COMETS

The date of perihelion (T), period (P), perihelion distance (q) and the magnitude parameters H and G are given for each comet which comes to perihelion in 2025 and which becomes brighter than magnitude 18 and for other comets which are expected to be brighter than 14th magnitude during the year. The table also gives the date that the comet is expected to be at its brightest, its declination, elongation and expected peak magnitude. A negative elongation indicates that the comet is best in the morning sky.

The magnitude parameters are taken from determinations by the Comet Section or the comet observation website (COBS) (as indicated by '*' in the H column) or from elements downloaded from the MPC. The predicted total magnitude is given by:

$$m_1 = H + 2.5\ G\ (\log_{10} r) + 5\ (\log_{10} \Delta)$$

where Δ is the distance of the comet from Earth and r is its distance from the Sun, both in astronomical units. It is important to remember that comet magnitude predictions are often very uncertain and can be misleading, particularly for non-periodic comets with small perihelion distances. In particular, comets which show apparently bright magnitudes at very small elongations are unlikely to be observable. The table is derived from orbital elements downloaded from the Minor Planet Center (MPC) on 2024 September 20 and it is sorted in order of the date at which the comet reaches its brightest magnitude. A digital version containing more information is available from the Comet Section website at britastro.org/comet. This website contains links to many other resources useful to the comet observer, such as the Comet Section observing guide which is available for download as a PDF.

There are no bright comets expected in 2025 although a few are expected to brighten to binocular range and there are many faint comets to keep imagers busy including the possible recovery of a comet discovered by the BAA's first Comet Section director back in 1894.

Periodic comet **24P/Schaumasse** comes to perihelion in 2026 January and it might reach 8th magnitude by the end of the year. At the beginning of October, it is a 15th magnitude object in Gemini. It brightens slowly and moves east and by the start of December it will be a 12th magnitude object in Leo. A finder chart is on page xxx.

C/2024 E1 (Wierzchos) also comes to perihelion in 2026 January. In early October it should be a 12th magnitude object in Hercules moving south and by late November it may be as bright as 9th magnitude but it will be very low in the evening twilight by then. A finder chart is on page xxx.

If **C/2024 G3 (ATLAS)** survives perihelion it could be a bright binocular object from the southern hemisphere in late January and February as it moves from Capricornus to Piscis Austrinus.

P/1894 F1 (Denning) is a periodic comet which was discovered by the first Comet Section director, William F. Denning, in 1894 but was then lost. Recently it was linked 2007 HE4, a cometary object observed in 2007 and, as a result of this, we now have a good orbit. This predicts that the next perihelion passage is in 2025 December when it might reach 18th magnitude although the magnitude is very uncertain. It is well placed for northern hemisphere observers to attempt recovery starting October in Cancer at around 20th magnitude and ending the year in Virgo.

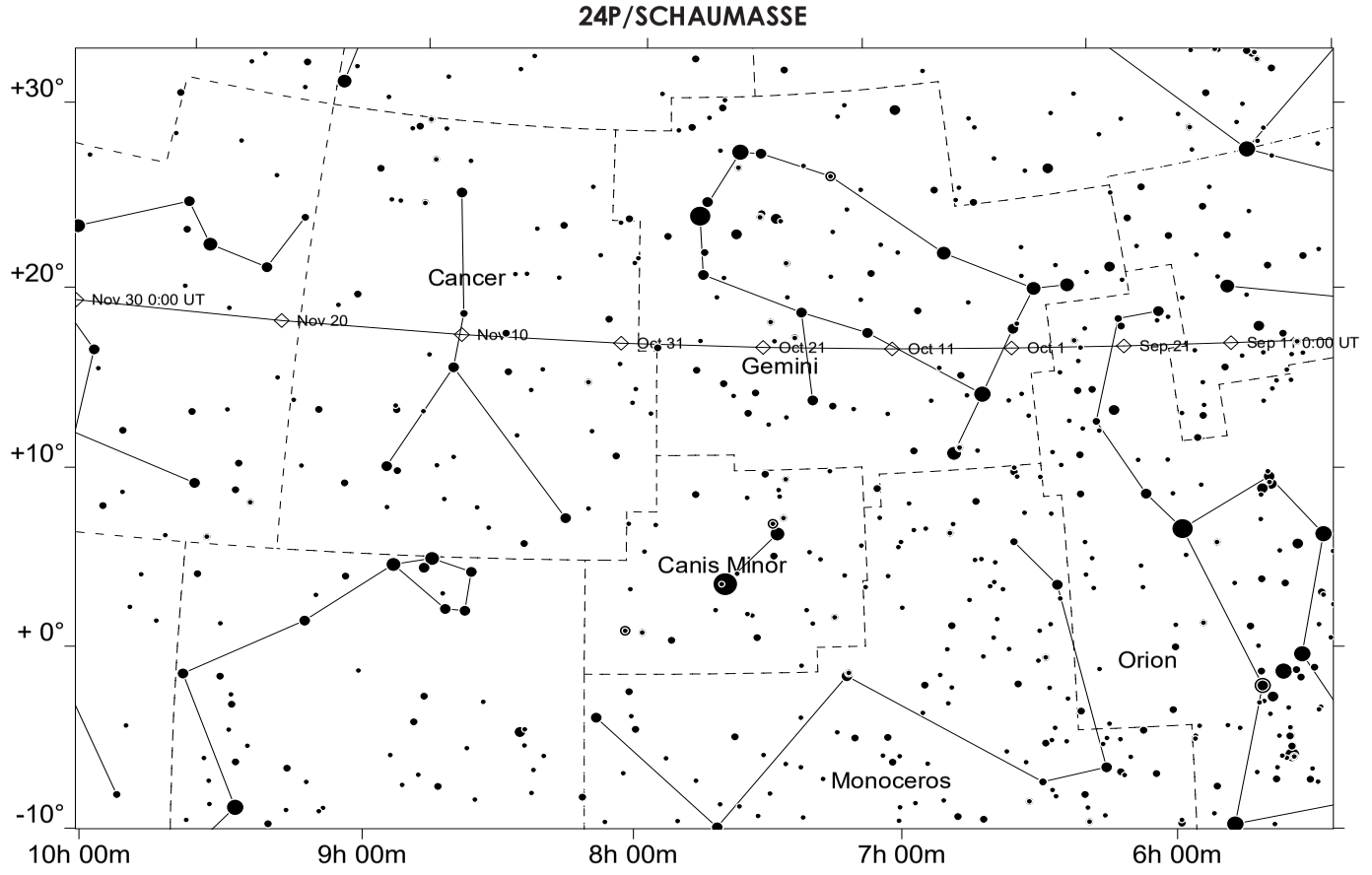
Charts produced using Megastar 4

COMETS

Name	T	q	P	H	G	Date of peak		Dec. at peak	Elong. at peak	Peak Magnitude
	yyyy–mm–dd	au	years			mm	dd	°	°	
333P/LINEAR	2024-11-29	1.11	8.67	10.7*	8.0	Jan	1	+43.5	76	12.2
37P/Forbes	2024-10-11	1.62	6.44	7.3*	6.6	Jan	1	–15.5	32	13.6
C/2022 E2 (ATLAS)	2024-09-14	3.67		5.0	4.0	Jan	1	+63.2	121	13.3
C/2023 A3 (Tsuchinshan–ATLAS)	2024-09-27	0.39		6.5	3.2	Jan	1	+6.3	32	11.1
C/2023 C2 (ATLAS)	2024-11-16	2.37		7.0	4.0	Jan	1	–12.0	23	13.4
195P/Hill	2025-08-03	4.44	16.42	8.5	4.0	Jan	10	–8.6	147	17.9
C/2024 G3 (ATLAS)	2025-01-13	0.09		9.0	4.0	Jan	13	–16.5	–5	–1.3
P/2010 A3 (Hill)	2025-03-11	1.62	15.07	14.0	4.0	Jan	26	+20.7	97	16.8
249P/LINEAR	2025-02-01	0.50	4.60	15.5	4.0	Feb	1	–15.7	–4	13.3
P/2023 S1	2025-02-24	2.62	7.54	11.5	4.0	Feb	3	+18.8	176	16.8
C/2024 A1 (ATLAS)	2025-06-13	3.88		7.0	4.0	Feb	8	–13.6	132	15.6
C/2024 J2 (Wierzchos)	2025-03-19	1.81	11.5	4.0	Feb	27+24.5		33	16.2	
C/2023 H5 (Lemmon)	2025-06-30	4.31		7.0	4.0	Mar	4	+58.0	127	16.3
P/2019 Y3 (Catalina)	2025-03-03	0.93	5.24	18.5	4.0	Mar	12	+38.1	71	15.8
323P/SOHO	2025-03-14	0.04	4.15	20.0	4.0	Mar	14	–3.9	–3	6.7
21P/Giacobini–Zinner	2025-03-25	1.01	6.53	9.4*	5.8	Mar	25	+4.5	3	11.0
49P/Arend–Rigaux	2025-04-10	1.43	6.74	11.3	4.4	Mar	30	+11.1	46	14.5
C/2023 F3 (ATLAS)	2025-02-02	5.19		6.0	4.0	Apr	2	–44.2	–138	16.4
48P/Johnson	2025-03-02	2.01	6.55	8.5*	4.0	Apr	3	–9.8	–24	13.9
C/2023 T3 (Fuls)	2025-01-25	3.55		8.5	4.0	Apr	6	–34.5	–152	16.2
323P–C/SOHO	2025-04-07	0.04	4.22	27.0	4.0	Apr	7	+5.7	–2	13.1
C/2024 L5 (ATLAS)	2025-03-10	3.43		9.0	4.0	Apr	9	–24.2	–163	16.3
P/2010 H2 (Vales)	2025-03-09	3.08	7.50	6.0	4.0	Apr	9	+6.4	–165	12.5
C/2024 G2 (ATLAS)	2025-06-13	5.35		7.0	4.0	Apr	13	–38.9	141	17.6
217P/LINEAR	2025-05-24	1.23	7.84	9.9*	4.3	May	25	+6.5	–29	12.4
164P/Christensen	2025-05-27	1.68	6.98	11.0	4.0	May	30	+15.1	–9	15.4
105P/SingerBrewster	2025-01-22	2.05	6.47	11.5	6.0	June	2	–5.1	–121	17.8
P/2011 CR42 (Catalina)	2025-01-12	2.53	6.58	9.0	4.0	June	11	–30.4	–161	14.4
65P/Gunn	2025-06-16	2.93	7.68	7.8*	3.7	June	29	–31.5	–172	13.6
60P/Tsuchinshan	2025-07-20	1.65	6.63	11.3*	2.9	July	18	+18.9	5	15.0
P/2003 QX29 (NEAT)	2025-08-07	4.23	22.64	8.5	4.0	July	23	–11.8	171	17.3
47P/Ashbrook–Jackson	2025-10-27	2.81	8.36	5.3*	6.0	Sept	11	–11.5	172	13.4
P/2016 G1 (PANSTARRS)	2025-05-16	2.04	4.15	14.0	4.0	Sept	12	+10.6	–161	17.6
414P/STEREO	2025-09-26	0.52	4.67	19.0	4.0	Sept	22	+8.2	–27	16.6
331P/Gibbs	2025-12-22	2.88	5.21	12.0	4.0	Oct	23	+13.1	–178	18.0
C/2022 N2 (PANSTARRS)	2025-07-31	3.83		6.0	4.0	Oct	31	+26.5	–159	14.3
210P/Christensen	2025-11-22	0.52	5.62	12.9*	2.1	Nov	15	–25.8	–8	9.8
40P/Vaisala	2025-11-11	1.82	11.06	5.2*	10.9	Nov	22	–2.9	–36	14.3
240P/NEAT	2025-12-19	2.12	7.59	5.4*	6.4	Nov	28	+7.4	164	11.0
C/2023 X2 (Lemmon)	2025-12-26	5.09		8.5	3.2	Dec	13	+85.6	–109	17.5
198P/ODAS	2025-10-09	2.00	6.81	9.0	4.0	Dec	14	+25.0	–156	12.4
323P–B/SOHO	2025-12-16	0.04	4.91	26.0	4.0	Dec	16	–23.5	0	12.8
P/1999 XN120 (Catalina)	2025-12-22	3.30	8.55	13.5	2.0	Dec	18	+25.7	–178	17.9
171P/Spahr	2025-09-25	1.77	6.69	13.5	4.0	Dec	28	+24.0	–116	17.0
141P–E/Machholz	1994-09-19	0.75	5.23	11.9*	8.9	Dec	31	–11.7	28	12.6
141P–F/Machholz	1994-09-19	0.75	5.22	11.9*	8.9	Dec	31	–9.9	36	10.8
141P–G/Machholz	2025-12-25	0.75	5.21	11.9*	8.9	Dec	31	–8.2	49	8.7
141P–H/Machholz	2015-08-24	0.76	5.22	11.9*	8.9	Dec	31	–10.8	31	11.9
24P/Schaumasse	2026-01-08	1.18	8.17	7.9*	8.8	Dec	31	+14.6	–95	8.4
43P/Wolf-Harrington	2025-08-05	2.44	9.01	6.7*	6.6	Dec	31	–7.2	–107	15.4
63P/Wild	2026-07-06	1.97	13.39	8.1*	4.0	Dec	31	+53.3	150	13.5
78P/Gehrels	2026-06-24	2.01	7.22	4.6*	6.8	Dec	31	–10.2	44	13.7
88P/Howell	2026-03-18	1.36	5.48	5.4*	7.3	Dec	31	–22.5	–25	11.0
C/2022 QE78 (ATLAS)	2025-09-10	5.48		5.0	4.0	Dec	31	+24.2	–142	15.8
C/2022 R6 (PANSTARRS)	2025-08-25	6.57		5.0	4.0	Dec	31	–11.4	–132	17.1
C/2024 E1 (Wierzchos)	2026-01-20	0.57		7.0	4.0	Dec	31	–25.5	5	6.8

* – magnitude parameters taken from *https://people.ast.cam.ac.uk/~jds/magpars.htm*

Negative elongations are morning, positive are evening


24P/SCHAUMASSE
+30°
+20°
+10°
+ 0°
-10°
10h 00m
9h 00m
8h 00m
7h 00m
6h 00m
Cancer
Gemini
Canis Minor
Orion
Monoceros
Nov 30 0:00 UT
Nov 20
Nov 10
Oct 31
Oct 21
Oct 11
Oct 1
Sep 21
Sep 1 0:00 UT

COMETS

C/2024 E1 (WIERZCHOS)