

Solar Bulletin

THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS - SOLAR COMMITTEE

Carl E. Feehrer, Editor
9 Gleason Rd.
Bedford, MA 01730



Email: cfeehrer@hotmail.com

ISSN 0271-8480

Volume 60 Number 6

June 2004

Table I. American Relative Sunspot Numbers (Ra) for June 2004 [boldface = maximum, minimum]

Day	N	Raw Mean	Ra
1	34	54	37
2	37	49	34
3	39	50	36
4	39	46	32
5	37	41	30
6	32	30	23
7	39	44	31
8	47	36	27
9	40	39	31
10	28	35	26
11	31	31	23
12	39	26	20
13	38	39	29
14	35	46	35
15	39	67	50
16	48	84	66
17	34	87	63
18	31	99	70
19	34	100	73
20	46	121	91
21	41	116	89
22	34	100	72
23	35	78	57
24	40	62	46
25	35	44	34
26	28	36	27
27	40	35	25
28	36	38	29
29	39	37	27
30	42	30	22
31	---	---	---

Means: 37.2 56.7 41.9

Total No. of Observers: 67

Total No. of Observations: 1117

Table II. June 2004 Observers

9 AAP P.Abbott	13 LARJ J.Larriba
30 ARAG G.Araujo	15 LERM M.Lerman
8 BARH H.Barnes	17 MARE E.Mariani
10 BATR R.Battaiola	30 MARJ J.Maranon
17 BEB R.Berg	12 MAV D.Matsnev
14 BERJ J.Berdejo	18 MCE E.Mochizuki
5 BLAJ J.Blackwell	25 MMI M.Moeller
22 BMF M.Boschat	18 OBSO IPS Observatory
16 BOSB B.Bose	4 PARN N.Parker
26 BRAB B.Branchett	13 RICE E.Richardson
29 BRAR R.Branch	22 RITA A.Ritchie
30 BROB R.Brown	20 SCGL G.Schott
4 BXA A.Baransky	2 SDP D.Sharples
12 CAMP P.Cambell	16 SIMC C.Simpson
18 CARJ J.Carlson	6 STEF G.Stefanopoulos
30 CHAG G.Morales	22 STEM G.Stemmler
22 CKB B.Cudnik	25 STQ N.Stoikidis
20 CLZ C.Laurent	20 SUZM M.Suzuki
22 COMT T.Compton	30 TESD D.Teske
25 CR T.Cragg	14 THR R.Thompson
23 DEJV J.van Delft	18 TJV J.Temprano
11 DELS S.Delaney	23 URBP P.Urbanski
14 DGP G.Dyck	4 VARG A.Vargas
12 DPP P.dePonthiere	10 VIDD D.Vidican
29 DRAJ J.Dragesco	17 WILW W.Wilson
24 DUBF F.Dubois	22 YESH H.Yesilyaprak
21 FEEC C.Feehrer	
17 FERJ J.Fernandes	
21 FLET T.Fleming	
19 FUJK K.Fujimori	
10 GOEM M.Goetz	
7 HALB B.Halls	
13 HAYK K.Hay	
14 HRUT T.Hrutkay	
15 JAMD D.James	
3 JENS S.Jenner	
16 KAPJ J.Kaplan	
30 KNJS J&S Knight	
5 KQR R.Kinne	
5 KROL L.Krozel	
3 KUZM M.Kuzmin	

Reporting Addresses

Sunspot Reports -- email: solar@aaavso.org
postal mail: AAVSO, 25 Birch St. Cambridge, MA 02138
FAX (AAVSO): (617) 354-0665

SID Solar Flare Reports -- email: noatak@aol.com
postal mail: Mike Hill
114 Prospect St. Marlboro, MA 01752

Table III. Means of Raw Group Counts (RG) and Ratios of Spots to Groups (S:G) in June 2004

Day	RG	S:G	Day	RG	S:G	Day	RG	S:G	Day	RG	S:G
1	3.3	6.9	9	3.0	3.6	17	4.6	8.7	25	2.9	5.2
2	2.8	7.6	10	2.8	2.5	18	4.1	14.5	26	2.3	5.8
3	3.0	6.9	11	2.5	2.7	19	4.0	14.9	27	2.6	3.3
4	2.7	6.6	12	2.1	2.8	20	5.2	13.3	28	2.7	4.1
5	2.8	4.5	13	3.0	3.0	21	5.0	13.0	29	2.6	4.3
6	2.2	4.0	14	3.4	3.6	22	4.7	11.4	30	2.1	4.1
7	3.3	3.5	15	3.9	6.9	23	3.8	10.7	31	---	---
8	2.6	3.8	16	4.9	7.1	24	3.2	9.4	Mn.	3.3	6.6

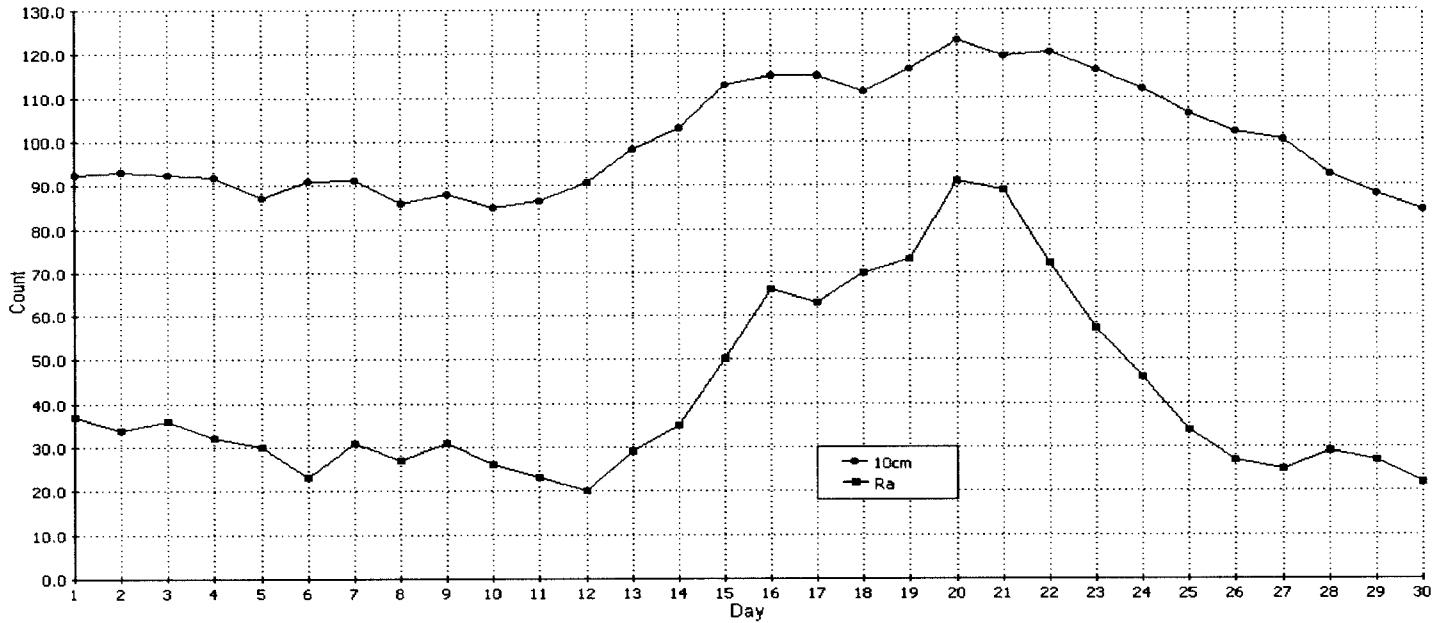


Fig. 1. 10 cm Solar Flux and American Relative Sunspot Numbers (Ra) for June 2004
 10 cm source: <http://www.drao.nrc.ca/icarus>

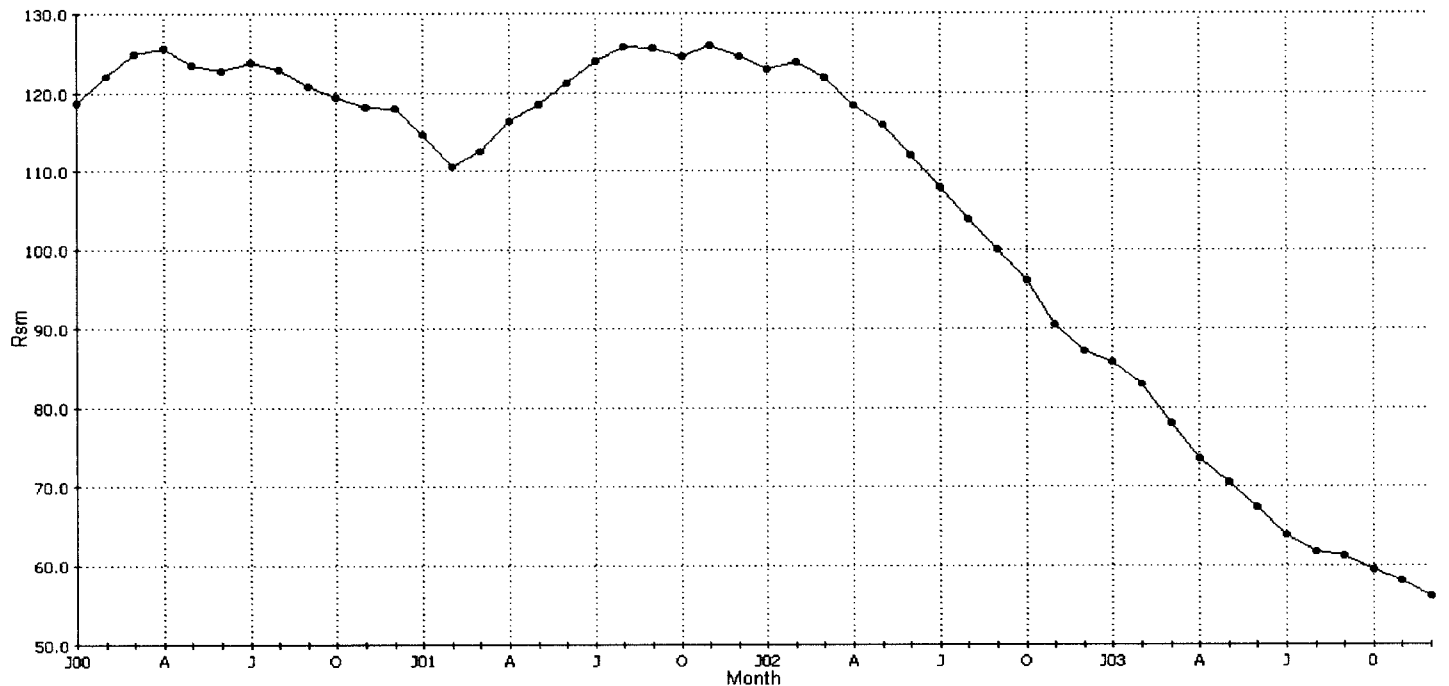


Fig. 2. Smoothed Mean Sunspot Numbers (Waldmeier method) from January 2000 to December 2003.

Solar Events

June was a VERY slow month for SID activity. A number of observers reported either no events or only one or two. As can be seen in the chart below, the beginning of the month was especially slow but picked up somewhat towards the end as a number of active regions emerged on the surface of the sun. There were only 167 X-Ray flare events recorded by the GOES-12 Satellite. Of these, only one was an M-Class event. All others were B or C class events. As would be expected with such low activity, observers reported only 16 correlated SID events. A slow month indeed. I have noticed, with this total lack of activity, that my received signal is unusually smooth each day. Previously, in addition to the characteristic SIDs, my traces have shown appreciable waviness. I always attributed this to reception effects or interference. I think this might not be the case. Yesterday the RSGA solar activity report on the web indicated that a new active region was rotating onto the disk and was elevating the “background” X-Ray flux from B1 to B4. This got me to thinking about the wavy signal I’ve seen during periods of elevated “SID” activity and the idea that what I’m seeing is the overall variations in background X-Ray flux, without an actual flare event. And I’m surprised by the amount of variation. It would be interesting to see if any correlation could be made between the background variation and specific SID Events to see if there is some sort of indication that an event is about to happen. Is there a churning of the soup, so to speak, before an active region pops? Could this be a predictive tool? Interesting stuff and possibly a way to make watching SID more interesting beyond just counting events. Watch your charts, especially as active regions emerge and see if there is a change from a nice smooth daily signal to one that gets choppy or wavy. In addition see if there is any correlation between this and the SID events you record. Thanks to all of our observers for submitting reports, even if you see no SIDs.

Solar Flare Summary Based on GOES-12 Data

