



Georgi Dobrovolski Solar Observatory

NEW ZEALAND

E-MAIL: gdso@earthling.net

WEBSITE: www.freewebs.com/gdso

NEW ALTERNATIVE SITE

SUNSPOT RESULTS FOR OCTOBER 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															
05															
06	2000	1	11	21	2	7	27	198	22	4	16	1.5	2.5	2.5	4587-5
07															
08															
09	2205	1	2	12	0	2	2	8	2	2	4	2.0	3.5	3.0	4588-5
10															
11	2030	1	1	11	0	1	1	4	1	1	1	1.0	2.5	2.5	4589-5
12															
13															
14															
15															
16	2035	1	1	11	1	0	10	37	10	2	4	1.5	2.5	2.5	4590-5
17	2030	1	1	11	1	0	10	37	10	2	4	1.5	3.0	2.5	4591-5
18															
19															
20															
21															
22															
23	2000	0	0	0	0	0	0	0	0	0	0	1.0	2.0	2.0	4592-5
24	2125	0	0	0	0	0	0	0	0	0	0	2.0	3.0	3.0	4593-5
25	2010	0	0	0	0	0	0	0	0	0	0	1.0	2.0	2.0	4594-5
26	2040	0	0	0	0	0	0	0	0	0	0	1.5	2.0	2.0	4595-5
27															
28															
29															
30	1955	1	3	13	2	1	21	54	28	4	16	1.5	2.5	2.5	4596-6
31	1940	1	5	15	3	2	32	125	35	5	25	1.5	2.5	2.0	4597-6
TOTALS	—	7	24	94	9	13	103	463	108	20	70	16.0	28.0	26.5	—
NOBS	—	11	11	11	11	11	11	11	11	11	11	11	11	11	—
MNS	—	0.64	2.18	8.55	0.82	1.18	9.36	42.09	9.82	1.82	6.36	1.45	2.55	2.41	—

MEAN WEIGHT = 0.4806

MEAN CONDITION = 2.1364

TRUNCATED WOLF NUMBER = 6.45

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

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SUNSPOT DISTRIBUTION & INTER-SOL INDICES FOR OCTOBER 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											
05											
06	2000	12	1	4	7	0	0	1.5	2.5	2.5	4587-5
07											
08											
09	2205	3	1	0	2	0	0	2.0	3.5	3.0	4588-5
10											
11	2030	1	0	0	0	0	1	1.0	2.5	2.5	4589-5
12											
13											
14											
15											
16	2035	1	0	0	0	1	0	1.5	2.5	2.5	4590-5
17	2030	1	0	0	0	1	0	1.5	3.0	2.5	4591-5
18											
19											
20											
21											
22											
23	2000	0	0	0	0	0	0	1.0	2.0	2.0	4592-5
24	2125	0	0	0	0	0	0	2.0	3.0	3.0	4593-5
25	2010	0	0	0	0	0	0	1.0	2.0	2.0	4594-5
26	2040	0	0	0	0	0	0	1.5	2.0	2.0	4595-5
27											
28											
29											
30	1955	4	1	2	1	0	0	1.5	2.5	2.5	4596-6
31	1940	6	1	3	2	0	0	1.5	2.5	2.0	4597-6
TOTALS	—	28	4	9	12	2	1	16.0	28.0	26.5	—
NOBS	—	11	11	11	11	11	11	11	11	11	—
MNS	—	2.55	0.36	0.82	1.09	0.18	0.09	1.45	2.55	2.41	—

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SUNSPOT CENSUS BY CLASSIFICATION FOR OCTOBER 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																			
05																			
06	2000	0	0	0	0	0	0	1	11	0	0	0	0	0	0	0	0	0	0
07																			
08																			
09	2205	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10																			
11	2030	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12																			
13																			
14																			
15																			
16	2035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
17	2030	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
18																			
19																			
20																			
21																			
22																			
23	2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	2125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	2010	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	2040	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27																			
28																			
29																			
30	1955	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0
31	1940	0	0	0	0	0	0	0	0	1	5	0	0	0	0	0	0	0	0
TOTALS	—	1	1	1	2	0	0	2	14	1	5	0	0	0	0	0	0	2	2
REGIONAL PERCENTAGES																			
A	B	C	D	E	F	G	H	J	Σg										
14.3	14.3	0.0	28.6	14.3	0.0	0.0	0.0	28.6	7										
NOBS = 11				$\overline{p/g}$ mean = 1.2857						$\overline{f/g}$ mean = 3.4286									
				$\overline{p/g}$ mean = 1.2857						$\overline{f/g}$ mean = 3.4286									
GROUP COMPLEXITY INDEX (GCI) = 4.7143																			

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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 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
APRIL	2.58	41.97	53.70	350.4	56.63	8.44	18.03

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 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
APRIL	2.58	41.72	53.68	337.8	57.16	8.43	17.88