

August 18, 1947

14.1/904

Mr. A. E. Covington
 Microwave Section
 National Research Council
 Ottawa,
 Canada

Dear Mr. Covington:

I have your request of July 31, for American sunspot numbers for June and July 1947.

Since it takes about two weeks to gather and compile the observations, the July numbers are just now ready. I enclose a prepublication copy together with a copy of CNPL F-35 which contain the June numbers.

Thank you very much for the table of your 10 cm solar noise observation July 26, 1947 - July 29, 1947. I agree that Reber is observing the same sun as you are. The coefficient of linear correlation between the two sets is 0.44 ± 0.03 for 38 days in February through April 1947. I am not sure I would expect a better correlation.

You probably have compared the dates of intensification of solar noise with the meridian passage dates of individual centers of solar activity. Here is a summary, my brief and very rough comparison.

Intensification of noise	Optical phenomena
April 26 - 30	Two active spots on meridian April 27; another on April 28
May 13 (?)	Growing spot at meridian May 14; active region at east limb
May 21 - 29	Active regions at meridian May 21, 23, 24, 26
June 19 - 23	One Post-active and one growing region crossed meridian June 21

Ltr. to A. E. Covington

August 18, 1947

July 16 - 18

Active regions at meridian
July 15, 16, 17, 20

July 22

no activity at meridian

In addition there were five other groups designated active in our records during the period April 14 to July 29. Thus five intensifications of solar noise coincided approximately with the meridian passage of one or more active solar regions, one intensification was associated with no activity at meridian, and five spots had obvious relationship with noise intensification. Further analyses might be expected to indicate significant properties of the solar regions as concerns their relation to 10 cm noise intensity.

Reber was not sure if your reported daily observations represented maximum values, average values, noon values, or some average over a shorter time than the daylight hours. I would judge that for day to day comparisons of noise and other solar observations, a mean for as long a period as practicable centered at noon would be most advantageous. Of course there are other uses of your data for which some other representative value might be more appropriate. I also wonder what troubles you encounter from the lower atmosphere at large zenith angles.

Sincerely yours,

A.H.S. in J.V.H.

A. H. Shapley, In Charge
Solar Investigations
Basic Ionospheric Research Section
Central Radio Propagation Laboratory

MS

Enclosures:
sunspot table
copy of CRPL-F35

AHS:ghb

American Relative Sunspot Numbers

July 1947

Day	No.	Day	No.
1	172	16	198
2	143	17	186
3	135	18	204
4	142	19	199
5	134	20	199
6	141	21	221
7	140	22	151
8	130	23	150
9	200	24	166
10	175	25	174
11	138	26	168
12	148	27	149
13	186	28	131
14	194	29	131
15	182	30	143
		31	135

Monthly Mean .163.4