

# Solar Bulletin

THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS  
SOLAR SECTION



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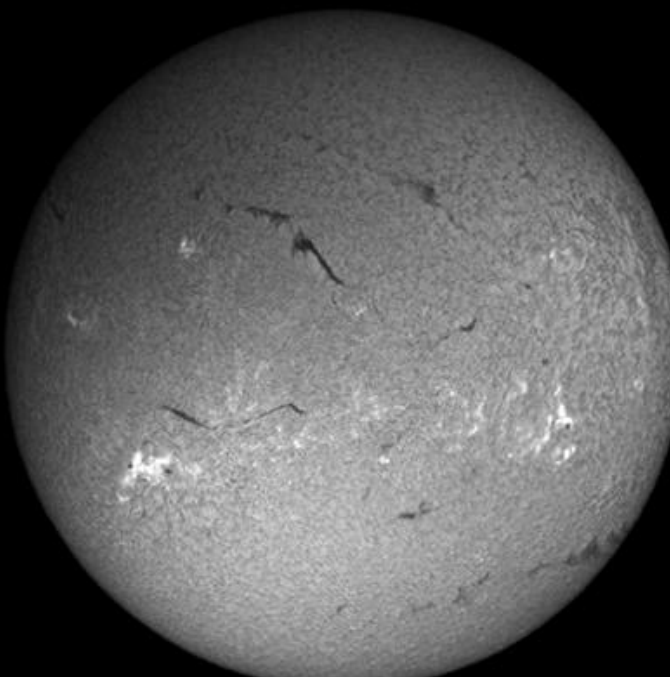
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15:51:47.6 14-Jun-2015

Strong Solar Type III Radio Burst Event  
( no flare association )


June 14 , 2015  
1551- 1553 UTC

Video : Hydrogen-alpha  
656.28 nm

Radio Emissions  
Channel A: 22.222 MHz  
Channel B: 23.333 MHz

FSX-4 Radio Spectrograph

HELIOTOWN



Thomas Ashcraft  
35.50 N -105.89 W  
New Mexico

June 14 2015

Here is a video of the optical view of the Sun in the hydrogen-alpha wavelength at the time of a moderate solar Type III radio event. No flare association as far as I could tell.

<https://vimeo.com/130691332> Video lasts 1 minute 45 seconds.

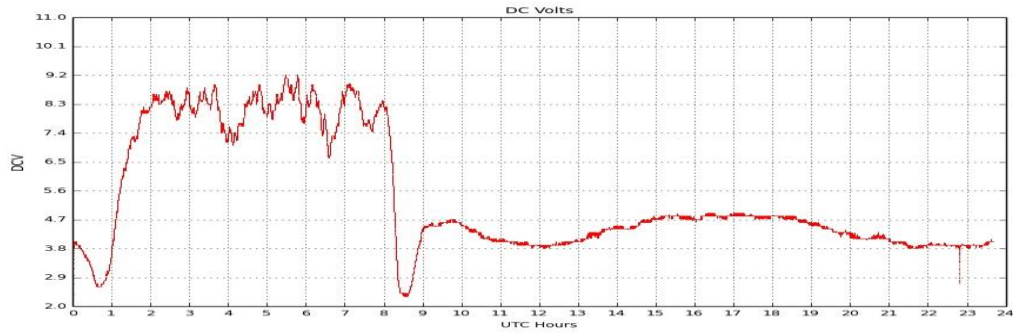
Radios for audio are two Sangean ATS-803a short waves. Radio spectrograph is a Richard Flagg built FSX-4. Antenna is a radiojove dual dipole cut for 20 MHz.

Hydrogen-alpha telescope is a Lunt 50/60mm double stack. Camera is a DMK41.

Thomas Ashcraft (with permission) : Heliotown : New Mexico

# Sudden Ionospheric Disturbance Report

File: VLFlag201506140001.txt UTC: Sun Jun 14 23:40:00 2015 sun AZ = 296.2 sun EL = 6.2



There were no SID events recorded by John DuBois (NAA) for June 14, 2015.

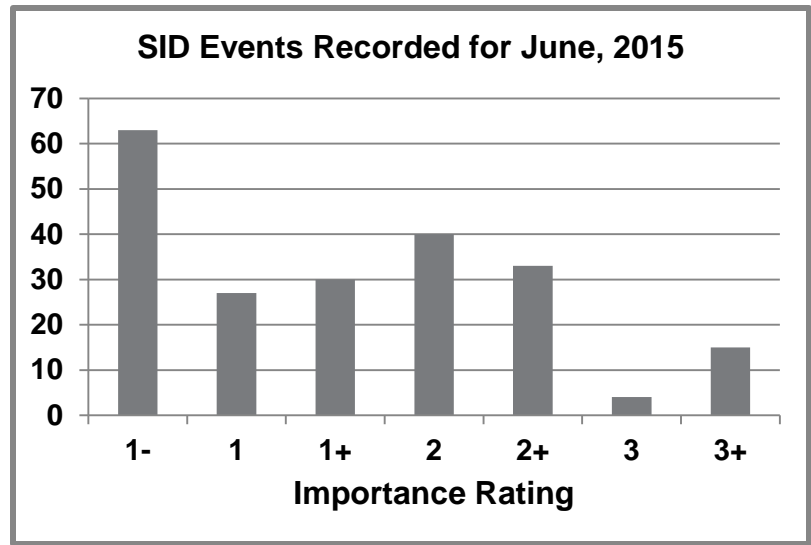
## Sudden Ionospheric Disturbances (SID) Records During June, 2015

Date	Max	Imp	Date	Max	Imp	Date	Max	Imp
150602	0700	2+	150611	0243	3+	150618	0025	2+
150604	0945	2	150612	0208	2	150618	0121	2+
150604	2329	2	150612	1540	2	150618	0551	2+
150604	1449	2+	150612	2349	2	150618	1639	3+
150605	0937	2	150612	0721	3	150619	1128	2
150605	1732	2	150613	0034	2	150619	0927	2+
150606	0136	2	150613	0145	2	150620	0242	2
150606	1034	2	150613	0944	2	150620	0635	2+
150606	1201	3+	150613	1252	2	150620	0647	2+
150606	1537	3+	150613	1615	2	150621	2241	2
150606	1707	3+	150613	0238	2+	150621	0142	2+
150606	1841	3+	150613	0325	2+	150621	0944	2+
150607	0931	2	150613	1237	2+	150621	1629	2+
150607	1031	2+	150613	1437	2+	150621	0236	3+
150607	1514	2+	150613	2314	2+	150622	0740	2
150609	0354	2+	150613	2142	3+	150622	1800	3
150609	1621	2+	150614	0103	2+	150622	1812	3
150610	0141	2	150614	0419	2+	150622	0521	2+
150610	0229	2	150615	0845	2	150623	1221	2
150610	1423	2	150615	1032	2	150623	1050	2+
150610	1824	2	150615	0754	2+	150624	1528	2
150610	1305	2+	150616	0342	2+	150625	0814	3+
150611	0856	2	150617	0606	2	150625	0838	3+
150611	1201	2	150618	0607	2	150627	1109	2+
150611	1438	2	150618	1537	2	150629	1453	2
150611	1521	2	150618	0137	3	150629	1458	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

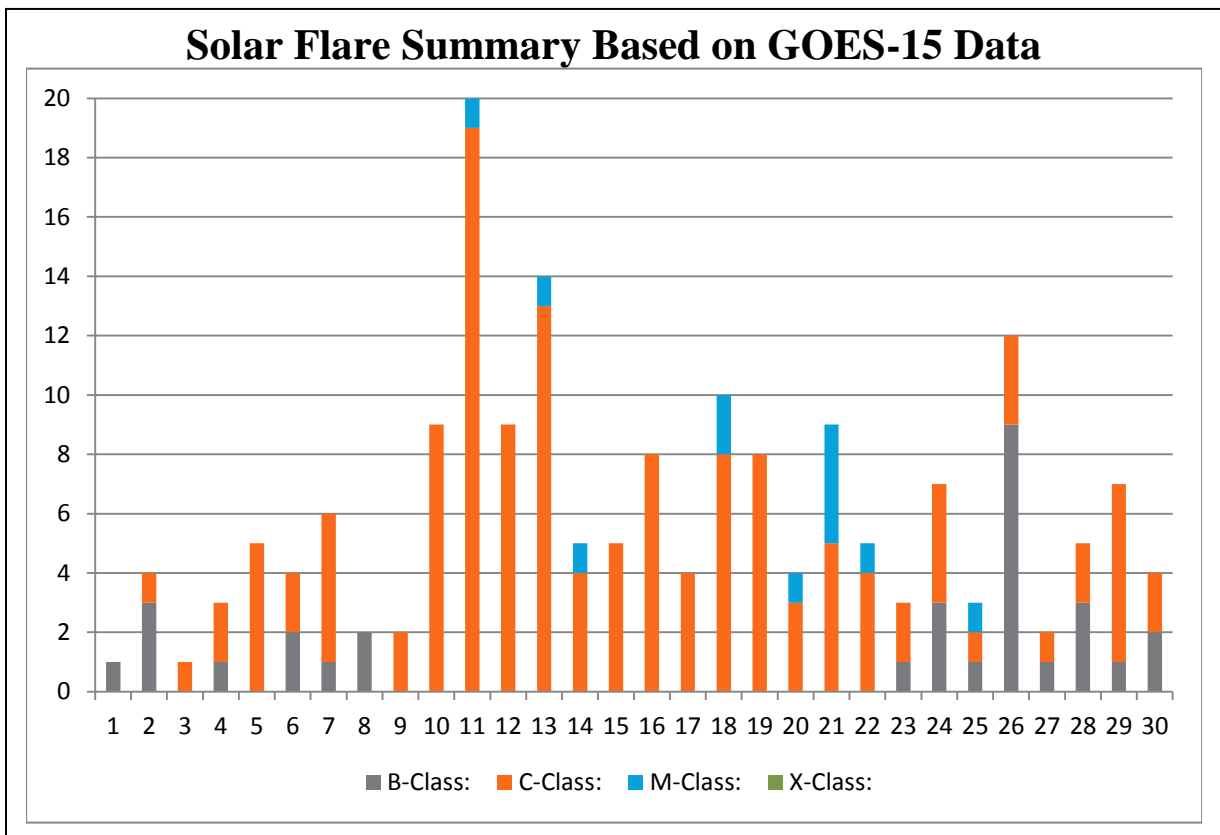


Importance rating: Duration (min)	1-: <19	1: 19-25	1+: 26-32	2: 33-45	2+: 46-85	3: 86-125	3+: 125
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## Sudden Ionospheric Disturbances (SID) Observers During June, 2015

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

There were 181 GOES XRA events for June, 2015. Twelve M class flares, 138 C class flares and 31 B class flares. About the same flaring this month compared to last. There were 12 AAVSO SID observers who submitted reports this month.



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

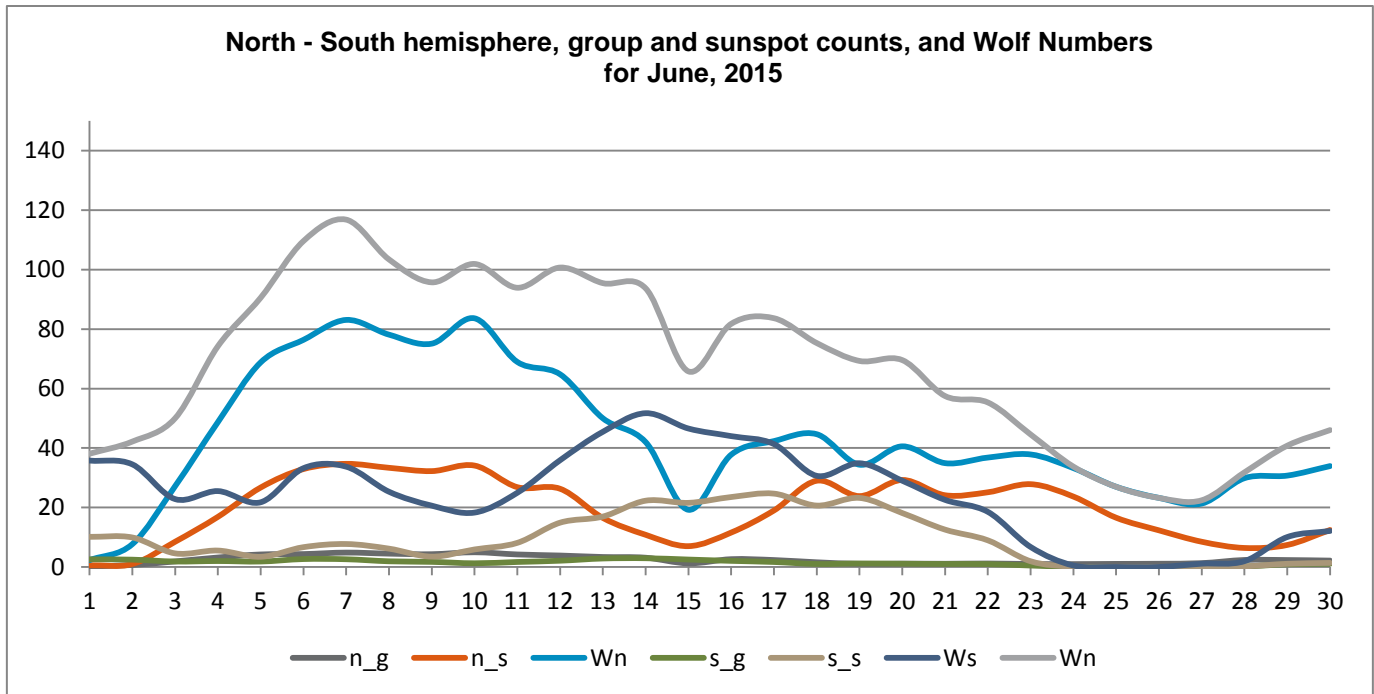
DAY	NumObs	RAW	Ra
1	29	39	28
2	30	40	30
3	29	49	37
4	38	70	55
5	32	87	69
6	40	104	81
7	40	111	<b>85</b>
8	34	100	77
9	28	94	71
10	31	99	76
11	31	91	73
12	31	96	75
13	27	88	69
14	25	84	62
15	26	61	45
16	31	76	58
17	31	77	59
18	33	76	59
19	31	66	54
20	35	67	51
21	34	60	47
22	39	55	44
23	35	44	34
24	34	34	25
25	35	27	20
26	33	23	18
27	29	23	<b>17</b>
28	28	29	21
29	40	39	30
30	40	45	35
<b>Average</b>	<b>32.6</b>	<b>65.1</b>	<b>50.2</b>

Obs	#Obs	Name
AAX	12	Alexandre Amorim
AJV	28	J. Alonso
ARAG	30	Gema Araujo
ASA	26	Salvador Aguirre
BARH	11	Howard Barnes
BERJ	24	Jose Alberto Berdejo
BLAJ	8	John A. Blackwell
BMF	16	Michael Boschhat
BRAB	30	Brenda Branchett
BRAF	20	Raffaello Braga
BROB	15	Robert Brown

BSAB	13	Santanu Basu
BXD	4	Alexandru Burda
CHAG	27	German Morales Chavez
CIOA	9	Ioannis Chouinavas
CKB	17	Brian Cudnik
CNT	10	Dean Chantiles
CVJ	18	Jose Carvajal
DEMF	5	Frank Dempsey
DGP	16	Gerald Dyck
DJOB	7	Jorge del Rosario
FERJ	22	Javier Ruiz Fernandez
FLET	21	Tom Fleming
FLF	17	Fredirico Luiz Funari
FTAA	6	Tadeusz Figiel
FUJK	21	K. Fujimori
HALB	15	Brian Halls
HAYK	18	Kim Hay
HMQ	7	Mark Harris
HOWR	28	Rodney Howe
JDAC	11	David Jackson
JGE	6	Gerardo Jimenez Lopez
KAND	28	Kandilli Observatory
KAPJ	27	John Kaplan
KNJS	26	James & Shirley Knight
KROL	24	Larry Krozel
LEVM	17	Monty Leventhal
LKR	8	Kristine Larsen
LRRR	20	Robert Little
MGAA	8	Gael Mariani
MILJ	13	Jay Miller
MJHA	30	John McCammon
MMI	5	Michael Moeller
MUDG	11	George Mudry
MWU	15	Walter Maluf
OATS	7	Susan Oatney
OBSO	14	IPS Observatory
ONJ	13	John O'Neill
RLM	8	Mat Raymonde
SDOH	30	Jan Alvestad (SDO)
SIDM	19	Monika Sidor
SIMC	5	Clyde Simpson
SONA	9	Andries Son
STAB	30	Brian Gordon-States
SUZM	14	Miyoshi Suzuki
TESD	26	David Teske
URBP	26	Piotr Urbanski
VARG	25	A. Gonzalo Vargas

VIDD	13	Dan Vidican
WAU	2	Artur Wargin
WILW	25	William M. Wilson

**Total Observers: 61**  
**Total Observations: 1016**



There were 39 out of 61 observers who counted northern and southern hemisphere groups and sunspots this month. The northern hemisphere was predominant with days of crossover on the 3<sup>rd</sup>, 13<sup>th</sup>, 17<sup>th</sup> and 19<sup>th</sup>.



As promised - a couple of shots of my projection set up. The orientation of the image allows me to get a view of the Sun, the right way up with east to the left (as per a 'normal' view of the Sun.)

The screen on which the image is projected rotates and can be moved up and down to allow both for the daily orientation and angular changes over the year.

I suppose it is like an open Hossfield pyramid though I got the idea 40 years ago as a teenager watching a member of my local astronomy club who had a similar set-up.

Best wishes.

Brian Halls (HALB)

**Reporting Addresses:**

**Sunspot Reports – Kim Hay [solar.aavso@gmail.com](mailto:solar.aavso@gmail.com)**

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