

CRPL - FB - 268

FOR OFFICIAL DISTRIBUTION



SPACE DISTURBANCES LABORATORY
SOLAR-GEOPHYSICAL DATA

Issued: December 1966



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ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
INSTITUTE FOR TELECOMMUNICATION SCIENCES AND AERONOMY
BOULDER, COLORADO
80302

SOLAR - GEOPHYSICAL DATA

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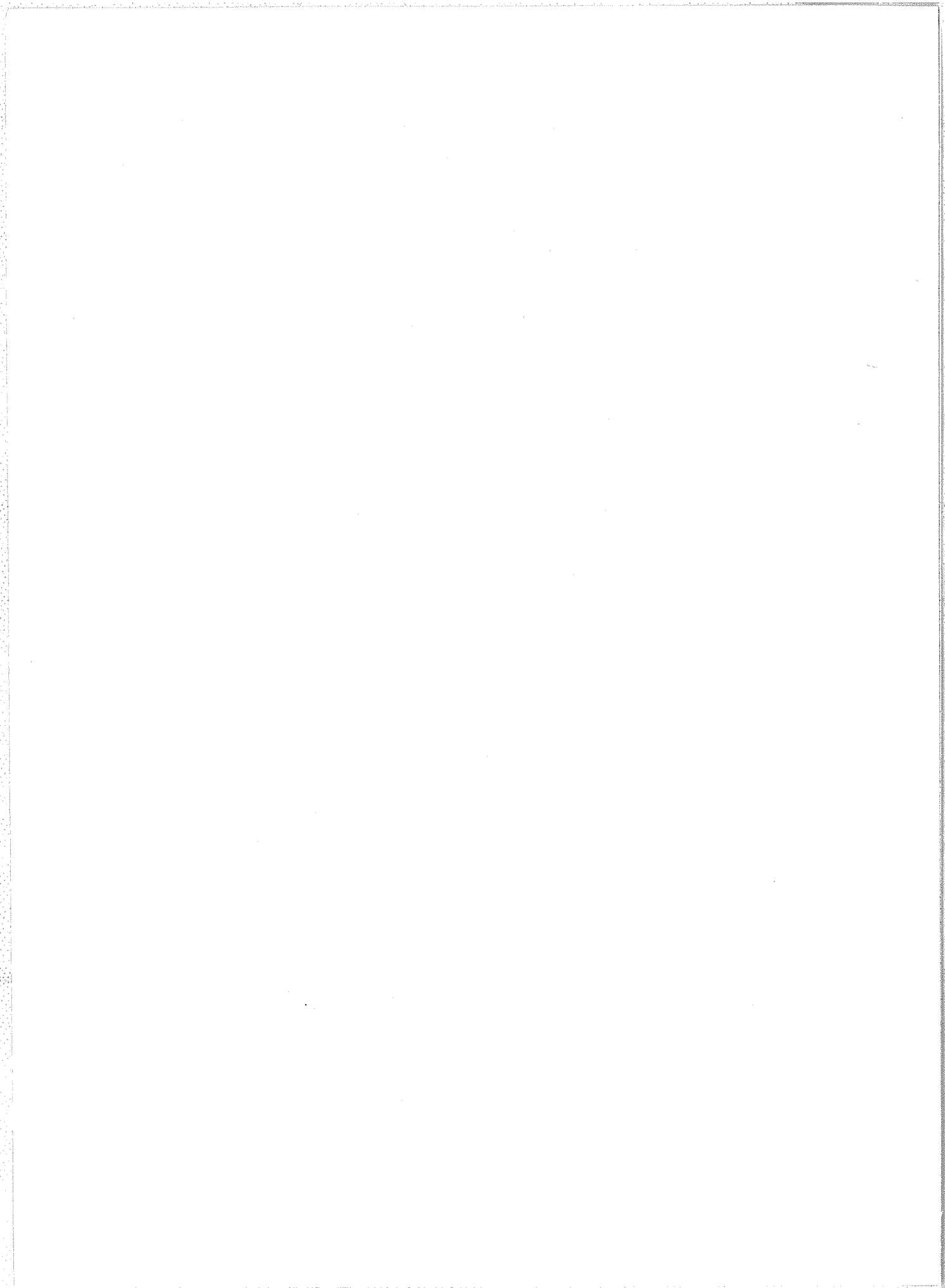
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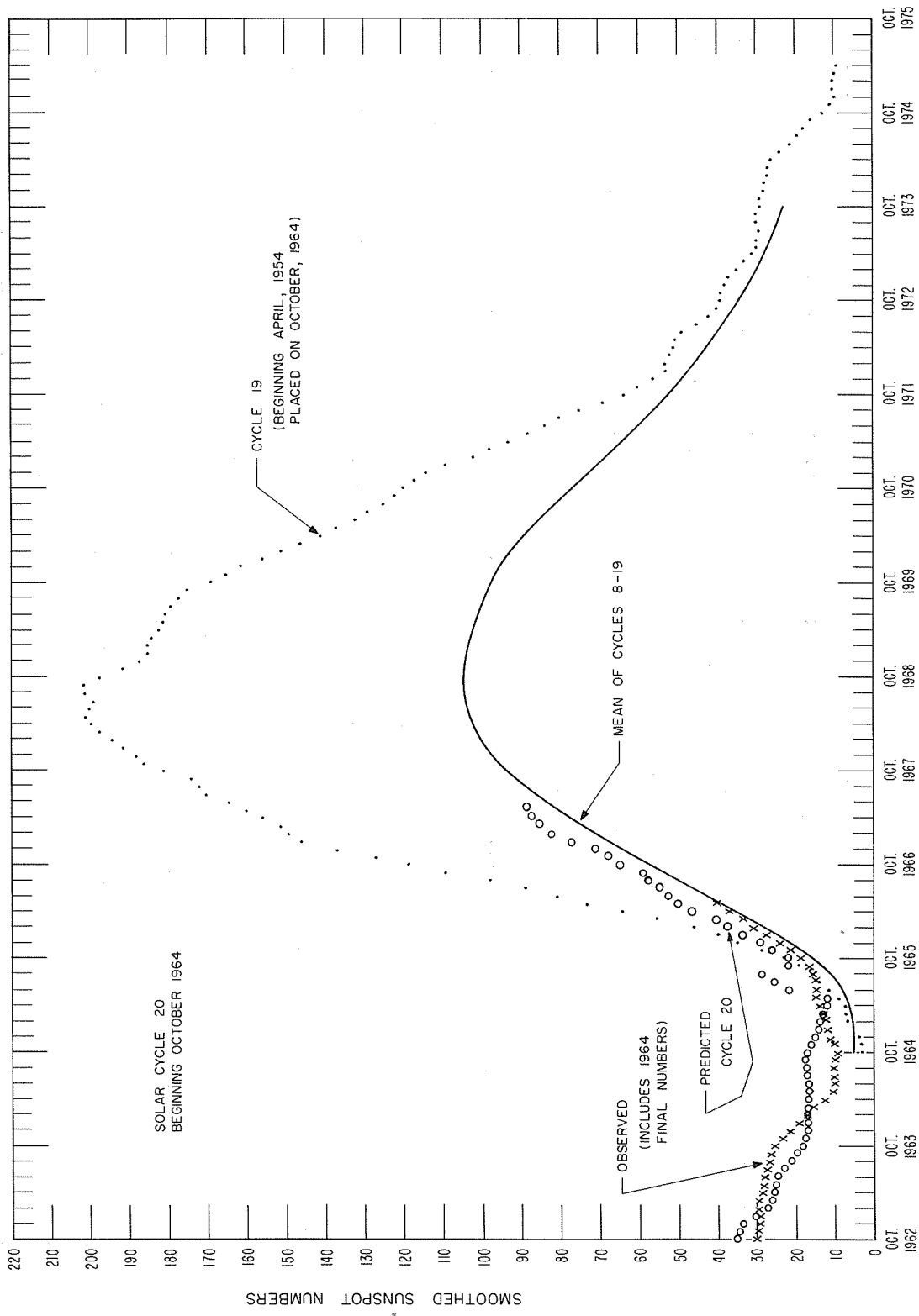
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The descriptive text was republished in January 1966. Addenda have been given in the introduction to the CRPL-FB reports for April, May, August, September, October and November 1966.





PREDICTED AND OBSERVED SUNSPOT NUMBERS

RELATIVE SUNSPOT NUMBERS

ZURICH, R_z

| | 1965 | | 1966 | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|-------|------|------|
| | DEC. | JAN. | FEB. | MAR. | APR. | MAY | JUNE | JULY | AUG. | SEPT. | OCT. | NOV. |
| 1 | 13 | 18 | 7 | 25 | 64 | 50 | 71 | 49 | 78 | 44 | 57 | 43 |
| 2 | 8 | 17 | 9 | 11 | 58 | 48 | 74 | 49 | 62 | 44 | 55 | 42 |
| 3 | 8 | 16 | 20 | 11 | 74 | 57 | 41 | 54 | 65 | 25 | 50 | 33 |
| 4 | 8 | 15 | 17 | 18 | 74 | 61 | 60 | 53 | 51 | 18 | 36 | 38 |
| 5 | 8 | 8 | 17 | 12 | 55 | 38 | 43 | 48 | 53 | 26 | 40 | 20 |
| 6 | 8 | 7 | 17 | 14 | 59 | 23 | 43 | 46 | 50 | 30 | 44 | 32 |
| 7 | 8 | 7 | 16 | 10 | 70 | 13 | 38 | 58 | 31 | 36 | 53 | 48 |
| 8 | 15 | 13 | 13 | 9 | 65 | 16 | 35 | 68 | 13 | 38 | 48 | 51 |
| 9 | 7 | 13 | 10 | 15 | 47 | 8 | 33 | 56 | 7 | 39 | 44 | 56 |
| 10 | 7 | 7 | 11 | 13 | 37 | 0 | 25 | 58 | 0 | 37 | 65 | 62 |
| 11 | 0 | 8 | 14 | 10 | 25 | 14 | 43 | 52 | 16 | 42 | 66 | 72 |
| 12 | 0 | 0 | 8 | 0 | 27 | 14 | 34 | 62 | 36 | 38 | 49 | 80 |
| 13 | 14 | 17 | 16 | 0 | 24 | 23 | 34 | 56 | 30 | 29 | 72 | 68 |
| 14 | 0 | 30 | 12 | 0 | 29 | 52 | 31 | 37 | 37 | 35 | 64 | 66 |
| 15 | 14 | 36 | 16 | 9 | 29 | 46 | 22 | 34 | 41 | 38 | 60 | 62 |
| 16 | 22 | 57 | 13 | 26 | 35 | 47 | 40 | 48 | 36 | 57 | 70 | 44 |
| 17 | 21 | 50 | 19 | 44 | 40 | 33 | 46 | 42 | 35 | 76 | 70 | 54 |
| 18 | 20 | 64 | 24 | 53 | 40 | 27 | 39 | 49 | 35 | 83 | 70 | 51 |
| 19 | 18 | 68 | 32 | 60 | 24 | 34 | 33 | 38 | 27 | 76 | 66 | 61 |
| 20 | 15 | 63 | 39 | 54 | 37 | 57 | 42 | 65 | 24 | 78 | 81 | 70 |
| 21 | 10 | 52 | 41 | 49 | 40 | 80 | 29 | 55 | 22 | 89 | 96 | 72 |
| 22 | 11 | 44 | 50 | 52 | 56 | 66 | 34 | 66 | 38 | 86 | 81 | 82 |
| 23 | 9 | 38 | 55 | 40 | 69 | 68 | 59 | 56 | 65 | 71 | 70 | 76 |
| 24 | 8 | 41 | 42 | 31 | 58 | 68 | 63 | 70 | 71 | 62 | 61 | 72 |
| 25 | 12 | 27 | 37 | 23 | 56 | 64 | 80 | 67 | 89 | 68 | 50 | 74 |
| 26 | 23 | 19 | 36 | 18 | 54 | 70 | 78 | 74 | 95 | 54 | 44 | 67 |
| 27 | 29 | 16 | 35 | 10 | 40 | 66 | 69 | 52 | 90 | 48 | 39 | 59 |
| 28 | 64 | 14 | 31 | 12 | 40 | 60 | 52 | 61 | 84 | 35 | 28 | 41 |
| 29 | 64 | 19 | 35 | 35 | 48 | 39 | 47 | 76 | 89 | 40 | 25 | 37 |
| 30 | 44 | 28 | 42 | 42 | 52 | 58 | 55 | 63 | 76 | 38 | 24 | 37 |
| 31 | 38 | 15 | | 52 | | 56 | | 66 | 66 | | 35 | |
| MEAN | 17.0 | 26.7 | 23.5 | 24.5 | 47.5 | 43.7 | 46.4 | 55.7 | 48.8 | 49.3 | 55.3 | 55.7 |

All Zürich Sunspot Numbers, R_z , for 1965 are Final. The numbers for 1966 are Provisional.AMERICAN, R_A

| | 1965 | | 1966 | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|-------|------|------|
| | DEC. | JAN. | FEB. | MAR. | APR. | MAY | JUNE | JULY | AUG. | SEPT. | OCT. | NOV. |
| 1 | 10 | 25 | 0 | 11 | 32 | 24 | 56 | 33 | 77 | 30 | 53 | 36 |
| 2 | 10 | 21 | 12 | 12 | 37 | 37 | 48 | 37 | 70 | 28 | 44 | 36 |
| 3 | 10 | 19 | 14 | 14 | 34 | 35 | 41 | 54 | 69 | 18 | 42 | 23 |
| 4 | 9 | 13 | 16 | 16 | 49 | 19 | 50 | 51 | 64 | 16 | 39 | 12 |
| 5 | 10 | 7 | 17 | 15 | 40 | 15 | 39 | 36 | 46 | 15 | 34 | 30 |
| 6 | 12 | 1 | 15 | 14 | 47 | 17 | 26 | 30 | 40 | 20 | 44 | 37 |
| 7 | 9 | 0 | 14 | 10 | 49 | 12 | 22 | 52 | 23 | 27 | 41 | 53 |
| 8 | 2 | 1 | 13 | 10 | 55 | 11 | 26 | 45 | 8 | 36 | 39 | 47 |
| 9 | 3 | 0 | 12 | 16 | 36 | 8 | 27 | 49 | 0 | 36 | 45 | 49 |
| 10 | 0 | 0 | 14 | 15 | 26 | 0 | 24 | 44 | 1 | 48 | 44 | 59 |
| 11 | 0 | 0 | 15 | 7 | 19 | 0 | 26 | 56 | 17 | 41 | 73 | 78 |
| 12 | 0 | 0 | 11 | 0 | 22 | 5 | 32 | 47 | 24 | 32 | 55 | 66 |
| 13 | 0 | 19 | 12 | 3 | 16 | 9 | 18 | 27 | 31 | 28 | 72 | 66 |
| 14 | 0 | 30 | 14 | 1 | 22 | 22 | 21 | 19 | 28 | 31 | 65 | 45 |
| 15 | 18 | 37 | 13 | 15 | 31 | 28 | 24 | 14 | 33 | 37 | 57 | 60 |
| 16 | 21 | 31 | 16 | 21 | 28 | 24 | 33 | 33 | 42 | 47 | 59 | 47 |
| 17 | 18 | 43 | 13 | 43 | 28 | 18 | 36 | 40 | 38 | 61 | 66 | 51 |
| 18 | 19 | 43 | 25 | 46 | 29 | 14 | 31 | 40 | 33 | 58 | 65 | 53 |
| 19 | 16 | 55 | 24 | 46 | 16 | 33 | 27 | 35 | 29 | 67 | 73 | 54 |
| 20 | 0 | 55 | 33 | 41 | 42 | 56 | 28 | 46 | 15 | 63 | 82 | 68 |
| 21 | 7 | 41 | 36 | 32 | 38 | 59 | 32 | 38 | 17 | 77 | 78 | 64 |
| 22 | 8 | 34 | 43 | 29 | 42 | 51 | 42 | 43 | 43 | 63 | 77 | 69 |
| 23 | 10 | 36 | 55 | 19 | 58 | 59 | 58 | 56 | 66 | 64 | 64 | 57 |
| 24 | 6 | 31 | 47 | 17 | 51 | 59 | 61 | 59 | 83 | 57 | 60 | 54 |
| 25 | 17 | 18 | 47 | 16 | 47 | 49 | 66 | 57 | 89 | 65 | 47 | 53 |
| 26 | 20 | 14 | 47 | 10 | 34 | 61 | 62 | 65 | 96 | 39 | 41 | 51 |
| 27 | 35 | 15 | 32 | 0 | 22 | 48 | 44 | 62 | 95 | 26 | 16 | 50 |
| 28 | 44 | 14 | 28 | 12 | 22 | 41 | 35 | 75 | 86 | 26 | 3 | 40 |
| 29 | 55 | 20 | 36 | 36 | 33 | 40 | 29 | 71 | 81 | 35 | 28 | 47 |
| 30 | 47 | 21 | 41 | 41 | 33 | 37 | 33 | 75 | 51 | 36 | 29 | 45 |
| 31 | 28 | 3 | | 32 | | 56 | | 75 | 33 | | 35 | |
| MEAN | 14.3 | 20.9 | 22.8 | 19.4 | 34.6 | 30.5 | 36.6 | 47.2 | 46.1 | 40.9 | 50.6 | 50.0 |

DAILY SOLAR FLUX AT 2800 Mc/s
OTTAWA ARO
OBSERVED FLUX, S

Ic

| | 1965 | | 1966 | | | | | | | | | |
|------|------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | DEC. | JAN. | FEB. | MAR. | APR. | MAY | JUNE | JULY | AUG. | SEPT. | OCT. | NOV. |
| 1 | 75.4 | 82.0 | 79.9 | 81.2 | 106.9* | 90.3 | 101.9 | 96.8 | 122.2 | 114.5 | 101.2 | 96.0 |
| 2 | 75.0 | 78.9 | 79.2* | 78.0 | 106.4 | 92.5 | 101.0 | 95.0 | 116.1 | 104.4 | 101.9 | 98.3 |
| 3 | 74.9 | 78.5 | 79.8 | 77.1 | 102.1 | 92.4 | 99.7 | 96.0 | 114.8* | 101.5 | 103.1 | 94.6 |
| 4 | 74.5 | 80.5 | 81.3 | 76.7 | 102.5 | 91.0 | 99.1 | 101.4 | 112.7* | 100.2 | 100.6* | 93.3 |
| 5 | 75.4 | 80.0 | 82.9 | 76.0 | 101.9 | 87.0 | 98.7 | 101.6 | 107.4 | 98.9 | 100.0 | 99.6 |
| 6 | 76.2 | 79.7 | 84.5 | 76.6 | 104.0 | 86.0 | 98.9 | 106.1 | 103.0 | 96.4 | 102.0* | 106.6 |
| 7 | 75.3 | 80.9 | 85.1 | 77.4 | 102.6* | 88.2 | 94.1 | 108.9 | 98.7 | 94.4* | 103.2 | 115.5 |
| 8 | 76.7 | 80.6 | 84.6 | 77.5 | 107.0* | 86.2 | 96.6 | 110.6 | 95.0 | 94.8* | 99.6 | 119.2 |
| 9 | 75.0 | 80.1 | 85.2 | 79.6 | 100.0 | 85.9 | 95.9 | 104.3 | 93.8 | 94.0 | 103.8 | 119.5 |
| 10 | 75.3 | 79.8 | 86.0 | 79.6 | 94.4 | 84.9 | 93.9 | 104.6* | 91.8 | 92.6 | 106.8 | 124.4 |
| 11 | 75.6 | 80.9 | 85.8* | 79.0 | 93.5 | 86.6 | 93.2 | 105.4 | 90.1 | 95.4 | 110.3 | 128.7 |
| 12 | 75.9 | 84.0 | 85.4 | 79.3 | 94.4 | 90.7 | 93.0 | 99.4 | 90.4 | 99.5* | 115.3 | 128.9 |
| 13 | 74.0 | 87.2 | 86.1 | 81.0 | 92.6 | 91.0 | 93.1 | 97.2 | 90.8 | 101.1 | 123.4* | 129.1 |
| 14 | 74.7 | 93.2 | 86.1 | 82.3 | 90.5 | 95.1 | 93.9 | 96.6 | 90.5 | 106.0 | 120.9 | 126.7 |
| 15 | 76.8 | 101.9 | 85.4 | 88.1* | 95.7 | 97.1 | 91.8 | 97.9 | 91.3 | 110.8 | 121.3 | 125.4 |
| 16 | 77.6 | 106.0 | 84.7 | 93.8* | 92.6 | 97.9 | 94.9 | 99.5 | 92.8 | 123.3* | 121.2* | 123.9 |
| 17 | 78.4 | 101.7* | 84.1 | 106.2* | 94.5 | 96.7 | 96.4 | 98.0 | 94.4 | 127.8 | 121.4* | 115.9 |
| 18 | 78.4 | 104.8* | 84.1 | 110.6 | 92.1 | 96.4 | 95.1 | 98.1 | 95.1 | 141.3 | 119.5* | 116.1 |
| 19 | 76.8 | 108.6* | 83.0 | 115.5 | 88.2 | 104.6* | 93.8 | 98.3 | 97.7 | 145.3 | 116.5* | 113.7 |
| 20 | 74.5 | 102.3 | 84.7* | 111.9 | 92.6 | 112.8* | 91.3 | 98.6 | 99.2 | 144.9* | 125.2 | 137.6 |
| 21 | 74.1 | 98.9 | 87.6 | 121.2 | 90.8 | 120.6 | 90.5 | 100.5 | 100.4 | 136.1 | 122.0* | 113.4* |
| 22 | 72.3 | 94.7* | 87.9 | 105.8 | 92.4 | 118.1 | 93.0 | 103.2 | 103.1 | 130.6* | 121.0* | 119.5 |
| 23 | 72.7 | 93.5 | 84.5* | 96.8 | 97.8 | 111.1 | 96.0 | 111.3 | 112.2 | 126.6* | 112.2 | 117.6* |
| 24 | 71.2 | 91.8 | 83.7 | 93.5 | 102.5 | 114.7 | 100.2 | 116.9 | 119.4* | 125.3 | 107.3 | 116.8 |
| 25 | 72.1 | 88.1 | 80.9 | 91.6 | 102.6* | 112.2 | 101.5* | 122.1 | 123.6* | 118.2* | 102.0 | 113.7 |
| 26 | 76.9 | 85.4 | 84.8 | 85.0 | 100.0* | 109.4 | 102.1* | 123.7 | 127.5 | 108.9 | 98.9 | 110.2 |
| 27 | 83.7 | 82.4 | 84.8 | 83.4 | 95.6 | 105.6 | 97.5 | 120.1 | 130.7 | 102.5 | 93.2 | 114.2* |
| 28 | 83.8 | 80.5 | 85.7 | 87.9 | 93.6 | | 98.1 | 120.5 | 130.0* | 97.5 | 95.4 | 107.0 |
| 29 | 84.7 | 80.7 | | 96.4 | 93.1 | 103.2 | 96.5 | 128.9 | 127.3 | 98.3 | 101.1 | 100.7 |
| 30 | 81.9 | 78.7 | | 99.2 | 91.9 | 98.8 | 97.4 | 124.2 | 123.8 | 95.4 | 97.1 | 97.3* |
| 31 | 80.8 | 77.7 | | 110.6 | | 102.7 | | 121.0 | 118.7 | | 98.6 | |
| MEAN | 76.5 | 87.9 | 84.2 | 90.3 | 97.2 | 98.3 | 96.3 | 106.7 | 106.5 | 110.9 | 108.6 | 113.3 |

FLUX ADJUSTED TO 1 A.U., S_a

| | 1965 | | 1966 | | | | | | | | | |
|------|------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | DEC. | JAN. | FEB. | MAR. | APR. | MAY | JUNE | JULY | AUG. | SEPT. | OCT. | NOV. |
| 1 | 73.3 | 79.3 | 77.6 | 79.7 | 106.8* | 91.7 | 104.8 | 100.1 | 125.9 | 116.6 | 101.4 | 94.6 |
| 2 | 72.9 | 76.3 | 76.9* | 76.7 | 106.3 | 94.0 | 103.9 | 98.2 | 119.6 | 106.3 | 102.0 | 96.7 |
| 3 | 72.7 | 75.9 | 77.5 | 75.8 | 102.1 | 94.0 | 102.6 | 99.3 | 118.2* | 103.2 | 103.2 | 93.1 |
| 4 | 72.3 | 77.8 | 79.0 | 75.5 | 102.6 | 92.5 | 102.0 | 104.8 | 116.0* | 101.9 | 100.6* | 91.7 |
| 5 | 73.2 | 77.4 | 80.6 | 74.8 | 102.0 | 88.6 | 101.7 | 105.0 | 110.5 | 100.5 | 100.0 | 97.9 |
| 6 | 74.0 | 77.1 | 82.1 | 75.5 | 104.2 | 87.5 | 101.9 | 109.7 | 106.0 | 97.9 | 101.9* | 104.7 |
| 7 | 73.0 | 78.2 | 82.8 | 76.2 | 102.8* | 89.9 | 96.9 | 112.6 | 101.5 | 95.8* | 103.1 | 113.4 |
| 8 | 74.4 | 77.9 | 82.3 | 76.4 | 107.3* | 87.8 | 99.5 | 114.4 | 97.7 | 96.2* | 99.4 | 116.9 |
| 9 | 72.7 | 77.4 | 82.9 | 78.5 | 100.3 | 87.5 | 98.9 | 107.8 | 96.4 | 95.3 | 103.5 | 117.2 |
| 10 | 73.0 | 77.2 | 83.8 | 78.6 | 94.8 | 86.6 | 96.8 | 108.1* | 94.3 | 93.9 | 106.5 | 121.9 |
| 11 | 73.2 | 78.2 | 83.6* | 78.0 | 93.9 | 88.3 | 96.1 | 109.0 | 92.5 | 96.6 | 109.8 | 126.1 |
| 12 | 73.5 | 81.2 | 83.2 | 78.3 | 94.8 | 92.6 | 95.9 | 102.7 | 92.8 | 100.8* | 114.8 | 126.2 |
| 13 | 71.7 | 84.3 | 83.9 | 80.0 | 93.1 | 92.9 | 96.1 | 100.4 | 93.2 | 102.4 | 122.8* | 126.4 |
| 14 | 72.4 | 90.1 | 83.9 | 81.4 | 91.0 | 97.2 | 96.9 | 99.8 | 92.8 | 107.4 | 120.3 | 124.0 |
| 15 | 74.4 | 98.5 | 83.3 | 87.1* | 96.3 | 99.2 | 94.7 | 101.1 | 93.7 | 112.0 | 120.6 | 122.6 |
| 16 | 75.1 | 102.6 | 82.7 | 92.9* | 93.2 | 100.1 | 97.9 | 102.8 | 95.1 | 124.6* | 120.3* | 121.2 |
| 17 | 75.9 | 98.4* | 82.1 | 105.1* | 95.2 | 98.9 | 99.5 | 101.2 | 96.8 | 129.1 | 120.5* | 113.2 |
| 18 | 75.9 | 101.4* | 82.2 | 109.6 | 92.9 | 98.7 | 98.2 | 101.3 | 97.5 | 142.6 | 118.5* | 113.4 |
| 19 | 74.3 | 105.1* | 81.1 | 114.6 | 89.0 | 107.1* | 96.9 | 101.5 | 100.0 | 146.6 | 115.6* | 111.1 |
| 20 | 72.1 | 99.0 | 82.8* | 111.0 | 93.5 | 115.5* | 94.3 | 101.8 | 101.6 | 146.0* | 124.1 | 110.9 |
| 21 | 71.7 | 95.7 | 85.7 | 120.3 | 91.7 | 123.6 | 93.5 | 103.7 | 102.7 | 137.2 | 120.9* | 110.7* |
| 22 | 70.0 | 91.8* | 86.0 | 105.1 | 93.4 | 121.0 | 96.1 | 106.5 | 105.5 | 131.5* | 119.8* | 116.5 |
| 23 | 70.3 | 90.6 | 82.7* | 96.2 | 98.8 | 113.9 | 99.2 | 114.9 | 114.7 | 127.5* | 111.1 | 114.7* |
| 24 | 68.8 | 88.9 | 81.9 | 92.9 | 103.7 | 117.7 | 103.5 | 120.6 | 122.0* | 126.0 | 106.1 | 113.8 |
| 25 | 69.7 | 85.4 | 79.3 | 91.1 | 103.8* | 115.1 | 104.8* | 126.0 | 126.3* | 118.8* | 100.8 | 110.7 |
| 26 | 74.4 | 82.7 | 83.1 | 84.7 | 101.3* | 112.3 | 105.6* | 127.6 | 130.2 | 109.4 | 97.7 | 107.3 |
| 27 | 80.9 | 79.9 | 83.2 | 83.1 | 96.0 | 108.5 | 100.8 | 123.8 | 133.4 | 102.9 | 92.0 | 111.1* |
| 28 | 81.0 | 78.1 | 84.1 | 87.6 | 94.9 | | 101.4 | 124.2 | 132.6* | 97.9 | 94.1 | 106.1 |
| 29 | 81.9 | 78.3 | | 96.1 | 94.5 | 106.8 | 99.8 | 132.9 | 129.8 | 98.6 | 99.7 | 98.0 |
| 30 | 79.2 | 76.3 | | 99.0 | 93.3 | 101.6 | 100.7 | 128.0 | 126.1 | 95.7 | 95.7 | 94.6* |
| 31 | 78.1 | 75.4 | | 110.4 | | 105.6 | | 124.6 | 120.9 | | 97.1 | |
| MEAN | 74.1 | 85.0 | 82.1 | 89.4 | 97.8 | 100.6 | 99.4 | 110.1 | 109.2 | 112.4 | 107.9 | 110.8 |

CALCIUM PLAGE AND SUNSPOT REGIONS

NOVEMBER 1966

| Nov. 1966 | LAT. | MCMATH PLAGE NUMBER | RETURN OF REGION | CALCIUM PLAGE DATA | | | | | | SUNSPOT DATA | | |
|--------------|------|---------------------------|------------------------|--------------------|-------|----------------------------|-------------------------|-----------------------|-------------------------|---|---|---|
| | | | | CMP VALUES | | HISTORY | AGE (ROTA- TIONS) | DATE FIRST SEEN | DURA- TION (DAYS) | CMP VALUES | | HISTORY |
| | | | | AREA | INT. | | | | | AREA | COUNT | |
| 2.4 | S23 | 8563 | 8528 | (2000) | (3.0) | <i>l</i> <i>l</i> <i>l</i> | 2 | 10/26 | ≥12 | {(10) (10) | (1) (4) | <i>l</i> - <i>d</i> <i>b</i> - <i>l</i> |
| 3.6 | N19 | 8569 | New | (500) | (2.0) | <i>b</i> - ? | 1 | 10/31 | >7 | | | |
| 5.8 | N23 | 8568 | 8530 | (3700) | (2.5) | <i>l</i> / ? | 6 | 10/29 | >9 | | | |
| 6.6 | N16 | 8571 | New | 1400 | 3.0 | <i>l</i> \ <i>l</i> | 1 | 10/31 | 13 | { 10 (10) | 25 (2) | <i>l</i> - <i>d</i> <i>b</i> - <i>d</i> |
| 8.2 | N24 | 8577 | New | (200) | (2.0) | <i>b</i> - <i>d</i> | 1 | 11/13 | 1 | | | |
| 10.2 | N18 | 8572 (1) | New | (3600) | (3.5) | <i>l</i> <i>l</i> <i>l</i> | 1 | 11/4 | 13 | {(10) 50 20 | (8) 14 14 | <i>b</i> - <i>d</i> <i>b</i> <i>l</i> <i>l</i> <i>b</i> <i>l</i> <i>l</i> |
| 11.9 | S27 | 8576 | New | (200) | (1.5) | <i>b</i> - <i>d</i> | 1 | ≤11/12 | ≥2 | | | |
| 13.4 | N14 | 8573 (2) | 8545 | 10000 | 3.0 | <i>l</i> <i>l</i> <i>l</i> | 3&4 | 11/6 | 15 | {420 220 10 (10) (10) (10) (10) | 30 53 7 (3) (1) (3) (3) | <i>l</i> <i>l</i> <i>l</i> <i>l</i> <i>l</i> <i>l</i> <i>b</i> - <i>d</i> <i>b</i> - <i>d</i> <i>b</i> - <i>d</i> <i>b</i> - <i>d</i> <i>b</i> - <i>d</i> |
| 16.6 | N14 | 8587 | New | (300) | (2.0) | <i>b</i> - <i>l</i> | 1 | 11/19 | 4 | {(10) 10 | (1) 5 | <i>b</i> - <i>d</i> <i>b</i> - <i>d</i> |
| 17.8 | N29 | 8574 | 8550 | (500) | (1.5) | <i>l</i> - <i>d</i> | 2 | <11/12 | >9 | | | |
| 18.8 | N19 | 8575 | New | (300) | (1.5) | <i>l</i> - <i>d</i> | 1 | 11/12 | 5 | | | |
| 19.3 | S15 | 8588 | New | 200 | 2.5 | <i>b</i> - ? | 1 | 11/19 | >4 | (20) | (9) | <i>b</i> - <i>d</i> |
| 20.1 | S23 | 8579 (3) | 8561 | 600 | 1.5 | <i>l</i> - <i>d</i> | 2 | 11/14 | 9 | | | |
| 20.3 | N23 | 8578 | 8553 | 3600 | 3.0 | <i>l</i> <i>l</i> <i>l</i> | 3 | 11/13 | 13 | { 90 (10) | 17 (1) | <i>l</i> <i>l</i> <i>l</i> <i>b</i> - <i>d</i> |
| 21.2 | S22 | 8581(4) | 8554 | 600 | 2.5 | <i>l</i> \ <i>l</i> | 3 | 11/15 | 12 | | | |
| 21.2 | N22 | 8589 | New | 2400 | 3.5 | <i>b</i> <i>l</i> <i>l</i> | 1 | 11/19 | 8 | 260 | 37 | <i>b</i> <i>l</i> <i>l</i> |
| 21.4 | N13 | 8583 | 8556 | 500 | 1.5 | <i>l</i> - <i>d</i> | 2 | <11/16 | >7 | | | |
| 22.4 | S23 | 8585(4) | 8554 | 600 | 1.5 | <i>l</i> - <i>l</i> | 3 | <11/18 | >5 | | | |
| 23.7 | N31 | 8584 | 8555 | (4800) | (3.5) | <i>l</i> <i>l</i> <i>l</i> | 2 | 11/16 | 15 | {140 (10) (10) | 17 (1) (6) | <i>l</i> <i>l</i> <i>l</i> <i>l</i> - <i>d</i> <i>b</i> <i>l</i> <i>l</i> |
| 25.2 | N22 | 8586 | 8566 | 1400 | 2.0 | <i>l</i> <i>l</i> <i>l</i> | 2 | 11/18 | 14 | | | |
| 25.4 | N45 | 8595 | New | (300) | (2.0) | <i>b</i> - <i>d</i> | 1 | 11/26 | ≥1 | | | |
| 27.4 | N21 | 8591 | 8567 | (1000) | (2.5) | <i>l</i> <i>l</i> <i>l</i> | 2 | 11/20 | 14 | (10) | (4) | <i>l</i> - <i>d</i> |
| 29.3 | S23 | 8592 (5) | 8563 | (700) | (2.5) | <i>l</i> <i>l</i> <i>l</i> | 3 | <11/25 | >9 | | | |
| 30.2 | N18 | 8593 | New | (2000) | (3.5) | <i>b</i> <i>l</i> <i>l</i> | 1 | <11/25 | >9 | 20 | 24 | <i>l</i> <i>l</i> <i>l</i> |

- (1) Region 8572 is primarily a new region, although it appears in the position of region 8539, which was a declining plage during the previous rotation.
(2) Region 8573 is a return of regions 8545 and 8546.
(3) Region 8579 is a return of part of region 8561.
(4) Regions 8581 and 8585 are a return of parts of region 8554.
(5) Region 8592 is a return of part of region 8563.

Regions 8580 and 8582 have been merged with 8578 and region 8590 has been merged with 8591.

Regions 8570 and 8596 have been omitted from this list because of their ephemeral nature and low intensity.

No calcium plage observations were secured at the McMath-Hulbert observatory on Nov. 2, 3, 5, 7, 8, 9, 10, 11, 17, 23, 24, 27, 28 and 29, 1966. The history of some of the regions contains uncertainties because of missing observations.

MT. WILSON MAGNETIC CLASSIFICATIONS OF SUNSPOTS

Iib

NOVEMBER 1966

| Nov. 1966 | TIME MEAS. UT | LAT. | MER. DIST. | TYPE | No. | Nov. 1966 | TIME MEAS. UT | LAT. | MER. DIST. | TYPE | No. |
|-----------|---------------|------|------------|-----------------|-------|-----------|---------------|------|------------|------------------------|---------|
| 1 | 1955 | N22 | W54 | (β) 1 | 16160 | 12 | 2155 | N13 | W37 | (β p) 4 | 16167 |
| | | N20 | W23 | (β f) 3 | 16161 | | | N24 | W43 | (α p) 3 | 16168 |
| | | N36 | W33 | (α p) 2 | 16162 | | | N15 | E05 | (β p) 5 | 16169 |
| | | N12 | E60 | (α p) 2 | 16163 | | | N08 | E02 | (α p) 6 | 16170 |
| 2 | 2300 | N23 | W70 | β | 16160 | 13 | 1630 | N11 | E02 | (β f) 2 | 16171* |
| | | N21 | W40 | β f | 16161 | | | N14 | W47 | (β p) 4 | 16167 |
| | | N37 | W49 | β p | 16162 | | | N25 | W55 | (α p) 3 | 16168 |
| | | N11 | E44 | α p | 16163 | | | N15 | W06 | (β γ) 5 | 16169 |
| 3 | 1610 | N23 | W79 | (α f) 1 | 16160 | 14 | No Obs. | N09 | W07 | (β γ) 5 | 16170** |
| | | N22 | W46 | (β f) 2 | 16161 | | | | | | |
| | | N37 | W59 | (β p) 2 | 16162 | | | | | | |
| | | N12 | E35 | (α p) 2 | 16163 | | | | | | |
| | | N15 | E43 | (α f) 2 | 16164 | | | | | | |
| | | N18 | E44 | (α f) 1 | 16165 | | | | | | |
| 4 | 1545 | N21 | W60 | (α f) 1 | 16161 | 15 | 2340 | N12 | W83 | α p | 16167 |
| | | N36 | W72 | (α p) 1 | 16162 | | | N09 | W40 | β p | 16170 |
| | | N13 | E26 | (β p) 1 | 16163 | | | N15 | W36 | β p | 16169 |
| | | S23 | W35 | (β p) 1 | 16166 | | | N19 | E58 | β p | 16172 |
| 5 | 2010 | N21 | W60 | (α f) 1 | 16161 | 16 | No Obs. | N09 | W62 | β p | 16170 |
| | | N36 | W72 | (α p) 1 | 16162 | | | N15 | W57 | α p | 16169 |
| | | N13 | E26 | (β p) 1 | 16163 | | | N22 | E27 | β p | 16172 |
| | | S23 | W35 | (β p) 1 | 16166 | | | N31 | E33 | α p | 16173 |
| 6 | No Obs. | N13 | E07 | (β p) 2 | 16163 | 17 | 1710 | N32 | E77 | α p | 16174 |
| | | N19 | E57 | (β f) 2 | 16167 | | | | | | |
| | | S21 | W57 | (α p) 2 | 16166 | | | | | | |
| 7 | No Obs. | N18 | E04 | (β f) 2 | 16167 | 18 | No Obs. | N14 | W88 | α p | 16169 |
| | | N22 | E05 | (β p) 3 | 16168 | | | N16 | E02 | (β p) 4 | 16175 |
| | | N13 | E49 | (α p) 5 | 16169 | | | N18 | E20 | (β p) 2 | 16172 |
| 8 | No Obs. | N07 | E45 | (α p) 6 | 16170 | 19 | 1900 | N30 | E55 | (β p) 5 | 16174 |
| | | N18 | E04 | (β f) 2 | 16167 | | | | | | |
| 9 | 1715 | N22 | E05 | (β p) 3 | 16168 | 20 | No Obs. | N19 | W24 | (β p) 4 | 16175 |
| | | N13 | E49 | (α p) 5 | 16169 | | | N23 | W04 | (β f) 6 | 16172 |
| | | N07 | E45 | (α p) 6 | 16170 | | | N29 | E27 | (α p) 5 | 16174 |
| | | N14 | W04 | (β p) 3 | 16167 | | | S17 | W33 | (β p) 2 | 16176 |
| 10 | 2200 | N23 | W11 | (β p) 2 | 16168 | 21 | 1715 | N19 | W24 | (β p) 4 | 16175 |
| | | N14 | E31 | (α p) 5 | 16169 | | | N23 | W04 | (β f) 6 | 16172 |
| | | N07 | E29 | (α p) 6 | 16170 | | | N29 | E27 | (α p) 5 | 16174 |
| | | N14 | W04 | (β p) 3 | 16167 | | | S17 | W33 | (β p) 2 | 16176 |
| 11 | 1605 | N18 | W26 | (α p) 1 | 16172 | 22 | No Obs. | N18 | E20 | (β p) 2 | 16172 |
| | | N24 | W24 | (β p) 3 | 16168 | | | N30 | E77 | α p | 16174 |
| | | N14 | W15 | (β p) 4 | 16167 | | | N17 | E76 | β f | 16177 |
| | | N15 | E21 | (β p) 5 | 16169 | | | N20 | W67 | β | 16175 |
| | | N11 | E21 | (β f) 2 | 16171 | | | N23 | W48 | β p | 16172 |
| | | N08 | E18 | (α p) 6 | 16170 | | | N30 | W17 | α p | 16174 |
| 12 | 2215 | N20 | W24 | (β p) 4 | 16167 | 23 | No Obs. | N20 | W67 | β | 16175 |
| | | N15 | E21 | (β p) 5 | 16169 | | | N23 | W48 | β p | 16172 |
| 13 | 2155 | N11 | E21 | (β f) 2 | 16171 | 24 | 2215 | N30 | W17 | α p | 16174 |
| | | N08 | E02 | (α p) 6 | 16170 | | | N17 | E76 | β f | 16177 |

MT. WILSON MAGNETIC CLASSIFICATIONS OF SUNSPOTS

NOVEMBER 1966

| Nov. 1966 | TIME MEAS. UT | LAT. | MER. DIST. | TYPE | No. | | TIME MEAS. UT | LAT. | MER. DIST. | TYPE | No. |
|--------------|---------------------|------|---------------|-----------------|-------|----|---------------------|------|-----------------|-----------------|-------|
| 25 | 1620 | N22 | W58 | (β p) 4 | 16172 | 29 | 1640 | N26 | W60 | (β) 3 | 16178 |
| | | N30 | W20 | (α f) 2 | 16174 | | | N17 | E08 | (β f) 2 | 16177 |
| | | N23 | W08 | (β) 1 | 16178 | | | N23 | E36 | (β f) 3 | 16179 |
| | | N17 | E63 | (β f) 4 | 16177 | | | S17 | W05 | (α p) 1 | 16180 |
| 26 | 2320 | N21 | W78 | (β p) 3 | 16172 | 30 | 2210 | S28 | E22 | (α p) 1 | 16181 |
| | | N29 | W43 | (α p) 3 | 16174 | | | N24 | W77 | (β f) 2 | 16178 |
| | | N23 | W25 | (β) 1 | 16178 | | | N17 | W07 | (β f) 2 | 16177 |
| | | N16 | E44 | (β f) 3 | 16177 | | | N25 | E19 | (β f) 3 | 16179 |
| 27 | No Obs. | | | | | | N12 | E80 | (α f) 2 | 16182 | |
| 28 | 1800 | N29 | W65 | α p | 16174 | | | | | | |
| | | N25 | W47 | β | 16178 | | | | | | |
| | | N19 | E24 | β p | 16177 | | | | | | |

* Polarities reversed from those of previous day.

** No. 16171 becomes part of No. 16170.

*** This appears to be the fourth disk passage of this group.

SOLAR FLARES

PRELIMINARY

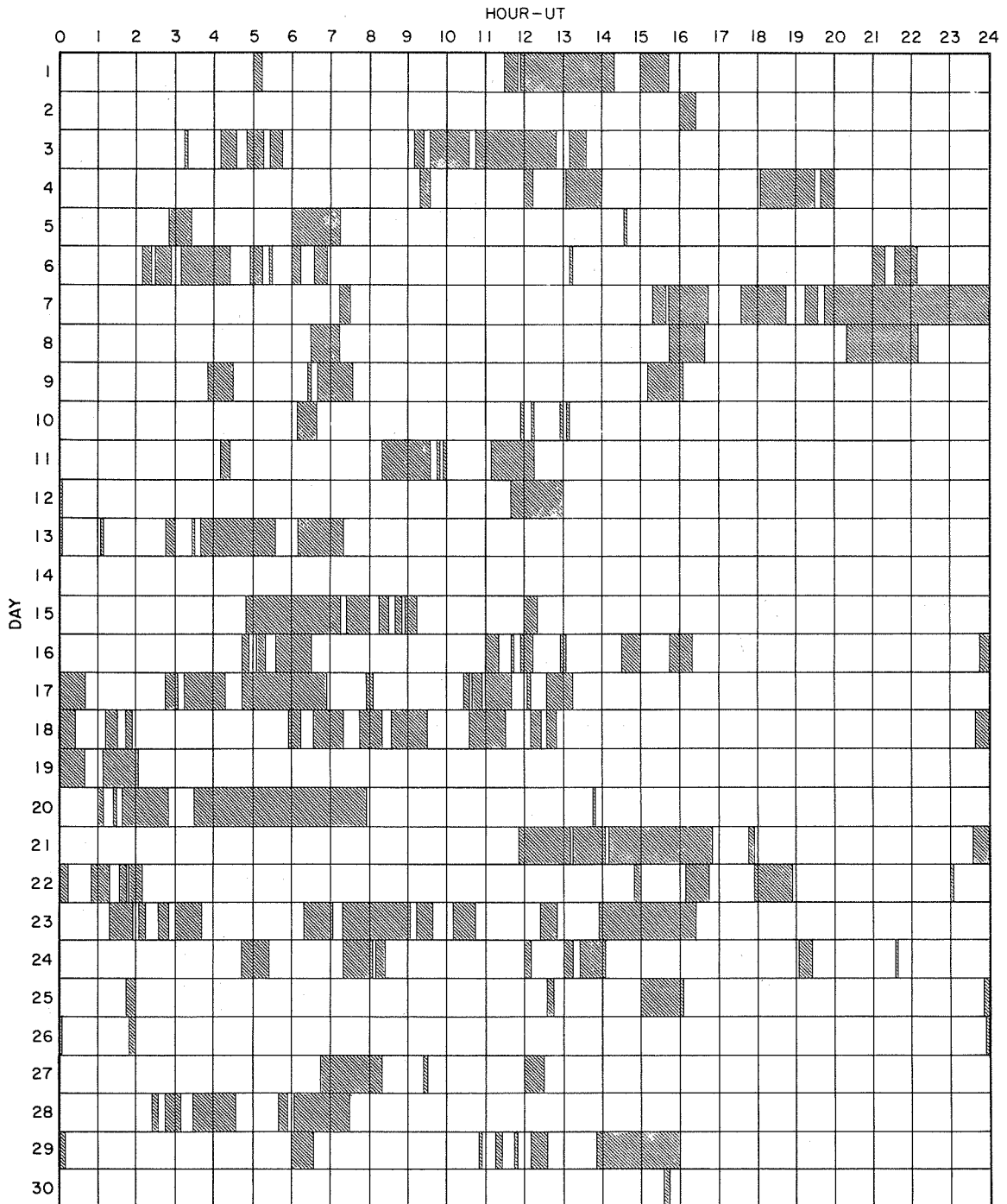
NOVEMBER 1966

| OBSERVATORY | OBSERVED UT | | | | LOCATION | | | | DURATION — MIN. | IM- POR- TANCE | OBS. | | MEASUREMENTS | | | | | REMARKS | |
|-------------|-------------|-------|-------|------------|----------|------------|------------------|----------------------|-----------------------|----------------------|---------|-------|--------------|---------|---------------------|---------------------|---------------|---------|-------------|
| | DATE | START | END | MAX. PHASE | APPROX. | | CENTRAL DISTANCE | MC MATH PLAGE REGION | | | CMP DAY | COND. | TYPE | TIME UT | MEAS. AREA Sq. Deg. | CORR. AREA Sq. Deg. | MAX. WIDTH Hg | | MAX. INT. % |
| | | | | | LAT. | MER. DIST. | | | | | | | | | | | | | |
| | 1966 | | | | | | | | | | | | | | | | | | |
| | NOV | | | | | | | | | | | | | | | | | | |
| HALE | 27 | 2320 | 2342 | 2322 | N28 | W37 | .698 | 8586 | 25.2 | 22 | -N | 1 | C | 2321 | .41 | .60 | | | |
| IKOM | 27 | 2355E | 0015 | | N20 | W90 | 1.000 | 8589 | 21.2 | 200 | -F | | V | | | | | | |
| IKOM | 28 | 0035E | 0051D | | N20 | W90 | 1.000 | 8589 | 21.3 | 160 | -N | | V | 0040 | | | | 95 | |
| HALE | 28 | 0104 | 0114 | 0107 | N26 | W40 | .716 | 8586 | 25.0 | 10 | -B | 1 | C | 0107 | .31 | .40 | | | |
| IKOM | 28 | 0156E | 0218D | 0200 | N15 | E27 | .500 | 8593 | 30.1 | 220 | 1N | | V | 0200 | 1.75 | 2.10 | | 100 | |
| HALE | 28 | 0209E | 0216D | 0210U | N14 | E27 | .493 | 8593 | 30.1 | 70 | -B | 1 | P | 0210 | 1.03 | 1.20 | | | |
| HALE | 28 | 0242 | 0246D | 0245 | N26 | W40 | .716 | 8586 | 25.1 | 40 | -N | 1 | P | 0245 | .31 | .40 | | | |
| CAPS | 28 | 0823E | 0854 | | N26 | W40 | .716 | 8586 | 25.3 | 310 | -B | 3 | | 0835 | 2.10 | 2.90 | | 208 | |
| CATA | 28 | 0828E | 0850D | 0833 | N25 | W41 | .721 | 8586 | 25.3 | 220 | -B | | | 0833 | 1.09 | 1.63 | | 240 | |
| CAPF | 28 | 0830E | 0910 | | N26 | W40 | .716 | 8586 | 25.4 | 400 | 2N | | P | 0830 | 4.70 | 6.61 | | | |
| ARCE | 28 | 0838E | 0858D | | N28 | W42 | .745 | 8586 | 25.2 | 200 | 1B | | C | 0842 | 3.01 | 4.50 | | | |
| CAPF | 28 | 0832E | 0910 | | N21 | W90 | 1.000 | 8589 | 21.6 | 380 | | | P | | | | | | |
| MONT | 28 | 1112E | 1200 | | N34 | W61 | .910 | 8584 | 23.9 | 480 | -N | | | 1112 | | 1.20 | | | |
| HALE | 28 | 1720 | 1750 | 1727 | N18 | E19 | .423 | 8593 | 30.1 | 30 | -N | 1 | C | 1727 | .41 | .50 | | | |
| HALE | 28 | 2140 | 2155 | 2144 | N33 | W61 | .908 | 8584 | 24.3 | 15 | -N | 1 | C | 2144 | .26 | .30 | | | |
| HALE | 28 | 2200 | 2215 | 2201 | N24 | W50 | .803 | 8586 | 25.2 | 15 | -B | 1 | C | 2201 | .52 | .90 | | | |
| HALE | 29 | 0122 | 0140 | 0125 | S26 | E29 | .629 | 8597 | 1.2 | 18 | -N | 2 | C | 0125 | .41 | .50 | | | |
| MANI | 29 | 0124 | 0133D | 0128 | S26 | E02 | .458 | 8592 | 29.2 | 90 | -N | 2 | C | 0128 | .21 | .26 | | | |
| HALE | 29 | 0226 | 0236 | 0227 | S25 | E30 | .631 | 8597 | 1.4 | 10 | -F | 2 | C | 0227 | .26 | .30 | | | |
| CATA | 29 | 0900E | 0935D | 0910 | N17 | E13 | .348 | 8593 | 30.4 | 350 | -B | | | 0910 | .85 | .91 | | 210 | |
| ISTA | 29 | 0902 | 0935 | | N18 | E14 | .370 | 8593 | 30.4 | 33 | -F | | | | | | | | |
| LOCK | 29 | 1712 | 1742 | 1716 | S26 | E22 | .566 | 8597 | 1.4 | 30 | -N | | C | 1716 | .60 | .70 | | 20 | |
| HALE | 29 | 1713 | 1747 | 1717 | S26 | E21 | .558 | 8597 | 1.3 | 34 | -B | 2 | C | 1717 | .46 | .60 | | | |
| SACP | 29 | 1714 | 1732 | 1720 | S27 | E22 | .577 | 8597 | 1.4 | 18 | -N | | C | | 1.17 | 1.24 | | | |
| LOCK | 29 | 1742 | 1815 | 1750 | N17 | E10 | .320 | 8593 | 30.5 | 33 | -N | | C | 1750 | .90 | 1.00 | | 20 | |
| HALE | 29 | 1744 | 1812 | 1747 | N18 | E06 | .306 | 8593 | 30.2 | 28 | -N | 2 | C | 1747 | .72 | .80 | | | |
| LOCK | 29 | 2008 | 2036 | 2013 | N33 | W77 | .980 | 8584 | 24.1 | 28 | 1N | | C | 2013 | 1.00 | 3.10 | | 20 | |
| HALE | 29 | 2012 | 2040 | 2014 | N33 | W77 | .980 | 8584 | 24.1 | 28 | 1B | 2 | C | 2014 | .72 | | | | |
| MANI | 30 | 0007E | 0018 | 0010 | N18 | W01 | .292 | 8593 | 29.9 | 110 | -F | 2 | | 0010 | .52 | .54 | | | |
| MANI | 30 | 0446 | 0524 | 0501 | N24 | W67 | .931 | 8586 | 25.2 | 38 | -N | 2 | | 0501 | .36 | .76 | | | |
| MANI | 30 | 0628 | 0641 | 0632 | N17 | W01 | .275 | 8593 | 30.2 | 13 | -F | 2 | | 0632 | .26 | .27 | | | |
| LOCK | 30 | 1627 | 1730 | 1633 | N15 | W06 | .262 | 8593 | 30.2 | 63 | 1B | | C | 1633 | 4.00 | 4.00 | | 40 | |
| SACP | 30 | 1628 | 1715 | 1634 | N16 | W05 | .271 | 8593 | 30.3 | 47 | 1N | | C | | 3.21 | 3.15 | | | |
| HALE | 30 | 1755E | 1830 | 1801U | N17 | W05 | .287 | 8593 | 30.4 | 350 | -N | 1 | P | 1801 | .52 | .53 | | | |

INTERVALS OF NO FLARE PATROL OBSERVATIONS PROVISIONAL

IIIg

NOVEMBER 1966



Observatories included:

- | | | | | |
|-------------------|--------------|------------|-------------|-----------------|
| Arcetri | Haleakala | Kandilli | Manila | Sacramento Peak |
| Capri-G (German) | Herstmonceux | Kodaikanal | Meudon | Tortosa |
| Capri-S (Swedish) | Ikomasan | Lockheed | Monte Mario | Wendelstein |
| Catania | Istanbul | Locarno | Ondrejov | Zürich |

SOLAR FLARES

AUGUST 1966

Table with columns: OBSERVATORY, OBSERVED UT (DATE, START, END, MAX. PHASE), LOCATION (APPROX. LAT., MER. DIST., CENTRAL DISTANCE, MCMATH PLAGE REGION, CMP DAY), DURATION (MIN.), IMPOR-TANCE, OBS. COND., TYPE, MEASUREMENTS (TIME UT, MEAS. AREA Sq. Deg., CORR. AREA Sq. Deg., MAX. WIDTH Hg, MAX. INT. %), and REMARKS.

SOLAR FLARES

AUGUST 1966

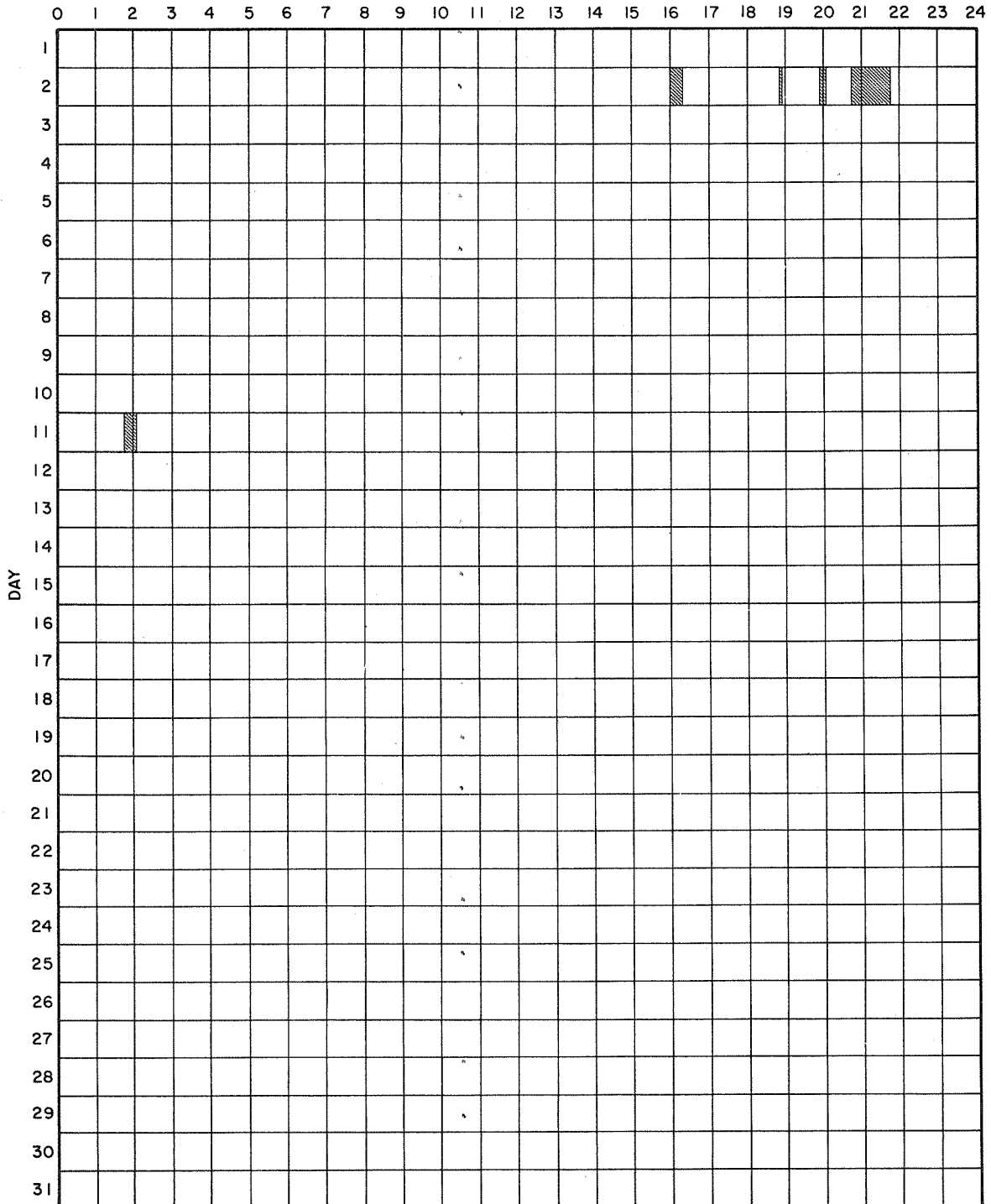
Table with columns: OBSERVATORY, OBSERVED UT (DATE, START, END, MAX. PHASE), LOCATION (APPROX. LAT., MER. DIST., CENTRAL DISTANCE, MCMATH PLAGE REGION, CMP DAY), DURATION (MIN.), IMPOR-TANCE, OBS. (COND., TYPE), MEASUREMENTS (TIME UT, MEAS. AREA, CORR. AREA, MAX. WIDTH, MAX. INT.), and REMARKS.

INTERVALS OF NO FLARE PATROL OBSERVATIONS PROVISIONAL

III.s

AUGUST 1966

HOUR-UT



Observatories included:

| | | | | | |
|------------|-------------------|-----------|------------|-----------------|-------------|
| Abastumani | Capri-S (Swedish) | Huancayo | Kodaikanal | McMath-Hulbert | Tachkent |
| Arcetri | Catania | Ikomaşan | Locarno | Mitaka | Tortosa |
| Arosa | Climax | Istanboul | Lockheed | Ondrejov | Voroshilov |
| Athens | Culgoora | Kandilli | Manila | Sacramento Peak | Wendelstein |
| Bakou | Haleakala | Kharkov | Meudon | Siberie | Zürich |
| Bucaresti | Herstmonceux | Kiev | | | |

IONOSPHERIC EFFECTS OF SOLAR FLARES

OCTOBER 1966

| OCT | UNIVERSAL TIME | | | WIDE SPREAD INDEX | SWF TYPE | IMP | IMPORTANCE | | | | | BUR | STATIONS | KNOWN FLARE |
|------|----------------|------|-------|-------------------|----------|-----|------------|------|-----|-----|-----|-----|---|-------------|
| | START | END | MAX | | | | ABS | SCNA | SEA | SPA | SES | | | |
| 1966 | | | | | | | | | | | | | | |
| 17 | 1015U | 1110 | 1045 | 1 | | | | | | | | | A17 | 1010E |
| 18 | 1939 | 1943 | | 5 | | | | | | | | 2 | MC BO HA | 1937 |
| 20 | 1612 | 1615 | | 4 | | | | | | | | 1+ | MC BO | 1612 |
| 20 | 2039 | 2100 | 2046 | 4 | | | 05 | 1 | | | | | MC BO | 2037E |
| 20 | 2040 | 2055 | 2044U | 1 | SL 1- | | | | | | | | MC | |
| 20 | 2040 | 2300 | 2050 | 1 | | | | | | 36 | | | HA(WWVL20-36) | |
| 20 | 2154 | 2156 | 2155 | 1 | | | | | | | 12 | | HA(WWVH10-12,WWVH5-10) | 2153 |
| 20 | 2155 | 2159 | | 5 | | | | | | | | 2 | HA MC | |
| 22 | 2217 | 2351 | 2222 | 4 | | | | | | | | | MA(NPG18-22) | 2212 |
| | | | | | | | | | | | | | HA(WWVL20-22) | |
| 23 | 0205 | 0230 | | 4 | S 1 | | | | | | | | OK MA | 0208 |
| 23 | 0206 | 0226 | 0210 | 1 | | | | | | 20 | | | MA(NPG18-20) | |
| 23 | 0234 | 0303 | 0240 | 1 | | | | | | 43 | | | MA(NPG18-43) | 0234 |
| 23 | 0235 | 0315 | 0240 | 4 | S 1 | | | | | | | | OK MA | |
| 23 | 0236 | 0246 | 0240 | 1 | | | | | | | | | MA | |
| 23 | 0615 | 0800 | 0640 | 5 | G 2 | 10 | 1- | | | | | | AN MA | 0628 |
| 23 | 0955 | | 1015 | 1 | | | | | | 32 | | | UM(GBZ19-32) | |
| 23 | 1003 | | 1010 | 1 | | | | | | | 1 | | UM | |
| 23 | 1024 | 1115 | 1035 | 1 | | | | | | | 2+ | | UM | |
| 23 | 1025 | 1130 | 1035 | 1 | | | | | | 32 | | | UM(GBZ19-32) | |
| 23 | 1420 | 1530 | 1432 | 2 | | | | | | | 2 | | A1 A18 | 1423 |
| 23 | 1420 | 1545 | 1442 | 5 | | | | | | 99 | | | BO(WWVL20-360,NBA24-45, NPM26-125) | |
| | | | | | | | | | | | | | UM(WWVL20-99,GBZ19-16) | |
| 23 | 1424 | 1520 | 1430 | 5 | SL 2+ | | | | | | | | MC BA BE BO GS HU TN TR | |
| 23 | 1424 | 1545 | | 5 | | | | 2 | | | | | RO A1 A5 A6 A17 | |
| 23 | 1425 | 1520 | 1434 | 5 | | 30 | 1 | | | | | | RO MC BO | |
| 23 | 1940 | 2015 | 1953 | 1 | | | | | | | 2 | | A18 | 1905 |
| 23 | 1941 | | | 5 | | | | | | 99 | | | BO(WWVL20-115,NPM26-42, NBA24-15) HA(WWVL20-22) | |
| 23 | 2055 | 2130 | 2102 | 5 | SL 1+ | | | | | | | | HU AN BE BO MC TO | 2055 |
| 23 | 2055 | 2310 | 2115 | 5 | | | | | | 99 | | | BO(WWVL20-170,NPM26-70) | |
| | | | | | | | | | | | | | AN(NPM26-75) | |
| 23 | 2058 | 2128 | 2106 | 5 | | 23 | 1 | | | | | | HA(WWVL20-65) | |
| 23 | 2100 | 2145 | 2115 | 3 | | | | 2 | | | | | BO MC HA | |
| 23 | 2100 | 2200 | 2107 | 1 | | | | | | | 3 | | A1 A5 A18 | |
| 23 | 2100 | 2200 | 2107 | 1 | | | | | | | | | A18 | |
| 23 | 2237 | 2302 | 2239 | 1 | S 1- | | | | | | | | MA | 2231 |
| 23 | 2238 | 2330 | 2243 | 1 | | | | 1- | | | | | MA | |
| 23 | 2239 | 2306 | 2243 | 1 | | | | | | 28 | | | MA(NPG18-28) | |
| 23 | 2351 | 0040 | | 4 | SL 2 | | | | | | | | OK MA | 2350 |
| 23 | 2351 | 2355 | 2353 | 1 | | | | | | | 12 | | HA(WWVH10-12,WWVH5-7) | |
| 24 | 0006 | 0047 | 0018 | 1 | | | | | | 47 | | | MA(NPG18-47) | |
| 24 | 0028 | 0037 | 0032 | 1 | | | | | | | 2 | | BO(WW18-0.2) | |
| 24 | 0120 | 0136 | 0132 | 1 | | 6 | 1- | | | | | | MA | 0120E |
| 24 | 0120 | 0200 | 0124 | 4 | G 1 | | | | | | | | OK MA | |
| 24 | 0121 | 0201 | 0127 | 1 | | | | | | 37 | | | MA(NPG18-37) | |
| 24 | 0249 | 0302 | 0252 | 1 | S 1- | | | | | | | | MA | |
| 24 | 0250 | 0315 | 0305 | 1 | | | | | | 37 | | | MA(NPG18-37) | |
| 24 | 0340 | 0401 | 0346 | 1 | | | | | | 32 | | | MA(NPG18-32) | |
| 24 | 0340 | 0401 | 0346 | 1 | G 1- | | | | | | | | MA | |
| 24 | 1455 | 1555 | 1515 | 1 | | | | | | | 3 | | UM | 1420 |
| 24 | 1500 | 1530 | 1511 | 5 | | | | | | 99 | | | BO(WWVL20-160) | |
| | | | | | | | | | | | 25 | | UM(GBZ19-39,WWVL20-36) | |
| 24 | 1502 | 1505 | 1503 | 1 | | | | | | | | | BO | |
| 24 | 1503 | | 1508 | 1 | | | | 1- | | | | | A17 | |
| 24 | 2250 | 2328 | 2304 | 4 | SL 1+ | | | | | | | | MA OK | 2252 |
| 24 | 2251 | 2333 | 2301 | 4 | | | | | | 43 | | | MA(NPG18-43) | |
| 24 | 2251 | 2333 | 2301 | | | | | | | | | | HA(WWVL20-32) | |
| 25 | 0415 | 0450 | 0430 | 4 | G 1+ | | | | | | | | OK MA | * |
| 25 | 0418 | 0540 | 0432 | 1 | | | | | | | 1 | | ND | |
| 25 | 0419 | 0442 | 0427 | 1 | | | | | | 36 | | | MA(NPG18-36) | |
| 25 | 0421 | 0437 | 0427 | 1 | | | | | | | | | MA | |
| 25 | 0727 | 0742 | 0733 | 1 | SL 1 | 7 | 1- | | | | | | OK | |
| 25 | 0727 | 0742 | 0733 | 1 | | | | | | 16 | | | MA(NPG18-16) | |
| 26 | 0500 | 0550 | 0530 | 2 | | | | | | 90 | | | AN(WWVL20-90,NSS21-70) | |
| 26 | 0500 | 0630 | 0530 | 1 | SL 2+ | | | | | | | | AN | |
| 26 | 0500 | 0930 | 0530 | 1 | | | | 2 | | | | | AN | |

CI = Las Palmas, Canary Islands TN = Tangiers, Morocco
 Ft. Monmouth ceased observation of SWFs in September 1966.

RIOMETER EVENTS

IIIw

OCTOBER 1966

Great Whale River

30 Mc/s

| OCT. 1966 | START UT | END UT | MAX UT | MAX. ABS. .10B | NO. OF PKS | OCT. 1966 | START UT | END UT | MAX UT | MAX. ABS. .10B | NO. OF PKS |
|--------------|-------------|-----------|-----------|----------------------|------------------|--------------|-------------|-----------|-----------|----------------------|------------------|
| 02 | 0350 | 1448 | 0920 | 7 | 3 | | | | | | |
| 03 | 0430 | 0930 | 0548 | 7 | 1 | | | | | | |
| 04 | 0250 | | | | | 18 | 0624 | | | | |
| 06 | | 2240 | 0540 | 120 | 25 | 19 | | 2253 | 1936 | 14 | 5 |
| 07 | 0200 | 2300 | 0500 | 50 | 5 | 20 | 0250 | 0600 | 0414 | 6 | 3 |
| 08 | 0151 | 2333 | 0842 | 14 | 8 | 21 | 0700 | 2204 | 1348 | 11 | 2 |
| 09 | 0144 | 2238 | 1215 | 32 | 16 | 22 | 0533 | * | 1425 | 5 | 1 |
| 10 | 0155 | 2320 | 1331 | 10 | 2 | 23 | 1251 | 2223 | 1435 | 4 | 1 |
| 11 | * | | | | | 24 | * | 0820 | 0437 | 4 | 3 |
| 12 | | 2226 | 2013 | 20 | 4 | 24 | 1230 | 2138 | 1550 | 7 | 4 |
| 13 | 0300 | | 1215 | | | 25 | 0100 | 2359 | 1357 | 60 | 13 |
| 14 | | 1006 | | 24 | 13 | 26 | 0234 | 2200 | 1541 | 56 | 8 |
| 15 | 0116 | 1030 | 0617 | 5 | 2 | 27 | 0018 | 1022 | 0247 | 24 | 2 |
| 16 | 1646 | | | | | 29 | 0248 | 0820 | 0644 | 7 | 1 |
| 17 | | 0520 | 0732 | | | 30 | 0115 | 0658 | 0511 | 11 | 3 |
| | | | | 50 | 17 | 30 | 1334 | | | | |
| | | | | | | 01 | | | 1227 | | |
| | | | | | | 02 | | 0840 | | 74 | 27 |

* TIME NOT KNOWN DUE TO EQUIPMENT FAILURE OR OTHER CAUSE.

THIS TABULATION SHOWS ALL EVENTS STARTING ON ANY DAY OF THIS MONTH.
 SEE PREVIOUS MONTH TABLE FOR EVENTS WHICH MAY NOT HAVE ENDED BY
 THE FIRST DAY OF THIS MONTH.
 MAX IS THE TIME OF EVENT MAXIMUM.
 ABS IS ABSORPTION.
 PKS IS PEAKS.

NO DATA ZEROS FOR ALL VALUES OF A DAY.

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

NOVEMBER 1966

| DATE | FREQUENCY STATION | TYPE | STARTING TIME | TIME OF MAXIMUM | DURATION | FLUX DENSITY $10^{-22} \text{ Wm}^{-2} (\text{c/s})^{-1}$ | | INT. | REMARKS |
|-----------|-------------------|------|---------------|-----------------|----------|--|------|------|---------|
| | | | UT | UT | MINUTES | PEAK | MEAN | | |
| 2 | 10700 PENN | 20 | 1722.1 | 1723.9 | 15.7 | 9.3 | 2.9 | | |
| | 8800 SGMR | 1 | 1722 | 1724 | 4.5 | 4.4 | 2.5 | | |
| | 4995 SGMR | 3 | 1721.5 | 1722.8 | 5.3 | 13.2 | 6.5 | | |
| | 2800 OTTA | 4 | 1719 | 1714 | 9 | 28.0 | 11.0 | | |
| | 2700 PENN | 20 | 1715.2 | 1723.9 | 58 | 30.4 | 4.0 | | |
| | 2695 SGMR | 3 | 1721 | 1724 | 12 | 22.6 | 11.2 | | |
| | 1415 SGMR | 45 | 1719.3 | 1724.5 | 11.7 | 30.2 | 14.7 | | |
| | 606 SGMR | 45 | 1719.7 | 1723.3 | 8 | 40.1 | 7.6 | | |
| | 2800 OTTA | 29 | 1728 | | 30 | 2.0 | 1.0 | | |
| 3 | 2800 OTTA | 21 | 1852 | 1901 | 30 | 1.6 | 0.8 | | |
| | 8800 SGMR | 1 | 1858 | 1859.9 | 5 | 4.6 | 1.6 | | |
| | 4995 SGMR | 1 | 1858 | 1859.9 | 5 | 4.4 | 1.5 | | |
| | 2800 OTTA | 4 | 1857 | 1859.7 | 4 | 8.6 | 4.3 | | |
| | 2700 PENN | 3 | 1852.6 | 1859.8 | 7 D | 10.4 | 2.0D | | |
| | 2695 SGMR | 3 | 1857.5 | 1859.9 | 5.5 | 9.1 | 3.0 | | |
| | 1415 SGMR | 1 | 1857.5 | 1859.9 | 5.5 | 3.0 | 1.0 | | |
| 5 | 606 SGMR | 3 | 1238.4 | 1238.5 | .2 | 87.4 | 43.8 | | |
| | 2700 PENT | 2 | 2321 | 2322.2 | 2 | 6.0 | 3.0 | | |
| 6 | 2800 OTTA | 21 | 1334 | 1412 | 80 | 3.6 | 2.0 | | |
| | 2800 OTTA | 1 | 1437.2 | 1437.4 | .5 | 2.0 | 1.0 | | |
| | 1415 SGMR | 20 | 1440 | 1442.4 | 8 | 2.6 | 1.0 | | |
| 7 | 10700 PENN | 24 | 1815.6 | 1851.5 | 180 D | 30.5 | 20.0 | | |
| | 8800 SGMR | 22 | 1824 | 1847.4 | 185 D | 22.4 | 6.5 | | |
| | 4995 SGMR | 22 | 1808 | 1847.3 | 201 D | 18.0 | 6.0 | | |
| | 2800 OTTA | 25 | 1800 | | 50 | 7.4 | | | |
| | 2800 OTTA | 1 | 1846.5 | 1847.5 | 1.5 | 1.6 | 0.8 | | |
| | 2700 PENN | 24 | 1803 | 2007 | 180 D | 13.2 | 10.7 | | |
| | 2695 SGMR | 22 | 1758 | 1847.3 | 211 D | 13.4 | 4.4 | | |
| 1415 SGMR | 22 | 1751 | 1847.3 | 218 D | 6.4 | 2.1 | | | |
| 8 | 2700 PENT | 1 | 2054 | 2054.5 | 1.5 | .8 | 0.4 | | |
| 10 | 2800 OTTA | 26 | 1500 | 1510 | 20 | -1.4 | -0.7 | | |
| | 2800 OTTA | 1 | 1520 | 1520.5 | 1 | 1.4 | 0.7 | | |
| | 2800 OTTA | 20 | 1843 | 1848 | 12 | 1.8 | 0.9 | | |
| | 2700 PENT | 20 | 2215 | 2017 | 60 | 1.4 | 0.7 | | |
| 11 | 2800 OTTA | 20 | 1325 | 1333 | 45 | 3.0 | 1.5 | | |
| | 2800 OTTA | 20 | 1545 | 1557 | 20 | 2.0 | 1.0 | | |
| | 2800 OTTA | 21 | 1700 | 1730 | 85 | 3.2 | 1.6 | | |
| | 8800 SGMR | 20 | 1750 | 1802.5 | 30 | 3.8 | 1.2 | | |
| | 4995 SGMR | 20 | 1750 | 1801.5 | 30 | 8.6 | 2.5 | | |
| | 2800 OTTA | 1 | 1800.5 | 1802 | 2 | 4.0 | 2.0 | | |
| | 2695 SGMR | 20 | 1750 | 1802.3 | 30 | 7.1 | 2.0 | | |
| | 1415 SGMR | 20 | 1750 | 1805 | 31 | 3.8 | 1.2 | | |
| | 8800 SGMR | 40 | 1934 | 1938.5 | 16 | 7.0 | 3.5 | | |
| | 4995 SGMR | 40 | 1930 | 1938 | 20 | 8.6 | 4.3 | | |
| | 2800 OTTA | 20 | 1920 | 1935 | 55 | 3.0 | 1.5 | | |
| | 2695 SGMR | 40 | 1930 | 1937 | 23 | 5.9 | 2.9 | | |
| | 1415 SGMR | 40 | 1934 | 1941.3 | 16 | 1.7 | 0.8 | | |
| | 2700 PENT | 4 | 2149 | 2151.2 | 4 | 16.4 | 8.2 | | |
| 2800 OTTA | 29 | 2153 | | 15 | 1.8 | 0.9 | | | |
| 12 | 2800 OTTA | 20 | 1720 | 1730 | 25 | 2.4 | 1.2 | | |
| | 2800 OTTA | 20 | 1842 | 1845 | 7 | 1.0 | 0.5 | | |
| | 2800 OTTA | 20 | 1903 | 1910 | 45 | 2.4 | 1.2 | | |
| 13 | 2800 OTTA | 20 | 1343 | 1345.5 | 7 | 2.0 | 1.0 | | |
| | 2800 OTTA | 1 | 1955 | 1956 | 2 | 2.0 | 1.0 | | |
| | 2800 OTTA | 1 | 2106.5 | 2108 | 2 | 2.6 | 1.3 | | |
| | 2700 PENT | 21 | 2058 | 2115 | 62 | 3.0 | 2.2 | | |
| 14 | 2700 PENT | 20 | 2040 | 2115 | 80 | 2.8 | 1.4 | | |
| 15 | 8800 SGMR | 1 | 1325.3 | 1325.8 | 2 | 2.8 | 1.5 | | |
| | 4995 SGMR | 1 | 1325.3 | 1325.7 | 2.2 | 6.8 | 3.4 | | |
| | 2800 OTTA | 20 | 1324 | 1326 | 9 | 1.6 | 0.8 | | |
| | 2800 OTTA | 22 | 1910 | 1932 | 80 | 6.6 | 3.3 | | |
| 16 | 2800 OTTA | 20 | 1427 | 1435 | 70 | 4.0 | 2.0 | | |
| | 2800 OTTA | 1 | 1753 | 1753.5 | 1.5 | .8 | 0.4 | | |
| | 2800 OTTA | 20 | 1955 | 2015 | 55 | 2.0 | 1.0 | | |
| 17 | 2800 OTTA | 26 | 1435 | 1540 | 90 | -2.8 | -1.4 | | |
| | 2800 OTTA | 24 | 1655 | | 5 | 4.0 | | | |

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

IVb

NOVEMBER 1966

| DATE | FREQUENCY STATION | TYPE | STARTING TIME | TIME OF MAXIMUM | DURATION | FLUX DENSITY $10^{-22} \text{Wm}^{-2} (\text{c/s})^{-1}$ | | INT. | REMARKS |
|-----------|-------------------|--------|---------------|-----------------|----------|---|------|------|---------|
| | | | UT | UT | MINUTES | PEAK | MEAN | | |
| 19 | 8800 SGMR | 40 | 1512.4 | 1521.6 | 18.6 | 10.4 | 3.0 | | |
| | 4995 SGMR | 40 | 1515.7 | 1521.6 | 15.3 | 3.4 | 1.0 | | |
| | 2800 OTTA | 20 | 1715 | 1725 | 50 | 2.8 | 1.4 | | |
| | 2800 OTTA | 20 | 1835 | 1915 | 85 | 2.8 | 1.4 | | |
| 21 | 2800 OTTA | 20 | 1450 | 1750 | 330 | 5.0 | 2.5 | | |
| 22 | 2800 OTTA | 20 | 1530 | 1615 | 75 | 2.2 | 1.1 | | |
| | 2800 OTTA | 1 | 1745.3 | 1745.5 | 1 | 1.2 | 0.6 | | |
| | 2700 PENN | 24 | 1745 | 1932 | 199 | 3.4 | 1.7 | | |
| | 8800 SGMR | 20 | 1832.5 | 1836.8 | 52.5 | 12.5 | 3.0 | | |
| | 4995 SGMR | 20 | 1832.5 | 1854.3 | 46.5 | 10.9 | 2.0 | | |
| | 2800 OTTA | 23 | 1824 | 1840 | 115 | 8.0 | 4.0 | | |
| | 2800 OTTA | 3 | 1847 | 1850 | 6 | 7.6 | 3.8 | | |
| | 2700 PENN | 20 | 1822.4 | 1848.8 | 63 | 14.7 | 4.1 | | |
| | 2695 SGMR | 20 | 1834 | 1849 | 43 | 22.3 | 5.0 | | |
| | 1415 SGMR | 20 | 1836.8 | 1851.6 | 53.2 | 25.2 | 8.0 | | |
| | 960 PENN | 1 | 1848.4 | 1851.6 | 7 | | | | |
| | 606 SGMR | 20 | 1838.2 | 1849 | 116.8 | 101.5 | 20.0 | | |
| | 8800 SGMR | 20 | 1947 | 1948 | 10 | 3.8 | 1.0 | | |
| | 4995 SGMR | 20 | 1946 | 1948.2 | 11 | 10.0 | 2.0 | | |
| | 2800 OTTA | 20 | 1946 | 1948 | 10 | 3.8 | 1.9 | | |
| | 2700 PENN | 20 | 1946 | 1948 | 13 | 4.4 | 2.2 | | |
| 2695 SGMR | 20 | 1944.5 | 1948.3 | 13.5 | 4.4 | 1.0 | | | |
| 23 | 2800 OTTA | 20 | 1625 | 1745 | 100 | 2.0 | 1.5 | | |
| 24 | 2800 OTTA | 20 | 1438 | 1443 | 15 | 1.2 | 0.6 | | |
| 25 | 10700 PENN | 24 | 1508 E | | 64 D | | | | |
| | 2700 PENN | 24 | 1508 E | | 62 D | | | | |
| | 10700 PENN | 20 | 1524 | 1528.1 | 17 | 6.6 | 2.3 | | |
| | 8800 SGMR | 20 | 1523.8 | 1529 | 22.2 | 5.6 | 1.0 | | |
| | 4995 SGMR | 3 | 1523.6 | 1524.6 | 1.9 | 25.0 | 4.0 | | |
| | 4995 SGMR | 29 | 1525.5 | 1525.5 | 20.5 | 9.4 | 4.0 | | |
| | 2800 OTTA | 22 | 1523 | 1524 | 35 | 5.4 | 2.7 | | |
| | 2700 PENN | 20 | 1521.6 | 1533.9 | 25 | 5.8 | 2.3 | | |
| | 2695 SGMR | 20 | 1523.5 | 1527.3 | 21.5 | 6.5 | 1.0 | | |
| | 960 PENN | 3 | 1530.6 | 1533.3 | 3.4 | 9.8 | 3.7 | | |
| | 8800 SGMR | 20 | 1811 | 1812 | 9 | 7.0 | 2.0 | | |
| | 4995 SGMR | 20 | 1809 | 1813.2 | 11 | 6.4 | 2.0 | | |
| | 2695 SGMR | 20 | 1809 | 1813.7 | 11 | 15.4 | 4.0 | | |
| | 1415 SGMR | 20 | 1812 | 1816.7 | 8 | 3.2 | .5 | | |
| 27 | 2800 OTTA | 23 | 1540 | 1612 | 130 | 5.2 | 2.6 | | |
| | 2800 OTTA | 2 | 1619.3 | 1619.5 | .5 | 6.6 | 3.3 | | |
| | 2695 SGMR | 40 | 1611 | 1611.7 | 3 | 6.0 | 2.0 | | |
| | 2695 SGMR | 3 | 1619.3 | 1619.4 | .5 | 20.0 | 5.0 | | |
| | 1415 SGMR | 40 | 1605.3 | 1637 | 32.7 | 15.2 | 4.0 | | |
| | 606 SGMR | 40 | 1606.5 | 1617.5 | 31.5 | 8.8 | 2.2 | | |
| | 2800 OTTA | 20 | 1823 | 1838 | 60 | 2.6 | 1.3 | | |
| | 2800 OTTA | 45 | 2013 | 2013.8 | 1 | 7.6 | 3.8 | | |
| | | | | 2013 | | .5 | 2.4 | | |
| | | | | 2013.5 | | .5 | 7.6 | | |
| | 2695 SGMR | 3 | 2013 | 2013.6 | 2 | 7.6 | 2.5 | | |
| | 1415 SGMR | 3 | 2013.2 | 2013.8 | 2.8 | 7.9 | 2.6 | | |
| | 606 SGMR | 3 | 2013.2 | 2013.8 | 2.8 | 35.3 | 12.0 | | |
| | 2800 OTTA | 3 | 2149 | 2150 | 2 | 17.6 | 8.8 | | |
| 2800 OTTA | 29 | 2151 | | 3 | 3.0 | 1.5 | | | |
| 28 | 2800 OTTA | 22 | 1418 | 1435 | 80 | 2.6 | 1.9 | | |
| 29 | 2800 OTTA | 1 | 1510.5 | 1511.3 | 1 | 5.0 | 2.5 | | |
| | 2800 OTTA | 29 | 1511.5 | | 2.5 | 2.0 | 1.0 | | |
| 30 | 2800 OTTA | 21 | 1628 | 1700 | 80 | 3.0 | 1.5 | | |
| | 8800 SGMR | 1 | 1630 | 1633 | 14 | 6.6 | 1.0 | | |
| | 4995 SGMR | 3 | 1629.2 | 1631.4 | 15.8 | 9.3 | 2.0 | | |
| | 2800 OTTA | 4 | 1630.5 | 1631.8 | 3 | 10.8 | 3.6 | | |
| | 2700 PENN | 3 | 1629 | 1632.2 | 8 | 13.4 | 3.0 | | |
| | 2695 SGMR | 3 | 1628.5 | 1631.4 | 17.5 | 16.1 | 3.0 | | |
| | 960 PENN | 1 | 1631.5 | 1632.3 | 1.7 | .9 | 0.6 | | |

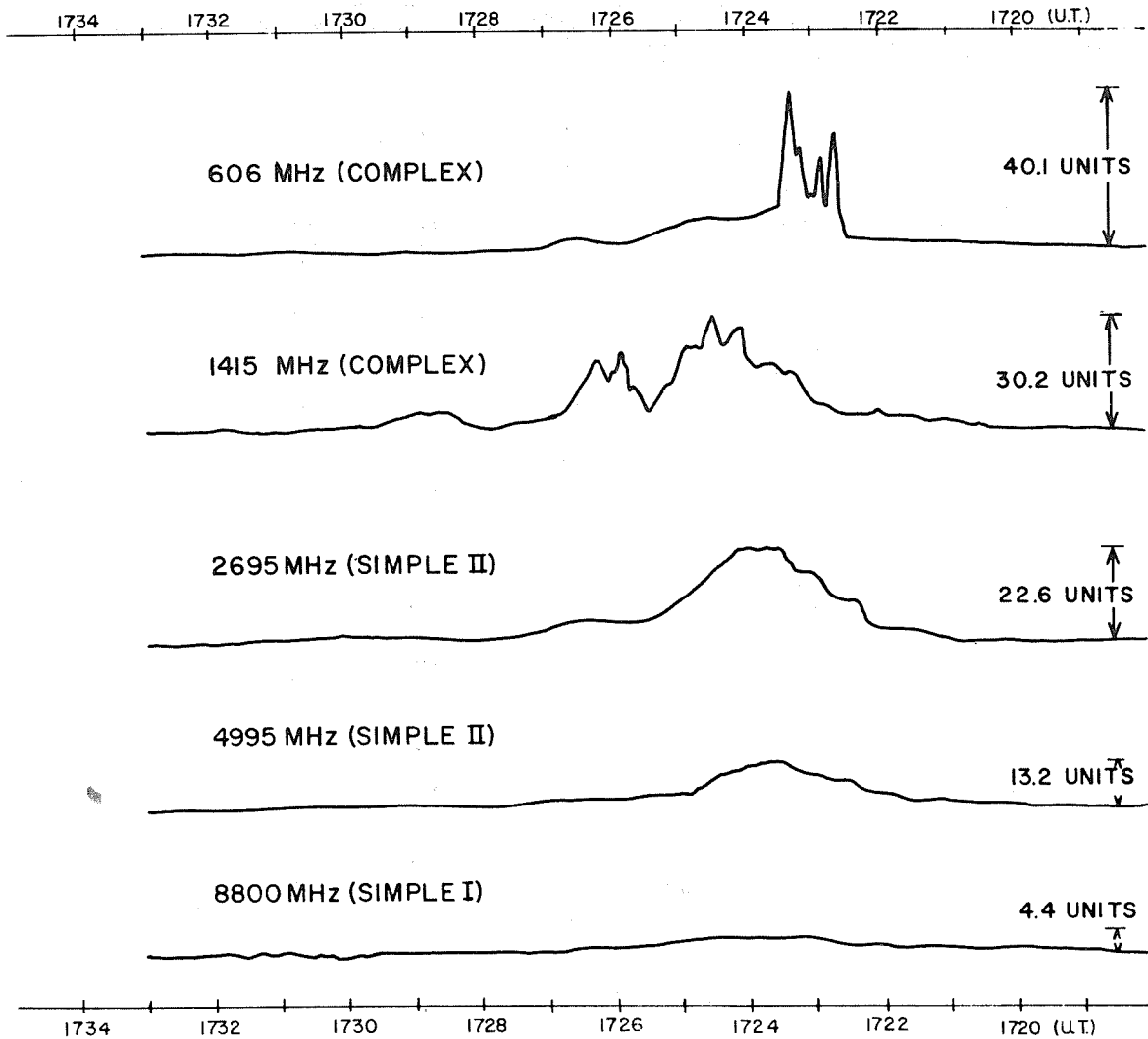
The following occurrences were received too late to include in the above table.

| | | | | | | | | |
|----|----------|----|------|------|---|------|--|--|
| 1 | 486 WASH | 3 | 1550 | | 1 | 25.0 | | |
| 2 | 486 WASH | 45 | 1722 | 1723 | 3 | 45.0 | | |
| 11 | 486 WASH | 45 | 2150 | | 2 | 25.0 | | |
| 22 | 486 WASH | 45 | 1847 | 1852 | 6 | 85.0 | | |

IVc

SELECTED SOLAR NOISE BURST
AFCRL SAGAMORE HILL

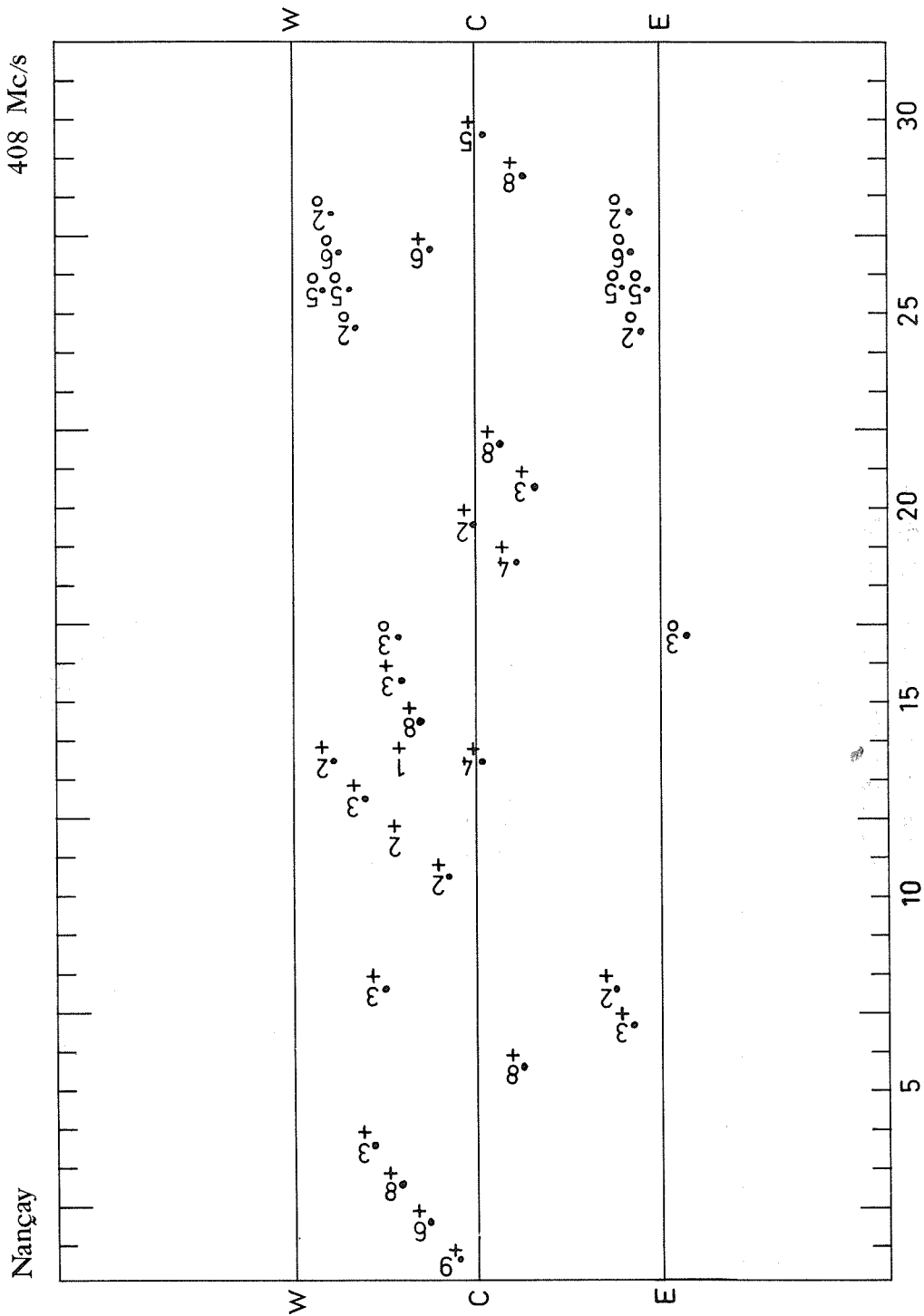
NOVEMBER 1966



RADIO BURST RECORDED AT SAGAMORE HILL RADIO OBSERVATORY (AFCRL)
HAMILTON, MASS. ON 2 NOVEMBER, 1966

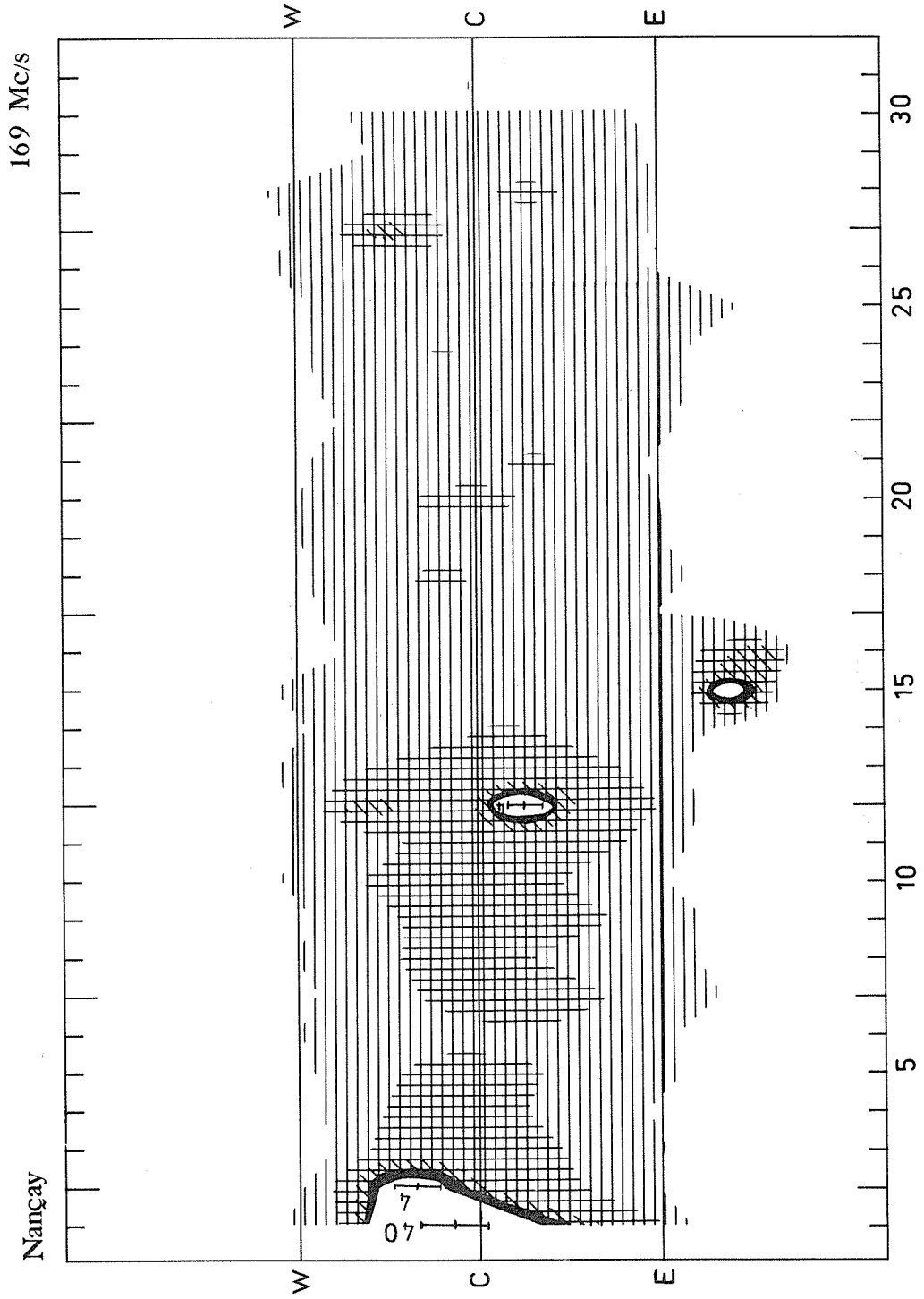
SOLAR RADIO EMISSION INTERFEROMETRIC OBSERVATION

NOVEMBER 1966



SOLAR RADIO EMISSION INTERFEROMETRIC OBSERVATION

NOVEMBER 1966



SOLAR RADIO EMISSION SPECTRAL OBSERVATION

IVf

NOVEMBER 1966

University of Colorado

7.6-41 Mc/s

| Date Nov 1966 | Bursts | | | | Date Nov 1966 | Bursts | | | |
|---------------------|-----------------|-----------------|----------------|---------------------------|---------------------|-----------------|-----------------|----------------|---------------------------|
| | Type | Time (U.T.) | Inten- sity | Frequency Range (Mc/s) | | Type | Time (U.T.) | Inten- sity | Frequency Range (Mc/s) |
| 1 Nov | continuum | 1500-1908 | 1- | 26-41 | 6 Nov | III | 1543:45-1544 | 3 | 25-41 |
| | III | 1515:30-1515:45 | 1 | 28-40 | | III | 1544-1544:15 | 2 | 25-41 |
| | III | 1816:45-1817 | 1+ | 22-38 | | III | 1544:30-1544:45 | 2 | 25-41 |
| | III | 1817:15-1817:45 | 2 | 20-41 | | III | 1547:15-1547:30 | 1+ | 25-33 |
| | III | 1836:15-1836:30 | 1- | 22-39 | | III | 1609:45-1610 | 1- | 26-38 |
| | III | 2004:15-2004:30 | 1 | 24-37 | | III | 1614:15-1614:30 | 1- | 28-41 |
| | continuum | 2010-2030 | 1 | 24-41 | | III | 1736:30-1736:45 | 1 | 22-40 |
| | III | 2011-2011:15 | 1+ | 25-41 | | III | 1832-1832:15 | 1 | 23-35 |
| | III | 2012-2012:15 | 1+ | 22-41 | | III | 1838-1838:15 | 1 | 22-41 |
| | III | 2012-2012:15 | 1+ | 22-41 | | III | 1932:45-1933:15 | 1+ | 22-39 |
| 2 Nov | continuum | b1342-1534 | 1 | 27-41 | III | 1948:15-1948:30 | 2 | 23-41 | |
| | III | 1402:45-1403 | 1+ | 25-35 | III | 1948:30-1949 | 2 | 23-41 | |
| | III | 1617:30-1617:45 | 2 | 26-41 | III | 1951:15-1951:45 | 3 | 20-41 | |
| | III | 1707-1707:30 | 2 | 21-39 | III | 1956-1956:15 | 1- | 28-41 | |
| | III | 1720:15-1720:45 | 2 | 24-40 | III | 2045-2045:15 | 1- | 30-39 | |
| | III | 1721:30-1721:45 | 2 | 26-36 | III | 2053:15-2053:30 | 1- | 30-39 | |
| | III | 1722:15-1723 | 2 | 16-41 | III | 2053:45-2054 | 1 | 28-39 | |
| | III | 1723:15-1724:30 | 2 | 16-41 | III | 2055-2055:15 | 1 | 28-38 | |
| | III | 1726:30-1726:45 | 1+ | 26-34 | III | 2055:15-2055:30 | 1 | 27-38 | |
| | continuum | 1736-1933 | 1+ | 25-41 | III | 2056:45-2057 | 1+ | 22-40 | |
| III | 1743:30-1743:45 | 2 | 26-39 | III | 2104-2104:15 | 2 | 22-41 | | |
| III | 1746-1746:30 | 2 | 25-40 | III | 2104:15-2104:30 | 2 | 23-41 | | |
| III | 1746:45-1747:30 | 2 | 26-41 | III | 2104:30-2104:45 | 2 | 23-41 | | |
| III | 1747:45-1748:15 | 2 | 25-41 | III | 2105-2105:15 | 2 | 25-41 | | |
| III | 1720:15-1720:45 | 2 | 24-40 | III | 2105:30-2105:45 | 3 | 23-41 | | |
| III | 1721:30-1721:45 | 2 | 26-36 | III | 2107:30-2108 | 3 | 21-41 | | |
| III | 1722:15-1723 | 2 | 16-41 | III | 2119:45-2121 | 3 | 22-41 | | |
| III | 1723:15-1724:30 | 2 | 16-41 | III | 2127-2127:15 | 1+ | 22-40 | | |
| III | 1726:30-1726:45 | 1+ | 26-34 | III | 2128:30-2130:30 | 3 | 22-41 | | |
| continuum | 1736-1933 | 1+ | 25-41 | III | 2131-2131:30 | 3 | 24-41 | | |
| III | 1743:30-1743:45 | 2 | 26-39 | III | 2132:45-2133 | 2 | 26-41 | | |
| III | 1746-1746:30 | 2 | 25-40 | III | 2153-2153:15 | 1- | 32-38 | | |
| III | 1746:45-1747:30 | 2 | 26-41 | III | 2154:15-2154:30 | 1- | 26-35 | | |
| III | 1747:45-1748:15 | 2 | 25-41 | III | 2158-2158:15 | 1 | 28-40 | | |
| III | 2119-2119:15 | 1 | 27-35 | III | 2159:30-2159:45 | 1- | 28-34 | | |
| III | 2203-2203:30 | 2 | 27-40 | III | 2206:30-2206:45 | 1 | 28-38 | | |
| no observ. | 2306-2316 | | | III | 2208-2208:30 | 1+ | 28-41 | | |
| 3 Nov | III | 1530:30-1530:45 | 1 | 23-41 | III | 2216:30-2216:45 | 1+ | 29-41 | |
| | III | 1531-1531:15 | 1 | 26-40 | III | 2216:45-2217 | 2 | 26-40 | |
| | III | 1531:15-1531:30 | 1 | 26-40 | III | 2217:15-2217:30 | 2 | 30-40 | |
| | III | 1902:45-1905 | 3 | 16-41 | III | 2217:45-2218 | 3 | 24-41 | |
| | III | 1902:45-1905 | 3 | 16-41 | III | 2227:45-2228 | 1+ | 27-40 | |
| continuum | 1905-1911 | 1 | 26-41 | III | 2246:45-2248 | 3 | 25-41 | | |
| 4 Nov | III | 1437:30-1437:45 | 1 | 24-40 | III | 2254-2255:15 | 3 | 26-41 | |
| | III | 1536:15-1536:30 | 1- | 31-41 | III | 2257:30-2257:45 | 3 | 27-40 | |
| | III | 1939:30-1940 | 1- | 32-41 | III | 2301-2301:15 | 2 | 28-41 | |
| | III | 1939:30-1940 | 1- | 32-41 | III | 2322-2322:15 | 1- | 28-37 | |
| 5 Nov | III | 1606:45-1607 | 1+ | 24-39 | III | 1551-1551:15 | 1- | 30-38 | |
| | III | 1630:30-1630:45 | 1+ | 31-41 | III | 1701:30-1701:45 | 1- | 28-40 | |
| | III | 1720:45-1721:15 | 1+ | 26-34 | III | 1904-1904:30 | 1 | 22-38 | |
| | III | 2008-2008:15 | 1+ | 27-41 | III | 2209:45-2210 | 1+ | 24-39 | |
| | III | 2008:15-2008:45 | 1+ | 29-41 | III | 2210-2210:15 | 1 | 31-39 | |
| | III | 2036-2036:15 | 1+ | 24-41 | III | 2210:15-2210:30 | 1- | 28-39 | |
| | III | 2144:45-2145:15 | 2 | 23-41 | III | 2218:30-2219 | 1 | 26-39 | |
| | III | 2145:30-2145:45 | 2 | 26-41 | III | 2325:30-2325:45 | 1- | 25-40 | |
| | III | 2145:45-2146:15 | 2 | 30-41 | | | | | |
| | III | 2148:45-2149 | 1+ | 28-39 | | | | | |
| III | 2149-2149:30 | 2 | 28-41 | | | | | | |
| III | 2157-2158 | 3 | 22-41 | | | | | | |
| III | 2200:30-2201 | 1+ | 26-38 | | | | | | |
| III | 2201:15-2201:30 | 2 | 26-40 | | | | | | |
| III | 2202:45-2203:15 | 1+ | 24-38 | | | | | | |
| III | 2248:15-2248:30 | 1 | 30-36 | | | | | | |
| III | 2248:45-2249 | 2 | 27-37 | | | | | | |
| III | 2323:30-2324 | 1+ | 30-40 | | | | | | |
| 6 Nov | III | 1446:45-1447:15 | 1 | 31-41 | | | | | |
| | III | 1543-1543:15 | 3 | 20-41 | | | | | |
| | III | 1543:30-1543:45 | 3 | 20-41 | | | | | |
| | III | 1543:30-1543:45 | 3 | 20-41 | | | | | |

SOLAR RADIO EMISSION SPECTRAL OBSERVATION

NOVEMBER 1966

University of Colorado

7.6-41 Mc/s

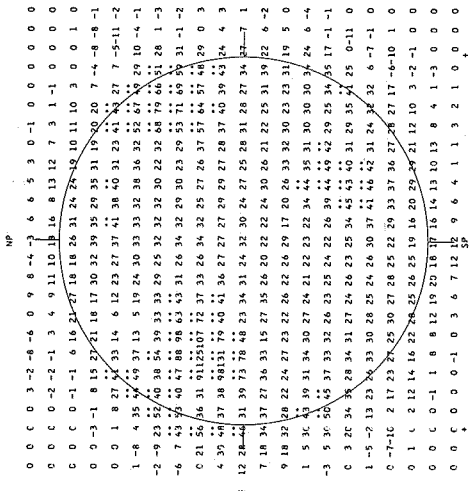
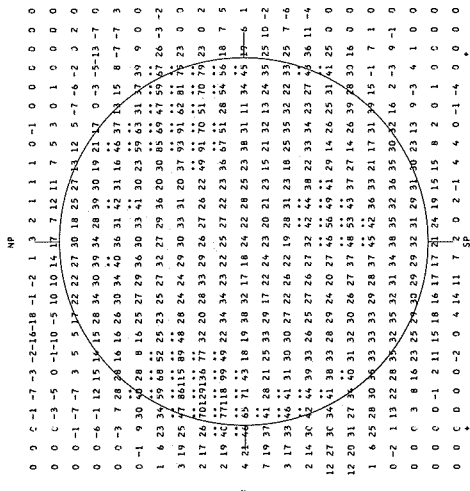
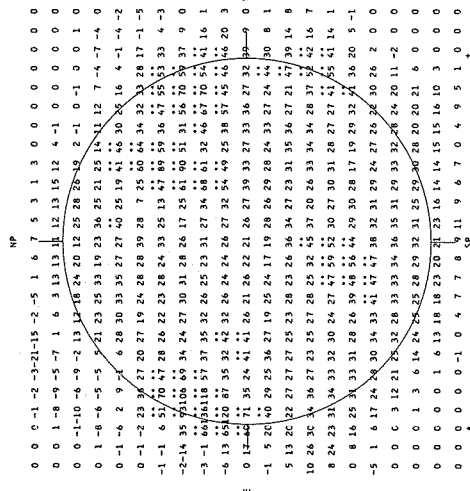
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|---------------------|-----------------|-----------------|----------------|---------------------------|------------------------|-----------------|-----------------|----------------|---------------------------|
| | Type | Time (U.T.) | Inten- sity | Frequency Range (Mc/s) | | Type | Time (U.T.) | Inten- sity | Frequency Range (Mc/s) |
| 8 Nov | III | 1533-1533:45 | 3 | 21-41 | 19 Nov | III | 1604:15-1604:45 | 1+ | 34-40 |
| | III | 2010-2010:45 | 2 | 22-38 | 22 Nov | II | 1903:30-1914:30 | 2 | 19-40 |
| | III | 2049-2049:30 | 1 | 28-39 | | IV | 1920:30-2036:15 | 1- | 35-40 |
| 9 Nov | III | 2123:30-2123:45 | 1- | 24-35 | | III | 2250:30-2250:45 | 1- | 26-35 |
| | III | 1856:45-1857:30 | 2 | 23-41 | 24 Nov | III | 1524:30-1524:45 | 1 | 29-41 |
| | III | 1916-1916:30 | 2 | 22-41 | | III | 2211:30-2211:45 | 2 | 26-40 |
| 10 Nov | III | 1916:30-1917 | 2 | 22-41 | | III | 2211:45-2212 | 2 | 24-41 |
| | III | 1917:15-1917:30 | 2 | 28-40 | | III | 2212-2214:15 | 3 | 23-41 |
| | III | 1935:45-1936:15 | 1 | 32-41 | | III | 2214:15-2214:30 | 3 | 23-40 |
| | III | 2111:30-2111:45 | 1- | 32-40 | 25 Nov | III | 2011:15-2011:30 | 1+ | 24-38 |
| | III | 2215:30-2215:45 | 1+ | 26-40 | | III | 2011:30-2011:45 | 1 | 27-38 |
| | III | 2230:45-2231 | 1 | 28-35 | | III | 2123:30-2123:45 | 1+ | 22-38 |
| 11 Nov | III | 2142:15-2142:30 | 1 | 23-40 | | III | 2235-2235:30 | 1+ | 28-38 |
| 12 Nov | III | 1409-1409:15 | 2 | 25-41 | | III | 2235:30-2235:45 | 2 | 25-41 |
| | III | 1633:45-1634 | 2 | 19-41 | | III | 2236:45-2237 | 1+ | 34-38 |
| | III | 1650-1650:30 | 2 | 20-41 | 26 Nov | III | 2028:45-2029:15 | 1 | 24-36 |
| | III | 1751:30-1751:45 | 1 | 28-40 | 27 Nov | III | 1522-1523 | 1+ | 27-39 |
| | III | 1959:30-1959:45 | 1+ | 26-41 | | III | 1559:30-1559:45 | 1+ | 34-40 |
| | III | 2117:30-2117:45 | 1 | 28-39 | | continuum | 1604:30-1652 | 2 | 28-41 |
| | III | 2236:45-2237 | 1- | 31-39 | | III | 1604:30-1604:45 | 1+ | 29-40 |
| | III | 2238-2238:15 | 1- | 28-36 | | III | 1631:15-1631:30 | 2 | 29-37 |
| | III | 2253:30-2253:45 | 3 | 23-41 | | III | 1632:30-1633 | 2 | 28-41 |
| | III | 2253:45-2254:15 | 3 | 25-41 | | III | 1633:45-1634 | 3 | 30-41 |
| | III | 2254:15-2254:30 | 2 | 30-41 | | III | 1712:45-1713:30 | 1+ | 22-39 |
| | III | 2303-2303:15 | 2 | 27-41 | | continuum | 1823-1831 | 2 | 22-41 |
| | continuum | 2303:15-2320 | 1- | 28-41 | | III | 1824:30-1825 | 3 | 16-41 |
| III | 2311-2311:15 | 1+ | 28-37 | | III | 1825-1825:15 | 3 | 16-41 | |
| III | 2313:30-2313:45 | 1+ | 30-37 | | III | 1826:15-1826:30 | 3 | 22-40 | |
| 13 Nov | III | 1603:30-1603:45 | 1 | 30-37 | continuum | 2013:45-2044 | 1 | 26-41 | |
| III | 1959:15-2000:15 | 2 | 22-41 | | III | 2033:15-2033:30 | 2 | 24-39 | |
| III | 2000:15-2000:30 | 2 | 31-37 | | III | 2052:30-2052:45 | 1- | 32-40 | |
| III | 2215-2215:45 | 2 | 26-41 | | III | 2140:15-2140:30 | 1- | 30-41 | |
| III | 2216-2216:15 | 1+ | 26-35 | | III | 2141:15-2141:30 | 2 | 27-41 | |
| III | 1509:45-1510 | 1- | 29-40 | | III | 1956-1956:15 | 1- | 26-39 | |
| III | 1515:30-1515:45 | 1- | 28-41 | 28 Nov | III | 2157-2157:15 | 1- | 20-31 | |
| III | 1619:45-1620 | 1 | 28-41 | | III | 1542:45-1543 | 1+ | 28-40 | |
| III | 1638:30-1638:45 | 1 | 29-38 | | III | 1708-1708:30 | 3 | 22-41 | |
| III | 1639:15-1639:30 | 1 | 27-41 | 29 Nov | III | 1714:30-1715 | 3 | 22-41 | |
| III | 1725:15-1725:30 | 1- | 28-41 | | III | 1715-1715:15 | 2 | 26-41 | |
| III | 2136-2136:15 | 1+ | 23-41 | | III | 1715:15-1715:30 | 2 | 24-38 | |
| 14 Nov | III | 2204-2204:15 | 1- | 28-38 | III | 2021:30-2021:45 | 1+ | 26-35 | |
| III | 1515:30-1515:45 | 1 | 28-39 | | III | 1630:15-1630:30 | 2 | 21-41 | |
| III | 1515:45-1516 | 1 | 28-39 | 30 Nov | III | 1631-1631:15 | 2 | 22-39 | |
| III | 1516-1516:15 | 1+ | 30-40 | | III | 1631:30-1631:45 | 2 | 22-39 | |
| III | 1900:30-1900:45 | 1 | 27-40 | | III | 1631:45-1632 | 1+ | 22-38 | |
| 15 Nov | no observ. | 1700-2300 | | | | | | | |
| 16 Nov | III | 2301:30-2301:45 | 1 | 26-39 | | | | | |
| 17 Nov | III | 1753:30-1753:45 | 1+ | 24-38 | | | | | |
| III | 1934:45-1935 | 1- | 31-41 | | | | | | |
| III | 2035:45-2036:30 | 3 | 23-41 | | | | | | |
| 18 Nov | III | 2108-2108:15 | 1+ | 26-41 | d - harmonic structure | | | | |
| | III | 2156:30-2156:45 | 1- | 27-41 | | | | | |
| | III | 2157-2157:15 | 1 | 27-41 | | | | | |
| | III | 2157:30-2157:45 | 1+ | 24-41 | | | | | |
| | III | 1606:15-1606:30 | 1+ | 27-38 | | | | | |

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

NOVEMBER 1966

9.1 cm

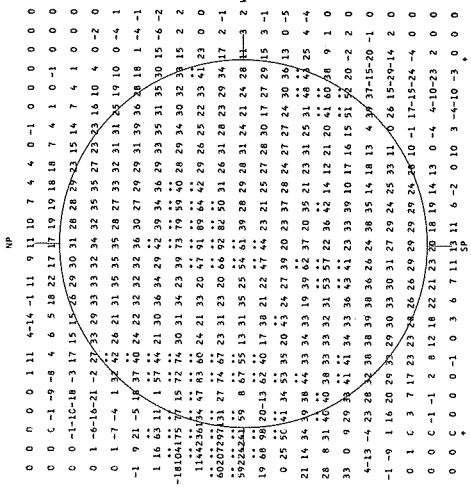
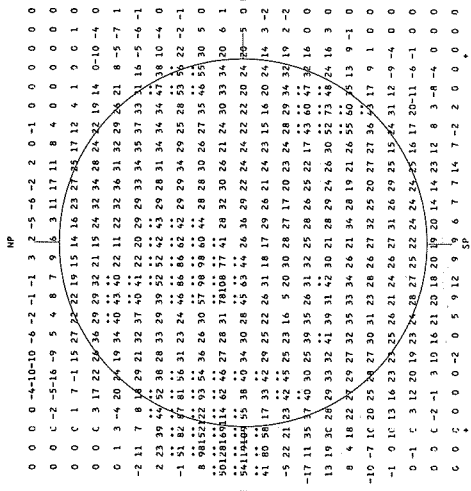
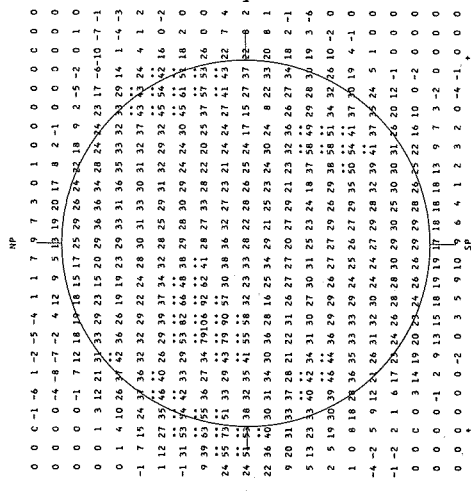
STANFORD



9.1 CM SPECTROHELIOGRAM
STANFORD, 01 NOV 1966 20-21 HRS UT, 3.5° N. BRIGHTNESS UNIT = 1000 K

9.1 CM SPECTROHELIOGRAM
STANFORD, 02 NOV 1966 20-21 HRS UT, 3.5° N. BRIGHTNESS UNIT = 1000 K

9.1 CM SPECTROHELIOGRAM
STANFORD, 03 NOV 1966 20-21 HRS UT, 3.5° N. BRIGHTNESS UNIT = 1000 K



9.1 CM SPECTROHELIOGRAM
STANFORD, 04 NOV 1966 20-21 HRS UT, 3.5° N. BRIGHTNESS UNIT = 1000 K

9.1 CM SPECTROHELIOGRAM
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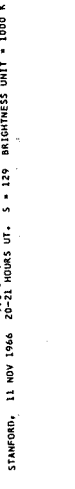
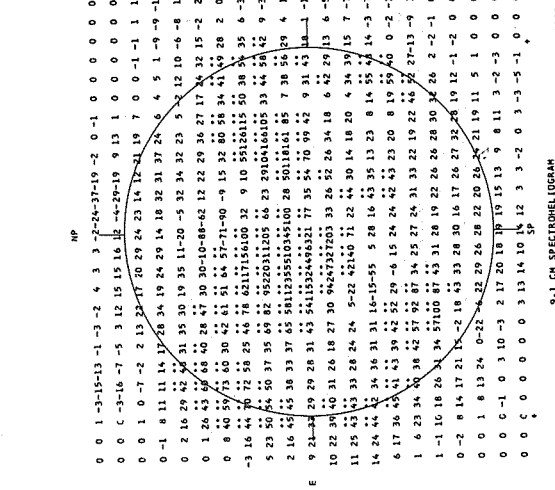
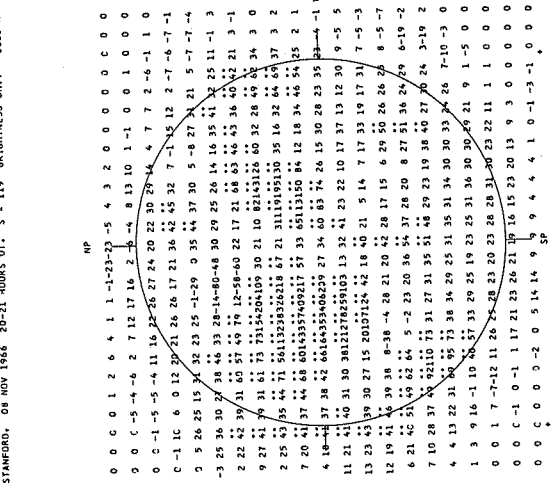
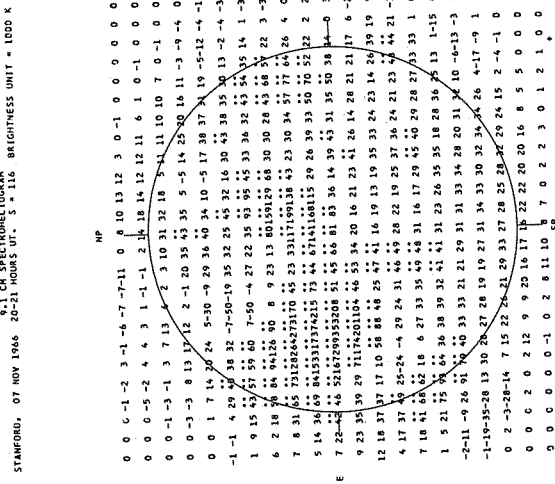
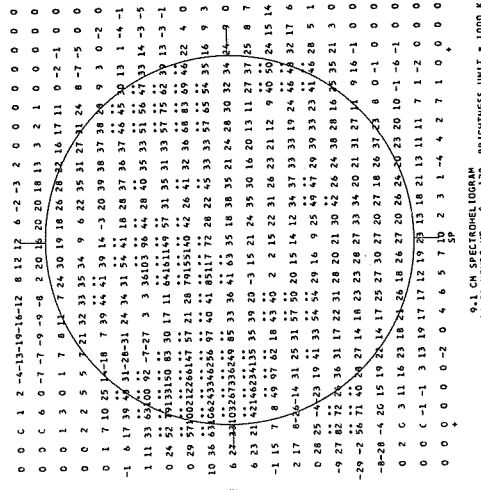
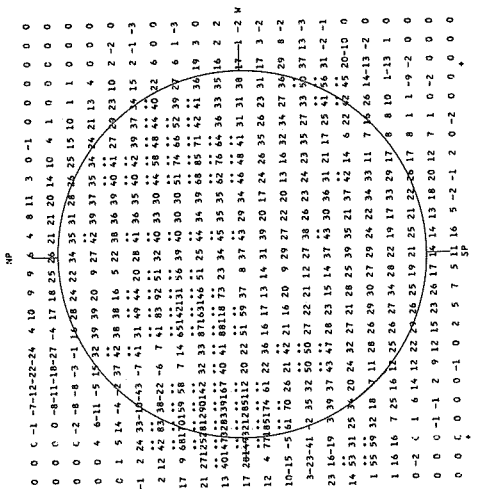
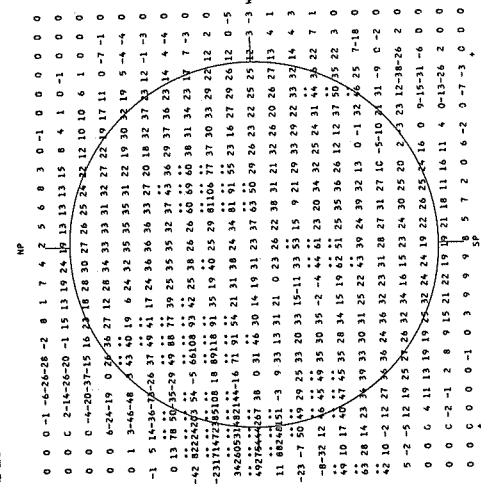
9.1 CM SPECTROHELIOGRAM
STANFORD, 06 NOV 1966 20-21 HRS UT, 3.5° N. BRIGHTNESS UNIT = 1000 K

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

9.1 cm

NOVEMBER 1966

STANFORD

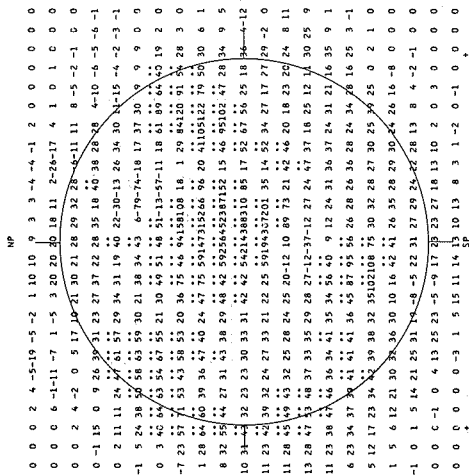


SOLAR RADIO EMISSION SPECTROHELIOGRAMS

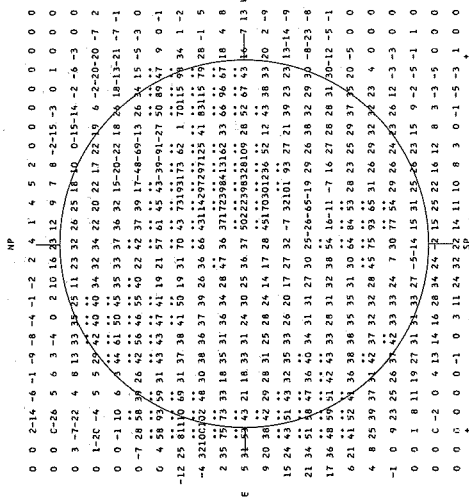
STANFORD

NOVEMBER 1966

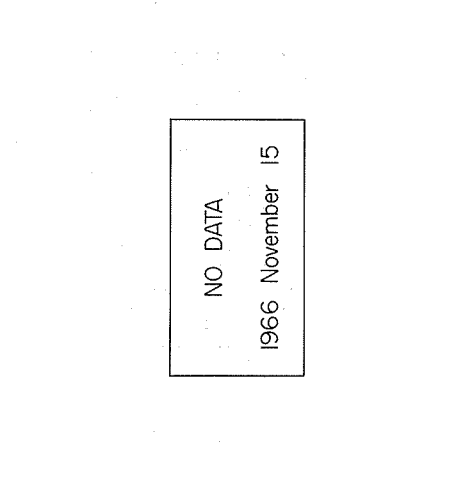
9.1 cm



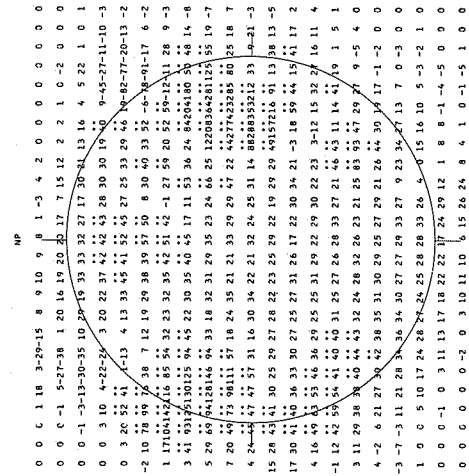
9.1 CM SPECTROHELIOGRAM
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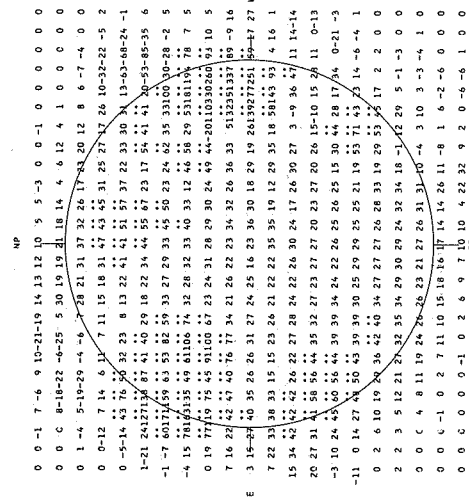
9.1 CM SPECTROHELIOGRAM
STANFORD, 14 NOV 1966. 20-21 HOURS UT. S = 127. BRIGHTNESS UNIT = 1000 K.



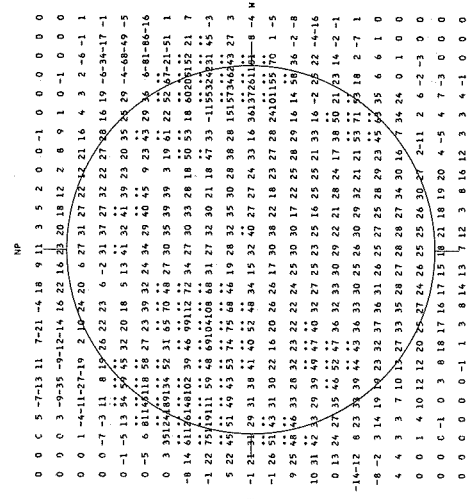
9.1 CM SPECTROHELIOGRAM
STANFORD, 16 NOV 1966. 20-21 HOURS UT. S = 116. BRIGHTNESS UNIT = 1000 K.



9.1 CM SPECTROHELIOGRAM
STANFORD, 17 NOV 1966. 20-21 HOURS UT. S = 116. BRIGHTNESS UNIT = 1000 K.



9.1 CM SPECTROHELIOGRAM
STANFORD, 18 NOV 1966. 20-21 HOURS UT. S = 116. BRIGHTNESS UNIT = 1000 K.



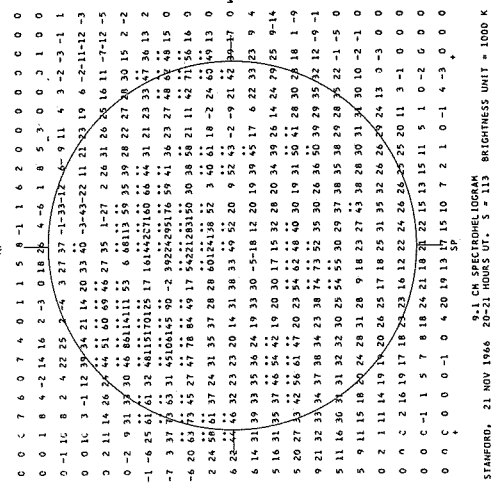
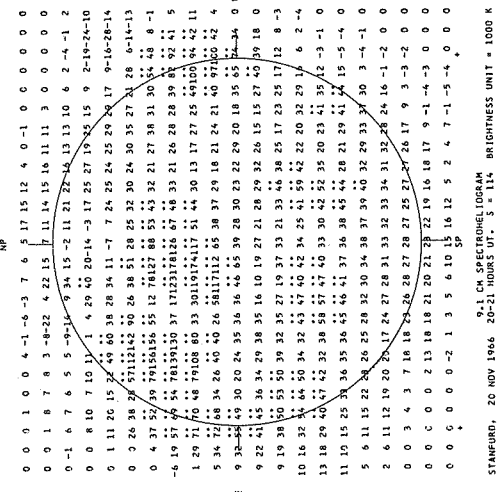
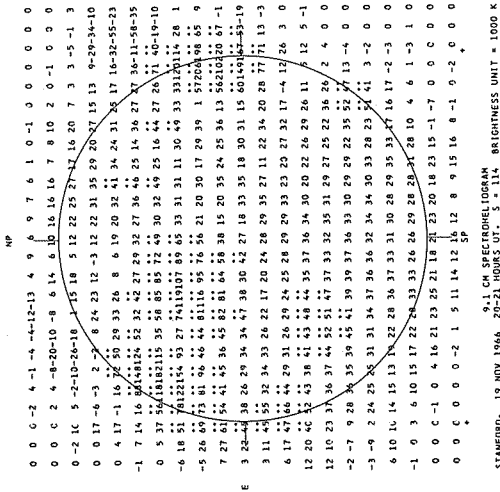
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STANFORD, 19 NOV 1966. 20-21 HOURS UT. S = 116. BRIGHTNESS UNIT = 1000 K.

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

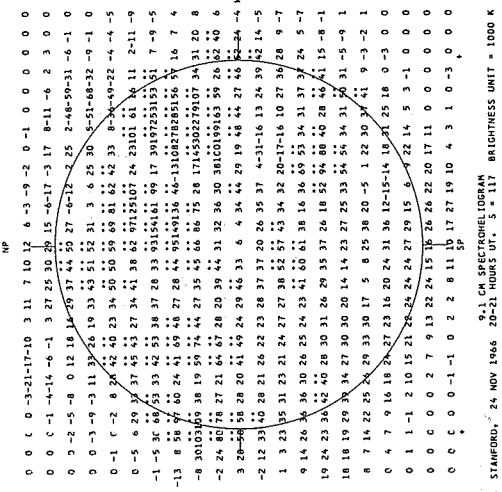
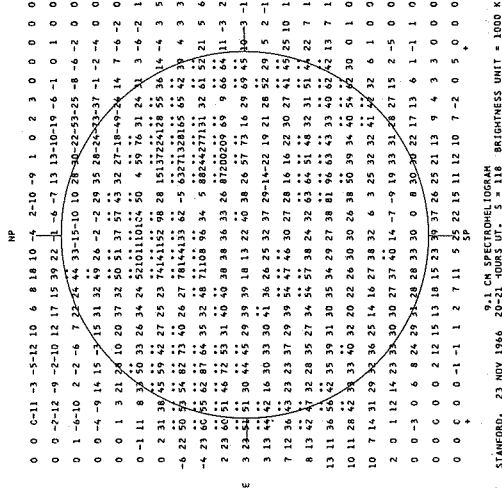
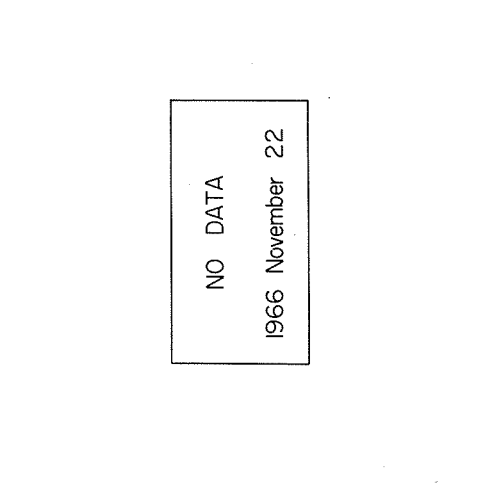
NOVEMBER 1966

9.1 cm

STANFORD



NO DATA
1966 November 22

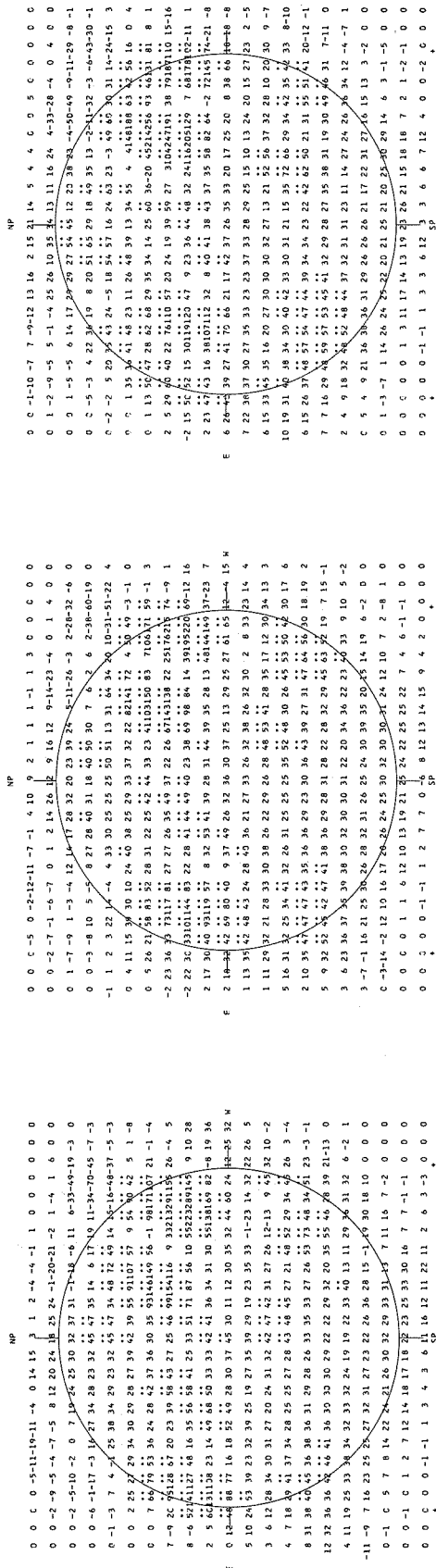


SOLAR RADIO EMISSION SPECTROHELIOGRAMS

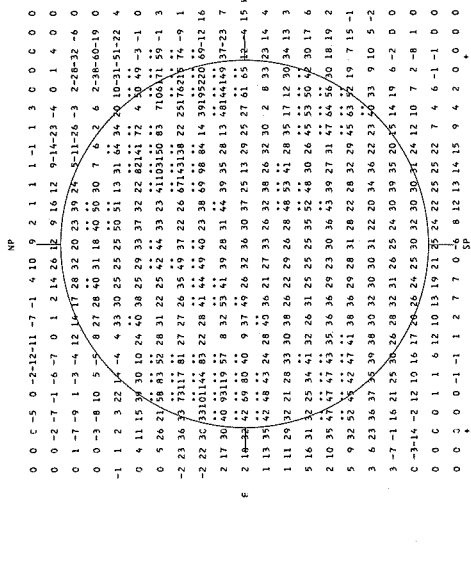
NOVEMBER 1966

STANFORD

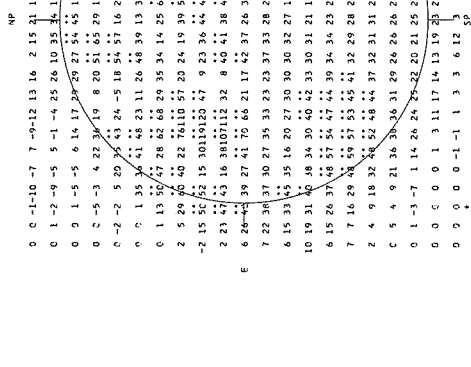
9.1 cm



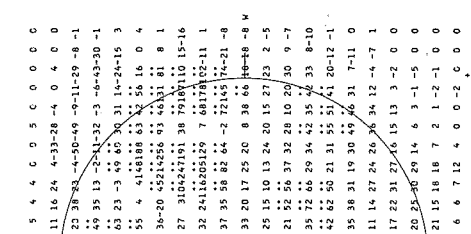
STANFORD, 25 NOV 1966. 9.1 CM SPECTROHELIOGRAM. 20-21 HOURS UT. S = 11N. BRIGHTNESS UNIT = 1000 K.



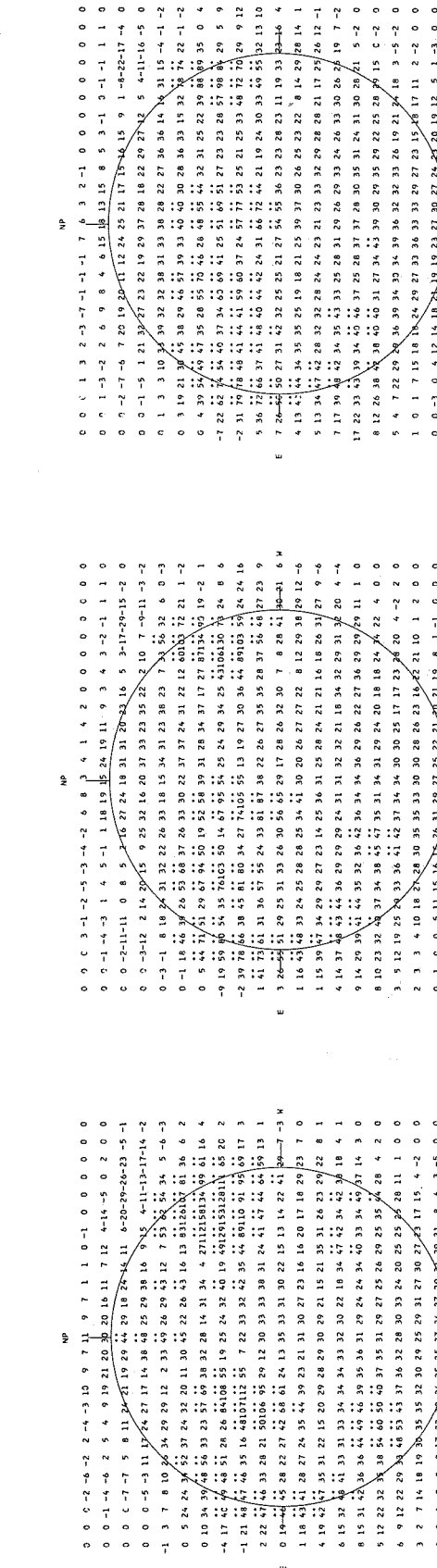
STANFORD, 26 NOV 1966. 9.1 CM SPECTROHELIOGRAM. 20-21 HOURS UT. S = 11D. BRIGHTNESS UNIT = 1000 K.



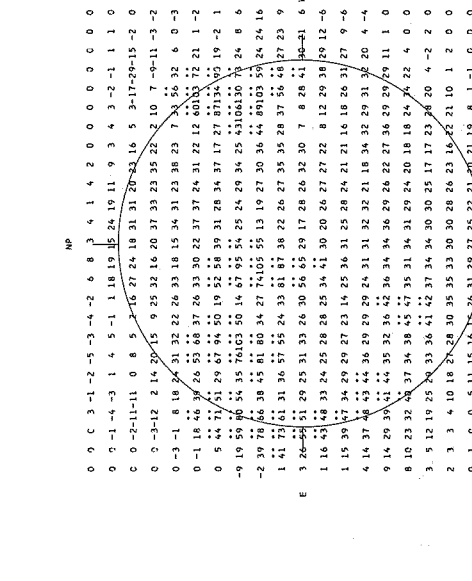
STANFORD, 27 NOV 1966. 9.1 CM SPECTROHELIOGRAM. 20-21 HOURS UT. S = 11E. BRIGHTNESS UNIT = 1000 K.



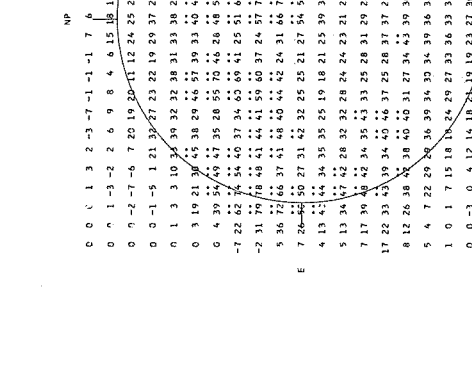
STANFORD, 28 NOV 1966. 9.1 CM SPECTROHELIOGRAM. 20-21 HOURS UT. S = 10F. BRIGHTNESS UNIT = 1000 K.



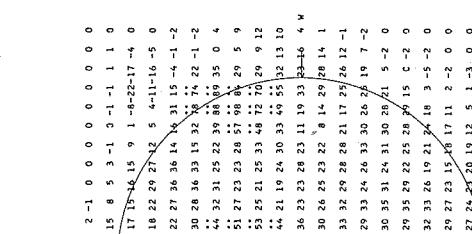
STANFORD, 29 NOV 1966. 9.1 CM SPECTROHELIOGRAM. 20-21 HOURS UT. S = 10I. BRIGHTNESS UNIT = 1000 K.



STANFORD, 30 NOV 1966. 9.1 CM SPECTROHELIOGRAM. 20-21 HOURS UT. S = 9J. BRIGHTNESS UNIT = 1000 K.



STANFORD, 31 NOV 1966. 9.1 CM SPECTROHELIOGRAM. 20-21 HOURS UT. S = 9K. BRIGHTNESS UNIT = 1000 K.



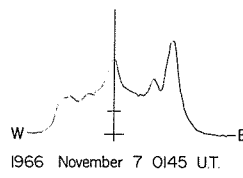
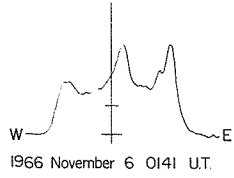
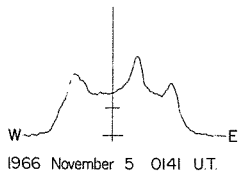
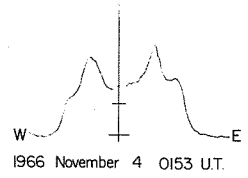
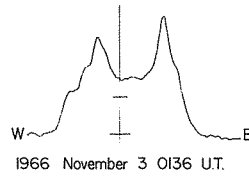
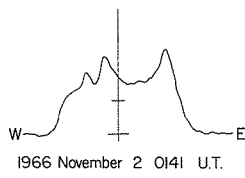
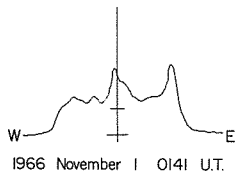
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FLEURS, AUSTRALIA

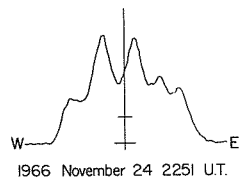
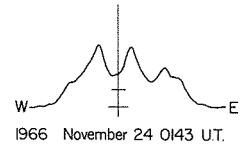
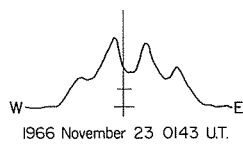
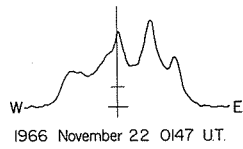
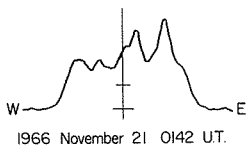
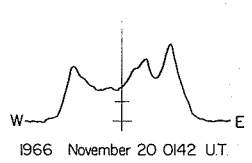
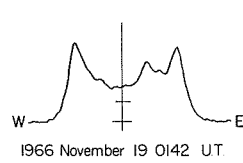
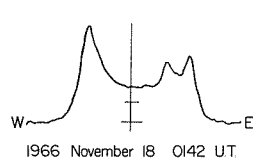
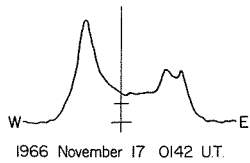
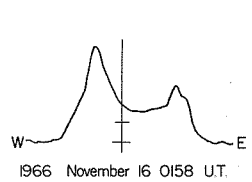
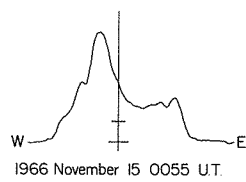
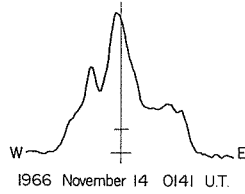
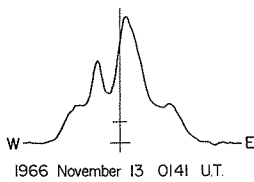
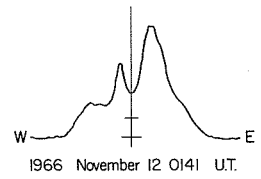
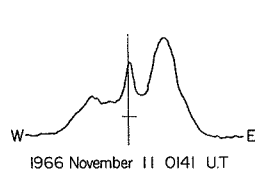
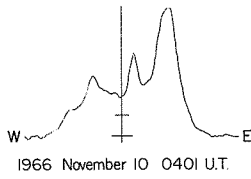
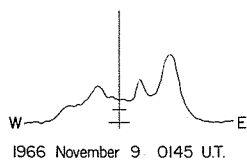
EAST - WEST SOLAR SCANS

November 1966

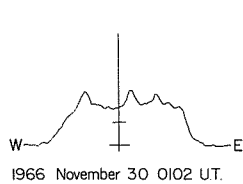
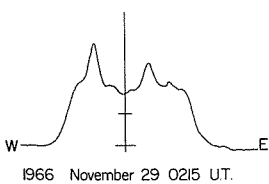
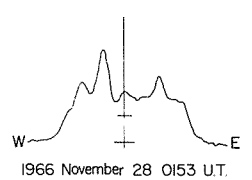
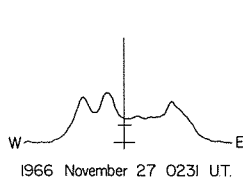
21 cm
Fan-Beam with 2 minutes of arc
E - W Resolution



NO DATA
1966 November 8



NO DATA
1966 November 26



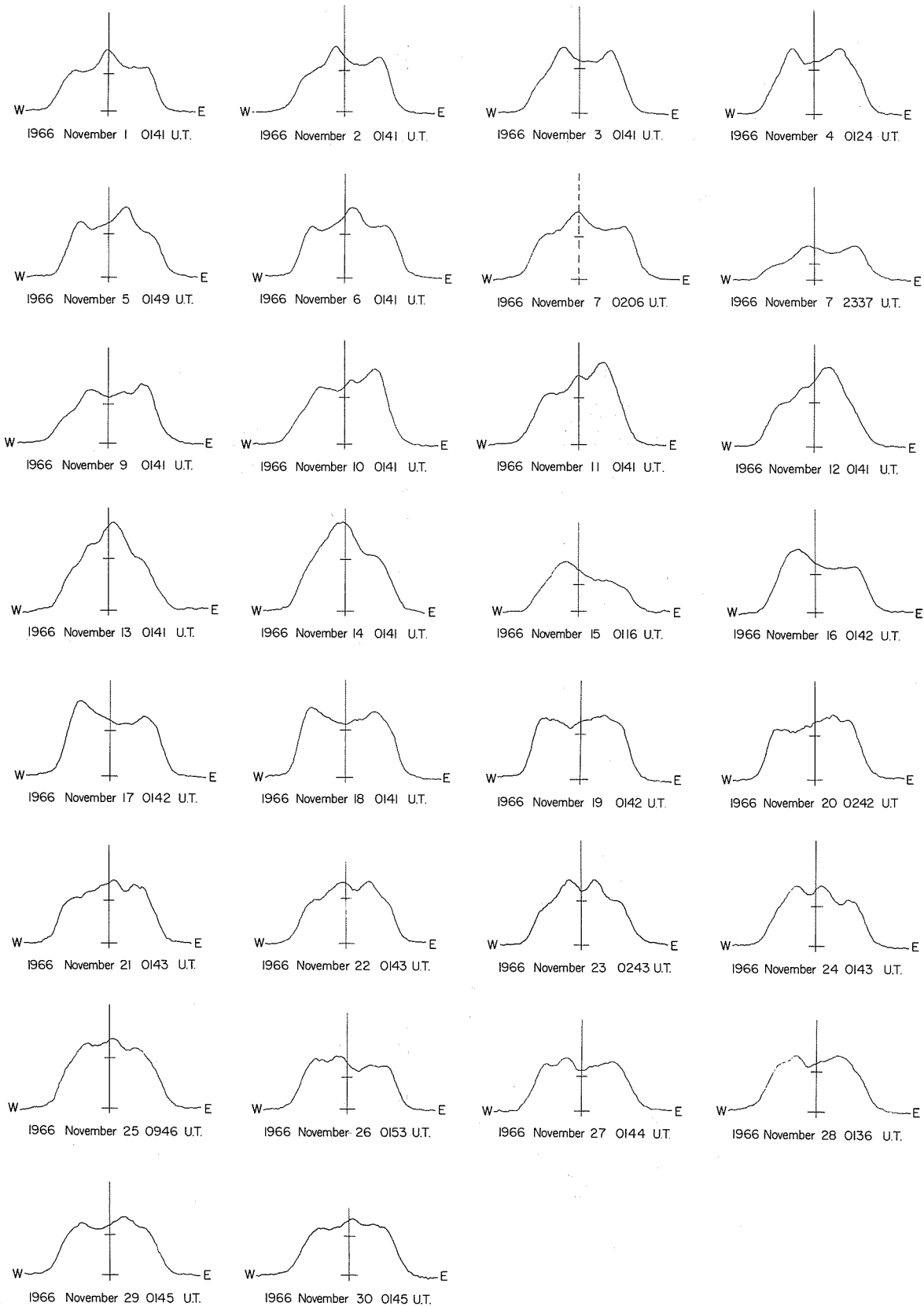
EAST - WEST SOLAR SCANS

IVa

FLEURS, AUSTRALIA

November 1966

43 cm
Fan-Beam with 4 minutes of arc
E-W Resolution



SOLAR RADIO EMISSION SPECTROHELIOGRAMS

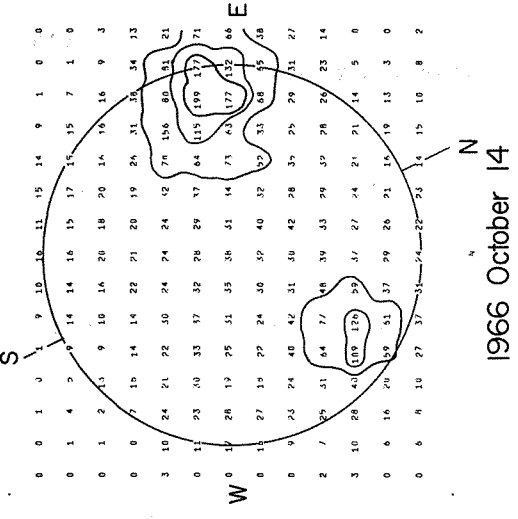
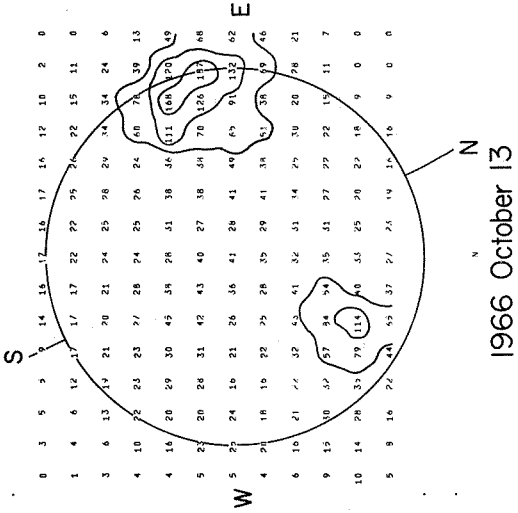
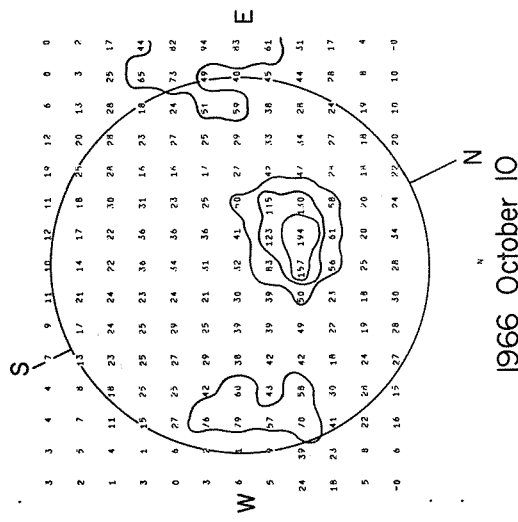
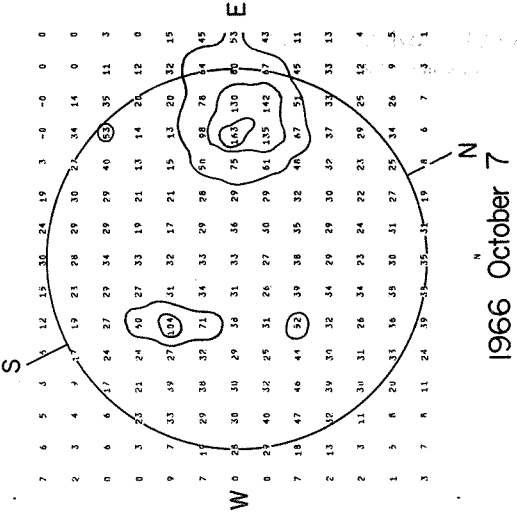
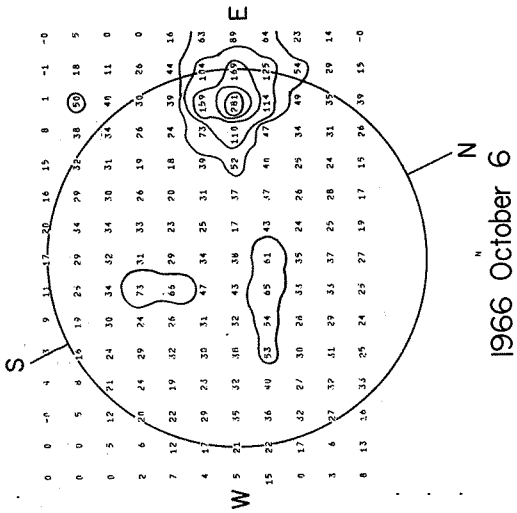
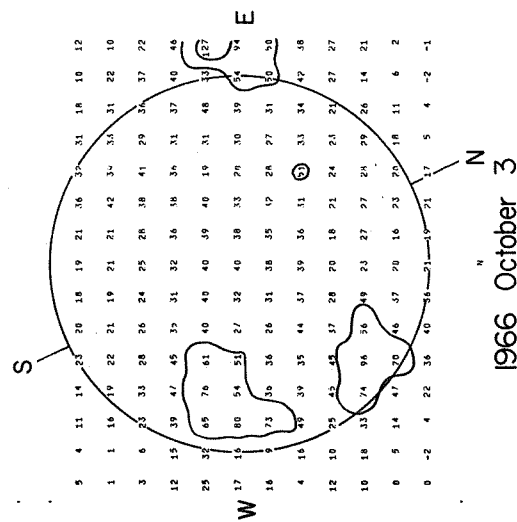
FLEURS, AUSTRALIA

OCTOBER 1966

21cm

Resolution: about 3 minutes of arc.

Unit of Brightness temperature: 1700°K

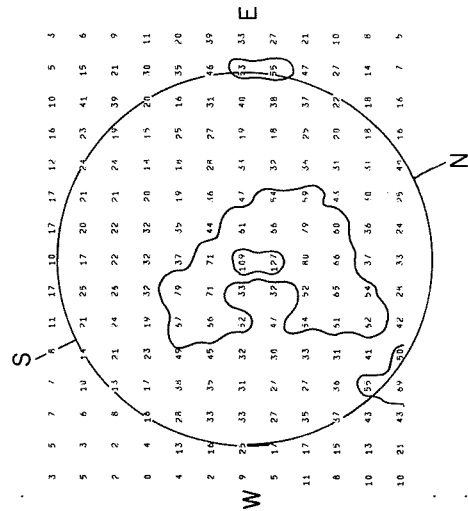
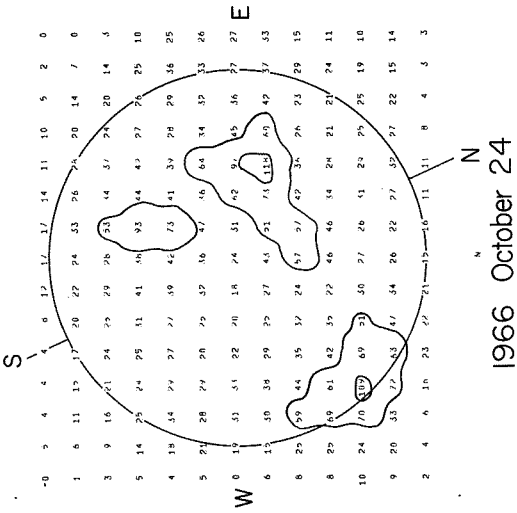
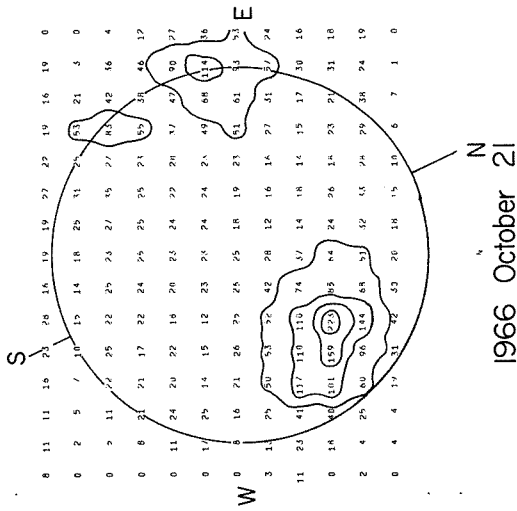
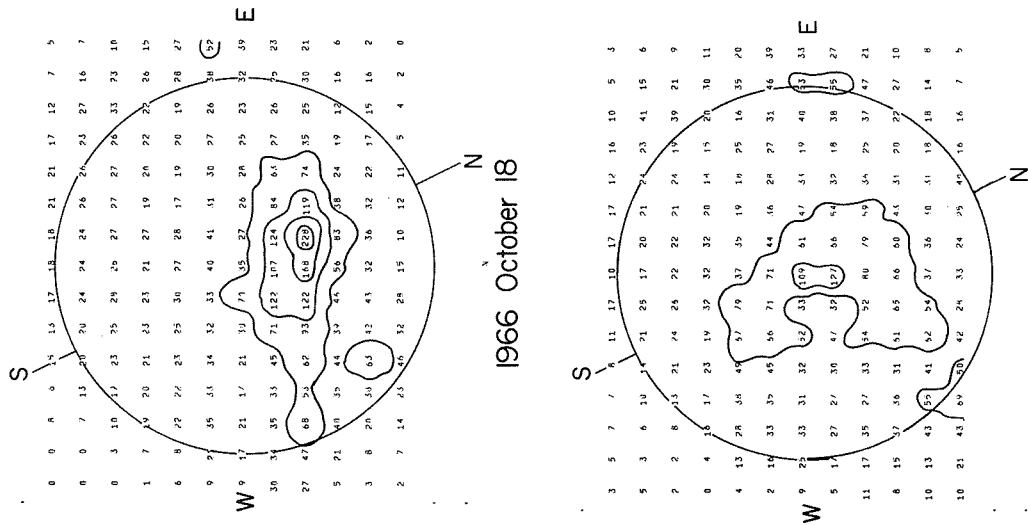


SOLAR RADIO EMISSION SPECTROHELIOGRAMS

FLEURS, AUSTRALIA

OCTOBER 1966

21 cm
Resolution: about 3 minutes of arc.
Unit of Brightness temperature: 1700°K



COSMIC RAY INDICES

(Neutron Monitors)

OCTOBER 1966

| OCT. 1966 | CHURCHILL | DEEP RIVER | CLIMAX | DALLAS |
|--------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| | DAILY AVERAGE COUNTS PER HOUR | DAILY AVERAGE COUNTS PER HOUR | DAILY AVERAGE COUNTS PER HOUR | DAILY AVERAGE COUNTS PER HOUR |
| 1 | * | 6627.4 | 3964.6 | * |
| 2 | | 6616.4 | 3958.4 | |
| 3 | | 6614.1 | 3964.9 | |
| 4 | | 6665.3 | 4004.5 | |
| 5 | | 6747.7 | 4058.0 | |
| 6 | | 6774.3 | 4075.6 | |
| 7 | | 6771.0 | 4084.7 | |
| 8 | | 6760.6 | 4076.3 | |
| 9 | | 6758.1 | 4070.5 | |
| 10 | | 6776.3 | 4059.9 | |
| 11 | | 6800.6 | 4062.0 | |
| 12 | | 6782.8 | 4058.0 | |
| 13 | | 6752.0 | 4053.4 | |
| 14 | | 6754.2 | 4055.9 | |
| 15 | | 6764.2 | 4064.1 | |
| 16 | | 6686.2 | 4023.3 | |
| 17 | | 6741.2 | 4040.9 | |
| 18 | | 6802.7 | 4096.2 | |
| 19 | | 6861.6 | 4119.3 | |
| 20 | | 6885.2 | 4125.4 | |
| 21 | | 6880.9 | 4142.7 | |
| 22 | | 6879.8 | 4141.8 | |
| 23 | | 6898.1 | 4137.0 | |
| 24 | | 6851.9 | 4087.7 | |
| 25 | | 6823.0 | 4077.3 | |
| 26 | | 6700.5 | 4000.6 | |
| 27 | | 6629.8 | 3956.9 | |
| 28 | | 6655.6 | 3976.9 | |
| 29 | | 6734.4 | 4013.2 | |
| 30 | | 6818.5 | 4072.3 | |
| 31 | | 6786.1 | 4093.2 | |

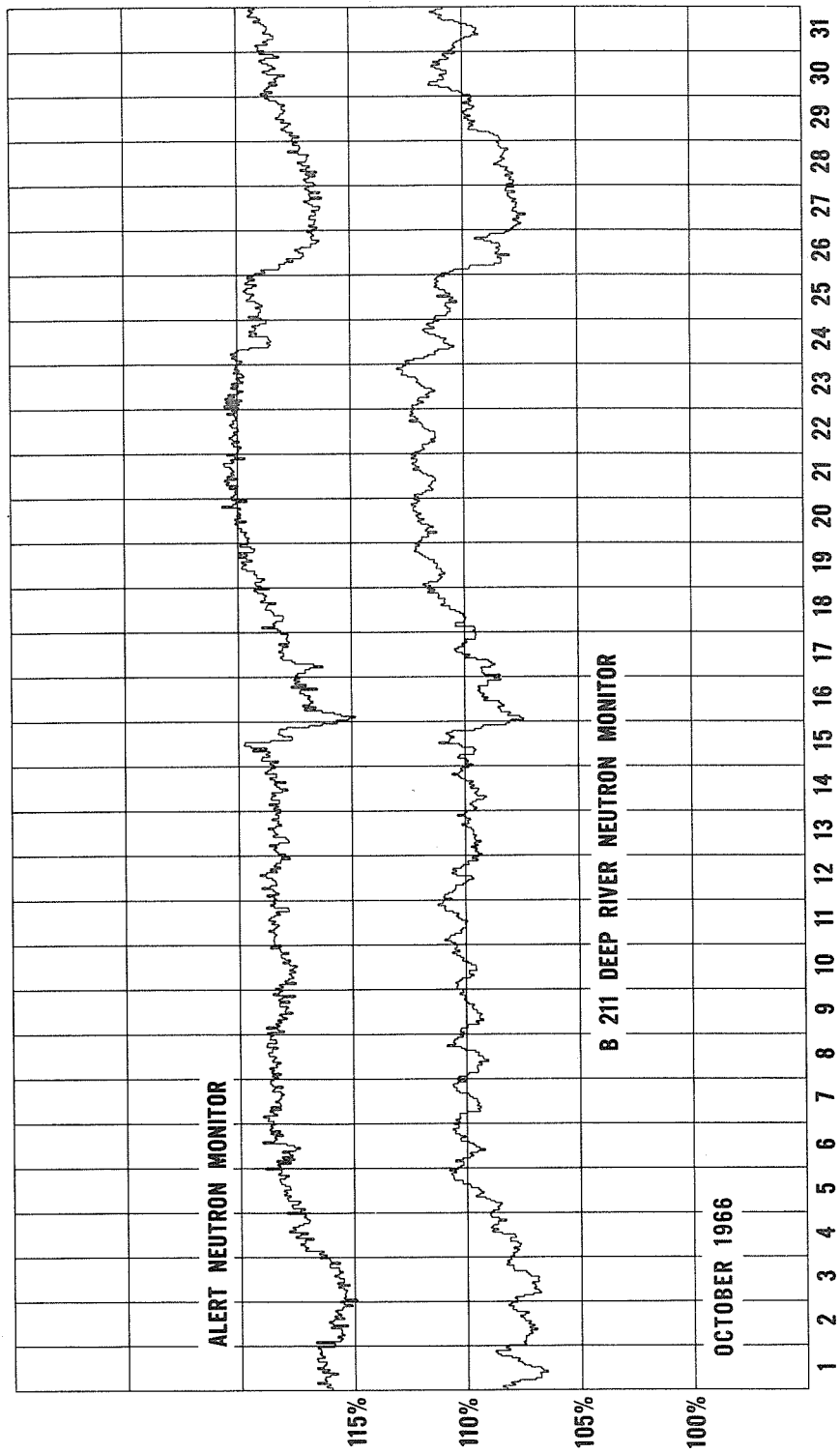
* The data for October 1966 from Dallas and Churchill have not been processed.
It will be published when it becomes available.

Deep River Neutron Monitor, Scaling Factor 300.

Climax IGC Station B305, Scaling Factor 100.

COSMIC RAY INDICES
(Pressure Corrected Hourly Totals)

OCTOBER 1966



GEOMAGNETIC ACTIVITY INDICES

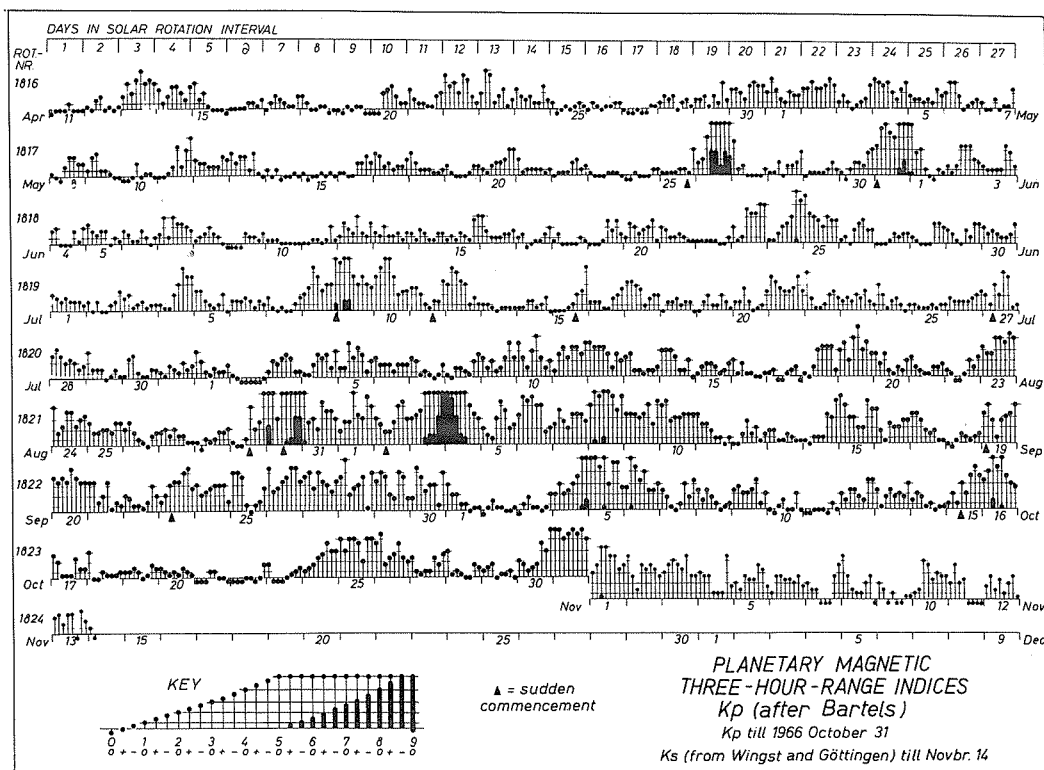
OCTOBER 1966

| DAY | | Kp | | | | | | | | SUM | Ci | Cp | Ap |
|------|----|--------------------------|----|----|----|----|----|----|----|------|------|-----|----|
| | | THREE-HOUR RANGE INDICES | | | | | | | | | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| 1 | | 3 | 2 | 2 | 1 | 1 | 0+ | 1- | 1- | 11- | 0.3 | 0.3 | 6 |
| 2 | QQ | 0 | 1- | 1+ | 1- | 1- | 0+ | 0+ | 1- | 5- | 0.0 | 0.0 | 3 |
| 3 | Q | 0 | 1 | 2- | 1- | 1- | 0+ | 1- | 2 | 7 | 0.1 | 0.1 | 4 |
| 4 | D | 2 | 3 | 2 | 2+ | 3 | 4- | 5+ | 6 | 27+ | 1.3 | 1.2 | 26 |
| 5 | D | 5 | 5 | 4+ | 5+ | 3 | 5- | 5- | 3- | 35- | 1.5 | 1.4 | 36 |
| 6 | D | 3- | 5+ | 4+ | 3+ | 4 | 2+ | 2+ | 3 | 27+ | 1.0 | 1.1 | 22 |
| 7 | | 2+ | 2- | 1- | 0+ | 1 | 3 | 2- | 3+ | 14 | 0.5 | 0.4 | 8 |
| 8 | | 2+ | 1+ | 2+ | 2- | 1 | 0+ | 1- | 1 | 11- | 0.2 | 0.2 | 5 |
| 9 | | 2+ | 3- | 2 | 2 | 2+ | 3+ | 1 | 2 | 18- | 0.6 | 0.5 | 9 |
| 10 | Q | 0+ | 0 | 1- | 1+ | 0+ | 0+ | 2 | 0+ | 5+ | 0.2 | 0.1 | 3 |
| 11 | QQ | 0 | 0 | 0+ | 0+ | 0+ | 0 | 1 | 0+ | 2+ | 0.0 | 0.0 | 2 |
| 12 | | 2 | 1+ | 2+ | 2+ | 2- | 1+ | 3+ | 3+ | 18- | 0.6 | 0.5 | 10 |
| 13 | | 2+ | 1- | 2- | 2+ | 2- | 2 | 2- | 3 | 15+ | 0.5 | 0.4 | 8 |
| 14 | | 1+ | 2 | 2- | 1- | 1 | 0+ | 1- | 1- | 8+ | 0.1 | 0.1 | 4 |
| 15 | | 1 | 2 | 1 | 3 | 2 | 4- | 4+ | 4- | 21- | 0.8 | 0.8 | 14 |
| 16 | D | 3+ | 4 | 6 | 4+ | 5+ | 4- | 3 | 3- | 32+ | 1.4 | 1.0 | 20 |
| 17 | | 3- | 2 | 1- | 1- | 1- | 2+ | 1+ | 1+ | 12- | 0.3 | 0.3 | 6 |
| 18 | | 3 | 0+ | 0+ | 1 | 1- | 1- | 1- | 1 | 8- | 0.2 | 0.2 | 4 |
| 19 | Q | 1 | 1 | 1+ | 1 | 0+ | 1- | 2- | 1+ | 8+ | 0.1 | 0.1 | 4 |
| 20 | Q | 1+ | 1 | 1- | 1 | 1- | 1+ | 1 | 1- | 8- | 0.1 | 0.1 | 4 |
| 21 | QQ | 0 | 0 | 0 | 1 | 1 | 0+ | 0+ | 0 | 3- | 0.0 | 0.0 | 2 |
| 22 | QQ | 0 | 0 | 0 | 0+ | 0+ | 0 | 0+ | 2- | 3- | 0.0 | 0.0 | 2 |
| 23 | QQ | 2- | 0 | 0 | 0 | 0+ | 1- | 1 | 1+ | 5 | 0.1 | 0.0 | 2 |
| 24 | | 1 | 1+ | 2- | 2+ | 3- | 4- | 3 | 3 | 19- | 0.9 | 0.6 | 11 |
| 25 | | 4 | 3 | 4 | 4 | 4- | 2 | 4 | 4 | 29- | 1.2 | 1.1 | 22 |
| 26 | | 4- | 4+ | 2- | 2+ | 3- | 4- | 2+ | 2 | 23- | 1.0 | 0.8 | 15 |
| 27 | | 2+ | 1 | 1- | 1 | 1 | 2+ | 2- | 3- | 13- | 0.3 | 0.3 | 6 |
| 28 | | 3 | 1- | 1 | 1- | 0+ | 0+ | 2- | 1+ | 9 | 0.2 | 0.2 | 5 |
| 29 | Q | 1 | 1+ | 2- | 0+ | 1- | 1- | 1 | 0+ | 7 | 0.1 | 0.1 | 4 |
| 30 | | 2 | 2- | 1 | 1+ | 2- | 4- | 3 | 5- | 19 | 1.0 | 0.7 | 13 |
| 31 | D | 5- | 5- | 4 | 4+ | 5- | 4+ | 5- | 4 | 35+ | 1.5 | 1.4 | 34 |
| MEAN | | | | | | | | | | 0.52 | 0.45 | 10 | |

The Kp values given as integers represent the values normally given with a small zero following the number i.e., 0=0o, 1=1o, etc., because the table is prepared by computer and lower case symbols are not available.

A preliminary storm sudden commencement (ssc) occurred October 15 at 0954UT.

Erratum: Mean Ap for July 1966 should be 9 instead of 12 as published in CRPL-FB-265, September 1966.



DAILY AVERAGE INDICES Ap

| | 1965 | | 1966 | | | | | | | | | |
|------|------|------|------|------|------|------|-----|------|------|------|-------|------|
| | NOV. | DEC. | JAN. | FEB. | MAR. | APR. | MAY | JUNE | JULY | AUG. | SEPT. | OCT. |
| 1 | 4 | 19 | 2 | 3 | 3 | 18 | 8 | 12 | 5 | 6 | 22 | 6 |
| 2 | 5 | 9 | 8 | 3 | 3 | 13 | 12 | 10 | 4 | 1 | 15 | 3 |
| 3 | 1 | 2 | 6 | 11 | 10 | 7 | 5 | 7 | 4 | 7 | 92 | 4 |
| 4 | 8 | 11 | 11 | 13 | 9 | 8 | 12 | 4 | 14 | 8 | 112 | 26 |
| 5 | 13 | 3 | 4 | 18 | 5 | 6 | 6 | 5 | 5 | 10 | 13 | 36 |
| 6 | 17 | 3 | 2 | 8 | 4 | 7 | 7 | 4 | 5 | 6 | 24 | 22 |
| 7 | 9 | 3 | 7 | 4 | 2 | 10 | 4 | 9 | 4 | 5 | 14 | 8 |
| 8 | 4 | 4 | 8 | 4 | 3 | 10 | 5 | 4 | 22 | 5 | 42 | 5 |
| 9 | 5 | 6 | 8 | 3 | 4 | 5 | 5 | 3 | 36 | 9 | 19 | 9 |
| 10 | 0 | 10 | 7 | 7 | 10 | 5 | 2 | 2 | 25 | 12 | 19 | 3 |
| 11 | 3 | 10 | 2 | 12 | 6 | 2 | 10 | 3 | 8 | 14 | 7 | 2 |
| 12 | 3 | 10 | 2 | 5 | 6 | 3 | 6 | 7 | 15 | 14 | 5 | 10 |
| 13 | 10 | 6 | 2 | 6 | 14 | 15 | 7 | 5 | 3 | 6 | 4 | 8 |
| 14 | 3 | 2 | 3 | 2 | 64 | 8 | 2 | 4 | 4 | 9 | 10 | 4 |
| 15 | 2 | 1 | 5 | 4 | 7 | 4 | 2 | 6 | 8 | 5 | 20 | 14 |
| 16 | 1 | 1 | 0 | 5 | 7 | 3 | 5 | 6 | 6 | 4 | 10 | 20 |
| 17 | 4 | 2 | 2 | 4 | 6 | 4 | 7 | 4 | 11 | 2 | 9 | 6 |
| 18 | 6 | 12 | 5 | 3 | 4 | 3 | 5 | 3 | 4 | 10 | 3 | 4 |
| 19 | 10 | 7 | 3 | 14 | 20 | 2 | 3 | 6 | 5 | 20 | 17 | 4 |
| 20 | 17 | 4 | 15 | 17 | 10 | 5 | 8 | 7 | 6 | 7 | 21 | 4 |
| 21 | 10 | 2 | 23 | 4 | 8 | 5 | 4 | 4 | 14 | 5 | 10 | 2 |
| 22 | 4 | 6 | 27 | 14 | 7 | 13 | 4 | 3 | 8 | 4 | 6 | 2 |
| 23 | 2 | 3 | 14 | 28 | 67 | 10 | 2 | 17 | 6 | 22 | 17 | 2 |
| 24 | 4 | 9 | 14 | 19 | 2 | 6 | 2 | 16 | 6 | 16 | 12 | 11 |
| 25 | 5 | 12 | 11 | 10 | 14 | 3 | 5 | 16 | 4 | 8 | 13 | 22 |
| 26 | 4 | 19 | 14 | 3 | 20 | 3 | 78 | 6 | 6 | 6 | 22 | 15 |
| 27 | 4 | 10 | 3 | 4 | 13 | 1 | 5 | 4 | 11 | 5 | 18 | 6 |
| 28 | 2 | 16 | 7 | 2 | 42 | 4 | 5 | 5 | 10 | 4 | 22 | 5 |
| 29 | 3 | 8 | 6 | 6 | 12 | 6 | 4 | 6 | 5 | 13 | 17 | 4 |
| 30 | 12 | 6 | 2 | 6 | 6 | 10 | 6 | 6 | 6 | 82 | 16 | 13 |
| 31 | | 3 | 2 | | 3 | | 48 | | 5 | 23 | | 34 |
| MEAN | 6 | 7 | 7 | 8 | 13 | 7 | 9 | 6 | 9 | 11 | 21 | 10 |

RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

NORTH ATLANTIC, NORTH PACIFIC

OCTOBER 1966

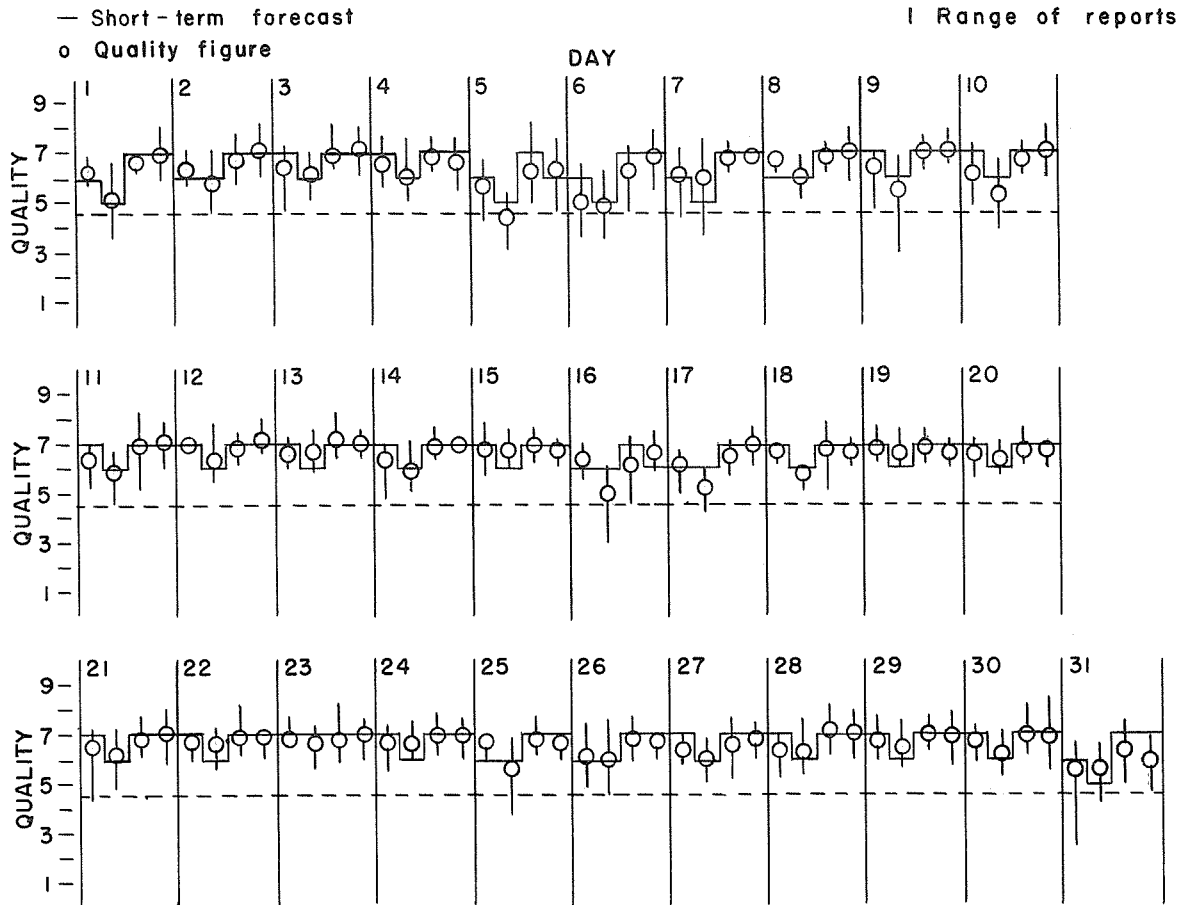
| OCT. 1966 | WHOLE DAY INDICES | | | ADVANCE FORECASTS (J _C -REPORTS) FOR WHOLE DAY | NORTH ATLANTIC | | | | NORTH PACIFIC | | | | GEOMAGNETIC INDICES | | | | | | | | | | |
|--------------|-------------------|---------------|-----------------------|---|--------------------------|----------------|----------------|----------------|---|----|----|----|---------------------|----|-----------------|----|-----------------|------------|-----------------|--------------|--------------|-----|----|
| | NORTH ATLANTIC | NORTH PACIFIC | AVERAGE HIGH LATITUDE | | 6-HOURLY QUALITY FIGURES | | | | SHORT-TERM FORECASTS ISSUED ABOUT ONE HOUR IN ADVANCE OF: | | | | K _{FR} | | A _{FR} | | K _{SI} | | A _{SI} | | | | |
| | | | | | 00 TO 06 | 06 TO 12 | 12 TO 18 | 18 TO 24 | 00 | 06 | 12 | 18 | 00 | 06 | 12 | 18 | 00 TO 06 | 08- SERVED | PRE- DICTED | HALF DAY (1) | HALF DAY (2) | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| 01 | 6+ | 6 | 6 | 6 | 6+ | 5 ₀ | 7- | 7 ₀ | 6 | 5 | 7 | 7 | 6 | 6 | 6 | 6 | 2 | 1 | 5 | 15 | 2 | 0 | 4 |
| 02 | 7- | 6 | 6 | 6 | 6+ | 6- | 7- | 7 ₀ | 6 | 6 | 7 | 7 | 6 | 6 | 6 | 6 | 1 | 0 | 3 | 11 | 1 | 0 | 2 |
| 03 | 7- | 6 | 6 | 6 | 6+ | 6+ | 7 ₀ | 7 ₀ | 7 | 6 | 7 | 7 | 6 | 6 | 6 | 6 | 1 | 1 | 3 | 11 | 1 | 0 | 2 |
| 04 | 7- | 6 | 6 | 6 | 7- | 6 ₀ | 7- | 7- | 7 | 6 | 7 | 7 | 6 | 6 | 7 | 6 | 3 | (4) | 20 | 7 | 2 | 3 | 16 |
| 05 | 6- | 5 | 5 | 6 | 6- | 4+ | 6+ | 6+ | 6 | 5 | 7 | 6 | 6 | 5 | 5 | 5 | (4) | 3 | 20 | 7 | (6) | 3 | 50 |
| 06 | 6- | 5 | 5 | 6 | 5 ₀ | 5 ₀ | 6+ | 7- | 6 | 5 | 7 | 7 | 6 | 5 | 5 | 6 | 3 | 3 | 15 | 12 | (4) | 3 | 34 |
| 07 | 6+ | 6 | 6 | 6 | 6+ | 6 ₀ | 7- | 7- | 6 | 5 | 7 | 7 | 6 | 6 | 5 | 6 | 1 | 2 | 6 | 9 | 1 | 2 | 5 |
| 08 | 7- | 6 | 6 | 6 | 7- | 6 ₀ | 7- | 7 ₀ | 6 | 6 | 7 | 7 | 6 | 6 | 6 | 6 | 2 | 1 | 5 | 7 | 2 | 0 | 6 |
| 09 | 7- | 6 | 6 | 7 | 6+ | 6- | 7 ₀ | 7 ₀ | 7 | 6 | 7 | 7 | 6 | 6 | 6 | 7 | 2 | 2 | 9 | 5 | 2 | 2 | 8 |
| 10 | 6+ | 6 | 6 | 7 | 6+ | 5+ | 7- | 7 ₀ | 7 | 6 | 7 | 7 | 6 | 6 | 6 | 6 | 1 | 1 | 2 | 5 | 1 | 0 | 2 |
| 11 | 7- | 6 | 6 | 7 | 6+ | 6 ₀ | 7 ₀ | 7 ₀ | 7 | 6 | 7 | 7 | 7 | 6 | 6 | 6 | 0 | 0 | 0 | 5 | 0 | 0 | 0 |
| 12 | 7- | 6 | 6 | 6 | 7 ₀ | 6+ | 7- | 7+ | 7 | 6 | 7 | 7 | 6 | 6 | 6 | 6 | 2 | 3 | 9 | 10 | 1 | 2 | 5 |
| 13 | 7- | 6 | 6 | 6 | 7- | 7- | 7 ₀ | 7 ₀ | 7 | 6 | 7 | 7 | 6 | 6 | 6 | 6 | 2 | 2 | 7 | 9 | 1 | 2 | 5 |
| 14 | 7- | 6 | 6 | 6 | 6+ | 6 ₀ | 7 ₀ | 7 ₀ | 7 | 6 | 7 | 7 | 6 | 6 | 6 | 6 | 1 | 1 | 3 | 7 | 1 | 0 | 3 |
| 15 | 7- | 6 | 6 | 7 | 7- | 7- | 7- | 7- | 7 | 6 | 7 | 7 | 6 | 6 | 6 | 6 | 2 | 3 | 12 | 7 | 1 | 3 | 9 |
| 16 | 6 ₀ | 6 | 6 | 7 | 6+ | 5 ₀ | 6 ₀ | 7- | 6 | 6 | 7 | 6 | 6 | 6 | 5 | 6 | (4) | 3 | 23 | 12 | (5) | (4) | 81 |
| 17 | 6+ | 6 | 6 | 6 | 6+ | 5+ | 7- | 7 ₀ | 6 | 6 | 7 | 7 | 5 | 6 | 6 | 6 | 2 | 1 | 4 | 12 | 0 | 1 | 3 |
| 18 | 7- | 6 | 6 | 6 | 7- | 6- | 7- | 7- | 7 | 6 | 7 | 7 | 6 | 6 | 6 | 6 | 1 | 1 | 2 | 10 | 0 | 1 | 2 |
| 19 | 7- | 6 | 6 | 6 | 7- | 7- | 7 ₀ | 7- | 7 | 6 | 7 | 7 | 6 | 6 | 6 | 6 | 1 | 1 | 3 | 7 | 1 | 1 | 3 |
| 20 | 7- | 6 | 6 | 7 | 7- | 6+ | 7- | 7- | 7 | 6 | 7 | 7 | 6 | 6 | 6 | 6 | 1 | 1 | 4 | 7 | 0 | 0 | 1 |
| 21 | 7- | 6 | 6 | 6 | 7- | 6+ | 7- | 7 ₀ | 7 | 6 | 7 | 7 | 6 | 6 | 7 | 6 | 0 | 1 | 2 | 10 | 0 | 0 | 1 |
| 22 | 7- | 6 | 6 | 6 | 7- | 7- | 7 ₀ | 7 ₀ | 7 | 6 | 7 | 7 | 6 | 6 | 6 | 6 | 0 | 0 | 0 | 10 | 0 | 0 | 0 |
| 23 | 7- | 6 | 6 | 6 | 7- | 7- | 7- | 7 ₀ | 7 | 7 | 7 | 7 | 6 | 6 | 6 | 6 | 0 | 1 | 2 | 10 | 0 | 0 | 0 |
| 24 | 7- | 6 | 6 | 6 | 7- | 7- | 7 ₀ | 7 ₀ | 7 | 6 | 7 | 7 | 6 | 6 | 7 | 6 | 2 | 3 | 11 | 13 | 0 | 3 | 8 |
| 25 | 6+ | 6 | 6 | 6 | 7- | 6- | 7- | 7- | 6 | 6 | 7 | 7 | 6 | 6 | 6 | 7 | (4) | 3 | 19 | 13 | (4) | 3 | 24 |
| 26 | 6+ | 6 | 6 | 6 | 6+ | 6 ₀ | 7- | 7- | 6 | 6 | 7 | 7 | 6 | 6 | 5 | 6 | 3 | 3 | 14 | 9 | 2 | 2 | 11 |
| 27 | 7- | 6 | 6 | 6 | 6+ | 6 ₀ | 7- | 7- | 7 | 6 | 7 | 7 | 6 | 6 | 6 | 6 | 1 | 2 | 6 | 9 | 0 | 2 | 3 |
| 28 | 7- | 6 | 6 | 7 | 6+ | 6+ | 7 ₀ | 7 ₀ | 7 | 6 | 7 | 7 | 6 | 6 | 6 | 6 | 1 | 2 | 4 | 6 | 0 | 0 | 2 |
| 29 | 7- | 6 | 6 | 7 | 7- | 7- | 7 ₀ | 7 ₀ | 7 | 6 | 7 | 7 | 6 | 6 | 6 | 6 | 1 | 1 | 3 | 4 | 1 | 0 | 2 |
| 30 | 7- | 6 | 6 | 7 | 7- | 6+ | 7 ₀ | 7 ₀ | 7 | 6 | 7 | 7 | 6 | 6 | 5 | 6 | 2 | 3 | 11 | 4 | 1 | 2 | 6 |
| 31 | 6 ₀ | 5 | 6 | 7 | 6- | 6- | 6+ | 6 ₀ | 6 | 5 | 7 | 7 | 6 | 6 | 5 | 5 | (4) | 3 | 24 | 10 | (4) | (4) | 35 |
| QUIET | | | | P | 19 | | | | | 21 | 19 | 27 | 29 | | | | | | | | | | |
| | | | | S | 12 | | | | | 10 | 11 | 4 | 2 | | | | | | | | | | |
| | | | | U | 0 | | | | | 0 | 0 | 0 | 0 | | | | | | | | | | |
| | | | | F | 0 | | | | | 0 | 0 | 0 | 0 | | | | | | | | | | |
| DISTURBED | | | | P | 0 | | | | | 0 | 0 | 0 | 0 | | | | | | | | | | |
| | | | | S | 0 | | | | | 0 | 1 | 0 | 0 | | | | | | | | | | |
| | | | | U | 0 | | | | | 0 | 0 | 0 | 0 | | | | | | | | | | |
| | | | | F | 0 | | | | | 0 | 0 | 0 | 0 | | | | | | | | | | |

1) THE ADVANCE J_C-FORECASTS ARE SCORED AGAINST THE AVERAGE HIGH LATITUDE WHOLE-DAY INDICES

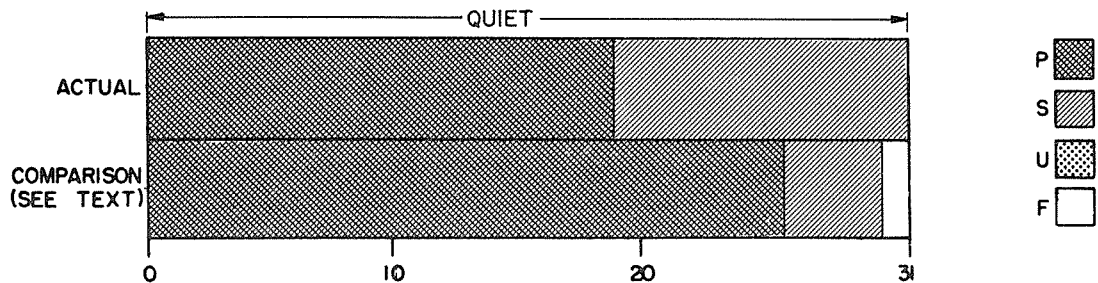
2) THE PREDICTED A_{FR} INDICES ARE ISSUED EACH WEDNESDAY FOR THE COMING SEVEN DAYS. THE VALUE FOR THE FIRST DAY OF EACH PREDICTION PERIOD IS UNDERScoreD.

OCTOBER 1966

NORTH ATLANTIC

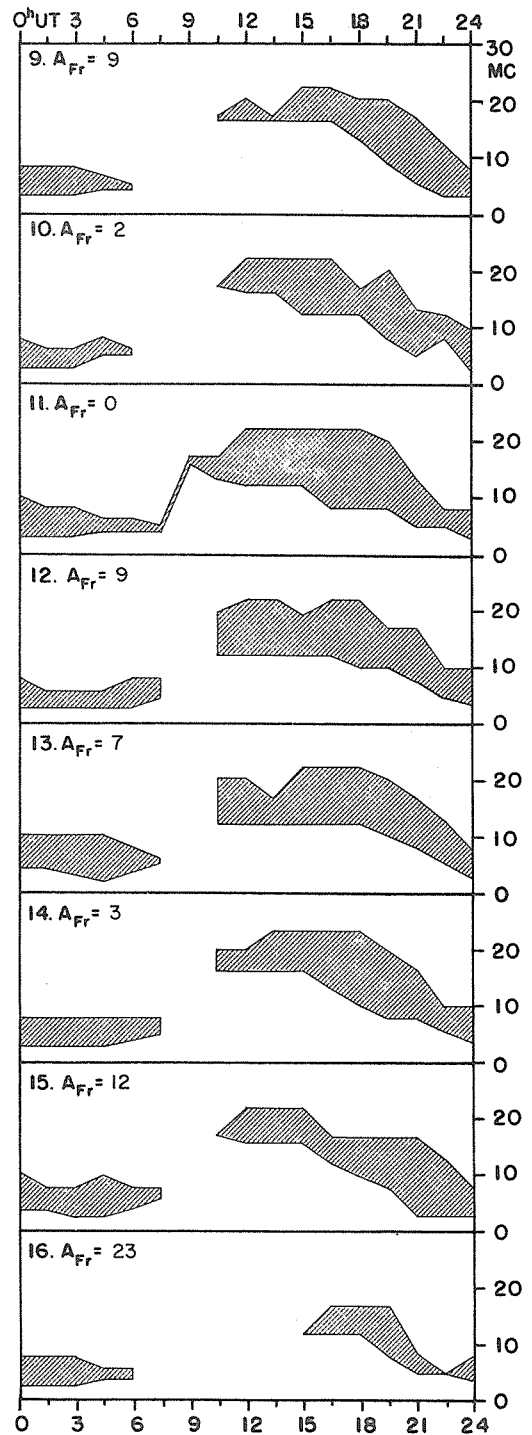
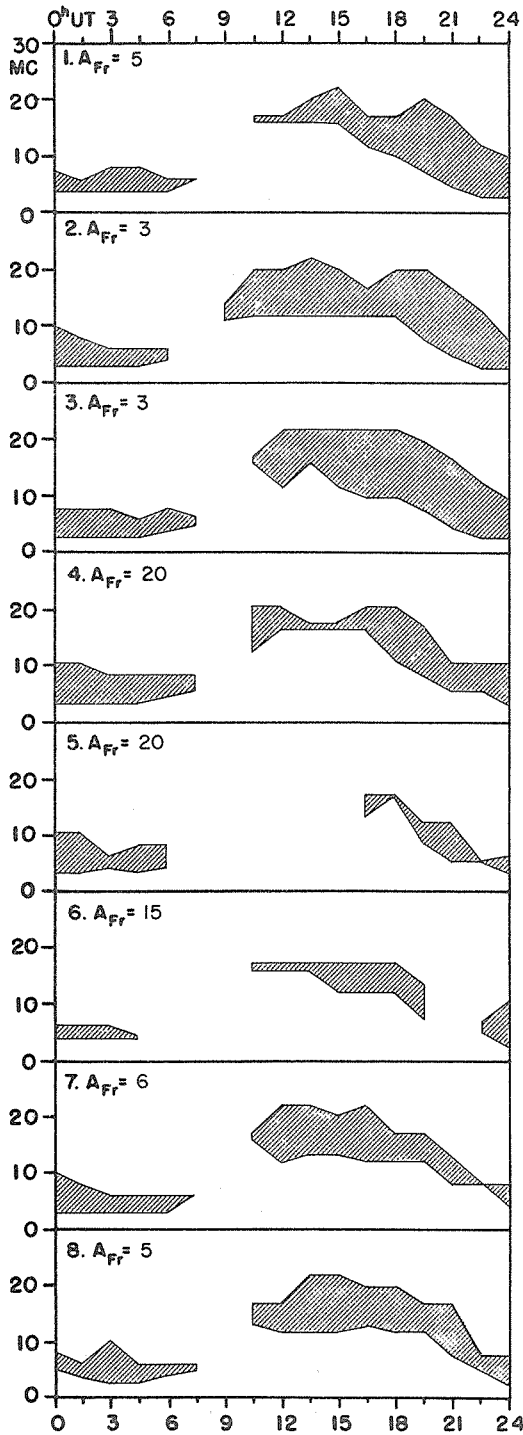


HIGH LATITUDE



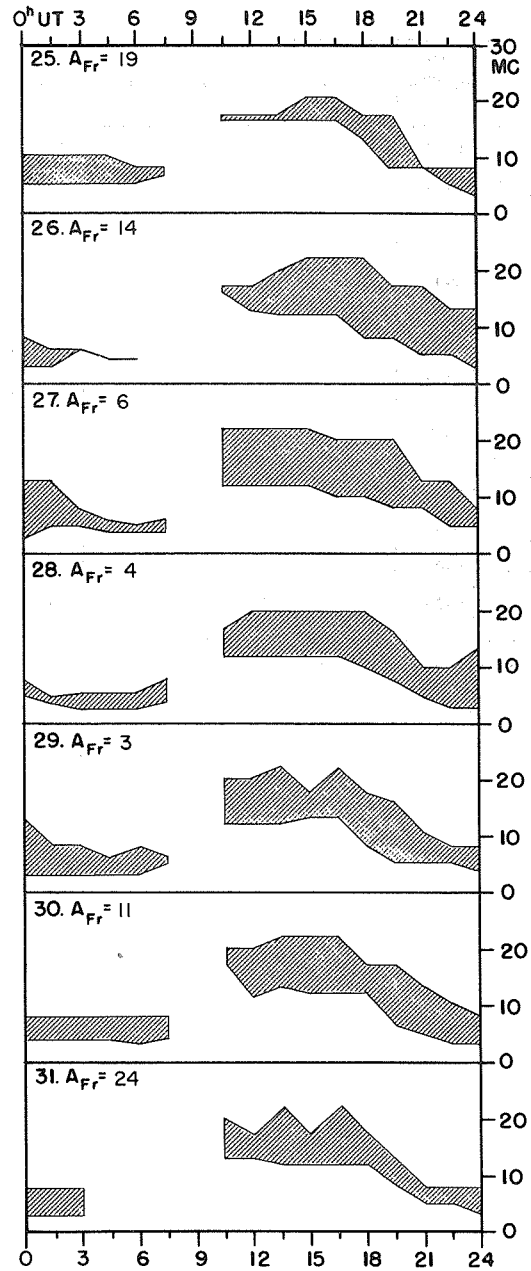
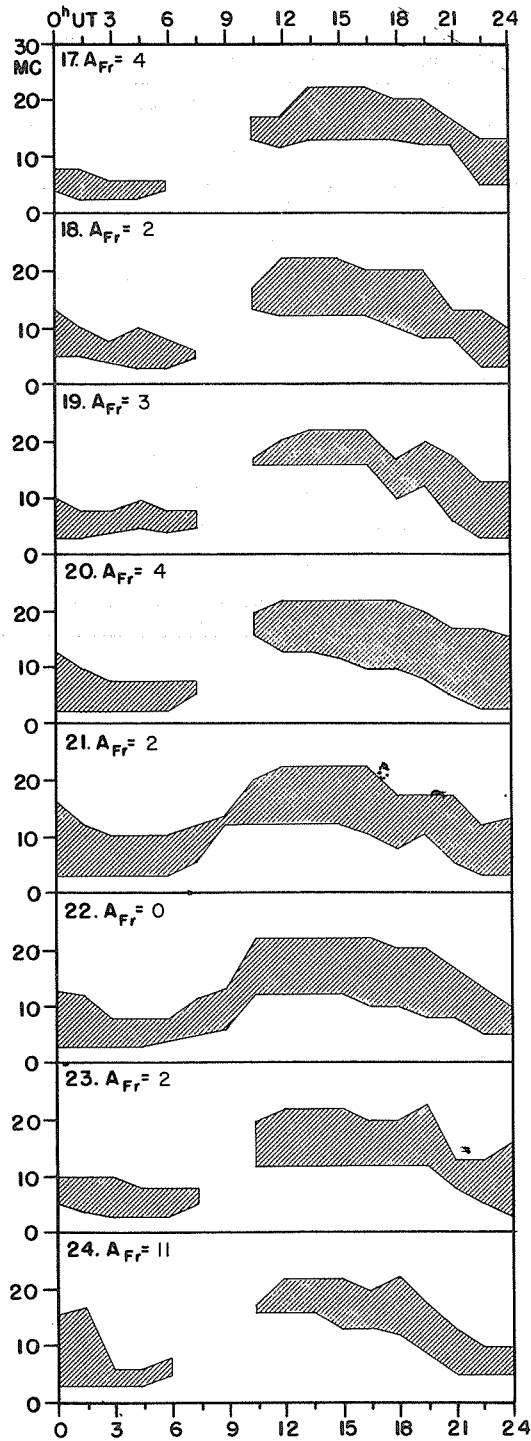
VIIc USEFUL FREQUENCY RANGES -- NORTH ATLANTIC PATH

OCTOBER 1966



USEFUL FREQUENCY RANGES -- NORTH ATLANTIC PATH VIII^d

OCTOBER 1966



Adapted from Observations by Deutsches Bundespost

ALERT PERIODS

INTERNATIONAL URSIGRAM
AND WORLD DAYS SERVICE

NOVEMBER 1966

| Nov. 1966 | TIME OF ISSUE UT | ADVANCE GEOPHYSICAL ALERT | WORLDWIDE GEOPHYSICAL ALERT | | | |
|--------------|------------------------|---------------------------|-----------------------------|-----------------|--------|--|
| | | | NO. | TYPE | TIMING | ELABORATION |
| 1 | 0400 | | 429 | Strat. Warming* | Exists | Antarctica Wilkes-Mirny region |
| 2 | 0400 | | 430 | Strat. Warming | Exists | Antarctica Hallett-Pole-Mirny spreading |
| 3 | 0400 | | 431 | Strat. Warming | Exists | Antarctica Hallett-Pole-Mirny |
| 4 | 0400 | | 432 | Strat. Warming | Exists | Antarctica Hallett-Pole-Mirny |
| 5 | 0400 | | 433 | Strat. Warming | Exists | Antarctica Molodezhnaya-McMurdo-Byrd |
| 6 | 0400 | | 434 | Strat. Warming | Exists | Antarctica Molodezhnaya-McMurdo-Byrd |
| 7 | 0400 | | 435 | Strat. Warming | Exists | Antarctica Molodezhnaya-McMurdo-Byrd |
| 8 | 0400 | | 436 | Strat. Warming | Exists | Antarctica spreading |
| 9 | 0400 | | 437 | Strat. Warming | Exists | Antarctica spreading |
| 10 | 0400 | | 438 | Strat. Warming | Exists | Antarctica |
| 11 | 0400 | | 439 | Strat. Warming | Ends | Antarctica vernal circulation change progressing |

* Strat. = Stratospheric