

Newsletter Belgian Solar Observers

Results and news for solar observers

Volume 14

Number 166

December 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

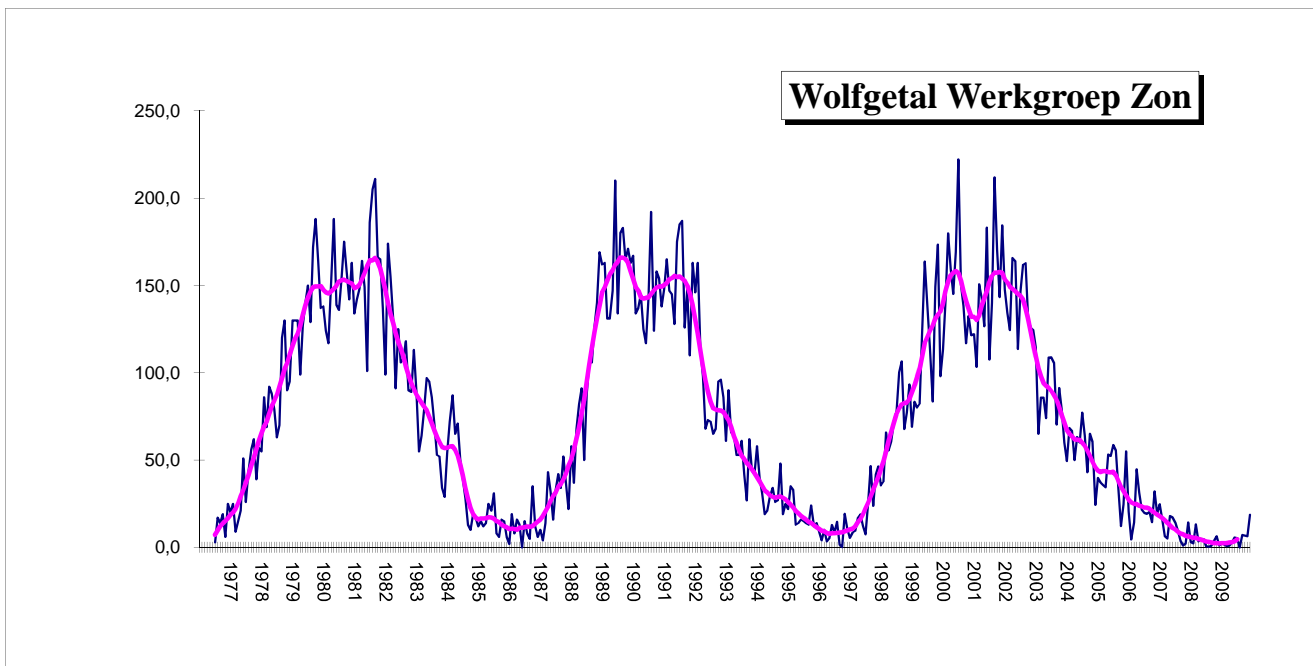
Monthly sunspot report

Polar faculae and CV numbers

Prominence numbers by the members

Monthly prominence report

Photo album and drawings



Mean of december observations

Groups :	N	0,79	Wolfnumb N	14,4	Beck :	85,2
	S	0,29	S	4,3	CV	10,7
	N+S	1,04	N+S	18,7		
264 observations	28 observers					

Sunspotnumbers VVS Belgium

Month: **December 2009**

Day	GROUPS			WOLFNUMBER			RE'	CV	OBS
	N	S	N+S	N	S	N+S			
1	0	0	0	0	0	0	0	0	10
2									
3									
4	0	0	0	0	0	0	0	0	7
5	0	0	0	0	0	0	0	0	8
6	0	0	0	0	0	0	0	0	3
7	0	0	0	0	0	0	0	0	6
8	0	0	0	0	0	0	0	0	8
9									
10	1	0	1	14	0	13,5	18	2	11
11	1	0	1	13	0	13,0	27	3,3	6
12	2	0	2	17	0	17,3	18	2,5	12
13	1	0	1	15	0	15,1	26	2,5	18
14	2	0	2	30	0	29,7	73	8,1	20
15	2	0	2	39	0	38,8	314	22,1	21
16	1	0	1	32	0	32,4	421	32	10
17									
18	1	0	1	24	0	24,0	253	38	16
19	2	0	2	27	0	26,6	190	34,8	22
20	3	1	4	34	14,8	48,6	222	53	9
21									
22	1	1	2	14	15,5	29,0	88	9	6
23	1	1	2	10	12	22,3	28	5	12
24	1	0	0	78	0	78,0	12	1	5
25	0	0	0	0	0	0	0	0	5
26	0	1	1	0	7,4	7,4	13	1,9	20
27	0	1	1	0	14,4	14,4	63	9	8
28	0	1	1	0	18,9	18,9	175	22,6	13
29	0	1	1	0	21	21,0	104		2
30									
31									
	0,79	0,29	1,04	14,4	4,3	18,7	85,2	10,7	258

Monthly mean: **18,7** Covering: **24/31** Spotless days: **7**
 Observations: **258** Number of observers: **26**

V.V.S. BELGIUM SOLAR SECTION FRANKY DUBOIS

Poekapellestraat 39
 B8920 Langemark
 Belgium
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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: December 2009

Day	Q	Wedel		H	e	Rp	el. Obs	Stdev	OBS
1	3,3	2		6	6,5	66,5	1	0,7	3
2									
3									
4	3,5	1,5		4	5	45	1	0	3
5	3	2		3	4,5	34,5		0,7	2
6	3	2		3	4	34			1
7	2,5	2,3		4	6,5	46,5		17,7	2
8	3,3	2		2,8	3,5	31,5		11,2	4
9									
10	2,9	1,9		4,3	6,5	49,5		5,7	4
11	2	2		5	9	59			1
12	2,7	2,2		3,7	5,3	42,3		7,9	3
13	2,8	2,1		5	8,5	58,5	1	10,7	7
14	3,8	1,6		3,2	4,4	36,4	1	9,9	6
15	2,8	1,9		4,1	6,3	47,3		7,3	7
16	3,5	1,5		3,5	5,5	40,5	1	7,8	3
17									
18	2,3	2,3		3,3	5,7	38,7	1	6,2	4
19	2,3	2,4		2,8	3,8	31,8	1	11,4	7
20	3,1	2,1		3,3	4,8	37,8		10,4	4
21									
22									
23	2	2		4,5	10	55	1	11,3	3
24	3	2		6	15	75			1
25	3	2		4	5	45			1
26	2,4	2,4		6,2	9	71	2	10,3	7
27	2,5	2		3	3,5	33,5		0,7	2
28	3,1	2,1		4	7	47	1	9,1	5
29									
30									
31									
	2,84	2,01		4,0	6,3	46,7	11	7,7	80

Monthly mean: **46,7** Covering: **22/31**
 Observations: **80** Number of observers: **11**

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 ; 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 : $H*10+e$

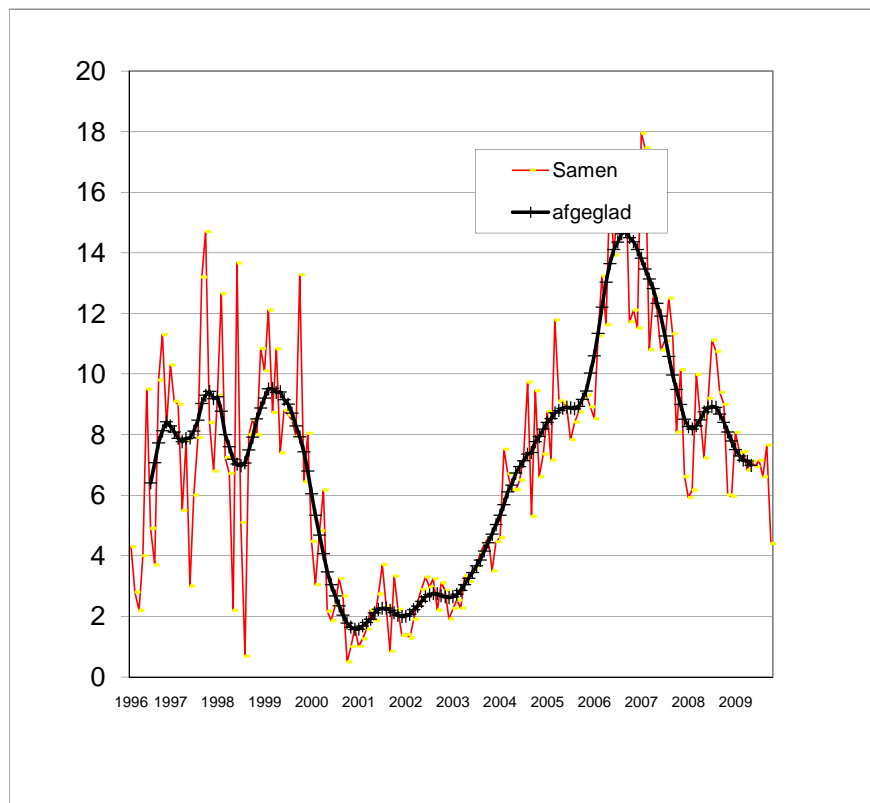
More info at : <http://members.chello.be/j.janssens/>

Belgian Solar Observers

Polar Faculae

Month: December 2009

Date	Dubois			Steen			Deman			Gabriel			Dekelver			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	North	South
1				5	4	3,5														0	1	4				
2																										
3																										
4	3	3	3	4	3	3,5																				
5																										
6				4	2	3,0																				
7																										
8																										
9																										
10				4	3	3,5																				
11																										
12	2	2	3	4	5	3,5														0	0	4	3	4	3	
13	4	0	3	3	1	3,5	8	4	3				0	0	1								4	5	3,5	
14	4	3	3	3	3	3,5	12	8	5				2	2	4					0	0	4	3	5	4	
15	1	2	3	1	1	3,0							3	1	2,5								3	5	3,5	
16																										
17																										
18	1	0	3	3	2	3,0																				
19																										
20	1	4	3																							
21																										
22																										
23													1	2	1,5								2	3	3,5	
24																				0	0	4	3	4	3	
25																										
26																	1	1	2,5	0	0	4	3	5	3	
27																										
28																				0	0	3	4	5	3	
29																										
30																										
31																										
	2,29	2,00		3,44	2,67		10,0	6,0		#####	#####		1,20	1,00		1,00	1,00		0,00	0,17		3,00	4,44			



Different Relative Sunspotnumbers

Month : December 2009

CV											Pettisindex SN						Intersol IS									
Date	F.Dubois	O.Steen	L.Meeus	J.Carels	J.Janssens	P.J. Dektelver	G.Gubbels	H.De Backer	D.Van Hesseche	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	
2																										
3																										
4	0	0										0,0			0	0	0			0,0	0	0			0,0	
5	0	0		0				0	0			0,0			0	0	0			0,0	0	0			0,0	
6		0		0								0,0			0	0	0			0,0	0	0			0,0	
7	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	
9																										
10	2	3		2				1				2,0			4	6	3			4,3	5	4			4,5	
11	5	3						2				3,3			12	4				8,0	4				4,0	
12	3	3		3			2	2	2			2,5		4	4	4	4			4,0	5	5	5		5,0	
13	2	4		3		2	3	2	2	2		2,5		4	4	3	7	4		4,4	5	5	5	4	4,8	
14	9	6	7	8		5	4	18				8,1		14	23	13	14	20		16,8	16	13	16	15	15,0	
15	14	32	10	24		23	29	22	23			22,1		69	42	28	51	60		50,0	20	25	19	30	23,5	
16	32	32		32			32					32,0		82	50	57	68			64,3	20	24	18		20,7	
17																										
18	44	47		23			44	32				38,0		33	33	23	48			34,3	11	13	12		12,0	
19	46	31	20	46	21	20	45	29	45	45		34,8		34	39	20	38	35		33,2	16	10	11	6	10,8	
20	51	55		53								53,0			43	43	54			46,7	23	24			23,5	
21																										
22	9	9		9								9,0			21	29	28			26,0	15	12			13,5	
23	10		3	3		5	4					5,0		7	24	8		3		10,5	8	4	9	10	7,8	
24							1					1,0		1						1,0			1		1,0	
25	0	0										0,0			0	0				0,0	0				0,0	
26	5	3		2	1		2	0	0	2		1,9		4	13	4	4			6,3	5	5	5		5,0	
27	13	16		5		2						9,0			22	4	21	14		15,3	7	6		5	6,0	
28	19	22		28			25	19				22,6		37	23	25	24			27,3	7	10	12		9,7	
29																										
30																										
31																										
##	12,6	12,7	10,0	13,4	11,0	9,5	17,4	9,1	14,0	12,8	#####	10,7	#####	26,3	17,0	12,7	15,5	20,5	####	15,31	8,0	8,9	10,3	11,7	7,24	

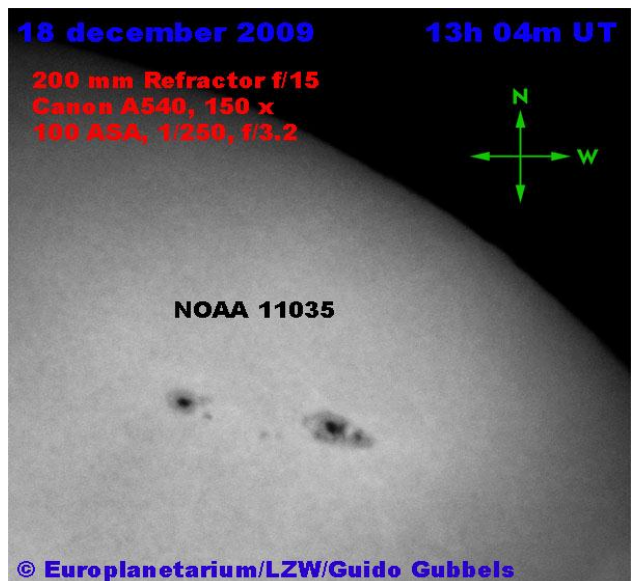
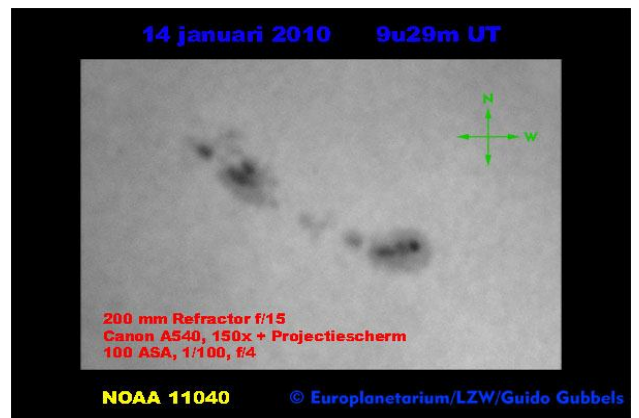
Becknumber

Date	F.Dubois	O.Steen	L.Meeus	P.J. Dektelver	J.Carels	G.Gubbels	S.Dufoer	D.Van Hesseche	R. Verboven	F.Feys	A.T.Son	J.Bourgeois	H.Coeckelberghs	De Backer	Pbl Obs Mira	J.Claes	E.De Ceuninck	Mean	Date						
1	0	0		0					0					0		0			0	1					
2																				2					
3									0										0	3					
4	0	0							0						0	0			0	4					
5	0	0		0			0							0		0			0	5					
6		0		0															0	6					
7	0	0							0					0					0	7					
8	0	0		0					0					0		4			1	8					
9									0										0	9					
10	20	24		12						20			4			32			19	10					
11	24	16							52				16						27	11					
12	16	16		16	16			12	40	20			12			16			18	12					
13	16	28		12	16	16		12	12	40	23	16	8		12	20			18	13					
14	80	56	80	52	80	56				68	52	90	138	68	60	48			71	14					
15	328	436	188	490	579	292		525		116	184	180	324	96	132	400			305	15					
16	475	500		325	425					666	425			88		468			422	16					
17										342									342	17					
18	250	250		275	275					270	300		250	252	198	260			258	18					
19	199	174	175	125	308	183		288	179	462	102		88	125	130	124			190	19					
20	226	226		384						100						176			222	20					
21										218									218	21					
22	104	76		64						108									88	22					
23	48		28	32	12	28				48	24		0		32				28	23					
24					4					32	0								12	24					
25	0	0								0						0			0	25					
26	32	16		16	16		0	16	0	16	0	0	0	0	16	16			12	26					
27	108	72		16	40											80			63	27					
28	108	180		162	198					306	270		90			180			187	28					
29										104									104	29					
30										112									112	30					
31										252									252	31					
	96,9	98,6	117,8	121,2	127,2	137	####	165	55	125	71	158	90	69	126	73	107		99,0						

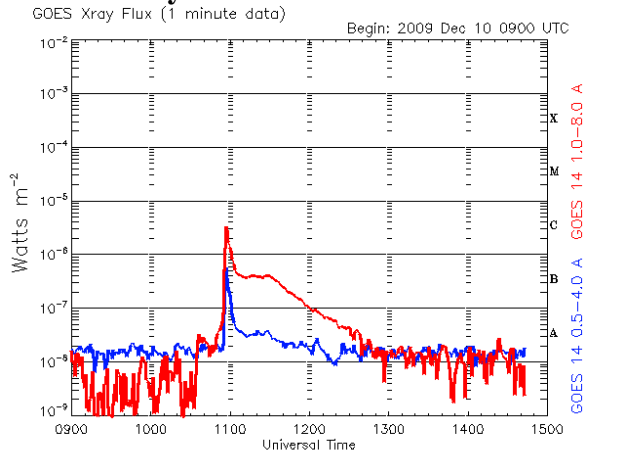
Sunspot activity from organisations all over de world

Month : **November 2009**

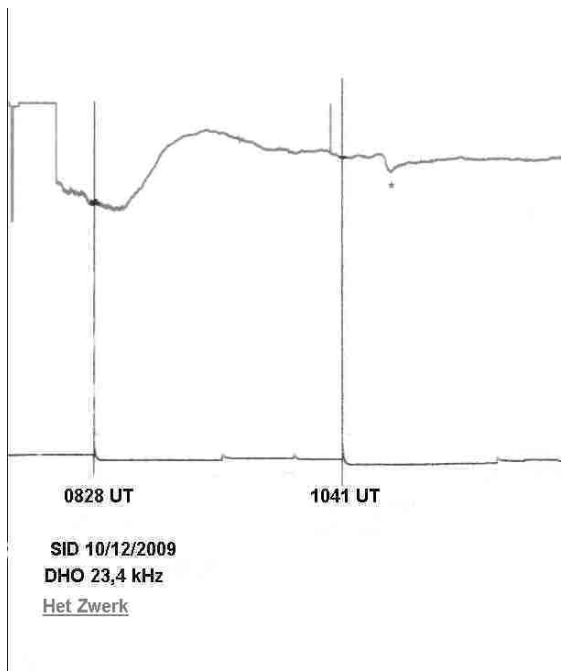
Organisation	Wolf Total	Wolf North	Wolf South	Groups	Faculae number	CV	Beck	Pettis index	Intersol	Area	prom MDF	prom Rp	Filam & plages	Radio flux	Naked eye	Polar Faculae
NOAA SWO	7,7													76,8		
SIDC	4,2	3,9	0,3													
Kanzelhöhe	5,1															
G.F.O.E.S France	3,3														0	
BSO Belgium	6,7	6,4	0,3	0,59		1,20	10,2	2,78	2,44			44,1				
S.O.G.S.A.S. Switzerland	3,7			0,3												
BAA	4,55			0,3							1,9					
GsRSI Italy	5,6											36,8				
CV Helios Network						1,05										
AAVSO																
Sonne Germany Preliminary	4,1														0	
O.A.A. Japan	4,7	4,7	0													
Solar Observer Society TOS Poland																
Astronomical League of the Philippines	3,92			0,31												



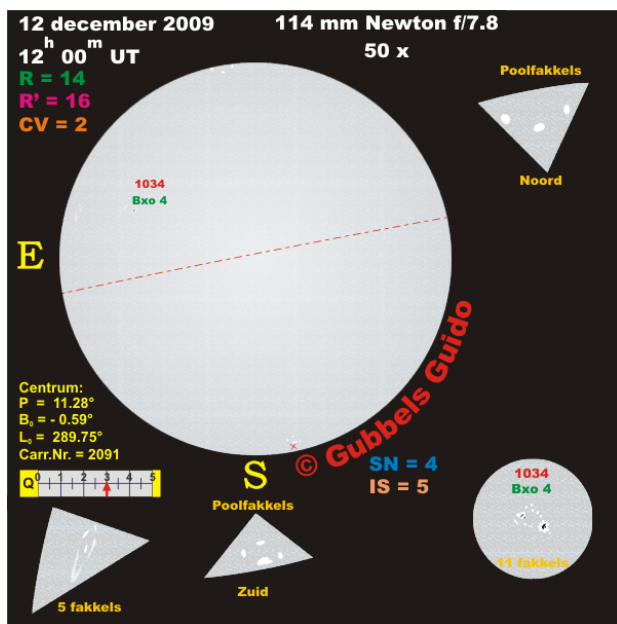
Solar activity in december 2009



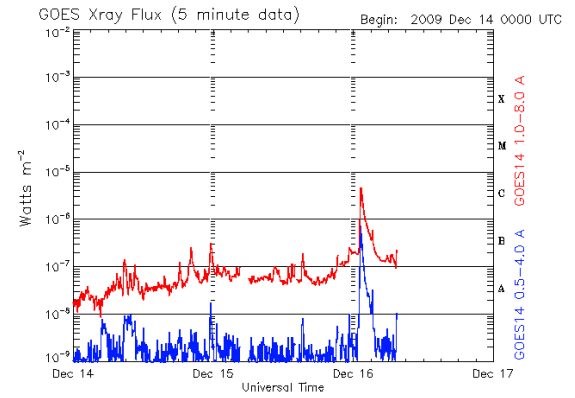
Updated 2009 Dec 10 1444 UTC NOAA/SWPC Boulder, CO USA
 10 december 2009 , C 3.4 flare in 1034.



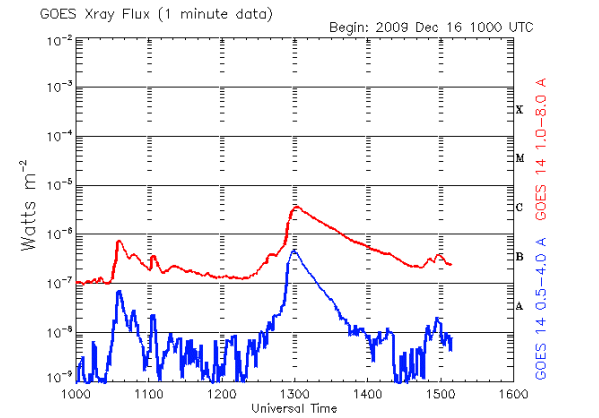
Sid reported by A.T.Son



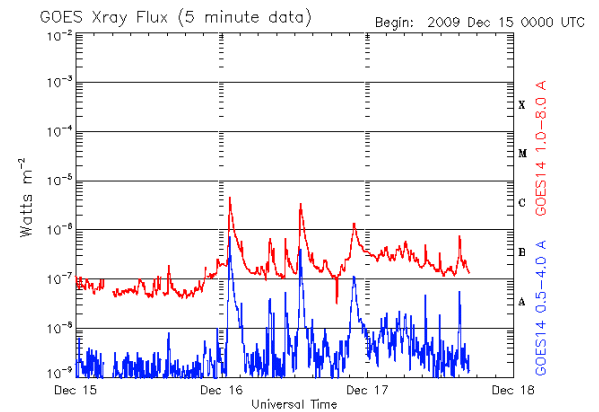
12 december 2009 G.Gubbels



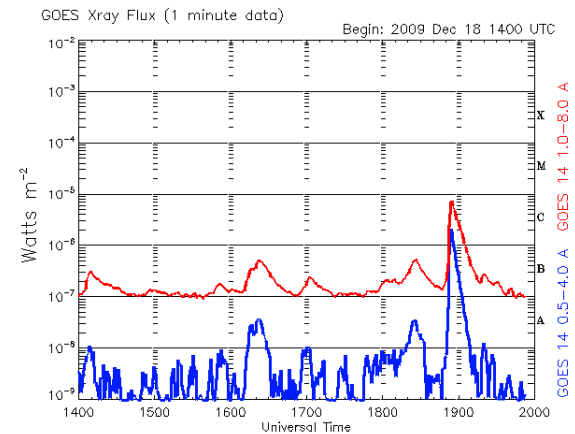
Updated 2009 Dec 16 07:40:11 UTC NOAA/SWPC Boulder, CO USA
 Activity from 14 to 16 december



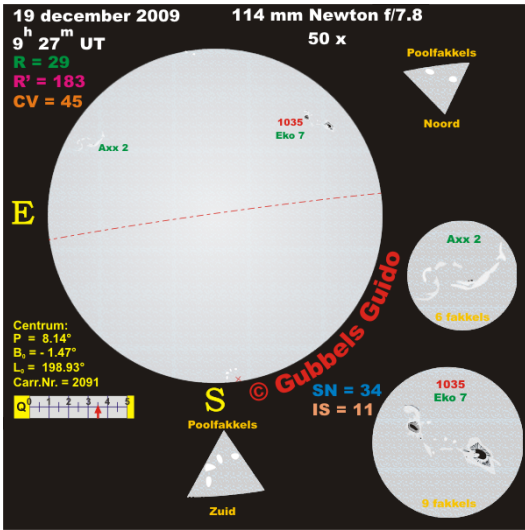
Updated 2009 Dec 16 1510 UTC NOAA/SWPC Boulder, CO USA
 16 december , C3.7 flare



Updated 2009 Dec 17 16:55:11 UTC NOAA/SWPC Boulder, CO USA
 Tree C flares between 16 and 17 december



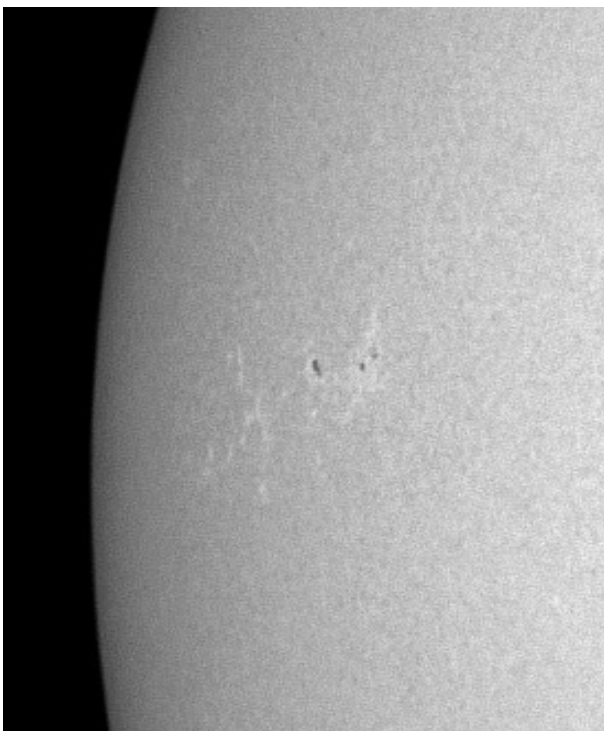
Updated 2009 Dec 18 1954 UTC NOAA/SWPC Boulder, CO USA
 C7.6 flare in Noa 1034 on 18 december



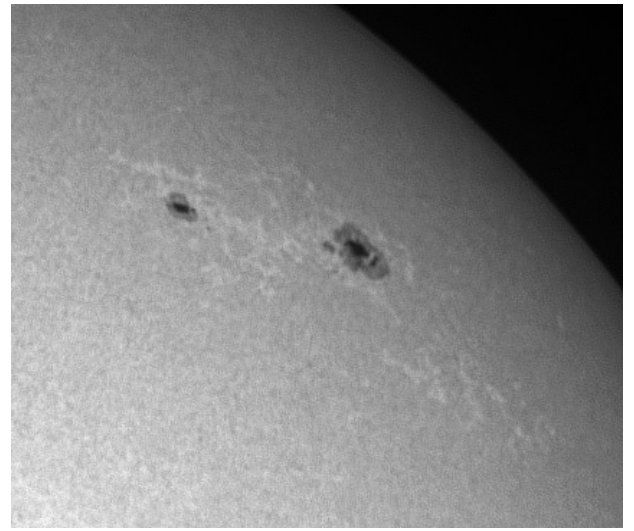
White light observation 19 december G.Gubbels



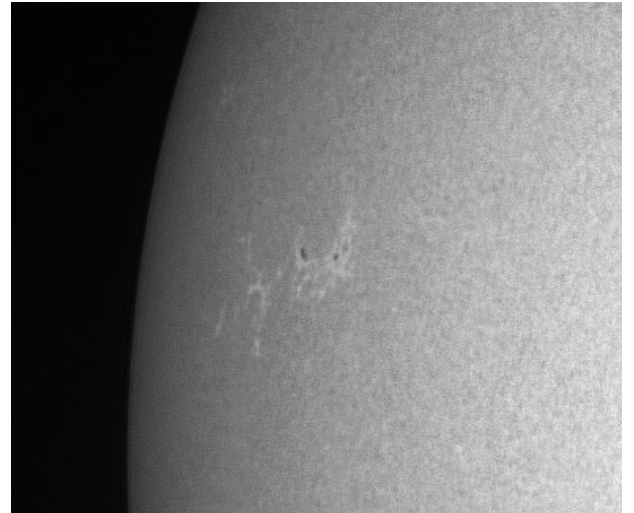
Noaa 1035 19 december by J.Bavais
2



Noaa 1037 19 december J.Bavais



Noaa 1035 19 december K line J.bavais



Noaa 1037 19 december K line J.bavais



Noaa 1035 19 december Ha J.Bavais

SIDC Weekly bulletin on Solar and Geomagnetic activity
WEEK 469 from 2009 Dec 21

SOLAR ACTIVITY

Several sunspot groups were present this week: Catania 30 (AR 1035), 32 (AR 1036), 33 (AR 1038), 34 (AR 1039). Catania 32 produced a C7.2 flare on Dec 22, peak time at 04:56UT and a C6.4 flare on Dec 23, peak time at 10:17UT.

4 other C-flares occurred on Dec 22. The source region was not identified. There were no space weather consequences linked with these flares.

GEOMAGNETIC ACTIVITY

The geomagnetic activity this week was very low. Kp did not exceed the value of 2.

SIDC Weekly bulletin on Solar and Geomagnetic activity
WEEK 470 from 2009 Dec 28

SOLAR ACTIVITY

Solar activity was dominated this week by NOAA active region 11039 that rotated in the Southern hemisphere from roughly central meridian to nearly the Western solar limb by the end of the period. The region showed a significant growth on Dec 31, followed by several minor C-flares. The largest event was a C3.1 flare on January 2 (23:19).

GEOMAGNETIC ACTIVITY

The solar wind gradually decayed from 400km/s in the beginning of the period down to less than 300 km/s from Dec 30 onwards. As a consequence the geomagnetic activity was at K=0 levels for most of the period with only an isolated K=3 episode on Jan 1.

SIDC Weekly bulletin on Solar and Geomagnetic activity
WEEK 471 from 2010 Jan 04

SOLAR ACTIVITY

The beginning of the week was dominated by NOAA active region 11039, producing weak C-class flares. It disappeared behind the western limb on January 6 leaving the visible solar disk spotless, until January 8 when NOAA AR 11040 developed new sunspots. This AR is still growing in size but has produced so far only weak C-class flares.

GEOMAGNETIC ACTIVITY

There were no disturbances that affected the Earth, conditions were quiet for the full week.

SIDC-NEWS: DEFINITIVE INTERNATIONAL AND HEMISPHERIC SUNSPOT #
NUMBERS from the SIDC (RWC-Belgium)

SIDC DEFINITIVE INTERNATIONAL AND HEMISPHERIC SUNSPOT NUMBERS FOR 2009

APRIL MAY JUNE

Date	Ri	Rn	Rs	Ri	Rn	Rs	Ri	Rn	Rs
1	0	0	0	0	0	0	11	11	0
2	0	0	0	0	0	0	12	12	0
3	0	0	0	0	0	0	11	11	0
4	0	0	0	7	0	7	9	9	0
5	0	0	0	0	0	0	8	8	0
6	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0

9	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0
13	0	0	0	7	7	0	0	0	0
14	0	0	0	10	10	0	0	0	0
15	0	0	0	9	9	0	0	0	0
16	0	0	0	8	8	0	0	0	0
17	0	0	0	9	9	0	7	0	7
18	0	0	0	8	8	0	0	0	0
19	0	0	0	7	7	0	0	0	0
20	0	0	0	0	0	0	0	0	0
21	7	7	0	0	0	0	7	0	7
22	0	0	0	8	0	8	8	0	8
23	0	0	0	8	0	8	7	0	7
24	0	0	0	0	0	0	8	0	8
25	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0
29	8	0	8	0	0	0	0	0	0
30	8	0	8	0	0	0	0	0	0
31				10	10	0			

MEAN :0.8 0.2 0.6 2.9 2.2 0.7 2.9 1.7 1.2

SIDC-NEWS: DEFINITIVE INTERNATIONAL AND HEMISPHERIC SUNSPOT #
NUMBERS from the SIDC (RWC-Belgium)
SIDC DEFINITIVE INTERNATIONAL AND HEMISPHERIC SUNSPOT NUMBERS FOR 2009

JULY AUGUST SEPTEMBER

Date	Ri	Rn	Rs	Ri	Rn	Rs	Ri	Rn	Rs
1	0	0	0	0	0	0	8	8	0
2	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
4	14	0	14	0	0	0	0	0	0
5	16	0	16	0	0	0	0	0	0
6	14	0	14	0	0	0	0	0	0
7	11	0	11	0	0	0	0	0	0
8	12	0	12	0	0	0	0	0	0
9	10	0	10	0	0	0	0	0	0
10	9	0	9	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	8	0	8
22	0	0	0	0	0	0	13	4	9
23	7	0	7	0	0	0	20	12	8
24	0	0	0	0	0	0	20	12	8
25	0	0	0	0	0	0	17	9	8
26	0	0	0	0	0	0	9	9	0
27	0	0	0	0	0	0	7	7	0
28	0	0	0	0	0	0	10	10	0
29	0	0	0	0	0	0	9	9	0
30	7	7	0	0	0	0	7	7	0
31	0	0	0	0	0	0			

MEAN 3.2 0.2 3.0 0.0 0.0 0.0 4.3 2.9 1.4