

Solar Bulletin

THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS
SOLAR COMMITTEE



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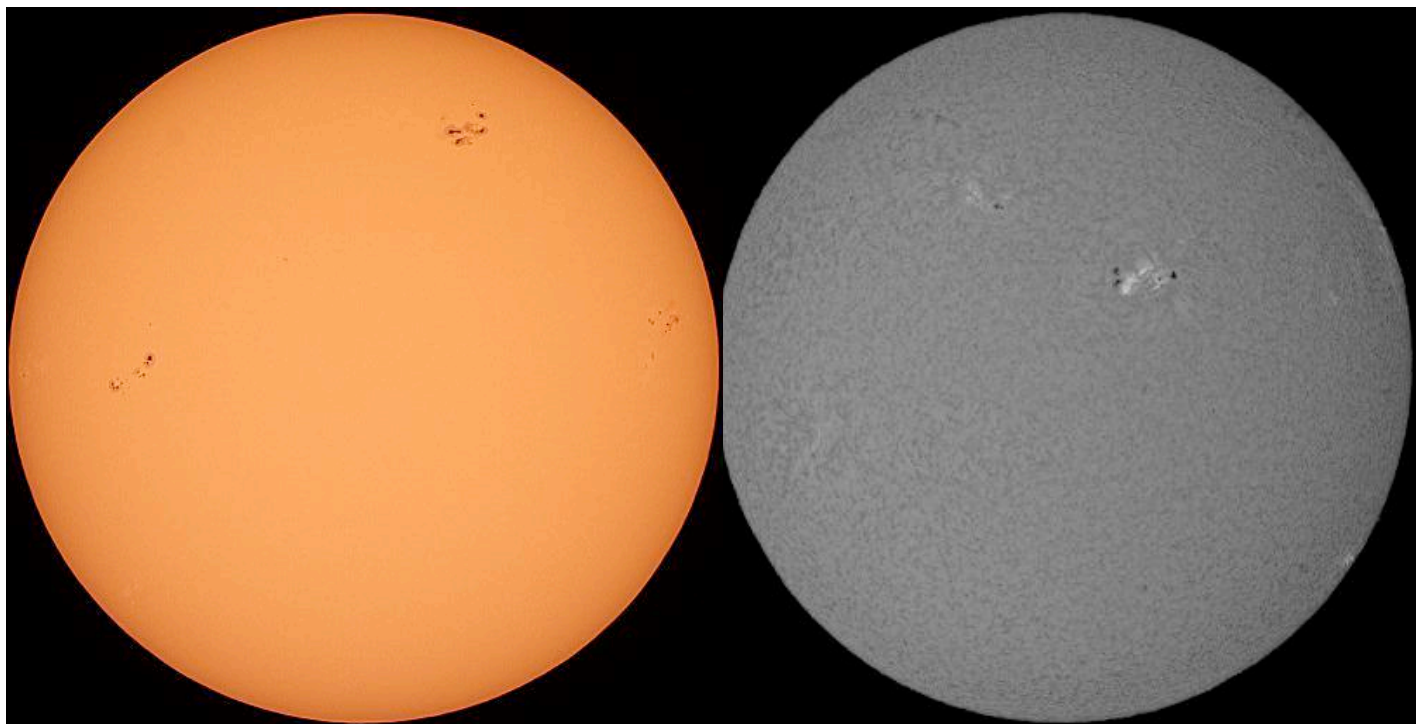
Web: <http://www.aavso.org/solar-bulletin>

Email: solar.aavso@gmail.com

ISSN 0271-8480

Volume 67 Number 3

March, 2011



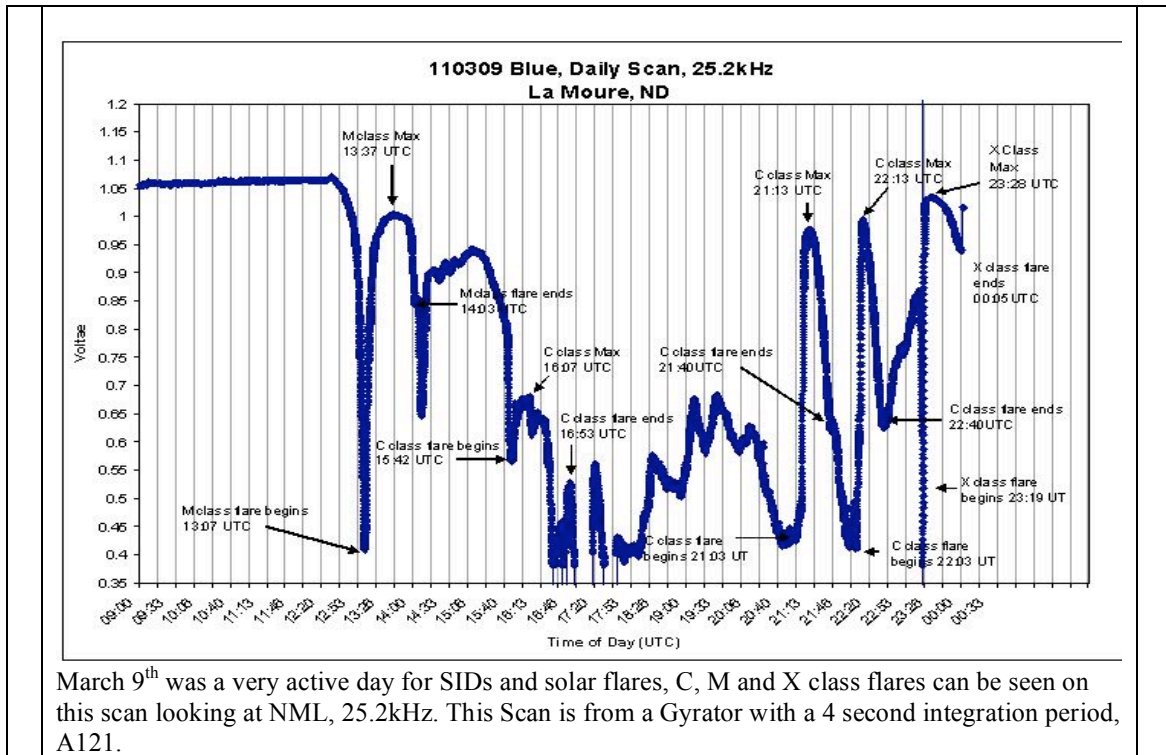
Biswajit Bose sends this image on the left. It is of the sun for March, 6th. The sunspot on the top right is AR1164, far right AR1165 and AR1166 is on the left. Then 3 days later AR1166 moves up to front and center (right image), and Dan Laszlo captures the X-class flare from AR1166 on March 9th with a Hydrogen Alpha filter: <http://spaceweather.com/archive.php?view=1&day=10&month=03&year=2011>

Thank you all for your submissions to the AAVSO Solar Section. It is important that either the Sunkey or the SolObs programs be used for data submission. Both programs can be found on the AAVSO site at the following location <http://www.aavso.org/software-directory#solar>

Also, please make sure you save your data files using your solar observation initials; eg. HAYK1103.RAW. and make sure the name is saved, with the year and month. SolObs will give a .RAW file, and the Sunkey program will give you a .txt file. The SolObs program is preferable.

Please use only these four codes for seeing; P = poor, F = Fair, G = Good, E = excellent.

Sudden Ionospheric Disturbance Report



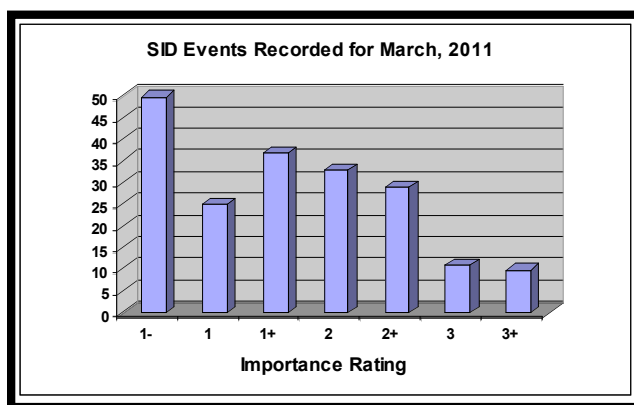
Sudden Ionospheric Disturbances (SID) Records During March, 2011

Date	Max	Imp	Date	Max	Imp	Date	Max	Imp
110301	0420	3+	110306	1040	2	110307	1047	1-
110301	0915	2+	110306	1209	2	110307	1408	2+
110301	0935	1+	110306	1315	1+	110307	1433	2
110301	2230	2+	110306	1346	2+	110307	1555	1
110302	1318	2	110306	1415	1	110307	1607	1-
110303	1422	1	110306	1446	1-	110307	1823	2+
110303	1430	1-	110306	1527	1	110307	2150	1
110303	2053	2+	110306	1609	1+	110308	0232	1+
110304	1354	1-	110306	1620	1-	110308	0400	2
110304	1403	1-	110306	1632	1	110308	0417	3
110305	0141	2+	110306	1800	2	110308	0508	1
110305	0907	2	110306	1938	2	110308	0607	2
110305	1017	2+	110307	0211	2	110308	0936	1+
110305	1342	2+	110307	0345	3	110308	1044	2+
110305	2125	3	110307	0442	2	110308	1103	2+
110306	0347	3	110307	0513	1+	110308	1336	3
110306	0532	1-	110307	0534	3	110308	1432	2+
110306	0539	2+	110307	0716	1	110308	1815	3
110306	0546	1	110307	0753	1	110308	1829	2
110306	0619	2	110307	0800	1-	110308	2009	2+
110306	0706	1	110307	0808	2	110308	2225	1
110306	0840	1-	110307	0815	1-	110308	2250	2+
110306	0900	1+	110307	0922	2+	110308	2313	1-
110306	0906	1-	110307	0930	1-	110308	2332	1-
110306	1001	1	110307	1022	2	110308	2338	1

**Sudden Ionospheric Disturbances (SID) Records During March, 2011
(continued)**

Date	Max	Imp	Date	Max	Imp	Date	Max	Imp
110309	0157	1-	110311	0433	2	110315	0853	2+
110309	0657	1-	110311	0703	1+	110315	0938	2
110309	0731	2	110311	0726	1+	110315	1000	1
110309	0806	1-	110311	1115	2	110315	1736	1+
110309	0856	1+	110311	1132	1-	110316	0847	1+
110309	1043	1-	110311	1147	1+	110316	1353	2+
110309	1108	1+	110312	0440	2	110316	2000	3+
110309	1326	2	110312	0457	1-	110321	0957	2+
110309	1405	2	110312	1028	1+	110321	1148	2+
110309	1545	1-	110312	1230	1+	110321	1550	3+
110309	1556	1	110312	1259	1+	110321	1610	3+
110309	1648	1-	110312	1320	1-	110321	1830	3
110309	2110	2	110312	1527	2	110322	0339	2+
110309	2215	1	110312	1538	1+	110322	1552	1+
110309	2326	2	110312	1739	1+	110323	0215	1+
110310	0412	1-	110313	1334	1+	110323	0234	3
110310	0711	2	110313	1342	1-	110323	1316	1-
110310	0721	2+	110313	1435	1-	110324	1208	1+
110310	0825	3+	110313	1444	1	110324	1221	1-
110310	0913	2	110313	1541	1	110324	1537	2
110310	0930	1-	110314	0715	1-	110324	1549	1
110310	1326	1	110314	0816	1+	110324	1707	2
110310	1344	1	110314	1610	1	110325	0611	2
110310	1425	1+	110314	1954	2	110325	2322	1+
110310	1909	1+	110314	2337	1+	110328	1139	2
110310	2243	1+	110315	0023	1+	110331	1537	1+

Solar Events

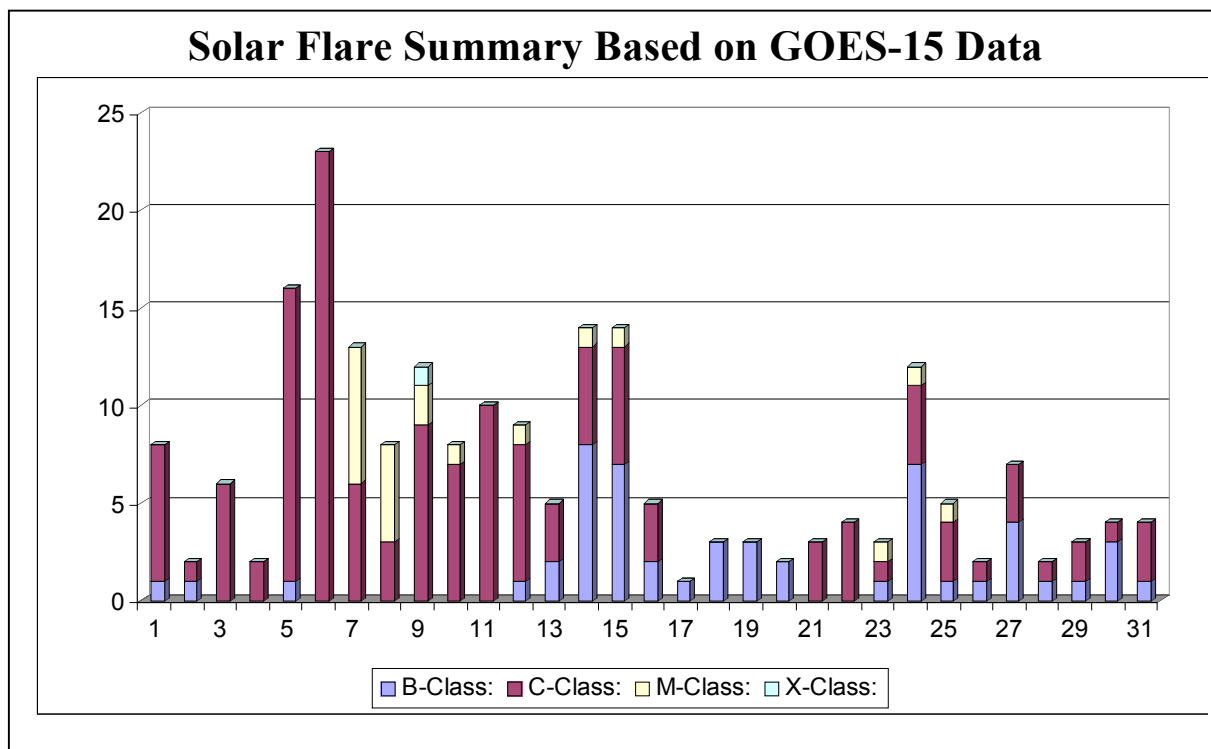


Importance rating: Duration (min)	1-: <19	1: 19-25	1+: 26-32	2: 33-45	2+: 46-85	3: 86-125	3+: >125
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Sudden Ionospheric Disturbances (SID) Observers During March, 2011

Observer	Code	Station(s) monitored	Observer	Code	Station(s) monitored
P King	A80	HWU	L Loudet	A118	DHO GBZ NAA
M Hill	A87	NAA	J Godet	A119	GBZ GQD ICV
L Anderson	A91	NWC	B Terrill	A120	NWC
R Battaiola	A96	HWU	R Howe	A121	NML
J Wallace	A97	NAA	F Adamson	A122	NWC
F Steyn	A102	NWC	G Myers	A124	NLK
A Son	A112	DHO	S Oatney	A125	NML
M Suhovecky	A115	NAA	G Perry	A126	DHO
			G Richardson	A128	NPM

There were 213 solar flares measured by GOES-15 for March, 2011, with one X class flare, 21 M class flares, 139 C class and 52 B class flares. Of the 17 AAVSO SID Observers who submitted reports, 16 recorded March events.



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

DAY	NumObs	RAW	Ra
1	29	56	40
2	26	58	40
3	25	67	49
4	24	86	58
5	23	97	72
6	32	113	81
7	27	121	90
8	23	116	83
9	22	93	64
10	20	76	49
11	25	71	47
12	26	80	54
13	25	75	50
14	24	51	36
15	23	42	29
16	23	34	23
17	24	27	19
18	22	31	20
19	28	30	21
20	29	27	18
21	20	25	17
22	26	39	29
23	28	38	26
24	31	43	32
25	26	80	54
26	25	87	64
27	24	100	75
28	28	103	75
29	26	94	70
30	30	79	58
31	26	67	44
Total	26	68	48

Total Observers: 52
Total Observations: 790

Initials	#Obs	Name
AAP	7	A. Patrick Abbott
AAX	17	Alexandre Arorim
AJV	14	J. Alonso
ARAG	28	Gema Araujo
ASA	11	Salvador Aguirre
BARH	15	Howard Barnes
BATR	3	Roberto Battaola
BERJ	10	Jose Alberto Berdejo
BMF	22	Michael Boschat
BOSB	8	Biswajit Bose
BRAB	28	Brenda Branchett
BROB	11	Robert Brown
CHAG	29	German Chavas Morales

CKB	24	Brian Cudnik
CLZ	7	Corp Laurent
CNT	10	Dean Chantiles
CVJ	6	Jose Carvajal
DELS	12	Susan Delaney
DEMF	6	Frank Dempsey
DGP	19	Gerald Dyck
DOGA	20	Ozkan Dogan
DUBF	26	Franky Dubois
FAM	8	Fabio Mariuzza
FERJ	21	Javier Ruiz Fernandez
FLET	23	Tom Fleming
FUJK	28	K. Fujimori
HALB	3	Brian Halls
HAYK	18	Kim Hay
HMQ	8	Mark Harris
HOWR	29	Rodney Howe
JASK	18	Krystyna Wirkus
KAPJ	22	John Kaplan
KNJS	23	James & Shirley Knight
KROL	5	Larry Krozel
LEVM	17	Monty Leventhal
MILJ	9	Jay Miller
MMI	17	Michael Moeller
MUDG	6	George Mudry
OATS	10	Susan Oatney
OBSO	11	IPS Observatory
RICE	19	E. C. Richardson
RO	3	John Rousom
SCGL	24	Gerd-Lutz Schott
SDP	1	Dolores Sharples
SIMC	7	Clyde Simpson
STQ	12	Nick Stoikidis
SUZM	30	Miyoshi Suzuki
TESD	21	David Teske
URBP	22	Piotr Urbanski
VARG	25	A.Gonzalo Vargas
WILW	16	William M. Wilson
WIRP	1	Piotr Wirkus

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