



Georgi Dobrovolski Solar Observatory

NEW ZEALAND

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SUNSPOT RESULTS FOR JULY 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	2325	9	46	136	16	17	177	786	159	30	106	2.5	2.0	2.0	4556-1
02															
03															
04															
05															
06															
07															
08	2220	5	36	86	13	13	143	742	93	16	62	1.5	2.5	2.5	4557-1
09															
10															
11															
12															
13	2235	4	9	49	7	1	71	277	107	14	52	2.0	3.0	3.5	4558-2
14															
15															
16															
17															
18															
19	2220	0	0	0	0	0	0	0	0	0	0	1.5	2.0	2.5	4559-2
20	2225	0	0	0	0	0	0	0	0	0	0	1.5	2.0	2.5	4560-2
21	2250	0	0	0	0	0	0	0	0	0	0	2.0	2.0	2.0	4561-2
22															
23	2240	2	9	29	2	5	25	134	24	6	20	1.0	2.0	2.5	4562-2
24															
25															
26															
27															
28	2220	3	14	44	9	2	92	252	81	12	48	2.0	2.5	2.5	4563-2
29	2215	3	20	50	8	8	88	330	71	11	41	1.0	2.0	2.0	4564-2
30															
31															
TOTALS	—	26	134	394	55	46	596	2521	535	89	329	15.0	20.0	22.0	—
NOBS	—	9	9	9	9	9	9	9	9	9	9	9	9	9	—
MNS	—	2.89	14.89	43.78	6.11	5.11	66.22	280.11	59.44	9.89	36.56	1.67	2.22	2.44	—

MEAN WEIGHT = 0.4833

MEAN CONDITION = 2.1111

TRUNCATED WOLF NUMBER = 41.22

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

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SUNSPOT DISTRIBUTION & INTER-SOL INDICES FOR JULY 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	2325	53	7	27	17	2	0	2.5	2.0	2.0	4556-1
02											
03											
04											
05											
06											
07											
08	2220	40	4	23	12	0	1	1.5	2.5	2.5	4557-1
09											
10											
11											
12											
13	2235	12	3	7	1	1	0	2.0	3.0	3.5	4558-2
14											
15											
16											
17											
18											
19	2220	0	0	0	0	0	0	1.5	2.0	2.5	4559-2
20	2225	0	0	0	0	0	0	1.5	2.0	2.5	4560-2
21	2250	0	0	0	0	0	0	2.0	2.0	2.0	4561-2
22											
23	2240	11	2	4	5	0	0	1.0	2.0	2.5	4562-2
24											
25											
26											
27											
28	2220	17	3	12	2	0	0	2.0	2.5	2.5	4563-2
29	2215	23	3	12	8	0	0	1.0	2.0	2.0	4564-2
30											
31											
TOTALS	—	156	22	85	45	3	1	15.0	20.0	22.0	—
NOBS	—	9	9	9	9	9	9	9	9	9	—
MNS	—	17.33	2.44	9.44	5.00	0.33	0.11	1.67	2.22	2.44	—

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SUNSPOT CENSUS BY CLASSIFICATION FOR JULY 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	2325	0	0	0	0	2	2/6	5	2/3/5/11/15	0	0	0	0	0	0	0	0	2	1/1
02																			
03																			
04																			
05																			
06																			
07																			
08	2220	1	1	0	0	0	0	2	7/16	1	10	0	0	0	0	0	0	1	2
09																			
10																			
11																			
12																			
13	2235	0	0	0	0	0	0	2	2/3	0	0	0	0	1	3	0	0	1	1
14																			
15																			
16																			
17																			
18																			
19	2220	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	2225	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	2250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22																			
23	2240	0	0	1	2	0	0	1	7	0	0	0	0	0	0	0	0	0	0
24																			
25																			
26																			
27																			
28	2220	0	0	0	0	0	0	3	3/5/6	0	0	0	0	0	0	0	0	0	0
29	2215	0	0	0	0	1	3	2	5/12	0	0	0	0	0	0	0	0	0	0
30																			
31																			
TOTALS	—	1	1	1	2	3	11	15	102	1	10	0	0	1	3	0	0	4	5
REGIONAL PERCENTAGES																			
A	B	C	D	E	F	G	H	J	Σg										
3.8	3.8	11.5	57.7	3.8	0.0	3.8	0.0	15.4	26										
NOBS = 9		$\overline{p/g}$ mean = 2.1324				$\overline{f/g}$ mean = 5.0657													
		$\overline{p/g}$ mean = 2.1154				$\overline{f/g}$ mean = 5.1538													
GROUP COMPLEXITY INDEX (GCI) = 7.2692																			

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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	$g(S^W)$	$WN(S^W)$	$SN(S^W)$	$BX(S^W)$	$CV(S^W)$	$QC(S^W)$	$IS(S^W)$
2004 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
DECEMBER	2.87	48.18	60.36	456.1	63.75	9.40	21.60
2005 JANUARY	2.83	47.36	60.71	432.0	64.03	9.38	21.14

BARNES-13 METHOD

MONTH	$g(S^{B13})$	$WN(S^{B13})$	$SN(S^{B13})$	$BX(S^{B13})$	$CV(S^{B13})$	$QC(S^{B13})$	$IS(S^{B13})$
2004 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
DECEMBER	2.80	46.43	57.15	426.5	61.36	9.13	20.38
2005 JANUARY	2.72	44.53	55.15	390.9	59.85	8.85	19.33