

# Solar Bulletin

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Volume 30 Number 7

JULY 1974

## SOLAR ACTIVITY DURING JULY

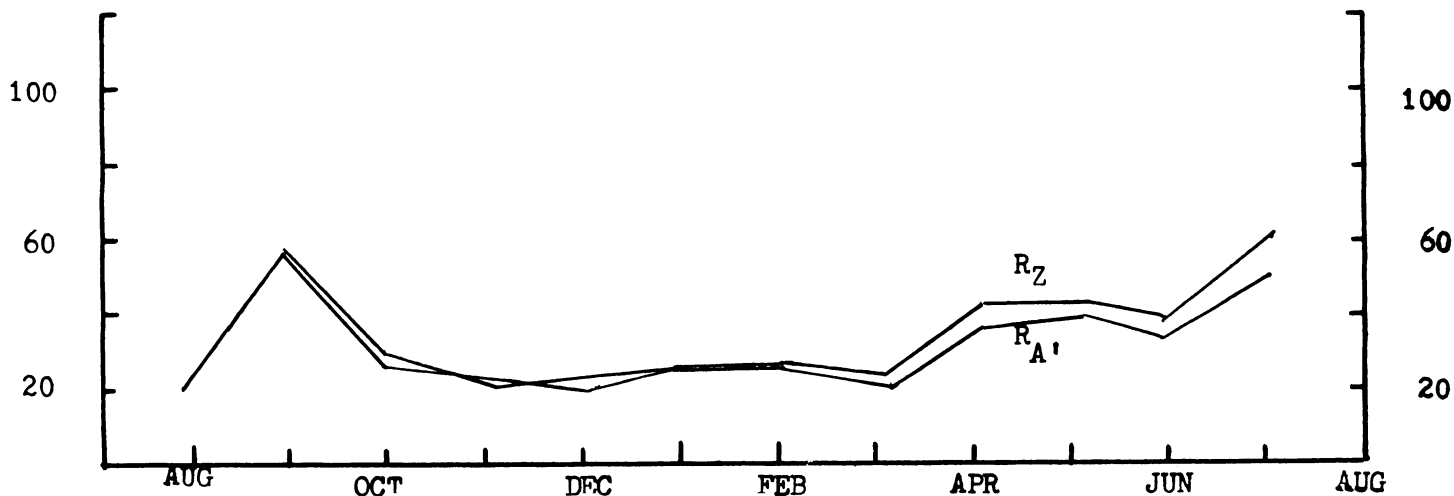
July's solar activity was dominated by a southern sunspot group of the beta-gamma type that began to form near the southeast limb on 28 June. As this group was nearing its maximum development it produced a "white flare" which was observed by sunspot observer, Robert Pike, of Mississauga, Ontario, Canada, on 4 July at 1354 UT. To the right is a drawing of the central portion of the group which Mr. Pike made soon after seeing the white flare. South is at the top and east to the right. The white flare occurred in the southern part of the group and its appearance at 1354 UT is shown slightly enlarged in the inset just above the drawing of the group.



Mr. Pike described it as "Two cigar-shaped sections lying parallel surrounded by, and embedded in, a diffuse glow which faded rather suddenly, radially away from the flare ending within the penumbra. The whole event seemed powerfully white but there was a distinct bluish cast visible like an electric spark. By 1355 UT all that remained was the glow which soon disappeared."

The sunspot group which produced the white flare was also a major flare producer throughout most of its passage across the solar disk and some of the ionospheric disturbances associated with these flares are reproduced on page two including one at the time of the white flare.

## RECENT TREND OF RELATIVE SUNSPOT NUMBERS

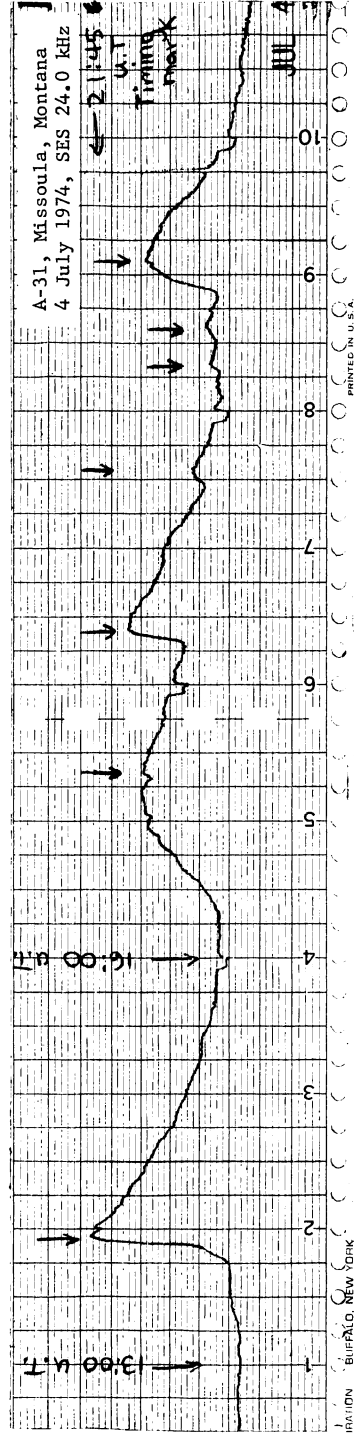
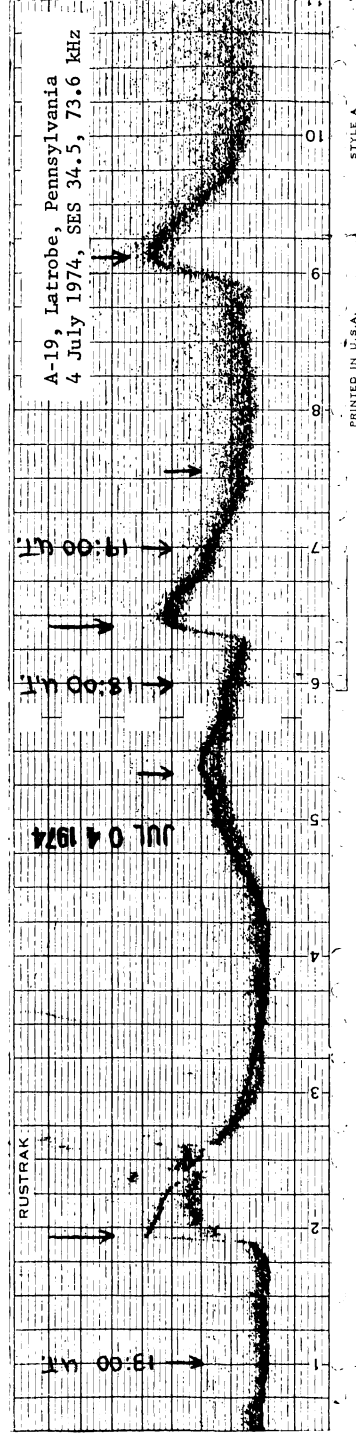


AMERICAN (R<sub>A</sub>) AND ZURICH

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

SUDDEN IONOSPHERIC DISTURBANCES RECORDED DURING JULY 1974

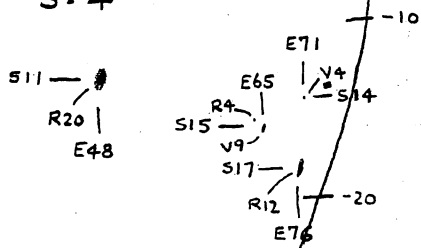
Day	R <sub>A</sub>	R <sub>Z</sub>	Day Max.	SEA SES Def.	Observers	Day Max.	SEA SES Def.	Observers
1	77	82	1 16:03	1- 2- 5	Al,19,26,29,31,30,36,37	6 11:18	1+ 5	A36
2	84	97	1 18:37	1 1 5	Al,19,26,29,30,31,36,37	6 18:50	1- 2+	Al,19,26,29,30,31,36
3	87	96	1 22:00	2- 5	Al,26,29,30,31,36,37	6 19:05	1+ 5	Al,19,26,30,31,37
4	88	98	2 00:24	1 4	A30,31	7 12:26	1 5	Al,19,31,37
5	94	107	2 06:50	1 5	A31	7 15:22	1 5	Al,19,30,31,36
6	83	88	2 16:42	1 5	Al,26,31,36	7 15:54	1- 2+	Al,19,31
7	71	88	2 18:12	1- 4	Al,19,31,36	7 16:20	1- 3	Al,19,31
8	50	63	2 19:45	1+ 5	Al,19,26,29,31,36,37	7 17:22	1- 4+	Al,19,31
9	33	42	2 21:55	1- 5	Al,19,31,36,37	7 18:35	1+ 5	Al,19,30,31,37
10	16	29	2 23:23	2 5	Al,19,26,30,31,37	7 21:25	1- 1+	Al,19,30,31,32,36
11	14	22	3 03:20	1 5	A31	8 15:45	1- 1 5	Al,19,26,29,30,31,32,36,37
12	21	27	3 08:51	3 3+	A31	8 21:54	1- 5	A30
13	23	28	3 09:23	2 3+	A31	8 22:31	2 1+	Al,19,26,30,31,32,36,37
14	36	46	3 09:40	1- 3	A31	9 01:58	2 4	A30
15	43	65	3 16:59	1 3	Al,31	9 14:01	1- 1- 5	Al,19,26,30,31,36,37
16	53	74	4 06:51	1- 5	A31	9 16:50	1+ 5	A36
17	44	65	4 13:57	1 2+	Al,19,26,29,31,32,36,37	9 17:36	1 5	Al,19,29,30,31,36,37
18	48	59	4 17:15	3 2+	Al,19,29,31,36,37	9 18:29	1 4	Al,19
19	44	45	4 18:29	2+ 5	Al,19,29,31,32,36,37	9 18:56	1- 1 5	Al,19,30,31,36,37
20	44	50	4 19:34	1- 5	Al,19,31,37	9 23:45	1 5	A30,31,37
21	50	55	4 20:20	1- 3+	Al,30,31,37	11 12:22	1 4	Al,19,37
22	47	61	4 20:36	1- 4	Al,30,31,37	12 12:30	1 3	Al,19,29,36
23	45	64	4 21:08	1+ 3 5	Al,19,29,30,31,32,36,37	12 21:18	2 4	Al,19,26,31,37
24	54	62	5 01:57	1+ 4	A31	13 13:40	1 2 5	Al,19,26,29,31,32,36,37
25	54	61	5 02:32	1 3+	A30,31	14 11:16	1 3	A31,36
26	55	67	5 12:43	1 5	Al,19,26,31,36	14 17:38	1 3+	A31,37
27	45	60	5 15:15	3 3 5	Al,19,26,29,30,31,36,37	18 13:55	2 3	Al,19,31,36,37
28	42	61	5 21:42	2+ 5	Al,19,30,31,37	24 13:45	1 1- 4	Al,19,31,32
29	36	42				24 16:15	1 4	Al,19,26,29,36
30	37	41						
31	33	38						
Means	50.0	61.5						



6/28/74

16:10 U.T.

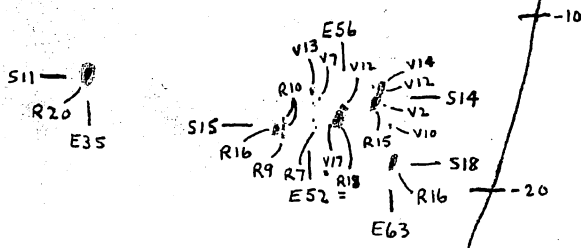
S = 4



6/29/74

15:55 U.T.

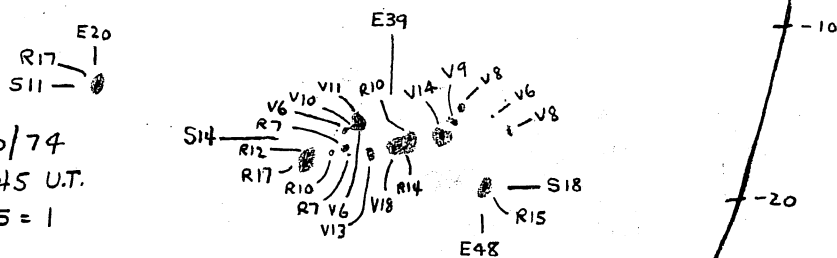
S = 4-



6/30/74

18:45 U.T.

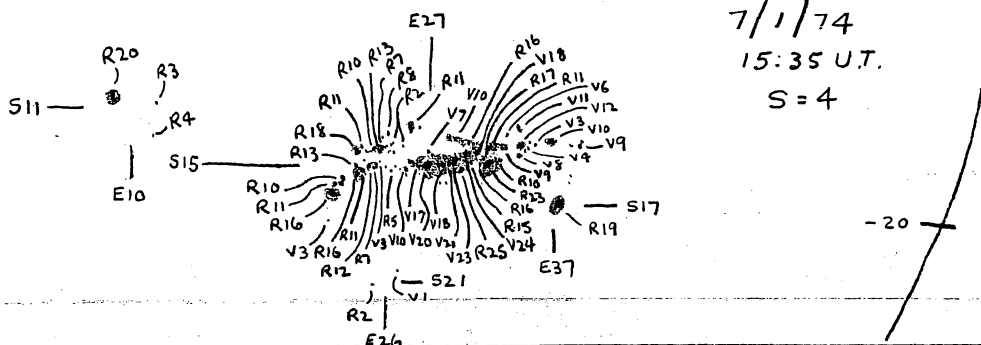
S = 1



7/1/74

15:35 U.T.

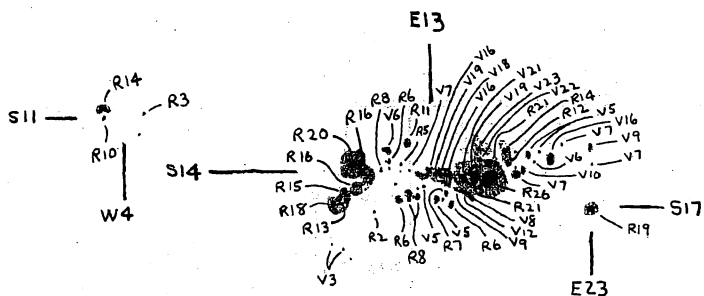
S = 4



7/2/74

16:45 U.T.

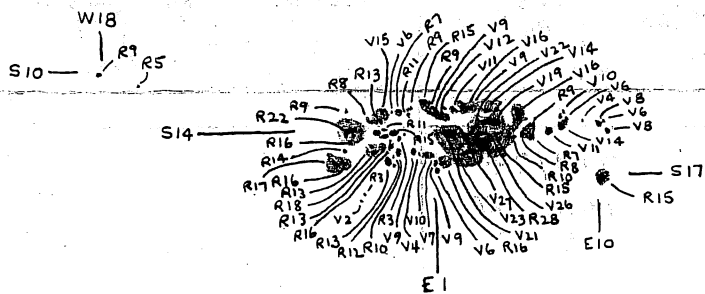
S = 3+



7/3/74

16:20 U.T.

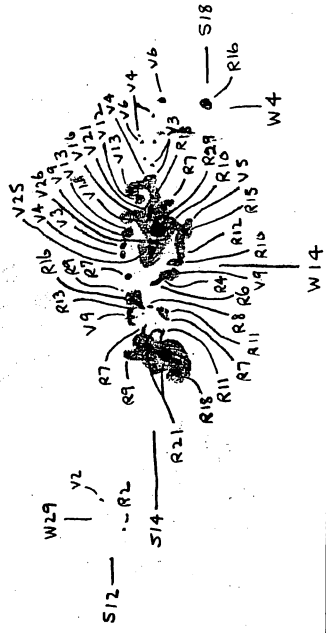
S = 4-3



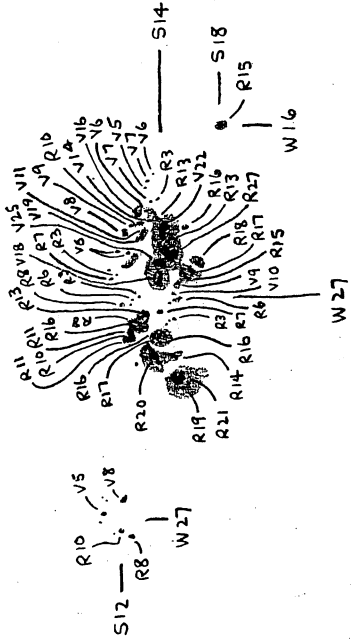
SUPPLEMENT TO SOLAR BULLETIN, VOLUME 30, NUMBER 7, JULY 1974

The above drawings of the very active beta-gamma sunspot group of early July were made by Tom Cragg of Mount Wilson Observatory. They show its development during 12 days of disk passage along with magnetic data for each day.

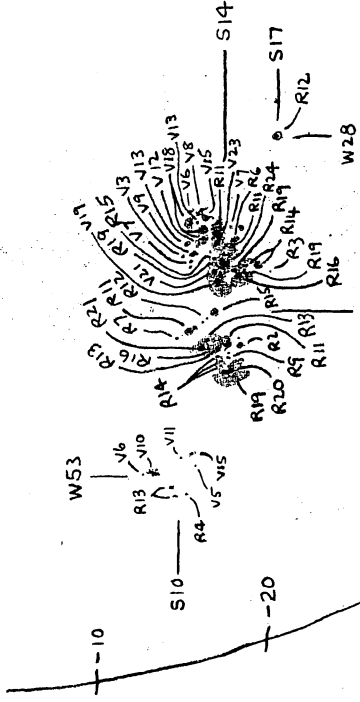
7/4/74  
19:15 U.T.  
S = 2



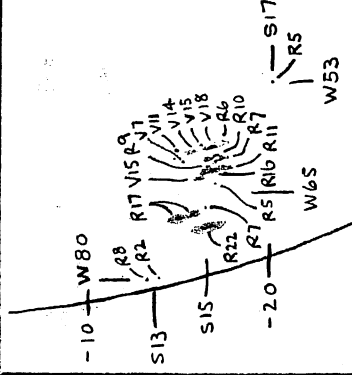
7/5/74  
16:55 U.T.  
S = 3



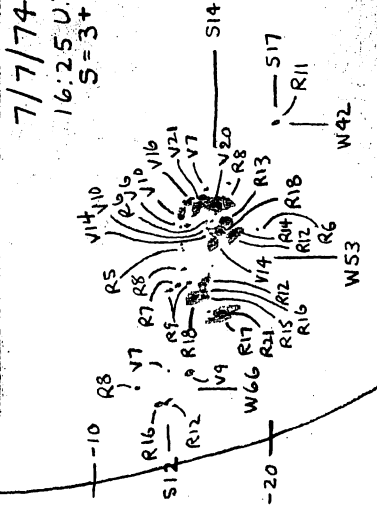
7/6/74  
16:20 U.T.  
S = 3



7/7/74  
15:05 U.T.  
S = 4



7/7/74  
16:25 U.T.  
S = 3+



7/9/74  
14:25 U.T.  
S = 3

