
SOLAR DIVISION Bulletin

A.A.U.S.O.

JAN 13 1955

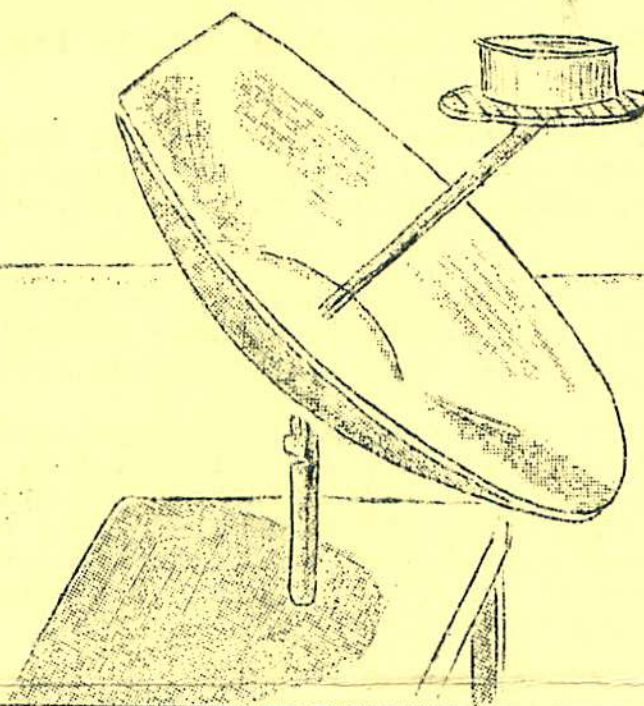
Harry L. Bondy, Editor

43-58 Smart St., Flushing 55, N.Y.

Editorial Advisory Committee: Neal J. Heines - Margaret W. Mayall - William A. Reid
David W. Rosebrugh - Alan H. Shapley (CRPL)

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INDIA'S SOLAR COOKER

The National Physical Laboratory of India developed a Solar Cooker which is now produced for the consumer. This Solar Cooker, designed by Dr. M. L. Ghai, is essentially a large concave aluminum mirror with an attachment to hold a cooking utensil. The laboratory has also developed cooking vessels that can be fitted on to the stove's "burner".

Although a solar cooker has been developed as far back as 1925 by Dr. C. G. Abbott of the Smithsonian Institution, the importance of a simple, inexpensive solar cooker for underdeveloped countries cannot be overestimated. In India about 78% of the yearly fuel requirements are met by dried cow dung. For lack of fertilizer, agricultural productivity is thus reduced by nearly half.

Editorial note:

A few of our readers have already answered my late November letter and expressed their views on the Solar Division BULLETIN. I hope that others will do likewise shortly and not hesitate to give their opinions. Your own comments are just as important as those of the next reader; there is no substitute for your ideas.

Already plans for the 1955 Solar Division BULLETIN are taking a more definite shape thanks to those who conveyed their thoughts. Generally speaking, and I do not hesitate to say it, the Solar Division BULLETIN is well appreciated and even praised. One of our readers found it in parts a bit "high brow", too complicated, though fine otherwise. Some expressed a desire to have articles on instruments-the technical or if you wish ATM-angle of solar astronomy. Others would like more detailed information, though it is generally understood and regretted that with the very limited finances the Solar Division BULLETIN cannot appear in any larger form.

The following are a few suggestions which will be included in our Solar Division BULLETIN.

a) Solar terminology, definitions and fundamental data. A series of articles about such terms as photosphere, plages, flares, filaments, coronal regions, solar coordinates, rotation, etc, etc will soon commence.

b) Sunspot observations for the beginner, instrumental aids, techniques, the method of recording, the importance of systematic observations, spot classification...will be explained, described.

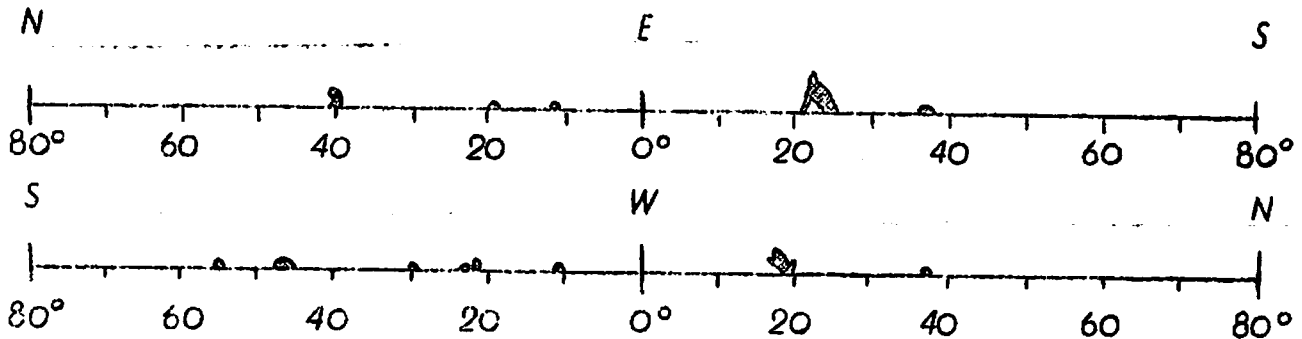
c) Equipment for advanced solar observations of prominences, and disc phenomena such as plages, filaments, flares, (Mr. T. A. Cragg is currently working on a plan for an inexpensive spectrohelioscope for flare patrol), a simple "coronoscope" using commercial, inexpensive narrow band filters for prominence observations-(already used by at least one of our members; another one is in construction) will soon be published.

d) Some interesting passages from old books and journals dealing with solar observations and problems will appear in the BULLETIN. (Miss Florence Rosenblatt is already engaged in some of this work).

e) We would like to publish drawings of sunspots, either as they appear on the whole disc or in detail. Projection drawings would be welcome as they would considerably help new members in their work. Later on when solar activity will be high, such projection drawings could help to illustrate the proper delineation of close sunspot groups.

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The December BULLETIN has been considerably delayed due to the Holiday season and it was necessary to publish this shortened edition. The January 1955 issue will carry the summary of solar activity in the last quarter 1954; also a detailed account of the "epoch of sunspot minimum" will be published. HLB

Solar latitude of prominences on June 30th 1954, the day of the total solar eclipse, as observed at the High Altitude Observatory, Boulder, Colorado (from Report No.HAO-24). The latitude position of the major prominences permits one to determine the polar axis of the eclipsed sun.



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Mean monthly SUNSPOT AREAS as measured by the U.S. Naval Observatory in Washington D.C.

A= the true area of the umbra plus penumbra, expressed in millionths of the visible hemisphere.

Month	A	Month	A	Month	A
January	0*	April	7	July	19
February	2**	May	1	August	75
March	182***	June	0	-	-

Notes: *) only a minute, short lived spot group (2 spots) was observed on January 11th 1954 with a total area A= 6.

***) first typical new cycle -high latitude sunspot group observed on February 8th and 9th.

***) last large old cycle sunspot group with a maximum area A= 750 on March 15th.

* * * * *

Out of other publications:

Mr. H. W. Newton, Royal Observatory Greenwich, mentions in SOLAR NOTES (The Observatory; October 1954) that a "tiny spot in latitude 27°S " was recorded on the Herstmonceux plate on July 21, 1953. He remarks "believed to be real but unconfirmed at Mount Wilson." This then preceded the exceptional high latitude spot of August 13, 1953 at 52°N. Statistically not too much significance can be given to these tiny, short lived spots.

American Relative Sunspot Numbers for November 1954:

Day	RA'	Day	RA'	Day	RA'
1.....	1	11.....	35	21.....	0
2.....	1	12.....	42	22.....	0
3.....	0	13.....	32	23.....	0
4.....	0	14.....	19	24.....	0
5.....	5	15.....	12	25.....	2
6.....	7	16.....	2	26.....	0
7.....	8	17.....	0	27.....	0
8.....	7	18.....	0	28.....	0
9.....	24	19.....	2	29.....	0
10.....	40	20.....	0	30.....	0

Mean RA' = 8.0



Zürich Provisional Sunspot-Numbers for November 1954:

Dependent on observations at Zürich Observatory and its stations in Locarno and Arosa.

Day	RZ	Day	RZ	Day	RZ
1.....	0	11.....	44	21.....	0
2.....	0	12.....	38	22.....	0
3.....	0	13.....	37	23.....	0
4.....	0	14.....	23	24.....	0
5.....	0	15.....	9	25.....	0
6.....	7	16.....	7	26.....	0
7.....	8	17.....	7	27.....	0
8.....	7	18.....	7	28.....	0
9.....	24	19.....	7	29.....	0
10.....	36	20.....	0	30.....	0

Mean RZ = 8.7

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* EPOCH of MINIMUM FREQUENCY in SUNSPOT ACTIVITY--APRIL 1954. *

* The epoch of sunspot minimum is determined statistically from *

* socalled smoothed sunspot-numbers. A smoothed sunspot-number *

* for any particular month depends on the monthly mean relative *

* sunspot numbers of six preceding as well as the six following *

* months together with the very month's relative sunspot number. *

* The lowest American Smoothed-Number-RA' was 2.4 for April 1954. *

* (More details in our next issue. hlb) *