

Solar Bulletin

OCT 2 1971

Publisher:

THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS — SOLAR DIVISION
540 NORTH CENTRAL AVENUE
RAMSEY, NEW JERSEY, U.S.A.



Volume 27 Number 9

September 1971

SOLAR ACTIVITY DURING SEPTEMBER

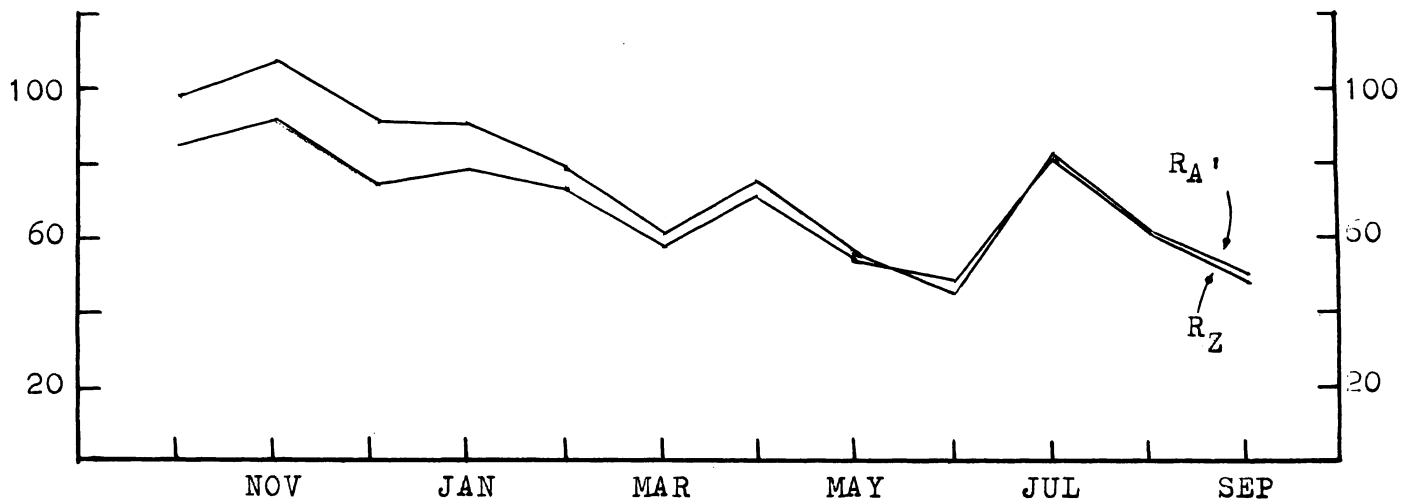
Fourteen ionospheric disturbances were recorded by the Solar Division observers. This is the same number as recorded for last month, again with minor events dominating the number of events recorded. Reproduction of three of these events are shown on page two.

The mean of the American sunspot numbers fell to 50.3 as the sunspot activity continued to decline.

Several small spots appeared on the southeast limb on 13th September. By the 14th, spots were found over a considerable latitude range as though two sunspot groups were present. Later, magnetic polarity measurements showed this to be actually a single group with the leader having following polarity. This necessitated classifying it a beta-gamma group according to the Mount Wilson magnetic classification system. This strange group was actually a return of the huge F-type group seen during the latter part of August.

Another interesting group came over the southeast limb on 24th September. This one was not a return and it featured one of the largest single round spots seen recently. As it reached the central meridian, this great spot was found to have a magnetic field of about 3000 gauss, so will probably last for a future return.

RECENT TREND OF RELATIVE SUNSPOT NUMBERS

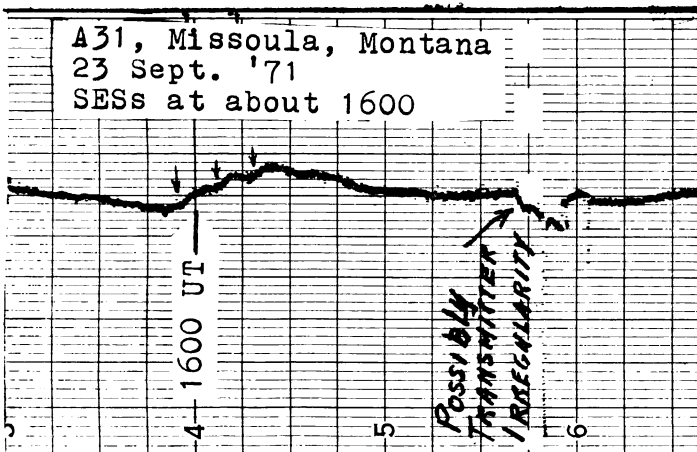
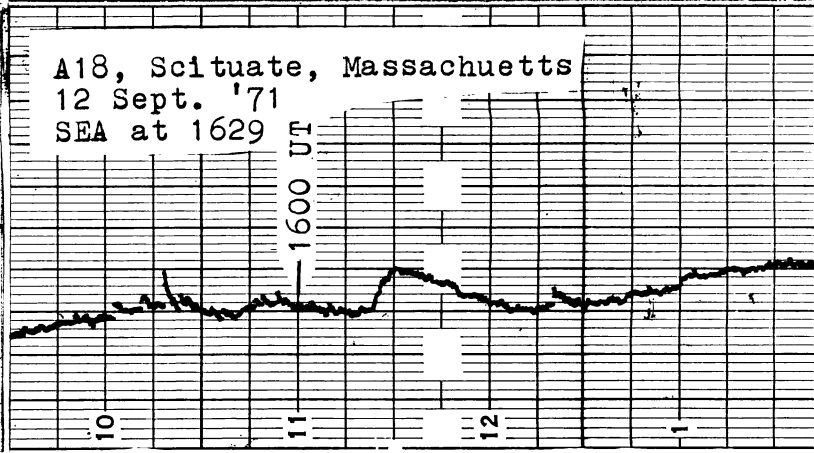
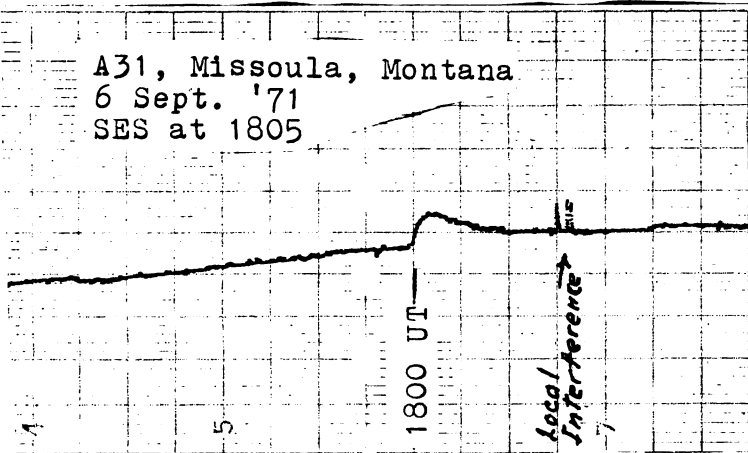


AMERICAN (R_A) AND ZURICH (R_Z) RELATIVE SUNSPOT NUMBERS, SEPTEMBER 1971

DAY	R_A	R_Z		DAY	R_A	R_Z
1	16	22		16	71	59
2	19	18		17	86	70
3	32	24		18	93	74
4	33	25		19	67	65
5	44	41		20	61	53
6	70	71	Monthly Means	21	66	56
7	87	74		22	60	69
8	61	55	$R_A = 50.3$	23	43	62
9	37	47		24	30	30
10	19	21	$R_Z = 47.5$	25	34	30
11	16	16		26	24	25
12	25	27		27	42	38
13	42	43		28	54	55
14	74	58		29	62	61
15	75	68		30	67	69

SUDDEN IONOSPHERIC DISTURBANCES RECORDED DURING SEPTEMBER 1971

DAY	MAX	SEA	SES	DEF	OBSERVERS	DAY	MAX	SEA	SES	DEF	OBSERVERS
6	1805	1	1	5	A1,21,23,30,31	18	1341	1-	1	5	A1,17,31
10	2006		1-	4	A1,21,30,31	18	1953		1-	5	A1,30,31
12	1629	1+	2	5	A1,18,19,21,22,26,30,31	21	1515	1-	1-	4	A1,17,19,21,26,31
14	1623	1	1	5	A1,18,21,26,30,31	23	1610	1-	1-	5	A1,6,18,19,21,23,26,27,30,31
14	2347		1	5	A21,30,31	23	2135	1-	1-	4	A21,26,30,31
17	1430	1	1+	5	A1,19,21,26,31	23	2231	1-	1-	5	A21,26,30,31
17	1555	1	1	5	A1,19,21,26,31	24	1925	1-	1-	4	A1,19,23,27,31



The quite low frequencies, (NLK, Jim Creek, Washington at 18.6 kHz) have not usually been considered the best for detection of SID events, nor has the "short path" been considered the best. Recordings of the 6th and 23rd counterdict these theories.

The SEA recorded on the 12th by A18 is the product of a new receiver after three years of absence from active operation.

Event(s) recorded on the 23rd appear to be possibly three separate SIDs. Some of the recordings showed only one slow gentle rise but most showed the 2nd peak as the largest