This is the time of the year when most of us have a short respite from routine duties and obligations. Many of our observers who have portable telescopes take them along and carry on the work they love so much. This holds true also of those engaged in research. Many problems are solved and new ideas have their origin when more time for contemplation is available. Certainly one comes back from such a period refreshed with new enthusiasm.

Think of the Sun, however, it seems now that there will be no respite for it until at least 1952, it certainly has been very busy the past two or three months with plenty of activity still in the picture this coming fall and until, or perhaps through, next spring. We believe that because of the present (July) activity or rather, the inactivity of the south pole the values will be somewhat lower when reductions have been completed.

We received a very interesting letter from Mr. James Hildebrand this month. His academic work at Notre Dame University since last fall, deprived him of the use of his telescope there but his mind was ever on the solar work in which he is intensely interested. "Jimmie" is always figuring something out. See the Bulletin Supplements of January 1948 and June 1948. In looking over his data he thought that one of the observed groups had record returns and asked for definite information on the record long-lived group. Because this may be useful to others we give
this information verbatim. It is taken from Russel-Dugan-Stewart, Text Book, "Astronomy" Vol.1; p.201; par.232, which reads as follows:

"Duration of the spots."

Most sunspots are very short-lived phenomena. One fourth of all those shown on the Greenwich photographs lasted but a single day, and as many again, from two to four days. These, as might be expected, were small spots; the larger ones are far from permanent. Out of some six-thousand (6000) groups observed in thirty-three years, only four hundred-sixty-eight (468) were observed to have a continuous existence into a second rotation of the sun. One hundred-fifteen (115) into a third, twenty-five (25) into a fourth, twelve (12) into a fifth, and but one into a sixth. In a single recorded instance (1840 - 1841) a spot persisted for eighteen months. This is the record thus far.

"Jimmie's next item was, "How about a Solar Division Library?". We, here, believe it a splendid idea and have prepared a Questionnaire for you to fill out as a supplement to this Bulletin. When you have completed this please send it to Mr. James Hillebrand, 3508 Konsington, Detroit 24, Michigan, who will prepare a summary for this office. Prompt action is very essential in order to arrive at a definite conclusion. Many of our Research affiliates have doubt will have Reprints that will be very useful to our observers and perhaps some duplicate volumes. An intensive follow-up will be made just as soon as we receive the necessary summarization from Mr. Hillebrand. The Bulletin will announce results as soon as received.

Along the line of the above and proceeding item "Duration Of The Spots" we have sent for publication a paper prepared by Dr. James C. Bartlett on Solar Bookkeeping which contains valuable information for observers and research workers alike. As soon as acceptance is assured we will make some known through the Bulletin.

In the last Bulletin, July 1948, No. 32, we asked that observers enter the (Wolf's) Relative sunspot number to their reports. Instructions were included but we would like to add that it would be very advantageous if these numbers were written in red ink, or red pencil.

With this Bulletin you will receive the New Form with a column added to it with the heading "R" where the Relative Numbers are to be placed hereafter. In addition to the new column we have extended the width of column "g" to \( \frac{1}{2} \) instead of \( \frac{1}{8} \), which allows additional room for the individual Group Count.

Because a number of observers do not have previous issues of the Bulletin we again provide the Wolf Formula.

"Sunspot periodicity was exhaustively studied by Wolf at Zurich, who represented the spotness by a system now called, Wolf's Sunspot Relative Numbers. These are computed by the formula:

\[
R = k (10g + f)
\]

in which \( R \) is Wolf's number, \( g \) the number of groups and single spots observed, \( f \) the total number of spots which can be counted in these groups and single spots combined, and \( k \) the multiplier which depends upon the condition of observation and the telescopes employed. Wolf took \( k \) as unity for himself when observing with a three inch telescope with a power of 64. A less favored or less assiduous observer would receive \( k \) greater than unity and one with
a larger telescope and good opportunities for observing would receive a fractional value of k. Wolf's numbers seem arbitrary, but are found by photographic comparisons to be closely proportional to the spotted areas on the sun. One hundred as a sunspot number corresponds to about 1/500 th. of the sun's visible disc covered by spots, including umbrae and penumbrae."

**STATISTICS.**

The total number of observed groups, here, for the month of June was 57. Total number of days with spots was 30.

Zurich's Preliminary Relative Sunspot Number was for June, 167.6.

* The highest number, as assigned at Solar Division Headquarters on July 16th., was 287, this was a medium sized group which made its first appearance on the 15th as coming from the invisible hemisphere on the east limb, in the south belt. This group was not visible at the early morning observation and was first seen at 1740 U.T. here.

* This information is given in order that the Solar Division observers may check their group counting each month.

**Special.**

We would like more participants in the Robert's project. Those who are contributing are doing splendid work and the data has proved of great importance to the High Altitude Observatory of Harvard University at Climax, Colorado, see Bulletin Supplement for January 1948.

**Good News Flash** Dr. Donald H. Menzel's Book "The Sun" (I believe that will be the title) is at the publisher for printing. Full details as to its procurement will be given as soon as it is available.

One may also care to buy a copy of Dr. M.Waldmeier's book "Sonne Und Erde" (German Text) from Genossenschaft Buchergilde Gutenberg, Morgenstrasse 2, Zurich, Switzerland. Price 7.20 Francs (tax included)

For those of you interested in our Migratory Bird Project be sure to read, "Bird Migration and the Concept of Continental Drift" released in the current issue of Science July 9,1948, Vol. 106. No.2793 pp. 23-30.

YOUR CHAIRMAN WILL BE VERY BUSY THE LAST TWO WEEKS OF AUGUST - we hope.
SPECIAL AUGUST SOLAR DIVISION SUPPLEMENT

ON SEEING CONDITIONS.

To the previous reports submitted and published in former Bulletin Supplements we add two more. That of Mr. Demetrius P. Elias of Athens, Greece and Mr. T.P. Maher of Oregon.

Mr. Elias. Days Observed 243. 1947

<table>
<thead>
<tr>
<th>Date</th>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>Excellent</th>
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<td>3-500-403</td>
<td>4-798-526</td>
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<td>3-854-517</td>
<td>19-4465-2946</td>
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<td>16-4009-2321</td>
<td>3-635-351</td>
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<td>May</td>
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<td>10-2351-1966</td>
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<td>7-1447-1112</td>
<td>10-2090-1742</td>
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<tr>
<td>Tot. 7 Mos.</td>
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<td>29-6327-4460</td>
<td>76-18409-11707</td>
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\[
\begin{array}{cccc}
\text{Aug} & 1-174-135 & 5-957-761 & 10-2378-1852 & 8-2448-2091 \\
\text{Sep} & 2-722-537 & 5-587-487 & 11-2252-1738 & 9-2505-1732 \\
\text{Oct} & 3-552-486 & 1-180-168 & 11-2604-2034 & 1-276-221 \\
\text{Nov} & 1-278-219 & 4-1075-739 & 9-1804-1137 & 5-1364-785 \\
\text{Dec} & 3-538-336 & 1-261-185 & 7-1716-944 & 3-876-407 \\
\text{Tot. 5 Mos.} & 10-2564-1713 & 14-3068-2300 & 48-10756-7705 & 25-7549-5236 \\
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\]

\[
\begin{array}{cccc}
\text{Aug} & 122.2 & 123.9 & 129.6 & 143.3 \\
\text{Sep} & 139.1 & 150.2 & 146.2 \\
\text{Oct} & & & & \\
\text{Nov} & & & & \\
\text{Dec} & & & & \\
\text{Tot. 5 Mos.} & 157.2 & 153.0 & & \\
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1947 Totals.

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<th>21-4225-3104</th>
<th>43-9407-6760</th>
<th>126-22165-19412</th>
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<tr>
<td>156.4</td>
<td>139.1</td>
<td>150.2</td>
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Final 28.7%

Mr. Maher. Two Instruments. 1947

2", 8-X Refractor Days Observed 89

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<th>Excellent</th>
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<tr>
<td>Mar</td>
<td>1-56-137-175</td>
<td>4-275-454-510</td>
<td>7-470-816-603</td>
<td>13-1022-1646-1747</td>
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<td>Tot.</td>
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<td>44-3177-5738-5816</td>
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| 45.8 | 47.6 | 50.6 | 55.4 |

1-7/8" Refractor Days Observed 73

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<tr>
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<th>Good</th>
<th>Excellent</th>
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<tbody>
<tr>
<td>Apr</td>
<td>1-145-166-170</td>
<td>6-1044-1054-1202</td>
<td>11-2352-2112-2498</td>
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</table>

54.1 | 77.4 | 87.1 | 102.3 |

2" 8-X 31.36% 1-7/8" Refractor 32.9%
- QUESTIONNAIRE -

SOLAR DIVISION LIBRARY

Please check each item.

Send all answers to:
Mr. James E. Hillebrand
3508 Kensington, Detroit 24,
Michigan.

1. Do you favor a Solar Division Library? Yes No

2. What part of the United States should it be located in? East West Central

3. Would you contribute solar books or reprints for this library? Yes No

4. What length of time should be involved in rentals? 1-Wk 2-Wk 1-Mo 2-Mos

5. If various periods are selected, what price have you for these periods?

6. Should rental price include a stipend for possible purchase of new or used books.

Bear in mind that postal charges are to be considered, one way, in the rental fee.

7. What are your suggestions for packing? 

8. Should standards cartons be procured for deliveries? Yes No

9. Do you favor the inclusion of reprints (Solar) from professional or other authors for such a library? Yes No

10. Have you lantern slides to offer or loan? Yes No

11. Do you know of anyone who has a solar library small or large, out side of the solar division, who would make such a contribution? Yes No

Many colleges and Universities have duplicates at times that they would like to give to someone who could really make good use of such material.

12. Would you contribute financially to such a project? Yes No

13. Have you any additional suggestions. Is so use the other side of this sheet.

A.A.U.S.O. JUL 26 1948