Sunspot Index and Long-term Solar Observations

World Data Center supported by the ICSU - WDS

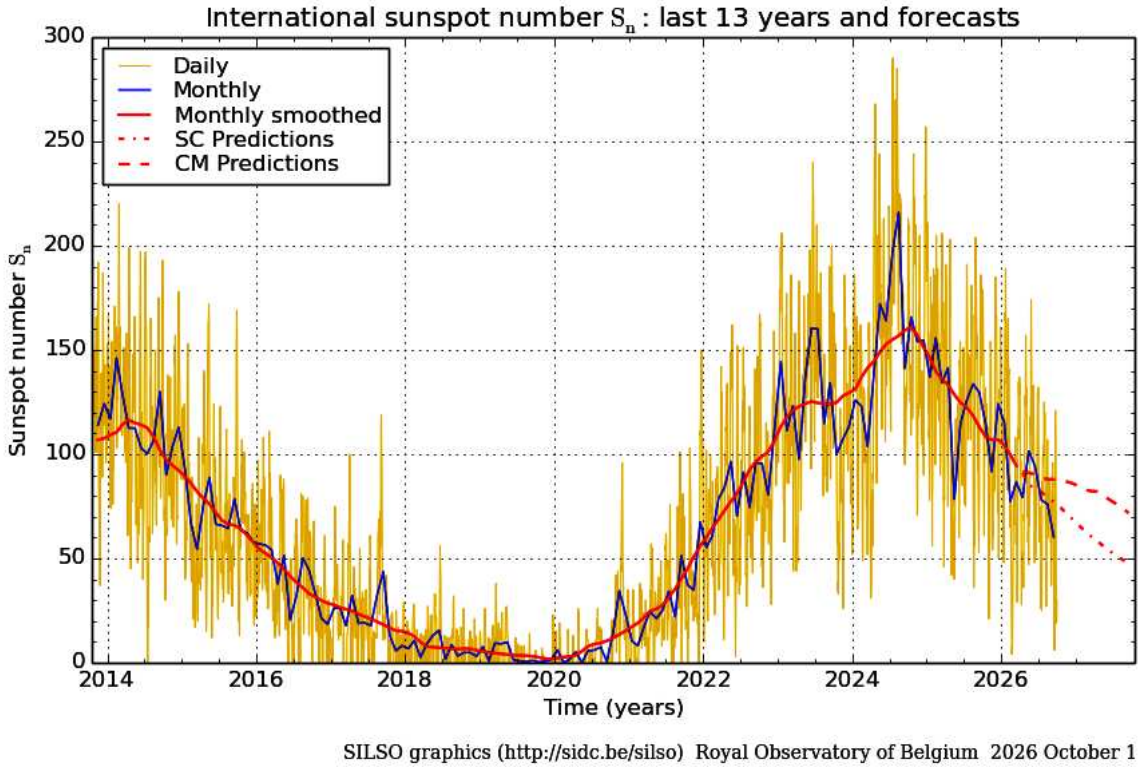
SUNSPOT BULLETIN

2026 n° 09

Provisional international and normalized hemispheric daily sunspot numbers for September 2026

Computed at the *Royal Observatory of Belgium* using observations from an international network with the *Specola Solare Ticinese Locarno* as reference station.

Date	S_n	S_n(N)	S_n(S)
1	59	39	20
2	39	25	14
3	37	37	0
4	55	46	9
5	68	57	11
6	78	59	19
7	89	76	13
8	91	78	13
9	94	83	11
10	96	84	12
11	85	71	14
12	86	74	12
13	63	52	11
14	48	33	15
15	40	16	24
16	27	15	12
17	15	3	12
18	6	0	6
19	13	5	8
20	52	27	25
21	69	52	17
22	104	69	35
23	121	80	41
24	111	75	36
25	89	56	33
26	56	34	22
27	48	35	13
28	19	19	0
29	20	14	6
30	30	16	14
Monthly mean	60.3	44.3	16.0
Cooperating stations	68	58	58



Predictions of the monthly smoothed Sunspot Number

using the last provisional value, calculated for March 2026: 94.5 (± 5%)

	SM	CM		SM	CM		SM	CM
2026 Apr	91	92	2026 Oct	75	88	2027 Apr	58	82
May	85	91	Nov	72	87	May	56	80
Jun	84	90	Dec	69	86	Jun	54	78
Jul	82	89	2027 Jan	66	85	Jul	52	76
Aug	80	88	Feb	63	83	Aug	50	74
Sep	77	88	Mar	61	82	Sep	48	72

SM : SIDC classical method : based on an interpolation of Waldmeier's standard curves. The estimated error ranges from 7% (first month) to 35% (last month)
CM : Combined method : the combined method is a regression technique coupling a dynamo–based estimator with Waldmeier's method of standard curves, designed by K. Denkmayr.
Ref.: K. Denkmayr, P. Cugnon, 1997 : "About Sunspot Number Medium-Term Predictions", in "Solar-Terrestrial Prediction Workshop V", eds. G.Heckman et al., Hiraiso Solar Terrestrial Research Center, Japan, 103.

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Summary of the URSIGRAMs from S.I.D.C.

Date	S_n	PPSI	600	2800	COS	SFI	XI	Ak
31	58	10	-	107	////	2	0/0	10
1	59	9	-	101	////	0	0/0	8
2	39	10	-	102	////	0	1/0	6
3	37	10	-	108	////	6	0/0	8
4	55	15	-	110	////	14	1/0	4
5	68	19	-	111	////	121	1/0	8
6	78	32	-	110	////	11	0/0	6
7	89	33	-	110	////	5	0/0	20
8	91	44	-	110	////	5	0/0	32
9	94	43	-	109	////	12	0/0	17
10	96	42	-	115	////	4	0/0	12
11	85	29	-	110	////	0	0/0	8
12	86	27	-	109	////	4	0/0	6
13	63	22	-	114	////	0	0/0	7
14	48	12	-	104	////	1	0/0	19
15	40	8	-	107	////	0	0/0	8
16	27	3	-	100	////	0	0/0	8
17	15	1	-	97	////	0	0/0	11
18	6	0	-	96	////	0	0/0	6
19	13	0	-	97	////	0	0/0	9
20	52	3	-	101	////	14	0/0	6
21	69	12	-	104	////	1	0/0	3
22	104	27	-	118	////	1	0/0	2
23	121	35	-	121	////	3	0/0	4
24	111	25	-	112	////	0	0/0	14
25	89	18	-	105	////	0	0/0	22
26	56	10	-	101	////	1	0/0	14
27	48	11	-	97	////	3	0/0	8
28	19	4	-	95	////	0	0/0	3
29	20	3	-	92	////	0	0/0	4
30	30	4	-	93	////	10	0/0	2

S_n : 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/m^2 : 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 : Solar Flare Index from the S.I.D.C. (origin: SWPC-NOAA, evaluation : 1 x Sn+10 x "1"+100 x ">1".

XI : X-flares index from the Ursigrams (M-flares/X-flares) (origin: SWPC-NOAA).

Ak : geomagnetic index from Wingst, Germany (origin: Ursigrams).

SOLAR PHYSICS DEPARTMENT

UCCLE DAILY PROVISIONAL RELATIVE SUNSPOT NUMBERS FOR SEPTEMBER 2026

DATE	UT	NUMBER OF GROUPS	NUMBER OF SPOTS	RELATIVE SUNSPOT NUMBERS TOTAL	NORTH	SOUTH	CENTRAL	PPSI 10-5 WM-2	QUAL	OBS
1	925	4	21	61	39	22	46	9.3	2	OL
2	720	2	10	30	14	16	0	21.0	3	OL
4	1000	4	15	55	44	11	30	36.0	2	OL
5	730	4	13	53	41	12	13	33.1	3	OL
6	730	5	21	71	60	11	18	54.6	3	OL
7	835	6	31	91	79	12	54	33.3	3	OL
8	855	6	35	95	82	13	71	72.9	2	OL
9	718	7	31	101	89	12	62	63.6	2	JV
10	735	7	33	103	91	12	92	67.1	3	JV
11	1325	6	21	81	68	13	59	17.9	3	SB
12	955	7	21	91	79	12	56	41.8	3	JV
14	1345	4	6	46	23	23	12	3.1	3	OB
15	745	3	4	34	12	22	11	2.4	4	OB
16	755	2	3	23	12	11	0	5.0	3	JV
17	900	1	1	11	0	11	0	0.3	3	OB
18	700	1	1	11	0	11	11	0.4	3	SB
19	945	2	3	23	12	11	12	0.7	3	OB
20	1146	5	17	67	34	33	34	2.2	3	OB
21	730	5	27	77	66	11	54	31.8	2	SB
22	700	9	49	139	88	51	76	76.8	2	SB
23	815	10	71	171	106	65	69	89.4	3	OL
24	700	8	38	118	83	35	40	46.8	1	SB
25	700	9	19	109	74	35	57	45.7	1	SB
26	740	3	8	38	24	14	25	17.3	3	SB
27	1045	3	22	52	41	11	40	25.7	2	JV
29	810	2	8	28	16	12	12	3.4	2	OL

The relative mean sunspot number is 68.4.

NORMALISED UCCLE OBSERVATIONAL SUNSPOT NUMBERS U'=K'U FOR SEPTEMBER 2026

K'= 0.941 (*)

1	57	7	86	13	***	19	22	25	103
2	28	8	89	14	43	20	63	26	36
3	***	9	95	15	32	21	72	27	49
4	52	10	97	16	22	22	131	28	***
5	50	11	76	17	10	23	161	29	26
6	67	12	86	18	10	24	111	30	***

The normalised relative monthly mean sunspot number is 64.

(*) K' is the mean of the monthly K' for the last five years.

The Sun has been observed 26 days on 30 possible.