

# Solar Bulletin

THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS  
SOLAR SECTION



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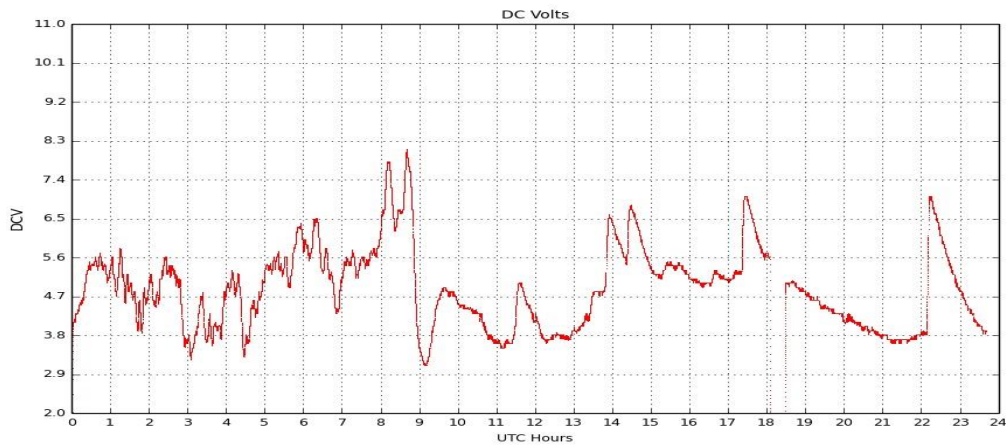


Gerardo Jimenez sends a solar photo of the day for May, 9 at 10:03 UT. 1/500 second exposure for each photo with the camera set at 100 ASA. The telescope is a Newtonian 250 mm F/4.7 on a Dobson mount with Mylar filter. This still image uses 42 images processed with Registax 6, and color enhanced in Photoshop. The orientation grid is from Peter Meadows' software; HelioViewer, so West is left and North is up: <http://www.petermeadows.com/html/software.html>. The image was taken in Avila, Spain by Gerardo Jimenez (JGE).

Best Regards and Clear Skies.

# Sudden Ionospheric Disturbance Report

File: VLFLog201505050001.txt      UTC: Tue May 5 23:40:00 2015      sun AZ = 291.8      sun EL = 1.1



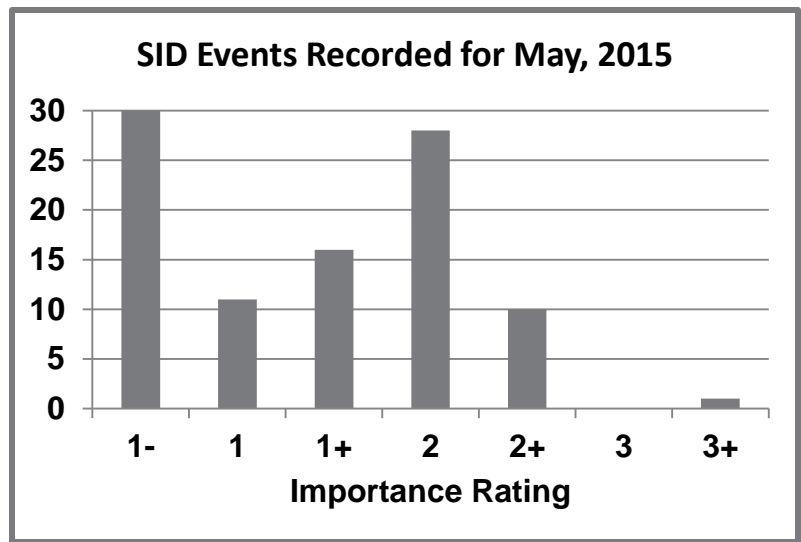
5 SID events recorded by John DuBois for May 5, 2015, 4 M class and one X class, far right.

## Sudden Ionospheric Disturbances (SID) Records During May, 2015

Date	Max	Imp	Date	Max	Imp	Date	Max	Imp
150501	300	1	150505	2211	2+	150509	811	2
150503	932	1	150505	330	3+	150509	137	2+
150503	605	1+	150506	29	1	150510	1258	2
150504	850	2	150506	641	1	150510	826	1+
150504	1031	2	150506	1111	2	150510	1303	2+
150504	1705	1+	150506	1149	2	150512	1151	2
150505	403	2	150506	1024	1+	150513	949	2
150505	714	2	150506	1119	1+	150513	1113	2
150505	1128	2	150506	2216	1+	150513	1000	2+
150505	1141	2	150506	1158	2+	150513	1817	2+
150505	1352	2	150507	1655	1	150514	732	2
150505	1400	2	150507	1957	1	150514	1407	2
150505	1424	2	150507	435	2	150514	1625	1+
150505	1723	2	150507	1001	2	150514	1753	1+
150505	837	1+	150507	1529	2	150515	11	2
150505	918	1+	150508	940	1	150520	812	1+
150505	947	1+	150508	415	2	150523	1739	1
150505	1003	2+	150508	409	1+	150528	1005	2
150505	1436	2+	150508	2150	1+	150528	903	2+

\*This is a truncated list of importance ratings greater than 1, see the full SID report here:  
<http://www.aavso.org/sid-database>

# Solar Events

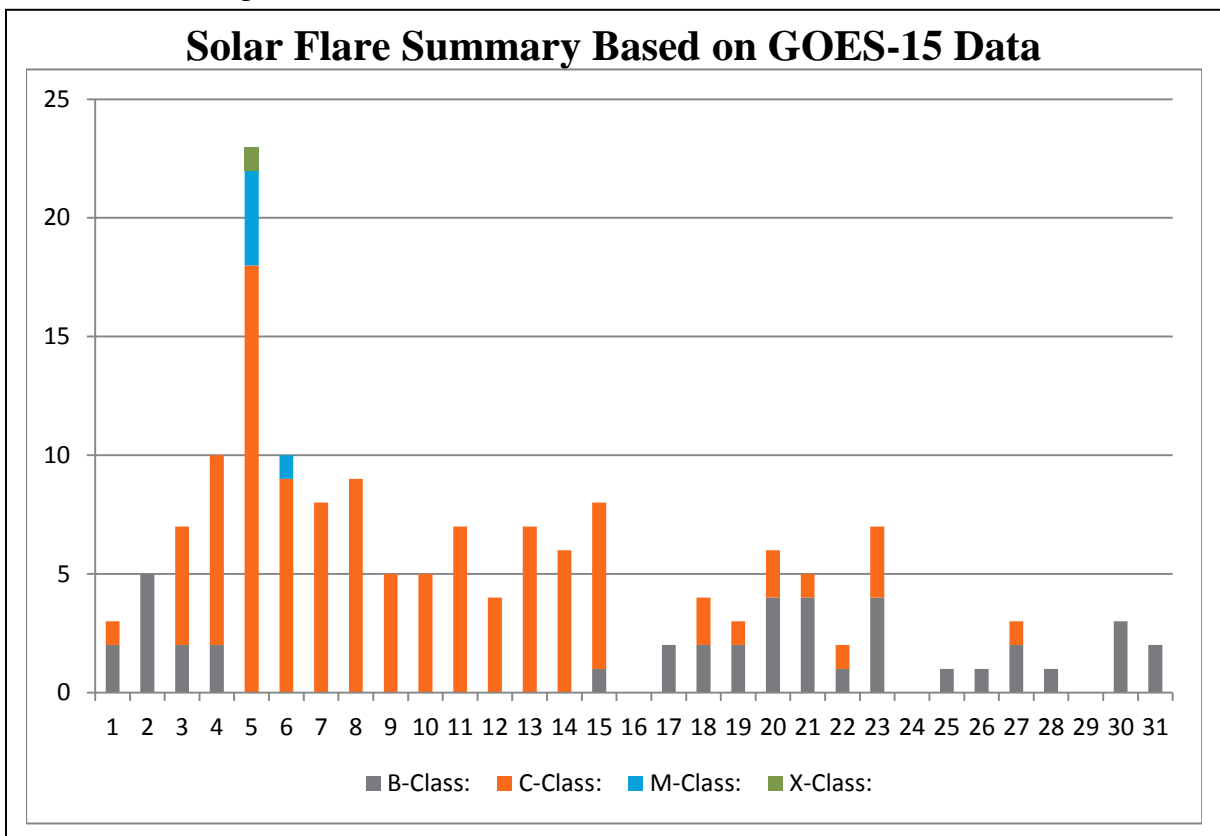


Importance rating: Duration (min)	1-: <19	1: 19-25	1+: 26-32	2: 33-45	2+: 46-85	3: 86-125	3+: 125
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## Sudden Ionospheric Disturbances (SID) Observers During May, 2015

Observer	Code	Station(s) monitored	Observer	Code	Station(s) monitored
A McWilliams	A94	NML	S Oatney	A125	NLK
R Battaiola	A96	ICV	J Karlovsky	A131	DHO NSY
J Wallace	A97	NAA	R Green	A134	NWC
L Loudet	A118	GQD NAA	R Mrlak	A136	GQD NSY
J Godet	A119	GBZ GQD ICV	G Silvis	A141	NAA NLK NPM
B Terrill	A120	NWC	R Rogge	A143	DHO GQD ICV
F Adamson	A122	NWC	K Menzies	A146	NAA

There were 157 GOES XRA flares for May, 2015. One X class, 5 M class, 110 C class and 41 B class flares. About the same flaring this month compared to last. There were 16 AAVSO SID observers who submitted reports this month.



American Relative Sunspot Numbers (Ra) for  
 May, 2015 [**boldface = maximum, minimum**]

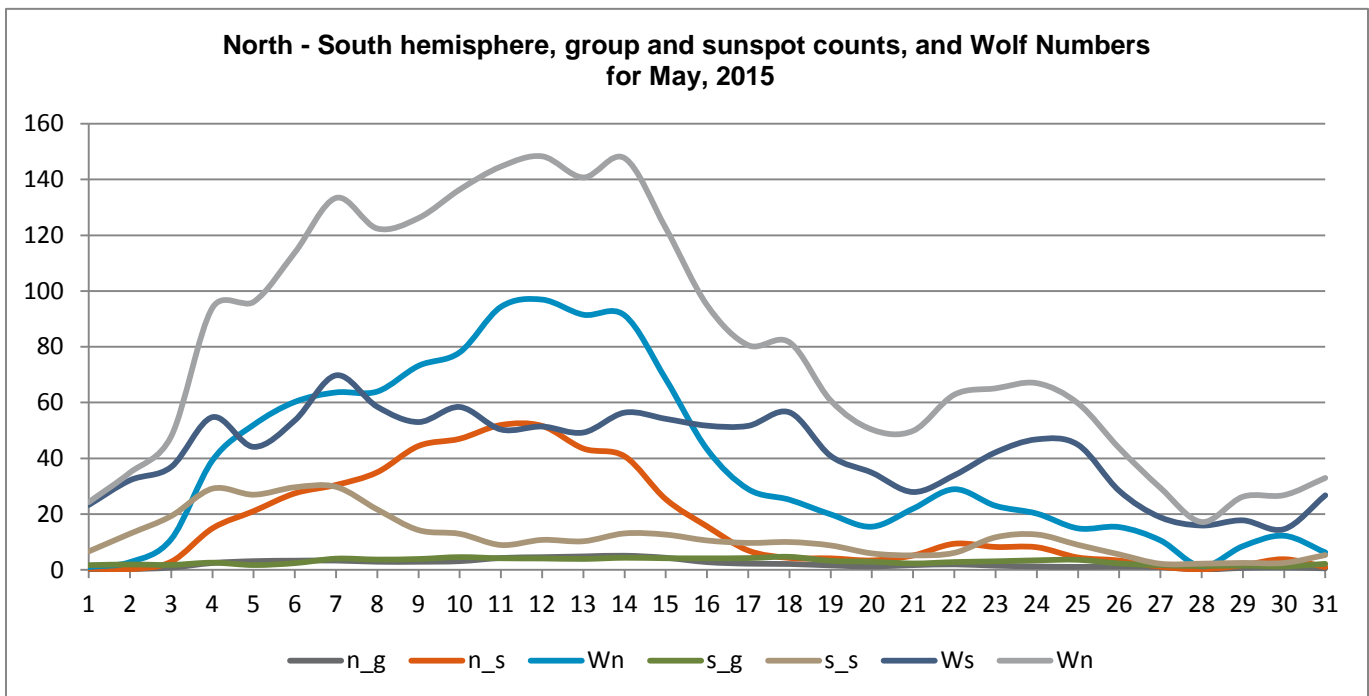
DAY	NumObs	RAW	Ra
1	30	19	14
2	36	30	22
3	36	45	34
4	32	84	65
5	33	93	69
6	38	113	85
7	41	129	98
8	28	121	90
9	37	116	90
10	33	136	103
11	35	131	101
12	30	131	104
13	35	138	<b>104</b>
14	32	135	100
15	25	110	81
16	24	90	68
17	38	79	61
18	37	73	54
19	31	57	43
20	29	42	32
21	35	45	33
22	39	58	45
23	36	62	48
24	44	65	50
25	32	58	42
26	40	37	28
27	34	23	17
28	35	15	<b>12</b>
29	34	20	15
30	35	21	16
31	31	27	20
<b>Average</b>	<b>34</b>	<b>74.2</b>	<b>56.3</b>

Obs	#Obs	Name
AAX	10	Alexandre Amorim
AJV	18	J. Alonso
ARAG	31	Gema Araujo
ASA	21	Salvador Aguirre
BARH	8	Howard Barnes
BDDA	9	Diego Bastiani
BERJ	18	Jose Alberto Berdejo
BLAJ	1	John A. Blackwell
BMF	22	Michael Boschat
BRAB	31	Brenda Branchett

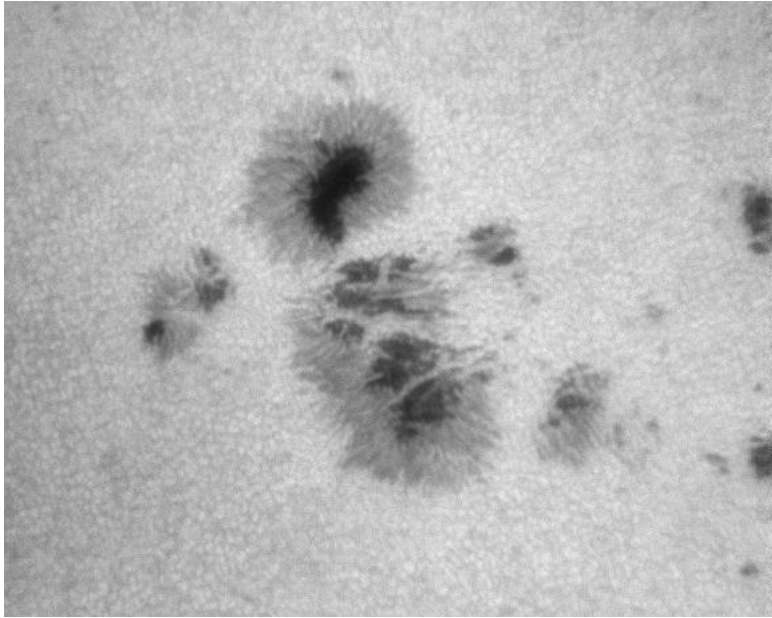
BRAF	16	Raffaello Braga
BROB	27	Robert Brown
BXD	16	Alexandru Burda
CHAG	29	German Morales Chavez
CIOA	10	Ioannis Chouinavas
CKB	13	Brian Cudnik
CNT	9	Dean Chantiles
CVJ	24	Jose Carvajal
DEMF	13	Frank Dempsey
DGP	22	Gerald Dyck
DJOB	15	Jorge del Rosario
DUBF	27	Franky Dubois
FERJ	18	Javier Ruiz Fernandez
FLET	23	Tom Fleming
FLF	13	Fredirico Luiz Funari
FTAA	8	Tadeusz Figiel
FUJK	25	K. Fujimori
HALB	11	Brian Halls
HAYK	16	Kim Hay
HMQ	9	Mark Harris
HOWR	20	Rodney Howe
JDAC	19	David Jackson
JGE	5	Gerardo Jimenez Lopez
JJMA	13	Jessica M.Johnson
KAND	26	Kandilli Observatory
KAPJ	22	John Kaplan
KNJS	24	James & Shirley Knight
KROL	31	Larry Krozel
LEVM	17	Monty Leventhal
LKR	15	Kristine Larsen
LRRR	30	Robert Little
MILJ	16	Jay Miller
MJHA	12	John McCammon
MMI	18	Michael Moeller
MUDG	8	George Mudry
MWU	11	Walter Maluf
OATS	7	Susan Oatney
OBSO	9	IPS Observatory
ONJ	14	John O'Neill
RLM	13	Mat Raymonde
SCGL	29	Gerd-Lutz Schott
SDOH	31	Jan Alvestad (SDO)
SIDM	16	Monika Sidor
SIMC	5	Clyde Simpson
SONA	10	Andries Son
STAB	30	Brian Gordon-States
SUZM	24	Miyoshi Suzuki

TESD	25	David Teske
URBP	23	Piotr Urbanski
VARG	23	A. Gonzalo Vargas
VIDD	15	Dan Vidican
WAU	2	Artur Wargin
WGI	6	Guido Wollenhaupt
WILW	19	William M. Wilson

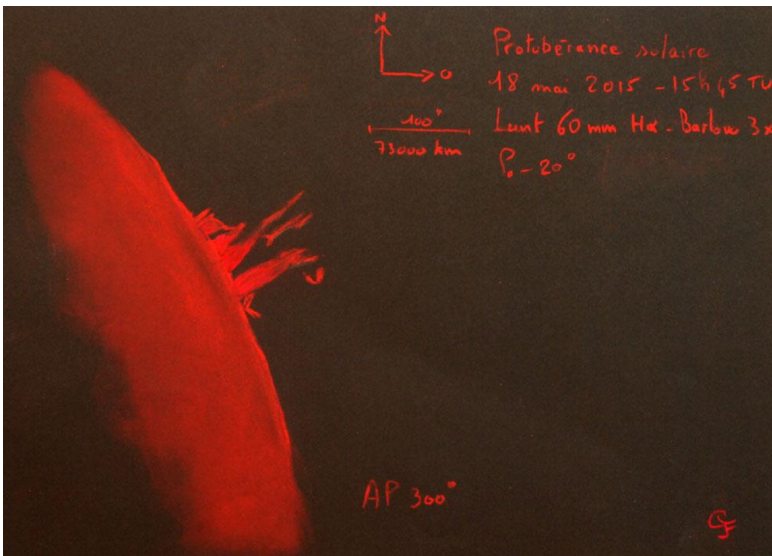
**Total Observers: 67**  
**Total Observations: 1101**



There were 41 out of 67 observers who counted northern and southern hemisphere groups and sunspots this month. The northern hemisphere was slightly predominant with days of crossover on the 4<sup>th</sup>, 6<sup>th</sup>, 8<sup>th</sup> and 16<sup>th</sup>.



**Brian Halls (HALB) takes this white light image of AR2345 on May 10<sup>th</sup>.**



**Jean Coliac (CFO) draws this huge protuberance on May 18, around 15 UT. Seen with a LUNT 60 mm Ha filter and a 3x Barlow.**

**Reporting Addresses:**

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SID Solar Flare Reports – Rodney Howe [ahowe@frii.com](mailto:ahowe@frii.com)