



Georgi Dobrovolski Solar Observatory

NEW ZEALAND

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NEW ALTERNATIVE SITE

SUNSPOT RESULTS FOR SEPTEMBER 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	2155	1	2	12	1	1	11	16	11	3	9	1.5	3.0	3.0	4579-3
02	2150	1	2	12	1	1	11	16	11	3	9	2.0	2.5	2.5	4580-3
03															
04															
05															
06															
07															
08															
09															
10															
11															
12															
13															
14	2035	1	46	56	9	13	103	1150	56	5	25	1.0	2.0	2.5	4581-4
15															
16															
17															
18															
19	2225	2	9	29	4	4	44	244	96	8	34	1.5	2.5	2.5	4582-4
20	2135	1	6	16	3	2	32	150	32	5	25	1.5	2.5	2.0	4583-4
21															
22															
23	2135	2	7	27	1	5	15	52	40	4	10	1.5	2.5	2.5	4584-4
24															
25															
26	2210	2	3	23	2	0	20	125	47	5	13	1.5	3.0	3.0	4585-4
27															
28															
29	2045	1	1	11	1	0	10	37	10	2	4	2.0	2.0	2.0	4586-4
30															
31	—														
TOTALS	—	11	76	186	22	26	246	1790	303	35	129	12.5	20.0	20.0	—
NOBS	—	8	8	8	8	8	8	8	8	8	8	8	8	8	—
MNS	—	1.38	9.50	23.25	2.75	3.25	30.75	223.75	37.88	4.38	16.12	1.56	2.50	2.50	—

MEAN WEIGHT = 0.4621

MEAN CONDITION = 2.1875

TRUNCATED WOLF NUMBER = 21.88

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

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SUNSPOT DISTRIBUTION & INTER-SOL INDICES FOR SEPTEMBER 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	2155	3	1	1	1	0	0	1.5	3.0	3.0	4579-3
02	2150	3	1	1	1	0	0	2.0	2.5	2.5	4580-3
03											
04											
05											
06											
07											
08											
09											
10											
11											
12											
13											
14	2035	47	1	33	13	0	0	1.0	2.0	2.5	4581-4
15											
16											
17											
18											
19	2225	10	1	4	4	1	0	1.5	2.5	2.5	4582-4
20	2135	7	1	4	2	0	0	1.5	2.5	2.0	4583-4
21											
22											
23	2135	8	1	2	4	0	1	1.5	2.5	2.5	4584-4
24											
25											
26	2210	4	1	2	0	1	0	1.5	3.0	3.0	4585-4
27											
28											
29	2045	1	0	0	0	1	0	2.0	2.0	2.0	4586-4
30											
31	—										
TOTALS	—	83	7	47	25	3	1	12.5	20.0	20.0	—
NOBS	—	8	8	8	8	8	8	8	8	8	—
MNS	—	10.38	0.88	5.88	3.12	0.38	0.12	1.56	2.50	2.50	—

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SUNSPOT CENSUS BY CLASSIFICATION FOR SEPTEMBER 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	2155	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0
02	2150	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0
03																			
04																			
05																			
06																			
07																			
08																			
09																			
10																			
11																			
12																			
13																			
14	2035	0	0	0	0	0	0	0	0	1	46	0	0	0	0	0	0	0	0
15																			
16																			
17																			
18																			
19	2225	0	0	0	0	0	0	0	0	1	8	0	0	0	0	1	1	0	0
20	2135	0	0	0	0	0	0	0	0	1	6	0	0	0	0	0	0	0	0
21																			
22																			
23	2135	1	1	0	0	1	6	0	0	0	0	0	0	0	0	0	0	0	0
24																			
25																			
26	2210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	1
27																			
28																			
29	2045	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
30																			
31	—																		
TOTALS	—	1	1	0	0	3	10	0	0	3	60	0	0	0	0	2	3	2	2
REGIONAL PERCENTAGES																			
A	B	C	D	E	F	G	H	J	Σg										
9.1	0.0	27.3	0.0	27.3	0.0	0.0	18.2	18.2	11										
NOBS = 8				$\overline{p/g}$ mean = 2.3125						$\overline{f/g}$ mean = 8.3125									
				$\overline{p/g}$ mean = 2.0000						$\overline{f/g}$ mean = 6.9091									
GROUP COMPLEXITY INDEX (GCI) = 8.9091																			

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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 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
FEBRUARY	2.81	46.03	59.67	391.9	62.75	9.27	20.02
MARCH	2.79	45.29	58.30	376.6	61.02	9.13	19.49

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 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
FEBRUARY	2.67	43.30	54.11	362.6	58.93	8.70	18.55
MARCH	2.64	42.71	53.98	349.1	58.26	8.62	18.23