

Solar Bulletin

THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS
SOLAR COMMITTEE



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Summary of AAVSO Solar Committee Activity for the Period from October 2001 to September 2002 [Presented at the October 26, 2002 Annual Meeting in Somerville, MA]

Chair: Carl E. Fehrer

As reported at earlier meetings, the Solar Division continues to benefit from the presence of the *Solar Bulletin* and related sunspot and SID data on the AAVSO website, and from media attention being paid to the Sun during the maximum. The Division continues to attract new contributors to both of its observation activities. During the period, 90 observers have filed sunspot reports and 20 observers have filed SID reports.

Sunspot Reports

During the period, 876 sunspot reports containing a total of 13,352 observations were received and processed. As shown in Figure 2 below, a larger number of reports has been received in this period than in the previous period as a result of growth in the size of the observer group.

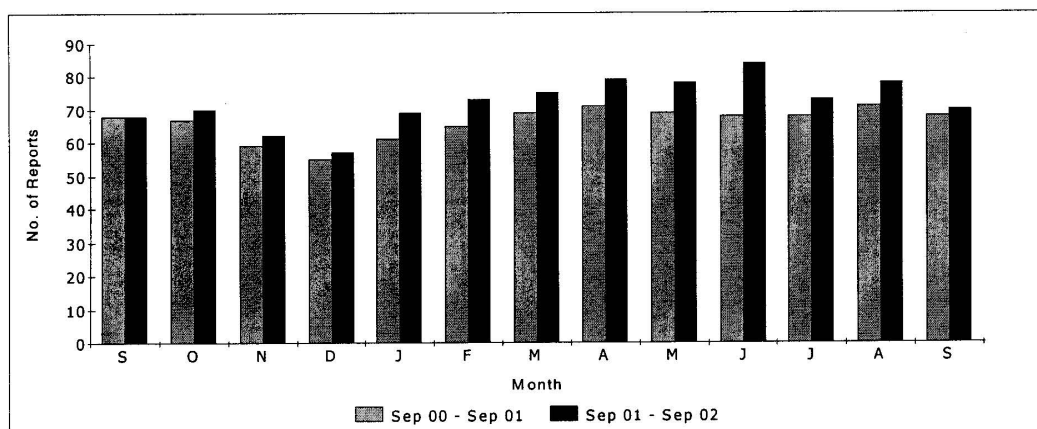


Fig. 1. Number of Sunspot Observer Reports Received During Corresponding Periods.

SID Reports

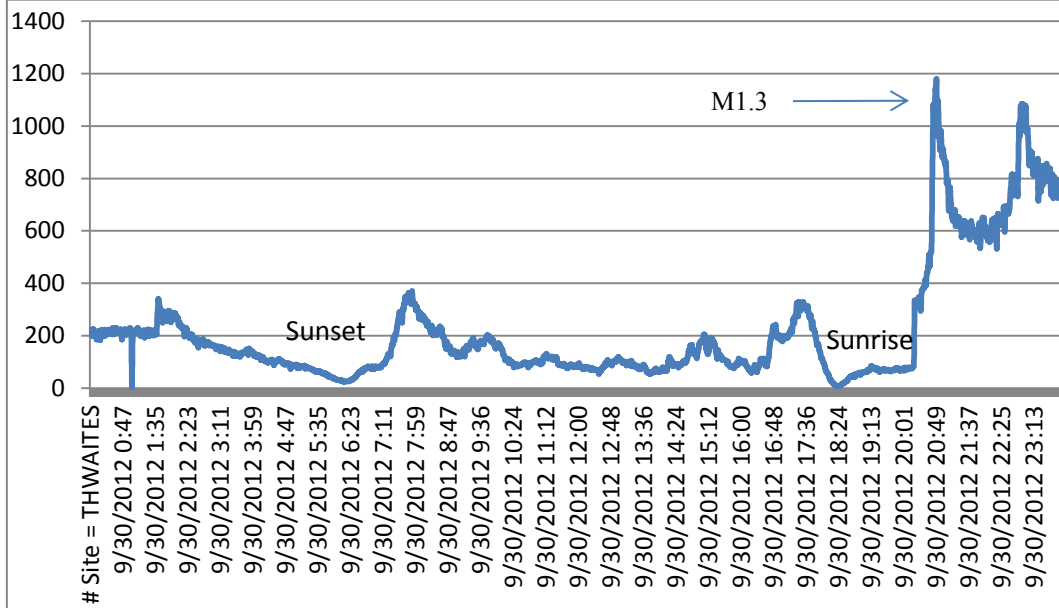
- One hundred ninety-nine reports based on the monitoring of seven different VLF stations were received and processed. Mike Hill, SID Analyst and Chair of the SID group has developed new procedures for automating the reduction and reporting of flare data. His reviews of activity during the period and of the revised procedures are presented at the end of this report.

Website Activity

- The number of solar images contributed to the Solar Photo Gallery by observers became large enough last month so that it was necessary to reorganize the collection. Since the group provides good coverage of the appearance of the disc over most of the maximum, I hope at some point to put together an album of selected images that could be of value in teaching new observers the art of sunspot grouping.

“To anyone at AAVSO who might remember Carl Fehrer: Solar Division Chair – 2000 to 2006 It is with much sadness that I tell you that he passed away last week after a long struggle with lymphoma. He very much enjoyed his association with your organization while he was active in the solar division.”

Thank you, and blessings to all, Barbara Fehrer.

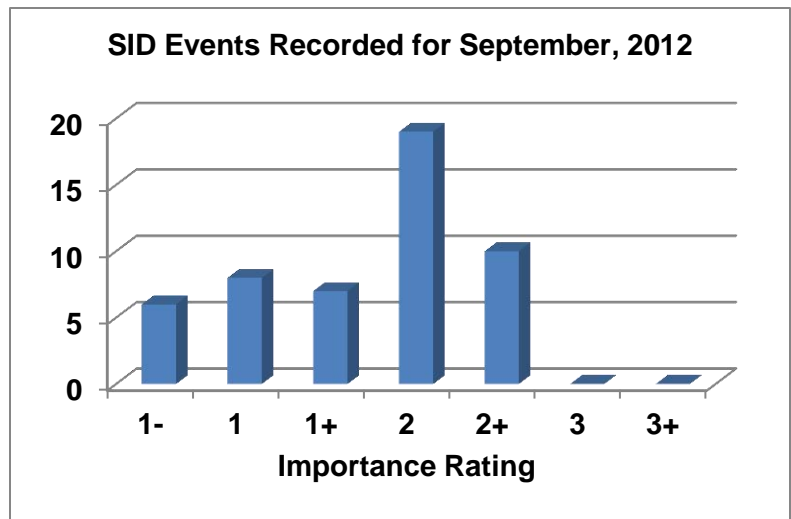


SID graph from September 30, 2012 by Rod Green, Geelong Australia

Sudden Ionospheric Disturbances (SID) Records During September , 2012

Date	Max	Imp	Date	Max	Imp	Date	Max	Imp
120901	1051	2	120906	0207	2	120913	0742	2
120901	1112	1	120906	0414	2	120913	0834	2+
120901	1138	2	120906	0752	1	120913	1307	1+
120901	1349	1-	120906	1009	2	120913	1603	1
120901	1828	1	120906	1522	2	120917	1144	2
120902	0932	1	120907	1045	2+	120917	1356	1-
120902	1021	2	120908	1749	2	120917	1406	2+
120902	1131	2	120909	0700	2	120919	1514	1+
120902	1527	1-	120909	1457	1+	120920	1140	2+
120902	1809	2	120910	0931	1+	120925	0437	2
120903	0944	2	120910	1024	1+	120925	0946	1-
120903	1040	2	120910	1254	2	120929	1510	2
120903	1048	2	120911	0933	1	120930	0435	2+
120903	1317	2+	120911	1105	2+	120930	1233	1-
120904	0950	1-	120911	1112	2+	120930	1428	1+
120905	0345	1	120911	2058	1	120930	1511	1+
120905	0750	2+	120912	1027	2+			

Solar Events

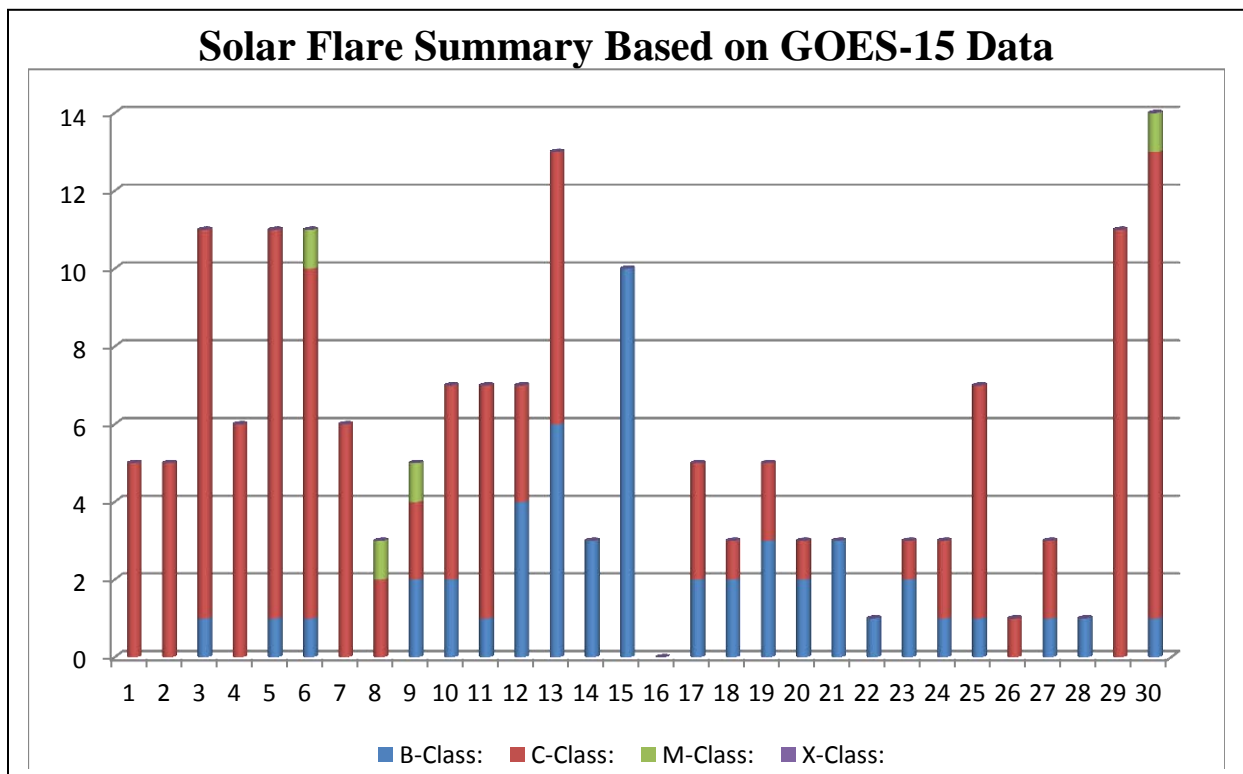


Importance rating: Duration (min)	1-: <19	1: 19-25	1+: 26-32	2: 33-45	2+: 46-85	3: 86-125	3+: >125
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Sudden Ionospheric Disturbances (SID) Observers During September , 2012

Observer	Code	Station(s) monitored	Observer	Code	Station(s) monitored
A McWilliams	A94	NML	S Oatney	A125	NML
J Wallace	A97	NAA	K Cotar	A129	DHO GBZ
F Steyn	A102	NWC	J Karlovsky	A131	DHO
L Loudet	A118	DHO GQD NAA	E Soubrouillar	A132	DHO
J Godet	A119	GBZ GQD	T Santo	A133	NWC
F Adamson	A122	NWC	R Green	A134	NWC
G Myers	A124	NLK			

There were 173 solar flares measured by GOES-15 for September, 2012. There were 4 M class flares, 118 C class and 51 B class flares. The sun was less active compared to August, 2012. There were 13 AAVSO SID Observers who submitted reports this month, no data for R. Battaiola.



American Relative Sunspot Numbers (Ra) for
September, 2012 [**boldface = maximum, minimum**]

DAY	NumObs	RAW	Ra
1	48	125	93
2	41	127	92
3	42	154	113
4	34	140	98
5	43	107	77
6	40	102	75
7	35	80	59
8	35	77	56
9	45	75	54
10	37	67	48
11	38	56	38
12	39	56	39
13	39	51	36
14	35	49	36
15	49	52	37
16	38	51	37
17	36	47	33
18	32	54	38
19	41	59	45
20	38	74	53
21	37	67	46
22	40	55	40
23	27	67	49
24	37	88	64
25	30	109	81
26	27	118	84
27	31	85	59
28	31	70	49
29	27	65	48
30	29	78	54
Average	36.7	80.1	57.7

Observer	# Obs	Name
AAP	4	A. Patrick Abbott
AAX	18	Alexandre Amorim
AJV	16	J. Alonso
AMG	2	Margarete J. Amorim
ARAG	28	Gema Araujo
ASA	11	Salvador Aguirre
BARH	7	Howard Barnes
BATR	6	Roberto Battaiola
BEB	5	Ray Berg
BERJ	13	Jose Alberto Berdejo
BMF	19	Michael Boschat

BRAB	30	Brenda Branchett
BRAF	22	Raffaello Braga
BROB	30	Robert Brown
BXD	4	Alexandru Burda
CADA	3	Adair Cardoso
CHAG	30	German Morales Chavez
CIOA	10	Ioannis Chouinavas
CKB	28	Brian Cudnik
CLZ	2	Laurent Corp
CNT	14	Dean Chantiles
CVJ	12	Jose Carvajal
DELS	4	Susan Delaney
DEMF	3	Frank Dempsey
DGP	26	Gerald Dyck
DJOB	25	Jorge del Rosario
DUBF	28	Franky Dubois
FAM	6	Fabio Mariuzza
FERJ	21	Javier Ruiz Fernandez
FLET	24	Tom Fleming
FLF	17	Fredirico Luiz Funari
FTAA	12	Tadeusz Figiel
FUJK	21	K. Fujimori
HAYK	22	Kim Hay
HOWR	26	Rodney Howe
HRUT	6	Timothy Hrutkay
JASK	17	Krystyna Wirkus
JGE	7	Gerardo Jimenez Lopez
JJK	2	Jerry Klotz
KAND	27	Kandilli Observatory
KAPJ	27	John Kaplan
KNJS	21	James & Shirley Knight
KROL	12	Larry Krozel
LEVM	22	Monty Leventhal
LKR	15	Kristine Larsen
MARE	9	Enrico Mariani
MCE	25	Etsuiku Mochizuki
MGAA	9	Gael Mariani
MILJ	14	Jay Miller
MJHA	27	John McCammon
MMI	25	Michael Moeller
MUDG	18	George Mudry
OATS	14	Susan Oatney
OBSO	19	IPS Observatory
RICE	20	E. C. Richardson
RLM	11	Mat Raymonde
SCGL	24	Gerd-Lutz Schott
SIMC	14	Clyde Simpson

SONA	9	Andries Son
STAB	28	Brian Gordon-States
SUZM	24	Miyoshi Suzuki
TESD	21	David Teske
URBP	24	Piotr Urbanski
VARG	20	A. Gonzalo Vargas
VIDD	13	Daniel Vidican
WILW	26	William M. Wilson
WRP	2	Russell Wheeler

Total Observers 67
Total Observations 1101

Reporting Addresses:
Sunspot Reports – Kim Hay
 Email: solar.aavso@gmail.com
SID Solar Flare Reports – Rodney Howe
 Email: ahowe@frii.com

Yearly summary of optical sunspot and group counts from September, 2011 thru September, 2012

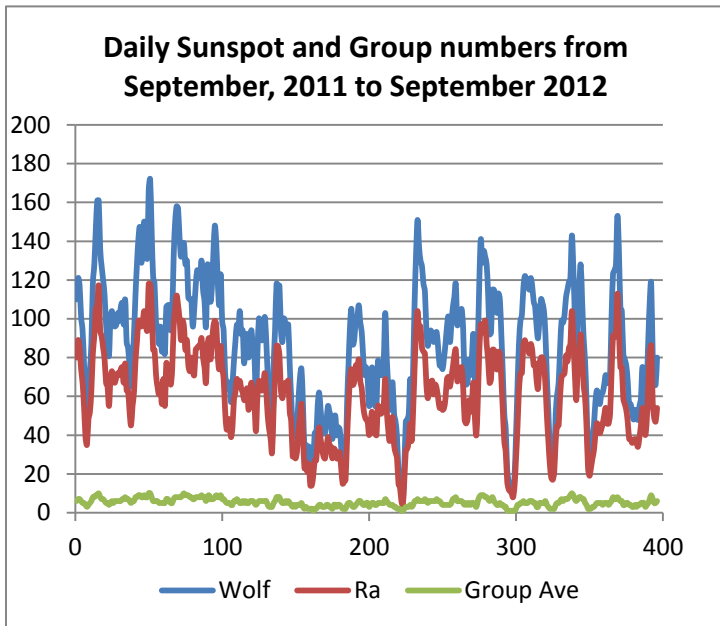


Figure 1 shows the daily numbers for group, sunspot and Wolf number for the last year.

With the new SunEntry database it is easy to extract data in many different formats. The sun has pulled out of the quiet time and is now showing a bi-modal solar maximum (Figure 1). There were a total of 70 sunspot observers who contributed 12,173 observations (September 2011 – September 2012). Their efforts should be applauded as they continue to monitor our nearest star. We also have many awards to be given for

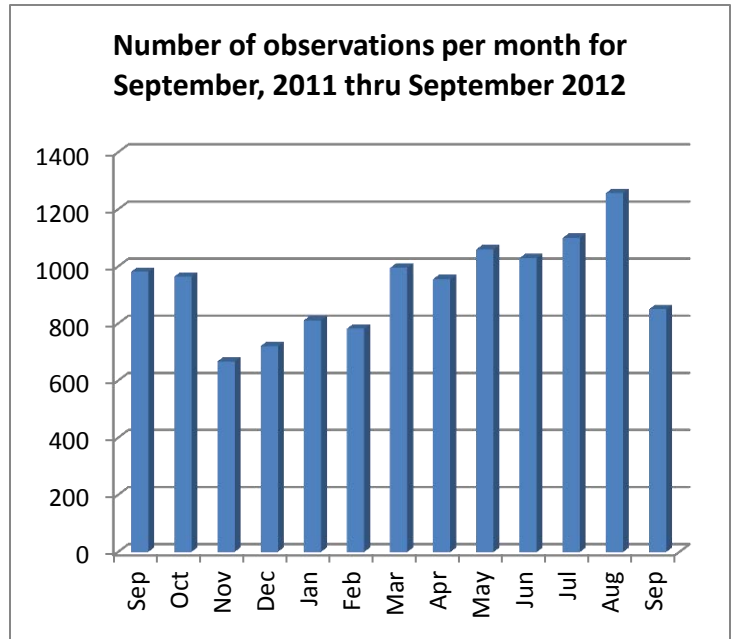


Figure 2 there were 12,173 daily observations reported this last year in the SunEntry database.

our sunspot observers based on past certificates, and running numbers from 2006 onward. Kim Hay from Yarker, Ontario, Canada is doing an excellent job of collecting, cleaning, and loading in the monthly data into the new SunEntry database built by Sara Beck. Matthew Templeton has converted the old reporting software to interface with the SunEntry database and this creates the American Relative numbers for the Solar Bulletin.

We hope that over the next few months to work with AAVSO HQ in building collaborative opportunities with scientists analyzing various solar indices. This would help increase AAVSO exposure and offer real time information to current and future sunspot observers and scientists.

It is not surprising that the AAVSO American Relative (Ra) number compares best with the Solar Influences

Data Center (SIDC) Sunspot Index (Ri) over the long term (graph courtesy of Frederic Clette, SIDC), as both organizations have between 70 and 80 visual observers worldwide submitting daily sunspot numbers.

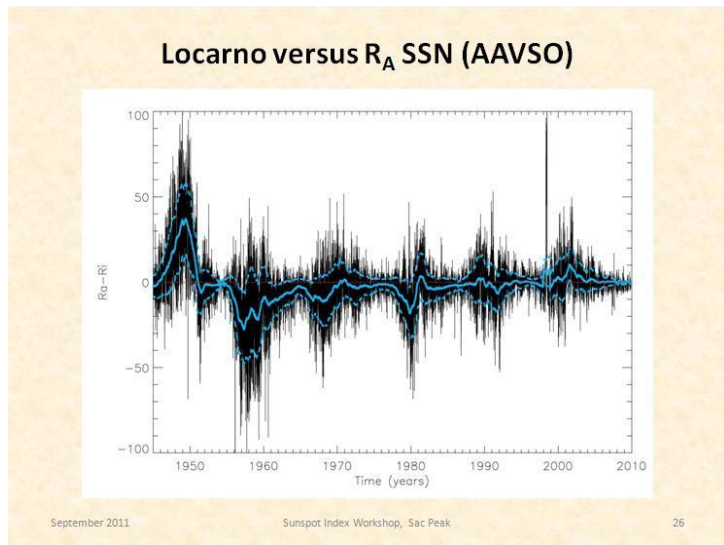


Figure 3 It is a tribute to how dedicated the volunteer visual observers all over the world who consistently have submitted data for over 65 years.

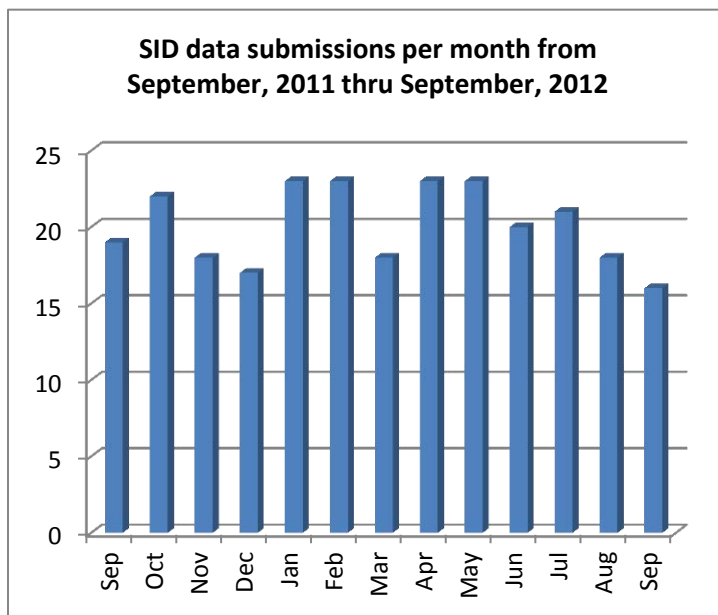


Figure 4 show the monthly reports (total of 325) for VLF data submissions this last year.

Rodney Howe
 AAVSO SID Analyst (2010-2012)
 Solar Bulletin Editor and Chair

AAVSO Solar Committee – SID Group
 Fall 2012 Report
 September 2011 – September 2012

For the last 12 months overall SID Activity has been up and down. Our observer ranks have remained consistent and we still have a good number of observers remaining vigilant in their watch for the next solar flare events. We also added three new observers this year. There were a total of 24 observers submitting reports and a total of 325 reports were sent in. Thanks to all observers for their efforts in monitoring, and report generation.

Two observers are eligible for an award this year. SID Observer awards are given to observers after having submitted at least 40 reports to the group.

A-118 Lionel Loudet Muret, France
 A-119 Jean-Pierre Godet LE VAUROUX, France