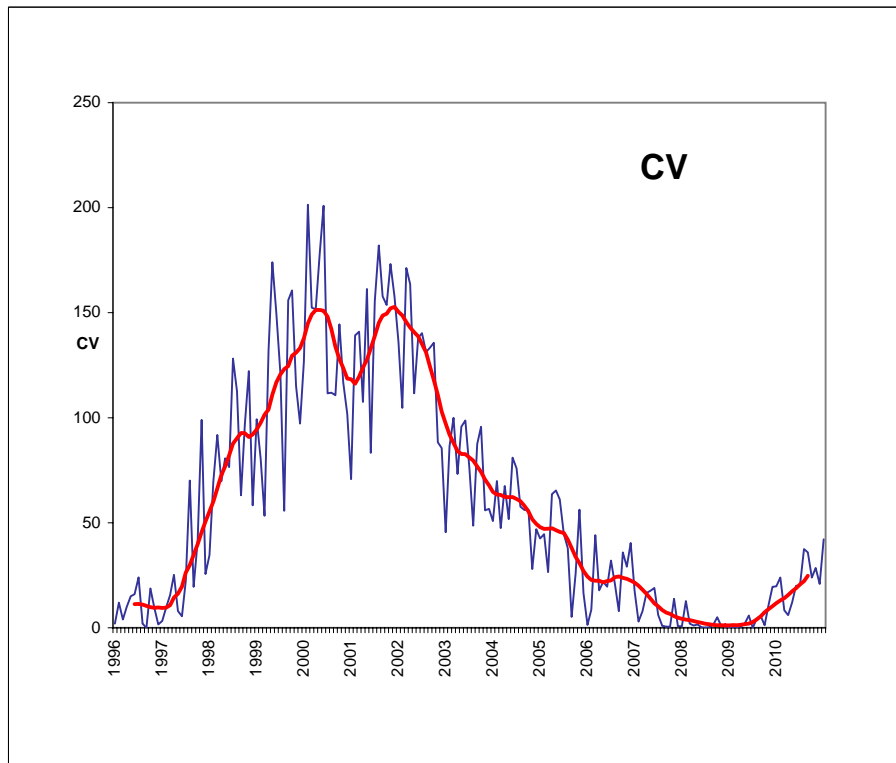
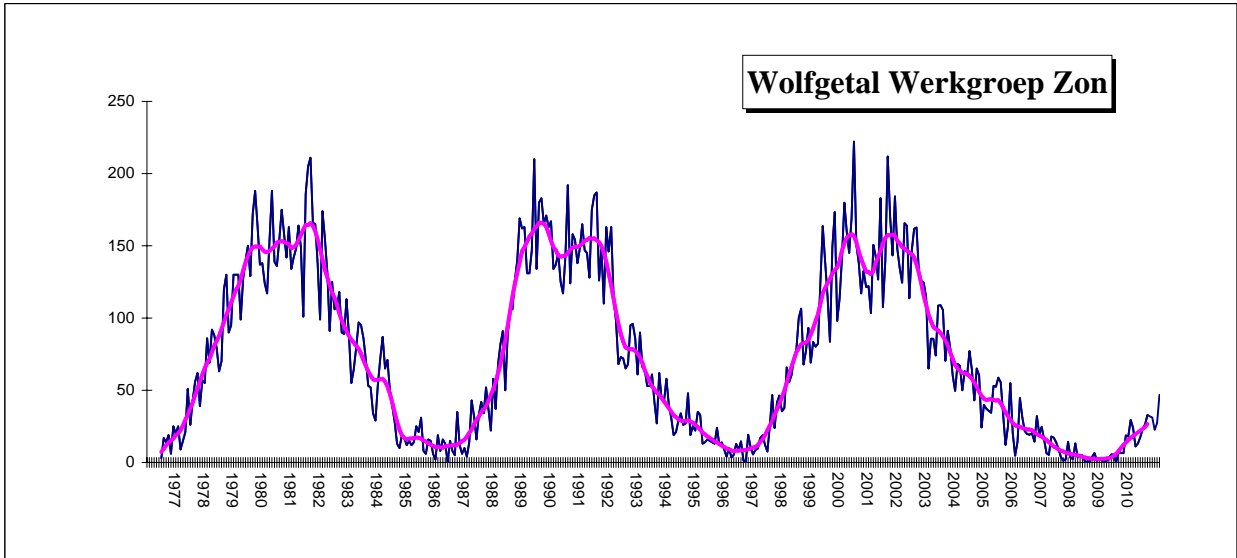


NIEUWSBRIEF V.V.S. WERKGROEP ZON

Waarnemingsresultaten en nieuws voor zonnevaarders	Jaargang : 16	Nummer: 180	Februari 2011
Franky Dubois Poelkappellestraat 57 Langemark 8920			
Web site: http://www.bso.vvs.be/ e-mail astrosun@skynet.be			



Gemiddelden werkgroep zon Februari 2011

Groepen : N	1,88	Wolfgetal : N	28,6	RE'	353,6
S	0,96	S	18,2	CV	42,1
N+S	2,84	N+S	46,9		

202 waarnemingen 27 waarnemers

Sunspotnumbers VVS Belgium

Month: February 2011

Day	GROUPS			WOLFNUMBER			RE'	CV	OBS
	N	S	N+S	N	S	N+S			
1	0	1	1	0	22	22	167	3	2
2									
3	1	2	3	11,8	21	33	32	4,5	10
4	1	2	3	12,0	35,0	47	116		1
5									
6	1	0	1	12,5	0,0	13	12		2
7	1	0	1	13,5	0	14	17	2,8	17
8	4	1	5	43,4	10,5	54	158	36	21
9	2	1	3	31,9	16,9	49	172	34	11
10	1	1	2	12,7	17,8	31	130	17	10
11	2	2	4	13,4	25,6	39	133	15,5	7
12	2	2	4	26,5	32	58	267	29,8	14
13	3	2	5	44,0	51	95	767	51	3
14	3	1	4	35,7	35	71	793	74,3	8
15	3	1	4	42,9	35,1	78	933	85,5	8
16	3	1	4	39,7	30,0	70	935	86,7	20
17	1	1	2	29,7	32,0	62	12,44	77	20
18	1	1	2	17,0	17,0	34			1
19	2	1	3	47,0	20,3	67	734	86	3
20	2	1	3	59,0	17,0	76	860		1
21	2	0	2	47,3	0	47	622	67	3
22	2	0	2	32,8	0	33	333	52	16
23	2	0	2	37,3	0	37	232		4
24									
25	2	0	2	20,3	0	20	48	6	3
26	2	1	3	31,8	8	40	732		4
27	2	1	3	20,4	19	39	172	29,3	11
28	2	1	3	33,6	10,9	45	108		2
	1,88	0,96	2,84	28,6	18,2	46,9	353,6	42,1	202

Monthly mean: **46,9** Covering: **25/28** Spotless days: **0**
 Observations: **202** Number of observers: **27**

V.V.S. BELGIUM SOLAR SECTION FRANKY DUBOIS

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

Observers:

E.De Ceuninck ; J.Janssens ; Publ obs Mira ; J.Bourgeois ; R.Dezeure ; F.Feys
 H. De Backer; F.Dubois ; B.Taillieu ; J.Carels ; K. Dewaele
 L.Meeus ; O.Steen ; KSB ; L.Claeys ; B.Thooris ; J.Bonse
 J.Claes ; R.Verboven ; F. Van Loo ; A.T.Son ; H.Coeckelberghs
 G.Gubbels ; J Bavais ; D.Van Hessche; E.Neven ; R.De Laet

Prominence number Rp

Belgian solar observers

Month: February 2011

Day	Q	Wedel		H	e	Rp	el. Obs	Stdev	OBS
1	3	1,5		5	8	58			1
2									
3	3,7	1,8		6	12	72		2,6	3
4	3,5	1,5		5	8	58			1
5									
6	4,5	1,5		8	16	96			1
7	2,4	2,8		7	10,5	80,5	1	7,9	5
8	3,3	2,3		8,2	12	94	3	15,1	9
9	3,8	2,8		11	14,5	124,5		29	2
10	3,3	1,8		7,5	9,5	84,5		7,8	2
11	3,3	1,8		7,5	14	89		1,4	2
12	3,7	1,8		7,7	12,3	89,3	1	8,9	4
13	5	1		8	19	99			1
14	3	3		4	7	47			1
15	4,5	1		8	13	93			1
16	3,8	2		6,3	12	75	2	16,9	6
17	3,7	1,5		7	13,2	83,2	3	14,6	8
18	3	2		8	12	92			1
19									
20	4	1,5		6	10	70			1
21	3,7	1,8		10,3	14,7	117,7			3
22	3,4	2,1		5,8	7,3	65,3		5,9	4
23	3,5	2		9	14	104			2
24									
25	4,5	1,5		8	14	94			1
26	3,7	2,2		5,7	9	66			3
27	3,3	2		6	8	68		8,5	2
28	3,5	1,5		6	8	68		17	1
	3,63	1,86		7,1	11,6	82,8	10	11,3	65

Monthly mean: **82,8** Covering: **24/28**
 Observations: **65** Number of observers: **9**

V.V.S. BELGIUM SOLAR SECTION FRANKY DUBOIS

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

Observers:

Steen ; Dubois ; De Ceuninck ; Coeckelberghs ; Janssens ; Feys
 Hambusch ; Claes ; G.Gubbels ; T.Spaninks ; R.Blondeel;R.Verboven

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/>

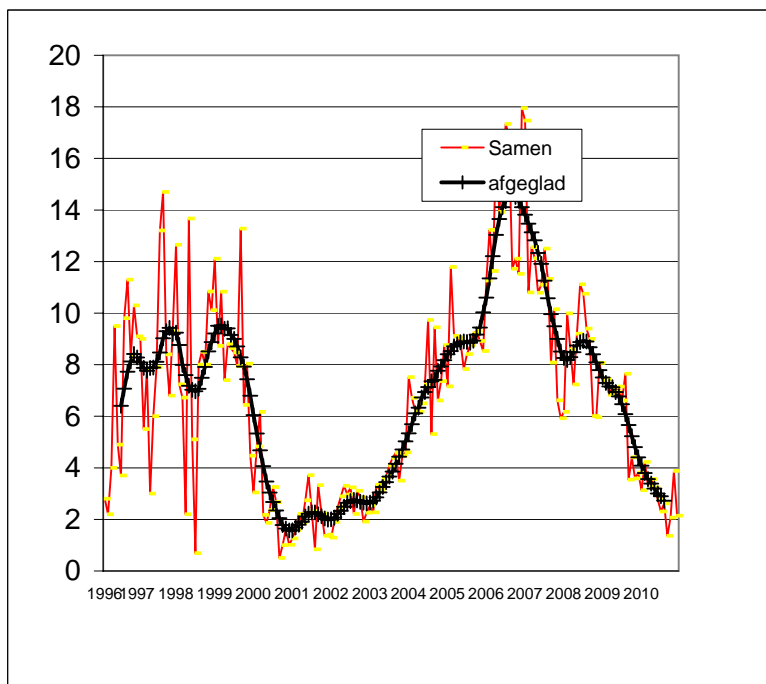
Belgian Solar Observers

Polar Faculae

Month: February 2011

Date	Dubois 125mm F20			Steen 102mm F15			T.Spaninks 127mm F15			G.Gubbels 114mm F7,8			J.Carels			Janssen 200mmF10			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	
1																						
2																						
3	1	3	3	1	2	3,5																
4																						
5																						
6																						
7										0	3	3,0										
8				0	4	4,0	0	0	4	1	4	4										
9										1	3	2,5	3	0	4							
10										1	2	2										
11																						
12										0	2	3,5				0	1	3				
13																						
14																						
15										0	3	2,5										
16				0	2	3,5	0	0	4	1	3	4										
17				0	0	3,5	0	0	4	0	3	3,5										
18																						
19																						
20																						
21							0	1	4													
22				1	1	3,5	0	0	4	1	3	3										
23																						
24																						
25																						
26																						
27				0	1	3,5																
28																						
29																						
30																						
31																						
1,00	3,00		0,33	1,67		0,0	0,2		0,6	2,9		3,00	0,00		0,00	1,00		#####	#####		##	

Obs of M.Szulc are not included in the monthly average !



SIDC Weekly bulletin on Solar and Geomagnetic activity
WEEK 529 from 2011 Feb 14

SOLAR CONDITIONS

Solar activity ranged from moderate to high during the whole week and it was dominated by NOAA AR 1158. It produced an X2.2 flare peaking at 01:56 UT on February 15. This has been the strongest flare in more than four years. This AR also produced the following M-class flares: M6.6 at 17:38 UT on February 13, M2.2 at 17:26 UT on February 14, M1.0 at 01:39 UT on February 16, M1.6 at 14:25 UT on February 16, M6.6 at 10:11 UT on February 18, M1.4 at 13:03 on February 18. NOAA AR 1161 produced an M1.0 flare at 07:44 UT on February 16. NOAA AR 1162 was active on February 18 with an M1.0 at flare 10:26, an M1.0 flare at 14:08 UT and an M1.3 at 21:04 UT. The M6.6 flare on February 13, the M2.2 on February 14 and the X2.2 on February 15 were associated with Earth directed CMEs and radio bursts

GEOMAGNETIC CONDITIONS

On February 14, a shock arrived to ACE and it was followed by strong magnetic fields which created active conditions. This disturbance is believed to have originated on February 9-10 on the Sun. On February 18, the combination of the three Earth directed CMEs described in the solar section arrived to the Earth and produced a minor geomagnetic storm. A more lasting and powerful geomagnetic effect was not seen due to the absence of a strong long lasting negative Bz. The Earth seems to have gone through a sheath region right after the shock that arrived at 00:40 UT on February 18, until 19:40 UT on the same day. After that the solar wind signatures could be related to a passage through a leg/flank of a magnetic cloud.

SIDC Weekly bulletin on Solar and Geomagnetic activity
WEEK 530 from 2011 Feb 21

SOLAR CONDITIONS

At the beginning of the week, AR NOAA 1158 that had produced the first X flares in four years, turned behind the limb. Solar activity was mostly quiet or at C-class flaring level during this week. Returning active region NOAA 1163 produced a M3.5 flare on Feb 24 before it turned onto the disk. A westward directed fast CME was associated with it. A filament from the northern hemisphere erupted on Feb 25.

GEOMAGNETIC CONDITIONS

Geomagnetic conditions were quiet during the whole week. The week ended with a large returning coronal hole at central meridian.

SIDC Weekly bulletin on Solar and Geomagnetic activity
WEEK 531 from 2011 Feb 28

SOLAR CONDITIONS

Solar activity remained at eruptive levels most of the week with several C flares and one M flare. The main

source of this activity was NOAA AR 1164. Several active regions appeared during the week and helped maintaining this activity level, with C flares from AR 1165, 1166 and 1169. A CME with no clear on disk signatures was observed by the SOHO/LASCO and STEREOA/COR2 coronagraphs on March 3rd, heading to the Earth direction, to the south.

GEOMAGNETIC CONDITIONS

Geomagnetic activity was dominated by a geomagnetic storm from March 1st 1200 UT to March 2nd 0600UT. At maximum of intensity, it reached major storm level (Kp=6) at planetary levels. Only active conditions were observed at Dourbes station in Belgium. Geomagnetic activity remained very calm the rest of the week.

SIDC Weekly bulletin on Solar and Geomagnetic activity
WEEK 532 from 2011 Mar 07

SOLAR ACTIVITY

The Sun was very active this week: we observed 16 M flares and 1 X flare. In the first half of the week, mainly NOAA AR 11164 (Catania 18) and NOAA AR 1165 (Catania 19) were responsible for all this activity. When these regions turned over the solar limb, NOAA AR 11166 (Catania 22) took over. It is this last region that produced the X1.5 on wednesday March 9 at 23h23. All three active regions had a beta-gamma-delta configuration of their photospheric magnetic field.

Several clear CMEs were observed by the SOHO/LASCO and STEREO/COR2 instruments. On monday March 7 there was a CME linked to M1.9 flare at 14h30 and one associated to an M3.7 flare at 20h12. Tuesday March 8, we observed two more CMEs: these were associated to a M1.5 flare at 3h58 and a M1.4 flare at 20h16. None of these CMEs were headed directly towards earth, but we did receive a glancing blow from them on March 10 and 11.

The long duration event on monday March 7 at 20h12 (M3.7 flare) was associated with an EIT wave (observed by SWAP) and a >10MeV proton event that lasted until March 10, seen in the GOES measurements.

GEOMAGNETIC ACTIVITY

Geomagnetic conditions were mostly quiet in the beginning of the week. Kp reached level 4 during one period (around 21h) on March 7 due to the arrival of a CME observed on the 3rd of March.

Late on March 10, we observed geomagnetic storm conditions that lasted until early morning on March 12th. The maximum Kp value that was reached, was 6. This storm was the result of the CMEs that were observed on March 7 and 8.
