

April 1949.
Number 41, Page 96.

560 Broadway,
Paterson 4, New Jersey.



Or, on that bank, feel the west wind
Breath health and plenty; please my mind,
To see sweet dew drops kiss these flower
And then washed off by April showers;
Here, hear my Kenna sing a song;
There, see a blackbird feed her young.

IZAACK WALTON

" The Anglers Wish "

Again another winter is gone (Northern Hemisphere), another Spring is here, the sun rises earlier and sets later while at the same time we find it farther north. At this time of the year our curves on our graphs of the number of sunspot observations made monthly, show sharp upward trends. The sun, in keeping with it's cyclic trend, is still very active (Mar. 17) and promises us much work.

There has been considerable excitement about the Solar Activity on January 17. Those participating in the Extra Activities Project of Dr. Roberts had an unusual experience, perhaps to be coveted. One can never tell when an observation is made of some unusual activity just how great a contribution to science that observation may mean. (See Bulletin No. 40, p. 93.).

Mr. E. H. Pilsworth who organized our Solar Division Conclave at Ann Arbor (Lake Angelus) last year (see Bulletin No. 34, p. 75.) promises a rare treat on April 17th., 1949. He is to show the Motion Picture Film on the Palomar 200" Telescope, to any one interested, at the Kingman Museum at Battle Creek. Mr. Pilsworth resides at Battle Creek, P.O. Box 964. Any one living in the midwest within a reasonable distance is welcome to attend. Kindly communicate with Mr. Pilsworth.

On April 23rd., the Northeast Region of the Astronomical League is to hold a meeting at the Museum Of Natural History, New York City. There will be much of interest here on both the 23rd., and 24 th.

By the time you read this the Migratory Birds will be flying. If your area is under a Flyway please be on the alert. Send reports to this office on all telescopic birds seen, reporting, Time, Type, and direction of Flight. If possible, the time taken for transit across the solar Disc. (Stop Watch).

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Library.

Mr. Franklin Ryder, Minneapolis Minnesota (Research) sent us a gift of \$2.00 which will be used for book purchase.
Mr. U. Commerell, (Observer) Hohenzollernstrasse 1, Stuttgart, Germany, sent us a gift copy of "Die Erforschung Der Sonne" (Exploration Of The Sun) by Gerhard Miczaika. Paper Cover, 88 pages.
"Sunspots From A Human Point Of View" ----- Stetson.
(Second Copy) Gift ---Heines.

PUBLICATIONS.

Last year we announced the publication of Dr. Menzel's new book; "our Sun" for March or April of 1949. We have heard nothing to the contrary and we believe that the release will be made known shortly

STATISTICS.

The total number of observed groups for the month of February was 46.
The total number of days with sunspots for February was ----- 28.
Zurich's Provisional Relative Sunspot Number for February was -183.3
Mean (monthly) Sunspot Area (U.S. Naval Observatory) February -- 2047
* The highest sunspot group number as assigned at Solar Division Headquarters on March 17th., was 117. It was the most eastern group in the south belt, four days (approx) from the Central Solar meridian, at 2110 U.T.

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

The S.D. Bulletin Supplement this month contains an interesting Supplement on seeing conditions as experienced by Mr. C.F. Fernald during 1948 and in addition a summary for 1946-47-48.

We hope that others may contribute to this program from time to time supplying us with annual data. Next month's supplement will give the data of two western observers of the United States. We welcome foreign data of this type.

Often times the blue, blue sky, without the presence of any clouds that are visible to the human eye reveal a diffusion of turbulations that do not enhance a solar observation. We have again experienced such a condition here, four days running.

With such a cycle as we are in it will be well to watch every detail and condition of observations for the next six or seven months. Be especially careful to report all details that are unusual. Delineation should be practiced whenever possible to explain a point or condition. Graded pencils should be used exemplify definition. Each contribution adds just that much more knowledge.

We repeat ; If you wish to participate in the Roberts Project, and wish Instructions and forms, please write to, Dr. Walter Orr Roberts, High Altitude Observatory, Boulder Colorado.

Due to the many responsibilities connected with the May meeting of the AAVSO the May Bulletin will be short.

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SUPPLEMENT TO THE APRIL BULLETIN.

I.

1949.

SEEING CONDITIONS:

FERNALD LETTER AND REPORT.

Enclosed is sheet giving data on local seeing conditions in 1948, and comparison of my spot numbers with the medians. I also append a table giving tables for the three years on which I have data. I think these figures pretty well prove what I started out to prove by them. Namely that seeing conditions effect my relationship to the median in a definite way. Of course the converse of this idea is that for all the observers the seeing condition factor averages out. To definitely prove that, it would be necessary to have additional data. For instance, if the monthly summary, as released by the National Bureau Of Standards, Central Radio Propagation Laboratory, in addition to the spot count number, an entry was made for the seeing conditions reported, it would be possible after a years accumulation of figures to get at this effect for all the observers.

I also append a table giving the seeing conditions by months for the three years concerned. The summer of 1948 was rather better than the preceeding years. While these figures would not hold for night conditions I think similar data for night would not be markedly Different. Of course seeing conditions effect faint stars just as they do faint small sunspots. With excellent conditions one may count 100 spots in a group, or see a 14.0 magnitude star, while with fair conditions one may count only 20 spots in the same group, or be able to see only 12.5 or 13 magnitude star.

We had fine weather up to January 20th., 1949, but since then it has gone down to normal. The winter of 1936-37 is still the best we ever had.

Good seeing,

Cyrus F.Fernald.

COMPARISON OF SUNSPOT NUMBERS OF MEDIAN OF REGULAR OBSERVERS WITH
OBSERVATIONS OF C.F.FERNALD, WILTON, MAINE.

Grouped by months and by rating of seeing as given by CFF.

Numbers given under each heading are; (1.) Number of days CFF made observations with seeing conditions of that rating. Day is put into the best seeing rating given for the day, where two or more observations are made. (2.) Sum of CFF spot numbers for those days. (3.) Sum of median spot numbers for those days.

1948	Poor	Fair	Good	Excellent
January	6- 454- 810	3- 265- 381	1- 77- 106	0-
February	9- 654-1054	4- 292- 417	1- 61- 83	0-
March	9- 715-1100	6- 386- 563	3- 151- 277	1- 183- 178
April	5- 815-1093	3- 584- 726	8- 1419- 1823	0-
May	0-	3- 357- 628	8- 1201- 1909	2- 238- 345
June	0-	2- 272- 488	10- 1744- 2129	7- 1208-1247

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July	0-	6- 667- 972	12-1822-2311	7-1233-1271
August	0-	2- 199- 310	8-1205-1523	15-2730-3251
September	0-	6- 899-1154	16-1919-2407	1- 121- 177
October	1- 98- 133	5- 498- 683	9-1210-1277	1- 101- 95
November	3- 256- 363	2- 190- 252	6- 626- 834	0-
December	4- 482- 605	2- 392- 465	7- 926-1140	2- 382- 372
Totals	37-3474-5158	44-5062-7039	89-12361-15782	36-6196-6936
Percentages	67.3	71.9	78.3	89.3

SUMMARY OF YEARS 1946-47-48.

Year	Days Observed	Poor	Fair	Good	Excellent
1946	267	12.0% - 85.8	26.6% - 98.4	52.5% - 104.4	8.9%-116.0
1947	260	19.6% - 88.8	33.4% - 92.0	38.9% - 105.5	8.1%-115.5
1948	206	17.9% - 88.8	21.4% - 95.0	43.2% - 103.0	17.5%-117.0

The percentage stated is that of the total days of observing that the seeing was of that quality. The second figure is ratio of spot numbers of CFF to median. 1947 figures multiplied by a "k" factor to get onto comparative basis to former years.

SEEING CONDITION BY YEARS 1946-47-48.

Month	Poor	Fair	Good	Excellent
January	4- 10- 6	6- 5- 3	8- 1- 1	1- 0- 0
February	2- 5- 9	6- 9- 4	12- 2- 1	1- 0- 0
March	2- 2- 9	7- 8- 6	15- 12- 3	3- 1- 1
April	2- 2- 5	6- 7- 3	11- 11- 8	2- 1- 0
May	1- 2- 0	5- 7- 3	9- 10- 8	5- 2- 2
June	1- 1- 0	5- 2- 2	15- 12- 10	5- 7- 7
July	1- 1- 0	3- 11- 6	22- 9- 12	1- 4- 7
August	2- 2- 0	8- 8- 2	14- 13- 8	2- 6- 15
September	0- 5- 0	8- 9- 6	12- 11- 16	4- 0- 1
October	7- 4- 1	6- 10- 5	10- 9- 9	1- 0- 1
November	5- 8- 3	5- 6- 2	8- 7- 6	0- 0- 0
December	5- 9- 4	6- 5- 2	4- 4- 7	0- 0- 2

Next month we hope to present the work of two western observers Mr Howard D Thomas and Mr.T.P.Maher. Both are ardent observers and are seriously interested in any procedure that will bring about better results both for themselves and the Solar Division.

Neither of these observers are blessed with everything in their favor and we commend them for their untiring devotion to the work of the AAVSO Solar Division.

Part of Mr.Thomas's work was sent in last year but as we needed a whole year of data this was held until now.

N.J.H.

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