

Solar Bulletin

THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS
SOLAR COMMITTEE



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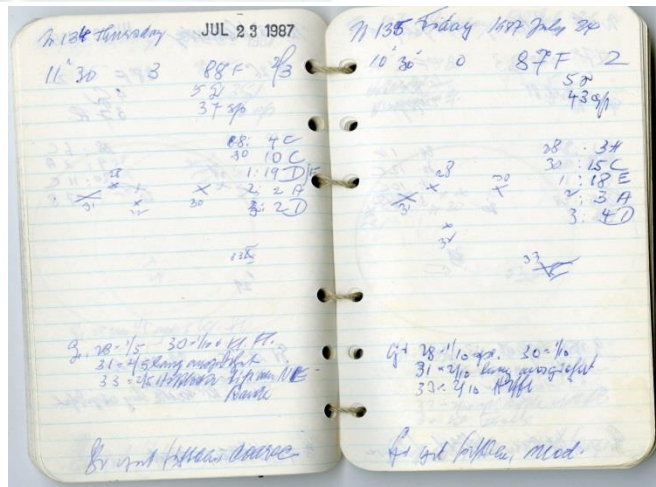
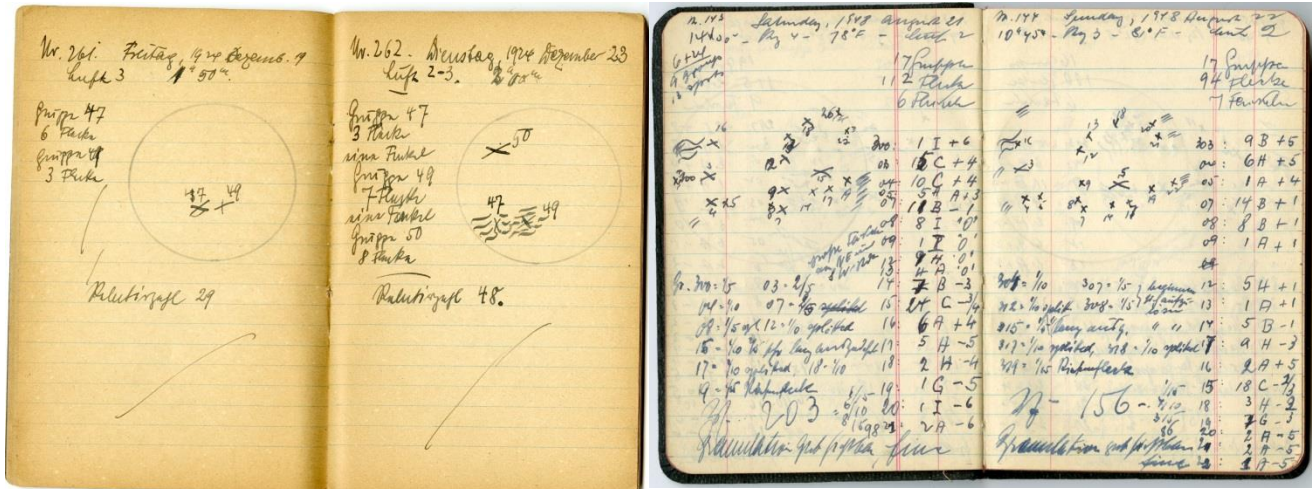
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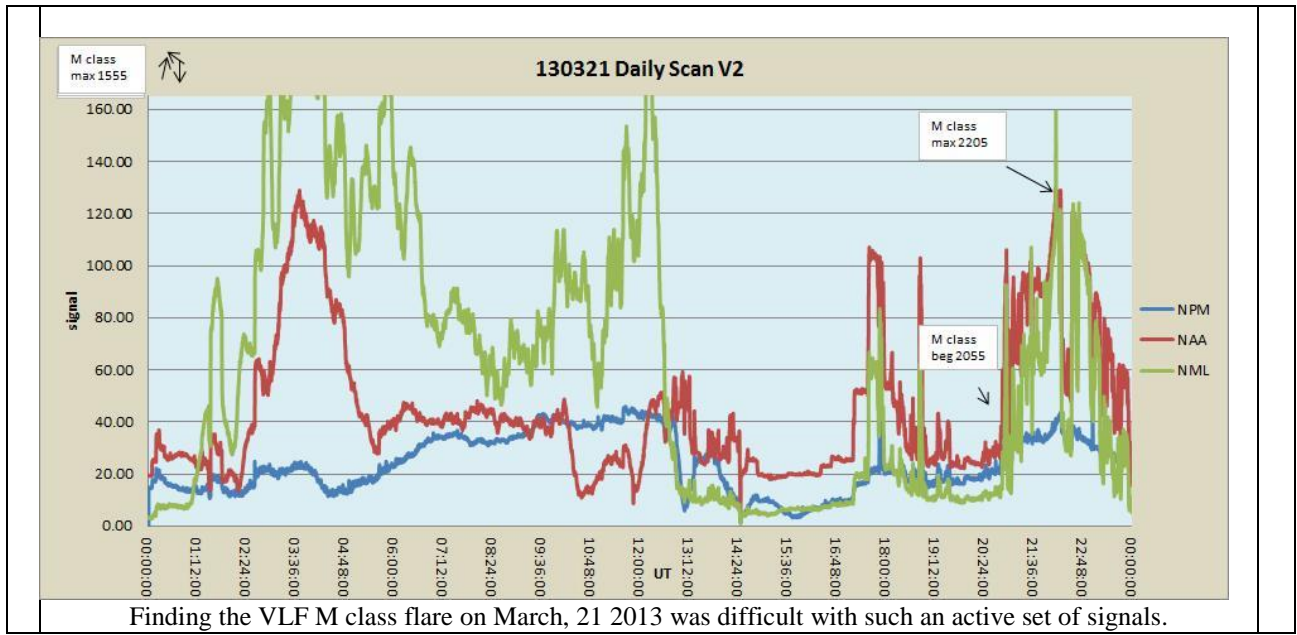


The above scanned pages come from 3 of 120 notebooks by Herbert Luft; 1924, 1948 and 1987 Luft's notebooks cover more than 60 years of observations (AAVSO Archives, Mike Saladyga). Below is an excerpt from Casper Hossfield's 2001 article 'A History of the Zurich and American Relative Sunspot Number Indices', JAAVSO Volume 30, 2001.

<http://www.aavso.org/sites/default/files/webpublications/ejaavso/v31n1/48.pdf>

Herbert Luft, an AAVSO solar observer who, like Bondy, knew Waldmeier personally and was a native speaker of German, and who had been a Zurich sunspot observer since 1923, said much the same thing about the AAVSO numbers as had Waldmeier, even calling them "monkey business" (Luft 1968a). Correspondence from Luft to AAVSO Director Margaret Mayall draws attention to the discrepancy between the American and Zurich numbers, and the absence of scientific justification for this discrepancy (Luft 1968b). Luft also told the author that he had discussed the matter with Dr. Robert Howard of Mount Wilson Observatory, and that Howard understood Luft's concern about the numbers (Luft 1968b). As Bondy had done, Luft tried hard, without success, to convince the AAVSO to change the method of determining the American numbers.

Sudden Ionospheric Disturbance Report

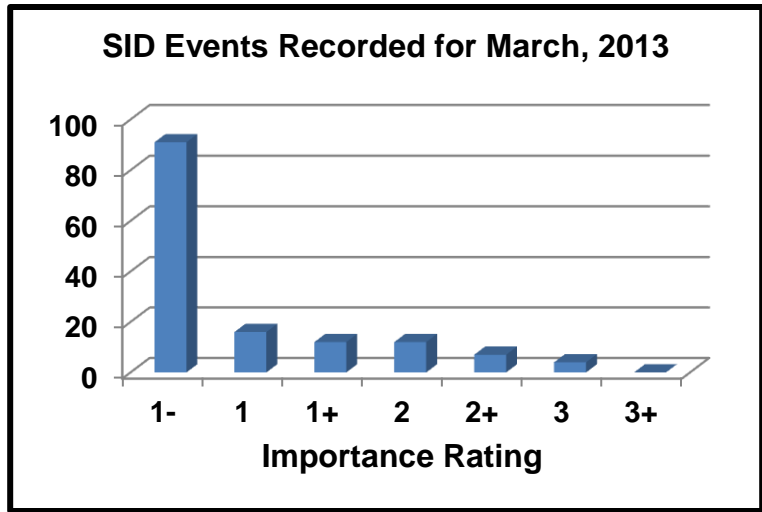


Sudden Ionospheric Disturbances (SID) Records During March, 2013

Date	Max	Imp	Date	Max	Imp	Date	Max	Imp
130301	0453	1	130305	1425	1-	130313	1621	1-
130301	1802	1-	130306	0950	1-	130313	2257	1+
130301	2102	1-	130306	1407	1-	130314	0108	1
130302	0112	2	130306	1553	1-	130314	0158	1+
130302	0623	1+	130306	2246	1	130314	0236	2+
130302	0630	1-	130307	1312	1-	130314	0532	1+
130302	0650	1-	130307	1641	1-	130314	0554	1-
130302	1509	1	130307	2113	2	130314	0600	1+
130302	1846	1-	130307	2312	2	130315	0530	2+
130303	0750	1-	130308	0942	1-	130315	0625	3
130303	1155	1-	130308	1518	1-	130315	0649	3
130303	1230	1-	130308	1626	1-	130315	0658	2+
130303	1445	1-	130308	1742	1-	130315	0820	2
130303	1458	1-	130309	1125	1-	130315	2042	1-
130303	1553	1-	130309	1832	1-	130315	2106	1-
130304	0926	2	130310	0007	1+	130316	0306	1-
130304	1044	1-	130310	0124	1-	130316	0403	3
130304	1059	1-	130310	1155	1-	130316	1133	1-
130304	1158	1-	130310	2111	2+	130316	2021	1-
130304	1710	1-	130310	2319	1	130316	2249	1-
130305	0241	2	130312	0400	1	130317	0106	2
130305	0413	2+	130312	1949	1-	130317	0309	1-
130305	0753	1+	130313	0344	1	130318	0128	1-
130305	1145	1-	130313	0451	1-	130318	0221	1
130305	1155	1	130313	0926	1+	130318	0249	1

Date	Max	Imp	Date	Max	Imp	Date	Max	Imp
130318	0311	1-	130319	2225	1-	130324	0827	2
130318	0323	1-	130320	0955	1-	130325	1150	1-
130318	0640	1	130321	0854	1+	130326	1130	1-
130318	1557	1-	130321	1531	1-	130328	0336	1
130319	0047	2+	130321	1554	1-	130329	0048	2
130319	0117	2+	130321	2148	1-	130330	0633	2
130319	0213	1-	130321	2204	3	130330	1117	1-
130319	0229	1-	130321	2238	1-	130330	1624	1-
130319	0321	1-	130322	0356	1-	130331	0221	1-
130319	0815	1	130322	0826	1-	130331	0225	1-
130319	1358	1-	130322	0844	1+	130331	0251	1-
130319	1617	1	130322	1221	1-	130331	2046	1-
130319	2143	1-	130323	1145	1-	130331	2053	1-
130319	2213	1-	130323	1414	1-	130331	2221	1-

Solar Events

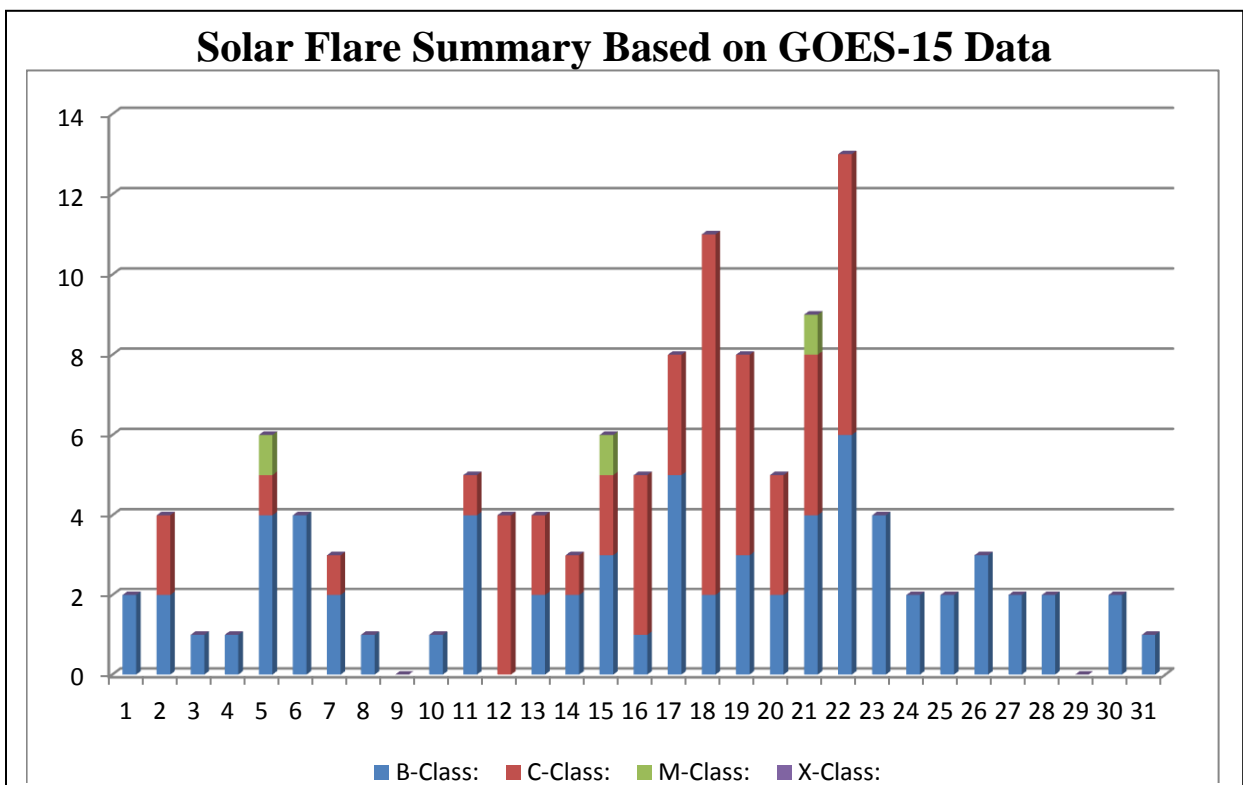


Importance rating: Duration (min)	1-: <19	1: 19-25	1+: 26-32	2: 33-45	2+: 46-85	3: 86-125	3+: >125
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Sudden Ionospheric Disturbances (SID) Observers During March, 2013

Observer	Code	Station(s) monitored	Observer	Code	Station(s) monitored
A McWilliams	A94	NML	K Cotar	A129	DHO GQD
R Battaiola	A96	ICV	J Karlovsky	A131	DHO
J Wallace	A97	NAA	E Soubrouillar	A132	HWU
L Loudet	A118	GQD	R Green	A134	NWC
J Godet	A119	GBZ GQD ICV	R Mrlak	A136	GQD NSY
B Terrill	A120	NWC	D Koawl	A137	NPM
F Adamson	A122	NWC	F Francione	A139	DHO NAA SAS
S Oatney	A125	NML			

There were 122 solar flares measured by GOES-15 for March, 2013, three M class, 49 C class and 70 B class flares. The sun was a little more active with M and C class flares this month. There were 15 AAVSO SID Observers who submitted reports this month.



American Relative Sunspot Numbers (Ra) for March, 2013 [**boldface = maximum, minimum**]

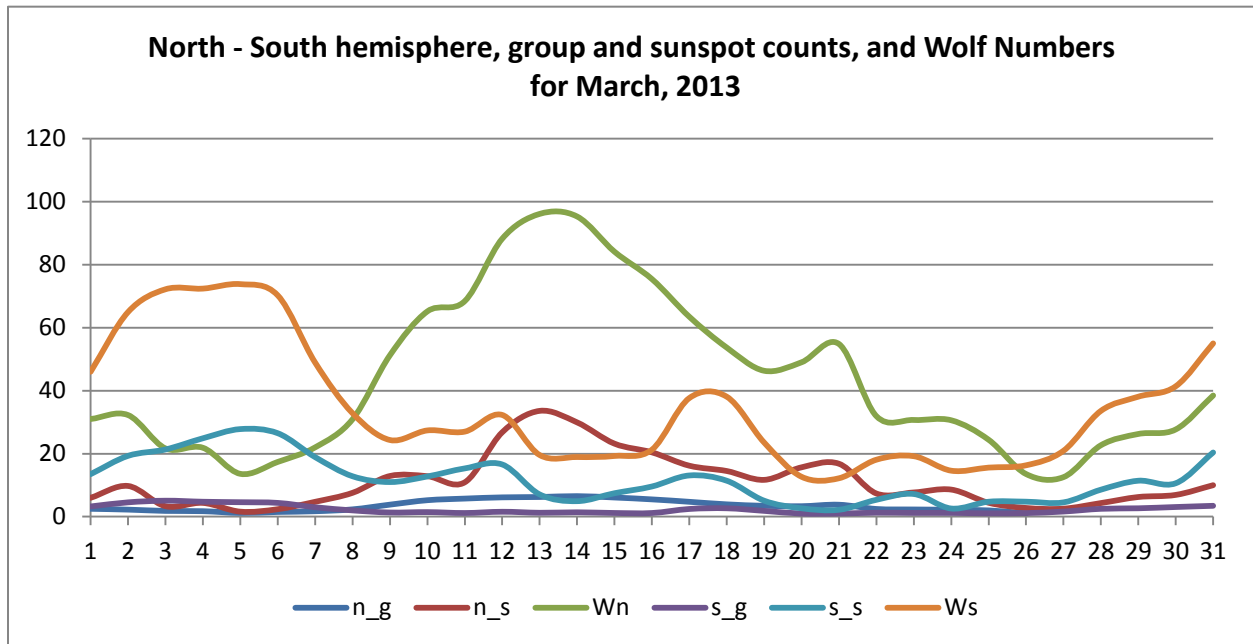
DAY	NumObs	RAW	Ra
1	22	70	49
2	31	79	57
3	35	79	54
4	34	78	57
5	33	67	49
6	31	68	48
7	27	61	43
8	27	60	42
9	29	69	51
10	30	81	58
11	21	94	70
12	27	108	77
13	25	106	79
14	35	110	83
15	27	104	75
16	31	98	75
17	28	105	76
18	23	88	71
19	30	62	45
20	28	42	31
21	28	48	34
22	28	46	35
23	27	44	30
24	31	37	26
25	28	33	24
26	33	27	19
27	29	27	20
28	26	48	34
29	28	62	46
30	32	69	51
31	31	83	60
Average	28	69.5	50.6

Obs	#Obs	Name
AAP	5	A. Patrick Abbott
AAX	16	Alexandre Amorim
AJV	7	J. Alonso
ARAG	29	Gema Araujo
ASA	25	Salvador Aguirre
BARH	15	Howard Barnes
BDDA	13	Diego Bastiani
BERJ	10	Jose Alberto Berdejo

BMF	16	Michael Boschat
BRAB	31	Brenda Branchett
BRAF	9	Raffaello Braga
BROB	17	Robert Brown
BXD	9	Alexandru Burda
CFO	8	Jean F. Coliac
CHAG	27	German Morales Chavez
CIOA	9	Ioannis Chouinavas
CKB	24	Brian Cudnik
CLZ	1	Laurent Corp
CNT	10	Dean Chantiles
CVJ	7	Jose Carvajal
DELS	1	Susan Delaney
DGP	24	Gerald Dyck
DJOB	14	Jorge del Rosario
DUBF	17	Franky Dubois
FAM	3	Fabio Mariuzza
FERJ	16	Javier Ruiz Fernandez
FLET	19	Tom Fleming
FLF	16	Fredirico Luiz Funari
FTAA	12	Tadeusz Figiel
FUJK	22	K. Fujimori
HAYK	15	Kim Hay
HOWR	28	Rodney Howe
JASK	16	Krystyna Wirkus
JGE	3	Gerardo Jimenez Lopez
JJK	2	Jerry Klotz
KAND	24	Kandilli Observatory
KAPJ	24	John Kaplan
KNJS	23	James & Shirley Knight
KROL	3	Larry Krozel
LEVM	21	Monty Leventhal
LKR	8	Kristine Larsen
MARE	6	Enrico Mariani
MCE	25	Etsuiku Mochizuki
MGAA	11	Gael Mariani
MILJ	11	Jay Miller
MJHA	20	John McCammon
MMI	18	Michael Moeller
MUDG	6	George Mudry
OATS	12	Susan Oatney
OBSO	19	IPS Observatory
RLM	11	Mat Raymonde
SIMC	5	Clyde Simpson
SMNA	3	Michael Stephanou
SONA	13	Andries Son
STAB	16	Brian Gordon-States

SUZM	21	Miyoshi Suzuki	WRP	3	Russell Wheeler
TESD	23	David Teske			
URBP	20	Piotr Urbanski			
VARG	20	A. Gonzalo Vargas	Total	Observers:	64
VIDD	12	Dan Vidican	Total	Observations:	896
WAW	3	Artur Wargin			
WILW	17	William M. Wilson			
WKM	2	Michael Wiskirken			

Thirty one of our sixty four observers submitted data on the sunspot and group counts for the Sun's north and south hemispheres. It is interesting to note how the Wolf numbers of groups and Sunspots counts cross over on the 8th and 26th this month.



Reporting Addresses:

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