# Solar Bulletin

THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS - SOLAR COMMITTEE

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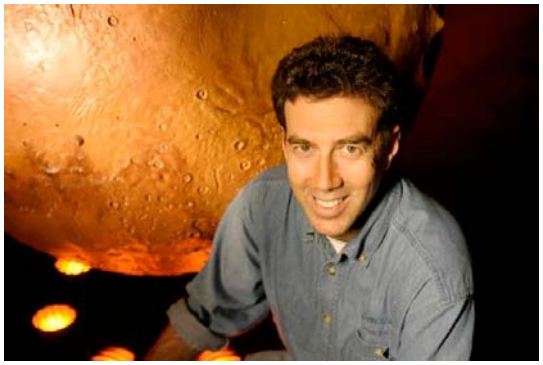
As Carl Feehrer mentioned in last month's Solar Bulletin, he is stepping down from his posts as Chair of the Solar Committee and as Sunspot Group Leader. He has held this position since 2000. I would like to take this opportunity to thank Carl for his great work in chairing the committee, working with the SID group lead and maintaining a strong relationship with all the contributing observers and the staff at AAVSO headquarters during his tenure. We look forward to his continued contributions of sunspot observations and his assistance through this transition.

I'd like to take a moment to introduce myself and the group leads so you'll know some of the names and faces involved behind the scenes.

**Paul Mortfield – Solar Committee Chair**



Paul began observing the sun since in his early teens when he made sunspot count observations, measured sunspot coordinates and got interested in solar radio observations. He's built several SID receivers and is an active observer with the designation code A108. While living in California he was involved with SOHO and Stanford University's Solar Observatory Group. Paul produced and hosted a variety of educational broadcasts about the sun for NASA-TV and is a contributing scientist for NASA's educational products review. For fun, his backyard observatory is used for research projects and astrophotography.

**Mike Hill - Solar Flare/ SID Observing Group Leader**

I have been observing the sun since I was 13 and it has held a special interest for me ever since. My interest turned to the sun-earth connection while taking a college course on environmental issues and I wrote a paper that was decidedly astronomically oriented. Later on I discovered the field of SID monitoring as a means of detecting solar flares and was hooked immediately. I built a Gyrator-II receiver and loop antenna and have been monitoring the sun electronically ever since. In March of 2000 I was asked by Janet Mattei of the AAVSO to take over as SID Analyst and willingly accepted the post. I monitor the sun every day for SIDs, check it on the weekend for sunspots and when possible look at it in H-Alpha with a homebuilt Prominence Scope.

**Daniel Williams – Sunspot Group Leader**

Dan is the new sunspot group leader and lives in rural Nebraska with his wife, two young children, and dog named Spotty. He has a degree in Physics and works as an electrical engineer. His solar interest includes the astrophysics of our star, observing in white light and H-Alpha (hasn't strayed over to Calcium K, yet), and also enjoys double stars and open clusters. He can be reached at drwill@megavision.com

# Sudden Ionospheric Disturbance Report

Michael Hill, SID Analyst
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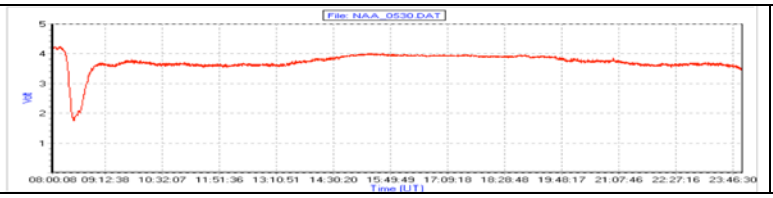
noatak@aol.com




## Sudden Ionospheric Disturbances (SID) Recorded During May 2006

(Analysis performed by Michael Hill, SID Analyst)

| Date | Max | Imp | Date | Max | Imp | Date | Max | Imp |
|---|---|---|---|---|---|---|---|---|
| 060504 | 1748 | 1+ | | | | | | |
| 060504 | 2111 | 2+ | | | | | | |
| 060504 | 2218 | 2+ | | | | | | |
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| Importance rating: Duration (min) | 1-: <19 | 1: 19-25 | 1+: 26-32 | 2: 33-45 | 2+: 46-85 | 3: 86-125 | 3+: >125 |
|---|---|---|---|---|---|---|---|

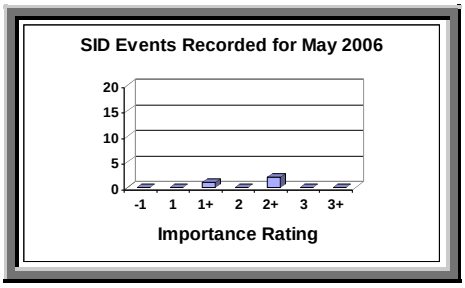
| Observer | Code | Station(s) monitored |
|---|---|---|
| J Winkler | A50 | NAA NML NPM |
| D Toldo | A52 | NSS |
| M King | A99 | HWU |
| F Steyn | A102 | NWC |
| P Mortfield | A108 | NAA |
| M Suhovecky | A115 | NAA |

| Observer | Code | Station(s) monitored |
|---|---|---|

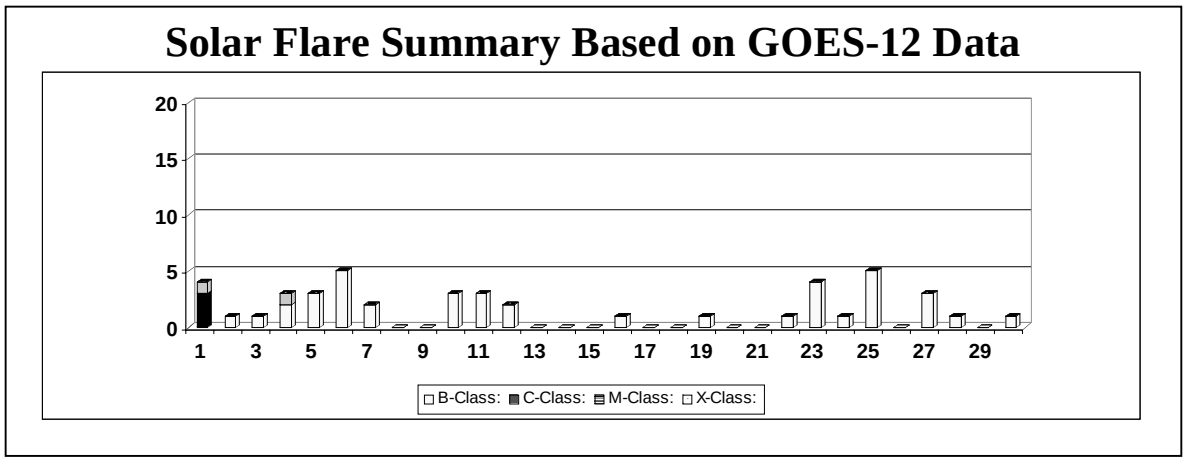
The events listed above meet at least one of the following criteria

1) Event reported by two or more observers within ±5 minutes
2) Event matched to GOES-8 XRA event to within ±15 minutes and event time < 1000 UT
3) reported by observer with a quality rating > 8 (scale 1-10)

# Solar Events




As you can certainly see from the data and the graphs this month, May was another very slow month for SID activity. There were only 3 correlated SID events reported by observers; two of fairly long duration and therefore higher importance rating. The GOES-12 Satellite detected only 45 X-Ray flares. This is the lowest number yet for that count that I have seen. In the past when we have observered very few to no SIDS there have been a significant number of X-Ray flares but they had been very weak – below our detection threshold. This month the actual total flare count is indeed very low. Of those 45 flares most were B-Class events with 2 C-Class events. Although only six of us have been recorded in the official observer list there were a good deal of you still reporting in even though things have remained slow. Even if you're not on the contributor list for correlated events, your submission of a report has been recorded. Thanks for your continued efforts.



American Relative Sunspot Numbers (Ra) for May 2006 [**boldface = maximum, minimum**]

| Day | N | Raw Mean | Ra |
|---|---|---|---|
| **1** | 28 | 58 | **40** |
| **2** | 26 | 51 | 36 |
| **3** | 33 | 50 | 35 |
| **4** | 31 | 53 | 38 |
| **5** | 31 | 40 | 28 |
| **6** | 34 | 38 | 27 |
| **7** | 33 | 49 | 36 |
| **8** | 35 | 44 | 32 |
| **9** | 30 | 39 | 27 |
| **10** | 34 | 29 | 21 |
| **11** | 30 | 19 | 13 |
| **12** | 31 | 14 | 9 |
| **13** | 25 | 8 | 5 |
| **14** | 31 | 1 | 1 |
| **15** | 34 | 2 | 1 |
| **16** | 30 | 0 | **0** |
| **17** | 26 | 0 | **0** |
| **18** | 23 | 4 | 3 |
| **19** | 28 | 14 | 9 |
| **20** | 27 | 28 | 20 |
| **21** | 30 | 31 | 22 |
| **22** | 33 | 42 | 28 |
| **23** | 34 | 39 | 28 |
| **24** | 33 | 39 | 27 |
| **25** | 37 | 36 | 26 |
| **26** | 23 | 47 | 32 |
| **27** | 27 | 44 | 31 |
| **28** | 40 | 54 | 38 |
| **29** | 34 | 51 | 36 |
| **30** | 38 | 44 | 31 |
| **31** | 34 | 32 | 20 |
| **Means** | **31.1** | **32.2** | **22.6** |

**Total No. of Observers: 58**

**Total No. of Observations: 963**


**Reporting Addresses:**

**Sunspot Reports – Email: solar@aavso.org Postal Mail: AAVSO, 25 Birch St. Cambridge, MA, 02138 Fax: 617-354-0665**

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


May 2006 Sunspot Observers

| | | |
|---|---|---|
| 15 | AAP | P. Abbott |
| 16 | AJV | J. Alonso |
| 30 | ARAG | G. Araujo |
| 1 | ARE | R. Allessi |
| 7 | BARH | H. Barnes |
| 7 | BATR | R. Battaiola |
| 10 | BEB | R. Berg |
| 8 | BERJ | J. Berdejo |
| 5 | BLAJ | J. Blackwell |
| 11 | BMF | M. Boschat |
| 28 | BRAB | B. Branchett |
| 25 | BRAD | D. Branchett |
| 4 | BRAM | M. Bradbury |
| 25 | BRAR | R. Branch |
| 5 | BROB | R. Brown |
| 27 | BYG | Y. Brovarets |
| 31 | CHAG | G. Morales |
| 30 | CKB | B. Cudnik |
| 9 | CLZ | L. Corp |
| 14 | COMT | T. Compton |
| 20 | DEJV | J. van Delft |
| 9 | DGP | G. Dyck |
| 22 | FERJ | J. Fernandez |
| 30 | FLET | T. Fleming |
| 19 | FUJK | K. Fujimori |
| 9 | GOEM | M. Goetz |
| 11 | HAYK | K. Hay |
| 13 | JAMD | D. James |
| 26 | KAPJ | J. Kaplan |
| 24 | KNJS | J.& S. Knight |
| 2 | KROL | L. Krozel |
| 10 | LARJ | J. Larriba |
| 6 | LERM | M. Lerman |
| 31 | MARJ | J. Maranon |
| 17 | MCE | E. Mochizuki |
| 11 | MENM | M. Menegotto |
| 9 | MMI | M. Moeller |
| 26 | OATS | S. Oatney |
| 22 | OBSO | IPS Observatory |
| 10 | RICE | E. Richardson |
| 16 | RITA | A. Ritchie |
| 26 | SCGL | G. Schott |
| 2 | SDP | D. Sharples |
| 14 | SIMC | C. Simpson |
| 4 | STEF | G. Stefanopoulis |
| 18 | STEM | G. Stemmler |
| 27 | STQ | N. Stoikidis |
| 19 | SUZM | M. Suzuki |
| 28 | SZUM | M. Szulc |
| 19 | TAKH | H.Takuma |
| 28 | TESD | D.Teske |
| 11 | TJV | J. Temprano |
| 28 | URBP | P. Urbanski |
| 22 | VARG | A. Vargas |
| 5 | WILD | D. Williams |
| 30 | WILW | W. Wilson |
| 5 | WRP | R. Wheeler |
| 26 | YESH | H. Yesilyaprak |

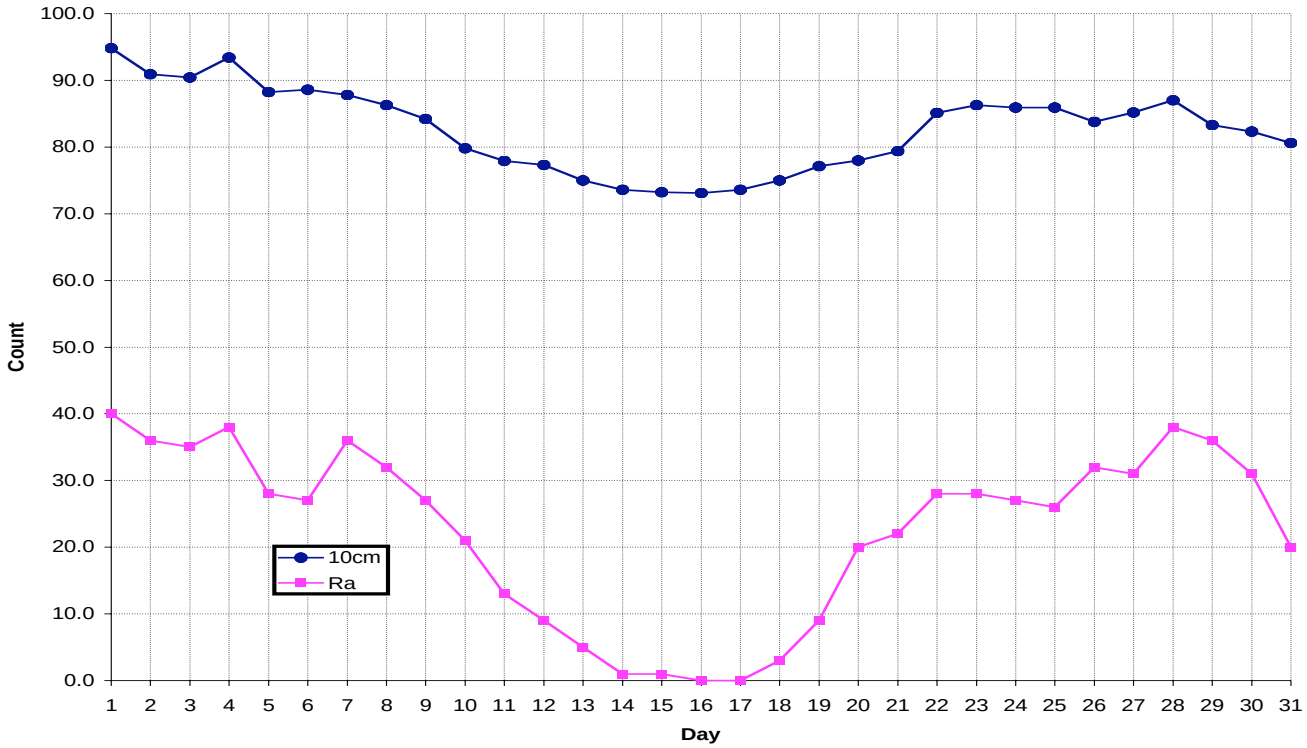



**Fig. 1. 10 cm Solar Flux and American Relative Sunspot Numbers (Ra) for May 2006**
10 cm source: http://www.drao.nrc.ca/icarus

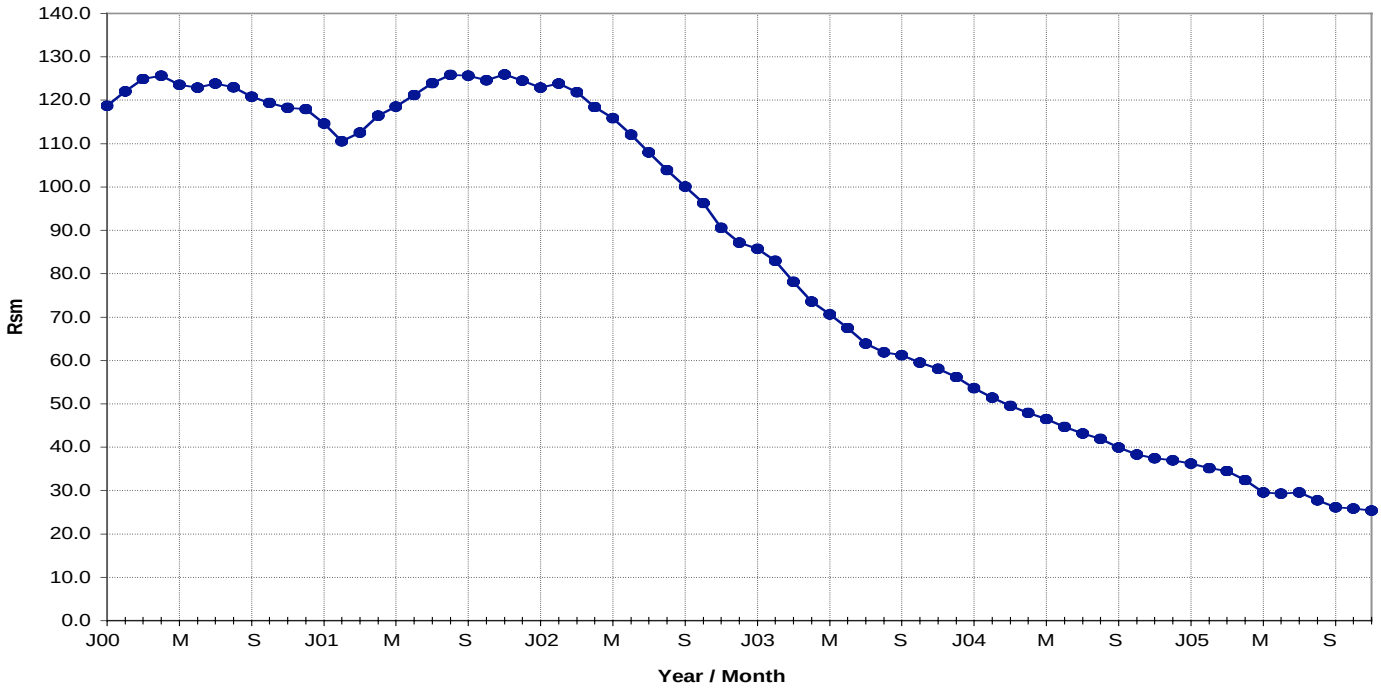



**Fig. 2. Smoothed Mean Sunspot Numbers (Rsm) from January 2000 to November 2005 (Waldmeier Method).**