Solar Bulletin

THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS - SOLAR COMMITTEE

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Table I. American Relative Sunspot Numbers (Ra) for September 2005 [boldface = maximum, minimum]

Day	N	Raw Mean	Ra
1	40	23	18
2	40	20	15
3	32	14	11
4	39	13	10
5	35	13	10
6	35	11	8
7	33	16	13
8	32	30	23
9	31	43	32
10	34	53	39
11	34	57	44
12	38	70	49
13	38	72	**51**
14	38	64	47
15	36	58	42
16	27	55	39
17	34	58	41
18	39	52	38
19	42	37	26
20	37	24	18
21	42	22	17
22	36	23	18
23	35	27	19
24	34	23	18
25	25	25	19
26	28	29	21
27	38	25	19
28	34	22	17
29	32	21	16
30	34	9	**7**
31	---	---	---
Means:	**35.1**	**33.6**	**24.8**

Total No. of Observers: 59

Total No. of Observations: 1052

Table II. September 2005 Observers

15	AAP	P.Abbott	20	KAPJ	J.Kaplan
12	AJV	A.Santiago	26	KNJS	J.Knight
27	ARAG	G.Araujo	3	KROL	L.Krozel
2	ARE	R.Allessi	11	LARJ	J.Larriba
8	BARH	H.Barnes	17	LERM	M.Lerman
6	BATR	R.Battaiola	12	MARE	E.Mariani
18	BEB	Ray Berg	22	MARJ	J.Maranon
15	BERJ	J.Berdejo	23	MCE	E.Mochizuki
11	BLAJ	J.Blackwell	16	MENM	M.Menegotto
26	BMF	M.Boschat	3	MEU	M.Mason
6	BOSB	B.Bose	27	MMI	M.Moeller
26	BRAB	B.Branchett	29	OATS	S.Oatney
4	BRAM	M.Bradbury	20	OBSO	IPS Observatory
30	BRAR	R.Branch	26	PEKT	R.Pektas
26	BROB	R.Brown	11	RICE	E.Richardson
30	CHAG	G.Morales	16	RIDC	C.Ridgway
29	CKB	B.Cudnik	21	RITA	A.Ritchie
14	CLZ	L.Corp	28	SCGL	G.Schott
20	COMT	T.Compton	15	SCHG	G.Scholl
27	CR	T.Cragg	15	SIMC	C.Simpson
8	FEEC	C.Feehrer	22	STEM	G.Stemmler
26	FERJ	J.Fernandez	24	STQ	N.Stoikidis
22	FUJK	K.Fujimori	21	SUZM	M.Suzuki
8	GOEM	M.Goetz	28	TESD	D.Teske
9	HALB	B.Halls	15	THR	R.Thompson
14	HAYK	K.Hay	19	TJV	J.Temprano
11	HRUT	T.Hrutkay	21	URBP	P.Urbanski
17	JAMD	D.James	18	VARG	A.Vargas
16	JENJ	J.Jenkins	15	VIDD	D.Vidican
			25	WILW	W.Wilson

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 September 2005

1	1.9	2.7	**9**	2.3	9.1	**17**	1.8	22.5	**25**	2.0	2.7
2	1.4	4.1	**10**	2.1	14.9	**18**	2.5	10.5	**26**	2.4	2.1
3	1.1	3.5	**11**	1.8	21.8	**19**	2.1	7.3	**27**	2.1	2.1
4	1.0	2.9	**12**	1.4	39.9	**20**	1.4	7.0	**28**	1.9	1.6
5	1.0	2.6	**13**	1.6	34.7	**21**	1.0	11.2	**29**	1.8	1.4
6	0.9	2.3	**14**	1.2	43.0	**22**	1.1	11.7	**30**	0.7	2.4
7	1.4	1.6	**15**	1.2	38.5	**23**	1.6	6.5	**31**		
8	1.9	5.7	**16**	1.1	38.3	**24**	1.8	2.7	**Mn.**	**1.6**	**11.9**

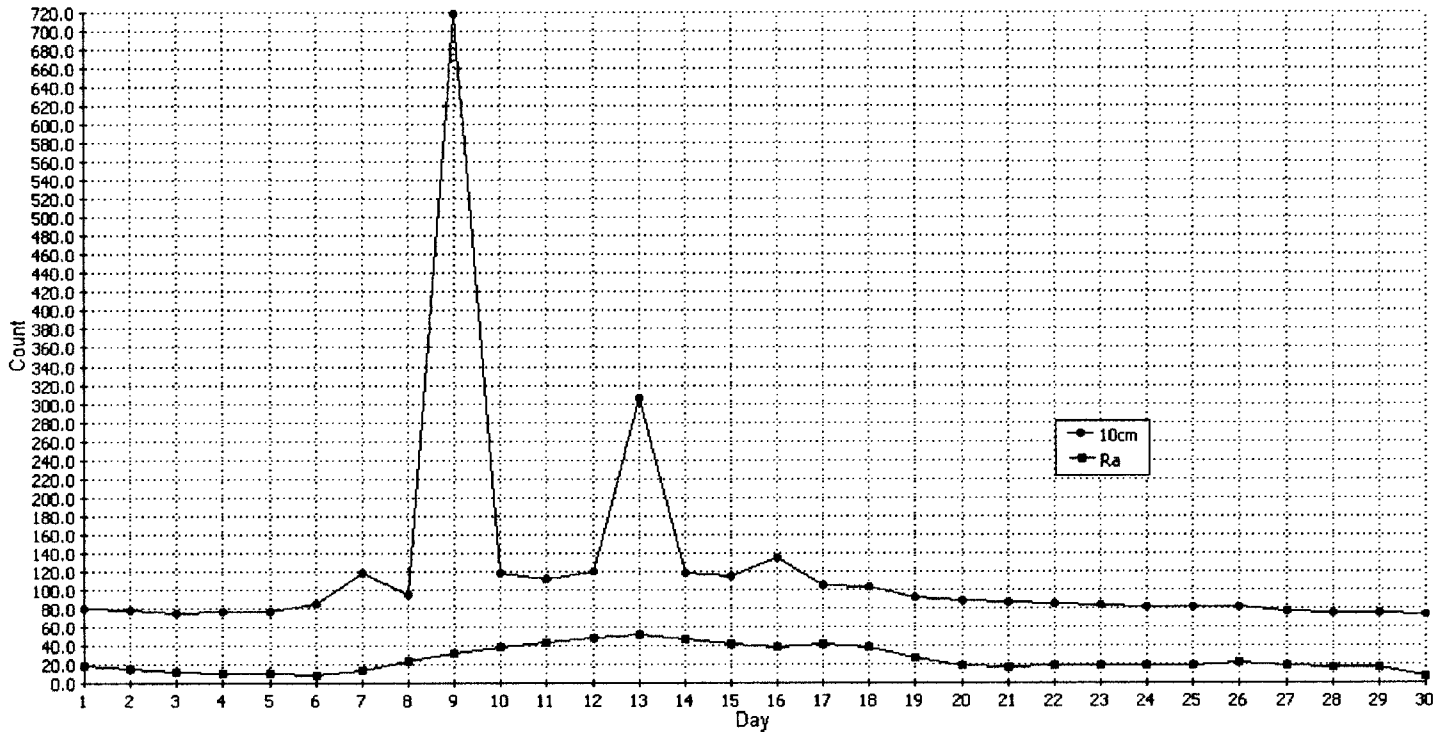

Fig. 1. 10 cm Solar Flux and American Relative Sunspot Numbers (Ra) for September 2005.
10 cm source: http://www.drao.nrc.ca/icarus

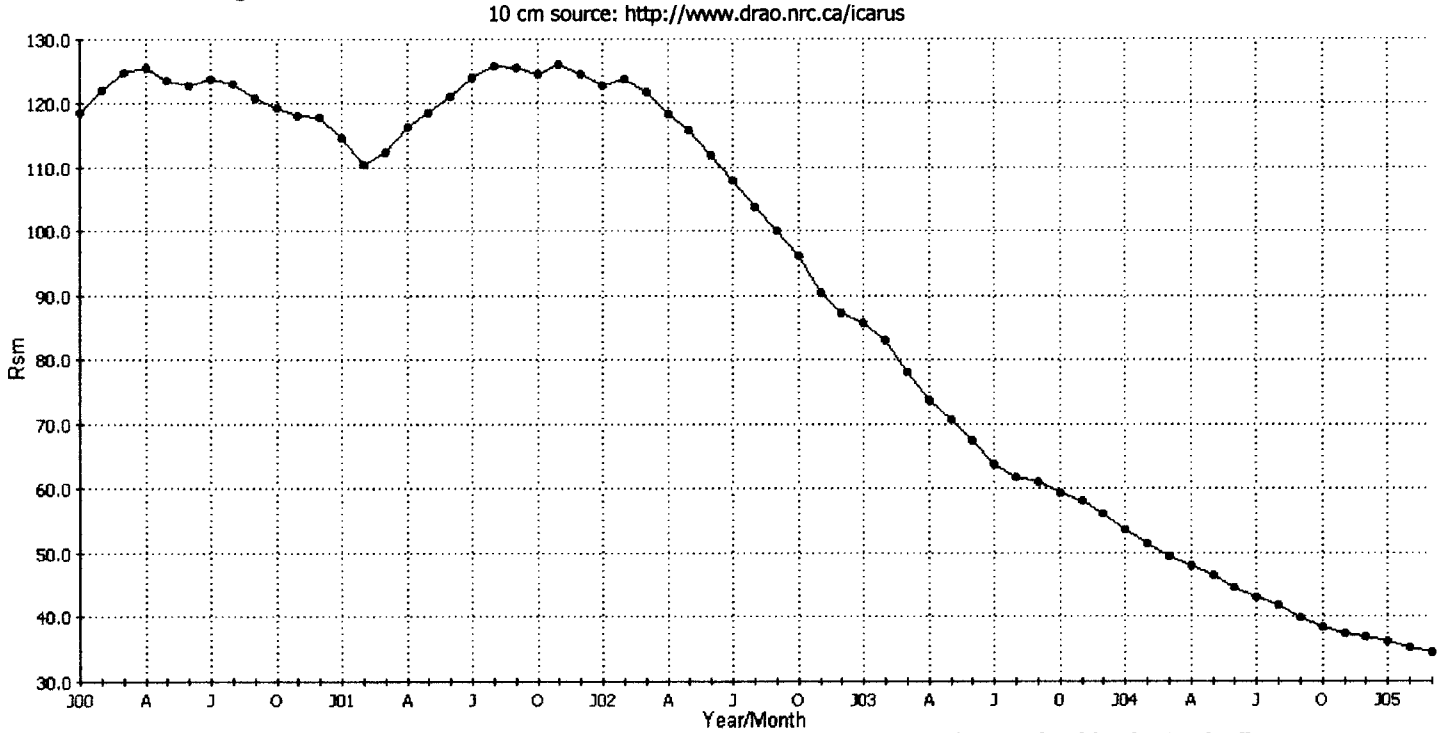

Fig. 2. Smoothed Mean Sunspot Numbers (Rsm) from January 2000 to March 2005 (Waldmeier Method).

Sudden Ionospheric Disturbance Report

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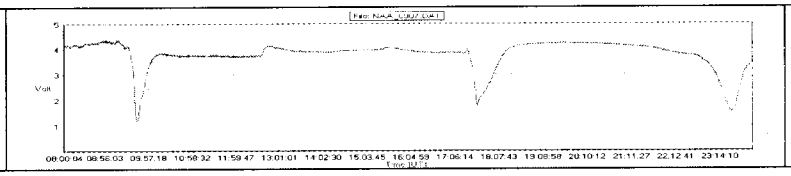


Sudden Ionospheric Disturbances (SID) Recorded During September 2005

(Analysis performed by Michael Hill, SID Analyst)

Date	Max	Imp	Date	Max	Imp	Date	Max	Imp
050905	1002	2	050909	1544	1	050914	0704	2
050905	1017	2+	050909	1748	2	050914	0814	2
050907	1004	1	050909	1927	2	050914	0913	2
050907	1123	1+	050909	1945	2+	050914	1036	2
050907	1243	2	050910	0442	2	050914	1258	1+
050907	1427	1-	050910	0616	2	050914	1928	1
050907	1531	1+	050910	0651	1+	050915	0120	2
050907	1734	3	050910	0834	2	050915	0213	1-
050907	1739	3	050910	0907	1+	050915	0501	1-
050908	0851	1	050910	1029	1	050915	0656	1-
050908	1119	1+	050910	1552	1	050915	0839	2
050908	1232	2	050910	1644	1+	050915	0846	2
050908	1303	1	050910	1921	2	050915	1042	1-
050908	1439	1	050910	1932	2	050915	1449	1-
050908	1457	1-	050910	2107	1+	050915	1517	1+
050908	1608	1+	050910	2156	2+	050915	1638	1
050908	1702	1+	050911	0234	1+	050916	0150	1+
050908	1751	1	050911	0620	1+	050916	0524	1-
050908	2031	1	050911	0714	1	050916	0859	1+
050908	2106	2+	050911	1034	2	050916	1447	1
050909	0220	2+	050911	1259	1+	050916	1516	1+
050909	0300	2+	050911	2042	2	050916	1527	1
050909	0457	2+	050912	0703	1	050916	1749	2+
050909	0544	2+	050912	0848	3	050916	1936	2
050909	0550	2+	050912	0900	2	050917	0442	1+
050909	0828	1	050912	2009	1-	050917	0607	2
050909	0838	1-	050913	0445	2	050917	0941	1-
050909	0918	2	050913	0830	1	050917	1038	1
050909	0931	1-	050913	1052	1+	050917	1505	1-
050909	0950	3	050913	1125	2	050918	0436	1
050909	0959	2	050913	1930	1	050918	0503	2
050909	1249	2	050914	0421	1	050921	0903	1-
050909	1528	1-	050914	0637	1+	050923	0600	2

Importance rating: Duration (min)	1-: <19	1: 19-25	1+: 26-32	2: 33-45	2+: 46-85	3: 86-125	3+: >125

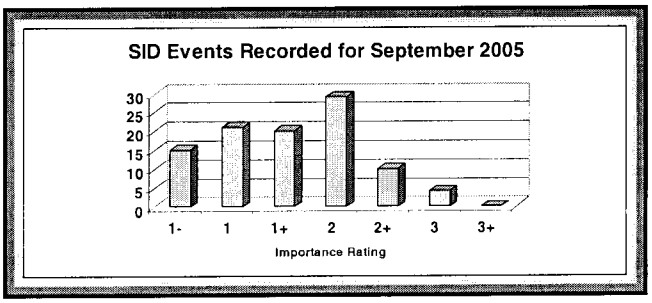
The events listed above meet at least one of the following criteria

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)

SID Observations – Contributing Observers

Observer	Code	Station(s) monitored
A Clerkin	A29	NAA
D Toldo	A52	NWC XXX
J Ellerbe	A63	DHO
P King	A80	FTA
M Hill	A87	NAA
J Mandaville	A90	NPM
L Anderson	A91	NWC
G Di Filippo	A93	DHO
T Poulos	A95	NAA
R Battaiola	A96	HWU

Observer	Code	Station(s) monitored
F Steyn	A102	NAA NWC
L Observatory	A107	DHO
P Mortfield	A108	NAA



Solar Events

September turned out to be quite a different month than last. We were treated to a very active period in the midst of approaching solar minimum complete with multiple X Class flares and a weekend at mid-month that featured beautiful auroras for some of us. There were 99 correlated SID events reported by observers this month, one of the highest numbers I have seen. Most had a low to medium importance rating but there were a good number in the upper end as well.

Interestingly there were only 164 X-Ray flares recorded by the GOES-12 Satellite. But of these, 10 were X-Class flares, 26 were M-Class flares and based on our recordings quite a few of the C-Class flares were probably in the upper end of that classification. This very active period was due primarily to one sunspot group, NOAA region 808, which was actually the return of a previous group from the month before. Thanks again to all of you for submitting your data.