

Newsletter Belgian Solar Observers

Results and news for solar observers

Volume 12

Number 137

July 2007

Franky Dubois Poelkappellestraat 39 langemark 8920

Web site: <http://www.bso.vvs.be> e-mail astrosun@skynet.be

Content Newsletter

Graphics and relative number for this month

Daily Wolfnumbers by the members

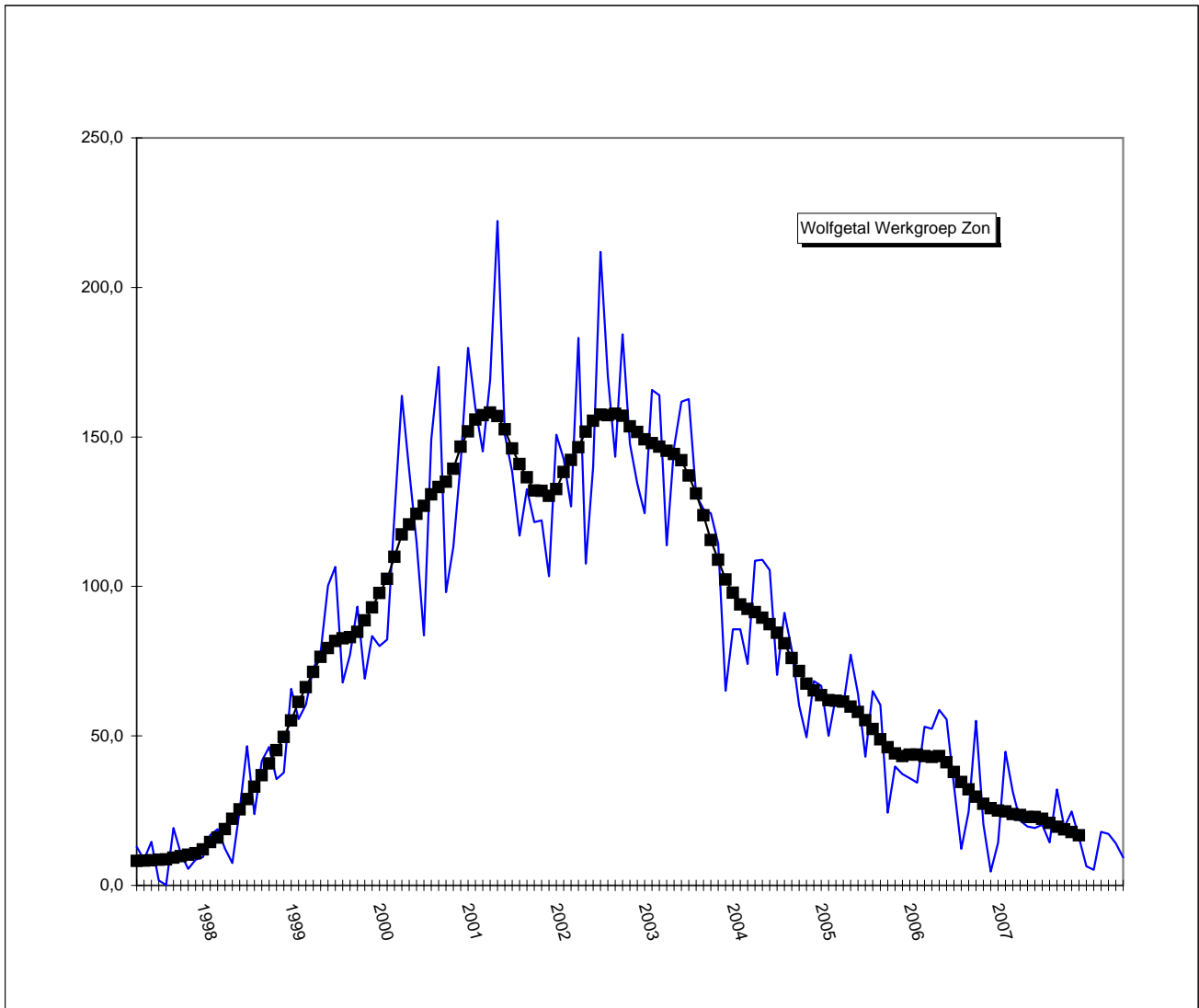
Monthly sunspot report

Polar faculae and CV numbers

Prominence numbers by the members

Monthly prominence report

Photo album and drawings



Mean of july observations

Groups :	N	0,13	Wolfnumb N	1,3	Beck :	123,8
	S	0,81	S	12,9	CV	19
	N+S	0,94	N+S	14,1		
487 observations	26 observers					

Sunspotnumbers VVS Belgium

Month: July 2007

Day	GROUPS			WOLFNUMBER			RE'	CV	OBS
	N	S	N+S	N	S	N+S			
1	0	2	2	0	25,8	25,8	221	11	17
2	0	1	1	0	18	18	171	10	15
3	0	1	1	0	12,5	12,5	99	9	14
4	0	1	1	0	13,1	13,1	119	9	13
5	0	1	1	0	12,5	12,5	90	9	12
6	0	1	1	0	12,3	12,3	93	10	10
7	0	1	1	0	10,6	10,6	42	15	18
8	0	1	1	0	14,9	14,9	115	31	24
9	0	1	1	0	20,5	20,5	242	53	13
10	0	1	1	0	24,9	24,9	371	51	19
11	0	1	1	0	26,8	26,8	442	56	4
12	0	1	1	0	20	20	233	56	7
13	1	1	2	11,1	26,9	38	359	59	19
14	1	1	2	12,3	25,3	37,6	376	55	21
15	1	1	2	10	26,8	36,8	330	38	21
16	1	1	2	5,9	23,2	29,1	169	35	14
17	0	1	1	0	17	17	104	26	21
18	0	1	1	0	14,7	14,7	63	23	19
19	0	1	1	0	10,7	10,7	48	15	15
20	0	0	0	0	0	0	0	0	14
21	0	0	0	0	0	0	0	0	19
22	0	0	0	0	0	0	0	0	16
23	0	0	0	0	0	0	0	0	3
24	0	0	0	0	0	0	0	0	19
25	0	0	0	0	0	0	0	0	17
26	0	0	0	0	0	0	0	0	12
27	0	0	0	0	0	0	0	0	18
28	0	1	1	0	13,7	13,7	49	7	17
29	0	1	1	0	12,4	12,4	64	7	14
30	0	2	2	0	13,9	13,9	38	4	22
31	0	1	1	0	2,3	2,3	1	1	20
	0,13	0,81	0,94	1,3	12,9	14,1	123,8	19,0	487

Monthly mean: **14,1** Covering: **31/31** Spotless days: **8**
 Observations: **487** Number of observers: **26**

V.V.S. BELGIUM SOLAR SECTION FRANKY DUBOIS

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 Belgium
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Observers:

Devriese ; De Ceuninck ; Janssens ; Publ obs Mira ; Bourgeois ; Macharis
 De Backer ; Dubois ; Gysel ; Kleber ; Deman ; Taillieu ; Carels ; Dewaele
 Meeus ; Steen ; KSB ; Gabriel ; Claeys ; Devriese ; Thooris ; Vanleenhove
 Claes ; Verboven ; Van Loo ; Son ; Coeckelberghs ; Gadyne
 S.Dufoer ; G.Gubbels ; jeugdwerking Astrolab ; J Bavais ; A. De Kerchove

VVS Belgian Solar Observers Prominence number Rp

Month : July 2007																											asm	Lille												
J. Janssens							F. Dubois							E. De Ceunick							L. Meeus					J. Hamsch					G. Deman					20/20				
Day	time	Q	W	H	e	Rp	time	Q	W	H	e	Rp	time	Q	W	H	e	Rp	time	Q	W	H	e	Rp	time	Q	W	H	e	Rp	time	Q	W	H	e	Rp				
1	7:55	3,5	2	5	7	57	10,42	4	3	4	4	44	09,50	2,50	2	5	7	57		09u0	3	2,5	6	6	66															
2	17:10	3	3	3	5	35	6,40	3	2,5	2	2	22	06,30	2,50	2,5	3	4	34		17u30	2	3	3	3	33															
3							16,44	3	2	2	2	22	16,40	2,00	2,5	5	5	55																						
4							7,02	3,5	3	5	6	56													16u30	3	2,5	7	10	80										
5							8,35	4	3	4	7	47	10,00	2,00	2,5	7	9	79																						
6							7,00	3	2,5	4	5	45	09,45	1,50	2,5	6	7	67																						
7	9:15	4	2	5	13	63	11,45	3,5	2	6	6	66	18,00	2,50	2,5	6	7	67	09,55	3	1	5	6	56	12u45	2,5	3	7	7	77	10:40	3	1	8	12	92				
8	6:40	4	1,5	6	12	72	18,10	3	3	6	7	67	07,00	2,50	2,5	7	9	79	12:20	3	2	5	7	57	10u30	3,5	2	10	12	112	10:35	3	1	5	7	57				
9							13,07	2,5	2,5	3	4	34	07,00	3,00	2	4	4	44							10u30	3	2,5	6	6	66	7:15	4	1	8	9	89				
10							11,51	3	2	4	4	44	06,30	2,50	2,5	6	7	67	10,50	3	3	6	7	67	11u10	3	2,5	4	4	44										
11																																								
12																																								
13																																								
14							15,20	3,5	2	4	4	44	14,15	2,50	2,5	6	7	67	13,35	3	1	3	3	33	12u45	2,5	3	4	5	45	13:10	3	2	4	5	45				
15							12,36	2,5	2,5	3	3	33	10,00	2,50	2,5	6	7	67							08u35	2	3,5	3	3	33										
16	7:05	4	2,5	5	9	59	08,30	2,50	2,5	3	4	34	08,30	2,50	2,5	3	4	34						11u00	3	2,5	5	6	56	9:40	3	2	5	8	58					
17							7,01	2,5	2	3	3	33	08,44	2,50	2,5	3	4	34																						
18							6,20	4	2	4	7	47	08,30	2,50	2,5	6	10	70							11u00	3	2,5	7	9	79	7:45	3	1	4	5	45				
19							7,40	2,5	2	6	10	70	08,30	3,00	2,5	7	10	80																						
20							16,35	3	2,5	4	6	46	17,00	2,00	2,5	5	5	55																						
21	6:30	3	3	5	9	59	6,53	3	2,5	6	7	67	07,45	2,50	2,5	6	8	68	09,10	3	3	4	4	44	08u50	3,5	2	9	15	105	7:15	4	2	6	9	69				
22	5:35	4	1,5	3	7	37	15,35	2	2,5	4	7	47	11,30	2,50	2	7	8	78						10u00	3,5	2	7	12	82	10:45	3	1	6	8	68					
23																																								
24							6,28	2,5	3	5	5	55	08,30	2,50	2	5	6	56							11u30	2,5	3	2	2	22	12:10	3	1	5	6	56				
25							16,53	3,5	3	2	2	22	07,30	2,00	2,5	2	2	22																						
26							7,15	3	2,5	3	5	35	07,00	3,00	2	3	5	35	08,30	4	2	4	8	48	11u30	3,5	2	6	6	66	7:05	3	1	3	6	36				
27							8,55	3	3	4	6	46	07,00	2,50	2,5	6	8	68																						
28							16,02	3,5	3	3	7	37	11,30	2,50	2,5	6	8	68	08,30	4	2	4	8	48	17u30	3,5	2	6	7	67	9:15	3	1	5	8	58				
29							7,22	3	3	4	8	48	07,00	2,50	2,5	5	7	57	08,30	4	2	4	7	47	16u15	3,5	2	5	9	59	11:55	3	1	5	7	57				
30							6,35	4	2	4	5	45	08,00	2	3	5	6	56	13,45	3	3	2	3	23	16u30	3,5	2	5	5	55	11:40	2	1	6	9	69				
31																																								
7		3,6	2,2	4,6	8,9	54,6	25	3,1	2,5	4,0	5,3	44,88	27	2,4	2,4	5,1	6,4	57,9	8	3,3	2,1	4,13	5,6	46,9	18	3,0	2,5	5,7	7,1	63,7	16	3,3	1,2	5,38	7,7	61,4				

asp																											asp	asp											
O. Steen							H. Coeckelberghs							J. Claes							A Gabriel					R.Blondeel					G. Gubbels								
Day	time	Q	W	H	e	Rp	time	Q	W	H	e	Rp	time	Q	W	H	e	Rp	time	Q	W	H	e	Rp	time	Q	W	H	e	Rp	time	Q	W	H	e	Rp			
1	7:00	3,5	2	3	5	35							9:15	4	1	3	6	36	7:20	4	2	5	9	59	9h00	2	2	4	5	45	8:52	3	2	3	5	35			
2	7:00	3	2	3	3	33							10:15	4	1	4	9	49	7:40	3	2	4	7	47															
3	14:15	3,5	2	2	2	22													12:20	3	2	5	7	57															
4	8:50	3,5	2	5	5	55													7:00	4	2	6	10	70															
5	10:40	3,5	2	4	5	45							14:30	3	2	7	16	86	8:40	4	2	6	11	71															
6	14:30	3,5	2	3	5	35													11:25	4	2	5	10	60															
7	10:00	3,5	2	4	4	44	9:30	4	3	3	4	34							7:45	3	2	8	11	91	14h25	2	2	5	5	55	8:51	2,5	2,5	2	6	26			
8	8:00	4	2	4	5	45	12:06	3	3	3	4	34							6:30	5	1	7	13	83	09h00	2	3	5	5	55	11:20	2	1,5	5	8	58			
9	6:00	3,5	2	5	5	55							10:45	3	2	4	6	46																					
10	6:00	3,5	2	4	4	44													9:05	4	2	5	8	58															
11																			12:20	3	2	5	7	57															
12																			9:30	3	2	4	7	47															
13	16:00	3,5	2	2	2	22																																	

Prominence number Rp

Belgian solar observers

Month: July 2007

Day	Q	Wedel		H	e	Rp	el. Obs	Stdev	OBS
1	3,3	2		4,0	6	46	1	10,4	9
2	3,1	2,3		3,3	5,5	38,5		10	8
3	2,5	2,3		5	6	56	2	1,4	4
4	3,7	2,3		5,3	7	60	1	8,4	4
5	3	2,2		6,7	12	79	2	7,5	5
6	3	2,3		4,5	6,8	51,8	2	14,5	6
7	2,9	1,9		5,3	7	60	2	9,3	11
8	3,4	2		5,2	8,2	60,2	2	15,9	11
9	3	2,3		4,5	4,8	49,8	2	13,8	6
10	3,1	2,3		4,7	5,7	52,7		10,9	7
11	3	2		5	7	57			1
12	2,8	2,3		4	5,5	45,5		2,1	2
13	3,1	2,2		5,3	7	60		11,8	5
14	3,1	2,2		4	5,3	45,3	2	11,1	9
15	2,4	2,4		4	5,4	45,4	3	13,7	10
16	3	2,2		5	7,7	57,7	2	1,5	5
17	2,7	1,9		4,2	6	48	2	12,1	8
18	3,1	1,7		6,6	9,8	75,8	2	6,3	7
19	3,3	1,6		6,2	12,8	74,8		12,9	7
20	2,8	2,2		4,8	8,2	56,2	1	11,9	5
21	3,3	2,4		5,5	8,1	63,1	2	9,1	9
22	3,2	1,7		5,7	9,7	66,7		12,7	8
23	3	2		6	10	70			1
24	3	1,8		4,5	6,7	51,7		11,3	6
25	2,8	2,5		3,3	4,3	37,3	1	16,7	6
26	2,5	2		4,5	7,5	52,5		9,2	3
27	3,5	1,8		3,9	7	46		11,4	9
28	3,1	1,9		4,9	8,9	57,9	2	15,1	7
29	3	1,9		5,6	8	64	1	12,1	7
30	3	1,9		4,7	8,9	55,9		11,8	9
31	3,4	2,1		4	5,3	45,3		12,3	9
	3,04	2,08		4,8	7,4	55,8	18	10,6	204

Monthly mean: **55,8** Covering: **31/31**
 Observations: **204** Number of observers: **12**

V.V.S. BELGIUM SOLAR SECTION FRANKY DUBOIS

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 Belgium
 e-mail : astrosun@skynet.be

Observers:

Steen ; Dubois ; Meeus ; De Ceuninck ; Coeckelberghs ; Janssens
 Hamsch ; Claes ; Gabriel ; Blondeel ; Deman ; G.Gubbels

Q : Seeing scale SIDC

W : transparency scale of Wedel , see <http://members.chello.be/j.janssens/>

H : number of prominence groups at the limb

e : total of individual prominences at the limb

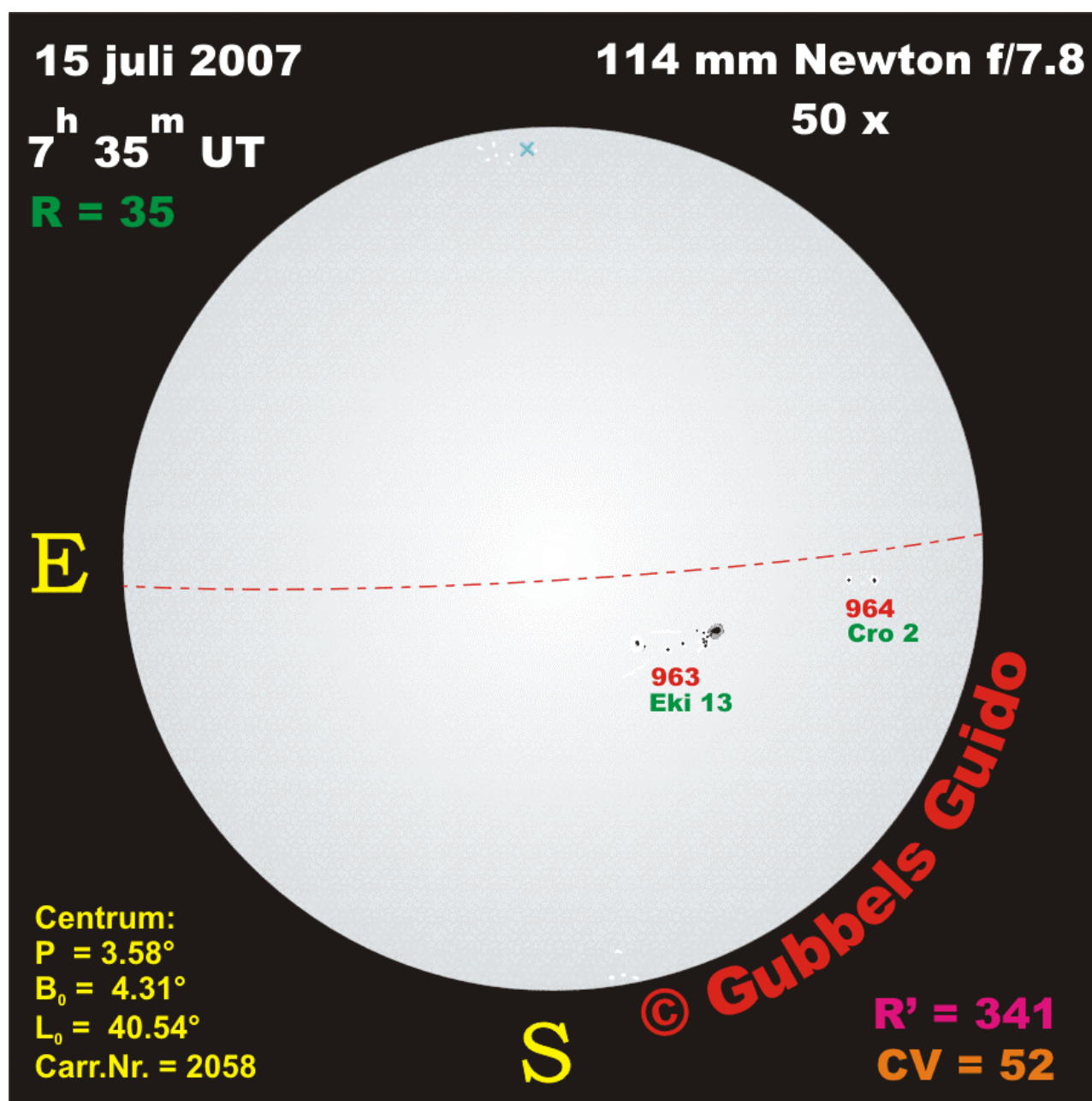
Rp : $H \cdot 10 + e$

More info at : <http://members.chello.be/j.janssens/>

Different Relative Sunspotnumbers

CV									Pettisindex	Intersol	Becknumber															
Date	F.Dubois	O.Steen	L.Meeus	J.Carels	J.Janssens	G.Gubbels	S.Dufoer	Mean	F.Dubois	F.Dubois	F.Dubois	O.Steen	L.Meeus	J.Carels	G.Gubbels	S.Dufoer	A.T.Son	J.Bourgeois	H.Coeckelberghs	De Backer	Pbl Obs Mira	J.Claes	D.Van Hesse	Mean	Date	
1	11	11	9	12	11	14	12	11,4		25	10	230	193	84	48	250	448			341		170		221	1	
2	12	11	8	10		10	0	8,5		17	9	64	64	40	308	220		296		44	259		116		157	2
3	10	10		7			10	9,3		11	4	111	111		111		74			111		74		99	3	
4	10	10		7		10		9,3		11	4	111	111		148	132		111			111		111		119	4
5	10	7		7		10		8,5		10	3	74	74		74	132				111		74		90	5	
6	10	10						10,0		10	3	74	74					148		74				93	6	
7	10	10	10	10	10	10	40	14,3		10	1	37	37	37	37	88	37		111	0	37			47	7	
8	25	34	19	28	28	58	25	31,0		32	7	108	126	144	108	144	90	180	108	111	72		72	115	8	
9	56	59	46	47		58		53,2		44	15	350	350	216	225	144		146	325		180			242	9	
10	56	59	53	59		58	22	51,2		60	19	450	400	325	450	360	342	252	400		360		375		371	10
11	56			56				56,0		52	18	425			500						400				442	11
12		56						56,0			17		175					300		225					233	12
13	57	72		29		84	55	59,4		56	28	333	430		447	358	236	192	500		248		483		359	13
14	53	50	72	29		69		54,6		79	21	514	399	483	398	351		186	403	175	240		669	315	376	14
15	49	50	28	31	23	52	25	36,9		44		370	320	374	370	341	320	116	312	114	366		533	424	330	15
16	43	30	24	32		44		34,6		39	14	133	154	254	337	134		76	56		204				169	16
17	38	11	26	26		44	12	26,2		27	11	80	48	175	175	250	32	48	56	125	32		125		104	17
18	41	11		8		44	11	23,0		13	5	32	32		32	150	24	24	32		32		100	176	63	18
19	10	10	10	10		37	10	14,5		11	3	74	37	37	74	88	37			0	37				48	19
20	0	0	0	0		0		0,0		0	0	0	0	0	0	0			0		0				0	20
21	0	0	0	0	0	0	0	0,0		0	0	0	0	0	0	0	0	0			0				0	21
22	0	0	0	0	0	0	0	0,0		0	0	0	0	0	0	0	0				0	0			0	22
23																										23
24	0	0	0	0		0	0	0,0		0	0	0	0	0	0	0		0	0		0			0	0	24
25	0	0	0	0		0	0	0,0		0	0	0	0	0	0	0	0				0			0	0	25
26			0	0		0		0,0						0	0	0		0	0		0			0	0	26
27	0	0	0	0		0	0	0,0		0	0	0	0	0	0	0	0	0			0			0	0	27
28	1	4	8	5		11	12	6,8		4	5	16	111	40	24	16	24	48	20		148		40		49	28
29	4	4	10	5		10	10	7,2		10	3	74	74	74	48	88	74		8		74				64	29
30	2	2	2	2		16	0	4,0		5	7	20	16	8	16	72	0	12	24		24		16	0	19	30
31	1	0	0	0		0	0	0,2		1	1	4	0	0	0	0	0	12		0	0		0		1	31
##	20,2	18,6	14,8	15,0	12,0	24,6	12,2	19,5		20,4	7,4	132	119	104	140	128	91,5	88,8	128	63,2	123	0	170	165	127	

N.O.A.A. Regio	ZICHTBAAR		N.O.A.A.		MAX	MAX	classificatie							
	van	tot	breedte	lengte	AREA	LENGTE	Macintosh							
10961	25-06-07	07-07-07	S12	221	0210	07	HSX	CKO	CSO	DAC	DSO	CAO	HSX	
10962	28-06-07	05-07-07	S09	189	0040	07	BXO	AXX						
10963	07-07-07	19-07-07	S06	56	0530	13	AXX	DAO	DAI	EHI	EKC	EAO	CAO	HSX
10964	12-07-07	16-07-07	N03	84	0050	07	CAO	DSO	CSO	AXX				
10965	28-07-07	31-07-07	S12	197	0040	03	CSO	BXO	AXX					
10966	03-08-07	12-08-07	S06	66	0040	04	HSX	AXX	DSO	HSX	CSO	BXO	AXX	
10967	08-08-07	08-08-07	N05	148	0050	01	AXX							
10968	13-08-07	14-08-07	N05	26	0020	04	BXO							

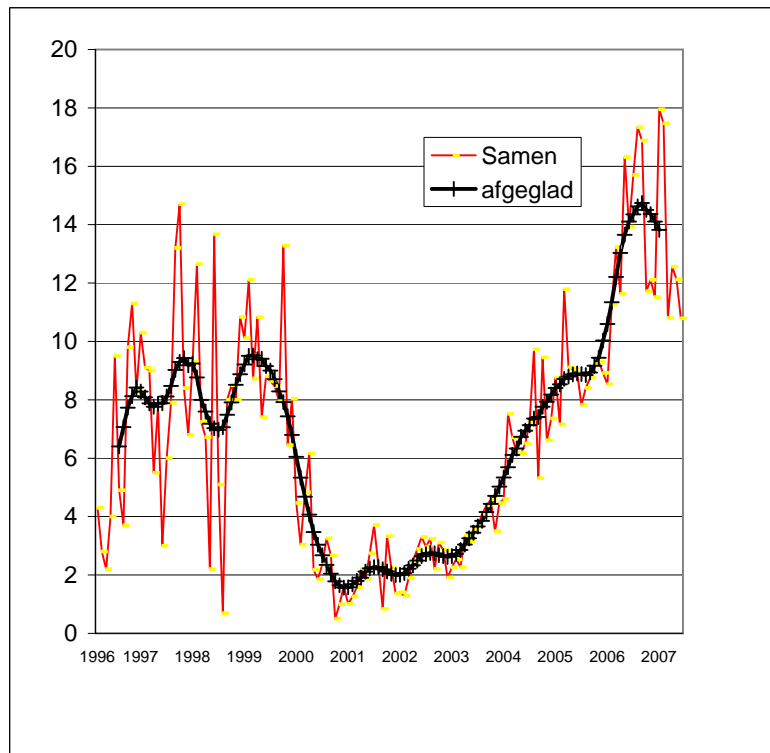


Belgian Solar Observers

Polar Faculae

Month: July 2007

Date	Dubois 125mm F20			Steen 102mm F15			Deman 150mm F15			Gabriel 250 mm F20			Carels 150mm F8			Janssen 200mm F10			T.Spaninks 127mm F15		
	North	South	Q	North	South	Q	North	South	Q	North	South	Q	North	South	Q	North	South	Q	North	South	Q
1	11	3	4	7	3	3,5				31	10	4				5	2	4	2	2	4
2	13	5	4	8	4	3													2	2	4
3	17	9	2	11	3	3,5													3	1	4
4	15	7	4	8	2	3,5															
5	11	3	4																		
6			4	7	2	3,5															
7			4													6	8	4,0	0	0	4
8			3	5	4	3,0	17	10	4	20	6	5			7	2	4,0	2	0	4	
9	3	9	3	9	2	3,5				21	7	4						3	1	4	
10	7	6	3	9	5	3,5															
11			2																		
12																					
13			2	7	2	3,5	15	4	3										0	0	5
14			3							23	7	4									
15	9	6	3	11	8	4,0				19	6	4				3	6	4,0	1	1	4
16	9	4	3				21	7	3				1	0	4				1	0	4
17			4				23	12	3										0	0	4
18	10	1	4	7	5	4	21	8	4	26	12	3	7	2	3				0	0	4
19	14	5	3	7	4	3,5	19	9	4	28	15	4	4	1	3				2	2	4
20	15	10	3																		
21	12	2	3	6	3	3,5	32	8	4	33	12	4				5	3	3,0	1	0	4
22			3	9	3	3,5	29	7	3	36	13	5				11	8	4,0	1	1	4
23																					
24	5	3	3	9	3	3,5	20	9	3				0	2	3				0	0	4
25	12	3	4	4	3	3,5				23	9	4							1	0	4
26																			1	0	4
27	7	5	4	8	5	3,5	19	5	3	26	12	4	0	2	4						
28	14	5	4	8	4	3,0	25	4	3				3	3	4						
29	7	2	3				25	9	3				1	0	4						
30	6	1	3	13	5	3,5				28	9	3							0	0	4
31	9	4	4	8	2	3,5	22	4	4	25	8	4	4,0	0,0	2,5				0,0	0,0	4
	10,30	4,65		8,05	3,60		22,2	7,4		26,1	9,7		2,50	1,25		6,17	4,83		1,00	0,50	



SIDC Weekly bulletin on Solar and Geomagnetic activity
WEEK 341 from 2007 Jul 09
SOLAR ACTIVITY

Solar activity was dominated by the transit of NOAA AR 0963 which produced several C-flares on July 9 and 10th, July 10th being the most active day. The activity then substantially dropped as the magnetic type of this region simplified from beta-gamma to beta. A new active region emerged on the disk on July 13th, and was called NOAA AR 0964. No significant activity was reported from this region, and the overall soft-X-ray background was in the low A levels by the end of the week.

GEOMAGNETIC ACTIVITY

Geomagnetic activity was dominated by the effects of recurrent coronal holes. The first period of unsettled conditions was observed on July 11th. While the Kp indices revealed minor storm conditions from 0 to 9 UT, only isolated active conditions (K=4) were observed at Dourbes stations at 0 UT. A second period of unsettled condition was observed on Bastille day (July 14th), possibly due to an extension of the previous coronal hole. Active conditions were observed with Kp from July 14th 9UT to July 15th, 6 UT with isolated minor storm conditions at 18 UT on July 14th. A K=5 was observed at Dourbes station from 18 to 21 UT on July 14th.

SIDC Weekly bulletin on Solar and Geomagnetic activity
WEEK 342 from 2007 Jul 16
SOLAR ACTIVITY

NOAA ARs 0963 and 0964 (Catania 49 and 50, respectively) were visible on the solar disk at the start of the week, but in contrast to the activity of the previous week both were almost completely quiescent. The week's largest event was a B2.9 event early on July 16th, with just one other B-class event all week, and July 18th. Neither event was associated with a CME. The soft X-ray flux background started the week fluctuating around the A-class threshold but had dropped to a flat sub-A class level by the end of the week. The 10.7cm radio flux followed a similar pattern, dropping to very low levels once AR 0963 had completed its West limb transit, on July 20th. Over the weekend, the solar disk remained spotless, the main features of note being two recurrent coronal holes; the first of which was visible in the SW and appeared much changed compared to previous rotations, while the second was an elongated hole extending from the solar equator to the polar region and could be seen approaching the central meridian over the weekend. A small filament in the SW disappeared overnight on the 22nd July but with no significant CME associated with it.

GEOMAGNETIC ACTIVITY

The week began with the Earth leaving the influence of the fast stream from a recurrent coronal hole and ended with it doing likewise to another. Although the hole was seen transiting the central meridian on July 16th it appeared to have evolved significantly as compared to previous rotations and the fast stream did not arrive until the 20th. Although the IMF was initially intense (~13nT) and with a significant negative Bz component (~-10nT) the wind speed was initially rather slow (~300km/s) and so only isolated active periods were recorded (K=4 at both Dourbes and Niemegk, and Kp=4 for a single period). The wind speed increased to ~550km/s during the next 24hrs and as a result a single period of Kp=5 was recorded, with further intervals of K=4 at Dourbes and Niemegk. Both the IMF and wind speed began their return to nominal conditions soon after though, and the remainder of the weekend saw quiet conditions

SIDC Weekly bulletin on Solar and Geomagnetic activity
WEEK 343 from 2007 Jul 23
SOLAR ACTIVITY

Solar activity has been very low during the whole week. The soft X-ray flux measured by the GOES satellite has been mostly flat, below the A level, except for a short period of sub-flaring activity recorded on July 28th. A small spot area was observed by the Catania observatory on July 28th, and was the next day referred as NOAA AR 0965.

GEOMAGNETIC ACTIVITY

Geomagnetic activity was mostly quiet during the week, with brief and isolated periods of unsettled conditions, linked to the recurrence of two coronal holes. The first one occurred on July 26th, and led to isolated minor storm conditions at Dourbes station (K=5) at 15UT. The second period

SIDC Weekly bulletin on Solar and Geomagnetic activity
WEEK 344 from 2007 Jul 30
SOLAR ACTIVITY

Solar activity was very low for the duration of whole week. The soft X-ray flux measured by the GOES satellite was mostly flat, below the A-class threshold, except for an A8.9 flare late on Sunday August 6th, right at the very end of the week. The source of the flare was NOAA AR 0966 (Catania 52) which was the return of NOAA 0963. Whilst the x-ray flux was quiet for the rest of the week, the solar disk was not completely featureless, with NOAA AR 0965 transiting from disk centre to W limb over the course of the week. The region was quiescent though, decaying from an alpha configuration to a plage while a large filament to the SW did not erupt. A significant CMEs was observed on July 30th but it was established as being a back-sided event. The CME was detected by Cactus as multiple events and so no Alert was issued. A subsequent Cactus Alert for a different event on July 31st was found to be a false detection. A fairly small and apparently new coronal hole was also visible transiting the western hemisphere somewhat to the NE or AR 0965.

GEOMAGNETIC ACTIVITY

Geomagnetic activity was mostly quiet during the week, with brief and isolated periods of unsettled conditions during the early days, linked to two coronal holes. The first one occurred on July 30th, and was due to the recurrent coronal hole that had been visible in the NE quadrant the previous week and had led to an isolated active period the previous day. Two days later on Aug 1st active conditions (Kp=4) were recorded for two three hours period due to the fast stream from the new coronal hole described above. Active conditions were also recorded at Dourbes and Niemegk during these periods, but in between and for the duration of the week quiet to very quiet conditions were recorded, with extended periods of Kp and K=0 over the weekend.
