

# NIEUWSBRIEF V.V.S. WERKGROEP ZON

Waarnemingsresultaten en nieuws voor zonnewaarnemers

Jaargang : 15

Nummer: 168

Februari 2010

Franky Dubois Poelkappellestraat 39 langemark 8920

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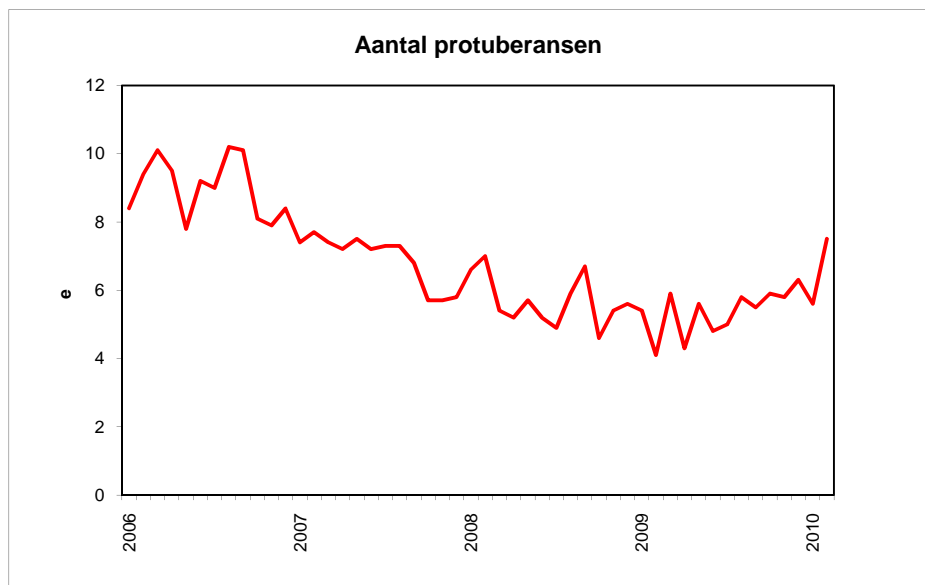
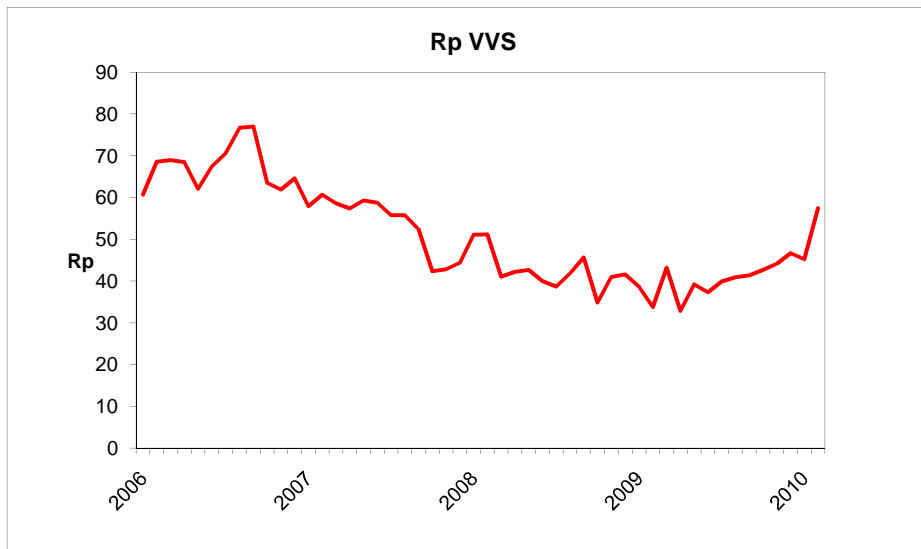
Een en ander herschikt de laatste maanden, sommige mensen gaan de papieren nieuwsbrief niet meer ontvangen omdat ze vroeger zonnewaarnemingen verrichten en nu niet meer. Een en ander kadert in het herindelen van mijn vrije tijd en omdat ik geen opvolger vind moet ik op een of andere manier zorgen dat ik wat minder werk krijg.

Eerst de nieuwsbrief onder handen genomen, je hebt het misschien al opgemerkt dat enkel de waarnemingen worden gepubliceerd, teksten ga je voorlopig niet meer vinden in de nieuwsbrief.

Ook de website gaat verandering tegemoet, ik denk er sterk aan om de fotodatabase op te doeken, de laatste maanden amper de tijd had om aan te passen. Maar indien zich iemand geroepen voelt om de volledige website te runnen mag dit zeker melden bij de werkgroep leider.

De volgende jaarlijkse vergadering gaat door op 18 september in het Europlanetarium. We zijn er tevens te gast om het vijfjarig bestaan te vieren van de Limburgse zonnewaarnemers.

Heb je zin om iets naar voren te brengen, dan kan je het nu al laten weten.



## Gemiddelden werkgroep zon februari 2010

Groepen : N	1,28	Wolfgetal : N	20,5	RE'	207,2
S	0,64	S	9	CV	19,7
N+S	1,84	N+S	29,5		

221 waarnemingen 28 waarnemers



# Sunspotnumbers VVS Belgium

Month: February 2010

Day	GROUPS			WOLFNUMBER			RE'	CV	OBS
	N	S	N+S	N	S	N+S			
1	1	0	1	15,9	0	15,9	66	9	13
2									1
3	1	0	1	13,5	0	13,5	98	8	6
4	1	0	1	11,0	0	11,0	37	7	7
5	1	0	1	13,8	0	13,8	38	8	8
6	2	0	2	33,9	0	33,9	173	15	15
7									
8	3	0	3	55,3	0	55,3	904	59	4
9	2	1	3	42,1	10,3	52,4	577	35	9
10	2	1	3	41,1	11	52,1	668	46	10
11	2	0	2	40,6	0	40,6	425	43	9
12	2	0	2	38,3	0	38,3	473	60	11
13	2	0	2	37,4	0	37,4	390	34	7
14	3	0	3	42	0	42,0	291	28	1
15	2	0	2	28,8	0	28,8	98	12	4
16	2	0	2	28,8	0	28,8	96	9	21
17	2	1	1	19,3	17,5	36,8	58	6	6
18	0	2	2	0	28	28,0	114	9	11
19	0	1	1	0	22,3	22,3	69	3	4
20	0	1	1	0	20	20,0	145	18	14
21	0	1	1	0	16,4	16,4	44	9	14
22	0	1	1	0	16,7	16,7	59	9	6
23	0	2	2	0	29,5	29,5	136		2
24	1	2	3	12,1	19	31,1	85	17	11
25	1	1	2	13	15,7	28,7	63	14	6
26	1	1	2	13,9	12,9	26,8	44	8	5
27	1	1	2	11,5	4,9	16,4	29	6	16
28									
	1,28	0,64	1,84	20,5	9,0	29,5	207,2	19,7	221

Monthly mean: **29,5** Covering: **25/28** Spotless days: **0**  
 Observations: **221** Number of observers: **28**

V.V.S. BELGIUM SOLAR SECTION FRANKY DUBOIS

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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: February 2010

Day	Q	Wedel		H	e	Rp	el. Obs	Stdev	OBS
1	3,1	1,9		5,4	8,8	62,8	1	6,7	6
2	1	4		3,0	6	36			1
3	3	2		5	9	59			1
4	3,2	2		6	6,7	66,7		10,5	3
5	2,5	2,3		5,5	8	63		9,9	2
6	4	2		7	16	86			1
7									
8	2,5	2		6	10	70		33,9	2
9	2,7	2,3		2,7	3,7	30,7	1	7,2	4
10	2,8	1,8		7	9	79		7,6	3
11	3	2,3		3,5	5,5	40,5		7,8	2
12	2,8	2		3,8	5,6	43,6	1	10,4	6
13	3	2,5		4	4	44			1
14									
15	2	2		4	9	49			1
16	2,9	2,4		5,3	7,7	60,7		13,6	9
17	2,3	2,3		4,7	6,7	53,7		5,7	3
18	2,3	2,6		4,8	7,5	55,5		6,7	4
19	2,3	3		4	5,5	45,5		14,8	2
20	3,2	2,3		5,3	7,7	60,7		13,6	6
21	3	2		4	5	45	1	15,6	3
22	3	2		5	7	57			1
23	2	3,5		7	7	77			1
24	2,9	2,4		5	5,6	55,6		11,5	5
25	1,5	2,8		6	8,5	68,5	1	0,7	3
26	3	2		6	11	71		1,4	2
27	2,8	2,4		5	7,6	57,6		16,9	5
28									
	<b>2,67</b>	<b>2,35</b>		<b>5,0</b>	<b>7,5</b>	<b>57,5</b>	<b>5</b>	<b>10,8</b>	<b>77</b>

Monthly mean: **57,5**    Covering:  
 Observations: **77**    Number of observers: **11**

**V.V.S. BELGIUM SOLAR SECTION    FRANKY DUBOIS**

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### 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 : February 2010**

CV											Pettisindex SN					Intersol IS								
Date	F.Dubois	O.Steen	L.Meeus	J.Carels	J.Janssens	P.J. Dekelver	G.Gubbels	H.De Backer	D.Van Hesse	R.Verboven	Mean	R.Verboven	G.Gubbels	F.Dubois	P.J. Dekelver	O.Steen	J.Carels	Mean	F.Dubois	J.Carels	G.Gubbels	P.J. Dekelver	Mean	
1	9	9					11	11	5		9,0		15	14		13		14,0		7		7		7,0
2																								
3	7	7					7	10			7,8		10	10		11		10,3		1		5		3,0
4	7	4						10			7,0			10		10		10,0		1				1,0
5	10	4						10			8,0			10		10		10,0		1				1,0
6	12	4	23		23		13		23	8	15,1		25	27		10		20,7				17		20,0
7																								
8							59				59,0		110					110,0				38		38,0
9	44	38		30				26			34,5			76		70	65	70,3		28	31			29,5
10	52	40						45			45,7			86		69		77,5		35				35,0
11	48	21		56				48			43,3			66		45	69	60,0		27	29			28,0
12	59	39		86				54			59,5			64		52	53	56,3		24	23			23,5
13	56	18		28							34,0			68		61	62	63,7		26	20			23,0
14	28										28,0			39				39,0		13				13,0
15		9		11				16			12,0					24	39	31,5			14			14,0
16	10	3	13	8		3	13	10			8,6		29	27	14	8	18	19,2		15	11	15	12	13,3
17	8	4		5							5,7			19		12	13	14,7		18	14			16,0
18			6			7	14				9,0		37		13			25,0				18	21	19,5
19		2				3					2,5				13	6		9,5				12		12,0
20	16	3	19	22				28			17,6			31		8	26	21,7		15	9			12,0
21	8	6	8			3	12	12		12	8,7	14	15	15	8	13		12,8		7		9	7	7,7
22		6						12			9,0					13		13,0						
23																								
24	16	14		10				28			17,0			27		17	27	23,7		11	11			11,0
25	11	14						18			14,3			19		16		17,5		12				12,0
26	8	7									7,5			17		16		16,5		11				11,0
27	6	8				3	4		11		6,4	11	6	14	5	12		9,3		8		8	4	6,7
28																								
##	21,8	12,4	13,8	28,4	23,0	3,8	16,6	22,5	13,0	10,0	19,5	12,5	30,9	33,6	10,6	23,6	41,3	31,50	14,9	18,0	14,6	11,2	15,53	

**Becknummer**

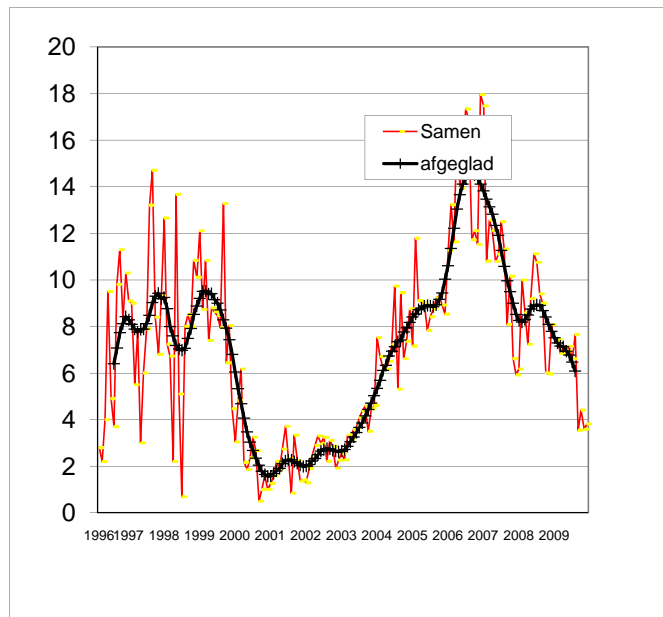
Date	F.Dubois	O.Steen	L.Meeus	P.J. Dekelver	J.Carels	G.Gubbels	E.De Ceuninck	D.Van Hesse	R.Verboven	F.Feys	A.T.Son	J.Bourgeois	H.Coeckelberghs	De Backer	Pbl Obs Mira	J.Claes	Mean	Date		
1	48	40				48	56	32		40				40				43	1	
2										64								64	2	
3	37	111				176				198	56			111				115	3	
4	37	37					37			56				37				41	4	
5	37	37					41							37				38	5	
6	136	40	292			97		94	488		64				680			236	6	
7																			7	7
8						1128												1128	8	
9	577	536			844		348				725			429				577	9	
10	720	629					570							752				668	10	
11	520	200			825		238							341				425	11	
12	616	348			602									324				473	12	
13	644	128			399													390	13	
14	291														100			196	14	
15		135			104									56				98	15	
16	104	32	80	48	52	104	44			60	176	147	40		56			79	16	
17	100	48			52		24											56	17	
18			80	104		260				257	32	40						129	18	
19		24		48						68					28			42	19	
20	252	32	216		144		112			228				162				164	20	
21	40	32	40	28		64	40		56	136				40				53	21	
22		32								96				40				56	22	
23										72								72	23	
24	130	40			72		64			104				114				87	24	
25	52	40								136				114				86	25	
26	56	44								88		32						55	26	
27	52	32		16		24		40	24	44		24						32	27	
28																			28	28
##	234	123,7	141,6	48,8	343,8	238	143	55	189	113	53	243	86	176	216			207,7		

# Belgian Solar Observers

## Polar Faculae

Month: February 2010

Date	Dubois 125mm F20			Steen 102mm F15			Deman 150mmF15			Gabriel 250 mm F20			Dekelver 150mm F8			Janssen 200mmF10			T.Spaninks 127mm F15			G.Gubbels 114mm F7,8			M. Szulc 60mm 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	Q		
	1	1	3	3	2	4	3,5	0	5	3									0	1	4	4	3	3	1	5	G		
2																									2	4	G		
3																			0	0	4				3	5	E		
4				0	3	3,5																			2	5	E		
5																									2	7	G		
6															0	2	3,0							3	5	2	1	8	G
7																										2	6	G	
8																									1	6	E		
9																									3	6	G		
10	1	5	3	1	2	3,5																							
11				0	0	3,5																							
12	3	6	3	0	2	3,5	6	10	3										0	0	3								
13																													
14																													
15																													
16				1	4	3,5							0	0	3				0	1	4	1	3	3,5					
17				1	1	3,5																			3	9	E		
18													1	2	3							4	2	3,5					
19													0	0	3														
20	1	2	3	0	3	3,5													0	0	4				3	7	E		
21													0	0	3										2	9	E		
22																									3	8	E		
23																													
24	2	3	3																										
25																									3	7	G		
26																									4	8	G		
27													0	0	3							2	3	2,5	4	8	E		
28																									3	7	E		
	1,60	3,80		0,63	2,38		3,0	7,5		#####	#####		0,20	0,40		0,00	2,00		0,00	0,40		2,80	3,20		2,47	6,76			

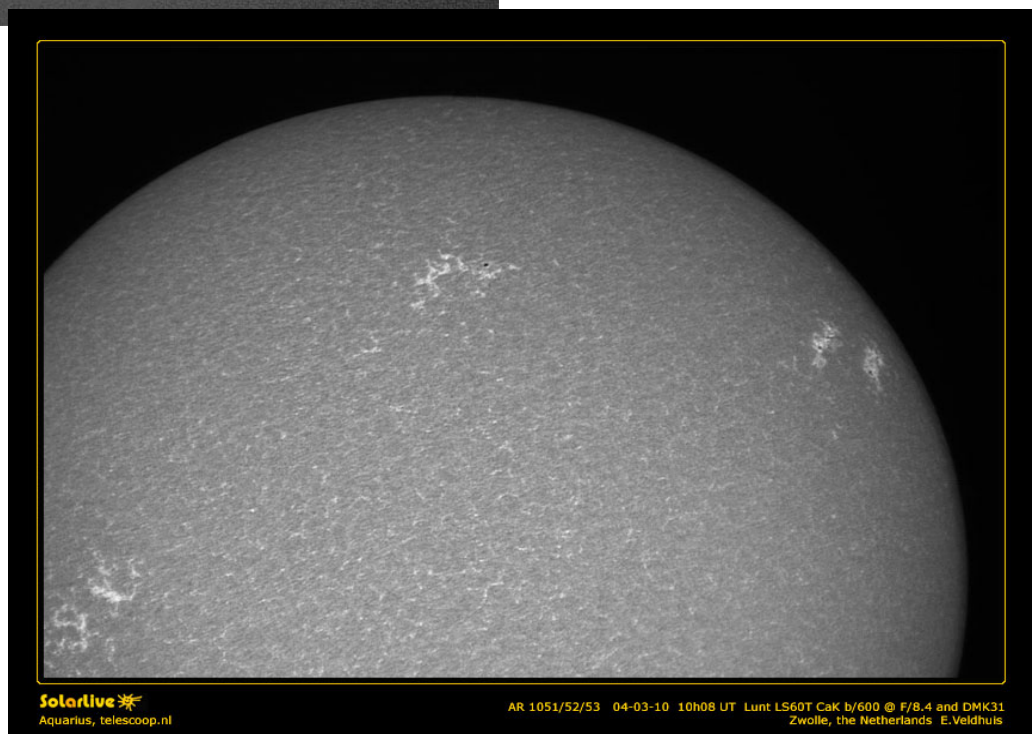
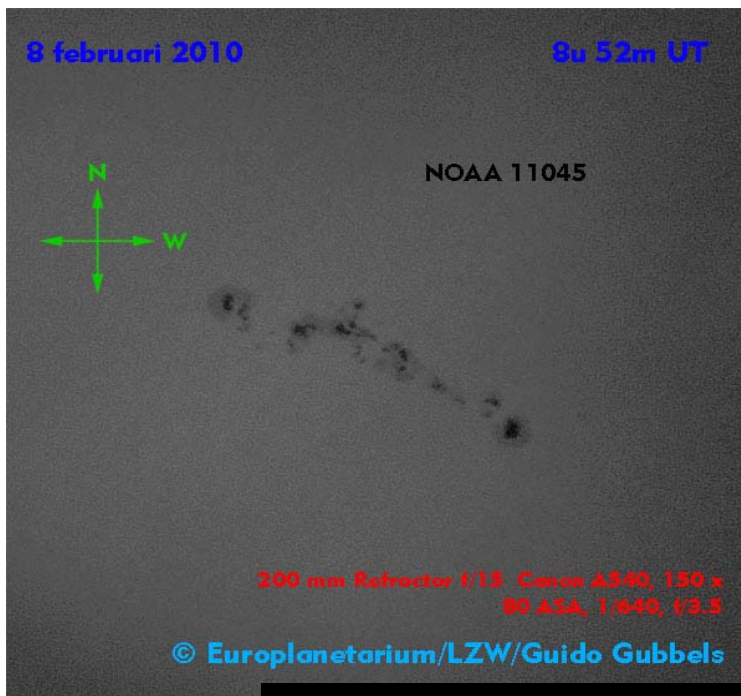


# Sunspot activity from organisations all over de world

Month :

**January 2010**

Organisation	Wolf Total	Wolf North	Wolf South	Groups number	Faculae number	CV	Beck	Pettis index	Intersol	Area	prom MDF	prom Rp	Filam & plages	Radio flux	Naked eye
NOAA SWO	21,3													81,1	
SIDC	13,1	7,5	5,6												
Kanzelhöhe	12,06														
G.F.O.E.S France	11,7														0,02
BSO Belgium	18,0	9,6	8,4	1,17		19,50	170	23,2	8,86			45,2			
S.O.G.S.A.S. Switzerland	15,6			1,0											
BAA	17,63			0,96							2,27		1,07		
GsRSI Italy	22,45											43,1			
CV Helios Network						18,03									
AAVSO	13,3														
Sonne Germany Preliminary	14,7	8,4	6,3	0,80			304,0								
O.A.A. Japan	16,9	9,4	7,5												
Solar Observer Society TOS Poland	18,2				1,44	18,13				146					
Astronomical League of the Philippines	14,61			1,11											



SIDC Weekly bulletin on Solar and Geomagnetic  
WEEK 477 from 2010 Feb 15

#### SOLAR ACTIVITY

The flaring activity was low during the past week. There was one C1.9 flare, originating from NOAA 1048. This active region launched several B-flares during the rest of the week.

During the week, several (small) CMEs were observed by STEREO and LASCO. Non of these were earth-directed. The solar wind speed was very low during the whole week, except on 19 February when it went up to 500 km/s.

#### GEOMAGNETIC ACTIVITY

On February 15, there was a jump in the magnetic field strength visible in the ACE data. This shock originated from the CME associated to the event that started at 12h36UT on February 13. As a consequence, the planetary K-index reached unsettled conditions ( $K_p=4$ ) for two periods in the evening of February 15.

During the rest of the week there were fluctuations in the magnetic field, but in combination the low solar wind speed, none of them were geo-effective. So geomagnetic activity was low during the rest of the week.

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SIDC Weekly bulletin on Solar and Geomagnetic activity  
WEEK 478 from 2010 Feb 22

#### SOLAR ACTIVITY

No significant flares occurred during the period, GOES X-ray levels reached only barely B2 levels on Feb 23 and Feb 24. A number of active regions were present on this disc: AR1051 in the Northern hemisphere and AR1049 and AR1050 in the Southern hemisphere.

A group of (partial) halo CMEs erupted over the solar North pole on February 28 with a projected speed of about 300km/s.

#### GEOMAGNETIC ACTIVITY

No significant geomagnetic activity was observed during the period. A weak shock arrived in the solar wind on Feb 25 around 15h00. Given the Southward Bz component of the magnetic field and low speeds (~380km/s), the geomagnetic reaction was limited to a  $K_p=2$  episode.

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SIDC Weekly bulletin on Solar and Geomagnetic activity  
WEEK 480 from 2010 Mar 08

#### SOLAR ACTIVITY

Solar activity was low during the full week. The visible disc was spotless on March 9 and 10, on March 11 two active regions became visible (NOAA AR 11054 and 11055, Catania 52 and 51 respectively).

AR 11055 did not produced any activity, AR 11054 produced a C2.3 flare on March 12 and a C1.3 on March 14. An Earth directed CME erupted from this AR on March 14, it should arrive to the Earth around March 17. Three more limb CMEs were seen between March 11 and 13 but did not arrive to the Earth.

#### GEOMAGNETIC ACTIVITY

Geomagnetic conditions were quiet to unsettled the whole week with only one active period ( $k_p=4$ ) on March 10, due to a fast wind stream.

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SIDC Weekly bulletin on Solar and Geomagnetic activity  
WEEK 481 from 2010 Mar 15

#### SOLAR ACTIVITY

Solar activity was low to very low over the full week, with just a few B subflares. The GOES X-ray background flux was mostly at A level. The largest sunspot group was Catania#52 (NOAA11054), which had spawned a halo CME on March 14. It reached its largest development on March 15 (type D, beta/gamma) but then decayed continuously until it disappeared at the West limb on March 20, without producing any further flaring activity.

#### GEOMAGNETIC ACTIVITY

The geomagnetic field was quiet to unsettled over the entire week, with just a brief active interval on March 17. This weak disturbance was associated with a temporary enhancement of the solar wind speed that peaked at 500km/s early on March 17.

This weak solar wind enhancement could be due either to a recurrent fast solar wind stream or to the glancing blow of the slow halo CME released at the Sun on March 14. The solar wind speed then declined with a plateau at 400km/s on March 19-20, causing temporary unsettled geomagnetic levels. On March 21, all parameters finally returned to very quiet levels.

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