




Georgi Dobrovolski Solar Observatory

NEW ZEALAND

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SUNSPOT RESULTS FOR MAY 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															
04	2205	2	32	52	5	10	60	511	71	8	34	2.0	2.5	2.0	4539-9
05	2210	2	34	54	9	10	100	773	87	9	41	2.0	2.5	2.0	4540-9
06	2210	2	19	39	9	5	95	433	87	9	41	1.5	2.5	2.5	4541-9
07															
08	2145	3	34	64	10	17	117	1126	81	12	62	2.0	2.0	2.0	4542-9
09															
10	2235	3	53	83	14	19	159	1568	123	15	77	1.5	2.0	2.0	4543-9
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22	2155	2	4	24	3	1	31	91	38	6	20	2.5	2.5	2.5	4544-0
23															
24	2215	2	15	35	5	7	57	210	40	7	25	1.5	2.0	2.5	4545-0
25															
26															
27															
28															
29															
30															
31															
TOTALS	—	16	191	351	55	69	619	4712	527	66	300	13.0	16.0	15.5	—
NOBS	—	7	7	7	7	7	7	7	7	7	7	7	7	7	—
MNS	—	2.29	27.29	50.14	7.86	9.86	88.43	673.14	75.29	9.43	42.86	1.86	2.29	2.21	—

MEAN WEIGHT = 0.4757

MEAN CONDITION = 2.1190

TRUNCATED WOLF NUMBER = 48.57

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

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SUNSPOT DISTRIBUTION & INTER-SOL INDICES FOR MAY 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											
04	2205	34	2	22	10	0	0	2.0	2.5	2.0	4539-9
05	2210	36	2	24	10	0	0	2.0	2.5	2.0	4540-9
06	2210	21	2	14	5	0	0	1.5	2.5	2.5	4541-9
07											
08	2145	36	2	17	16	0	1	2.0	2.0	2.0	4542-9
09											
10	2235	56	3	34	19	0	0	1.5	2.0	2.0	4543-9
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22	2155	5	1	2	1	1	0	2.5	2.5	2.5	4544-0
23											
24	2215	17	2	8	7	0	0	1.5	2.0	2.5	4545-0
25											
26											
27											
28											
29											
30											
31											
TOTALS	—	205	14	121	68	1	1	13.0	16.0	15.5	—
NOBS	—	7	7	7	7	7	7	7	7	7	—
MNS	—	29.29	2.00	17.29	9.71	0.14	0.14	1.86	2.29	2.21	—

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SUNSPOT CENSUS BY CLASSIFICATION FOR

MAY 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																			
04	2205	0	0	0	0	1	17	0	0	1	15	0	0	0	0	0	0	0	0
05	2210	0	0	0	0	0	0	1	11	1	23	0	0	0	0	0	0	0	0
06	2210	0	0	0	0	0	0	1	6	1	13	0	0	0	0	0	0	0	0
07																			
08	2145	1	1	0	0	0	0	0	0	1	6	1	27	0	0	0	0	0	0
09																			
10	2235	0	0	0	0	0	0	1	14	1	8	1	31	0	0	0	0	0	0
11																			
12																			
13																			
14																			
15																			
16																			
17																			
18																			
19																			
20																			
21																			
22	2155	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0	0	1	1
23																			
24	2215	0	0	0	0	1	6	1	9	0	0	0	0	0	0	0	0	0	0
25																			
26																			
27																			
28																			
29																			
30																			
31																			
TOTALS	—	1	1	0	0	2	23	5	43	5	65	2	58	0	0	0	0	1	1
REGIONAL PERCENTAGES																			
A	B	C	D	E	F	G	H	J	SIGMAg										
6.2	0.0	12.5	31.2	31.2	12.5	0.0	0.0	6.2	16										
		NOBS = 7		$\overline{p/g}$ mean = 3.3571				$\overline{f/g}$ mean = 11.5714											
				$\overline{p/g}$ mean = 3.4375				$\overline{f/g}$ mean = 11.9375											
GROUP COMPLEXITY INDEX (GCI) = 15.3750																			

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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	$g(S^W)$	$WN(S^W)$	$SN(S^W)$	$BX(S^W)$	$CV(S^W)$	$QC(S^W)$	$IS(S^W)$
2003 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
SEPTEMBER	3.15	51.44	61.95	464.3	64.60	9.98	22.12
OCTOBER	3.05	49.75	59.58	444.3	62.91	9.67	21.33
NOVEMBER	2.95	48.53	59.05	446.4	62.64	9.47	21.14

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 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
SEPTEMBER	3.21	53.53	65.96	508.9	67.87	10.34	23.68
OCTOBER	3.10	51.52	63.32	486.0	66.22	10.02	22.72
NOVEMBER	2.95	48.95	60.06	459.0	63.78	9.58	21.54