

Solar Bulletin

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SOLAR ACTIVITY DURING NOVEMBER

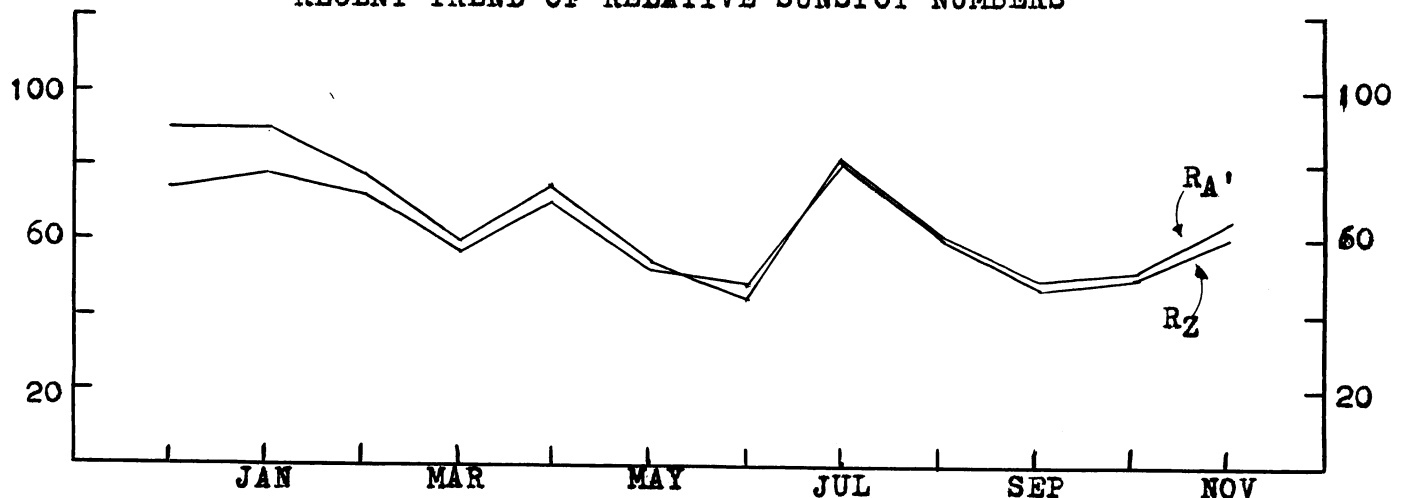
Thirteen ionospheric disturbances were recorded by the Solar Division observers. This was a slight increase over the number of events recorded in the previous month. Perhaps most significant, was the increase in the importance or size of the events, with slightly more than half being rated above a minor (1-).

The general change in ionospheric response in recordings made by the SES method when using a short signal path, continued from last month throughout the month of November. On page two are reproductions of some of the major events of the month. The recording of the event starting on the 9th and peaking on the 10th, occurred at local sunset at the observers station. A sunlit signal from North West Cape, Australia operating at 23.4 kHz was used. The high amplitude indicates a quite large event but the short duration or very fast decay tends to contradict, however, it is very common for the "sunset effect" to shorten the decay time for events taking place late in the solar day. The other three events are made by the SEA method and are typical recordings.

The mean of the American Sunspot numbers rose considerably to 64.9 for the month of November. Despite the high mean, there was a period during the middle of the month when only a single sunspot group was visible on the solar disk.

Thomas Cragg of Mount Wilson reported seeing a high-latitude southern spot at -32 degrees which may possibly have been a new-cycle spot. This single spot was found in a plage in which the magnetic polarity was reversed compared to normal polarity for the present cycle.

RECENT TREND OF RELATIVE SUNSPOT NUMBERS



AMERICAN (RA') AND ZURICH (RZ) RELATIVE SUNSPOT NUMBERS, NOVEMBER 1971

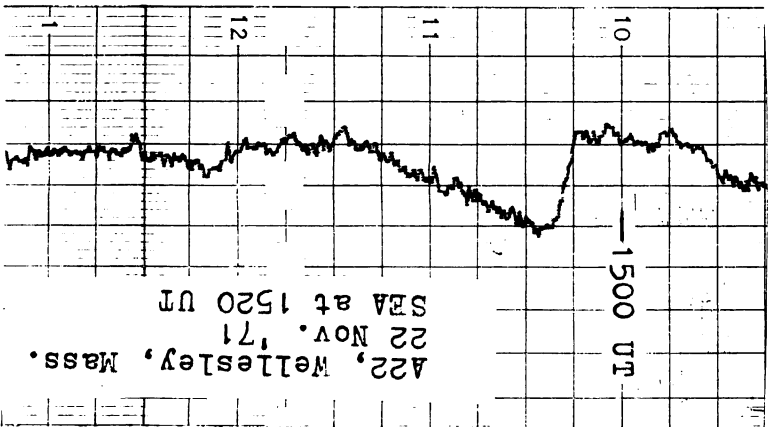
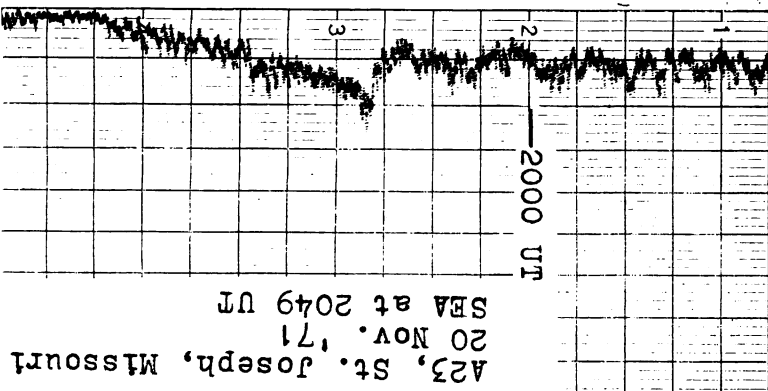
| DAY | RA' | RZ | DAY | RA' | RZ |
|-----|-----|----|-----|-----|-----|
| 1 | 74 | 76 | 16 | 17 | 26 |
| 2 | 70 | 69 | 17 | 38 | 42 |
| 3 | 69 | 62 | 18 | 45 | 45 |
| 4 | 64 | 66 | 19 | 48 | 48 |
| 5 | 74 | 64 | 20 | 44 | 42 |
| 6 | 59 | 61 | 21 | 64 | 60 |
| 7 | 50 | 47 | 22 | 79 | 76 |
| 8 | 58 | 43 | 23 | 88 | 77 |
| 9 | 53 | 56 | 24 | 94 | 86 |
| 10 | 37 | 32 | 25 | 96 | 87 |
| 11 | 44 | 40 | 26 | 111 | 97 |
| 12 | 43 | 51 | 27 | 121 | 102 |
| 13 | 32 | 48 | 28 | 127 | 93 |
| 14 | 19 | 34 | 29 | 117 | 84 |
| 15 | 17 | 28 | 30 | 95 | 73 |

Monthly Means
 RA' = 64.9
 RZ = 60.5

SUDDEN IONOSPHERIC DISTURBANCES RECORDED DURING NOVEMBER 1971

| DAY | MAX SEA | DEF | SEAS | OBSERVERS | DAY | MAX SEA | DEF | SEAS | OBSERVERS |
|-----|---------|-----|------|----------------|-----|---------|-----|------|-------------------|
| 3 | 1519 | 1- | 5 | A1,19,31 | 20 | 1745 | 1- | 4 | A30,31 |
| 3 | 1918 | 1+ | 5 | A1,19,21,30,31 | 20 | 2049 | 1 | 5 | A1,19,21,23,30,31 |
| 10 | 0005 | 1+ | 5 | A21,30,31 | 22 | 1520 | 2 | 5 | A1,17,19,22,23,26 |
| 10 | 1342 | 1 | 2 | A17 | 27 | 31 | | | |
| 12 | 1836 | 1+ | 5 | A1,19,21,23,26 | 24 | 1901 | 1- | 5 | A1,31 |
| 20 | 1446 | 1 | 5 | A1,21,31 | 26 | 1841 | 1- | 4 | A30,31 |
| | | | | | 26 | 2036 | 1- | 4 | A21,30,31 |
| | | | | | 27 | 1617 | 1- | 5 | A1,19,26,31 |

RASTRAK



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