Georgi Dobrovolski Solar Observatory

SUNSPOT DISTRIBUTION & INTER-SOL INDICES FOR

MARCH 2007

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 umbrae within penumbrae 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	2045	1	0	0	0	1	0	1.5	2.5	2.0	4777-3
03											
04	2045	9	2	3	4	0	0	1.5	2.0	2.0	4778-4
05	2110	4	1	0	2	1	0	2.0	2.5	2.0	4779-4
06											
07											
08	2050	0	0	0	0	0	0	2.0	2.0	2.0	4780-4
09											
10											
11											
12	2025	0	0	0	0	0	0	2.0	2.5	2.5	4781-4
13											
14											
15											
16											
17											
18	2040	0	0	0	0	0	0	1.5	3.0	3.0	4782-4
19	2130	0	0	0	0	0	0	1.5	2.0	2.0	4783-4
20	2110	0	0	0	0	0	0	1.0	2.5	2.5	4784-4
21											
22	2105	0	0	0	0	0	0	1.5	2.0	2.0	4785-4
23											
24											
25											
26	2100	3	1	1	1	0	0	2.5	3.0	2.5	4786-4
27											
28											
29											
30	2210	1	0	0	0	0	1	1.5	2.5	2.0	4787-4
31											
TOTALS	——	18	4	4	7	2	1	18.5	26.5	24.5	——
NOBS	——	11	11	11	11	11	11	11	11	11	——
MNS	——	1.64	0.36	0.36	0.64	0.18	0.09	1.68	2.41	2.23	——

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SUNSPOT CENSUS BY CLASSIFICATION FOR

MARCH 2007

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	2045	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
03																			
04	2045	0	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	1	3
05	2110	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1
06																			
07																			
08	2050	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09																			
10																			
11																			
12	2025	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13																			
14																			
15																			
16																			
17																			
18	2040	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	2130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	2110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21																			
22	2105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23																			
24																			
25																			
26	2100	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0
27																			
28																			
29																			
30	2210	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31																			
TOTALS	——	1	1	2	6	1	2	0	0	0	0	0	0	0	0	0	0	3	5

REGIONAL PERCENTAGES

A	B	C	D	E	F	G	H	J	Σ g
14.3	28.6	14.3	0.0	0.0	0.0	0.0	0.0	42.9	7

NOBS = 11 $\overline{p / g}$ mean = 0.6000 $\overline{f / g}$ mean = 1.8000

$\overline{p} / \overline{g}$ mean = 0.5714 $\overline{f} / \overline{g}$ mean = 2.0000

GROUP COMPLEXITY INDEX (GCI) = 2.5714

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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 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
APRIL	1.50	21.21	25.00	139.5	27.07	4.43	7.06
MAY	1.56	21.92	25.55	140.9	27.90	4.57	7.20
JUNE	1.48	21.01	24.39	138.9	27.71	4.38	7.13
JULY	1.41	20.26	23.39	138.1	28.14	4.24	7.06
AUGUST	1.48	21.13	24.22	141.8	30.33	4.44	7.25
SEPTEMBER	1.49	21.20	24.05	140.7	30.89	4.46	7.20

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 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
APRIL	1.53	21.56	24.84	135.8	26.44	4.41	7.08
MAY	1.49	21.08	24.29	134.5	26.52	4.36	7.01
JUNE	1.41	20.24	23.57	135.4	26.76	4.24	6.98
JULY	1.38	20.02	23.53	140.6	27.97	4.25	7.13
AUGUST	1.41	20.48	24.07	145.9	29.83	4.39	7.32
SEPTEMBER	1.42	20.56	23.96	145.0	30.80	4.42	7.26