

"Pseudo-MPEC" for SWAN25FCreated 2025 Apr 4 4:28:03 UT using [Find_Orb](#)[Click here for an explanation of pseudo-MPECs](#)

- [Astrometry](#)
- [Observing stations](#)
- [Orbital elements](#)
- [Residuals](#)
- [Ephemeris](#)
- [Astrometry \(from NEOCP, if available\)](#)
- ['Scout' \(JPL\) information](#)
- [NEOfixer information](#)

Orbit Simulator View

Astrometry:

SWAN25F	C2025 03 26.93464 22 50 53.87 +18 18 48.9	14.0 VqNEOCP	N89
SWAN25F	C2025 03 26.94547 22 50 55.79 +18 19 10.1	14.4 VqNEOCP	N89
SWAN25F	C2025 03 26.95627 22 50 57.68 +18 19 32.8	14.3 VqNEOCP	N89
SWAN25F	KB2025 04 01.89853 23 10 27.690+21 54 51.17	13.3 VZNEOCP	Q40
SWAN25F	KB2025 04 01.89925 23 10 27.823+21 54 52.80	13.3 VZNEOCP	Q40
SWAN25F	KB2025 04 01.89997 23 10 28.021+21 54 55.08	13.3 VZNEOCP	Q40
SWAN25F	KB2025 04 03.13191 23 15 11.57 +22 43 27.7	13.6 NXNEOCP	D15
SWAN25F	*KB2025 04 03.13479 23 15 12.22 +22 43 36.2	12.3 GXNEOCP	A71
SWAN25F	KB2025 04 03.13617 23 15 12.60 +22 43 38.9	12.4 GXNEOCP	A71
SWAN25F	KB2025 04 03.13618 23 15 12.61 +22 43 37.7	13.6 NXNEOCP	D15
SWAN25F	KB2025 04 03.13703 23 15 12.83 +22 43 40.8	12.5 GXNEOCP	A71
SWAN25F	KB2025 04 03.13782 23 15 12.99 +22 43 42.8	12.6 GXNEOCP	A71
SWAN25F	KB2025 04 03.14045 23 15 13.62 +22 43 48.3	13.4 NXNEOCP	D15
SWAN25F	B2025 04 03.17667 23 15 22.226+22 45 15.91	12.9 GWNEOCP	970
SWAN25F	B2025 04 03.17799 23 15 22.546+22 45 18.97	13.0 GWNEOCP	970
SWAN25F	B2025 04 03.17932 23 15 22.819+22 45 22.18	12.9 GWNEOCP	970
SWAN25F	B2025 04 03.18064 23 15 23.174+22 45 25.52	12.9 GWNEOCP	970
SWAN25F	9B2025 04 03.23950 23 15 37.176+22 47 48.19	11.5 GVNEOCP	G40
SWAN25F	9B2025 04 03.24281 23 15 38.021+22 47 55.75	11.0 GVNEOCP	G40
SWAN25F	9B2025 04 03.24631 23 15 38.794+22 48 05.65	11.2 GVNEOCP	G40
SWAN25F	C2025 04 03.82512 23 17 58.92 +23 11 24.9	10.2 TVNEOCP	P87
SWAN25F	C2025 04 03.82926 23 17 59.92 +23 11 36.2	VNEOCP	P87
SWAN25F	C2025 04 03.83338 23 18 00.95 +23 11 45.2	VNEOCP	P87
SWAN25F	C2025 04 03.93913 23 18 26.878+23 16 02.86	11.5 GXNEOCP	N86
SWAN25F	C2025 04 03.94509 23 18 28.380+23 16 17.15	11.1 GXNEOCP	N86
SWAN25F	BK250404:040922 349.85392 +23.42634	12.7 GW	970
SWAN25F	BK250404:041036 349.85519 +23.42660	12.5 GW	970

Station data:

- (970) [Chelmsford](#) ([N51.744713 E0.495400](#)) UK/England. Observer [N. James](#).
0.28-m f/10 Schmidt-Cassegrain + CCD.
- (A71) [Stixendorf](#) ([N48.428772 E15.453300](#)) Austria. Observers M. Jaeger, E. Prosperi, S. Prosperi. Measurer M. Jaeger. 0.2-m f/2.0 reflector + CCD.
- (D15) [Sternwarte F.Schiller-Gymnasium, Weimar](#) ([N50.983391 E11.317810](#)) Germany. Observer T. Lehmann. 0.28-m f/2.2 reflector.
- (G40) [Slooh.com Canary Islands Observatory](#) ([N28.299717 W16.508260](#)) Canary Islands (Spain). Observer B. Lütkenhöner. Measurers G. [Gašparović](#), Y. Chen. 0.43-m f/6.8 Corrected Dall-Kirkham + CCD.
- (N86) [Xingming Observatory-KATS, Nanshan](#) ([N43.473806 E87.178520](#)) China. Observers Observers X. Gao, [Q.-Z. Ye](#). Measurer Q.-Z. Ye. 0.28-m f/2.2 Schmidt.
- (N89) [Xingming Observatory #2, Nanshan](#) ([N43.470804 E87.179060](#)) China. Observers M. Zhang, X. Gao. Measurer M. Zhang. 0.50-m f/4 reflector + CCD.
- (O40) [Xingyuan, Daocheng](#) ([N29.013061 E100.228610](#)) China.
- (P87) [Hirao Observatory, Yamaguchi](#) ([N33.954133 E132.094190](#)) Japan. Observer K. Yoshimoto. 0.20-m f/8.0 Ritchey-Chrétien + CCD + f/5.4 focal

reducer.

Orbital elements: SWAN25F

Perihelion 2025 May 1.10440 +/- 0.0126 TT = 2:30:20 (JD 2460796.60440)
 Epoch 2025 Apr 3.0 TT = JDT 2460768.5 Earth MOID: 0.6277 Ju: 0.4139
 q 0.33350476 +/- 0.000438 Me: 0.0056 Sa: 0.5324 Auto-Find
 H 10.87 G 0.15 Peri. 153.75871 +/- 0.11
 z -0.0060854514 +/- 0.00549 Node 329.92195 +/- 0.021
 e 1.0020295 +/- 0.00183 Incl. 90.44818 +/- 0.039
 From 27 observations 2025 Mar. 26-Apr. 4; mean residual 0".47

Residuals in arcseconds:

250326 N89	.38-	.21+	250403 D15	.48+	.72-	250403 G40	.27-	.69-
250326 N89	.12+	.51-	250403 A71	.52+	.09+	250403 G40	1.1-	.75+
250326 N89	.27+	.31+	250403 A71	.14+	.18+	250403 P87	.35+	.35-
250401 O40	.01-	.22-	250403 D15	.43+	.40-	250403 P87	.13+	.81+
250401 O40	.40-	.28-	250403 970	.55+	.26+	250403 P87	.39+	.27-
250401 O40	.12+	.31+	250403 970	.63+	.13+	250403 N86	.52-	.41+
250403 D15	.12+	.43-	250403 970	.03+	.14+	250403 N86	.10-	.09+
250403 A71	.57-	.88+	250403 970	.60+	.30+	250404 970	.67-	.15+
250403 A71	.16+	.26+	250403 G40	1.0-	.25-	250404 970	.58+	1.0-

Ephemerides for (970) Chelmsford: SWAN25F:

Date (UTC)	RA	Dec	delta	r	elong	mag	"	sig	PA
2025 04 04	23 18 41.761	+23 18 29.37	1.5103	.79355	28.6	12.8	.148	145	
2025 04 05	23 22 55.817	+23 59 39.39	1.4834	.77268	28.7	12.7	.463	143	
2025 04 06	23 27 23.520	+24 41 38.95	1.4565	.75175	28.7	12.6	.878	142	
2025 04 07	23 32 06.120	+25 24 24.92	1.4296	.73075	28.6	12.6	1.41	142	
2025 04 08	23 37 04.995	+26 07 52.93	1.4027	.70971	28.6	12.5	2.07	141	
2025 04 09	23 42 21.658	+26 51 57.11	1.3760	.68864	28.5	12.4	2.87	141	
2025 04 10	23 47 57.772	+27 36 29.72	1.3494	.66754	28.4	12.4	3.85	140	
2025 04 11	23 53 55.147	+28 21 20.73	1.3230	.64645	28.2	12.3	5.02	140	
2025 04 12	00 00 15.746	+29 06 17.29	1.2969	.62538	28.0	12.2	6.41	140	
2025 04 13	00 07 01.676	+29 51 03.20	1.2710	.60436	27.8	12.2	8.06	140	
2025 04 14	00 14 15.172	+30 35 18.13	1.2454	.58343	27.5	12.1	10.0	140	
2025 04 15	00 21 58.559	+31 18 36.91	1.2202	.56262	27.1	12.0	12.3	140	
2025 04 16	00 30 14.194	+32 00 28.60	1.1955	.54199	26.8	12.0	14.9	141	
2025 04 17	00 39 04.380	+32 40 15.58	1.1713	.52159	26.3	11.9	18.0	141	
2025 04 18	00 48 31.236	+33 17 12.61	1.1478	.50150	25.9	11.8	21.6	142	
2025 04 19	00 58 36.512	+33 50 26.06	1.1250	.48180	25.3	11.8	25.7	143	
2025 04 20	01 09 21.356	+34 18 53.30	1.1030	.46259	24.8	11.7	30.5	145	
2025 04 21	01 20 46.011	+34 41 22.75	1.0821	.44400	24.2	11.7	35.9	146	
2025 04 22	01 32 49.464	+34 56 34.63	1.0622	.42617	23.6	11.6	42.2	148	
2025 04 23	01 45 29.068	+35 03 03.02	1.0437	.40927	22.9	11.6	49.3	150	
2025 04 24	01 58 40.193	+34 59 19.40	1.0266	.39348	22.3	11.6	57.4	153	
2025 04 25	02 12 15.974	+34 43 58.18	1.0112	.37902	21.7	11.5	66.4	156	
2025 04 26	02 26 07.276	+34 15 44.01	0.9975	.36614	21.1	11.5	76.4	159	
2025 04 27	02 40 02.943	+33 33 40.54	.98584	.35507	20.5	11.5	87.5	162	
2025 04 28	02 53 50.410	+32 37 19.42	.97634	.34607	20.0	11.5	99	166	
2025 04 29	03 07 16.653	+31 26 47.88	.96913	.33937	19.7	11.5	112	170	
2025 04 30	03 20 09.332	+30 02 52.86	.96431	.33514	19.4	11.5	126	175	
2025 05 01	03 32 17.929	+28 26 59.95	.96192	.33352	19.3	11.5	139	179	
2025 05 02	03 43 34.630	+26 41 06.75	.96195	.33456	19.4	11.5	154	4	
2025 05 03	03 53 54.774	+24 47 31.57	.96430	.33823	19.6	11.5	168	8	
2025 05 04	04 03 16.817	+22 48 40.04	.96883	.34440	19.9	11.5	181	13	
2025 05 05	04 11 41.889	+20 46 52.27	.97537	.35292	20.4	11.5	195	18	
2025 05 06	04 19 13.121	+18 44 13.15	.98371	.36356	21.0	11.6	208	22	
2025 05 07	04 25 54.921	+16 42 26.54	0.9936	.37606	21.6	11.6	221	27	
2025 05 08	04 31 52.331	+14 42 53.40	1.0048	.39019	22.3	11.6	233	31	
2025 05 09	04 37 10.529	+12 46 32.81	1.0172	.40570	23.1	11.6	246	35	
2025 05 10	04 41 54.499	+10 54 04.66	1.0305	.42238	23.9	11.7	257	39	
2025 05 11	04 46 08.834	+09 05 53.16	1.0446	.44002	24.7	11.7	269	43	
2025 05 12	04 49 57.646	+07 22 10.28	1.0592	.45845	25.5	11.8	280	46	
2025 05 13	04 53 24.544	+05 42 58.92	1.0743	.47753	26.3	11.9	291	49	