



Georgi Dobrovolski Solar Observatory

NEW ZEALAND

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SUNSPOT RESULTS FOR MARCH 2007

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f . l . 910 mm) k considered as 1 .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

WN = Wolf Number ; SN = Pettisindex ; BX = Beckindex ; CV = Classification Value ;

QC = Quality Count ; QC? = Squared Quality Count .

Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .

S = Sharpness [ie. clarity] refer to Kiepenheuer scale .

T = Transparency where 1 = excellent , 5 = worthless .

Stated times (UT) approximate Co-ordinated Universal Time / Temps Universel Coordonne' (UTC).

DATE	UT	g	f	WN	p	s	SN	BX	CV	QC	QC?	Q	S	T	Ref.
01															
02	2045	1	1	11	1	0	10	37	10	2	4	1.5	2.5	2.0	4777-3
03															
04	2045	2	7	27	1	4	14	127	10	4	8	1.5	2.0	2.0	4778-4
05	2110	2	3	23	1	2	12	45	12	4	8	2.0	2.5	2.0	4779-4
06															
07															
08	2050	0	0	0	0	0	0	0	0	0	0	2.0	2.0	2.0	4780-4
09															
10															
11															
12	2025	0	0	0	0	0	0	0	0	0	0	2.0	2.5	2.5	4781-4
13															
14															
15															
16															
17															
18	2040	0	0	0	0	0	0	0	0	0	0	1.5	3.0	3.0	4782-4
19	2130	0	0	0	0	0	0	0	0	0	0	1.5	2.0	2.0	4783-4
20	2110	0	0	0	0	0	0	0	0	0	0	1.0	2.5	2.5	4784-4
21															
22	2105	0	0	0	0	0	0	0	0	0	0	1.5	2.0	2.0	4785-4
23															
24															
25															
26	2100	1	2	12	1	1	11	16	11	3	9	2.5	3.0	2.5	4786-4
27															
28															
29															
30	2210	1	1	11	0	1	1	4	1	1	1	1.5	2.5	2.0	4787-4
31															
TOTALS	—	7	14	84	4	8	48	229	44	14	30	18.5	26.5	24.5	—
NOBS	—	11	11	11	11	11	11	11	11	11	11	11	11	11	—
MNS	—	0.64	1.27	7.64	0.36	0.73	4.36	20.82	4.00	1.27	2.73	1.68	2.41	2.23	—

MEAN WEIGHT = 0.4820

MEAN CONDITION = 2.1061

TRUNCATED WOLF NUMBER = 4.27

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SUNSPOT DISTRIBUTION & INTER-SOL INDICES FOR MARCH 2007

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f . l . 910 mm) .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

IS = Inter-Sol Index .

gr = number of multi-spot groups .

grfp = number of umbrae within penumbrae within the groups (gr) .

grf = number of non-penumbra spots within the groups (gr) .

efp = number of single penumbral spots .

ef = number of single non-penumbra spots .

Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .

S = Sharpness [ie. clarity] refer to Kiepenheuer scale .

T = Transparency where 1 = excellent , 5 = worthless .

DATE	UT	IS	gr	grfp	grf	efp	ef	Q	S	T	Ref.
01											
02	2045	1	0	0	0	1	0	1.5	2.5	2.0	4777-3
03											
04	2045	9	2	3	4	0	0	1.5	2.0	2.0	4778-4
05	2110	4	1	0	2	1	0	2.0	2.5	2.0	4779-4
06											
07											
08	2050	0	0	0	0	0	0	2.0	2.0	2.0	4780-4
09											
10											
11											
12	2025	0	0	0	0	0	0	2.0	2.5	2.5	4781-4
13											
14											
15											
16											
17											
18	2040	0	0	0	0	0	0	1.5	3.0	3.0	4782-4
19	2130	0	0	0	0	0	0	1.5	2.0	2.0	4783-4
20	2110	0	0	0	0	0	0	1.0	2.5	2.5	4784-4
21											
22	2105	0	0	0	0	0	0	1.5	2.0	2.0	4785-4
23											
24											
25											
26	2100	3	1	1	1	0	0	2.5	3.0	2.5	4786-4
27											
28											
29											
30	2210	1	0	0	0	0	1	1.5	2.5	2.0	4787-4
31											
TOTALS	—	18	4	4	7	2	1	18.5	26.5	24.5	—
NOBS	—	11	11	11	11	11	11	11	11	11	—
MNS	—	1.64	0.36	0.36	0.64	0.18	0.09	1.68	2.41	2.23	—

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SUNSPOT CENSUS BY CLASSIFICATION FOR

MARCH 2007

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f . l . 910 mm) .

Observed by PROJECTION .

Full disc diameter = 145 mm approx .

IF 2 OR MORE REGIONS ARE OF THE SAME CLASSIFICATION , THEN SUNSPOT COUNTS ARE SEPARATED BY SOLIDI (/) .

DATE	UT	A		B		C		D		E		F		G		H		J	
		g	f	g	f	g	f	g	f	g	f	g	f	g	f	g	f	g	f
01																			
02	2045	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
03																			
04	2045	0	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	1	3
05	2110	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1
06																			
07																			
08	2050	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09																			
10																			
11																			
12	2025	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13																			
14																			
15																			
16																			
17																			
18	2040	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	2130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	2110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21																			
22	2105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23																			
24																			
25																			
26	2100	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0
27																			
28																			
29																			
30	2210	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31																			
TOTALS	—	1	1	2	6	1	2	0	0	0	0	0	0	0	0	0	0	3	5

REGIONAL PERCENTAGES

A	B	C	D	E	F	G	H	J	Σg
14.3	28.6	14.3	0.0	0.0	0.0	0.0	0.0	42.9	7

NOBS = 11

$\overline{p/g}$ mean = 0.6000

$\overline{f/g}$ mean = 1.8000

$\overline{p/g}$ mean = 0.5714

$\overline{f/g}$ mean = 2.0000

GROUP COMPLEXITY INDEX (GCI) = 2.5714

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SMOOTHED RESULTS OF OBSERVED VALUES FOR THE LAST 12 MONTHS (OBTAINABLE) USING THE WALDMEIER & BARNES-13 METHODS.

DATA BELOW ARE PRELIMINARY. FINAL VALUES WILL BE PUBLISHED IN GDSO ANNUAL REPORTS.

WALDMEIER METHOD

MONTH	$g(S^W)$	$WN(S^W)$	$SN(S^W)$	$BX(S^W)$	$CV(S^W)$	$QC(S^W)$	$IS(S^W)$
2005 OCTOBER	2.08	32.20	42.68	242.2	42.17	6.52	12.81
NOVEMBER	2.06	31.17	40.20	221.1	40.18	6.31	11.88
DECEMBER	1.93	28.14	34.77	182.9	34.93	5.71	10.00
2006 JANUARY	1.75	25.12	30.36	161.9	30.74	5.06	8.69
FEBRUARY	1.58	22.75	27.18	153.1	28.70	4.62	7.88
MARCH	1.48	21.18	25.31	145.5	27.42	4.40	7.27
APRIL	1.50	21.21	25.00	139.5	27.07	4.43	7.06
MAY	1.56	21.92	25.55	140.9	27.90	4.57	7.20
JUNE	1.48	21.01	24.39	138.9	27.71	4.38	7.13
JULY	1.41	20.26	23.39	138.1	28.14	4.24	7.06
AUGUST	1.48	21.13	24.22	141.8	30.33	4.44	7.25
SEPTEMBER	1.49	21.20	24.05	140.7	30.89	4.46	7.20

BARNES-13 METHOD

MONTH	$g(S^{B13})$	$WN(S^{B13})$	$SN(S^{B13})$	$BX(S^{B13})$	$CV(S^{B13})$	$QC(S^{B13})$	$IS(S^{B13})$
2005 OCTOBER	2.01	30.56	40.00	223.5	40.02	6.22	11.80
NOVEMBER	1.93	28.43	36.02	197.0	36.23	5.78	10.37
DECEMBER	1.83	26.24	31.96	170.5	32.19	5.31	8.97
2006 JANUARY	1.70	24.02	28.49	151.3	28.81	4.83	7.91
FEBRUARY	1.59	22.37	26.11	140.4	26.87	4.51	7.29
MARCH	1.55	21.71	25.18	137.1	26.35	4.42	7.10
APRIL	1.53	21.56	24.84	135.8	26.44	4.41	7.08
MAY	1.49	21.08	24.29	134.5	26.52	4.36	7.01
JUNE	1.41	20.24	23.57	135.4	26.76	4.24	6.98
JULY	1.38	20.02	23.53	140.6	27.97	4.25	7.13
AUGUST	1.41	20.48	24.07	145.9	29.83	4.39	7.32
SEPTEMBER	1.42	20.56	23.96	145.0	30.80	4.42	7.26