

Newsletter Belgian Solar Observers

Results and news for solar observers

Volume 14

Number 165

November 2009

Franky Dubois Poelkappellestraat 39 langemark 8920

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Content Newsletter

Graphics and relative number for this month

Daily Wolfnumbers by the members

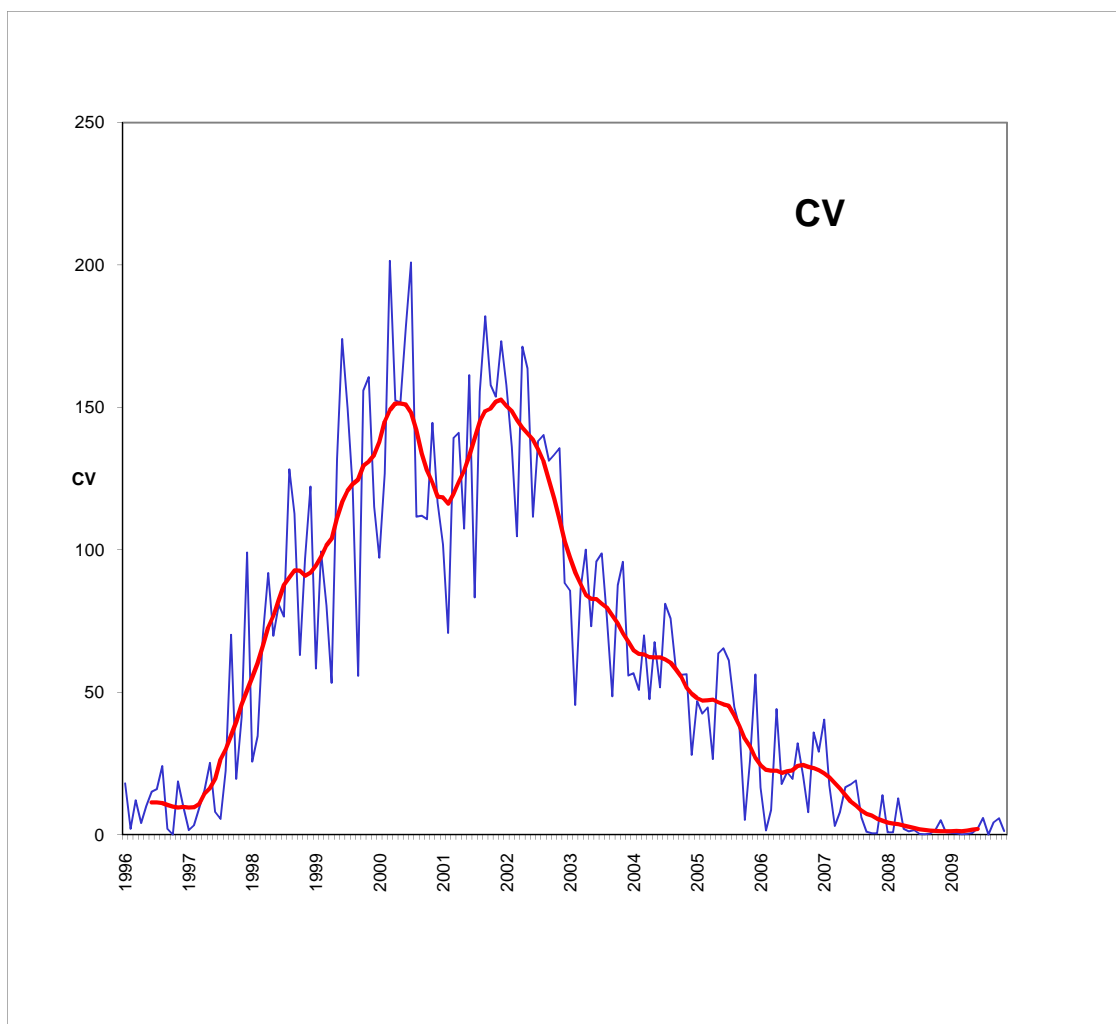
Monthly sunspot report

Polar faculae and CV numbers

Prominence numbers by the members

Monthly prominence report

Photo album and drawings



Mean of november observations

Groups :	N	0,56	Wolfnumb N	6,4	Beck :	10,2
	S	0,04	S	0,3	CV	1,2
	N+S	0,59	N+S	6,7		
299 observations	25 observers					

Wolfnumbers Belgian Solar Observers

Month: **November 2009**

Dag	SIDC			L. Meeus			H.Coeckelberghs			Publ Obs Mira			O. Steen			F. Dubois			L. Claeys			G. Deman			A.T. Son			H. De Backer			B. Thooris			A Gabriel			Dag
	R	g	f	R	g	f	R	g	f	R	g	f	R	g	f	R	g	f	R	g	f	R	g	f	R	g	f	R	g	f	R	g	f	R	g	f	
1	0																																	1			
2	0																																	2			
3	0																																		3		
4	0																																		4		
5	7	1	4	14																															5		
6	8																																		6		
7	0																																		7		
8	0																																		8		
9	8																																		9		
10	7																																		10		
11	7																																		11		
12	0																																		12		
13	7	1	2	12																															13		
14	8	0	0	0																															14		
15	7																																		15		
16	8																																		16		
17	0																																		17		
18	9																																		18		
19	17																																		19		
20	15	2	7	27																															20		
21	9	1	7	17																															21		
22	8																																		22		
23	0																																		23		
24	0																																		24		
25	0																																		25		
26	0																																		26		
27	0																																		27		
28	0																																		28		
29	0																																		29		
30	0																																		30		
#	4,2	8,8			4,3			####			8,3			7,9			7,8			13,6			6,9			5,6			7,1			8,0					

Observations of the SIDC are not included in the Belgian monthly Wolfnumber.
Publ Obs Mira : observers : Francis Meeus , Guido Matheus and Marc Rayen

Dag	SIDC			P.J.Dekelver			J. Bourgeois			KSB			Carels			G.Gubbels			J. Claes			E. De Ceuninck			R. Dezeure			B. Taillieu			S. Dufoer			F. van Loo			Dag
	R	g	f	R	g	f	R	g	f	R	g	f	R	g	f	R	g	f	R	g	f	R	g	f	R	g	f	R	g	f	R	g	f	R	g	f	
1	0																																	1			
2	0																																		2		
3	0																																		3		
4	0																																		4		
5	7	1	5	15																															5		
6	8	1	3	13																															6		
7	0																																		7		
8	0																																		8		
9	8																																		9		
10	7																																		10		
11	7																																		11		
12	0																																		12		
13	7																																		13		
14	8																																		14		
15	7																																		15		
16	8																																		16		
17	0																																		17		
18	9																																		18		
19	17																																		19		
20	15	2	7	27																															20		
21	9	1	8	18																															21		
22	8																																		22		
23	0																																		23		
24	0																																		24		
25	0																																		25		
26	0																																		26		
27	0																																		27		
28	0																																		28		
29	0																																		29		
30	0																																		30		
#	4,2	5,6			7,9			8,4			5,2			9,9			7,6			7,4			5,9			11,6			####			####					

Dag	SIDC			K. Dewaele			Verboven			J. Bavais			A. De Kerchove			F. Feys			D.V. Hessche			J. Bonse			L. Gysel			P. De Reu			J. Bruyland			C. Libert			Dag
	R	g	f	R	g	f	R	g	f	R	g	f	R	g	f	R	g	f	R	g	f	R	g	f	R	g	f	R	g	f	R	g	f	R	g	f	
1	0																																	1			
2	0																																		2		
3	0																																		3		
4	0																																		4		
5	7																																		5		
6	8																																		6		
7	0																																		7		
8	0																																				

Sunspotnumbers VVS Belgium

Month: **November 2009**

Day	GROUPS			WOLFNUMBER			RE'	CV	OBS
	N	S	N+S	N	S	N+S			
1	0	0	0	0	0	0	0	0	4
2	0	0	0	0,0	0	0	0	0	17
3	0	0	0	0,0	0	0	0	0	5
4	0	0	0	0,0	0	0	0	0	13
5	1	0	1	11,2	0	11,2	14	2	10
6	1	0	1	14,8	0	14,8	23	3,8	8
7	0	0	0	0	0	0	0	0	13
8	0	0	0	0	0	0	0	0	17
9	1	0	1	15	0	15,1	31	3,3	9
10	1	0	1	14	0	13,5	23	5,3	11
11	1	0	1	11,0	0	11,0	13	1	7
12	0	0	0	0,0	0	0	0	0	11
13	0	1	1	0,0	9	9,0	6	1,2	12
14	1	0	1	6,6	0	6,6	2	0,1	21
15	1	0	1	7,7	0	7,7	4	0,5	12
16	1	0	1	11,8	0	11,8	15	2	10
17									
18	1	0	1	10	0	10,0	17	3	5
19	2	0	2	23	0	23,4	44	3,4	16
20	2	0	2	18	0	18,4	26	3,7	15
21	1	0	1	17	0	17,2	40	2	20
22	1	0	1	11	0	10,9	18	1,3	18
23									
24									
25	0	0	0	0	0	0	0	0	5
26	0	0	0	0	0	0	0	0	10
27	0	0	0	0	0	0	0	0	8
28	0	0	0	0	0	0	0	0	8
29	0	0	0	0	0	0	0	0	4
30	0	0	0	0	0	0	0	0	10
	0,56	0,04	0,59	6,4	0,3	6,7	10,2	1,2	299

Monthly mean: **6,7** Covering: **27/30** Spotless days: **13**
 Observations: **299** Number of observers: **25**

V.V.S. BELGIUM SOLAR SECTION FRANKY DUBOIS

Poekapellestraat 39
 B8920 Langemark
 Belgium
 e-mail : astrosun@skynet.be

Observers:

De Ceuninck ; Janssens ; Publ obs Mira ; Bourgeois ; R.Dezeure ; F.Feys
 De Backer; Dubois ; Gysel ; Kleber ; Deman ; Taillieu ; Carels ; Dewaele
 Meeus ; Steen ; KSB ; Gabriel ; Claeys ; Thooris ; J.Bonse ; P.De Reu
 Claes ; Verboven ; Van Loo ; Son ; Coeckelberghs ; Gadyne ; Dekelver
 S.Dufoer ; G.Gubbels ; J Bavais ; A. De Kerchove ; J.Bruyland ; Van Hessche

Prominence number Rp

Belgian solar observers

Month: November 2009

Day	Q	Wedel		H	e	Rp	el. Obs	Stdev	OBS
1	3	2		5,0	9	59			1
2	3,2	1,6		4,6	7,3	53,3	1	9,3	8
3	3	2		3	4,5	34,5		0,7	2
4	3	2		5,5	5,5	60,5	1	7,8	3
5	3,3	2		4	5	45		17	2
6	3	2		3,5	5	40		9,9	2
7	3,5	1,8		3,5	4	39		8,5	2
8	3,2	1,6		2,8	3,7	31,7		8	6
9	3	2		4,5	6	51	1	9,9	3
10	2,5	2		3	3,5	33,5	1	0,7	3
11	3	2		1	2	12			1
12	3,2	1,8		4,7	7,3	54,3		7	3
13	3	2		6,5	8,5	73,5	1	7,8	3
14	3,1	1,7		3	4	34		9,5	6
15	3,5	1,5		3	5	35	1	17	3
16	3	1,8		3	4,7	34,7		11,6	3
17									
18	3	2		5	8	58			1
19	2,6	1,9		3,6	6,8	42,8		8,7	5
20	2,5	1,9		3,5	6,3	41,3		8,5	4
21	3	1,6		5	8,6	58,6		9,3	7
22	2,8	1,8		6	12,2	72,2		2,3	5
23									
24									
25	2,5	2,3		3	4,5	34,5		0,7	2
26	2	2		3	4	34			1
27	3	2		5	7	57			1
28	3	2,3		2,5	3	28	1	8,5	3
29									
30	3	1,5		2,5	4,5	29,5		9,2	2
	2,96	1,89		3,8	5,8	44,1	7	8,2	82

Monthly mean: **44,1** Covering: **26/30**
 Observations: **82** Number of observers: **8**

V.V.S. BELGIUM SOLAR SECTION FRANKY DUBOIS

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 B8920 Langemark
 Belgium
 e-mail : astrosun@skynet.be

Observers:

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

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

Month : November 2009

CV

Pettisindex SN

Intersol IS

Date	F.Dubois	O.Steen	L.Meeus	J.Carels	J.Janssens	P.J. Dektelver	G.Gubbels	H.De Baetier	D.Van Hessche	R.verboven	S.Dufoer	Mean	R.Verboven	G.Gubbels	F.Dubois	P.J. Dektelver	O.Steen	J.Carels	F.Feys	Mean	F.Dubois	J.Carels	G.Gubbels	P.J. Dektelver	Mean
1						0	0					0,0	0,0	0	0	0	0			0,0			0	0	0,0
2	0	0	0	0		0	0					0,0	0	0	0	0	0			0,0	0	0	0	0	0,0
3						0	0					0,0		0	0	0				0,0			0	0	0,0
4	0	0		0				0				0,0			0	0	0	7		0,0	0	0			0,0
5	2	2	2			2						2,0		5	5	4		0		3,5	6		5		5,5
6	5	2				2	5		5			3,8	11	12	13	3	4			8,0	5		5	4	4,7
7	0	0		0			0					0,0			0	0	0	0		0,0	0	0			0,0
8	0	0	0	0	0		0	0	0	0		0,0	0	0	0	0	0	0		0,0	0	0	0		0,0
9	2	5		3								3,3			5	16	4	8		8,3	6	5			5,5
10	5	2		1				13				5,3			13	4	2	8		6,3	5	4			4,5
11	1	1		1								1,0			3	2	1	7		2,0	4	1			2,5
12	0	0		0			0					0,0			0	0	0	5		0,0	0	0			0,0
13	1	2	2	0			1					1,2			2	0	0			1,3	3	0			1,5
14	1	0	0	0			0	2	0	0		0,1	0	0	1	0	0	5		0,3	1	0	0		0,3
15	1	1		0			0	1		0		0,5	0	0	1	1	0	4		0,5	1	0	0		0,3
16	2	3		2				1				2,0			5	5	2	5		4,0	6	3			4,5
17																									
18		3										3,0				3		4		3,0					
19	4	5		2			4	2				3,4		12	10	10	10	12		10,5	11	11	14		12,0
20	5	6	3				3	2		3		3,7		9	14		6			12,3	6		11		8,5
21		2	2	2	2		2	2		2		2,0		9		7	7	12		7,7		8	10		9,0
22	2	2		1			2	0		1		1,3		5	6		3	1	21		3,8	7	1	6	4,7
23																									
24																			9						
25	0	0		0								0,0			0	0	0	6		0,0	0	0			0,0
26	0	0		0			0					0,0			0	0		3		0,0	0				0,0
27	0	0		0			0					0,0			0	0	0	0		0,0	0	0			0,0
28	0	0					0					0,0			0	0		11		3,7	0				0,0
29	0	0										0,0			0	0		0		0,0	0				0,0
30	0	0	0	0			0					0,0			0	0	0			0,0	0	0			0,0
##	1,3	1,4	1,1	0,6	1,0	0,8	1,5	1,4	0,0	1,4	#####	1,2	2,2	4,3	3,4	1,6	3,0	1,5	5,5	2,78	2,7	1,8	4,2	1,8	2,44

Becknumber

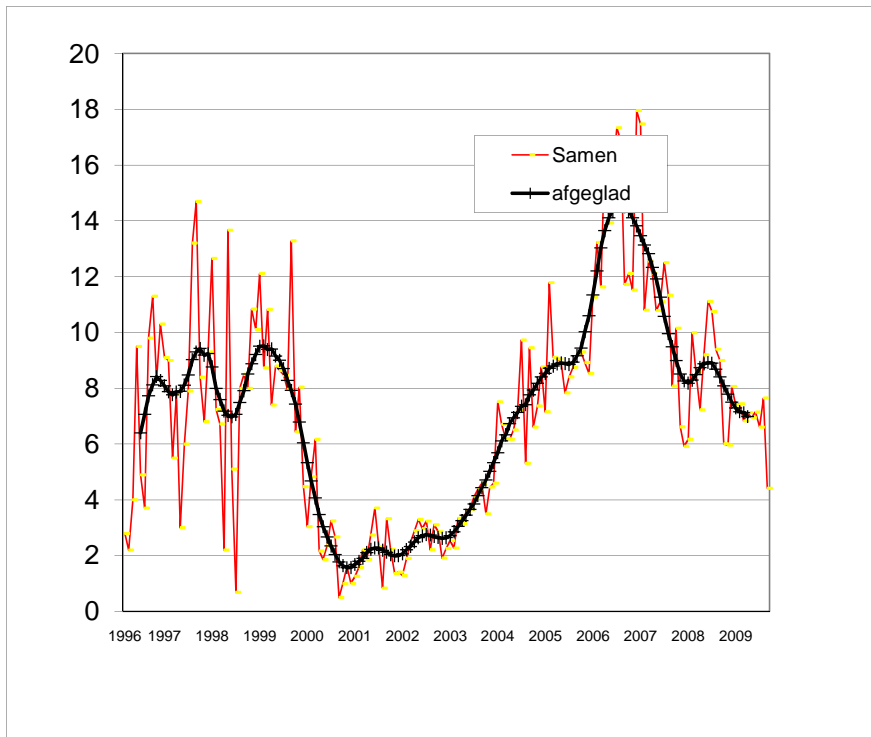
Date	F.Dubois	O.Steen	L.Meeus	P.J. Dektelver	J.Carels	G.Gubbels	S.Dufoer	D.Van Hessche	R.Verboven	F.Feys	A.T.Son	J.Bourgeois	H.Coeckelberghs	De Baetier	Pbl Obs Mira	J.Claes	Mean	Date
1				0	0			0									0	1
2	0	0	0	0	0	0				0	0						0	2
3				0	0					0							0	3
4	0	0			0			0	28								5	4
5	20	16	16	20					0								14	5
6	32	16		12	32			24									23	6
7	0	0			0				0	0	0		0				0	7
8	0	0	0		0	0		0	0	0		0	0	0			0	8
9	20	56			16				32								31	9
10	32	16			12				32				24				23	10
11	12	8			4				28								13	11
12	0	0			0				20					0			4	12
13	8	8	8		0	0		0	0	8				8			6	13
14	4	0	0		0	0		0	20	0	4			0	0		2	14
15	4	4			0	0		0	16					4			4	15
16	20	20			12				20					4			15	16
17									0								0	17
18		12							32		8						17	18
19	40	40			40	48			48	48	48			16		68	44	19
20	40	40	28		36			28	24	20				8	12		26	20
21		28	28		28	36		32	48				111	28	24		40	21
22	24	12			4	20			12	88			0	0	0		18	22
23																		23
24									36								36	24
25	0	0			0				24								6	25
26	0	0			0				12		0			0			2	26
27	0	0			0				0	0				0			0	27
28	0	0							44	0				0			9	28
29	0	0							0								0	29
30	0	0	0		0					0				0			0	30
	11,1	11,0	10,0	6,4	6,1	16	#####	0	12	23	8	9	37	6	#####	12		11,7

Belgian Solar Observers

Polar Faculae

Month: November 2009

Date	Dubois			Steen			Deman			Gabriel			Carels			Janssen			T.Spaninks			G.Gubbels		
	125mm F20			102mm F15			150mmF15			250 mm F20			150mm F8			200mmF10			127mm F15					
	North	South	Q	North	South	Q	North	South	Q	North	South	Q	North	South	Q	North	South	Q	North	South	Q	North	South	Q
1																								
2	8	1	2	5	4	3,5	9	3	4									0	0	4	0	0	3	
3																						4	6	4
4	4	2	2	4	5	3,5																		
5				3	3	3,5																		
6				4	5	3,5																		
7	5	4	2																					
8				4	2	3,5									2	0	3,0	0	0	4	0	0	3,5	
9				7	5	3,5	11	5	4															
10				6	4	3,5																		
11				4	3	3,0																		
12				6	3	3,0																		
13																								
14																						0	0	4
15																						3	5	3,5
16				6	4	3,5																		
17																								
18																								
19				4	0	3,0																0	0	3,5
20																						4	6	4
21				1	2	3,0	13	5	3						0	0	3,0	0	0	3	0	0	3,5	
22				0	2	3,0																0	0	3
23																								
24																								
25																								
26																								
27																								
28																								
29																								
30	2	0	2																					
	4,75	1,75		4,15	3,23		11,0	4,3		#####	#####		#####	#####		1,00	0,00		0,00	0,00		1,10	1,70	

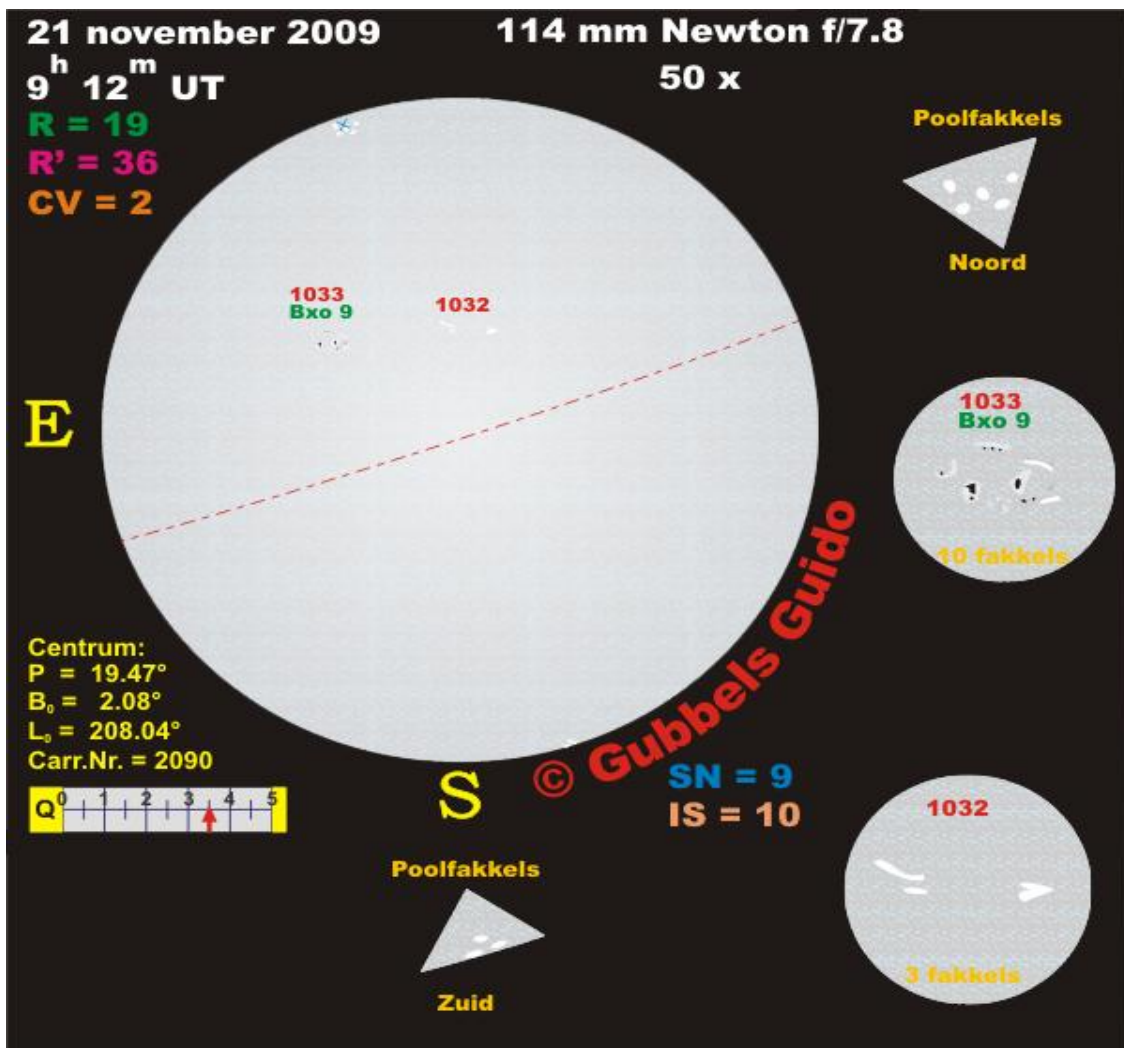


Sunspot activity from organisations all over de world

Month :

October 2009

Organisation	Wolf	Wolf	Wolf	Groups	Faculae	CV	Beck	Pettis	Intersol	Area	prom	prom	Filam &	Radio	Naked	Polar
	Total	North	South		number			index			MDF	Rp	plages	flux	eye	Faculae
NOAA SWO	7,0													72,3		
SIDC	4,6	4,6	0													
Kanzelhöhe	4,36															
G.F.O.E.S France	4,5														0	
BSO Belgium	6,7	6,5	0,2	0,41		5,70	58,2	8,6	4,35			42,7				7,65
S.O.G.S.A.S. Switserland	5,5			0,30												
BAA	5,7			0,273							2,21		0,17			
GsRSI Italy	8,7											45,7				
CV Helios Network						5,4										
AAVSO	4,5															
Sonne Germany Preliminary	5,2	5,1	0,1	0,20			69,0									
O.A.A. Japan	6,1	5,8	0,2													
Solar Observer Society TOS Poland	6,61				0,73	6,45				42,3						
Astronomical League of the Philippines	7,3			0,3												



SOLAR ACTIVITY

Solar activity was quiet during the whole week. The only sunspot group recorded on the solar disk on November 23 (Catania number 28, NOAA AR 1033), as well as two spotless H-alpha plages (NOAA ARs 1031 and 1032), did not produce any significant flaring activity.

A low-latitude coronal hole in the southern hemisphere passed the solar central meridian on November 23. A fast solar wind stream from this coronal hole arrived to the Earth on November 24-25 (see below).

GEOMAGNETIC ACTIVITY

In the beginning of the week (November 23-24) the Earth was situated inside the slow solar wind flow following a previous fast stream. Geomagnetic conditions were quiet. A sector boundary crossing was observed around noon on November 24. It was followed by a faster (up to 460 km/s according to SOHO/CELIAS) solar wind flow from the edge of a low-latitude coronal hole (see above). Due to low speed and weak interplanetary magnetic field, geomagnetic conditions remained quiet. This faster solar wind flow was over on November 26. The Earth entered another slow wind flow and stayed there until the end of the week. On November 26 the interplanetary magnetic field magnitude rose up to 7 nT. The north-south magnetic field component was predominantly negative during several hours. However, the solar wind speed remained low, and no significant geomagnetic disturbance resulted. Only IZMIRAN reported a single interval of active geomagnetic conditions ($K = 4$). According to Dourbes and NOAA, geomagnetic conditions were quiet. During the rest of the week, geomagnetic conditions were quiet as well.

SOLAR ACTIVITY

Solar activity was at its lowest level during the whole week. The Earth was facing the inactive hemisphere of the Sun. Indeed, over the last 8 Carrington rotations, almost all active regions appeared in restricted longitude ranges, mostly 200 - 300° and also 0 - 50°. So, all recent active regions were on the far side of the Sun during this week. As unique event, a limb CME was observed at the West limb on Dec.3. A small low-latitude coronal hole rotated in a geoeffective position late in the week by Dec.5. Also, on Dec.1st, the transition from GOES10 to GOES14 led to a jump in the X-ray flux measurements that is only due to a difference in the sensitivity of the instruments.

GEOMAGNETIC ACTIVITY

The geomagnetic activity remained quiet over the entire week, with only a brief unsettled interval on Dec.5, associated to a weak solar wind disturbance produced by a small low-latitude coronal hole.

The highlight of this week was an extremely quiet period from Dec.3 to Dec.5, when the solar wind parameters all reached exceptionally low values: speed < 250km/s, density < 0.3 electron/cm³, temperature < 20000K and magnetic field strength < 4nT. Given the vanishing and stable dynamic pressure of the solar wind on the Earth magnetosphere, the corresponding geomagnetic indices stayed mostly at Kp=0 in most ground stations from Dec.1 to Dec.5.

SOLAR ACTIVITY

A sunspot group, Catania, NOAA AR 1034 became visible at the east limb on Dec 10. The group produced one C-flare on that day.

GEOMAGNETIC ACTIVITY

There was no response of the magnetic field of Earth on solar influences.

The Kp index was zero or one.

SOLAR ACTIVITY

Solar activity was dominated by the emergence of NOAA AR 1035, which displayed a moderate flaring activity including several C-class flares. A partial halo CME was associated with one of these flares, peaking at C5.6 level, and occurring on Dec. 16th at 01:24UT (peak time). No geomagnetic effect was detected in response to this event. The biggest flare, a C7.6, occurred on Dec. 18th, at 18:55UT (peak time).

GEOMAGNETIC ACTIVITY

Geomagnetic activity remained at low levels during the whole week.
