



SUNSPOT RESULTS FOR MAY 2017

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 ; PX = 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 .

PLEASE NOTE:
 From July 2015's issue,
 the observed Pettisindex
 is labelled PX.

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

DATE	UT	g	f	WN	p	s	PX	BX	CV	QC	QC ²	Q	S	T	Ref.											
01	2240	0	0	0	0	0	0	0	0	0	0	1.5	2.5	2.0	5978-0											
02	2255	1	8	18	2	3	23	144	22	4	16	1.5	2.5	2.0	5979-0											
03																										
04																										
05	2235	2	5	25	3	1	31	60	33	7	25	1.5	2.5	2.5	5980-0											
06																										
07																										
08																										
09																										
10																										
11																										
12	2245	0	0	0	0	0	0	0	0	0	0	2.0	2.5	2.0	5981-0											
13	2240	0	0	0	0	0	0	0	0	0	0	1.5	2.0	2.0	5982-0											
14																										
15																										
16																										
17																										
18																										
19	2230	2	2	22	2	0	20	74	20	4	8	2.0	2.5	2.5	5983-0											
20	2235	2	2	22	2	0	20	74	20	4	8	1.0	2.0	2.0	5984-0											
21	2230	3	6	36	4	2	42	107	49	9	29	1.0	2.0	2.0	5985-0											
22																										
23																										
24	2235	1	8	18	4	2	42	144	31	4	16	1.5	3.0	2.5	5986-0											
25	2250	1	13	23	4	4	44	234	31	4	16	1.0	2.5	2.0	5987-0											
26	2240	1	16	26	3	5	35	288	31	4	16	1.5	2.5	2.0	5988-1											
27																										
28																										
29																										
30																										
31	2230	0	0	0	0	0	0	0	0	0	0	1.5	2.5	2.5	5989-1											
Σ	—	13	60	190	24	17	257	1125	237	40	134	17.5	29.0	26.0	—											
NOBS	—	12	12	12	12	12	12	12	12	12	12	12	12	12	—											
MNS	—	1.08	5.00	15.83	2.00	1.42	21.42	93.75	19.75	3.33	11.17	1.46	2.42	2.17	—											
MEAN WEIGHT =		0.5027					MEAN CONDITION =					2.0139					TRUNCATED WOLF NUMBER =					15.83				

Georgi Dobrovolski Solar Observatory



SUNSPOT DISTRIBUTION & INTER-SOL INDICES FOR MAY 2017

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	2240	0	0	0	0	0	0	1.5	2.5	2.0	5978-0
02	2255	9	1	5	3	0	0	1.5	2.5	2.0	5979-0
03											
04											
05	2235	7	2	4	1	0	0	1.5	2.5	2.5	5980-0
06											
07											
08											
09											
10											
11											
12	2245	0	0	0	0	0	0	2.0	2.5	2.0	5981-0
13	2240	0	0	0	0	0	0	1.5	2.0	2.0	5982-0
14											
15											
16											
17											
18											
19	2230	2	0	0	0	2	0	2.0	2.5	2.5	5983-0
20	2235	2	0	0	0	2	0	1.0	2.0	2.0	5984-0
21	2230	8	2	3	2	1	0	1.0	2.0	2.0	5985-0
22											
23											
24	2235	9	1	6	2	0	0	1.5	3.0	2.5	5986-0
25	2250	14	1	9	4	0	0	1.0	2.5	2.0	5987-0
26	2240	17	1	11	5	0	0	1.5	2.5	2.0	5988-1
27											
28											
29											
30											
31	2230	0	0	0	0	0	0	1.5	2.5	2.5	5989-1
Σ	—	68	8	38	17	5	0	17.5	29.0	26.0	—
NOBS	—	12	12	12	12	12	12	12	12	12	—
MNS	—	5.67	0.67	3.17	1.42	0.42	0.00	1.46	2.42	2.17	—

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SUNSPOT CENSUS BY CLASSIFICATION FOR MAY 2017

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	2240	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02	2255	0	0	0	0	0	0	1	8	0	0	0	0	0	0	0	0	0	0
03																			
04																			
05	2235	0	0	0	0	1	3	1	2	0	0	0	0	0	0	0	0	0	0
06																			
07																			
08																			
09																			
10																			
11																			
12	2245	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	2240	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14																			
15																			
16																			
17																			
18																			
19	2230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1/1
20	2235	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1/1
21	2230	0	0	0	0	1	2	1	3	0	0	0	0	0	0	0	0	1	1
22																			
23																			
24	2235	0	0	0	0	0	0	1	8	0	0	0	0	0	0	0	0	0	0
25	2250	0	0	0	0	0	0	1	13	0	0	0	0	0	0	0	0	0	0
26	2240	0	0	0	0	0	0	1	16	0	0	0	0	0	0	0	0	0	0
27																			
28																			
29																			
30																			
31	2230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	—	0	0	0	0	2	5	6	50	0	0	0	0	0	0	0	0	5	5
REGIONAL PERCENTAGES																			
A	B	C	D	E	F	G	H	J	Σg										
0.0	0.0	15.4	46.2	0.0	0.0	0.0	0.0	38.5	13										
NOBS = 12				$\bar{p/g}$ mean = 2.2292						$\bar{f/g}$ mean = 6.4375									
				$\bar{p/g}$ mean = 1.8462						$\bar{f/g}$ mean = 4.6154									
GROUP COMPLEXITY INDEX (GCI) = 6.4615																			



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	$g^r(S^w)$	$WN^r(S^w)$	$PX^r(S^w)$	$BX^r(S^w)$	$CV^r(S^w)$	$QC^r(S^w)$	$IS^r(S^w)$
2015 DECEMBER	2.51	39.57	47.78	374.0	50.79	8.28	16.24
2016 JANUARY	2.30	36.14	43.49	334.6	46.88	7.58	14.69
FEBRUARY	2.22	34.30	40.69	297.2	44.01	7.23	13.60
MARCH	2.22	33.19	38.55	259.5	42.02	7.04	12.52
APRIL	2.17	32.24	37.29	247.2	40.89	6.80	12.02
MAY	2.13	31.38	36.01	234.1	39.81	6.59	11.56
JUNE	2.05	29.80	33.32	204.2	37.05	6.23	10.70
JULY	1.97	28.48	31.41	185.6	34.55	5.94	10.11
AUGUST	1.87	27.06	30.01	175.4	33.10	5.68	9.58
SEPTEMBER	1.72	24.88	27.63	160.7	30.92	5.22	8.82
OCTOBER	1.61	23.46	26.23	154.7	28.81	4.90	8.41
NOVEMBER	1.53	22.14	24.90	147.6	26.41	4.60	7.90

BARNES-13 METHOD

MONTH	$g^r(S^{B13})$	$WN^r(S^{B13})$	$PX^r(S^{B13})$	$BX^r(S^{B13})$	$CV^r(S^{B13})$	$QC^r(S^{B13})$	$IS^r(S^{B13})$
2015 DECEMBER	2.38	37.61	46.09	360.9	48.30	7.94	15.49
2016 JANUARY	2.28	35.15	42.32	310.6	45.29	7.48	13.92
FEBRUARY	2.23	33.42	39.24	266.3	42.84	7.14	12.63
MARCH	2.21	32.39	37.16	233.9	41.44	6.93	11.74
APRIL	2.19	31.84	36.06	220.0	40.87	6.77	11.37
MAY	2.16	31.26	34.98	210.5	39.99	6.59	11.11
JUNE	2.09	30.22	33.33	199.1	38.04	6.31	10.71
JULY	2.02	29.31	32.23	195.0	36.19	6.07	10.48
AUGUST	1.94	28.36	31.42	193.6	34.66	5.86	10.29
SEPTEMBER	1.81	26.63	29.67	185.3	32.26	5.49	9.76
OCTOBER	1.66	24.45	27.36	170.7	29.12	5.04	8.98
NOVEMBER	1.52	22.22	25.01	152.8	25.95	4.60	8.09

NB: VALUES FROM MAY 2015 TO MAY 2016 (INCLUSIVE),
ARE BASED, IN PART, ON INTERPOLATED VALUES OF NOVEMBER 2015.