## Solar Bulletin



THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS - SOLAR COMMITTEE

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Gema Araujo caught this wonderful solar prominence on September 2, 2007 at 08:56 UT. More of Gema's images can be seen at www.astrosurf.com/obsolar/

Canadian solar observers Ralph Chou and John Ginder recorded four hours of solar prominence activity on September 23, 2007. They captured about 30GB of data, stacked the 40 best frames and produced a wonderful 5 second movie clip that is posted on YouTube. <u>http://www.youtube.com/watch?v=PNabV7qHtkE</u>

The timestamp in their clip is EDT (Eastern Daylight Time) You'll notice details come and go which they didn't see live on their screen until they produced the movie. This is an amazing effort with a 3 inch telescope, a Coronado filter, 4X Barlow and Lumenera camera. Hopefully other observers will give it a try.

Remember to send me any solar drawings, SID flares or photos for me to include here.

### Sudden Ionospheric Disturbance Report

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#### Sudden Ionospheric Disturbances (SID) Recorded During September 2007

		(i mai) s		<u> </u>	y whena		, 512 / 110	(Analysis performed by Michael Hill, SID Analyst)									
Date	Max	Imp	Da	te	Max	Ir	mp	Date	Max	Imp							
			1														
					NO												
					SIDS												
				C	Detected												
nportance rating: Duration (min) 1-: <19 1: 19-25			5 1+:2	26-32	2: 33-45	2+: 46-8	3: 86-125	3+:>12									
<u>Observer</u> King Hill	<u>Code</u> A80 A87	NAA NAA	n(s) mon	itored		bserve	<u>r Co</u>	de	Station(s) mor	itored							

The events listed above meet at least one of the following criteria

NAA

HWU NAA NWC

DHO

NAA

DHO GBZ GQD ICV

A97

A99

A102

A107

A108

A118

A119

J Wallace

L Observatory

P Mortfield

L Loudet

J Godet

M King

F Steyn

1) Event reported by two or more observers within  $\pm 5$  minutes 2) Event matched to GOES-8 XRA event to within  $\pm 15$  minutes and event time < 1000 UT

3) reported by observer with a quality rating > 8 (scale 1-10)

# **Solar Events**

September was a very slow month for SID activity. In fact there was no activity. As you can see there is no bar graph to the upper right as there usually is because there were 0 correlated SID events submitted by our observers. Even the GOES-12 Data shows a dearth of X-Ray flares. There were only 16 this past month and all but three were B class events. The others still only C Class at that.

All reports submitted to me were that of NO SID's detected. All except mine. As is depicted in the graph on the previous page I did register something towards the end of the day. It sure looks like a SID event but there were no X-Ray flares recorded that day or other observations by observers to correlate with. This is one of those rare cases where an event that seems important goes unreported. It may seem like the wrong way to go but it is in fact consistent with the data set that goes back many years now. To report it would be to change the criteria that we use and therefore skew the data. It couldn't have been a SID. In fact I have two systems running and the other did not record it. This highlights the fact that not every event you see is in fact a SID. There are other factors at work and on occasion the effect of these factors will appear as a SID signature. This is why we correlate with other observers and why it is good to have many observers to cross correlate with. So keep on monitoring. Your sumbissions are always important even when the times are slow. And slow they are at these days.



#### American Relative Sunspot Numbers (Ra) for September 2007 [**boldface = maximum, minimum**]

Day	N	Raw Mean	Ra
1	44	22	16
2	40	14	11
3	44	11	8
4	33	10	7
5	41	10	7
6	33	3	2
7	36	0	0
8	40	0	0
9	30	0	0
10	32	0	0
11	39	0	0
12	32	0	0
13	33	0	0
14	35	1	0
15	43	0	0
16	41	0	0
17	34	0	0
18	32	0	0
19	30	0	0
20	34	0	0
21	34	0	0
22	30	0	0
23	39	0	0
24	37	1	0
25	38	0	0
26	36	0	0
27	30	3	2
28	34	14	11
29	24	15	10
30	27	14	11

#### Means 35.2

2.8

3.9

No. of Observers: 58

Total No. of Observations: 1055

#### **Reporting Addresses:**

Sunspot Reports – Email: solar@aavso.org Postal Mail: AAVSO, 49 Bay State Rd. Cambridge, MA, 02138 Fax: 617-354-0665

SID Flare Reports – email: noatak@aol.com Postal Mail: Mike Hill, 114 Prospect St., Marlboro, MA, 01752

#### September 2007 Sunspot Observers

AAP	A. Abbott	19
AJV	J. Alonso	17
ANGR	R. Ang	30
BARH	H. Barnes	11
BATR	R. Battaiola	10
BEB	R. Berg	10
BEDJ	J. Bedient	15
BMF	M. Boschat	21
BRAB	B. Branchett	27
BRAD	D. Branchett	17
BRAR	R. Branch	28
BROB	R. Brown	29
BVC	A. Buck	30
CHAG	G. Morales	27
СКВ	B. Cudnik	28
CLZ	L. Corp	19
CNT	D. Chantiles	7
COMI	I. Compton	19
CVJ	J. Carvajal	24
DEJV	J. van Delft	18
	G. DYCK	13
	F. DUDUIS	2/ 1F
	J. Fernandez	15
	F Cobot	20
GOEM	M Goetz	12
	R Halls	10
HAYK	K. Hav	15
НМО	M. Harris	18
KAPJ	J. Kaplan	25
KNJS	J. & S. Knight	15
KROL	L. Krozel	5
KUZM	M. Kuzmin	4
LERM	M. Lerman	12
MARJ	J. Maranon	23
MCE	E. Mochizuki	21
MCHL	L. McHenry	3
MEU	E. Mason	4
MILJ	J. Miller	18
MMI	M. Moeller	23
OATS	S. Oatney	17
OR20	IPS Observatory	18
	E. C. RICHARUSON	10
KITA SCCI	A. RIICHIE	18
	G. Scholl	29 10
STEM	C. Simpson G. Stemmler	12
STO	N Stoikidis	24
SUZM	M Suzuki	24
SZUM	M. Szulc	24
TESD	D. Teske	24
TJV	J. Temprano	23
URBP	P. Urbanski	22
VARG	A. Vargas	24
VIDD	D. Vidican	18
WILW	W. Wilson	21
WRP	R. Wheeler	4
YESH	H. Yesilyaprak	25



#### Sm oothed M ean Sunspot Numbers (Rsm) from January 2000 to M arch 2007 (Waldmeier M ethod)

10 cm Solar Flux and American Relative Sunspot Numbers (Ra) for September 2007 10 cm source: http://w w w .drao.nrc.ca

