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Neal J. Heines, Editor.

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The first Summary of American Sunspot-Numbers was published in Washington D.C. , by the Carnegie Institution Of Washington, for the month of December 1944. Later, this work was taken over by the National Bureau Of Standards, in the Department of Commerce, and assigned to the Central Radio Propagation Laboratory. To date then, we have completed eight years of sunspot work.

The Central Radio Propagation Laboratory, the AAVSO Solar Division Executive Committee, join me in thanking all of you for your good efforts and co-operation during the year 1952.

At our October Meeting, held at Harvard College Observatory, a number of Solar Papers were presented. (See list in Bulletin No. 81, December 1952.) The outstanding paper was that of Mr. Harry Bondy, the title , " A STUDY OF SOLAR INDICIES ". Unfortunately, Mr. Bondy was not able to present his research study in its entirety, due to the established ten minute time limit for papers.

Mr Bondy's untiring effort, and sincerety of purpose, to obtain facts, deserves recognition. We therefore have decided to publish in the Solar Division Bulletin all of this study, in series. The first of which will be found in this issue as a supplement.

As this Bulletin reaches solar people here and abroad, we will greatly appreciate comments and criticisms after each offering, and, until the series have been completed.

Kindly send your comments, criticisms and suggestions to this office, where they will be reviewed and subsequently forwarded to Mr. Bondy for reply.

In our September Bulletin, Number 78,, page 218, under PUBLICATIONS , we announced release for publication, Prof. Dr. W. Gleissberg's book, "DIE HAUFIGKEIT DER SONNENFLECKEN", (Frequency of Sunspots). This Book is now available and can be ordered from the publisher;

Akademie-Verlage; Berlin, Germany

Price \$3.50 American Money.

Text in German Language,

Cloth Bound, 91 Pages.

Seven Chapters-Appendicies.

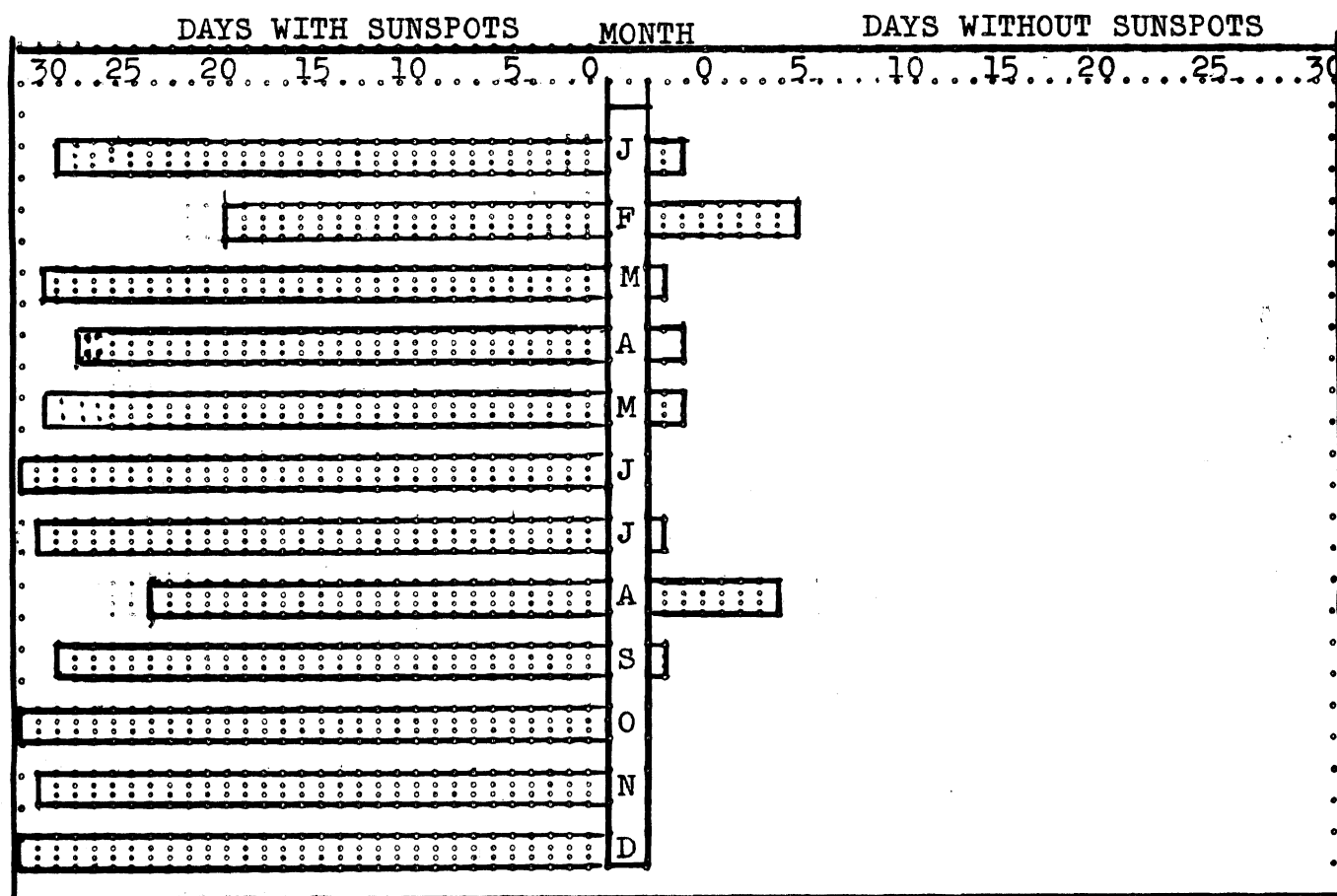
The work contains useful tables, Formulae and illustrations.
It should be in the library of solar people

December 1952 will perhaps go down in sunspot history as an interesting month. The decline towards minimum reveals a pattern not too dissimilar from the previous two cycles. No high latitude spots have been reported to date.

An interesting study of minimum activity can be delineated by graphic description. We show below a graph, for the number of days, with, and without spots during the year 1943, the year before minimum

SUN SPOTTEDNESS FOR

-1943-



It will be interesting to watch during the years 1953, '54, '55, how the bars shift across the month column from right to left. Such graphs are easily and quickly made with the typewriter. The skeleton forms of the graph should be prepared in advance.

Prof. Gleissberg, and others have predicted a sunspot minimum of short duration, so this should make an interesting study.

STATISTICS.

The total number of groups for the month of November was----- 6
Zurich's Provisional Sunspot Number for November was----- 22.1
The mean monthly sunspot area(U.S.Naval Observatory) not released.

* The highest sunspot group number as assigned at Solar Division Headquarters was 123. It made its appearance on Tuesday December 16th as a small patch of faint markings, but were not declared a group until the 17th when they appeared in a surrounding area of bright faculae. Their position was in the north belt about three days west of the central solar meridian and reached the west limb on Friday the 19th.

* Group counting reference for observers.

Predictions of smoothed monthly sunspot numbers for the next six months

Dec. 24	Mar. 21
Jan. 23	Apr. 20
Feb. 22	May. 19

Released by Prof.M.Waldmeier, Director, Federal Observatory at Zurich, Switzerland, and Transmitted by the Swiss Broadcasting Corporation on December 4th., 1952, via short wave radio.

ERRATA

The Monthly mean for American Sunspot-Numbers for the month of October. was published in the December Bulletin, No. 81, on the Reductions Summary, as 22.5. Kindly change this to 22.6

PUBLICATIONS

Reports Of Observatories (20 Observatories.)

The Astronomical Journal Vol.57;No.6;No.1202;October 1952.

The Solar Constant----- L.B.Aldrich-W.H.Hoover
Science. Vol 116 No. 3024; December 12, 1952.

Early measurements and measurements to date.

A New Sunshine Recorder. ----- C.L.Taylor
Bulletin Am. Meteorological Soc.

Something for the advanced student.

The Solar Eclipse of February 25, 1952.

The Scientific Monthly. November 1952, Vol.;LXXV No.5.

NOTES ON Prof. W. Gleissberg's Paper, "On the Difference Between Zurich and American Sunspot Numbers. (1)

In the above named paper Prof. Gleissberg tried to prove a change in the American Sunspot Number-RA- as against Zurich's RZ. As is known, RA actually deviated from Zurich, to which it was originally tied. This was recognised and remedied. (2&3) and is therefore not disputed here, however, the validity of Prof. Gleissberg's evaluation is disputed.

Prof. Gleissberg compared Sunspot Numbers with Sunspot Areas. The actual relation used by him was: $F = 16.7R$ (4) or $R = 0.060F$; where F is the total sunspot area expressed in millionths of the sun's hemisphere and corrected for the foreshortening effect. R, is the Relative Sunspot Number. Prof. Gleissberg compared RZ with Sunspot Areas measured at the U.S. Naval Observatory in Washington D.C. for the years 1938-1947, (See Table 1) and got a ratio; $RZ/F_{usno} = 0.060 \pm 0.008$ mean error. (F_{usno} stands for the US Naval Observatory Areas).

Unfortunately the "absolute measure of solar activity, which is independent of the observer, or of the instrument, or of the method of observation, so that its scale cannot change", as Prof. Gleissberg thought in his study, is nonexistent. A simple comparison of Sunspot Areas measured by the Royal Observatory at Greenwich and those measured by the U.S. Naval Observatory will show large differences even for yearly mean values exceeding 10% as can be seen in the table below. Thus the R/F ratio varies not only with R, but also with F according to whatever observatory data are used. In the light of these facts this ratio is inconclusive and no valid proof of a change in scale of sunspot-numbers. (Possible reasons for the differences in area measurements, as well as other pertinent facts, will be discussed in a later issue of this Bulletin.

TABLE 1.

Year:	Fusno:	Fgr.:	if Fgr. 100% aprox. Diff. %	R a t i o RZ/Fusno	R/F RZ/Fgr	RZ:	RA:
1938	1962	2019	-3%	0.056	0.054	109	-
39	1723	1579	+9%	52	56	88.8	-
40	1077	1039	+4%	63	65	67.8	-
41	731	658	+11%	65	72	47.5	-
42	478	423	+13%	64	72	30.6	-
43	331	295	+12%	49	55	16.6	-
44	140	126	+11%	69	76	9.6	-
45	469	429	+9%	71	77	32.2	32.3
46	1778	1817	-2%	52	51	92.6	99.9
47	2620	2637	-1%	58	58	151.6	170.9

Notes: Fusno = U.S. Naval Observatory.

Fgr = Royal Observatory of Greenwich, Sunspot Areas.

RZ = Zurich Sunspot Numbers. (Greenwich data from Spencer Jones, F.R.A.S.)

RA = American Sunspot Numbers.

(1) Publications of the Istanbul University Observatory, No. 35, 1949.

(2) Publ. of the Astro. Soc. Pacific, Feb. 1949; Vol 61, p. 13 (and 3) is AAVSO Solar Division Bulletin No. 64 June 1951.

(4) Waldmeier. Ergebnisse und Probleme der Sonnenforschung, 1941.

Mr. Harry Bondy.