

# Solar Bulletin

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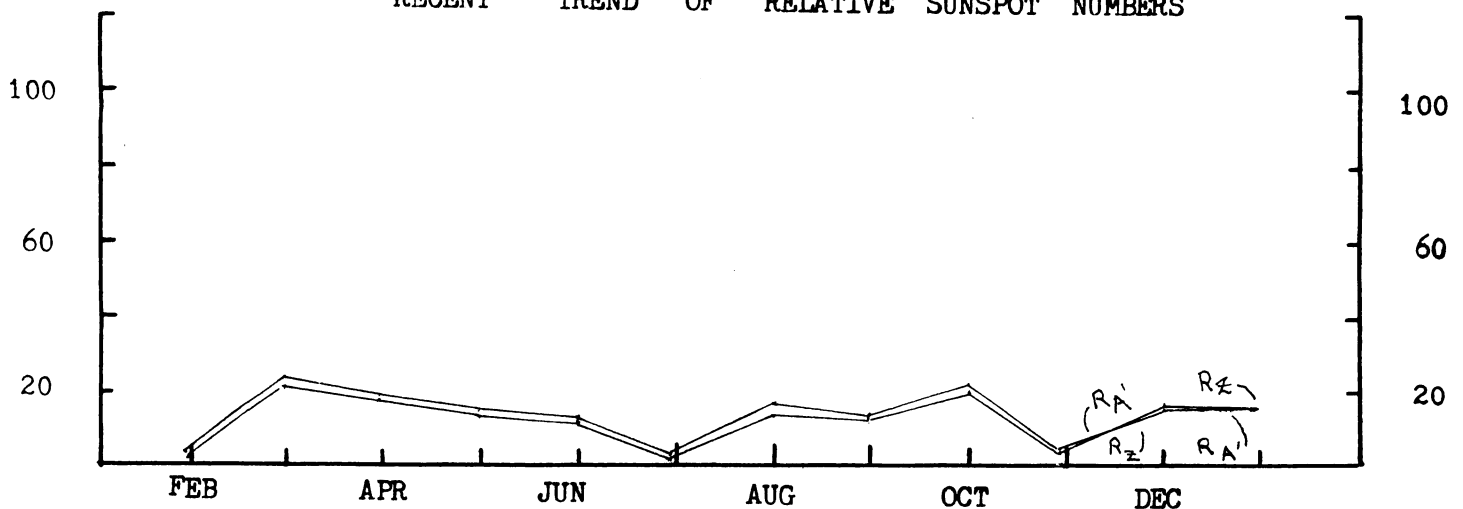
## SOLAR ACTIVITY DURING JANUARY

Sunspot activity continued at about the same level as last month. The January mean of the American sunspot numbers was 15.5, exactly the same as December's. There were five spotless days compared to six last month. The sun first became spotless early on the sixth and remained that way through the tenth. Early on the nineteenth a second spotless period began which lasted through the twentieth.

Many of January's sunspot groups apparently belonged to the new cycle 21. A fine example appeared in the southern hemisphere just west off the central meridian on the thirteenth. Although it developed rapidly, it was fading by the time it reached the west limb.

Four ionospheric disturbances were recorded during January. Three of these occurred on the twelfth, and the fourth on the thirty-first. Charts showing these events are reproduced on page two. Thirteen observers sent January charts for analysis. All of January's disturbances were small ones.

RECENT TREND OF RELATIVE SUNSPOT NUMBERS



SUDDEN IONOSPHERIC DISTURBANCES RECORDED DURING JANUARY 1977

AMERICAN ( $R_A$ ) And ZURICH ( $R_Z$ ) RELATIVE SUNSPOT NUMBERS FOR JANUARY 1977

Day	Max.	SEA	SES	Def.	Observers
12	18:05		1	5	A1,19,26,31,34,37
12	19:36		1	5	A1,19,26,31,34,37
12	22:08		1	5	A31,34,37
31	17:32	1+	1+	5	A1,19,26,30,31,34,43

DAY	$R_A$	$R_Z$
1.	15	20
2.	32	32
3.	28	25
4.	26	22
5.	21	21
6.	7	13
7.	0	0
8.	0	0
9.	0	0
10.	0	0
11.	12	14
12.	21	19
13.	21	23
14.	20	22
15.	20	20
16.	22	18
17.	22	30
18.	18	26
19.	3	7
20.	0	0
21.	9	15
22.	29	24
23.	34	34
24.	33	35
25.	20	17
26.	16	8
27.	6	0
28.	14	13
29.	11	11
30.	9	8
31.	10	10
Mean	15.5	15.7

Charts from the following observers were received and analyzed:

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

