

# Solar Bulletin

THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS - SOLAR COMMITTEE

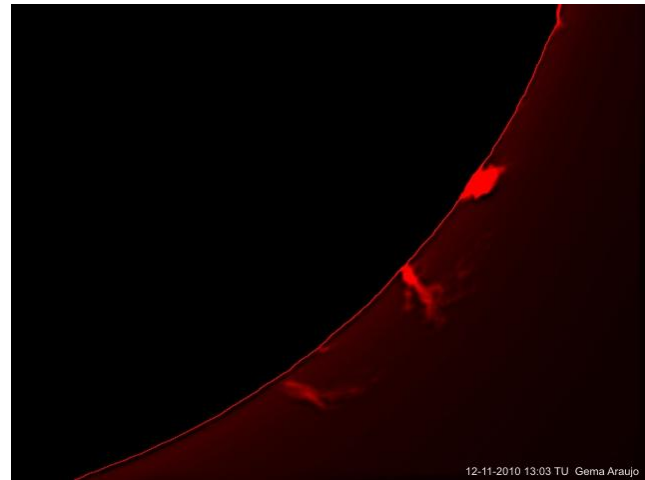
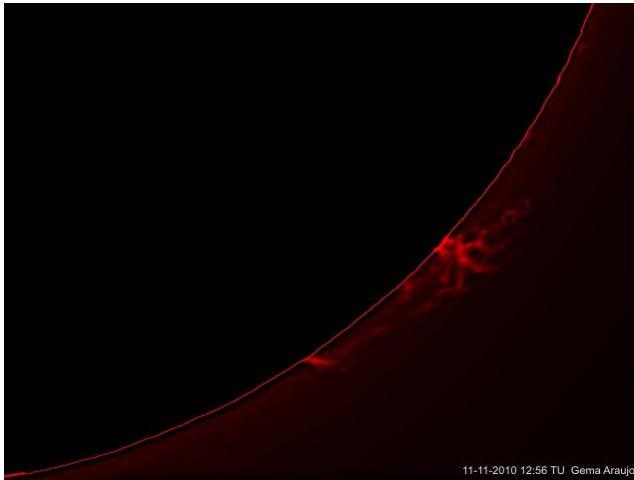


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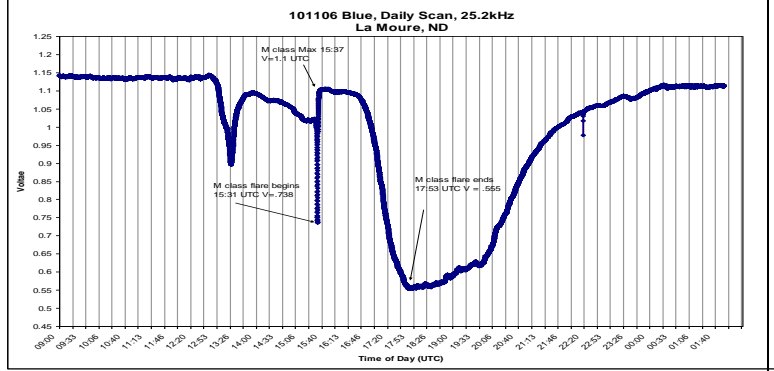
The evolution of prominences was captured by Gema Araujo of Spain over a two day time frame. The image on left taken on November 11, 2010 at 12:56UT. The image on right was taken the following day November 12, 2010 at 13:03UT.

## Solar Section Chairperson Needed ASAP

It is with deep regret that after 4 years of being chair of this section I will have to step down due to increased business responsibilities and travel. A volunteer is needed to step forward and lead the combined solar group and be editor of the monthly solar bulletin. This section has a long history in contributing the monthly American Relative Sunspot Number (Ra) and the Sudden Ionospheric Disturbance (SID) solar flare radio reports. If you can spare 4 hours per month and wish to take on the leadership of this section, please contact me at [Paul@theDDO.ca](mailto:Paul@theDDO.ca) I will be available to assist in the transition over the next several months to get the new chairperson up to speed. Thank You.

# Sudden Ionospheric Disturbance Report

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## Sudden Ionospheric Disturbances (SID) Recorded During November 2010

(Analysis performed by Michael Hill, SID Analyst)

Date	Max	Imp	Date	Max	Imp	Date	Max	Imp
101103	1218	3	101113	1138	1+			
101103	1233	2	101113	1947	1-			
101103	1251	2	101115	0734	1			
101105	1306	2+	101115	0751	2+			
101105	1410	2+	101122	1847	1			
101105	1533	3+						
101105	1546	3+						
101105	1553	3+						
101106	0451	2						
101106	0834	1+						
101106	1537	3						
101107	0145	1+						
101111	0725	2+						
101111	1607	1-						
101111	1615	2+						
101111	1619	2+						
101111	1648	1+						
101112	0137	1-						
101112	0808	3+						
101112	0808	3+						
101112	1352	2						

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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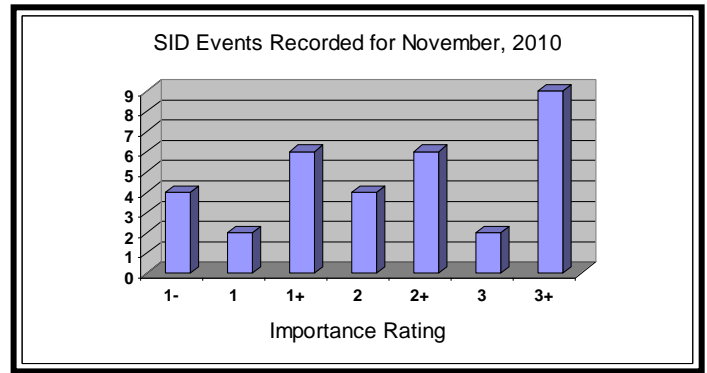
Observer	Code	Station(s) monitored
R Battaiola	A96	HWU
J Wallace	A97	NAA
F Steyn	A102	NAA NWC
M Suhovecky	A115	NAA
L Loudet	A118	GQD ICV NAA
J Godet	A119	GBZ GQD ICV
R Howe	A121	NML
S Oatney	A125	NML

Observer	Code	Station(s) monitored
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The events listed above meet at least one of the following criteria

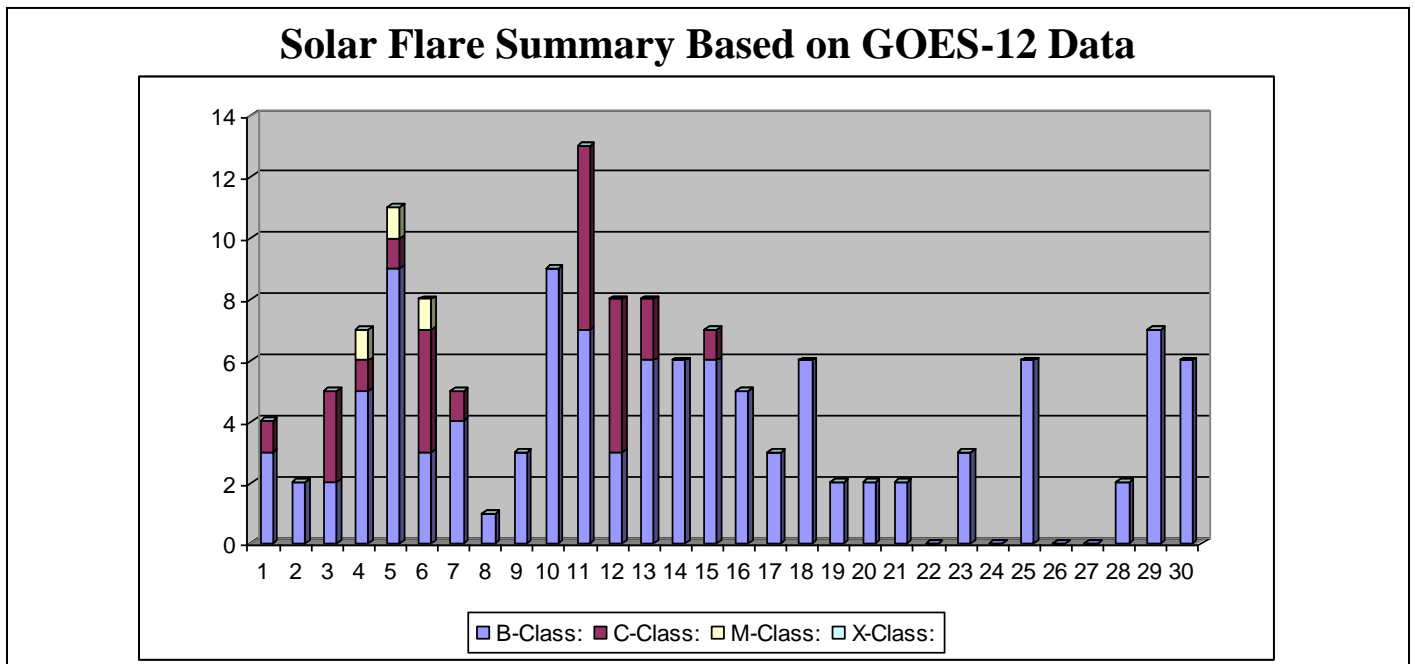
- 1) Event reported by two or more observers within  $\pm 5$  minutes
- 2) Event matched to GOES-8 XRA event to within  $\pm 15$  minutes and event time < 1000 UT
- 3) reported by observer with a quality rating > 8 (scale 1-10)

# Solar Events



There were 141 solar flares measured by GOES-8/14, 24 of which were C class flares, and three M class flares. Of the 14 AAVSO SID Observers who submitted reports, 8 recorded November events.

There were 113 B class flares this month, and comparing October's 157 flares/15 C class and one M class, November shows a slight drop in flare activity. The Importance Ratings for November flares however, were on average greater than the October Importance Ratings because of the rise in C and M class flare activity.



American Relative Sunspot Numbers (Ra) for  
November 2010 [**boldface = maximum, minimum**]

Day	N	Raw Mean	Ra
1	24	21	14
2	25	17	12
3	25	16	10
4	22	18	12
5	21	22	14
6	23	29	20
7	24	31	22
8	22	32	21
9	19	28	18
10	23	43	28
11	26	38	27
12	28	43	30
13	22	59	<b>42</b>
14	20	51	38
15	22	51	38
16	22	48	36
17	22	49	34
18	16	42	32
19	19	37	28
20	19	30	21
21	17	25	19
22	17	20	14
23	22	16	12
24	21	13	9
25	24	17	11
26	21	15	10
27	28	12	<b>8</b>
28	26	24	16
29	19	25	17
30	17	25	15
<b>Means</b>	<b>21.9</b>	<b>29.9</b>	<b>21.0</b>

**Total Observers: 44**  
**Total Observations: 656**

Initials	Name	# of Obs.
AAP	A. Patrick Abbott	10
AAX	Alexandre Arorim	8
AJV	J. Alonso	15
ARAG	Gema Araujo	26
ASA	Salvador Aguirre	9
BARH	Howard Barnes	6
BEB	Ray Berg	15

BERJ	Jose Alberto Berdejo	10
BMF	Michael Boschat	16
BRAB	Brenda Branchett	30
BROB	Robert Brown	21
BVC	Alan Buck	30
CHAG	German Chavas Morales	26
CKB	Brian Cudnik	25
CLZ	Corp Laurent	6
CNT	Dean Chantiles	12
DELS	Susan Delaney	10
DGP	Gerald Dyck	13
DOGA	Doga Ozkan	28
DUBF	Franky Dubois	20
FAM	Fabio Mariuzza	3
FERJ	Javier Ruiz Fernandez	14
FLET	Tom Fleming	18
FUJK	K. Fujimori	23
HALB	Brian Halls	1
HAYK	Kim Hay	4
JASK	Krystyna Wirkus	2
KAPJ	John Kaplan	17
KNJS	James & Shirley Knight	22
KROL	Larry Krozel	1
LEVM	Monty Leventhal	20
MILJ	Jay Miller	18
MMI	Michael Moeller	12
OATS	Susan Oatney	4
OBSO	IPS Observatory	16
RICE	E. C. Richardson	18
SCGL	Gerd-Lutz Schott	16
SIMC	Clyde Simpson	11
STQ	Nick Stoikidis	14
TESD	David Teske	20
URBP	Piotr Urbanski	9
VARG	A.Gonzalo Vargas	23
VIDD	Daniel Vidican	14
WILW	William M. Wilson	20

**Reporting Addresses:**

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