



Georgi Dobrovolski Solar Observatory

NEW ZEALAND

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SUNSPOT RESULTS FOR FEBRUARY 2005

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 ; QC² = 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 .

DATE	UT*	g	f	WN	p	s	SN	BX	CV	QC	QC ²	Q	S	T	Ref.
01															
02															
03	2000	1	1	11	1	0	10	37	10	2	4	1.5	2.0	1.5	4496-6
04															
05															
06															
07															
08															
09	2215	4	7	47	3	3	33	117	60	9	23	2.0	2.5	2.0	4497-6
10															
11	1945	6	13	73	5	5	55	313	110	15	41	1.0	2.0	2.5	4498-6
12															
13															
14															
15															
16	2000	3	27	57	5	16	66	524	87	10	36	1.5	2.0	2.0	4499-6
17	2115	4	19	59	6	11	71	399	97	12	40	1.5	2.0	2.5	4500-6
18															
19	2015	3	8	38	3	3	33	149	57	7	21	1.5	2.0	2.0	4501-6
20	2020	2	6	26	3	1	31	146	53	6	20	1.0	2.0	2.0	4502-6
21															
22															
23	2200	1	5	15	2	2	22	90	22	4	16	2.0	2.5	2.5	4503-6
24															
25															
26	2020	1	1	11	0	1	1	4	1	1	1	1.5	2.0	2.0	4504-7
27															
28	2025	0	0	0	0	0	0	0	0	0	0	1.5	2.5	2.0	4505-7
29	—														
30	—														
31	—														
TOTALS	—	25	87	337	28	42	322	1779	497	66	202	15.0	21.5	21.0	—
NOBS	—	10	10	10	10	10	10	10	10	10	10	10	10	10	—
MNS	—	2.50	8.70	33.70	2.80	4.20	32.20	177.90	49.70	6.60	20.20	1.50	2.15	2.10	—

MEAN WEIGHT = 0.5272

MEAN CONDITION = 1.9167

TRUNCATED WOLF NUMBER = 28.00

* Stated times approximate Co-ordinated Universal Time / Temps Universel Coordonné (UTC).

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SUNSPOT DISTRIBUTION & INTER-SOL INDICES FOR FEBRUARY 2005

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 umbræ within penumbræ within the groups (gr) .

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

efp = number of single penumbral spots .

ef = number of single non-penumbral 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											
03	2000	1	0	0	0	1	0	1.5	2.0	1.5	4496-6
04											
05											
06											
07											
08											
09	2215	8	1	2	2	2	1	2.0	2.5	2.0	4497-6
10											
11	1945	18	5	7	5	1	0	1.0	2.0	2.5	4498-6
12											
13											
14											
15											
16	2000	30	3	11	16	0	0	1.5	2.0	2.0	4499-6
17	2115	22	3	7	11	1	0	1.5	2.0	2.5	4500-6
18											
19	2015	9	1	4	2	1	1	1.5	2.0	2.0	4501-6
20	2020	8	2	5	1	0	0	1.0	2.0	2.0	4502-6
21											
22											
23	2200	6	1	3	2	0	0	2.0	2.5	2.5	4503-6
24											
25											
26	2020	1	0	0	0	0	1	1.5	2.0	2.0	4504-7
27											
28	2025	0	0	0	0	0	0	1.5	2.5	2.0	4505-7
29	—										
30	—										
31	—										
TOTALS	—	103	16	39	39	6	3	15.0	21.5	21.0	—
NOBS	—	10	10	10	10	10	10	10	10	10	—
MNS	—	10.30	1.60	3.90	3.90	0.60	0.30	1.50	2.15	2.10	—

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SUNSPOT CENSUS BY CLASSIFICATION FOR FEBRUARY 2005

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																			
03	2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
04																			
05																			
06																			
07																			
08																			
09	2215	1	1	0	0	1	4	0	0	0	0	0	0	0	0	1	1	1	1
10																			
11	1945	0	0	2	2/2	0	0	1	3	0	0	0	0	0	0	1	3	2	1/2
12																			
13																			
14																			
15																			
16	2000	0	0	0	0	0	0	2	4/21	0	0	0	0	0	0	0	0	1	2
17	2115	0	0	0	0	0	0	2	3/13	0	0	0	0	0	0	0	0	2	1/2
18																			
19	2015	1	1	0	0	0	0	1	6	0	0	0	0	0	0	0	0	1	1
20	2020	0	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0	1	2
21																			
22																			
23	2200	0	0	0	0	0	0	1	5	0	0	0	0	0	0	0	0	0	0
24																			
25																			
26	2020	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27																			
28	2025	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	—																		
30	—																		
31	—																		
TOTALS	—	3	3	2	4	1	4	8	59	0	0	0	0	0	0	2	4	9	13
REGIONAL PERCENTAGES																			
A	B	C	D	E	F	G	H	J	SIGMAg										
12.0	8.0	4.0	32.0	0.0	0.0	0.0	8.0	36.0	25										
NOBS = 10		$\overline{p/g}$ mean = 1.1389				$\overline{f/g}$ mean = 3.3704													
		$\overline{p/g}$ mean = 1.1200				$\overline{f/g}$ mean = 3.4800													
GROUP COMPLEXITY INDEX (GCI) = 4.6000																			

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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 THE GDSO ANNUAL REPORTS.

WALDMEIER METHOD

MONTH	$g(S^W)$	$WN(S^W)$	$SN(S^W)$	$BX(S^W)$	$CV(S^W)$	$QC(S^W)$	$IS(S^W)$
2003 SEPTEMBER	4.55	76.06	93.48	700.0	92.65	14.61	33.78
OCTOBER	4.41	73.76	90.28	690.5	88.82	14.13	32.79
NOVEMBER	4.29	71.92	88.12	673.5	85.40	13.74	32.00
DECEMBER	4.19	69.26	84.25	630.5	82.43	13.37	30.28
2004 JANUARY	4.00	65.23	78.05	575.9	77.59	12.71	28.00
FEBRUARY	3.75	61.35	72.76	548.3	72.73	11.90	26.48
MARCH	3.56	58.70	70.01	537.4	70.74	11.30	25.59
APRIL	3.53	57.59	70.08	508.8	70.66	11.20	24.77
MAY	3.57	57.74	71.00	503.5	71.37	11.34	24.58
JUNE	3.47	56.82	70.02	515.1	70.41	11.12	24.53
JULY	3.35	54.72	66.85	494.3	67.50	10.69	23.50
AUGUST	3.28	53.46	64.65	482.4	66.12	10.40	22.91

BARNES-13 METHOD

MONTH	$g(S^{B13})$	$WN(S^{B13})$	$SN(S^{B13})$	$BX(S^{B13})$	$CV(S^{B13})$	$QC(S^{B13})$	$IS(S^{B13})$
2003 SEPTEMBER	4.60	78.06	95.50	750.9	93.61	14.85	35.37
OCTOBER	4.35	73.60	89.51	704.8	88.15	14.07	33.20
NOVEMBER	4.14	69.20	83.99	644.3	82.96	13.34	30.79
DECEMBER	3.96	65.01	78.56	577.5	78.19	12.69	28.24
2004 JANUARY	3.80	61.44	73.72	524.8	73.91	12.09	26.12
FEBRUARY	3.68	59.12	70.59	500.3	70.85	11.63	24.88
MARCH	3.61	57.85	69.17	492.8	69.40	11.33	24.29
APRIL	3.58	57.27	68.92	486.3	68.87	11.18	23.97
MAY	3.57	57.45	69.47	497.3	69.37	11.18	24.20
JUNE	3.52	57.42	69.76	520.6	69.89	11.11	24.67
JULY	3.43	56.59	69.09	529.8	69.48	10.90	24.68
AUGUST	3.33	55.33	67.92	526.0	68.88	10.65	24.38