

# Solar Bulletin

THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS  
SOLAR COMMITTEE

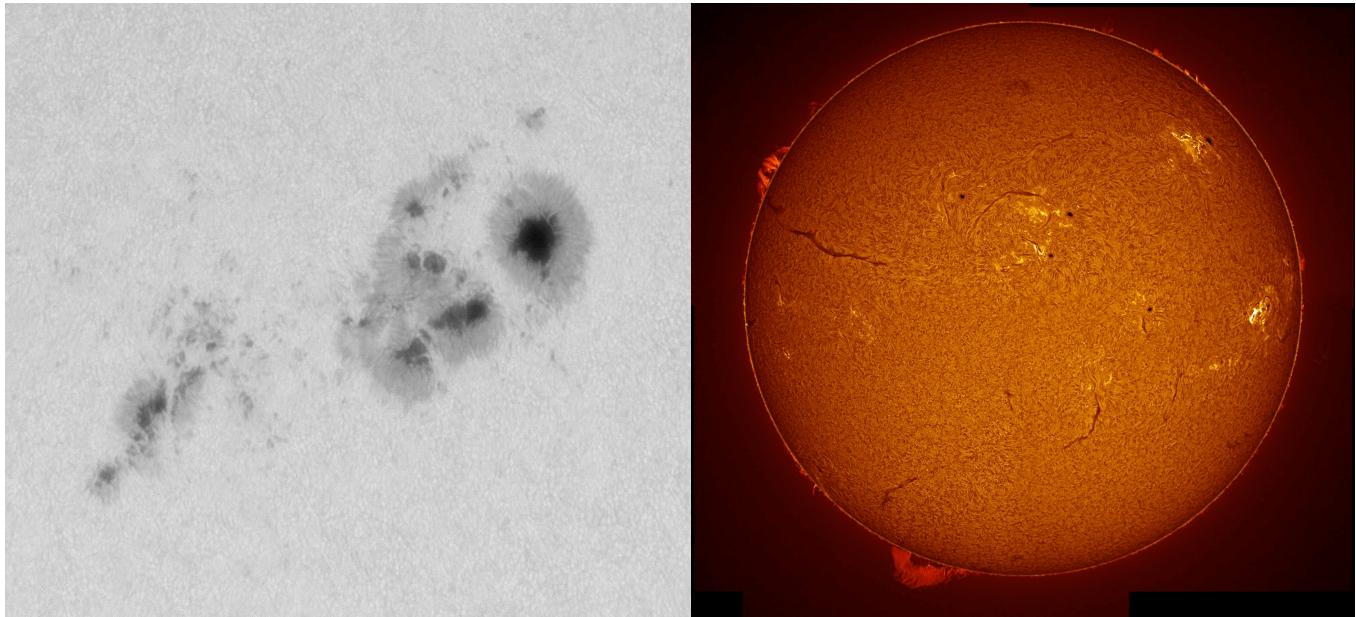


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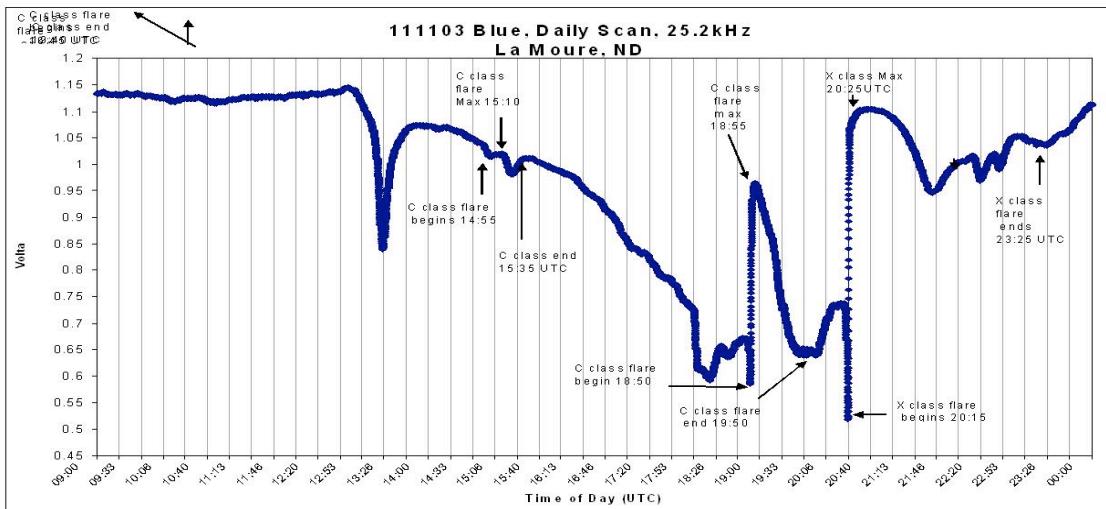


These images are from Javier Ruiz, on the left is the active sunspot region NOAA11339. The image was taken November 8, 2011 at 12h 26m UT, using a Baader Astrosolar Instrument: Skywatcher Equinox 120/900 + Barlow 3x + DMK31 Santander (Spain). The image on the right is the full disk using Hydrogen alpha filter, taken October 11, 2011 at 14h 44m UT. Instrument: SM90 + R-102/816 + BF30 + DMK41 Observatorio de Cantabria (Spain)

**The new SunEntry data entry forms are close to being done!**

We will be testing the SunEntry data entry forms over the next month or so. Once these data entry forms are ready we will ask all observers to submit their observations through these forms. They will upload observations directly into a MySQL database. All observers will have to have or request an AAVSO Observer ID and password to access the forms and database. The SunEntry forms are written in Java and will require a download of a Java startup application.

# Sudden Ionospheric Disturbance Report



This graph shows we had an X class flare on the 3<sup>rd</sup> of November, 2011, as well as three C class flares via NML, 25.28 kHz daily scan; receiver at Fort Collins, Colorado, USA

## Sudden Ionospheric Disturbances (SID) Records During November, 2011

Date	Max	Imp	Date	Max	Imp	Date	Max	Imp
111101	0740	1-	111103	1507	1-	111106	0817	2+
111101	0814	2+	111103	1802	1+	111106	0956	2
111101	0832	2	111103	1853	2	111106	1445	1+
111101	0847	2	111103	2026	2+	111107	0931	1-
111101	0923	1-	111103	2227	1-	111107	1432	2+
111101	1010	2	111103	2257	1-	111108	0809	2+
111101	1030	2	111103	2314	1-	111109	1326	3
111101	1111	2+	111103	2335	1-	111110	0321	1-
111101	1351	2+	111103	2351	1-	111110	1711	1-
111101	2007	2+	111104	0014	2	111110	1720	1
111102	0649	1-	111104	0351	2+	111110	1830	2+
111102	0842	2	111104	1934	2	111111	0705	2+
111102	1023	3+	111104	2039	1+	111111	1231	2+
111102	1044	1	111104	2244	1	111111	1710	2
111102	1341	2+	111105	0104	2+	111112	0743	1-
111102	1504	2	111105	0326	3	111112	0750	1-
111102	1717	1+	111105	0340	2+	111113	0500	1
111102	1724	2+	111105	1007	1+	111113	0646	2+
111102	1808	1-	111105	1049	2+	111113	0817	2
111102	1952	2	111105	1118	2	111113	0922	1
111102	2201	2	111105	1531	1+	111114	0615	1-
111102	2300	2	111105	1845	2+	111114	0928	2
111103	0715	1+	111105	2039	1+	111115	0009	2+
111103	0945	3+	111106	0101	3	111115	0853	3+
111103	1011	1+	111106	0330	1	111115	0911	2
111103	1044	1	111106	0426	2	111115	1122	2+
111103	1108	2	111106	0636	2	111115	1239	1+

**Sudden Ionospheric Disturbances (SID) Records During November, 2011**

Date	Max	Imp	Date	Max	Imp	Date	Max	Imp
111115	1633	2	111119	1814	1-	111125	0353	1-
111115	2238	1+	111119	1910	2+	111126	0837	1-
111116	0259	2	111119	1930	1-	111127	1328	3+
111116	0341	2	111120	0014	3+	111127	1946	1-
111116	0455	2	111120	0511	3	111128	1326	2
111116	0622	2	111120	0712	1	111129	0900	1+
111116	1335	1+	111120	0738	1	111129	2029	1-
111116	1502	2+	111120	1153	1+			
111116	1954	2	111120	1333	2			
111117	0139	1	111120	1650	2			
111117	0530	2+	111122	0038	1-			
111117	0724	1+	111122	0158	1+			
111117	0952	1-	111122	0405	1+			
111117	1156	3	111122	0730	1-			
111117	1329	2+	111122	0955	1			
111117	1359	2	111122	1240	1			
111117	1620	1+	111122	1639	1-			
111117	1835	2+	111122	1743	1-			
111118	0654	2	111122	2356	1-			
111118	1721	2+	111123	0316	1+			
111118	2059	1-	111123	0719	1			
111119	0046	2+	111123	0726	2			
111119	0149	1-	111123	1329	1-			
111119	0418	2	111124	0249	1+			
111119	1434	3	111125	0346	2			

**Reporting Addresses:**

**Sunspot Reports – Kim Hay**

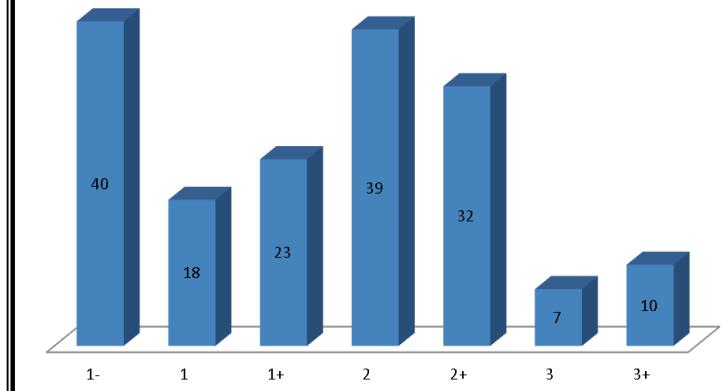
[solar.aavso@gmail.com](mailto:solar.aavso@gmail.com)

**SID Solar Flare Reports – Rodney Howe**

[a Howe@frii.com](mailto:a Howe@frii.com)

# Solar Events

SID Events Recorded for November, 2011



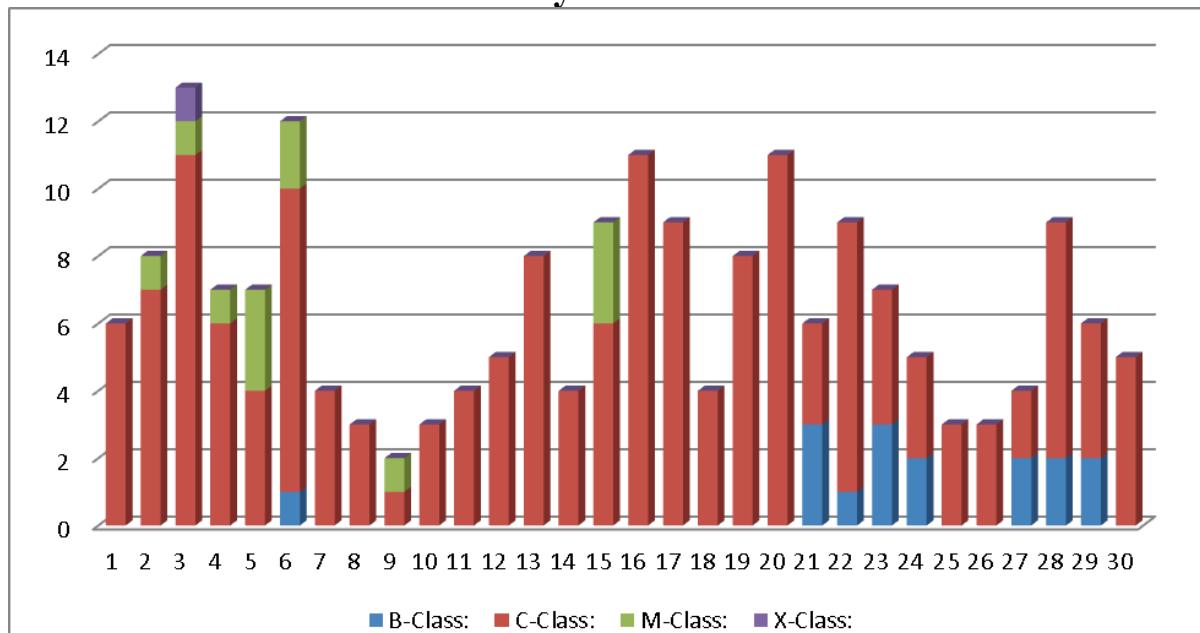
Importance rating: Duration (min)	1-: <19	1: 19-25	1+: 26-32	2: 33-45	2+: 46-85	3: 86-125	3+: >125
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## Sudden Ionospheric Disturbances (SID) Observers During November, 2011

Observer	Code	Station(s) monitored	Observer	Code	Station(s) monitored
A McWilliams	A94	NML	B Terrill	A120	NWC
R Battaiola	A96	ICV	R Howe	A121	NLM
J Wallace	A97	NAA	F Adamson	A122	NWC
F Steyn	A102	NWC	G Myers	A124	NLK
A Son	A112	DHO	S Oatney	A125	NML
L Loudet	A118	GQD NAA	K Cotar	A129	DHO FTA

There were 195 solar flares measured by GOES-15 for November, 2011. One X class flare, 12 M class flares, 166 C class and 16 B class flares. The sun was very active with C class flares this month. There were 14 AAVSO SID Observers who submitted reports on a month with many C class and M class flares.

## Solar Flare Summary Based on GOES-15 Data



American Relative Sunspot Numbers (Ra) for  
November, 2011 [boldface = maximum, minimum]

DAY	NumObs	RAW	Ra			
1	29	105	77	BEB	8	Ray Berg
2	21	107	74	BERJ	3	Jose Alberto Berdejo
3	21	107	73	BMF	18	Michael Boschat
4	25	94	<b>66</b>	BRAB	29	Brenda Branchett
5	30	102	74	BROB	25	Robert Brown
6	25	131	97	BXD	10	Alexandru Burda
7	26	150	105	CHAG	28	German Morales Chavas
8	29	158	<b>113</b>	CKB	19	Brian Cudnik
9	19	156	108	CNT	15	Dean Chantiles
10	16	142	100	CVJ	5	Jose Carvajal
11	19	131	89	DANB	4	Anderson Dantas
12	24	139	99	DELS	5	Susan Delaney
13	19	138	95	DGP	19	Gerald Dyck
14	17	125	83	DUBF	18	Franky Dubois
15	19	130	88	FAM	7	Fabio Mariuzza
16	24	111	77	FERJ	16	Javier Ruiz Fernandez
17	23	110	73	FLF	17	Fredirico Luiz Funari
18	24	110	80	FUJK	18	K. Fujimori
19	19	96	73	HAYK	11	Kim Hay
20	17	105	71	HMQ	3	Mark Harris
21	19	117	84	HOWR	19	Rodney Howe
22	17	123	84	HRUT	10	Timothy Hrutkay
23	15	121	85	JASK	15	Krstyna Wirkus
24	22	120	85	JGE	2	Gerado Jinenez Lopez
25	31	131	90	JJK	4	Jerry Klotz
26	26	115	80	KAPJ	16	John Kaplan
27	23	109	74	KNJS	18	James & Shirley Knight
28	20	96	67	KROL	9	Larry Krozel
29	19	128	86	LEVM	15	Monty Leventhal
30	24	127	89	LKR	13	Kristine Larsen
Averages	22	121	84.7	MILJ	10	Jay Miller
Total	<b>Observers:</b> 52			MMI	14	Michael Moeller
Total	<b>Observations:</b> 662			OATS	13	Susan Oatney
Observer	#Obs	Name		OBSO	13	IPS Observatory
AAP	6	A. Patrick Abbott		RICE	14	E. C. Richardson
AAX	15	Alexandre Arorim		SCGL	19	Gerd-Lutz Schott
AJV	12	J. Alonso		SDP	2	Dolores Sharples
ARAG	24	Gema Araujo		SIMC	4	Clyde Simpson
ASA	17	Salvador Aguirre		SONA	13	Andries Son
BARH	4	Howard Barnes		STQ	11	Nick Stoikidis
BATR	2	Roberto Battaiola		SUZM	21	Miyoshi Suzuki
				TESD	19	David Teske
				URBP	12	Piotr Urbanski
				VARG	22	A.Gonzalo Vargas
				WILW	8	William M. Wilson
				WRP	1	Russell Wheeler