

# Solar Bulletin

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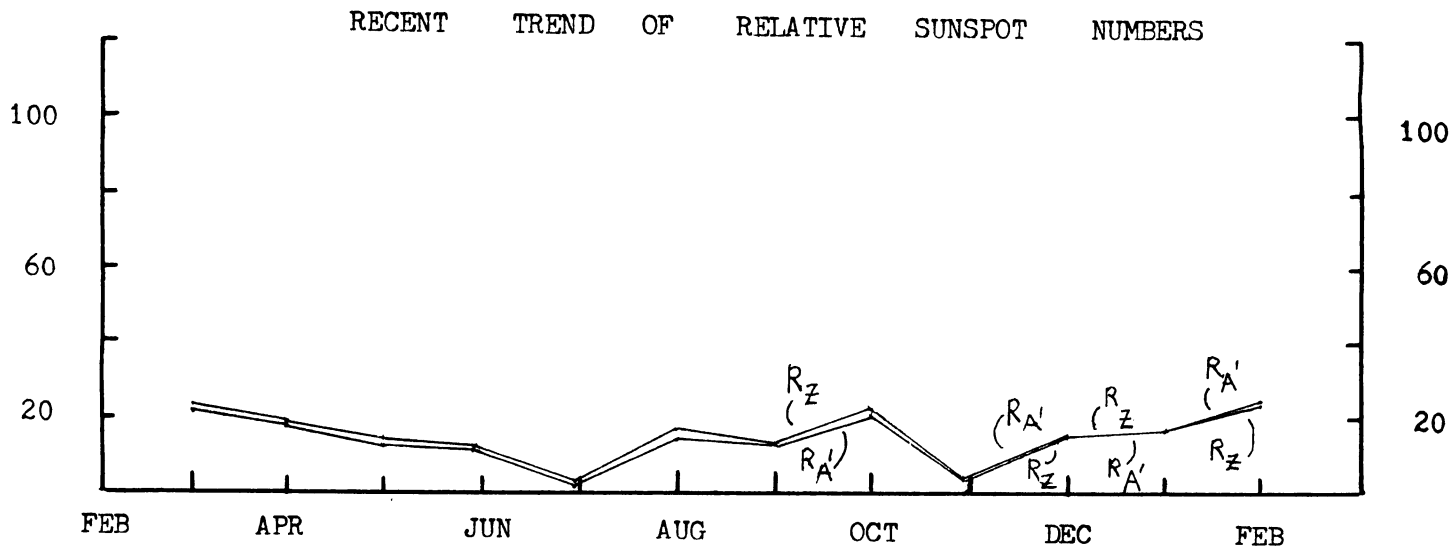
February 1977

## SOLAR ACTIVITY DURING FEBRUARY

Sunspot activity increased during February from the level of last month. The mean of the American sunspot numbers rose to 23.0. This exceeded the highest means of 1976 which were 19.1 in October and 21.1 in March. There were only two spotless days in February.

An H spot which rotated onto the visible disc on the fourteenth was in the right place to be a return of a group last seen at the west limb on 30 January. As this large spot disappeared over the west limb on the twenty-sixth, it left the sun spotless for the last two days of February.

Seven ionospheric disturbances were recorded during February by various of the thirteen observers who submitted charts for analysis. Most of the activity occurred near the middle of the month. Charts showing several of these events are reproduced on page two.



(R<sub>Z</sub>) RELATIVE SUNSPOT

NUMBERS FOR FEBRUARY 1977

| DAY  | R <sub>A'</sub> | R <sub>Z</sub> |
|------|-----------------|----------------|
| 1.   | 16              | 15             |
| 2.   | 20              | 19             |
| 3.   | 21              | 19             |
| 4.   | 17              | 16             |
| 5.   | 13              | 18             |
| 6.   | 3               | 7              |
| 7.   | 4               | 7              |
| 8.   | 14              | 26             |
| 9.   | 23              | 21             |
| 10.  | 27              | 23             |
| 11.  | 33              | 25             |
| 12.  | 53              | 48             |
| 13.  | 60              | 68             |
| 14.  | 57              | 61             |
| 15.  | 51              | 45             |
| 16.  | 54              | 49             |
| 17.  | 46              | 44             |
| 18.  | 38              | 37             |
| 19.  | 24              | 25             |
| 20.  | 12              | 10             |
| 21.  | 10              | 9              |
| 22.  | 10              | 9              |
| 23.  | 10              | 9              |
| 24.  | 9               | 8              |
| 25.  | 9               | 8              |
| 26.  | 9               | 8              |
| 27.  | 0               | 0              |
| 28.  | 0               | 0              |
| Mean | 23.0            | 22.6           |

| Day | Max.  | SEA | SES | Def. | Observers                    |
|-----|-------|-----|-----|------|------------------------------|
| 8   | 19:08 | 2   | 1-  | 4    | A1,19,29,30                  |
| 11  | 21:35 |     | 2   | 5    | A1,4,19,28,29,30,31,34,37,40 |
| 12  | 03:25 | 1   |     | 3    | A43                          |
| 12  | 15:36 |     | 1-  | 5    | A1,4,19,28,29                |
| 13  | 17:45 |     | 1+  | 5    | A26,30,31,34,37              |
| 17  | 15:56 | 2   | 1+  | 5    | A1,4,19,26,28,29,31,34,37    |
| 28  | 20:55 |     | 1+  | 5    | A1,19,26,30,31               |

Charts from the following observers were received and analyzed:

A-1,4,19,26,28,29,30,31,34,36,37,40,43

