



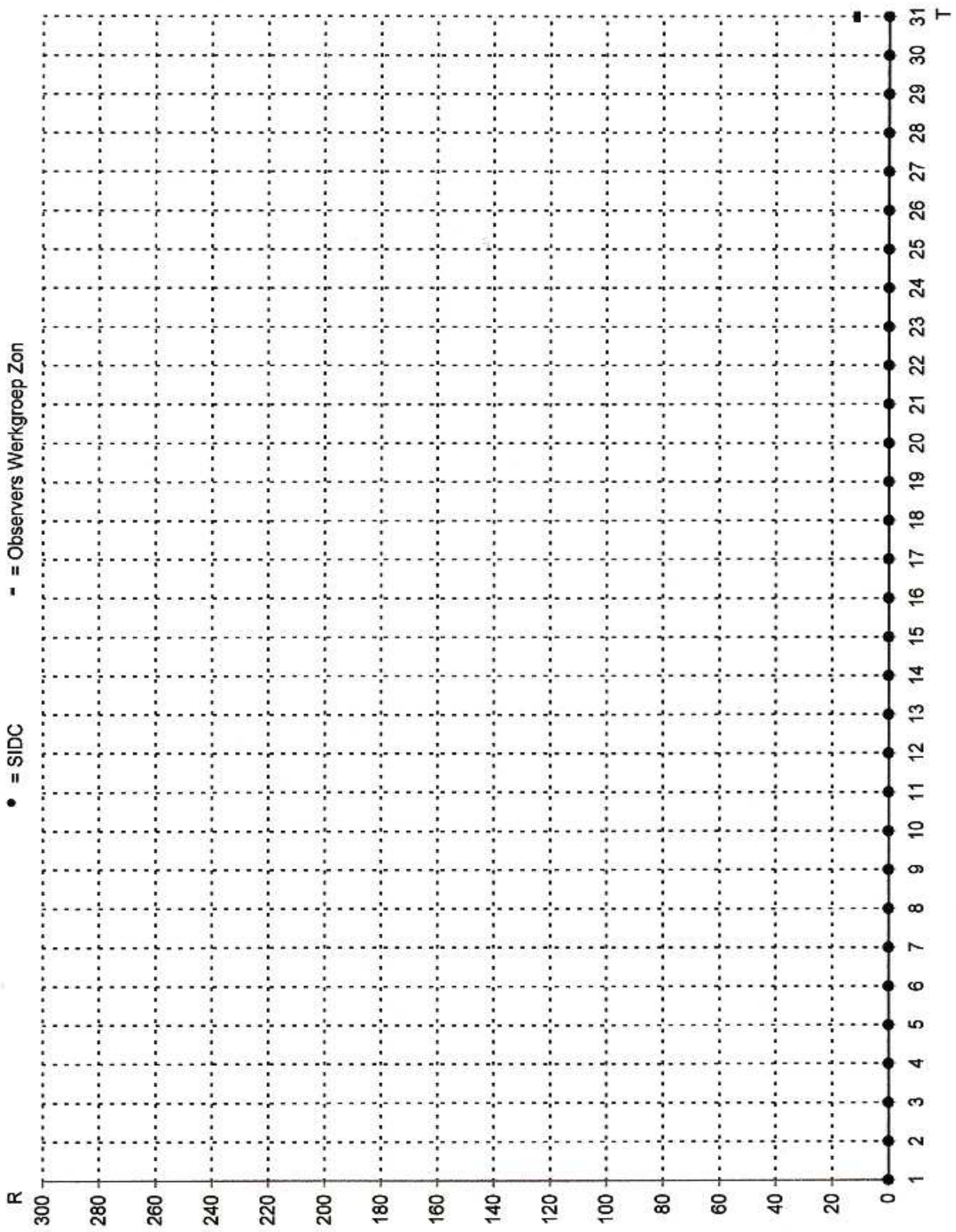
Bulletin Werkgroep Zon Augustus 2009

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Zonnevlekkengetallen (Sunspot numbers)

Day	SIDC	Bals	Gort	Jn 9	Kr80	vSlo	Son	Spa	Zans	Zijle
1	0	0	0	0	0	0	0			0
2	0			0	0					
3	0	0	0	0	0	0	0			
4	0	0	0	0		0	0			0
5	0	0	0	0	0	0	0			0
6	0	0	0	0	0	0				0
7	0	0		0		0				0
8	0				0	0	0			
9	0	0	0			0	0			
10	0	0	0	0		0	0	0	0	0
11	0	0		0	0	0	0	0	0	
12	0			0		0			0	0
13	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0
15	0	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	
21	0	0	0	0	0	0		0	0	
22	0	0	0	0	0	0		0	0	0
23	0	0	0	0	0	0		0	0	0
24	0	0	0	0	0	0		0	0	0
25	0			0		0		0		
26	0	0	0	0		0		0	0	
27	0	0	0	0	0	0			0	
28	0	0	0	0	0	0	0	0	0	
29	0	0	0	0	0	0	0	0	0	
30	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	12	0	11	0	
observ		27	23	29	23	30	18	19	21	17
k		-	-	-	-	-	-	-	-	-
st.dev.		-	-	-	-	-	-	-	-	-
st.d./k		-	-	-	-	-	-	-	-	-

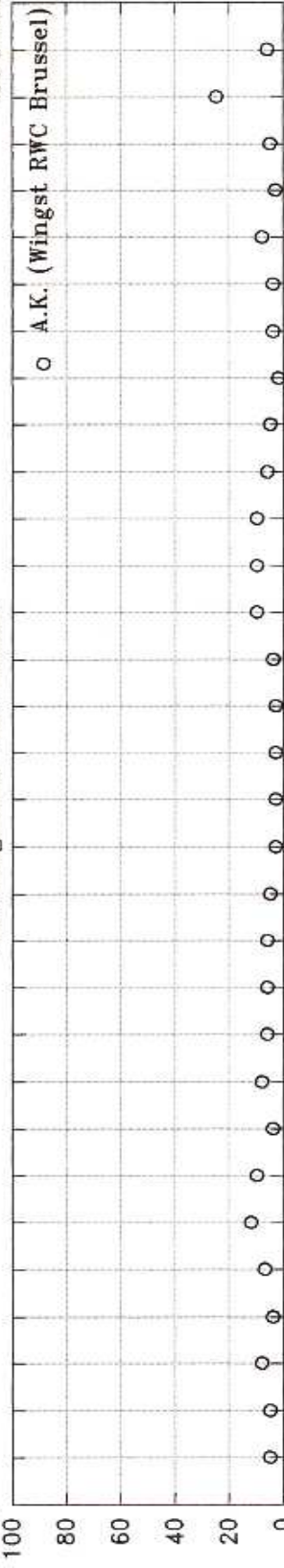
Observers	[...] = Refractor, d = ... mm	[Rf...] = Reflector, d = ... mm
Bals = H.A.M. Balster [70]	Kr80 = K. Kroesen [80]	Spa = T. Spaninks [75]
Gort = E.Gorter [80]	vSlo = B. van Slooten [90]	Zans = W. Zanstra [Rf 155]
Jn 9 = D. Jannink [9]	Son = A.T. Son [Rf 150 Kutter]	Zijle = W.A. Zijlema [90]



augustus 2009

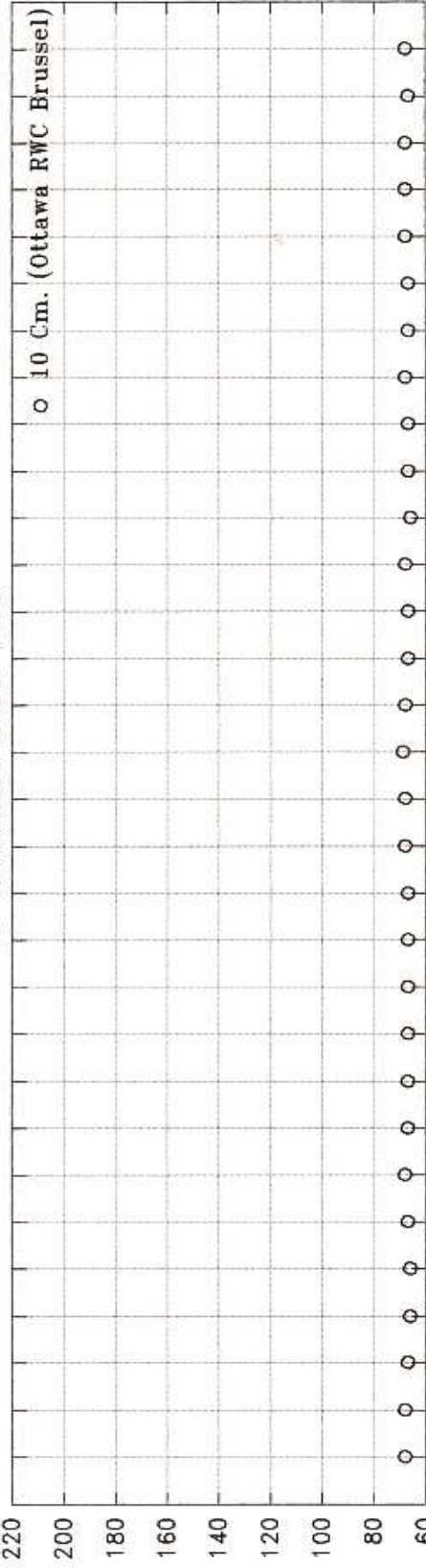
Geomagnetic A.K. Index

A.K.



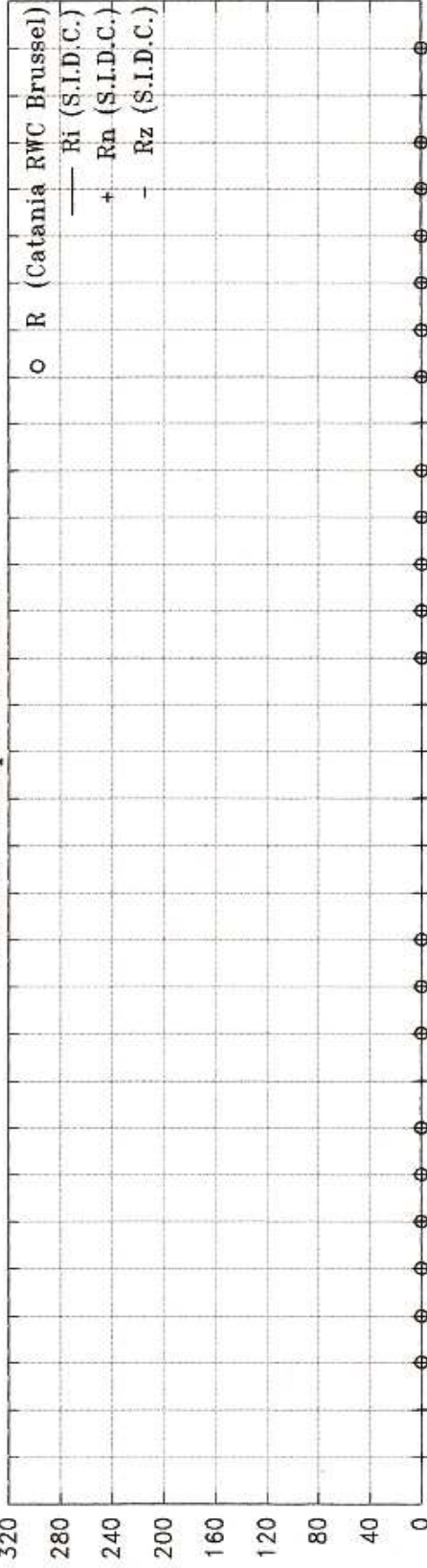
S.10

10 Cm. Solar Radio Flux



R.

Relative Sunspot Numbers



Rigem.

0

Zonnevlekkengetallen noordelijk- en zuidelijk halfrond

(Hemispheric sunspot numbers)

augustus 2009

Prominences

Day	S.I.D.C.		Balster		v.Slooten		Son		Spaninks		Zanstra	
	Rn	Rs	Rn	Rs	Rn	Rs	Rn	Rs	Rn	Rs	Rn	Rs
1	0	0	0	0	0	0	0	0				
2	0	0										
3	0	0	0	0	0	0	0	0				
4	0	0	0	0	0	0	0	0				
5	0	0	0	0	0	0	0	0				
6	0	0	0	0	0	0						
7	0	0	0	0	0	0						
8	0	0			0	0	0	0				
9	0	0	0	0	0	0	0	0				
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0			0	0					0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0			0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0			0	0	0	0
20	0	0	0	0	0	0			0	0	0	0
21	0	0	0	0	0	0			0	0	0	0
22	0	0	0	0	0	0			0	0	0	0
23	0	0	0	0	0	0			0	0	0	0
24	0	0	0	0	0	0			0	0	0	0
25	0	0			0	0			0	0		
26	0	0	0	0	0	0			0	0	0	0
27	0	0	0	0	0	0					0	0
28	0	0	0	0	0	0	0	0	0	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
31	0	0	0	0	12	0	0	0	11	0	0	0

Gorter			Spaninks		
Rp(t)	Rp(N)	Rp(S)	Rp(t)	Rp(N)	Rp(S)
23	23	0			
55	55	0			
99	44	55			
46	35	11			
44	22	22			
45	34	11			
45	23	22			
92	48	44			
57	23	34			
57	46	11	57	46	11
69	24	45	56	34	22
55	22	33	35	23	12
			49	11	38
44	11	33			
69	47	22	48	25	23
91	48	45	58	24	34
89	44	45	82	35	47
46	11	35	89	45	44

Gorter: PST40 Coronado + 63 mm protub.tel.
Spaninks: 63 mm protub.tel + PST 40 Coronado

Eerstvolgende bijeenkomst van de Werkgroep Zon: 14 november 2009, Sonnenborgh, Utrecht.

Meer informatie over de zon, met o.a. waarnemingen van leden van de Werkgroep Zon, vindt U op de website van de European Radio Astronomy Club:

www.eracnet.org onder [observations](#)

S.I.D.C. SUMMARY OF THE URSIGRAMS									
Date	R' ₁	PPSI	600	2800	COS	SFI	XI	Ak	SEA
31	0	999	-	69	////	0	0/0	5	
1	0	999	-	68	////	0	0/0	5	
2	0	999	-	68	////	0	0/0	5	
3	0	999	-	67	////	0	0/0	8	
4	0	999	-	66	////	0	0/0	4	
5	0	999	-	66	////	0	0/0	7	
6	0	999	-	67	////	0	0/0	12	
7	0	999	-	68	////	0	0/0	10	
8	0	999	-	67	////	0	0/0	4	
9	0	999	-	67	////	0	0/0	8	
10	0	999	-	67	////	0	0/0	6	
11	0	999	-	67	////	0	0/0	6	
12	0	999	-	67	////	0	0/0	6	
13	0	999	-	67	////	0	0/0	5	
14	0	999	-	68	////	0	0/0	3	
15	0	999	-	68	////	0	0/0	3	
16	0	999	-	69	////	0	0/0	3	
17	0	999	-	68	////	0	0/0	3	
18	0	999	-	67	////	0	0/0	4	
19	0	999	-	67	////	0	0/0	10	
20	0	999	-	68	////	0	0/0	10	
21	0	999	-	66	////	0	0/0	10	
22	0	999	-	67	////	0	0/0	6	
23	0	999	-	67	////	0	0/0	5	
24	0	999	-	68	////	0	0/0	2	
25	0	999	-	67	////	0	0/0	4	
26	0	999	-	67	////	0	0/0	4	
27	0	999	-	68	////	0	0/0	8	
28	0	999	-	68	////	0	0/0	3	
29	0	999	-	68	////	0	0/0	3	
30	0	999	-	67	////	0	0/0	25	
31	0	999	-	68	////	0	0/0	6	

R'₁ : provisional international sunspot numbers from the S.I.D.C.
PPSI : prompt photometric sunspot index from the S.I.D.C. in 10⁻⁵ w/m² : the quantity to be subtracted from the mean solar constant to account for the sunspot contribution.
600 : 600 Mhz solar flux from the station at Humain (Belgium).
2800 : 2800 Mhz solar flux from Ottawa (origin : Ursigrams - UGEOI). The 10.7cm Flux data are a service of the National Research Council of Canada.
COS : thousands of the cosmic ray counts (origin : Ursigrams - UCOSE Terre Adélie).
SFI : From October 1992, Solar Flare Index from the S.I.D.C. (origin : Ursigrams - UGEOR, evaluation : 1 x Sn+10 x "1"+100 x ">1").
XI : X-flares index from the Ursigrams (M-flares/X-flares) (origin : Ursigrams - UGEOR, UGEOI).
Ak : geomagnetic index from Wingst, Germany (origin : Ursigrams).
SEA : sudden enhancements of atmospherics from Uccle & Humain (Royal Observatory, Belgium).

Note that due to problems of interferences saturating our receivers, no SEA could be detected this month.

MONTHLY SUMMARY OF SOLAR AND GEOMAGNETIC ACTIVITY

I. Solar Activity

Since we have no solar activity to discuss, we rather focus on the signs for the absence of it...

The daily Estimated International Sunspot Number and Provisional International Sunspot Number were zero for all 31 days. The values for the 10cm flux ranged between 66 and 68 sfu (solar flux units), the background X-ray flux stayed below the measurement level of the GOES-satellite. EIT195 shows a quiet Sun.

From the viewpoint of the Earth, the Sun is tilted such that the northern polar hole is clearly visible. The northern polar hole has a negative/south pole polarity: the open magnetic field lines point into the Sun. Three extensions of this hole transited the solar disk in August.

II. Geomagnetic Activity

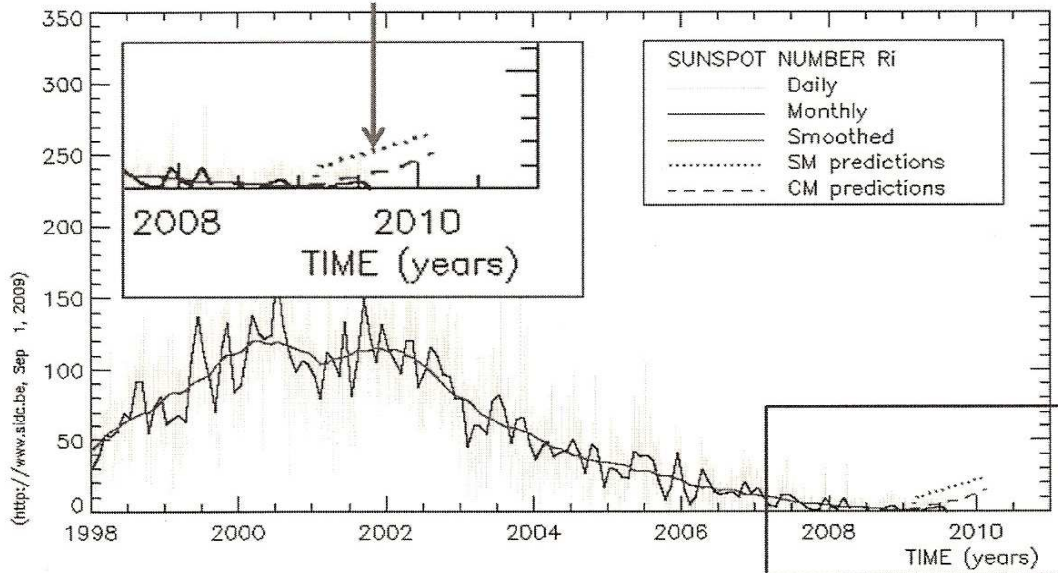
During three time periods in which the Earth encountered a fast solar wind stream, the geomagnetic conditions were disturbed.

On Aug 06, a fast solar wind stream arrived at the Earth. The region with a compressed magnetic field arrived one day before. The magnetic field strength rose up to 10 nT. The Bz-component was strong but predominantly positive resulting in two periods of active conditions on Aug 06.

A second interaction region between the slow and fast solar wind arrived early on Aug 19. From Aug 20 to 23, the solar wind had a velocity of 550 km/s. Again, the solar wind conditions resulted in two active periods on Aug 19-20.

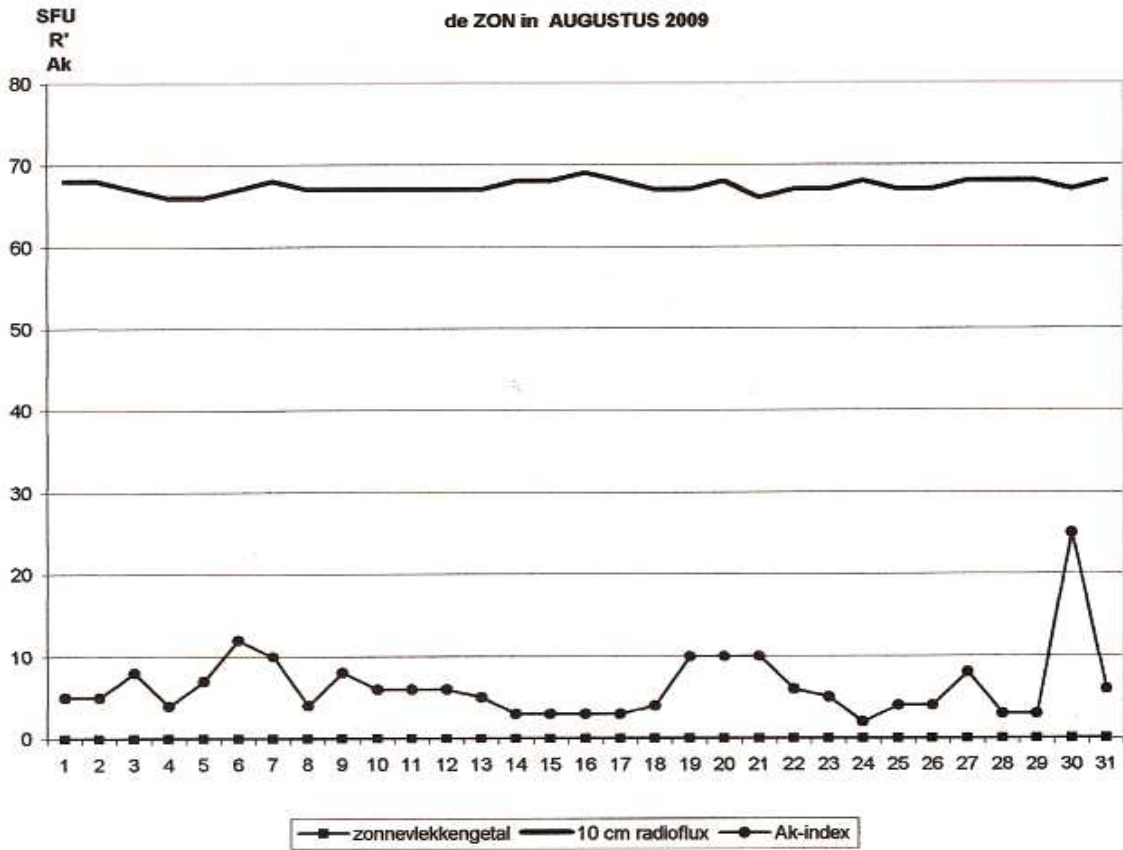
On Aug 30, we reached unexpectedly storm conditions. Through ACE measurements of the direction of the interplanetary magnetic field, this disturbance could be associated with the extension of the northern polar coronal hole where the magnetic field points inwards.

III. News item: Absence of Sunspots

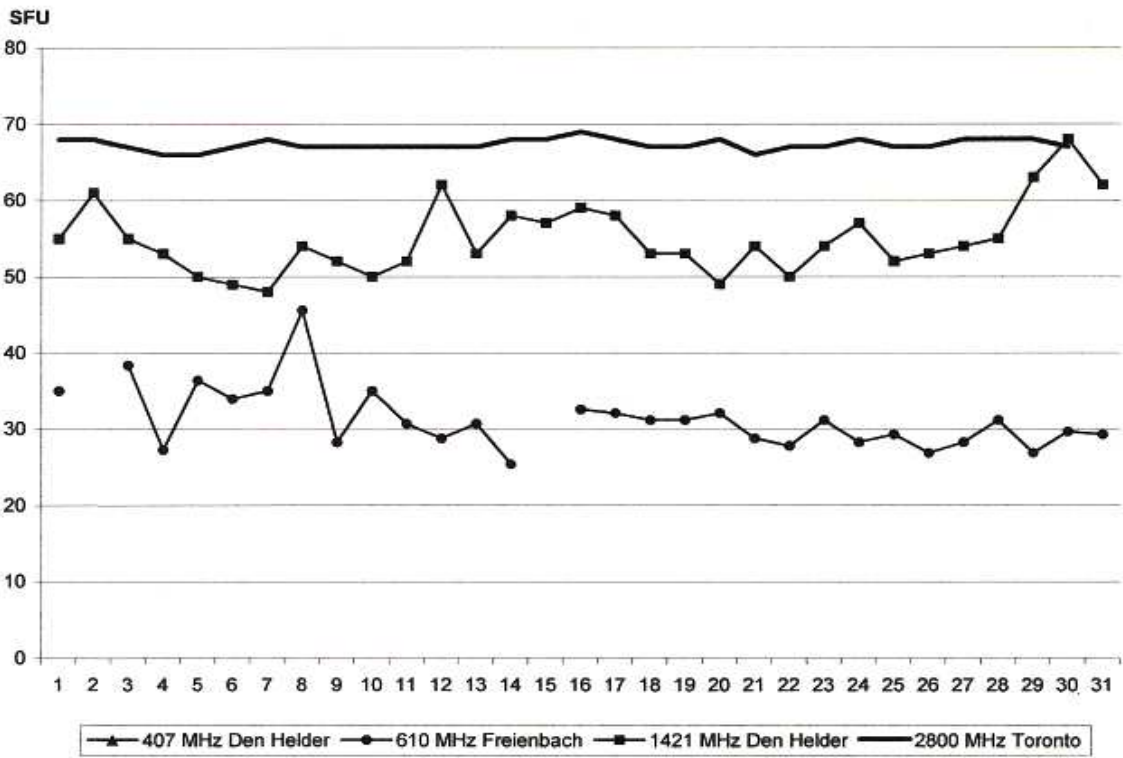


It has been since June 1913 that the monthly sunspot number is 0.0. It is the first time in the history of the SIDC that we encounter this situation: no sunspot was observed by none of the observers for a complete month. For August 2009, the yellow curve seems absent. In reality it is there, but coincides with zero and therefore is not visible.

de ZON in AUGUSTUS 2009



Radioflux ZON in AUGUSTUS 2009



Bulletin Werkgroep Zon

afzender:
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1781 GM Den Helder.

Eerstvolgende bijeenkomst Werkgroep Zon:
14 november 2009, Utrecht, Sonnenborgh.