

# Solar Bulletin

THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS  
SOLAR COMMITTEE



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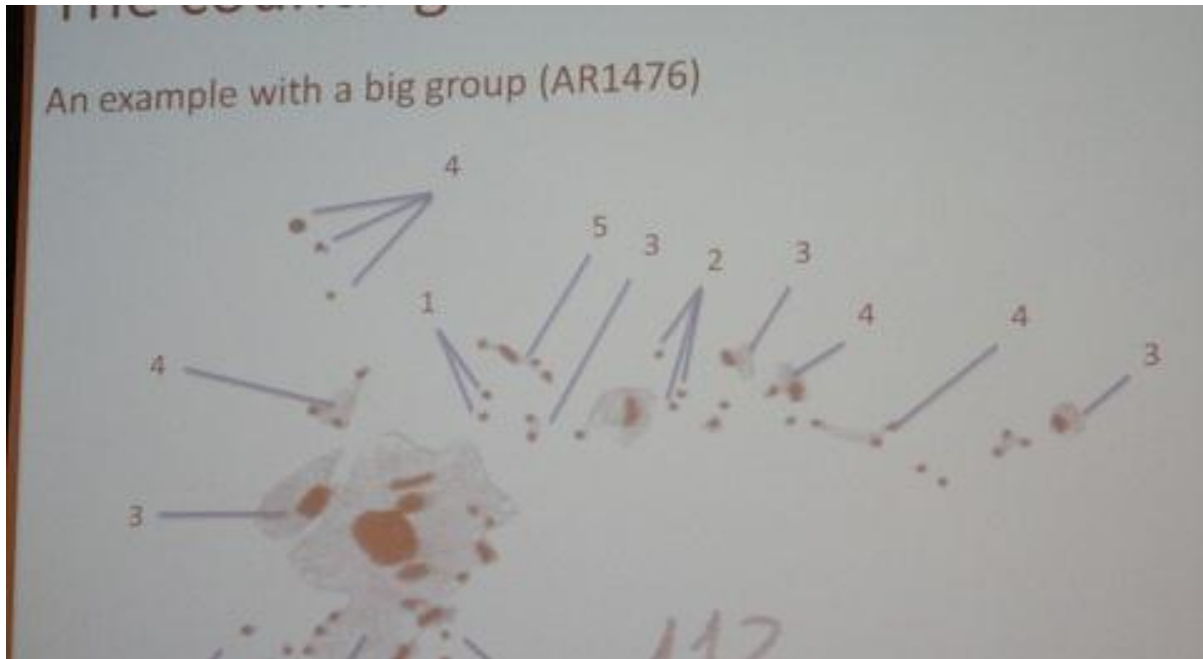
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How the Locarno Observatory, Italy, counts sunspots. This is a slide from the second Sun Spot Workshop held at the Royal Observatory of Belgium, Brussels, 21 - 25 May, 2012

The Brussels SSN workshop was sponsored by the Royal Observatory of Belgium (ROB), the National Solar Observatory (NSO), and the Air Force Research Laboratory (AFRL). While the first workshop, September, 2011 at Sunspot New Mexico offered a panorama of all issues in the sunspot number series, the Brussels workshop focused on the progress and additional evidence addressing the key problems of understanding solar indices as identified in the first workshop. Invited were additional European experts in the field of long-term tracers of solar activity. The goal was to make a synthesis of archival data and progress of defining solar indices in order to define and update the action list in view of the next workshop, which will be in January 2013, Tucson, Arizona.

<http://ssnworkshop.wikia.com/wiki/Home>

## **We are implementing the new SunEntry program!**

The formal release of SunEntry was scheduled for May 1, 2012, it is now fully operational.

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@aaavso.org](mailto:sara@aaavso.org)) to have access to the SunEntry AAVSO database.

**Please save all your entries to both a text file and to the SunEntry database.**



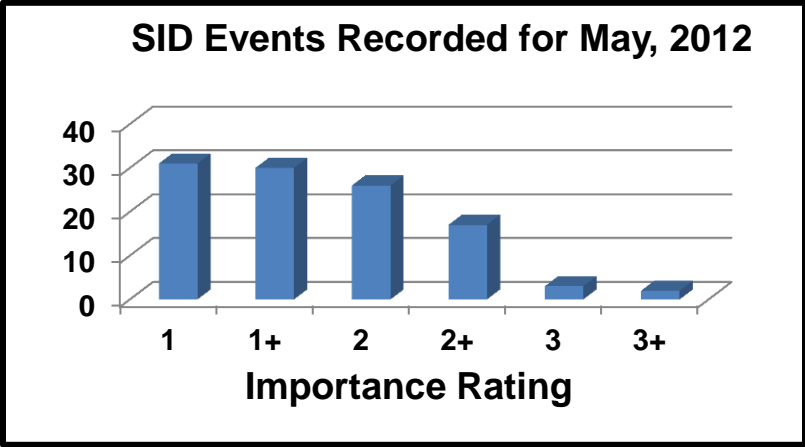
This H alpha image is from May, 20, 2012. Photo taken by Dan Laszlo with a 100 mm refractor. There were no SID events on this day, however there were many active regions!

### Sudden Ionospheric Disturbances (SID) Records During May , 2012

Date	Max	Imp	Date	Max	Imp	Date	Max	Imp
120501	447	1	120509	950	-1	120513	200	-1
120502	1140	2	120509	1230	2	120513	407	1
120502	1803	1	120509	1250	2+	120513	814	2
120502	1903	1	120509	1409	2	120514	36	-1
120503	1649	2	120509	1642	-1	120514	720	-1
120503	1656	2	120509	1902	1+	120514	738	2
120504	1451	2	120509	2102	2	120514	942	1
120504	1545	2+	120510	50	-1	120514	1339	-1
120504	1805	1	120510	146	1	120514	1616	1+
120504	1903	-1	120510	212	-1	120514	1736	-1
120505	838	1+	120510	419	1+	120514	1956	-1
120505	845	1+	120510	448	-1	120515	947	1+
120505	936	1+	120510	511	-1	120515	2217	1+

120505	1100	1	120510	522	1	120516	919	1+
120505	1212	-1	120510	601	-1	120516	1125	-1
120505	1317	-1	120510	624	1	120516	1226	-1
120505	1324	2	120510	735	-1	120517	140	3
120505	1649	-1	120510	1238	1	120517	146	3+
120505	1722	-1	120510	1315	1+	120518	812	2+
120506	111	2+	120510	1341	1	120518	1312	1+
120506	121	2	120510	1356	1	120518	1345	1+
120506	251	-1	120510	1414	-1	120518	1500	2
120506	329	1+	120510	1424	2	120518	1553	1+
120506	440	-1	120510	1659	1+	120520	1428	2
120506	704	-1	120510	1746	1	120521	950	2
120506	1141	1	120510	1849	2+	120523	1256	2
120506	1343	1	120510	2028	-1	120524	1140	1+
120506	1624	-1	120511	525	-1	120524	1847	-1
120506	1653	-1	120511	746	-1	120524	2107	1+
120506	1710	1	120511	816	-1	120525	1014	1
120506	1747	1+	120511	837	1+	120525	1103	-1
120507	254	2	120511	912	1+	120525	1555	-1
120507	704	1	120511	946	1	120526	139	2
120507	731	1+	120511	1017	-1	120526	914	1
120507	1109	1+	120511	1040	-1	120526	1610	1
120507	1135	2+	120511	1305	2	120527	304	-1
120507	1414	3	120511	1314	1+	120528	531	-1
120507	1427	2+	120511	1423	-1	120529	500	2+
120507	1726	2	120511	1738	1+	120530	844	2
120508	835	1	120512	435	1+	120530	905	2+
120508	928	1	120512	521	1	120531	1242	1+
120508	1040	-1	120512	655	-1	120531	1336	2
120508	1300	2	120512	715	-1	120531	1412	-1
120508	1309	2	120512	924	1	120531	1431	2

# Solar Events

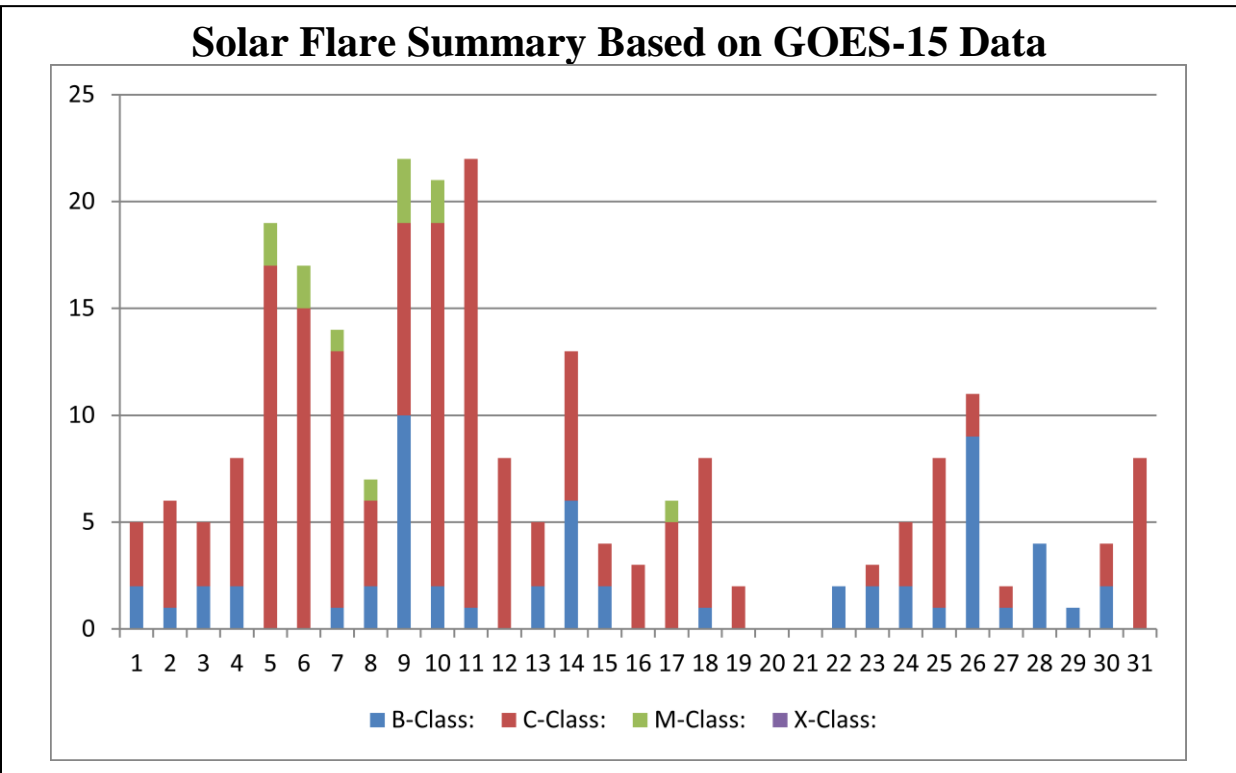


Importance rating: Duration (min)	1-: <19	1: 19-25	1+: 26-32	2: 33-45	2+: 46-85	3: 86-125	3+: >125
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## Sudden Ionospheric Disturbances (SID) Observers During May, 2012

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
J Wallace	A97	NAA	S Oatney	A125	NAA NML
F Steyn	A102	NAA NWC	K Cotar	A129	GBZ HWU
L Loudet	A118	GQD NAA TBB	J Karlovsky	A131	DHO ICV
J Godet	A119	GBZ GQD ICV	E Soubrouillar	A132	GBZ GQD HWU
B Terrill	A120	NWC	T Santo	A133	NWC

There were 243 solar flares measured by GOES-15 for May, 2012. There were 12 M class flares, 172 C class and 59 B class flares. The sun was somewhat more active compared to April, 2012. Fourteen AAVSO SID Observers submitted reports this month.



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

DAY	NumObs	RAW	Ra
1	33	88	61
2	30	91	66
3	27	93	64
4	32	85	59
5	36	76	54
6	37	78	56
7	37	74	53
8	28	80	54
9	33	87	59
10	36	96	69
11	35	101	70
12	36	88	65
13	32	97	70
14	40	106	75
15	33	111	81
16	33	118	84
17	34	97	68
18	35	103	71
19	37	101	74
20	33	105	75
21	28	95	65
22	29	69	48
23	39	66	46
24	34	67	48
25	33	79	58
26	36	71	52
27	39	81	57
28	42	92	67
29	37	69	49
30	35	60	40
31	30	86	57
<b>Average</b>	<b>34.2</b>	<b>87.4</b>	<b>61.7</b>

Observer	# Obs	Name
AAP	7	A. Patrick Abbott
AAX	16	Alexandre Amorim
AJV	22	J. Alonso
ARAG	31	Gema Araujo
ASA	22	Salvador Aguirre
BATR	7	Roberto Battaïola
BEB	20	Ray Berg
BERJ	10	Jose Alberto Berdejo
BMF	18	Michael Boschat

BRAB	30	Brenda Branchett
BRAF	23	Raffaello Braga
BROB	27	Robert Brown
CHAG	31	German Chavas Morales
CIOA	15	Ioannis Chouinavas
CKB	21	Brian Cudnik
CLZ	6	Laurent Corp
CNT	11	Dean Chantiles
CVJ	18	Jose Carvajal
DELS	6	Susan Delaney
DEMF	2	Frank Dempsey
DGP	11	Gerald Dyck
DJOB	19	Jorge del Rosario
DUBF	24	Franky Dubois
FAM	7	Fabio Mariuzza
FERJ	21	Javier Ruiz Fernandez
FLET	24	Tom Fleming
FLF	22	Fredirico Luiz Funari
FUJK	19	K. Fujimori
HALB	12	Brian Halls
HAYK	22	Kim Hay
HMQ	6	Mark Harris
HOWR	18	Rodney Howe
HRUT	17	Timothy Hrutkay
JASK	23	Krystyna Wirkus
JGE	5	Gerardo Jimenez Lopez
KAND	27	Kandilli Observatory
KAPJ	26	John Kaplan
KNJS	24	James & Shirley Knight
KROL	5	Larry Krozel
LEVM	22	Monty Leventhal
LKR	11	Kristine Larsen
MARE	7	Enrico Mariani
MCE	23	Etsuiku Mochizuki
MILJ	11	Jay Miller
MMI	27	Michael Moeller
MUDG	15	George Mudry
OATS	24	Susan Oatney
OBSO	17	IPS Observatory
RICE	14	E. C. Richardson
SCGL	26	Gerd-Lutz Schott
SIMC	14	Clyde Simpson
SONA	16	Andries Son
STAB	24	Brian Gordon-States
SUZM	23	Miyoshi Suzuki
TESD	28	David Teske
URBP	26	Piotr Urbanski

VARG	25	A. Gonzalo Vargas
WILW	29	William M. Wilson
WIRP	1	Piotr Wirkus
WRP	1	Russell Wheeler

**Total Observers 60**

**Total Observations 1059**

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

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

<b>Observer</b>	<b># Obs</b>	<b>Name</b>
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