A.A.V.S.O.

SOLAR DIVISION BULLETIN

Neal J. Heines, Editor

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REPORT OF THE SOLAR DIVISION TO

THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS

Meeting at Harvard Observatory Oct. 13-14, 1950.

Membership	102	With Research (85), Total 187.
Membership Distribution	29	States, 14 Foreign Countries.
Report Blanks Issued	454	Incl. duplicates & Gleissberg Pr
Reports Distributed	234	Bur. Stan. 101 Gleissberg, Total 335
Number of Observations	6099	To 9/1/50. 75,515;B.S. 5229;Gl. 416; Rad. 454.
Communications Sent	866	To September 1, 1950
Communications Received	592	

Number of Solar Division Bulletins Issued, 6 Editions, 724 Copies.
Number of Reduction Reports Distributed for this Five Month Period, 732

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* The American Relative Sunspot Number for this five month period are as follows;

April	139.5	June	99.3
May	129.8	July	104.7
		August	106.8

* Determined at the National Bureau of Standards, Central Radio Propagation Laboratory, Washington, D.C.

CONDITION OF THE PRESENT SUNSPOT CYCLE

Since our May 1950 report, rendered at State College, Pennsylvania, solar activity has been declining gradually and consistantly, in the regression towards the coming minimum.

The sun has not, up to the present date been void of spots.

Since May, the central zone of the sun has had nine spotless days, the north belt, had no spotless days, the south belt had thirteen spotless days.

Since January first and up to July first, relatively few high latitude groups have made their appearance. On May25th, latitude of 33 degrees north was reached; and on June 5th, latitude of 35 degrees south. Two groups have made their appearance on the solar equator, namely, on March 16th and March 19th. Many groups were reported at plus and minus 2 degrees and a lesser number at one degree. This latitude data was taken from reports of the U.S. Naval Observatory.

We have been able to obtain a few minimum predictions..They are as follows:

National Bureau of Standards (CRPL) ---------- Early 1955.
M. Waldmeier (Zurich) ---------- 1955.
W. Gleissberg (Istanbul, Turkey) ----------
"Minimum will not occur sooner than in 1954."
H.W. Newton (Greenwich Observatory) ---------- 1954-1955.
Stewart-Cook (Princeton University) ---------- M. 1954.6.
1955 will be the minimum year although 1956 is by no means precluded and 1954 is possible if the next cycle should start hard on the heels of the current one.
N.J. Heines (AAVSO Solar Division) ---------- 1954.7-1955.3

Naked-eye sunspots have been reported as late as August 1950. These were the most noted of the present period and were followed by reporte Aurorae.

In comparison with other years, since 1945, the observing condition during 1950 have been below par.

Atmospheric conditions during the latterpart of September were exceptionally bad. The sun portrayed colors from orange through blue to pale violet. Solar Division Headquarters was able to pierce this "so called haze" with Willson Filters Nos. 6 and 8 whereby the smallest details were made dicernible, even to pores and faculae within the sun's central zone. In Maine, during this period, Mr. C.F. Fernald reported that he was able to observe the sun directly without the use of any filters whatsoever, using the haze as a screen.

SOLAR DIVISION ACTIVITY

The Solar Division is still actively engaged in the following proje Sunspot Counts for the Central Radio Propagation Laboratory, National Bureau of Standards; The Granular Surface and Color in Sunspots, Dr. J.C. Bartlett; Unusual Spot Configuration and Colors, Dr. W.O. Roberts; Foreshortening Project, Prof. W. Gleissberg; Migratory Birds, Sunspot Delineation, Sunspot Area Measurements, Solar Division Headquarters and Solar Radiation, Heines.

Membership in the observers section of the Solar Division is at a slightly higher level. We lost a few observers during the past year but fortunately these have been replaced and others have been added.

Dr. Bartlett's section in the study of the sun's granular surface and colors in sunspots remains at a uniform level, and active.

Dr. W. O. Roberts section on Unusual Spot Configuration and Colors has continued its activity but with the decrease of the sun's activity there is much loss to report.

Participation continues faithfully in the Gleissberg Foreshortening Project. This project may perhaps terminate at the close of the coming year, 1951.

Our Solar Radiation project has also made progress. We hope that during 1951 we will be able to publish in our Bulletin radiation data from three areas in the United States, Western, Central, and Eastern. This will give us a better composite picture than we have been able to provide heretofore. The Western area is now taken care of at Riversid College, Riverside, California.

We are not progressing in our plans for the study of Ultra Violet Radiation. This is due to the scaricity of certain chemicals and glass prisms of a special color. It is hoped that during 1951 we will be able to present a better report on this project.

Practically all of the testing equipment for the optical parts of the monochrometer will be finished during the present year and we hope to have one completed unit in working order during the early part of 1951.

The Auroral section is now an integral unit of the AAVSO under the Chairmanship of Mr. Donald Kimball of Yale University. Monthly reports should be sent to Mr. Kimball even of faint Auroral glows when they are observed alone in the sky.

As mentioned before, Mr. Seely is unable to continue his activity in this section; we deeply appreciate his sincere interest and we thank him for the work he has done to keep this unit intact. We wish him much joy and happiness in the future before him.

The Solar Division Album will be on display here during the present sessions. We are indebted to Mr. Harry B. Chase for his fine effort to bring the Album up to date and for the revision of same.

Our Film and Slide service is active and a number of Astronomical societies throughout the country have made use of this service.

Your chairman has often been asked for the number of observations he has made during his participation in solar work. So that it may become a matter of record, his observations to October 1, 1950, number 13,561.

The heads of the various sections of the Solar Division and the Central Radio Propagation Laboratory of the National Bureau of Standards join me in thanking the observers and the research affiliates for their fine contributions during the past year. Their work is deeply appreciated and the results are indeed in evidence.

The kind co-operation of the Recorder's office has helped considerably to make this a very interesting period.

STATISTICS

The total number of observed groups for the month of Sept. was -- 20
The total number of days with sunspots for the month of Sept. was-30
Zurich's Provisional Relative Sunspot Number for September was -49.3
Mean (monthly) Sunjpot Area (U.S.Naval Obs.) for July was-------1371
* The highest sunspot group number as assigned at Solar Division Headquarters was observed on October 15. It represented a group near the east limb, south belt on October 15th and was number 241
* Group Counting reference.

Predictions of the smoothed monthly sunspot numbers for the coming six months are as follows:

Oct. 77	Jan. 66
Nov. 73	Feb. 63
Dec. 70	Mar. 59

The preceding was broadcast by the Swiss Broadcasting Corporation
Released by Prof. M. Waldmeier
Director Swiss Federal Observatory
Zurich, Switzerland

PUBLICATIONS

"Cycles in Weather and Solar Activity" M.O. Johnson,B.S,M.S,Ch.E
Price $5.00 post paid. Order from Paradise of the Pacific, LTD., P.O. Box 80 Honolulu, 10, Hawaii. The same author has also written "Correlation of Cycles in Weather, Solar Activity, Geomagnetic Valves, and Planetary Configuration" Price $4,00

"IN this there is given not only the first plausible, but also an excellent explanation of the cause of variation in sunspots".

The above sentence is a quote and not the Editor's comment.

"Methods in Climatology" V. Conrad & L.W. Pollak

This work demonstrates how climatological investigations may be analyzed and scientifically so as to produce a quantitative description of climate. Write Harvard University Press, 44 Francis Ave. Cambridge, Massachusetts.

"Sun Blasts of Nydrogen Cause Auroral Displays"
As determined by Dr. A.B. Meinel of Yerkes Observatory.
Science Weekly NewsLetter Sept. 9, 1950

"The Evidence For Tornado Prominences" E. Pettit
Pubication of the Astronomical Society of the Pacific
August issue pp 144-150
Very useful information to solar people.

Mr. Harold Leinbach one of our former observers, who during this year completed his post graduate work at California Institute of Technology is now occupied in special research work in Alaska, for our government.

We read in the August issue of Publication of the Astronomical Society of the Pacific that Miss Elizabeth Roemer, also one of our former observers has shared in the Dorothea Kumpke Roberts prize, for "outstanding undergraduate work". Congratulation, Miss Roemer!

The meeting of the AAVSO at Harvard Observatory was a very successful one. Space cannot be given here for full details, these will be found soon in Sky & Telescope, Popular Astronomy and eventually in Variable Comments.

Dr. Gartlein's lecture on Aurora was outstanding and was supplemented by movies and Kodachrome slides. The projection of the Auroral Spectrum showed the H_α line quite distinctly. This is further evidence of solar relationship as referenced in Dr. Meinel's statement contained in Publications Section of this bulletin.

Reduction Reports are enclosed for the past two months. They were too late for the last mailing.

Anyone interested in the purchase of two 7" R.F.T. communicate with Mr. B. Parmenter, 6718 E. Seventh, Spokane, Washington.

LEONIA LANDMARK AN OBSERVATORY, LONG UNOTICED.

Probably few people in Leonia N.J. on last Saturday saw a large truck with an odd load - a box-like structure at the rear, and a hemispherical dome in the front. Yet this unusual cargo meant that the observatory built about 25 years ago by the late J.Earnest G.Yalden was going back into service with amateur astronomers.

After Mr.Yalden's death in 1937, his beautiful Clark telescope soon found a home with another star enthusiast, but the observatory itself was not so easily moved. A number of members of the society of Variable Star Observers, of which Mr.Yalden was a past president, have been trying to get a suitable place for the small building which housed the telescope. Recently a small group became interested in having the observatory moved to eastern Long Island, where it is to be acenter of activity for stellar observations.

This change merits more than passing mention of the widespread attention which this small building has received. Only eight feet by eight feet, it probably has been one of the best known structures of its kind

in the world. Local inhabitants have been well aware of its existance, and ever since it has been closed, many of the tennis players on the courts of Wood Park have wondered what it signified.

It was built after very careful study by Mr.Yalden, who had for many years included astronomy among his numerous hobbies. There were many unique features in its construction, and the smooth operation of the rotating dome was a surprise to those who had not appreciated the skil: of the designer.

One result of the building of this observatory was seen in the lette which Mr.Yalden received from astronomers both professional and amateu asking for information. His replies went to all parts of these United States and even to Europe. Then he was freque ntly consulted by those interested in small observatories, and was largely responsible for the design of a number of structures used in the college teaching of astronomy.

It is a tribute to the careful planning of its designer that this small building should still be able to take such a journey (120 miles) and then resume its duty."

While the observatory was a tribute to the science of astronomy, the above, is a tribute from ProfW.Farwell, Mr.Yalden's devoted friend and neighbor. Dr.Frawell was before his retirement Professor of Physics at Columbia University in New York City.

At this writing the Yalden Observatory is now being set up for the Custer Institute Of Research at Southold Long Island.

MONTHLY SUMMARY OF AURORA REPORTS A.A.V.S.O.
FOR THE MONTH OF AGUST 1950.

Date 1950 AUG	TIME USED E.S.T. Time of Observation	RECEIVED IN SEPTEMBER: G	HA HB	RA RB	R	D	C	PA PS	F	DS OR	ELEVATION AND DIRECTION	GENERAL OBSERVATIONS	STATION
6	20:30	I									20°		ELLSWORTH MAINE
7	20:30-21:30				W		W	W			NW-NE		WINTER HARBOR MAINE
7	20:35-20:37			IIIC IIIC	IIIC IIIC						45° NE-NW	No Moon SKY CLEAR	HAMDEN CONN.
"	20:37-20:40			IIIC	IIIC				IIIC		70° NE-NW		"
"	20:40-20:45				IIIC IIIC		IIIC		IIIC		Z NE-NW		"
"	20:45-21:10				IIIC				IIIC		Z NE-NW		"
"	21:10-21:30	IC									30° N		"
8	01:00-01:18					IIIG-W			IIIG-W		80° N		CHESTER. CONN.
"	3:50-4:10			IIIC	IIIC				IIIC		75° NW-N	MOON SKY BRIGHT	HAMDEN "
"	4:10-4:25				IIIC				IIIC		Z NW-N		"
"	4:25-4:30	IC									10° NW-N		"
10	22:35-22:55	IC											WILTON MAINE
19	0:30				BG								COULEE DAM WASHINGTON
20	1:25-2:30				IIIBC			IIIBC		IIIBC	Z NE-SW	ONLY SECOND MAG. STARS SEEN THROUGH BRIGHT AREAS	"
"	2:30-3:50			IIIBG	IIIBG			IIIBG		IIIBG	Z NE-SW		
19	20:25	G									25° N		BATTLECREEK MICH
"	21:25-21:31								II				"
"	21:31-21:42				G	G	G				Z		"
"	21:42-21:52				III	III	III		III		80°		"
"	21:54-22:07						IIIC		IIIC		Z N-NW		"
"	22:08-22:14						G		G	R	Z NW-NE		"
"	22:16-22:21						G		G	G	Z N		"
"	22:24-22:37								IIIC				"
22	01:30-1:45	I											WILTON MAINE

Reports Received From - M.BEARDSLEY. C.FERNALD. D.Kimball. J.KNOWLES. E.Pilsworth. H Thomas.

DONALD. S. KIMBALL.
New Haven - Conn.