Solar Bulletin

THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS
SOLAR COMMITTEE

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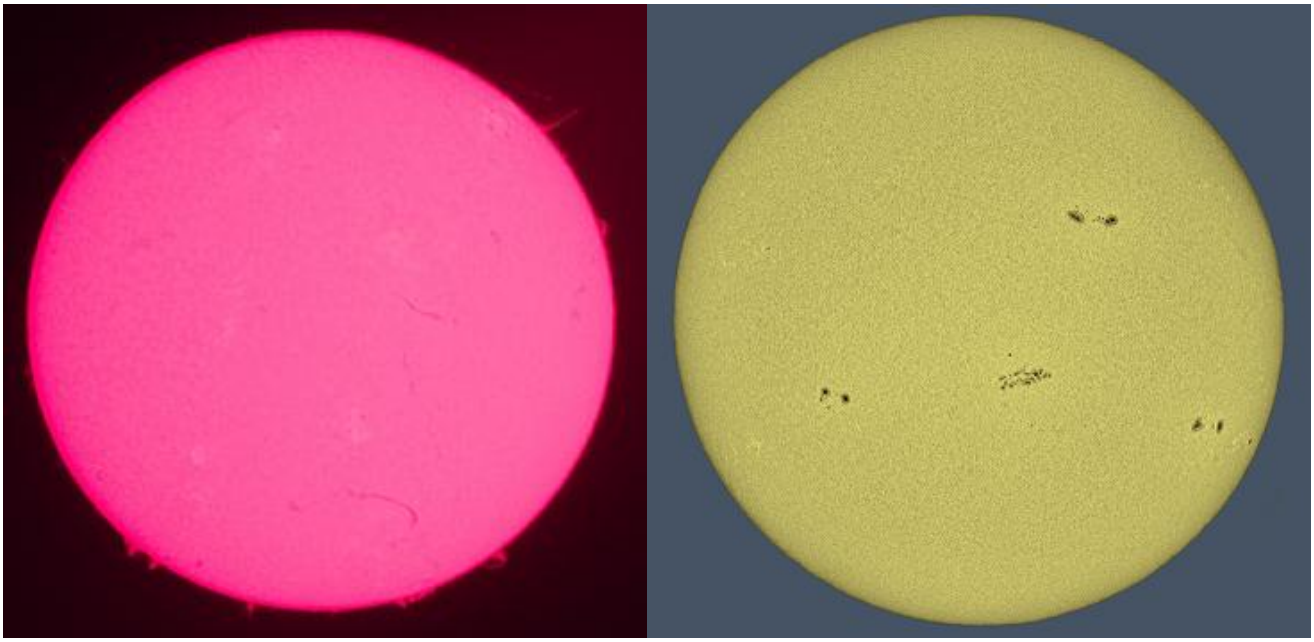
ISSN 0271-8480

Volume 68 Number 4 April. 2012

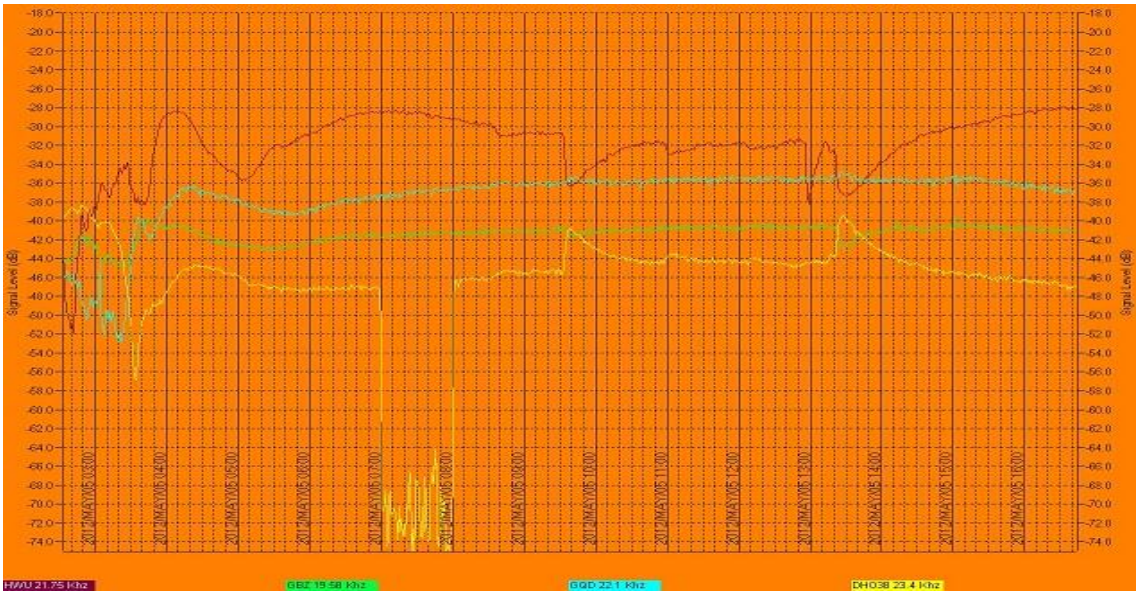


The left image is by Dan Laszlo with an H alpha filter taken on 2012-04-21. On the right are the groups and sunspots for the same day, not the same time though, the image on the right by Robert Arn: Location: Fossil Creek, Fort Collins, CO, Date: 2012-04-21, Camera: Canon XSi (modified) Telescope: WO 110FLT, Extenders: Televue 2x Powermate, Filters: Herschel Solar Wedge "P" with ND 1.8, Mount: CGEM, Shot: HDR

We are implementing the new SunEntry program!

The formal release of SunEntry is scheduled for May 1, 2012.
You can download the SunEntry program from here, please visit this page: http://www.aavso.org/sun-entry you will need an AAVSO account. Please contact AAVSO Staff member Sara Beck (sara@aavso.org) to have access to the SunEntry AAVSO database.
Please save all your entries to both a text file and to the SunEntry database.

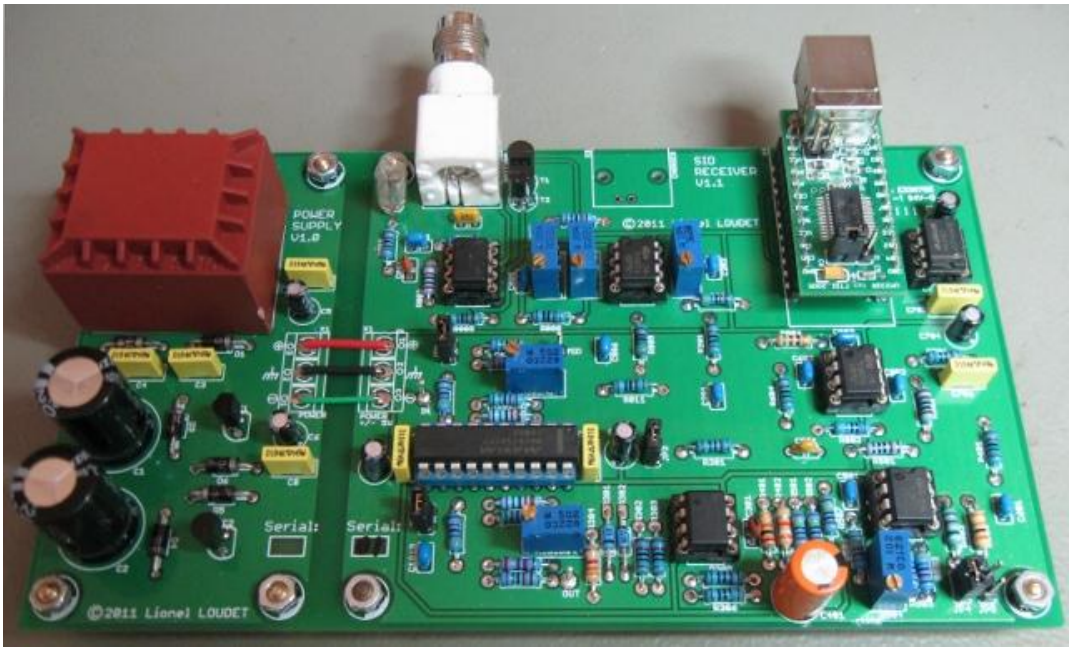
Sudden Ionospheric Disturbance Report



Emmanuel Soubrouillard A132

This graph is uploaded every 15 sec. Station is located near Toulon, south-east of France, Europe.
Poc : esoub83@free.fr

Emmanuel writes: I use a loop antenna (60 turns of wire around 60 cm square) and the receiver is designed by Lionel Loudet A118: http://sidstation.loudet.org/hw-en.xhtml

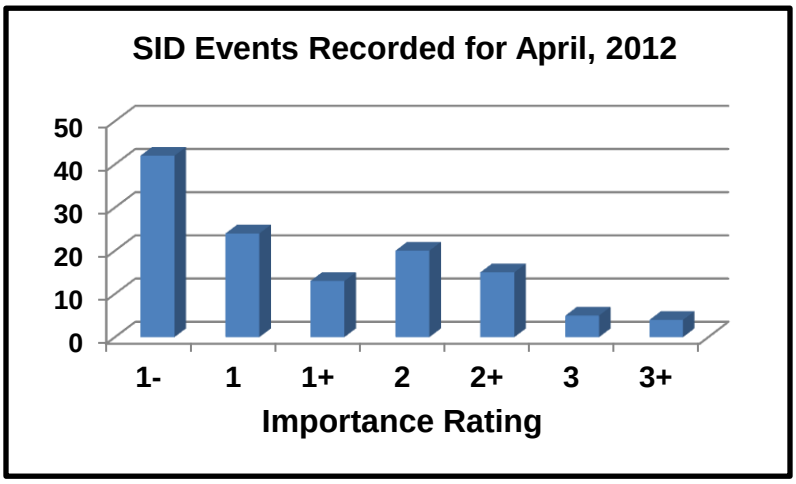


In fact, I didn't use the DAC. I take the signal from the pre-amp section and drive it directly to the PC's sound card. Then, software (Spectrum Lab) runs 24/7 to provide signal curves.

Sudden Ionospheric Disturbances (SID) Records During April, 2012

Date	Max	Imp	Date	Max	Imp	Date	Max	Imp
120401	1341	1	120410	2143	1	120419	1455	2
120401	1511	1-	120411	1203	1+	120419	2143	1
120401	2116	1+	120411	1326	2	120420	1455	1-
120402	2118	1-	120411	1939	2+	120420	1512	1-
120402	2226	1	120411	2204	1	120420	1648	1-
120404	1058	3	120413	0504	1-	120421	0117	1-
120404	1311	2+	120413	1811	1+	120421	1116	2
120404	1611	1-	120414	1516	1-	120421	1748	1
120404	1627	1+	120415	0145	1-	120422	1406	1
120404	1830	3	120415	0247	1-	120422	2016	1-
120404	1902	2	120415	0418	1-	120423	0522	2
120404	2137	3+	120415	0911	1-	120424	0751	2
120405	1327	1	120415	1631	1+	120424	1312	1-
120405	1611	2+	120415	1924	1	120424	1643	1
120405	1624	1	120416	1737	1+	120425	1215	2
120405	2109	1	120416	1744	2+	120427	0823	2+
120406	0359	1-	120417	1303	1-	120427	1102	2
120407	1708	1-	120417	1726	1-	120427	1326	1-
120408	1640	1	120418	1136	2	120429	1100	1-
120408	2146	1	120418	1146	1+	120429	1540	1
120409	0122	1-	120418	1240	2	120430	0723	3+
120409	1238	2+	120418	1514	2	120430	0742	3
120409	1245	2+	120418	1706	1+	120430	0919	1
120409	1309	2+	120419	0008	1-	120430	1029	1-
120409	1421	3	120419	0259	1	120430	1040	1+
120410	1137	1-	120419	1123	2	120430	1439	1-

Solar Events

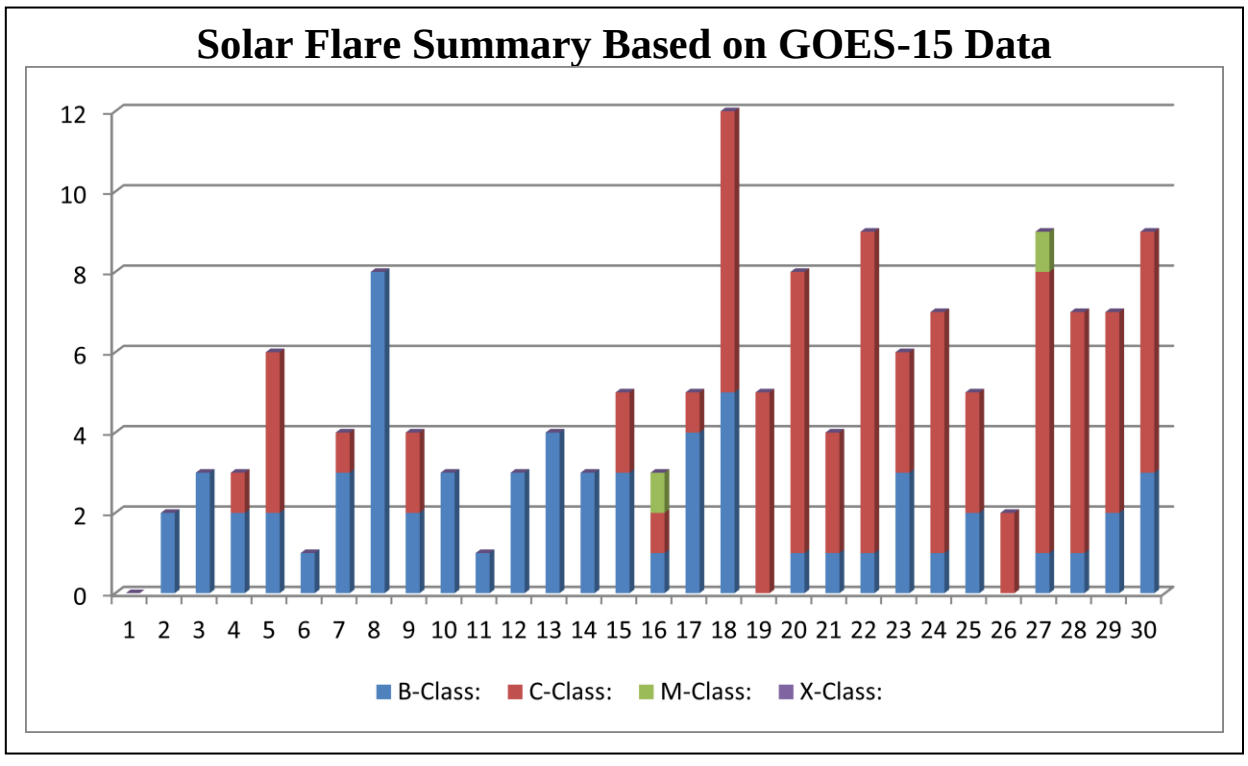


Importance rating: Duration (min)	1-: <19	1: 19-25	1+: 26-32	2: 33-45	2+: 46-85	3: 86-125	3+: >125

Sudden Ionospheric Disturbances (SID) Observers During April, 2012

Observer	Code	Station(s) monitored	Observer	Code	Station(s) monitored
P King	A80	HWU	F Adamson	A122	NWC
A McWilliams	A94	NML	G Myers	A124	NLK
R Battaiola	A96	HWU	S Oatney	A125	NML NPM
J Wallace	A97	NAA	K Cotar	A129	DHO GBZ
A Son	A112	DHO	S Zinn	A130	NAA NPM
L Loudet	A118	GQD NAA NSY	J Karlovsky	A131	DHO ICV
J Godet	A119	GBZ GQD ICV	E Soubrouillar	A132	HWU
B Terrill	A120	NWC			

There were 148 solar flares measured by GOES-15 for April, 2012. There were two M class flares, 80 C class and 66 B class flares. The sun was not so active compared to March, 2012. There were 15 AAVSO SID Observers who submitted reports this month.



American Relative Sunspot Numbers (Ra) for April, 2012 [**boldface = maximum, minimum**]

DAY	NumObs	RAW	Ra
1	29	55	39
2	35	67	46
3	23	67	49
4	28	51	35
5	26	46	30
6	36	40	28
7	29	22	15
8	35	21	13
9	31	8	5
10	21	7	**4**
11	25	25	17
12	32	47	31
13	26	48	32
14	24	53	37
15	27	69	46
16	26	51	37
17	27	76	54
18	29	108	73
19	32	130	90
20	30	151	**104**
21	25	137	94
22	27	130	96
23	23	120	82
24	29	114	79
25	30	113	80
26	14	94	66
27	23	86	59
28	26	92	65
29	31	94	66
30	30	93	70
Average	**27.6**	**73.8**	**51.3**

Observer	#Obs	Name
AAP	7	A. Patrick Abbott
AAX	18	Alexandre Arorim
AJV	11	J. Alonso
ARAG	27	Gema Araujo
ASA	25	Salvador Aguirre
BARH	10	Howard Barnes
BEB	14	Ray Berg
BERJ	6	Jose Alberto Berdejo
BMF	20	Michael Boschat
BRAB	30	Brenda Branchett
BRAF	13	Raffaello Braga
BROB	25	Robert Brown
CHAG	28	German Morales Chavez
CIOA	10	Ioannis Chouinavas
CNT	11	Dean Chantiles
CVJ	8	Jose Carvajal
DELS	6	Susan Delaney
DGP	25	Gerald Dyck
DUBF	25	Franky Dubois
FAM	7	Fabio Mariuzza
FERJ	10	Javier Ruiz Fernandez
FLET	21	Tom Fleming
FLF	16	Fredirico Luiz Funari
FUJK	17	K. Fujimori
HALB	3	Brian Halls
HAYK	16	Kim Hay
HMQ	4	Mark Harris
HOWR	24	Rodney Howe
HRUT	16	Timothy Hrutkay
JASK	18	Krystyna Wirkus
JGE	5	Gerado Jinenez Lopez
KAPJ	24	John Kaplan
KNJS	19	James & Shirley Knight
KROL	23	Larry Krozel
LEVM	21	Monty Leventhal
LKR	13	Kristine Larsen
MARE	7	Enrico Mariani
MILJ	15	Jay Miller
MRO	14	E.Mochizuik
MMI	21	Michael Moeller
MUDG	10	George Mudry
OATS	21	Susan Oatney
OBSO	15	IPS Observatory
RICE	9	E. C. Richardson
SCGL	20	Gerd-Lutz Schott
SIMC	28	Clyde Simpson
SONA	12	Andries Son
SUZM	21	Miyoshi Suzuki
TESD	21	David Teske
VIDD	11	Vidican Dan
WILW	27	William M. Wilson
WIRP	1	Piotr Wirkus

Total Observers 52
Total Observations 829

Errata to April 2012 Solar Bulletin – Volume 68, Number 4

The following observers should be added to the table on page 5:

Observer	# Obs	Name
BATR	2	Roberto Battaiola
CKB	28	Brian Cudnik
DEMF	2	Frank Dempsey
DJOB	6	Jorge del Rosario
JJK	4	Jerry Klotz
KAND	27	Kandilli Observatory
STAB	26	Brian Gordon-States
URBP	25	Piotr Urbanski
VARG	21	A. Gonzalo Vargas
WRP	1	Russell Wheeler

Total	Observers	62
Total	Observations	971

These images are from Dan Vidican: These are images taken April 22. Can you count the groups and the number of sunspots? How do you decide whether the sunspot is pore?