

# Solar Bulletin

THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS  
SOLAR SECTION



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**Dear Solar Observers,**

**By now I'm sure you have heard about the security breach we just experienced at the AAVSO. Fortunately, it does not look like any data was lost or personal information compromised. Financial data is not kept on our servers so that was never in danger.**

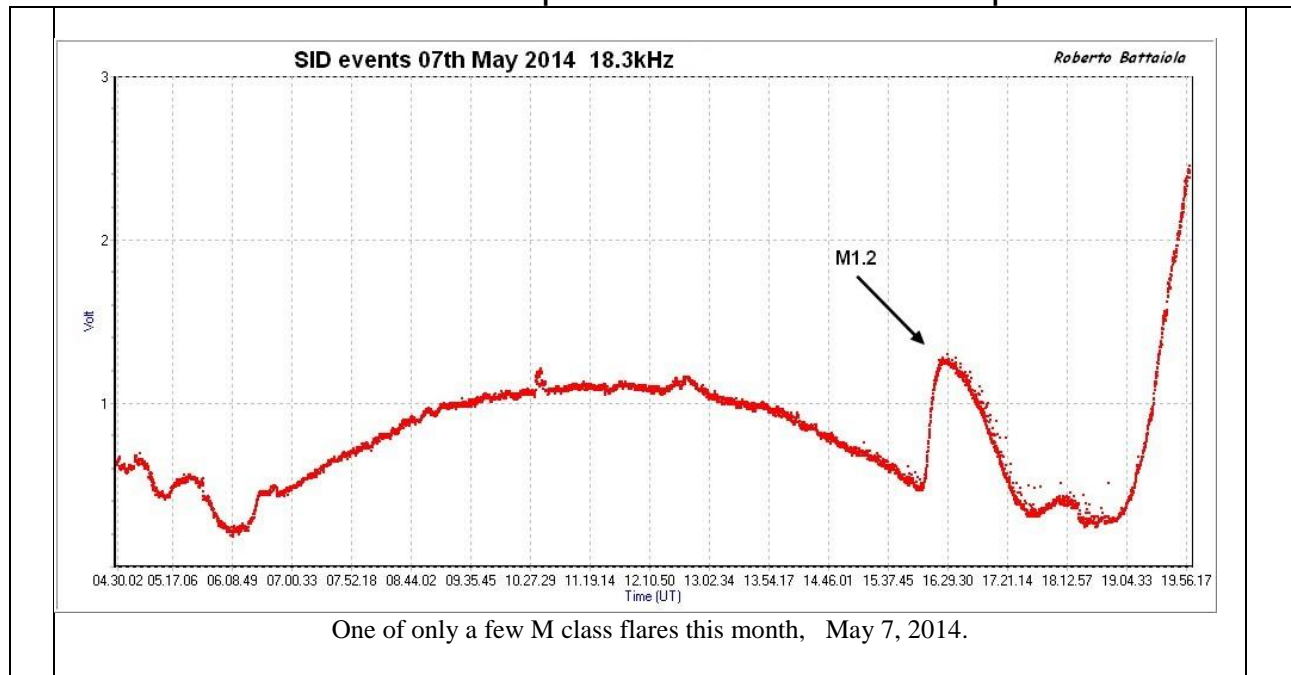
**As part of the cleanup operation, all programs that require database connections such as SunEntry (also VStar, Seqplot, and Zapper) have been temporarily disabled so that they can be made more secure. We will re-release an upgraded version and let you know we have done so as soon as practicable.**

**Since today is the deadline for submission of May data for publication in this month's Solar Bulletin, and you now have no way to create your report or upload it to the database, we have decided not to include the sunspot numbers in this month's Solar Bulletin, but instead publish both May and June numbers in the June Solar Bulletin. Please hold on to your observations and continue to make new ones just as you always do and we will let you know (on this forum and by email) when SunEntry will be available for use again.**

**We greatly appreciate your patience and understanding.**

**Sara Beck & Matthew Templeton (AAVSO Staff)**

# Sudden Ionospheric Disturbance Report

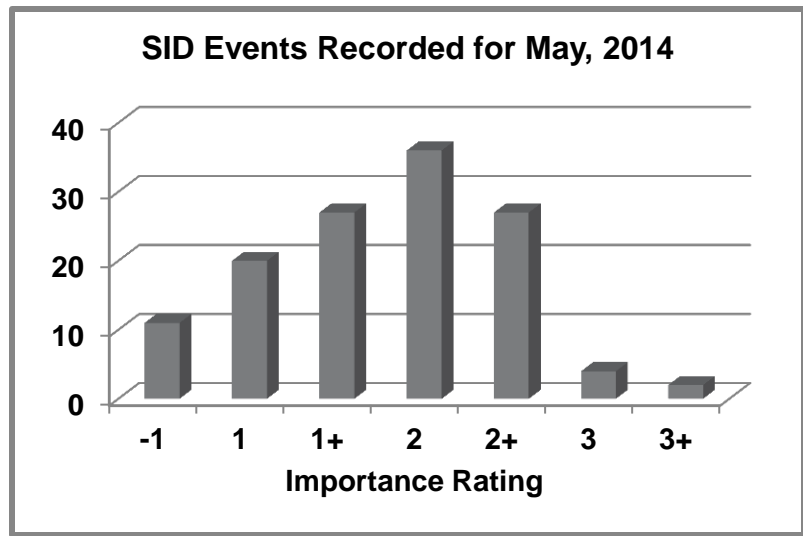


## Sudden Ionospheric Disturbances (SID) Records During May, 2014

Date	Max	Imp	Date	Max	Imp	Date	Max	Imp
140501	1327	1+	140506	0906	3	140509	1306	2
140501	2112	2	140506	1725	2+	140509	1421	1+
140502	0803	1	140506	2143	2+	140509	1428	2
140502	0927	2+	140506	2211	1+	140509	1500	2
140502	0937	2+	140506	2252	2	140509	1731	1+
140502	1414	1+	140507	0629	1	140510	0701	2
140502	1830	2+	140507	1240	1-	140510	0711	2+
140502	2021	1	140507	1616	2+	140510	1845	1+
140502	2142	1+	140507	1626	2+	140510	2355	1
140503	0403	1+	140507	1634	2+	140511	0444	1
140503	0544	2	140507	1917	1+	140511	0453	1+
140503	0612	2+	140508	0139	2+	140511	0526	1
140503	0929	1-	140508	0932	2	140511	0811	1-
140503	1612	1+	140508	1005	1+	140511	1714	1
140503	2052	3+	140508	1025	3	140511	1912	2+
140504	0906	1+	140508	1650	1+	140512	0638	2
140504	1206	1-	140508	2203	1	140512	0736	1+
140504	1232	2	140509	0138	2+	140513	0922	1
140505	1824	2	140509	0523	2	140513	2125	2+
140505	2118	2	140509	0751	1-	140513	2145	3
140506	0401	1	140509	0821	1+	140513	2223	2+
140506	0430	2	140509	1121	1	140514	0102	2+
140506	0846	3	140509	1128	2	140514	0443	1
140506	0900	2+	140509	1300	1	140514	0858	1+

Date	Max	Imp	Date	Max	Imp	Date	Max	Imp
140514	1318	2	140515	0532	2	140519	0922	1-
140514	1329	2	140515	0533	1+	140520	0141	1+
140514	1414	2+	140515	0651	1	140521	0127	2+
140514	1426	2+	140515	0924	2	140521	0717	1+
140514	1442	1-	140515	1005	2	140522	0310	2+
140514	1505	1	140515	1250	1	140522	0320	2+
140514	1552	1	140515	1329	2	140522	0430	3+
140514	1758	2	140516	0705	1	140523	0458	2
140515	0255	2	140516	2020	1	140524	1815	1+
			140517	0239	2	140524	1836	2
			140518	0654	2+	140525	0940	2
						140525	1753	1+
						140525	2200	2+
						140526	1602	2
						140526	1608	2
						140527	1416	1+

# Solar Events

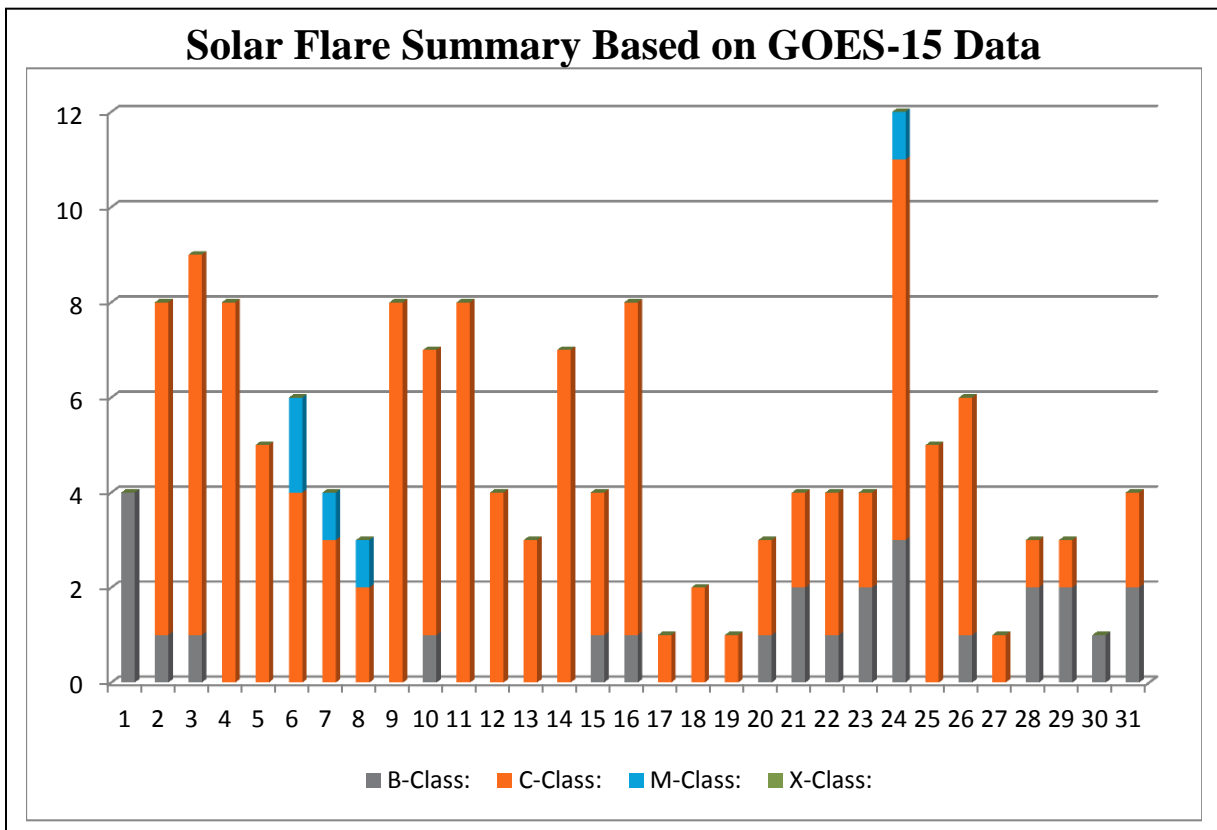


Importance rating: Duration (min)	1-: <19	1: 19-25	1+: 26-32	2: 33-45	2+: 46-85	3: 86-125	3+: >125
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## Sudden Ionospheric Disturbances (SID) Observers During May, 2014

Observer	Code	Station(s) monitored	Observer	Code	Station(s) monitored
A McWilliams	A94	NML	J Karlovsky	A131	DHO NSY
R Battaiola	A96	HWU	R Green	A134	JJI NWC
J Wallace	A97	NAA	R Mrlak	A136	GQD NSY
L Loudet	A118	DHO GQD NAA	D Koawl	A137	DHO NPM
B Terrill	A120	NWC	F Francione & C Re	A139	HWU NAA NSY
F Adamson	A122	NWC	I Ryumshin	A142	DHO HWU
S Oatney	A125	NLK NML	R Rogge	A143	DHO GQD ICV
K Cotar	A129	DHO			

There were 150 solar flares measured by GOES-15 for May, 2014: 5 M class, 119 C class and 26 B class flare. Far less flaring this month as compared to last, with many small C class and a few M class flares. There were 15 AAVSO SID observers who submitted reports this month.



Here's a graph from a recent publication by Jose Vaquero (2012) which shows how AAVSO solar observers contribute to the solar scientists' community and their understanding of past solar cycles.

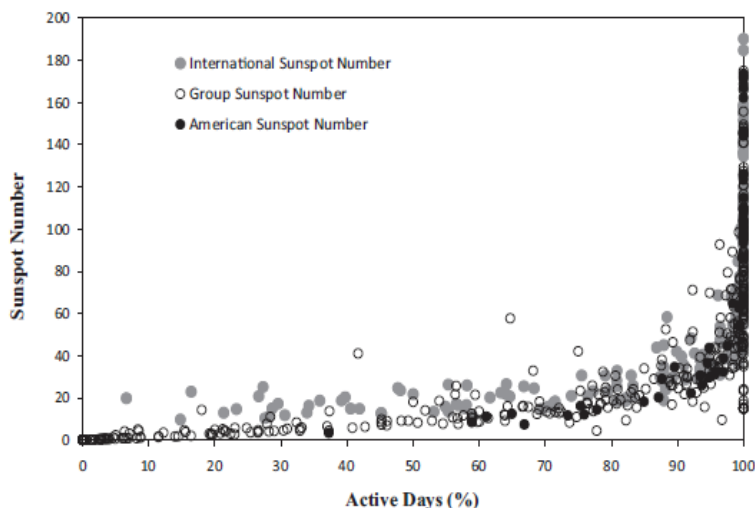


Fig. 1. Relationship between the annual International, Group and American Sunspot Number and active days (AD, expressed as percentage of active days per year).

Fig. 1 shows the relationships between different annual values of SNs (GSN, ISN, and ASN) and AD. Vaquero et al. (2012) have shown that the relationship between GSN and AD is approximately linear for low values of AD. Moreover, they show that some values of annual GSN does not follow this empirical linear rule. Recently, Vaquero and Trigo (2013) have corrected some of these values consulting the original observations.

<http://www.aavso.org/sites/default/files/2014AdvSpaRes.pdf>

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