

Solar Bulletin

THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS - SOLAR COMMITTEE

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February 2004

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

Day	N	Raw Mean	Ra
1	31	69	50
2	21	92	68
3	21	101	69
4	25	95	68
5	23	89	69
6	20	76	51
7	27	63	47
8	38	78	57
9	31	79	57
10	29	78	53
11	36	69	49
12	30	73	50
13	28	67	47
14	29	59	41
15	37	69	49
16	31	55	37
17	27	32	24
18	31	31	21
19	33	32	22
20	28	37	25
21	25	50	33
22	26	53	38
23	26	82	57
24	20	71	53
25	28	79	58
26	29	90	63
27	35	100	72
28	37	93	66
29	38	73	55
30	---	---	---
31	---	---	---

Means 29.0 70.2 50.0

Total No. of Observers: 65

Total No. of Observations: 840

Table II. February 2004 Observers

17 AAP P.Abbott	6 LARJ J.Larriba
22 ARAG G.Araujo	3 LERM M.Lerman
4 BARH H.Barnes	16 LEVM M.Leventhal
1 BATR R.Battaiola	4 MARE E.Mariani
11 BEB R.Berg	20 MARJ J.Maranon
12 BERJ J.Berdejo	25 MCE E.Mochizuki
5 BLAJ J.Blackwell	15 MMI M.Moeller
7 BMF M.Boschat	17 OBSO IPS Observatory
24 BOSE B.Bose	5 RICE E.Richardson
19 BRAR R.Branch	18 RITA A.Ritchie
19 BROB R.Brown	14 SCGL G.Schott
3 BURS S.Burgess	7 SCHG G.Scholl
1 BXA A.Baransky	5 SIMC C.Simpson
5 CAMP P.Campbell	2 STEF G.Stefanopoulos
15 CARJ J.Carlson	9 STEM G.Stemmler
26 CHAG G.Morales	19 STQ N.Stoikidis
14 CKB B.Cudnik	26 SUZM M.Suzuki
12 CLZ C.Laurent	13 SZUM M.Szulc
4 COMT T.Compton	14 TESD D.Teske
24 CR T.Cragg	14 THR R.Thompson
25 DEJV J.van Delft	17 TJV J.Temprano
10 DGP J.Dyck	11 URBP P.Urbanski
17 DRAJ J.Dragesco	13 VARG A.Vargas
17 DUBF F.Dubois	4 VELM M.Velea
13 FEEC C.Feehrer	11 WILW W.Wilson
16 FERJ J.Fernandes	16 YESH H.Yesilyaprak
17 FLET T.Fleming	
24 FUJK K.Fujimori	
5 GOEM M.Goetz	
3 GOL A.Golovin	
29 GUNM M.Gundlach	
10 HAYK K.Hay	
15 HRUT T.Hrutkay	
20 JAMD D.James	
13 JEFT T.Jeffrey	
11 KAPJ J.Kaplan	
8 KHAR R.Khan	
13 KNJS J&S Knight	
5 KROL L.Krozel	

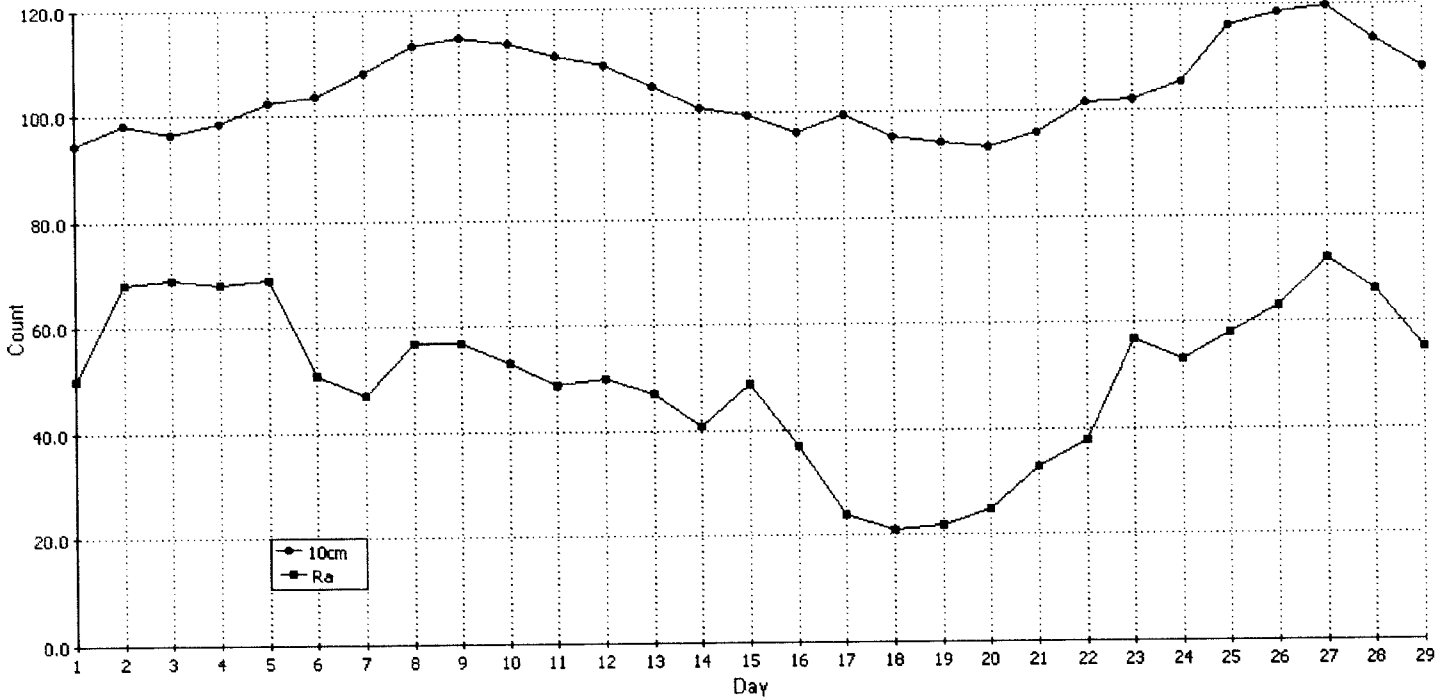
Reporting Addresses

Sunspot Reports -- email: solar@aavso.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 February 2004

Day	RG	S:G	Day	RG	S:G	Day	RG	S:G	Day	RG	S:G
1	3.9	7.8	9	4.1	9.3	17	2.8	1.7	25	3.6	11.9
2	5.1	7.9	10	4.6	7.2	18	2.6	1.7	26	4.0	12.6
3	5.7	7.8	11	4.2	6.5	19	2.8	1.8	27	5.2	9.3
4	5.0	8.9	12	4.7	5.6	20	3.1	1.9	28	4.6	10.2
5	5.0	7.9	13	4.4	5.2	21	3.5	4.3	29	3.9	8.7
6	3.3	13.3	14	4.1	4.3	22	3.2	6.4	30	---	---
7	2.6	14.0	15	5.4	2.8	23	4.4	8.5	31	---	---
8	3.6	11.7	16	4.5	2.2	24	3.6	9.8	Mn.	4.4	7.3



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

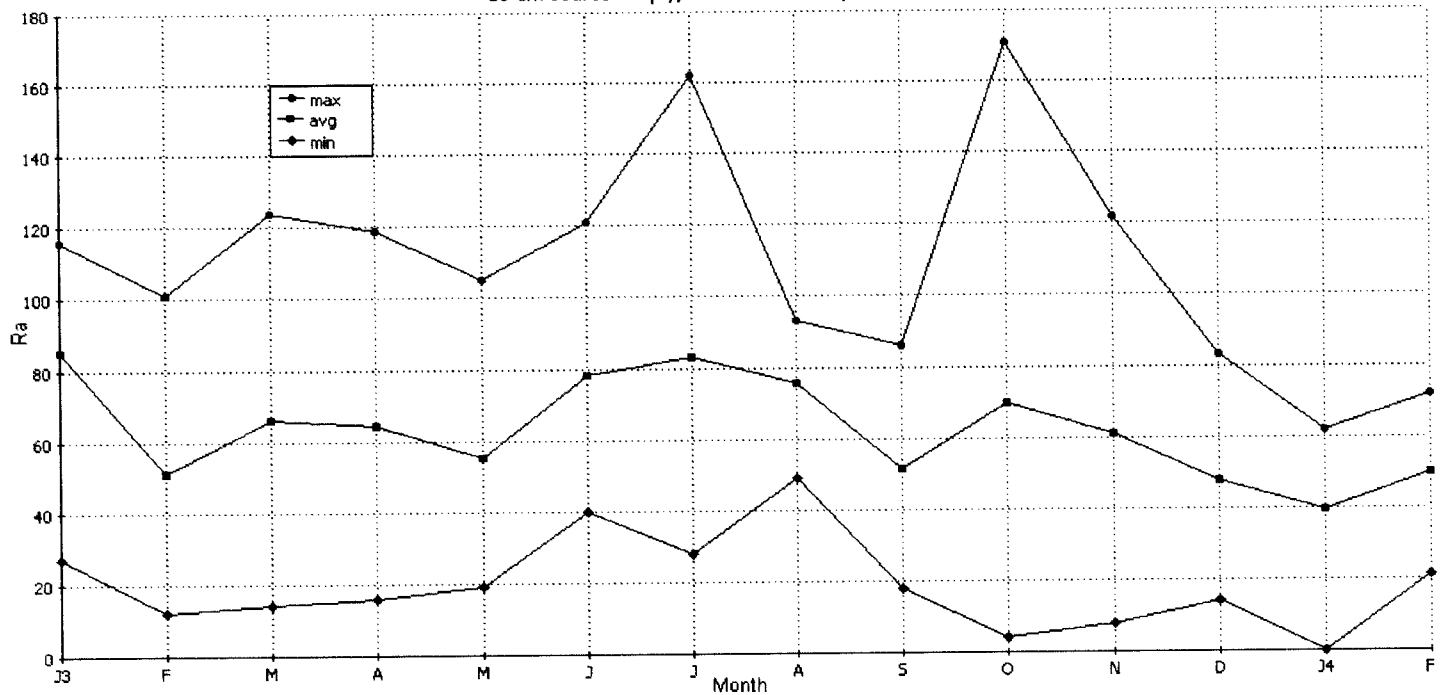
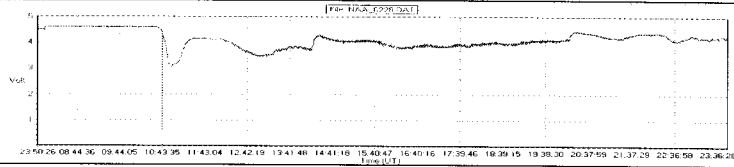


Fig. 2. Maximum, Mean, and Minimum Values of Ra for Each Month from January 2003 to Present.

Sudden Ionospheric Disturbance Report

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 Marlborough, MA 01752 USA
 noatak@aol.com



Sudden Ionospheric Disturbances (SID) Recorded During February 2004

(Analysis performed by Michael Hill, SID Analyst)

Date	Max	Imp	Date	Max	Imp	Date	Max	Imp
040201	0608	2						
040202	0759	2						
040203	0853	1						
040203	1339	2						
040204	1119	1						
040205	0637	1+						
040205	0706	1+						
040205	0755	1+						
040208	2051	2+						
040209	0947	1						
040209	1102	1+						
040209	1405	1						
040211	1807	3						
040222	2002	1						
040225	1227	2						
040225	1622	2						
040226	0203	2						
040226	0449	1						
040226	0537	2						
040226	1420	2						
040226	2017	2+						
040226	2231	2						
040227	0851	1+						
040228	1711	1-						
040228	1728	1+						

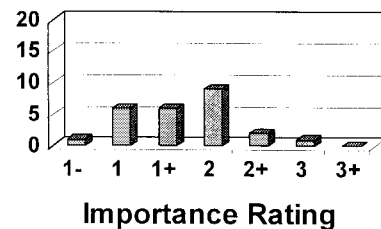
Importance rating : Duration(min)	-1: <19	1: 19-25	1+: 26-32	2: 33-45	2+: 46-85	3: 86-125	3+: >125
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The events listed above meet at least one of the following criteria

- 1) Event reported by two or more observers within ± 5 minutes
- 2) Event matched to GOES-8 XRA event to within ± 15 minutes and event time < 1000 UT
- 3) reported by observer with a quality rating > 8 (scale 1-10)

Observer	Code	Station(s) monitored
A Clerkin	A29	NAA NAU
J Winkler	A50	NAA NML NPM
D Toldo	A52	NAA NPM NWC
P King	A80	FTA
W Moos	A84	FTA
M Hill	A87	NAA
L Anderson	A91	NWC
G DiFillipo	A93	DHO
T Poulos	A95	NAA
R Battaiola	A96	DHO
J Wallace	A97	NAA
P Campbell	A100	NLK
F Steyn	A102	NWC
B Bose	A103	VTX
P Mortfield	A108	NLK
A Son	A112	DHO

SID Events recorded for February 2004



Solar Events

February was a pretty slow month for SID events, especially in the middle of the month. Also the solar activity level was somewhat erratic with some days having a lot of activity followed immediately with days of inactivity and then active again. I wonder if this is symptomatic of this time frame within the solar cycle, kind of like the end of a particular season, when the temperatures begin to fluctuate between what is normal in one season and what is normal in the next one about to begin. As we approach minimum we are apt to see this erratic behaviour more often than not.

Observers reported only 25 correlated events this month while the GOES-12 satellite reported only 113 X-Ray flares. Of these, two were M-Class and one was an X-Class event towards the end of the month. No long duration SID events resulted from any of these flares. Overall most of the SID events had an average importance rating of 1, 1+, and 2. Thanks to all that have sent in reports. Note that if you format your reports manually, which a couple of you do, the importance rating 'sign' comes AFTER the numerical value not before. (i.e. 1- not -1)

Solar Flare Summary Based on GOES-12 Data

