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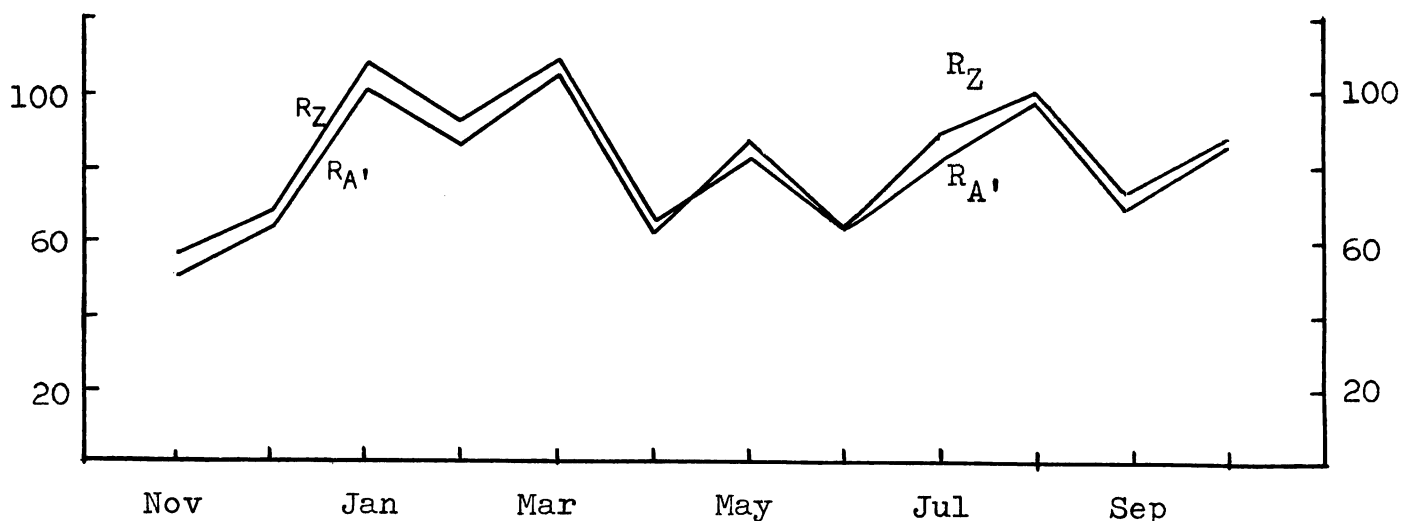
SOLAR ACTIVITY DURING OCTOBER

Most of October's solar activity took place at the end of the month. Sudden ionospheric disturbances occurred at this time due to flares in a complex sunspot group that crossed the sun's central meridian on the 23rd. A record of all sudden ionospheric disturbances recorded by the Solar Division's indirect flare patrol appears on page 2 along with a reproduction of a strip-chart recording of the event that occurred on the 24th.

Sunspot activity was also concentrated at the end of the month and was dominated by a large sunspot group first seen at the north-east limb as a J-type group on the 17th. By the 22nd, this group had developed into two somewhat parallel strings of spots inclined to the equator by an amount not unusual in new groups. Magnetic polarities were such that the eastern end of the upper string and the western end of the lower string gave the group gamma-type characteristics. By the 26th, the two strings of spots began to join and grew rapidly into large spots reaching maximum development just before west limb passage on the 29th.

The month-end increase in activity also had a very pronounced affect on satellite orbits. Arthur Leonard of Davis, California who keeps a constant check on orbital accelerations found a three-fold increase in the acceleration of Echo I at the end of October. This was the greatest increase since last spring.

RECENT TREND OF RELATIVE SUNSPOT NUMBERS



AMERICAN (R_A) AND ZURICH (R_Z) RELATIVE SUNSPOT NUMBERS, OCTOBER 1967

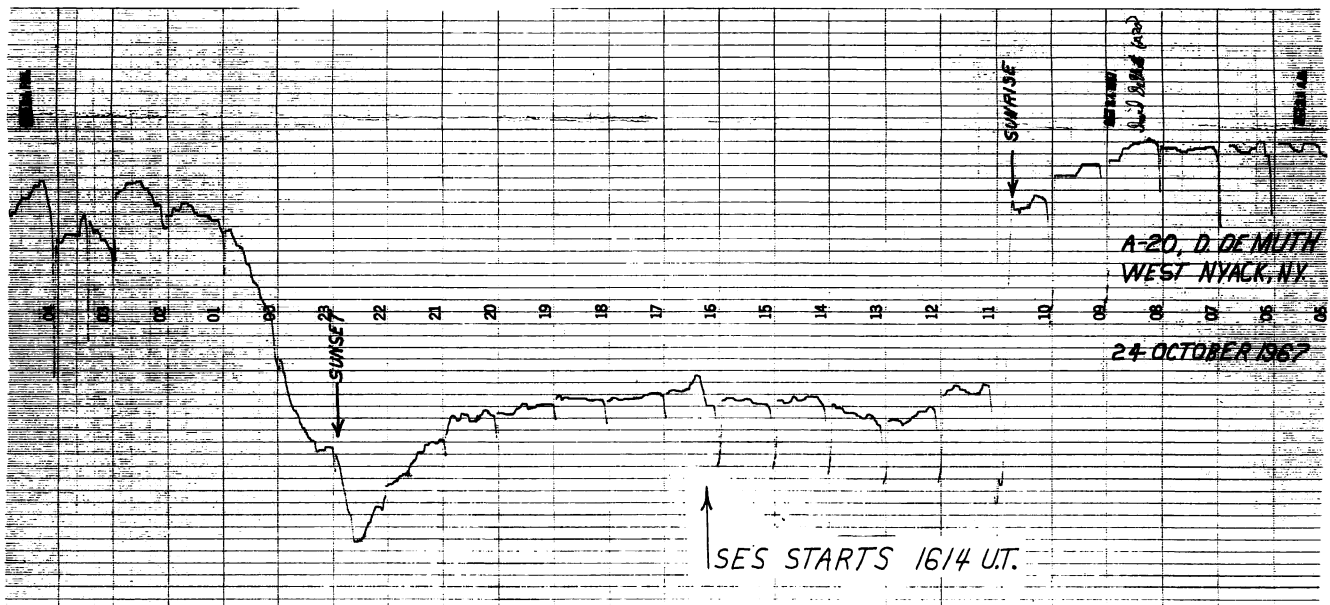
day	R _A	R _Z	day	R _A	R _Z
1	82	72	16	36	41
2	73	69	17	28	36
3	83	96	18	34	50
4	110	89	19	52	62
5	106	98	20	52	83
6	99	92	21	74	80
7	66	88	22	91	86
8	54	76	23	90	101
9	66	80	24	98	93
10	97	82	25	116	114
11	73	90	26	134	125
12	66	66	27	153	125
13	54	55	28	167	156
14	45	64	29	145	133
15	43	47	30	117	133
			31	105	100

October mean R_A = 84.2

October mean R_Z = 86.5

SUDDEN IONOSPHERIC DISTURBANCES RECORDED DURING OCTOBER

DAY	MAX.	SEA	SES	DEF.	OBSERVERS	DAY	MAX	SEA	SES	DEF.	OBSERVERS
1	1322	1		4	A-17	24	1620		2	5	A-20, 18, 1
3	0744	1		1	A-17	24	1625	2		5	A-1, 8, 21
8	1735	1		1	A-19, 6	27	1117	1+		1	A-17
22	1017	3		0	A-17	27	1434		1+	4	A-20



Sudden enhancement of signal (SES) of very-low-frequency station NBA at Panama operating on 24 kHz recorded by A-20 at West Nyack, N. Y.