

A.A.V.S.O.

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Neal J. Heines. Editor.

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560 Broadway,
Paterson (4) New Jersey.

We have just received information from the Carnegie Institution of Washington concerning the great major sun-spot group which made its initial appearance on January 29th. Dr. Fleming writes:

"The large sun-spot group which passed the central meridian on February 5th was perhaps the largest since photographic records were started. It has served to call attention to the sun and to the increasing activity. The magnetic and ionospheric disturbances on February 7th and 10th were quite severe, though not as unusual as the sun-spot. The overall length of the whole group was about 200,000 miles. The leader was about 50,000 miles across, and the follower at one time almost 100,000 miles.

From past experience here, had the solar equator been more nearly in line with the earth's equator the disturbances would have been very severe.

We were also informed by Dr. Fleming that one of our observers in California, Miss Elizabeth Roemer, was a WINNER in the Science Talent Search. Dr. Fleming adds "Her interest and aptitude for Solar work struck us as unusually great". The entire Solar Division joins the S.D. Committee in congratulating you Miss Roemer.

Rev. Kearns sent to us a fine photograph of the major group, which was sent to Washington where it is to be used in a report on the data from observations of the members of the Solar Division.

Mr. H/B/Chase, one of our Massachusetts observers has very kindly offered to supply those observers who are applying the projection method of observation with his design of solar discs and instructions. The discs are 12 centimeters in diameter. Those of you who desire to take advantage of this kind offer will please inform the chairman as soon as possible.

Early in the organization period of the Solar Division your chairman promised you participation in some of the newer projects that are attendant to solar observations. One of these projects has just now materialized. It is the study of High Flying Migratory Birds that are seen while making solar observations.

Drs. Wm. A. Rense, Physicist, and George H. Lowery Jr., Ornithologist have invited the observers of the Solar Division to seriously undertake these observations while doing solar work. Drs. Rense and Lowery are both connected with the Louisiana State University at Baton Rouge.

Dr. Rense has outlined a sample data sheet which is as follows:

Observer	John R. Madison
Date	March 30 1946
Latitude and Longitude	39° 30' N, 74° 20' W
Place	Lakehurst N/J
Condition Of Sky	Clear, no clouds

Wind From North, gentle
Instrument 3" Refractor; Solar Prism
Time started 2:05 p.m.E.S.T.
Time finished 2:45 p.m.E.S.T.
No.of birds seen going in same general
direction (with respect to ground.)... 30
General direction of Bird flight N,N.E.
Approximate altitude of sun (or moon). 45

Remarks

Sun observed thru telescope (not projected). Birds all moving fast. Seem to be about the same size (small). One bird not included above, was going E; it was a large slow moving bird. Most birds (about 25) passed from 2:05 p.m. to 2:20 p.m. only a few at that.

The total time interval included on one sheet should be no more than one hour. A separate sheet should be used for each hour's observation. If observations are interrupted, a separate sheet should be used when they are resumed, and the data obtained before interruption should be recorded on first sheet. Thus, each sheet of data is for a continuous period of observation.

If birds do not seem to have a general direction, a note to that effect should be included under "Remarks". If possible the number of birds going in each observed general direction should be recorded under "Remarks". "Direction" refers to direction with respect to ground. When projection of sun's image is used, special care must be taken in guessing at ground direction.

Any note which the observer thinks might be of help later on in evaluating the data should be placed under "Remarks". For instance any estimation of the height of birds is helpful.

Observers wishing to obtain maximum data should refer to the article in Popular Astronomy, February, 1946, Page 55, and follow the instructions given there. This article gives special attention to observations against the moon's disc. But the formulae also apply to observations against the sun's disc, for which ~~there~~ no correction for phase is ever necessary. In locating reference points on the sun's disc, Spots may be used, or else the N - S, and E - W axes (marked with cross hairs or otherwise). Cross hairs turned to point along the vertical and horizontal directions are, especially convenient (see page 69 of the article mentioned above).

It is a far cry from sun-spots to birds but Dr. Lowery ably expressed the importance of this project. He writes "The matter of making observations of birds crossing before the lunar and solar disc seems to me to be the means whereby we can solve some of the greatest problems in bird migration. We have made extensive observations here last spring and fall, and we have an auspicious program mapped out for the current spring. I cannot overemphasize of getting others to cooperate in as many localities as possible."

Your chairman has been observing in this project since 1934 and promises a real thrill to those of you who will participate. It is so much better to shoot the birds with a telescope rather than with killing ammunition and in addition you will make a noble contribution to the science of Ornithology.

Send your data to this office along with the Sun-spot report at the end of each month. The evaluation of the data will be made by the above scientists but must be recorded here for other reports. Start about 3-15-46