

# Solar Bulletin

THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS  
SOLAR COMMITTEE

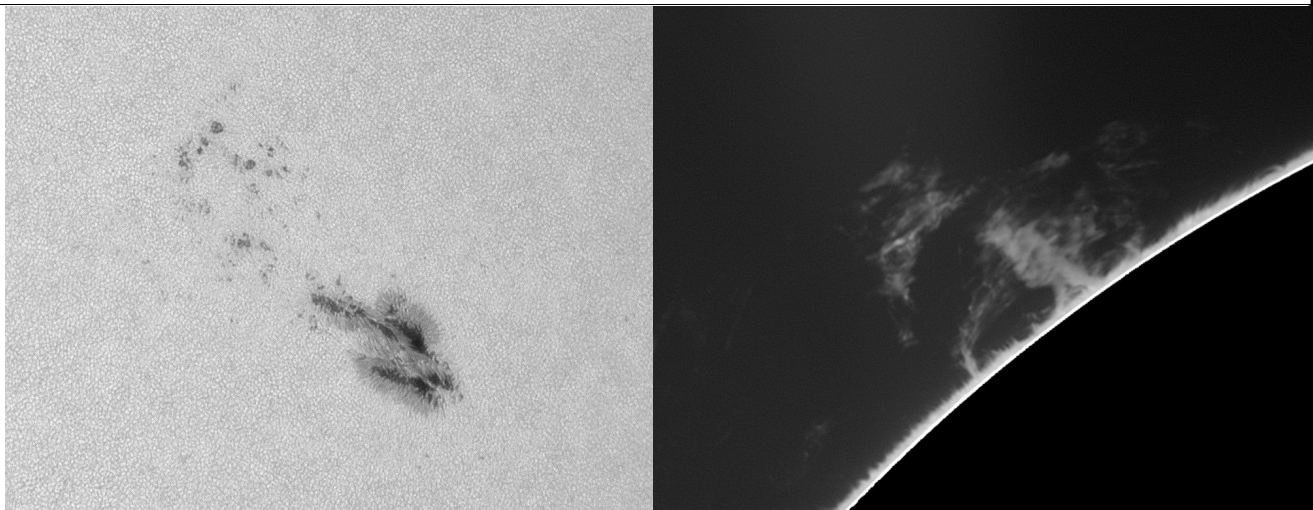


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Observer Javier Ruiz at the Observatory of Cantabria, Spain sends these two images. The one on the left was taken:

110414.- 14-4-11 11h 34m Astrosolar + R-120/900mm + 3x + DMK31,

And the one on the right:

110417\_1.- 17-4-11 16h 16m SM90 + R-102/816mm + BF30 + 3x + DMK31.

## For our Sunspot viewers

Please use only these four codes for seeing; P = poor, F = Fair, G = Good, E = excellent when recording sunspot data. And, over the next few months we will be calculating the k-corrected values for the American Relative number. Here are a couple references on the topic.

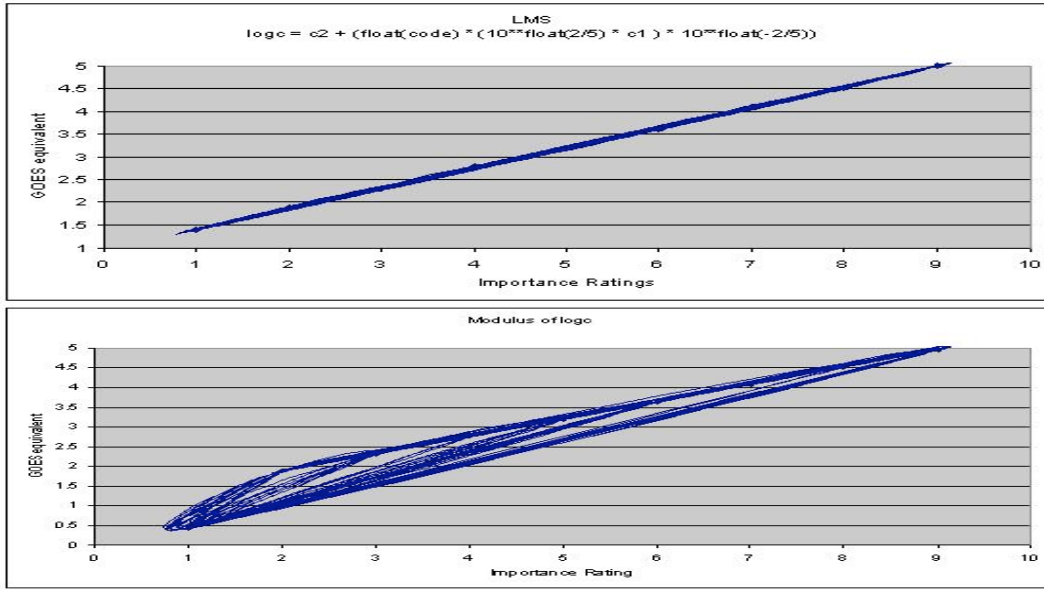
Article by Grant Foster:

<http://www.aavso.org/sites/default/files/webpublications/ejaavso/v26n1/50.pdf>

Schaefer discusses; (3. Realistic Inflation):

<http://www.aavso.org/sites/default/files/webpublications/ejaavso/v26n1/40.pdf>

# Sudden Ionospheric Disturbance Report

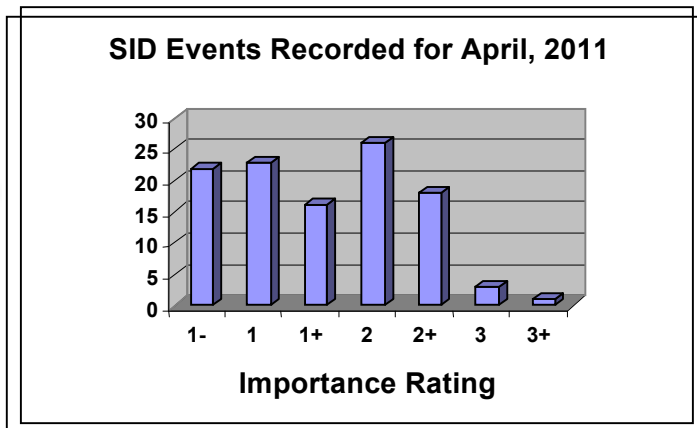


If we stretch the SID Importance Rating (1-, 1, 1+, 2-, 2, 2+, 3-, 3, 3+) to 9 values and use Log 10 conversion, we can match to a GOES Log equivalent scale; where B = 1, C = 2, M = 3 and X = 4 class flares. Our VLF SID data seems to show we mostly are looking at C class flares, (bottom).

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

Date	Max	Imp	Date	Max	Imp	Date	Max	Imp
110401	0201	2+	110415	0918	2+	110421	1451	2
110406	1801	2+	110415	0934	2	110421	2210	3
110407	1410	1-	110415	1136	1+	110422	0444	1+
110407	1637	2+	110415	1351	1	110422	0458	2
110409	1545	2+	110415	1448	1	110422	0808	1+
110411	0919	2+	110415	1613	1-	110422	0946	2
110411	1602	2	110415	1713	2	110422	1125	2+
110411	1606	1-	110416	0056	2	110422	1237	1
110412	0608	2	110416	0359	1-	110422	1356	1+
110412	1228	2	110416	0538	1+	110422	1449	1-
110412	1230	1	110416	0614	1	110422	1555	2
110413	0629	1-	110416	0630	2+	110422	1708	1
110413	0800	3+	110416	0906	1+	110422	1752	2+
110413	0833	1-	110416	1401	2	110422	1934	1
110413	1041	1+	110416	1411	2	110423	0219	1-
110413	1321	2	110416	1653	2	110423	0344	2
110413	1344	2	110416	1950	1	110423	0735	2
110413	1607	1-	110416	2315	2	110424	1929	2
110414	0258	2+	110417	1415	1	110425	0353	1+
110414	0528	2	110418	1245	1	110427	2330	1+
110414	0701	1	110418	1602	2+	110428	1159	1+
110414	0945	1	110419	1120	1-	110428	1728	1+
110414	1009	1-	110420	0928	1-	110430	0819	1+
110414	1009	1-	110420	1835	3	110430	0904	1
110414	1025	1+	110420	1940	3	110430	1150	2+
110414	1025	1	110421	0836	2+	110430	1322	2
110414	1528	1	110421	0947	2			

# Solar Events

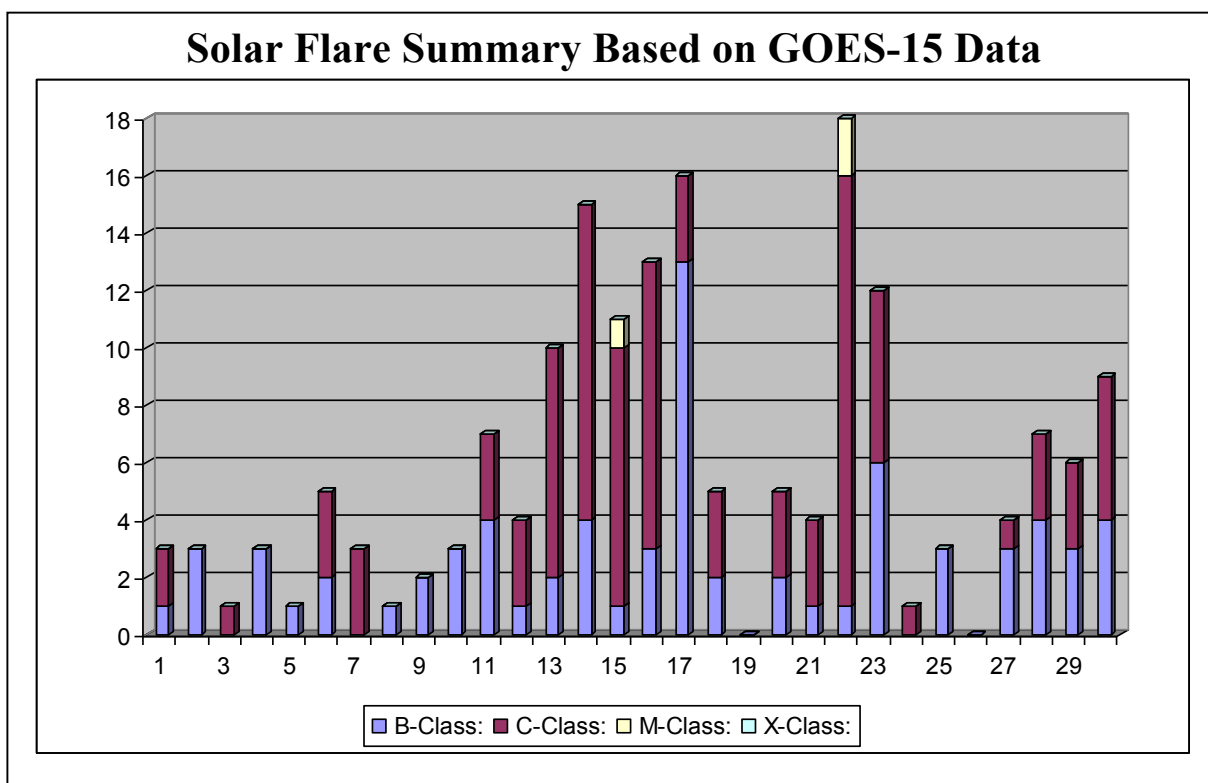


Importance rating: Duration (min)	1-: <19	1: 19-25	1+: 26-32	2: 33-45	2+: 46-85	3: 86-125	3+: >125
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## Sudden Ionospheric Disturbances (SID) Observers During April, 2011

Observer	Code	Station(s) monitored	Observer	Code	Station(s) monitored
P. King	A80	HUA	R Howe	A121	NML
L Anderson	A91	NWC	F Adamson	A122	NWC
R Battaiola	A96	HWU	G Myers	A124	NLK
J Wallace	A97	NAA	S Oatney	A125	NML
F Steyn	A102	NAA NWC	G Perry	A126	DHO
L Loudet	A118	GQD ICV NAA	M Kinder	A127	HWU
J Godet	A119	GBZ GQD ICV	G Richardson	A128	NPM
B Terrill	A120	NWC			

There were 168 solar flares measured by GOES-15 for April, 2011, 3 M class flares, 99 C class and 66 B class flares. Of the 14 AAVSO SID Observers who submitted reports, all 14 recorded April events.



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

DAY	NumObs	RAW	Ra
1	22	60	36
2	29	54	40
3	33	55	39
4	24	55	38
5	23	55	36
6	29	58	41
7	35	65	45
8	28	69	50
9	37	65	44
10	36	55	40
11	27	64	44
12	32	80	54
13	20	112	74
14	28	120	<b>84</b>
15	28	121	81
16	26	88	65
17	37	65	48
18	25	64	43
19	25	71	47
20	27	64	44
21	30	70	52
22	26	74	52
23	24	70	48
24	29	61	41
25	26	45	<b>29</b>
26	31	55	40
27	27	58	38
28	25	55	38
29	27	62	43
30	34	59	46
<b>Total</b>	<b>850</b>	<b>68.3</b>	<b>47.4</b>

**Total Observers: 54**

**Total Observations: 850**

Initials	#Obs	Name
AAP	19	A. Patrick Abbott
AAX	21	Alexandre Arorim
AJV	17	J. Alonso
ARAG	27	Gema Araujo
ASA	18	Salvador Aguirre
BARH	8	Howard Barnes
BATR	10	Roberto Battaiola
BERJ	8	Jose Alberto Berdejo
BMF	15	Michael Boschat
BRAB	30	Brenda Branchett
BROB	21	Robert Brown
CHAG	25	German Chavas Morales
CKB	26	Brian Cudnik
CLZ	6	Corp Laurent

CNT	13	Dean Chantiles
CVJ	9	Jose Carvajal
DELS	5	Susan Delaney
DEMF	2	Frank Dempsey
DGP	12	Gerald Dyck
DUBF	27	Franky Dubois
FAM	16	Fabio Mariuzza
FERJ	21	Javier Ruiz Fernandez
FIST	17	Seda Fitikci
FLET	26	Tom Fleming
FLF	16	Fredirico Luiz Funari
FUJK	24	K. Fujimori
HALB	9	Brian Halls
HAYK	12	Kim Hay
HMQ	11	Mark Harris
HOWR	18	Rodney Howe
JASK	19	Krystyna Wirkus
JJK	2	Jerry Klotz
KAPJ	18	John Kaplan
KROL	4	Larry Krozel
LEVM	22	Monty Leventhal
LKR	4	Kristine Larsen
MARE	14	Enrico Mariani
MILJ	11	Jay Miller
MMI	26	Michael Moeller
MUDG	8	George Mudry
OATS	13	Susan Oatney
OBSO	18	IPS Observatory
RICE	28	E. C. Richardson
SCGL	23	Gerd-Lutz Schott
SDP	2	Dolores Sharples
SIMC	7	Clyde Simpson
STQ	12	Nick Stoikidis
SUZM	27	Miyoshi Suzuki
TESD	25	David Teske
URBP	24	Piotr Urbanski
VARG	23	A.Gonzalo Vargas
VIDD	6	Daniel Vidican
WILW	23	William M. Wilson
WIRP	2	Piotr Wirkus

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