



1986

No. 4

Provisional Sunspot - Numbers for APRIL 1986

Dependent on observations at Locarno Specola Solare,
 complemented by an international network and
 determined at the Observatoire Royal de Belgique.
 Thirty seven coop. stat. on May 1 st ,0930 UT

Day	R' _I	Day	R' _I
1	9	16	26
2	10	17	14
3	12	18	15
4	0	19	13
5	0	20	18
6	0	21	25
7	9	22	20
8	11	23	54
9	0	24	64
10	9	25	48
11	13	26	43
12	15	27	33
13	14	28	23
14	26	29	31
15	25	30	33

MEAN = 20.4

 Predictions of the smoothed
 monthly Sunspot - Numbers

Classical Method		S.I.D.C. Adjusted Values	
1986 May 10	1986 Aug. 7	1986 May 0 (1 to -5)	Aug. 0
Jun. 9	Sep. 6	Jun. 0	Sep. 0
Jul. 8	Oct. 5	Jul. 0	Oct. 0

Precision on the sixth predicted value : ± 3 Classical estimated smoothed value for 1987 January : $2 (\pm 4)$ Forecasted values are evaluated on the basis of the latest
 monthly smoothed value (1986 October) : $17.5 \pm 5\%$

Brussels, May 1st . 1986

A. Koeckelenbergh.

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 Ed. Resp. Dr. André Koeckelenbergh, 3, avenue Circulaire, B-1180 BRUXELLES, BELGIUM
 TELEX : 21565 obsbel - Tél. : (02) 375 24 84 EXT 611

S.I.D.C. SUMMARY OF URSIGRAMS
 1986 APRIL $R'_{im} = 20.4$

Date	R_i	PPSI	2800	COS	XFI	XI	A_k	
1	9	0	72	1008	0	0/0	10	
2	10	0	71	9	0	0/0	6	
3	12	0	71	3	0	0/0	16	
4	0	0	72	5	0	0/0	4	
5	0	0	72	6	0	0/0	12	
6	0	0	72	10	0	0/0	5	
7	9	0	72	4	0	0/0	6	2b - II
8	11	0	72	3	0	0/0	6	
9	0	0	72	3	0	0/0	15	SSC
10	9	0	72	2	0	0/0	19	
11	13	0	72	5	0	0/0	5	
12	15	2	73	12	0	0/0	12	
13	14	2	74	1	0	0/0	7	
14	26	2	76	1000	0	0/0	6	
15	25	4	76	2	0	0/0	8	SSC
16	26	13	75	2	0	0/0	10	
17	14	16	75	6	0	0/0	8	
18	15	27	74	8	0	0/0	7	
19	13	23	74	1000	0	0/0	14	
20	18	24	74	1000	0	0/0	7	
21	25	26	75	5	1	0/0	8	
22	20	18	73	7	0	0/0	12	
23	54	30	81	2	13	0/0	11	
24	64	84	86	2	40	3/0	16	X-fl.
25	48	89	85	3	1	0/0	7	
26	43	76	84	8	3	0/0	6	SSC
27	33	55	82	7	1	0/0	5	X-fl.
28	23	26	79	8	2	0/0	10	
29	31	15	76	8	1	0/0	10	
30	33	7	74	1	2	0/0	5	

No major change in the predictions of the minimum : probably for the end of this year
 We wait the first spot of high heliographic latitude .

- R'_{im} : provisional International monthly Sunspot-Number from the S.I.D.C.
 R'_i : 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 significative 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 (Ampli.fluct.in $2nT$).
 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

AVRIL 1986

DATE	UT	NOMBRE DE GROUPES	NOMBRE DE TACHES	NOMBRE DE WOLF	NOM. REL. ZONF CENTRALE	PSI 10-6 WM-2	QUAL	CBS
1	1000	0	0	0	0	0.	2	ST
2	1000	0	0	0	0	0.	3	VI
3	1004	0	0	0	0	0.	1	VI
4	1333	0	0	0	0	0.	2	VI
5	0941	0	0	0	0	0.	4	HR
6	1141	0	0	0	0	0.	1	HB
7	1334	0	0	0	0	0.	1	VI
10	0927	0	0	0	0	0.	1	HB
11	0647	1	1	11	0	2.	2	VI
12	0721	1	2	12	12	3.	2	ST
16	0649	3	6	36	11	146.	3	VI
17	1419	1	2	12	0	271.	2	ST
18	1041	1	2	12	12	276.	2	ST
19	0920	2	7	27	27	316.	3	CG
21	0648	2	4	24	24	327.	1	VI
22	0505	1	2	12	12	283.	2	HB
23	0731	0	21	51	23	147.	1	VI
24	0841	3	50	60	49	764.	2	VI
25	0721	2	33	53	53	746.	2	ST
26	0746	1	13	23	0	217.	2	HB
29	0552	2	15	35	17	151.	1	VI
30	0607	2	8	28	0	73.	2	VI

LE SOLEIL A ETE OBSERVE 22 JOURS SUR 30 POSSIBLES
LE NOMBRE RELATIF DE WOLF MOYEN EST DE 18.9

ED. RESP. DR. ANDRE KOECKELEMBERGH
3, AV. CIRCULAIRE, B 1180 BRUXELLES. BELGIUM.
TELEX : 21565 OBSBEL - TEL. : (02) 3752464 EXT 611

NORMALISED UCCLE OBSERVATIONAL SUNSPOT NUMBERS

WEEKS FOR 1986				APRIL					
K* = .961 (*)									
1	0	7	0	13	***	19	28	25	50
2	0	8	***	14	***	20	***	26	***
3	0	9	***	15	***	21	23	27	***
4	0	10	0	16	34	22	11	28	22
5	0	11	10	17	11	23	49	29	33
6	0	12	11	18	11	24	76	30	26
								31	***

THE SUN WAS OBSERVED 20 DAYS OR 30 POSSIBLE
 THE NORMALISED RELATIVE MONTHLY MEAN WOLF NUMBER IS 17

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

UCCLE OBSERVATIONAL MAJOR SUNSPOTS FOR 1986 APRIL
 E AND F BRUNNER'S TYPE GROUPS

UCCLE NO	EAST LIMB		DATE AND TYPE			WEST LIMB	
	DATE	IST OBS	DATE	TYPE	LAST OBS	DATE	
5-1774	4 17.9	23 D	4 24.7	20 G	5 1.4		

PROBABLE RETURN OF MAJOR GROUPS FOR 1986 MAY

UCCLE NO	NEW EAST LIMB	NEW CMP	NEW WEST LIMB
5	5 15.0	5 21.8	5 28.5