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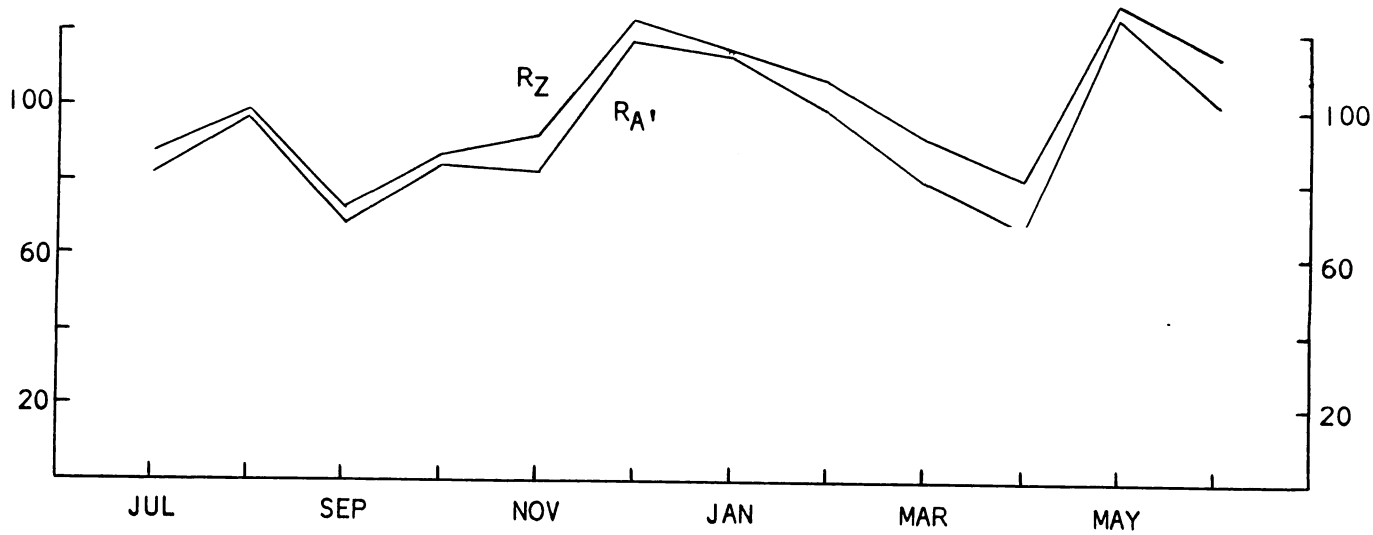
SOLAR ACTIVITY DURING JUNE

June was a month of considerable solar activity. Twelve ionospheric disturbances were recorded by Solar Division observers. Most of these were of rather low intensity. A recording of one of these is shown on page two. It shows an excellent example of a type of small ionospheric effect of a solar flare that can easily be identified with confidence in a recording of very-low-frequency atmospheric noise. It is the characteristic shape: rapid rise followed by slow decay that make it easy to distinguish from the other ups and downs in the trace. The build up of thunderstorms is not so sudden that the rise would take only four minutes. Following the ionospheric disturbance can be seen a typical rise due to thunderstorm activity starting about 1100 UT. It can be seen that its rise time is much slower. On the other hand, a rapid rise can be caused by man-made interference but it is very rare for such interference to decay slowly in the manner of an ionospheric disturbance. The chart also shows a typical interference rise starting at 0902 which is easily identified as man-made by its rapid decay time.

Sunspot activity fell considerably from the high level it had reached during May. The monthly mean of the American sunspot numbers fell to 101.8 compared to the May mean of 124.3. The highest numbers occurred at the beginning of the month with activity dropping off as the month progressed.

RECENT TREND OF RELATIVE SUNSPOT NUMBERS



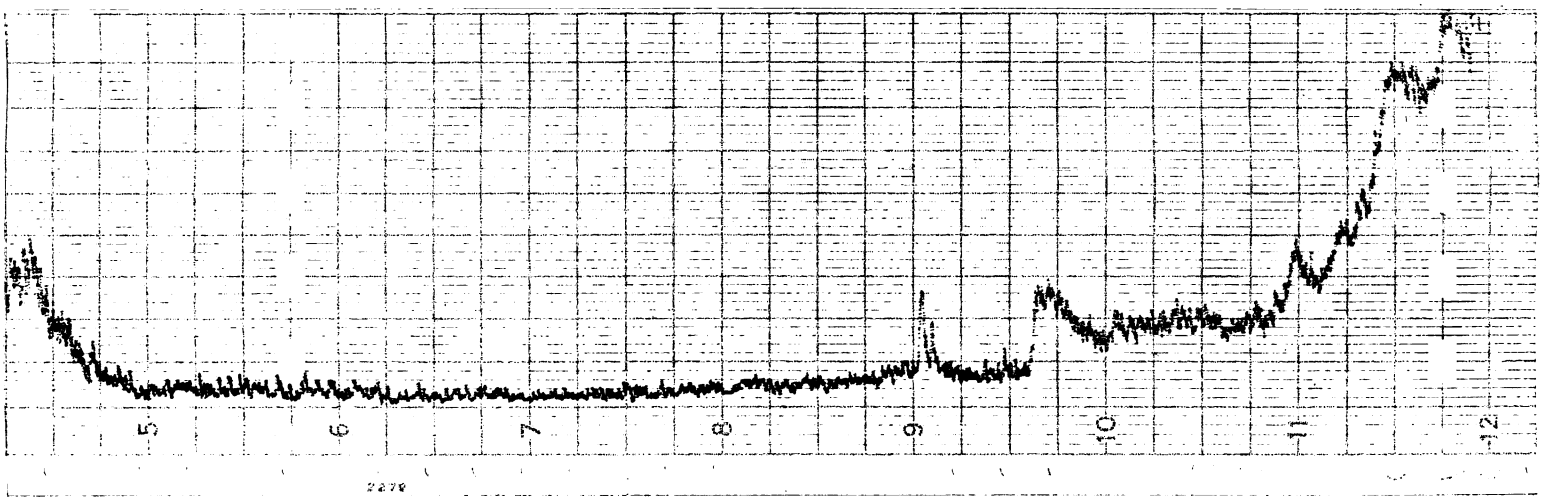
AMERICAN ($R_{A'}$) AND ZURICH (R_Z) RELATIVE SUNSPOT NUMBERS, JUNE 1968

day	$R_{A'}$	R_Z	day	$R_{A'}$	R_Z
1	127	139	16	114	108
2	117	150	17	121	118
3	117	121	18	102	131
4	105	114	19	93	107
5	120	115	20	88	108
6	157	129	21	76	113
7	147	138	22	85	98
8	117	128	23	97	106
9	94	99	24	97	122
10	84	99	25	77	119
11	90	87	26	75	117
12	100	113	27	76	102
13	104	117	28	87	115
14	118	120	29	82	94
15	117	111	30	69	98

June mean $R_{A'}$ = 101.8 June mean R_Z = 114.5

SUDDEN IONOSPHERIC DISTURBANCES RECORDED DURING JUNE

DAY	MAX.	SEA	SES	DEF.	OBSERVERS	DAY	MAX.	SEA	SES	DEF.	OBSERVERS
1	1634		3	5	A-21	11	0940	1		5	A-17
5	2057		2	4	A-21	18	2043		2-	4	A-21
6	1536	1-	1	3	A-21,22	19	1437		1	2	A-21
8	2040		1-	1	A-21	20	1711	2+	2+	5	A-20,1,18,21
9	0036		3	5	A-21	26	2335		2	4	A-21
10	2211	1	1+	4	A-21,20,22,1	27	1953	1+	1+	3	A-21,19



The above recording of 27 kHz atmospheric noise shows a sudden enhancement (SEA) starting at 0936 UT and reaching maximum four minutes later. By 1000 UT the disturbance of the ionosphere has ended. This record was made by A-17, Durban, Natal, Republic of South Africa.