

SUNSPOT - BULLETIN

1984 , No. 5

Provisional Sunspot - Numbers for MAY 1984

Dependent on observations at Locarno Specola Solare ,
 complemented by an international network and
 determined at the Observatoire Royal de Belgique.
 Thirty nine cooperating stations on June 1st , 0900 h UT .

Day	R _i	Day	R _i
1	97	16	97
2	89	17	83
3	68	18	70
4	49	19	78
5	38	20	70
6	24	21	65
7	35	22	77
8	54	23	83
9	72	24	86
10	85	25	70
11	94	26	87
12	100	27	86
13	118	28	63
14	97	29	74
15	85	30	70
		31	63

MEAN = 75 . 1

Predictions of the smoothed
 monthly Sunspot - Numbers

Classical Method				S.I.D.C. Adjusted Values			
1984 Jun.	53	1984 Sep.	49	1984 Jun.	45	1984 Sep.	41
Jul.	52	Oct.	47	Jul.	44	Oct.	39
Aug.	51	Nov.	46	Aug.	43	Nov.	38

Precision on the sixth predicted value : ± 8
 Classical estimated smoothed value for 1985 February : 41 ± 10
 Forecasted values are estimated on the basis of the latest
 provisional monthly smoothed value (1983 November): 66.3 ± 5%

Brussels , June 1st , 1984 A . Koeckelenbergh .

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S.I.D.C. SUMMARY OF URSIGRAMS
1984 MAY $R'_{im} = 75.1$

Date	R_1	PPSI	2800	COS	XFI	XI	A_k	
1	97	155	151	125	24	1/0	23	P - 2b
2	89	100	142	116	23	1/0	15	P)
3	68	55	121	119	10	0/0	14	
4	49	24	118	105	17	1/0	16	
5	38	8	113	101	21	2/0	29	
6	24	3	106	99	9	0/0	12	
7	35	23	116	94	11	0/0	5	
8	54	59	120	103	9	0/0	7	
9	72	107	127	108	7	0/0	23	
10	85	142	148	106	36	1/0	26	2b
11	94	105	142	116	31	2/0	16	
12	100	109	147	116	34	1/0	16	
13	118	173	148	118	10	0/0	10	
14	97	118	144	127	7	0/0	16	
15	85	60	137	116	10	0/0	10	
16	97	52	134	-	-	-	10	
17	83	39	127	125	10	0/0	32	ssc
18	70	15	129	127	34	2/0	19	
19	78	27	134	118	127	1/1	25	2b
20	70	128	135	111	165	5/1	32	2b - mgst
21	65	40	140	112	112	1/1	35	2b - x2
22	77	64	127	117	33	2/0	34	2b
23	83	74	127	-	23	1/0	20	
24	86	86	124	116	6	0/0	28	P - ssc
25	70	56	125	126	19	1/0	21	
26	87	44	118	123	21	0/0	18	
27	86	37	117	128	6	0/0	10	
28	63	22	119	125	6	0/0	9	
29	74	35	118	130	13	0/0	12	
30	70	39	118		9	0/0		
31	63	39						

Tentative predicted evolution of sunspot number : decrease to september .

- R'_{im} : provisional International monthly Sunspot-Number from the S.I.D.C.
 R'_1 : provisional International daily Sunspot-Numbers from the S.I.D.C.
 PPSI : Prompt Photometric Sunspot Index from the S.I.D.C. in 10^{-5} W.m^{-2}
 Quantity to subtract at the mean solar constant, due to the presence of the sunspots .
 2800 : 2800 Mhz solar flux from the Ursigrams (origin:Herzberg Institute Ottawa)
 COS : thousands of cosmic rays counts from the Ursigrams
 XFI : X-flare Index from the S.I.D.C.on the base of the Ursigrams .The sum of number of class C-flares +10 x class M-flares of significant X-ray flux + 100 x X-flares with important X-ray flux .
 XI : X-flare Index from the Ursigrams (number of M-flares/number of X-flares)
 A_k : geomagnetic Index of Wingst station from the Ursigrams .
 sid : Sudden Ionospheric disturbance ; ssc :sudden storm commencement
 sfe : solar flare effect ; // :two ribbons flare ; P :proton flare
 mst : magnetic storm ; II radio- outburst ; pca :polar cap absorption
 aur : aurorae ; 1b ,2b ...: flare of class 1 or2 (bright) .

OBSERVATOIRE ROYAL DE BELGIQUE

DEPARTEMENT 4 RADIOASTRONOMIE ET PHYSIQUE SOLAIRE

NOMBRES RELATIFS DE WOLF JOURNALIERS

PROVISOIRES

PROVISIONAL

SUNSPOT RELATIVE NUMBERS

STATION UCCLE BELGIUM

MAI 1984

DATE	UT	NOMBRE DE GROUPES	NOMBRE DE TACHES	NOMBRE DE WOLF	NOMB REL ZONE CENTRALE	PPSI 10-6 WM-2	QUAL	OBS
1	0730	5	70	120	23	1390.	2	AK
2	1045	5	47	97	20	613.	2	JH
3	0739	5	41	91	0	661.	3	HB
4	1126	3	15	45	0	303.	2	HB
5	0915	3	9	39	0	129.	1	CG
7	0555	2	11	31	0	264.	1	HB
8	0712	3	46	76	0	498.	2	JH
9	0634	3	68	98	23	901.	2	JH
10	0800	4	84	124	110	1177.	3	AK
11	0804	4	97	137	125	718.	1	JH
12	0930	3	68	98	87	785.	2	CG
13	1030	5	86	136	125	1331.	2	AK
14	1243	4	105	145	134	1040.	3	JH
15	1226	5	69	119	27	316.	2	JH
16	1310	6	63	123	46	413.	2	JH
17	1235	5	64	114	37	418.	2	JH
18	0724	4	37	77	30	170.	3	JH
19	1115	5	44	94	35	553.	2	CG
22	1228	3	67	97	52	828.	2	JH
23	1238	4	67	107	62	978.	2	JH
24	1323	3	76	106	95	1127.	2	JH
26	1315	4	61	101	71	406.	2	AK
27	0750	8	56	136	54	391.	3	AK
31	1620	4	21	61	50	-	2	AK

LE SOLEIL A ETE OBSERVE 24 JOURS SUR 31 POSSIBLES
LE NOMBRE RELATIF DE WOLF MOYEN EST DE 98,8

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NORMALISED UCCLE OBSERVATIONAL SUNSPOT NUMBERS

U'=K'U FOR 1984				MAY					
K' = .910 (*)									
1	109	7	28	13	123	19	85	25	***
2	88	8	69	14	132	20	***	26	91
3	82	9	89	15	108	21	***	27	123
4	40	10	112	16	111	22	88	28	***
5	35	11	124	17	103	23	97	29	***
6	***	12	89	18	70	24	96	30	***
								31	56

THE SUN WAS OBSERVED 24 DAYS ON 31 POSSIBLE
THE NORMALISED RELATIVE MONTHLY MEAN WOLF NUMBER IS 90

* K' IS THE MEAN OF THE MONTHLY K'S FOR THE LAST FIVE YEARS

UCCLE OBSERVATIONAL MAJOR SUNSPOTS FOR 1984
E AND F BRUNNER'S TYPE GROUPS

UCCLE NO	EAST LIMB		DATE AND TYPE			WEST LIMB	
	DATE	IST OBS	DATE	TYPE	LAST OBS	DATE	
2-1748	4 21.8	22 G	4 28.5		5 H	5 5.3	
4-1748	4 20.9	24 A	4 27.6		3 H	5 4.4	
7-1748	4 23.7	28 D	4 30.4		5 H	5 7.2	
9-1748	5 5.8	7 E	5 12.6		19 H	5 19.3	
1-1749	5 17.4	18 J	5 24.2		27 G	5 30.9	

PROBABLE RETURN OF MAJOR GROUPS FOR 1984
JUNE

NO	NEW EAST LIMB	NEW CMP	NEW WEST LIMB
4	5 17.8	5 24.6	5 31.3
9	6 2.6	6 9.4	6 16.1