



Georgi Dobrovolski Solar Observatory

NEW ZEALAND

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SUNSPOT RESULTS FOR **SEPTEMBER 2006**

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 .

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

DATE	UT	g	f	WN	p	s	SN	BX	CV	QC	QC ²	Q	S	T	Ref.
01															
02															
03	2200	0	0	0	0	0	0	0	0	0	0	1.5	2.5	2.5	4717-7
04															
05															
06															
07	2230	3	12	42	5	4	54	248	79	10	34	2.0	2.5	2.0	4718-7
08															
09															
10															
11															
12															
13	2100	2	6	26	2	3	23	48	50	6	18	2.0	2.5	2.5	4719-7
14															
15															
16															
17															
18	2030	1	1	11	1	0	10	37	10	2	4	1.0	2.5	2.5	4720-7
19	2045	1	1	11	1	0	10	37	10	2	4	2.0	2.5	3.0	4721-7
20															
21	2140	1	2	12	1	1	11	16	11	3	9	2.0	2.5	2.0	4722-8
22															
23															
24															
25	2145	0	0	0	0	0	0	0	0	0	0	2.0	2.5	2.5	4723-8
26															
27															
28															
29															
30															
31															
TOTALS	—	8	22	102	10	8	108	386	160	23	69	12.5	17.5	17.0	—
NOBS	—	7	7	7	7	7	7	7	7	7	7	7	7	7	—
MNS	—	1.14	3.14	14.57	1.43	1.14	15.43	55.14	22.86	3.29	9.86	1.79	2.50	2.43	—

MEAN WEIGHT = 0.4488

MEAN CONDITION = 2.2381

TRUNCATED WOLF NUMBER = 14.57

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SUNSPOT DISTRIBUTION & INTER-SOL INDICES FOR SEPTEMBER 2006

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	2200	0	0	0	0	0	0	1.5	2.5	2.5	4717-7
04											
05											
06											
07	2230	15	3	8	4	0	0	2.0	2.5	2.0	4718-7
08											
09											
10											
11											
12											
13	2100	8	2	3	3	0	0	2.0	2.5	2.5	4719-7
14											
15											
16											
17											
18	2030	1	0	0	0	1	0	1.0	2.5	2.5	4720-7
19	2045	1	0	0	0	1	0	2.0	2.5	3.0	4721-7
20											
21	2140	3	1	1	1	0	0	2.0	2.5	2.0	4722-8
22											
23											
24											
25	2145	0	0	0	0	0	0	2.0	2.5	2.5	4723-8
26											
27											
28											
29											
30											
31											
TOTALS	—	28	6	12	8	2	0	12.5	17.5	17.0	—
NOBS	—	7	7	7	7	7	7	7	7	7	—
MNS	—	4.00	0.86	1.71	1.14	0.29	0.00	1.79	2.50	2.43	—

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SUNSPOT CENSUS BY CLASSIFICATION FOR SEPTEMBER 2006

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	2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04																			
05																			
06																			
07	2230	0	0	0	0	1	2	1	8	0	0	0	0	0	0	1	2	0	0
08																			
09																			
10																			
11																			
12																			
13	2100	0	0	0	0	2	2/4	0	0	0	0	0	0	0	0	0	0	0	0
14																			
15																			
16																			
17																			
18	2030	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
19	2045	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
20																			
21	2140	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0
22																			
23																			
24																			
25	2145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26																			
27																			
28																			
29																			
30																			
31																			
TOTALS	—	0	0	0	0	4	10	1	8	0	0	0	0	0	0	1	2	2	2
REGIONAL PERCENTAGES																			
A	B	C	D	E	F	G	H	J	Σg										
0.0	0.0	50.0	12.5	0.0	0.0	0.0	12.5	25.0	8										
NOBS = 7				$\overline{p/g}$ mean = 1.1333						$\overline{f/g}$ mean = 2.2000									
				$\overline{p/g}$ mean = 1.2500						$\overline{f/g}$ mean = 2.7500									
GROUP COMPLEXITY INDEX (GCI) = 4.0000																			

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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 APRIL	2.58	41.97	53.70	350.4	56.63	8.44	18.03
MAY	2.32	37.30	47.99	301.4	50.99	7.54	15.82
JUNE	2.33	36.69	47.03	279.9	49.91	7.44	15.11
JULY	2.37	36.83	47.22	274.0	49.81	7.48	14.78
AUGUST	2.22	34.42	44.96	256.9	46.61	7.03	13.74
SEPTEMBER	2.11	32.64	42.97	243.8	43.20	6.65	13.02
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

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 APRIL	2.58	41.72	53.68	337.8	57.16	8.43	17.88
MAY	2.50	40.44	53.26	323.2	55.88	8.20	17.39
JUNE	2.48	39.88	53.22	312.6	55.11	8.12	17.01
JULY	2.44	38.85	52.00	298.9	53.16	7.92	16.25
AUGUST	2.32	36.39	48.69	276.3	49.17	7.42	14.92
SEPTEMBER	2.15	33.32	44.22	249.2	44.31	6.78	13.33
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