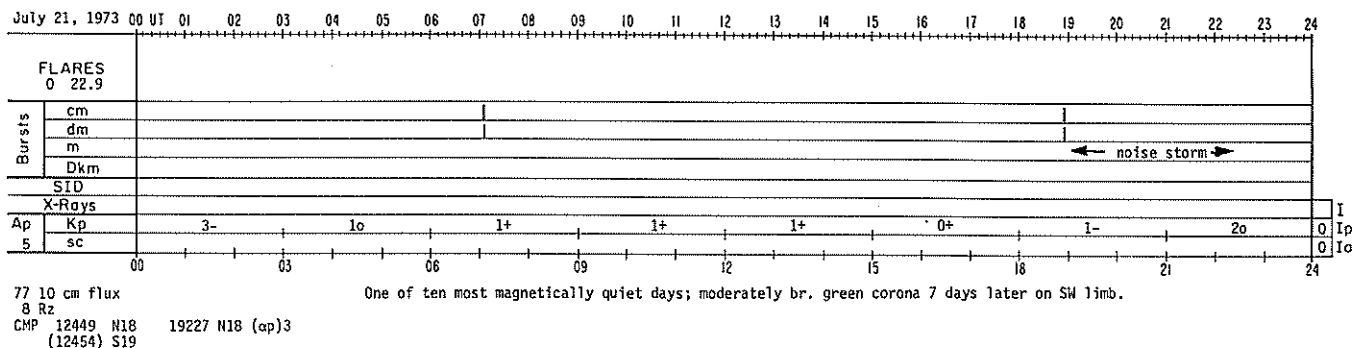
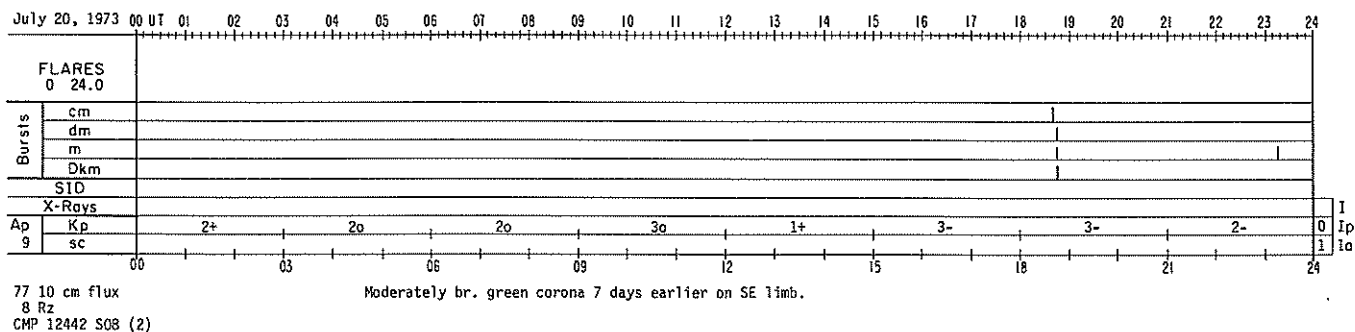
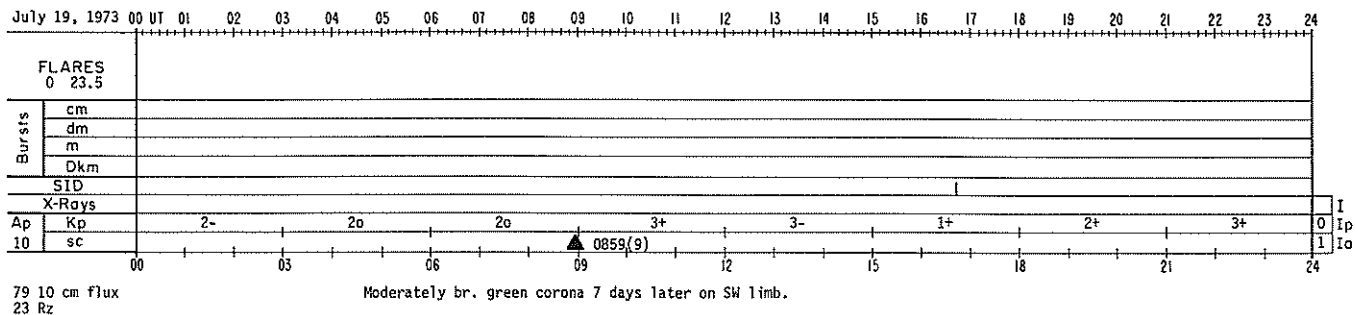


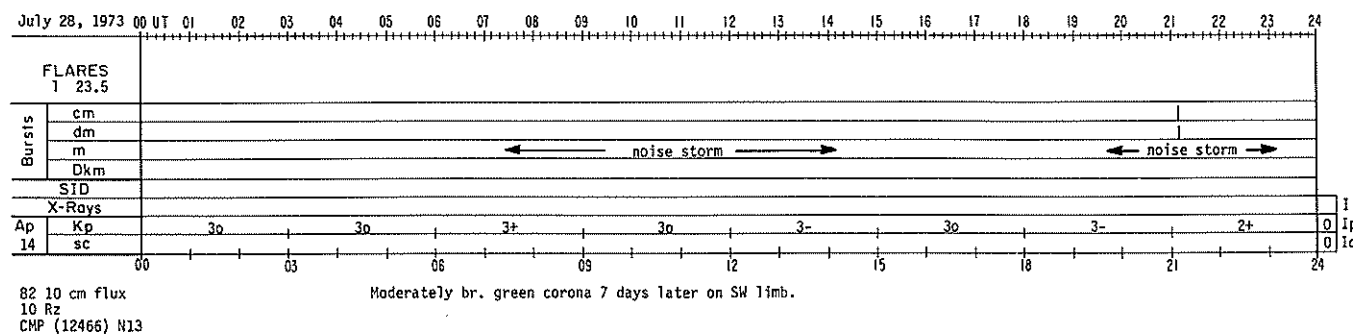
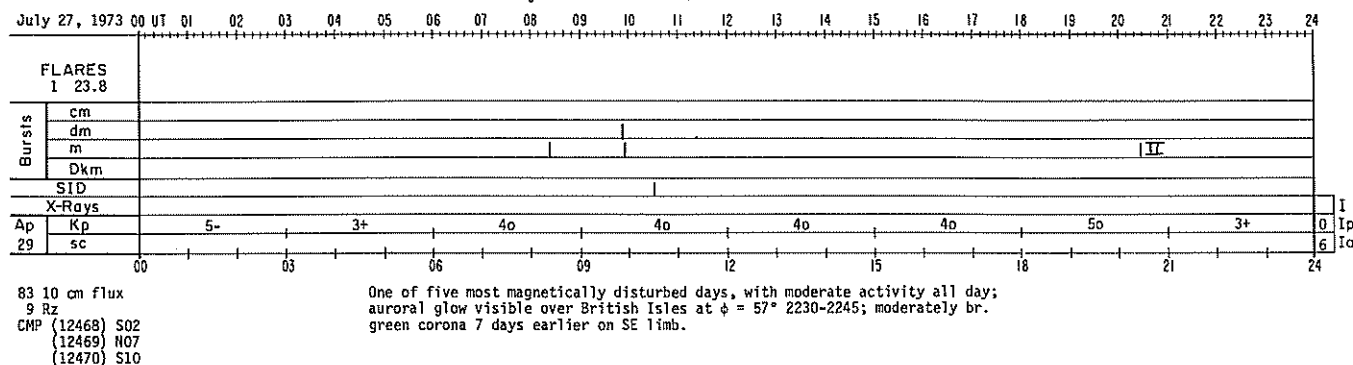
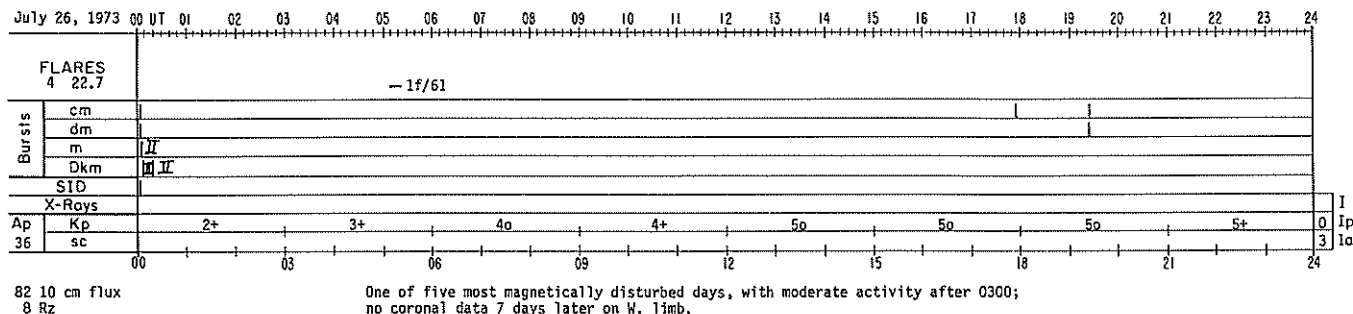
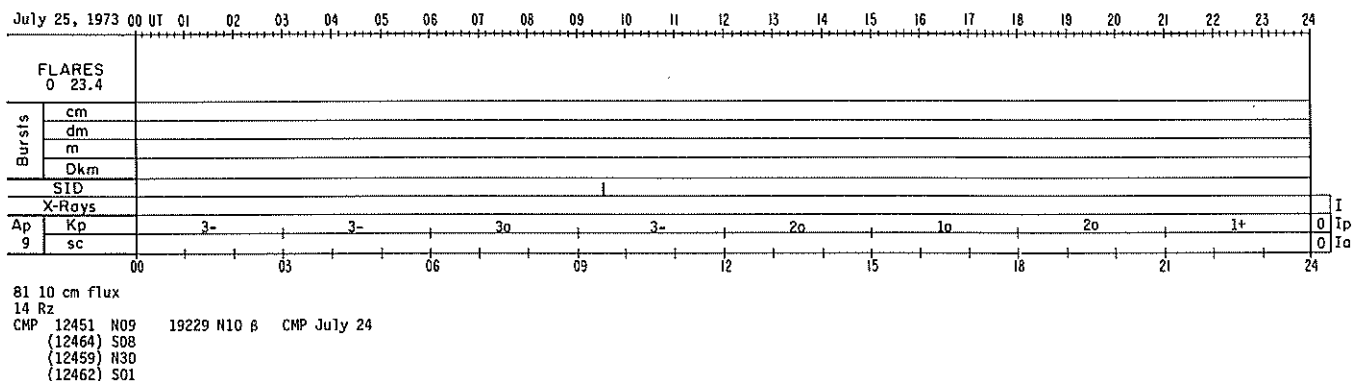
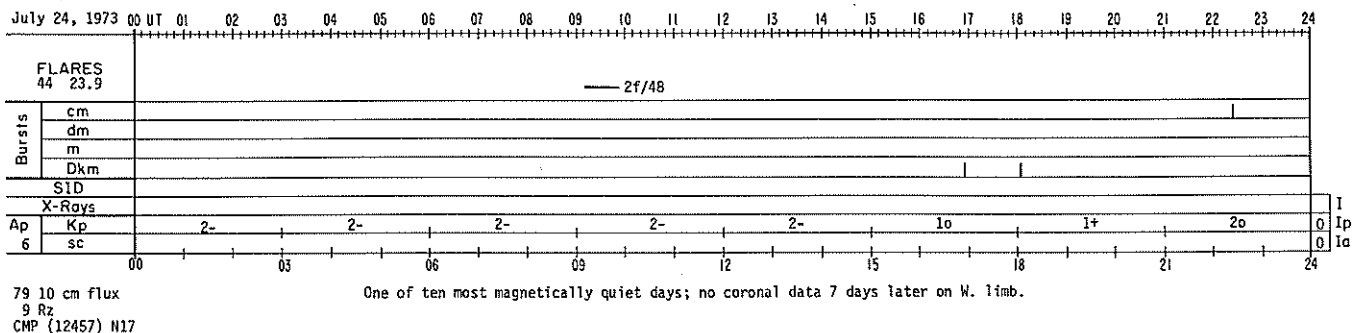
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Jul 73



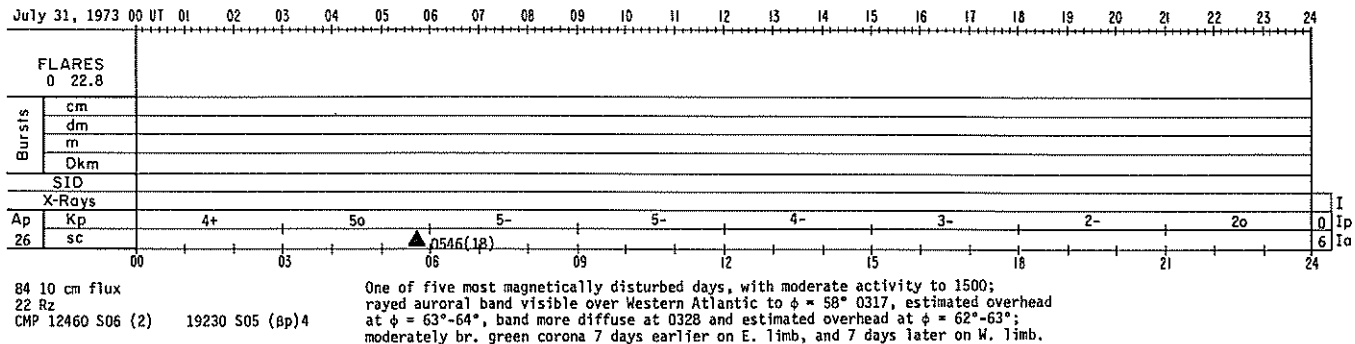
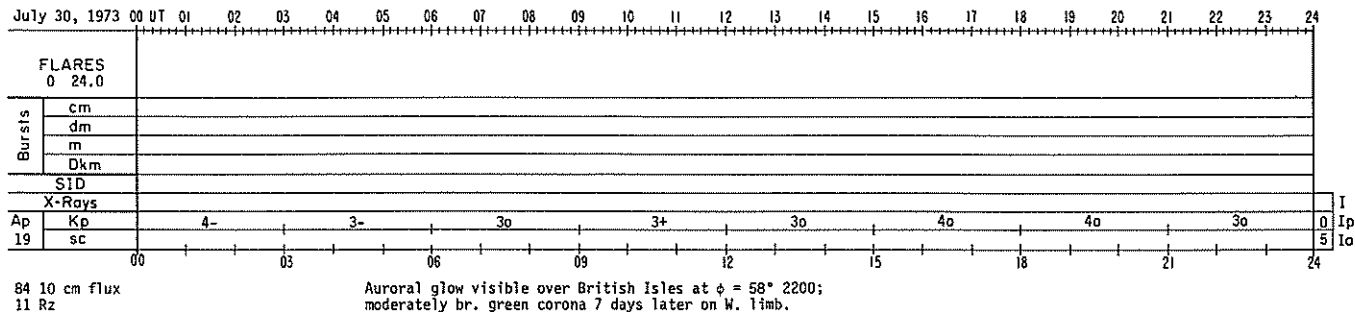
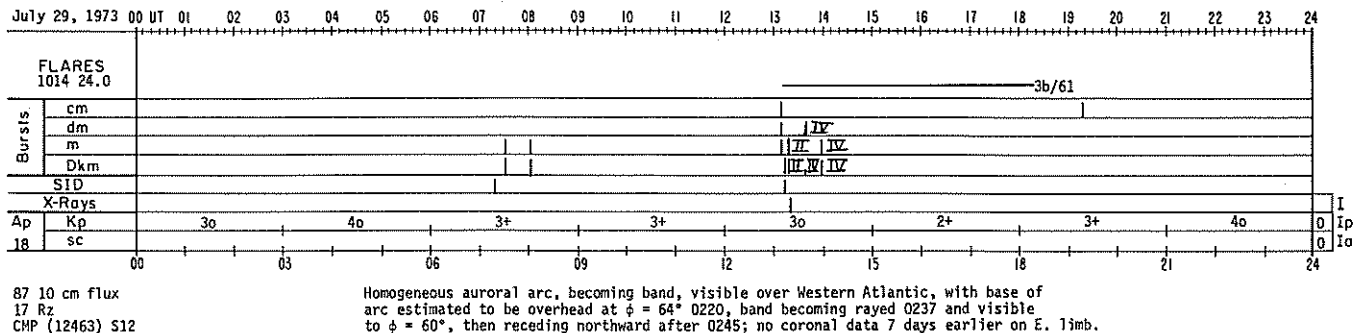


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Jul 73





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## REGIONAL FLARE INDEX

JULY 1973

| MC MATH<br>PLAGE NO. | LAT | CMP DATE   | DATE<br>FIRST FLARE | DATE<br>LAST FLARE | FLARE-INDEX<br>SUM | FLARE-INDEX<br>MEAN | TOTAL NO.<br>OF FLARES |
|----------------------|-----|------------|---------------------|--------------------|--------------------|---------------------|------------------------|
| 12414                | S 6 | 73/07/05.0 | 73/06/29            | 73/07/08           | 70.94              | 7.09                | 11                     |
| 12417                | N13 | 73/07/05.9 | 73/06/28            | 73/07/10           | 111.08             | 8.54                | 18                     |
| 12427                | N 2 | 73/07/07.3 | 73/07/06            | 73/07/08           | 48.11              | 16.04               | 7                      |
| 12431                | N12 | 73/07/14.4 | 73/07/18            | 73/07/18           | 5.82               | 5.82                | 1                      |
| 12448                | S 5 | 73/07/18.0 | 73/07/24            | 73/07/24           | 44.39              | 44.39               | 1                      |

## Note:

The Regional Flare Index and count of flares in each region has in previous months included each maximum of a multi-maximum event. This has caused some regions to appear to be more flare producing than is probably warranted. Beginning with April 1972 only the principal maximum of a multi-maximum event will be used in the calculation. Also note that only the Confirmed Events as selected for the "I.A.U. Quarterly Bulletin on Solar Activity" are included in the calculation.

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 confirmed flares during its disk passage.



### UAG Series of Reports

Prepared by World Data Center A for Solar-Terrestrial Physics, NOAA, Boulder, Colorado, U.S.A.

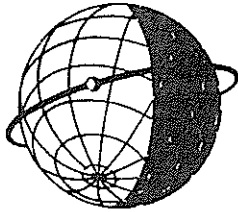
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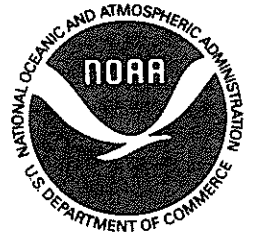
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- UAG-24 "Data on Solar-Geophysical Activity Associated with the Major Ground Level Cosmic Ray Events of 24 January and 1 September 1971", Parts 1 and 2, compiled by Helen E. Coffey and J. Virginia Lincoln, World Data Center A for Solar-Terrestrial Physics, December 1972, 462 pages, price (includes Parts 1 and 2) \$2.00.
- UAG-25 "Observations of Jupiter's Sporadic Radio Emission in the Range 7.6-41 MHz, 9 September 1968 through 9 December 1971", by James W. Warwick, George A. Dulk and David G. Swann, Department of Astro-Geophysics, University of Colorado, February 1973, 35 pages, price 35 cents.
- UAG-26 "Data Compilation for the Magnetospherically quiet Periods February 19-23 and November 29 - December 3, 1970", compiled by Helen E. Coffey and J. Virginia Lincoln, World Data Center A for Solar-Terrestrial Physics, May 1973, 129 pages, price 70 cents.
- UAG-27 "High Speed Streams in the Solar Wind", by D. S. Intriligator, University of Southern California, Department of Physics, Los Angeles, California, 90007, June 1973, 16 pages, price 15 cents.
- UAG-28 "Collected Data Reports on August 1972 Solar-Terrestrial Events", Parts 1, 2 and 3, edited by Helen E. Coffey, World Data Center A for Solar-Terrestrial Physics, July 1973, 932 pages, price (includes Parts 1-3) \$4.50.
- UAG-29 "Auroral Electrojet Magnetic Activity Indices AE (11) for 1968", by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Environmental Data Service, October 1973, 148 pages, price 75 cents.
- UAG-30 "Catalog of Data on Solar-Terrestrial Physics", prepared by Environmental Data Service, NOAA, Boulder, Colorado, October 1973, 317 pages, price \$1.75.
- UAG-31 "Auroral Electrojet Magnetic Activity Indices AE (11) for 1969", by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Environmental Data Service, February 1974, 142 pages.



# **WORLD DATA CENTER A**

**FOR**

## **SOLAR-TERRESTRIAL PHYSICS**



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

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