



1984

No.3

 Provisional Sunspot - Numbers for MARCH 1984
 

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Dependent on observations at Locarno Specola Solare,  
 complemented by an international network and  
 determined at the Observatoire Royal de Belgique.  
 Thirty five cooperating stations on April 1, 0930 UT

Day	R' <sub>I</sub>	Day	R' <sub>I</sub>
1	74	16	117
2	78	17	105
3	66	18	92
4	54	19	90
5	65	20	103
6	46	21	98
7	51	22	97
8	64	23	89
9	60	24	80
10	42	25	97
11	61	26	101
12	72	27	90
13	79	28	98
14	98	29	92
15	112	30	107
		31	113

 MEAN : 83.6
 

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 Predictions of the smoothed  
 monthly Sunspot - Numbers
 

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Classical Method			S.I.D.C. Adjusted Values				
1984 Apr.	55	1984 Jul.	50	1984 Apr.	44	1984 Jul.	38
May	53	Aug.	48	May	42	Aug.	37
Jun.	51	Sep.	47	Jun.	39	Sep.	37

 Precision on the sixth predicted value :  $\pm 8$ 

 Classical estimated smoothed value for 1984 December :  $42 \pm 10$ 

 Forecasted values are evaluated on the basis of the latest  
 monthly smoothed value ( 1983 September ) :  $67.9 \pm 5\%$ 


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Brussels, April 1 st , 1984

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S.I.D.C. SUMMARY OF URSIGRAMS  
1984 MARCH  $R_{im}^i = 83.6$

Date	$R_1$	PPSI	2800	COS	XFI	XI	$A_k$	
1	74	49	146	95	17	1/0	30	
2	78	34	141	104	2	2/0	32	
3	66	19	125	104	4	0/0	32	
4	54	16	120	96	3	0/0	9	
5	65	16	110	89	1	0/0	4	
6	46	25	111	89	8	0/0	28	SSC
7	51	31	107	91	2	0/0	25	
8	64	33	105	92	7	0/0	33	
9	60	37	104	82	3	0/0	18	
10	42	31	100	83	6	0/0	21	
11	61	30	100	84	6	0/0	12	
12	72	37	101	75	12	0/0	12	
13	79	42	116	76	20	1/0	17	1b -2b -P
14	98	40	122	81	12	2/0	6	P - X
15	112	48	136	79	12	0/0	10	
16	117	53	119	85	21	1/0	20	X
17	105	47	134	81	22	1/0	22	
18	92	46	129	79	21	0/0	19	
19	90	36	128	78	16	0/0	10	
20	103	49	127	82	17	0/0	3	2n -SID
21	98	56	123	79	19	0/0	8	
22	97	49	124	96	10	1/0	20	
23	89	59	116	100	2	0/0	14	
24	80	49	114	98	3	0/0	10	
25	97	32	112	86	0	0/0	27	
26	101	25	121	81	3	0/0	20	
27	90	23	130	-	34	2/0	25	
28	98	61	136	99	14	0/0	47	SSC
29	92	66	141	105	48	3/0	35	
30	107	111	144	-	33	2/0	(20)	1b
31	113	138						

- $R_{im}^i$  : 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  $10^{-5} \text{ W.m}^{-2}$   
 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 ribbonsflare ; 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

MARS 1984

DATE	UT	NOMBRE DE GROUPES	NOMBRE DE TACHES	NOMBRE DE WOLF	NOMB REL ZONE CENTRALE	PPSI 10-6 WM-2	QUAL	OBS
1	0853	5	55	105	39	358.	2	ST
2	1259	6	39	99	33	272.	1	ST
3	0920	5	27	77	49	218.	2	HB
4	1115	7	36	106	64	213.	3	AK
6	1339	4	33	73	35	250.	1	ST
7	1318	4	29	69	52	320.	1	ST
8	1103	5	53	103	85	373.	2	ST
9	0953	5	26	76	47	443.	3	HB
12	1124	7	34	104	65	360.	3	ST
13	1250	7	43	113	53	247.	2	ST
14	1304	9	54	144	38	322.	3	ST
15	0913	9	72	162	51	172.	2	ST
16	1137	9	56	146	40	379.	2	ST
19	1251	8	58	138	62	356.	2	ST
20	0816	8	50	130	62	384.	3	ST
21	0936	7	37	107	39	683.	2	ST
22	0851	8	50	130	87	614.	1	ST
23	0830	6	62	122	83	841.	2	ST
24	1709	7	50	120	94	545.	3	AK
25	0934	8	50	130	88	287.	2	HB
27	0928	9	44	134	28	218.	1	ST
29	0943	7	58	128	39	641.	1	ST
30	1420	7	105	175	47	1050.	2	AK
31	1050	8	49	129	47	1351.	1	CG

LE SOLEIL A ETE OBSERVE 24 JOURS SUR 31 POSSIBLES  
LE NOMBRE RELATIF DE WOLF MOYEN EST DE 117.5

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NORMALISED UCCLE OBSERVATIONAL SUNSPOT NUMBERS

		U'=K*U FOR 1984				MARCH			
		K* = .900 (*)							
1	94	7	62	13	101	19	124	25	116
2	89	8	92	14	129	20	116	26	***
3	69	9	68	15	145	21	96	27	120
4	95	10	***	16	131	22	116	28	***
5	***	11	***	17	***	23	109	29	115
6	65	12	93	18	***	24	107	30	157
								31	116

THE SUN WAS OBSERVED 24 DAYS ON 31 POSSIBLE  
 THE NORMALISED RELATIVE MONTHLY MEAN WOLF NUMBER IS 105

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

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

UCCLE NO	EAST LIMB DATE	DATE	AND TYPE	WEST LIMB DATE
		IST OBS	CHP	LAST OBS
15-1745	2 16.8	18 E	2 23.6	29 H 3 1.3

PROBABLE RETURN OF MAJOR GROUPS FOR 1984 APRIL

NO	NEW EAST LIMB	NEW CHP	NEW WEST LIMB
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NONE