

Newsletter Belgian Solar Observers

Results and news for solar observers

Volume 12

Number 133

March 2007

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Content Newsletter

Graphics and relative number for this month

Daily Wolfnumbers by the members

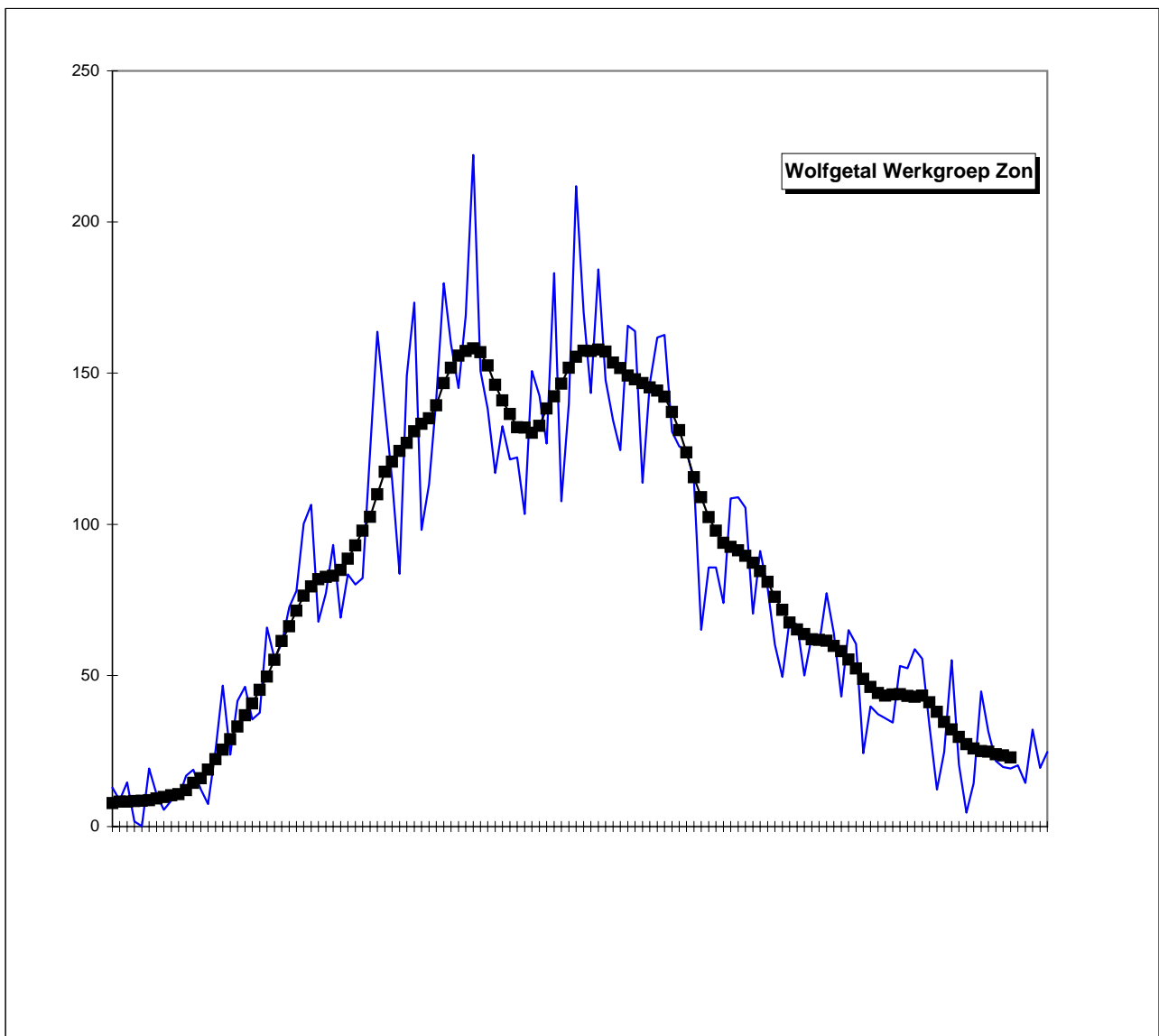
Monthly sunspot report

Polar faculae and CV numbers

Prominence numbers by the members

Monthly prominence report

Photo album and drawings



Mean of March observations

Groups :	N	0,23	Wolfnumb N	2,1	Beck :	14,4
	S	0,47	S	4,3	CV	3
	N+S	0,70	N+S	6,4		
455 observations	26 observers					

Sunspotnumbers VVS Belgium

Month: **March 2007**

Day	GROUPS			WOLFNUMBER			RE'	CV	OBS
	N	S	N+S	N	S	N+S			
1	0	1	1	0	11,3	11,3	44	9	17
2	0	2	2	0	15,2	15,2	58	11	23
3	0	1	1	0	11,2	11,2	39	10	9
4	0	1	1	0	13,4	13,4	74	9	10
5	0	2	2	0	23,9	23,9	69	13	15
6									
7	0	0	0	0	0	0	0	0	16
8	0	0	0	0	0	0	0	0	16
9	0	0	0	0	0	0	0	0	10
10	0	0	0	0	0	0	0	0	20
11	1	0	1	11	0	11	24	5	20
12	1	0	1	8	0	8	12	6	19
13	1	0	1	10,9	0	10,9	1	1	19
14	0	0	0	2,9	0	2,9	0	0	18
15	0	0	0	0	0	0	0		20
16	0	0	0	0	0	0	0	0	12
17	0	0	0	0	0	0	0	0	9
18	0	0	0	0	0	0	0	0	14
19	0	0	0	0	0	0	0	0	16
20	0	0	0	0	0	0	0	0	15
21	1	0	1	4,6	0	4,6	1	1	12
22	0	1	1	0	0	0	0	0	11
23	0	1	1	0	13,3	13,3	14	2	3
24	0	1	1	0	5,5	5,5	4		2
25	0	1	1	0	3	3	2	2	21
26	0	1	1	0	14,3	14,3	33	6	20
27	0	1	1	0	9	9	10	2	22
28	0	1	1	0	9,6	9,6	23	1	20
29	1	0	1	12,6	0	12,6	20	3	13
30	1	0	1	9	0	9	3	1	15
31	1	0	1	3,5	0	3,5	2	1	18
	0,23	0,47	0,70	2,1	4,3	6,4	14,4	3,0	455

Monthly mean: **6,4** Covering: **30/31** Spotless days: **11**
 Observations: **455** 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

Prominence number Rp

Belgian solar observers

Month: **March 2007**

Day	Q	Wedel	H	e	Rp	el. Obs	Stdev	OBS
1	3,4	2,1	7,3	10	83	1	8	7
2	3,2	2,1	5,6	8,5	64,5	2	16,7	10
3	2,8	2,3	3,5	3,5	38,5		7,8	2
4	3	3	5	8	58			1
5	2,8	2,1	3,8	5,2	43,2	1	8,5	6
6								
7	3,1	2	3,8	5	43		5	4
8	2,9	2,2	4,4	6,4	50,4		6,9	7
9	2,3	2,1	5	6,6	56,6		8,9	5
10	3,2	2,3	5,9	9,6	68,6		9,9	10
11	2,9	2,2	6,3	8,8	71,8	1	7,7	9
12	3	2,1	3,3	7,7	40,7	2	10,6	9
13	3,4	2,4	6,2	12,7	74,7	2	4,1	8
14	3,3	2	5,2	8,4	60,4		9,5	10
15	3,5	2,1	5	7	57	1	7,3	7
16	3	2	4,5	6	51		25,5	2
17	2,9	2,4	5,3	6,5	59,5		5,1	4
18	2,6	2,2	6,3	7,6	70,6		8,4	7
19	2,6	2,2	6	8,6	68,6		8,4	5
20	2,6	2,1	5,8	8,8	66,8	1	10,4	6
21	4	1,5	6,5	7,5	72,5	2	6,4	4
22	2,7	2,3	6	9	69	1	1,4	3
23	3	2	4	6	46			1
24								
25	3,3	2,1	6	8,5	68,5	1	11	9
26	2,9	2,2	4,9	6,7	55,7	1	14,2	8
27	3,3	2,3	5,4	8,6	62,6		12,7	10
28	3,2	2,3	5,7	7,6	64,6		11	9
29	4,5	2,3	4,5	7	52		9,9	2
30	3	2,7	2,3	3	26		6,7	3
31	2,9	2,3	4,8	7	55	1	9,6	6
	3,08	2,20	5,1	7,4	58,6	17	9,3	174

Monthly mean: **58,6** Covering: **29/31**
 Observations: **174** Number of observers: **10**

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 Belgium
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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/>

Cv numbers for march 2007

Mean

Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
O. Steen	10	13	10	10	8		0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	1	0			1	5	2	1	3	1	1	2,5
L.Meeus		10			10			0	0	0	0	8	5	1	0	0				0	0	0	0			0	8	2	2	8	1	1	2,6
J. Carels	7	11		7						0	2	8	1	0	0	0	0	0	0	0	0	0	2		2	5	2		2	1	1	2,2	
F.Dubois	10	11	10		20		0	0	0	0	6	8	0	0	0	0	0	0	0			1	0	2	0	6	2	2	2	1	1	3,0	
J.Janssen	10	10								0															0	5	2	0	2		0	3,2	
Sj Dufoer	10							0			13		0		0		0								0	0	0	0			0	2,3	

CV New (J. Janssens)

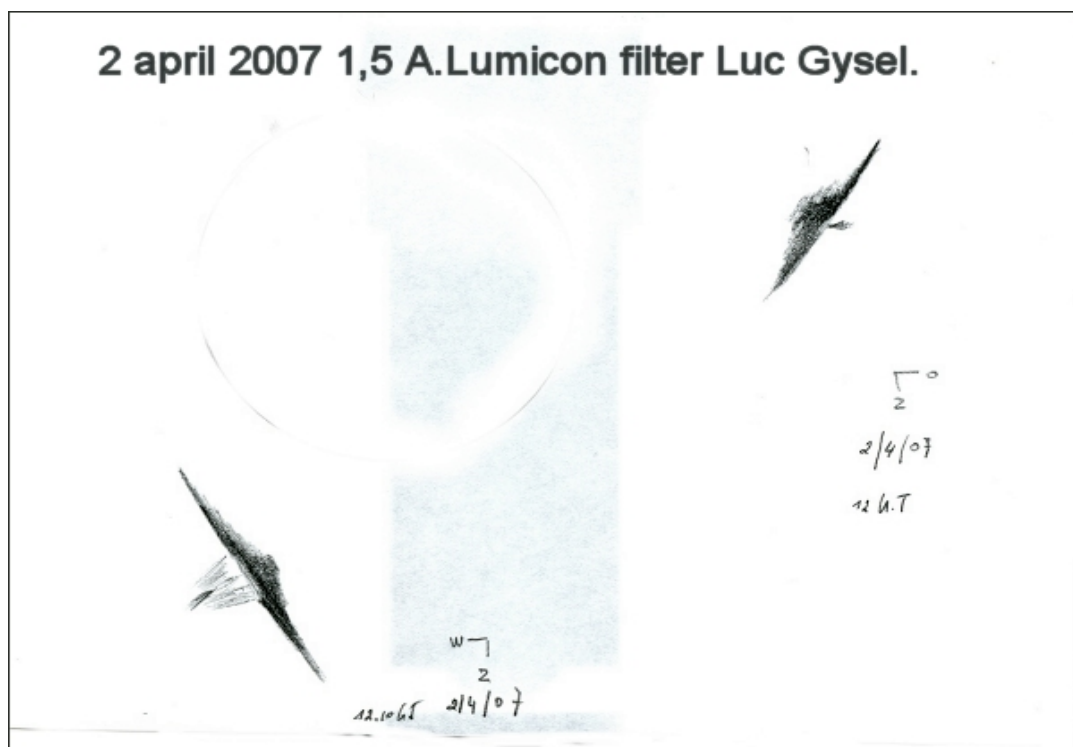
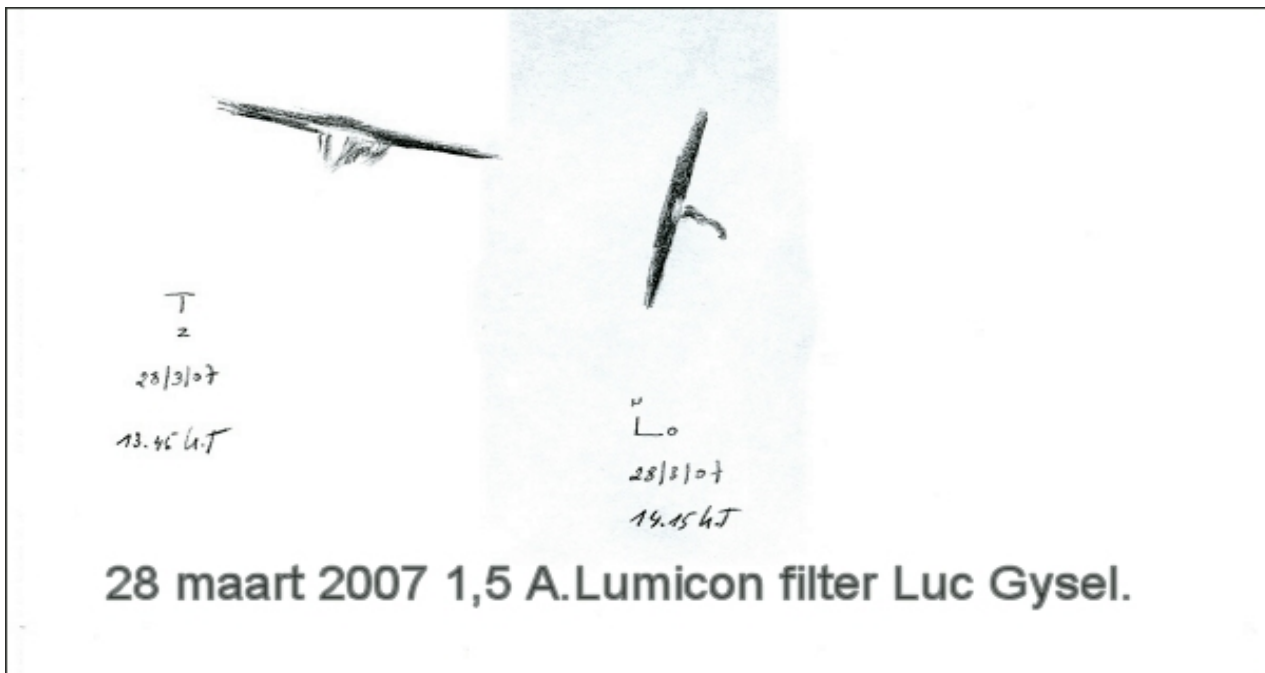
Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
O. Steen	16	20	16	16	14		0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	1	0			1	8	3	2	4	1	1	3,9

CV New

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

Special events and observations in march 2007

No

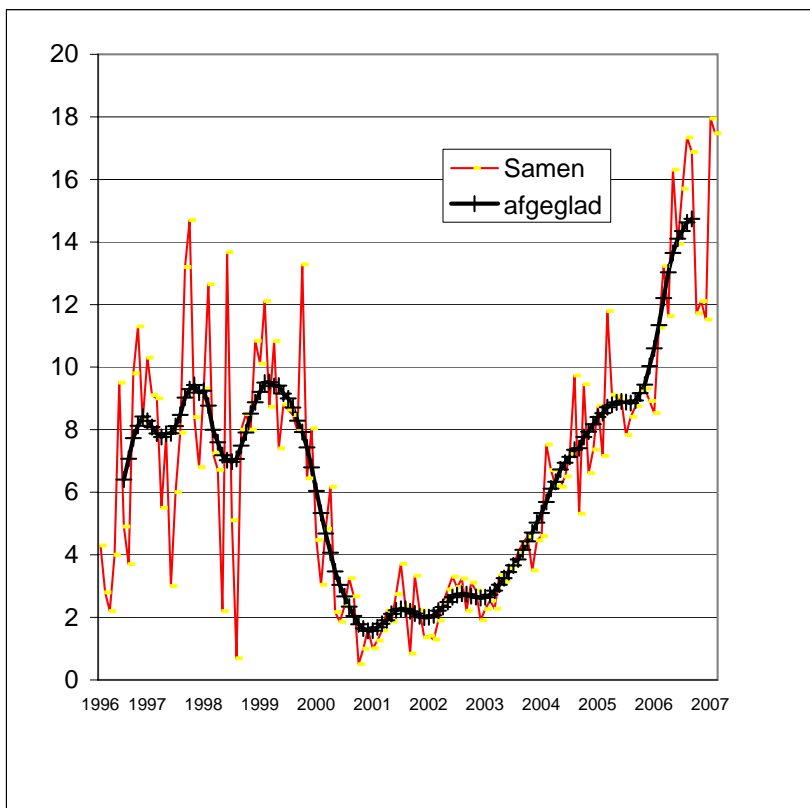


Belgian Solar Observers

Polar Faculae

Month: March 2007

Date	Dubois 125mm F20			Steen 102mm F15			Deman 150mmF15			Gabriel 250 mm F20			Carels 150mm F8			Janssen 200mmF10		
	North	South	Q	North	South	Q	North	South	Q	North	South	Q	North	South	Q	North	South	Q
1	12	22	4	6	10	3,5				42	20	3				2	7	3,5
2	8	16	3	5	13	3,5	15	24		40	32	4	0	2	3	1	11	3,5
3				5	8	3,5												
4																		
5				2	5	3,5				31	14	3						
6																		
7				3	7	3,5				28	19	3						
8	2	10	3	6	9	3,5				27	18	3						
9	4	19	3	4	7	3												
10				4	7	4	10	20		22	16	3				0	5	3,0
11	4	19	3	5	12	4	11	19					1	1	3			
12	3	10	3	4	10	3,5	15	23		21	19	3	0	2	3			
13				5	8	3,5				20	26	4	0	2	3			
14				5	9	4	15	21		17	45	4						
15	9	22	4	6	13	4,0	16	31		22	43	4	3	8	3			
16																		
17	6	19	3	5	8	3,5	8	29					0	3	3			
18				3	7	3												
19				6	9	3,5				14	33	3						
20				3	7	3,5												
21	6	22	3	8	13	4,0				10	32	4						
22										13	42	3						
23																		
24																		
25	6	18	3	7	11	3,5				17	55	4	1	4	4	5	12	4,0
26	9	23	3	6	11	3,5				16	47	3	0	10	4	3	9	2,5
27	4	17	4	9	13	3,5				21	47	3	0	15	5	1	14	4,0
28				12	15	3,5				10	41	3				3	7	3,5
29										9	54	5	0	7	4	2	15	4,0
30	3	12	3	4	8	3,5							0	4	3			
31	0	10	3	5	7	3,5				11	43	3				0,0	6,0	3,0
	5,43	17,07		5,33	9,46		12,9	23,9		20,58	34,00		0,45	5,27		1,89	9,56	



SIDC Weekly bulletin on Solar and Geomagnetic activity
WEEK 323 from 2007 Mar 05
SOLAR ACTIVITY

Flaring activity was absent this week. GOES recorded only a small group of A flares and a B2.0 flare on Mar 10. The Sun was rather static this week: the 10cm flux varied only between 73 and 71, the Estimated International Sunspot Number was 4 days zero, and the background X-ray radiation was 7 days below A-level. A recurrent coronal hole was visible in the TRACE 171 mosaic. The hole had expanded to the west compared with previous rotations when it was mainly located between two sunspot groups. Part of the hole was now located in front the first group. This first part passed the central meridian end Feb 2007.

GEOMAGNETIC ACTIVITY

Geomagnetic disturbances were caused this week by the recurrent coronal hole mentioned in the part about flaring activity. Last rotation, this hole did not cause significant disturbances. The co-rotating interaction region arrived late on Mar 03. The strength of the interplanetary magnetic field increased at the moment. The increase was not really convincing leading to only unsettled conditions. Early Mar 06, an additional increase of the IMF strength was measured by ACE. The second part of the hole located between two sunspot groups became geo-effective leading to a brief period of minor storm conditions. The influence diminished on Mar 07 and ended early Mar 08.

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SIDC Weekly bulletin on Solar and Geomagnetic activity
WEEK 324 from 2007 Mar 12
SOLAR ACTIVITY

Solar activity was minimal all week, only occasionally rising above the A-class threshold during a two-day period between March 13-14 and then only peaking at ~A3 level. NOAA AR 0946 was visible in the far NW at the start of the week and then during its W limb transit but from Mar 14th on the solar disk was spotless. The week saw a recurrent coronal hole transit from central meridian to W limb in the southern hemisphere, but the hole appeared to have evolved significantly by

comparison with previous rotations and its extension up toward equatorial latitudes was substantially smaller than previously.

GEOMAGNETIC ACTIVITY

Geomagnetic conditions were quiet to start the week then jumped rather briefly to minor storm levels for just two 3-hr intervals before remaining predominantly unsettled to quiet for the rest of the week. The fast stream from the recurrent coronal hole was first evident in ACE data from midway through Mar 12 and the solar wind reached its maximum speed of ~700km/s between Mar 13-14. However, apart from an initial epoch where the IMF was strongly southward and prompted minor storm conditions (with Kp=5 and K=5 at both Dourbes and Niemegek), the field strength for the most part remained modest and mainly northward. By the end of the week conditions were sufficiently quiet to issue an All Quiet Alert.

SIDC Weekly bulletin on Solar and Geomagnetic activity
WEEK 325 from 2007 Mar 19
SOLAR ACTIVITY

Solar conditions were quiet throughout the whole week. No sunspots were detected until March 23, when a small sunspot group (Catania number 28, NOAA AR 0947) has emerged in the eastern hemisphere. It did not produce any noticeable flaring activity and the solar X-ray background was below the A level during the whole week. A narrow equatorial coronal hole reached the solar disc center on March 21. The fast flow from this coronal hole arrived to the Earth on March 25 (see below).

GEOMAGNETIC ACTIVITY

During the most of the week geomagnetic conditions were quiet as the Earth was inside the slow solar wind flow with low to average values of the interplanetary magnetic field. On March 23 the solar wind speed started to rise, indicating the arrival of the interaction region between the slow and fast solar wind flows. The magnetic field in the interaction region contained intervals of southward interplanetary magnetic field, so two minor storm intervals (K = 5) were reported by NOAA on March 24. The fast flow from the equatorial coronal hole (see above) arrived on March 25 leading to active geomagnetic conditions (Kp=4) during 6 hours.

SIDC Weekly bulletin on Solar and Geomagnetic activity
WEEK 326 from 2007 Mar 26
SOLAR CONDITIONS

Solar conditions have been quiet during the entire week. There were only two small active regions numbered AR 0948 and 0949. The GOES X-ray background curve remained on or below A-level during the whole week. Only one B flare was recorded. An equatorial coronal hole crossed the central meridian and produced geomagnetic activity (see below).

GEOMAGNETIC CONDITION

The week started under the influence of the high speed wind from an elongated coronal hole that had crossed the central meridian during the previous week. By Wednesday 28th March the solar wind speed had returned to slow wind values. The influence of the second coronal hole started at the end of 31st March. This resulted in geomagnetic active to minor storm conditions from 1 to 2 April, when the high speed wind reached the Earth and the IMF was mainly negative.