3I/ATLAS = C/2025 N1 (ATLAS)

Initial reported observation by ATLAS Chile, Rio Hurtado on 2025-07-01.

Orbit

epoch	2025-11-21.0
epoch JD	2461000.5
perihelion date	2025-10-29.48273
perihelion JD	2460977.98273
argument of perihelion (°)	128.00707
ascending node (°)	322.15474
inclination (°)	175.11292
eccentricity	6.1396863
perihelion distance (AU)	1.3564871
radial non-grav. param.	
transverse non-grav. param.	

semimajor axis (AU)	
mean anomaly (°)	
mean daily motion (°/day)	
aphelion distance (AU)	
period (years)	
P-vector [x]	-0.96791155
P-vector [y]	-0.24887839
P-vector [z]	-0.03473878
Q-vector [x]	-0.24579521
Q-vector [y]	0.9088986
Q-vector [z]	0.33687987

recip semimajor axis orig (AU)	-3.78918
recip semimajor axis future (AU)	-3.788763
recip semimajor axis error (AU)	0.0000286
reference	E2025-YF1
observations used	5609
residual rms (arc-secs)	0.50
perturbers coarse indicator	M-v
perturbers precise indicator	003Ek
first observation date used	2025-05-08.0
last observation date used	2025-12-23.0
computer name	Alexanders
orbit quality code	

Observations

5816 total observations over interval: 2025 05 08.517659 – 2025 12 23.142545

These data are available for download (format description).

Date (UT)	J2000 RA	J2000 Dec	Magn	Location	Ref
2025 05 08.517659	19 12 35.590	-18 42 21.35	21.57 V	C57 – TESS	MPC 187161
2025 05 10.603515	19 11 27.094	-18 41 21.70	21.64 V	C57 – TESS	MPC 187161
2025 05 12.689361	19 10 11.775	-18 40 49.56	21.82 V	C57 – TESS	MPC 187161
2025 05 14.990495	19 08 42.571	-18 40 42.61	21.39 V	C57 – TESS	MPC 187161
2025 05 15.421174	19 08 28.246	-18 41 39.48	19.22 r	I41 – Palomar Mountain--ZTF	MPC 187161
2025 05 17.076322	19 07 17.030	-18 40 52.12	20.81 V	C57 – TESS	MPC 187161
2025 05 21.366015	19 04 11.124	-18 42 04.65	20.80 V	C57 – TESS	MPC 187161
2025 05 21.944615	19 03 40.745	-18 41 56.13	20.08 c	M01 – Weizmann Astrophysical Observatory	MPC 186021
2025 05 22.373611	19 03 19.698	-18 41 58.91	20.49 g	I41 – Palomar Mountain--ZTF	MPC 186021
2025 05 22.373800	19 03 19.751	-18 41 58.81	20.52 g	I41 – Palomar Mountain--ZTF	MPC 187161

2025 12 18.076007	10 51 32.014	+06 38 13.06	13.2 R	C23 – Olmen	MPEC Y151
2025 12 18.080255	10 51 30.890	+06 38 19.72	13.6 G	G05 – Piconcillo, Sierra Morena	MPEC Y151
2025 12 18.081690	10 51 30.489	+06 38 22.00	14.9 G	G05 – Piconcillo, Sierra Morena	MPEC Y151
2025 12 18.093090	10 51 27.300	+06 38 37.93	14.1 G	G05 – Piconcillo, Sierra Morena	MPEC Y151
2025 12 18.111257	10 51 22.235	+06 39 03.76	12.91 G	L92 – San Costantino	MPEC Y51
2025 12 18.119201	10 51 20.038	+06 39 15.08	13.1 r	213 – Observatorio Montcabre	MPEC Y51
2025 12 18.136737	10 51 15.129	+06 39 39.92	12.90 G	L92 – San Costantino	MPEC Y51
2025 12 18.163655	10 51 07.602	+06 40 17.91	12.82 G	L92 – San Costantino	MPEC Y51
2025 12 18.176852	10 51 03.984	+06 40 36.84	13.0 r	213 – Observatorio Montcabre	MPEC Y51
2025 12 18.234155	10 50 48.002	+06 41 58.09	13.1 r	213 – Observatorio Montcabre	MPEC Y51
2025 12 18.339167	10 50 19.038	+06 44 32.06	14.99 G	X08 – ShAO Chile station, El Sauce	MPEC Y151
2025 12 18.339283	10 50 19.022	+06 44 32.34	14.42 G	X08 – ShAO Chile station, El Sauce	MPEC Y151
2025 12 18.339398	10 50 18.972	+06 44 32.60	15.02 G	X08 – ShAO Chile station, El Sauce	MPEC Y151
2025 12 18.425556	10 49 55.070	+06 46 29.42	14.7 V	U76 – Maury Lewin Observatory, Glendora	MPEC Y151
2025 12 18.469097	10 49 42.888	+06 47 31.27	14.7 V	U76 – Maury Lewin Observatory, Glendora	MPEC Y151
2025 12 18.532164	10 49 25.286	+06 49 00.66	14.6 V	U76 – Maury Lewin Observatory, Glendora	MPEC Y151
2025 12 18.64495	10 48 54.10	+06 51 39.7		Q23 – Sukagawa	MPEC Y151
2025 12 18.65322	10 48 51.80	+06 51 51.5		Q23 – Sukagawa	MPEC Y151
2025 12 18.66183	10 48 49.38	+06 52 03.8	11.6 T	Q23 – Sukagawa	MPEC Y151
2025 12 18.712742	10 48 35.173	+06 53 16.31	15.2 G	900 – Moriyama	MPEC Y151
2025 12 18.717458	10 48 33.893	+06 53 22.74	15.3 G	900 – Moriyama	MPEC Y151
2025 12 18.722173	10 48 32.547	+06 53 29.75	15.3 G	900 – Moriyama	MPEC Y151
2025 12 18.787303	10 48 14.293	+06 55 01.82	15.2 G	Q21 – Southern Utsunomiya	MPEC Y151
2025 12 18.790810	10 48 13.326	+06 55 06.87	14.8 G	Q21 – Southern Utsunomiya	MPEC Y151
2025 12 18.794329	10 48 12.319	+06 55 11.78	14.8 G	Q21 – Southern Utsunomiya	MPEC Y151
2025 12 18.79797	10 48 11.49	+06 55 18.9	14.2 V	O56 – Jaichalad-Pailin Observatory	MPEC Y151
2025 12 18.83790	10 48 00.29	+06 56 15.6	13.7 V	O56 – Jaichalad-Pailin Observatory	MPEC Y151
2025 12 18.87771	10 47 49.10	+06 57 12.0	13.1 V	O56 – Jaichalad-Pailin Observatory	MPEC Y151
2025 12 18.91303	10 47 39.15	+06 57 59.2	13.4 R	C94 – MASTER-II Observatory, Tunka	MPEC Y151
2025 12 18.923565	10 47 36.509	+06 58 14.38	14.9 G	C40 – Kuban State University Astrophysical Observato	MPEC Y151
2025 12 18.933090	10 47 33.852	+06 58 27.84	14.8 G	C40 – Kuban State University Astrophysical Observato	MPEC Y151
2025 12 18.93508	10 47 32.98	+06 58 30.9	13.6 R	C94 – MASTER-II Observatory, Tunka	MPEC Y151
2025 12 18.944722	10 47 30.516	+06 58 45.44	14.8 G	C40 – Kuban State University Astrophysical Observato	MPEC Y151
2025 12 18.94646	10 47 29.82	+06 58 47.2	13.7 R	C94 – MASTER-II Observatory, Tunka	MPEC Y151
2025 12 19.007280	10 47 13.073	+07 00 13.39	14.3 G	B67 – Sternwarte Mirasteilas, Falera	MPEC Y151
2025 12 19.008924	10 47 12.619	+07 00 15.70	14.3 G	B67 – Sternwarte Mirasteilas, Falera	MPEC Y151
2025 12 19.010556	10 47 12.146	+07 00 18.29	14.2 G	B67 – Sternwarte Mirasteilas, Falera	MPEC Y151
2025 12 19.026343	10 47 07.680	+07 00 40.32	14.1 G	D69 – JMU Space-Observatory	MPEC Y151
2025 12 19.071528	10 46 55.022	+07 01 44.33	13.8 G	D69 – JMU Space-Observatory	MPEC Y151
2025 12 19.079572	10 46 52.819	+07 01 56.46	13.9 r	213 – Observatorio Montcabre	MPEC Y151
2025 12 19.089965	10 46 49.888	+07 02 10.72	14.9 G	B74 – Santa Maria de Montmagastrell	MPEC Y151

2025 12 19.092060	10 46 49.313	+07 02 13.62	15.0 G	B74 – Santa Maria de Montmagastrell	MPEC Y151
2025 12 19.104699	10 46 45.745	+07 02 31.73	15.3 G	B74 – Santa Maria de Montmagastrell	MPEC Y151
2025 12 19.109271	10 46 44.441	+07 02 37.75	13.8 G	D69 – JMU Space-Observatory	MPEC Y151
2025 12 19.126806	10 46 39.547	+07 03 02.20	14.0 G	I81 – Tarbatness Observatory, Portmahomack	MPEC Y151
2025 12 19.129618	10 46 38.731	+07 03 06.30	14.0 G	I81 – Tarbatness Observatory, Portmahomack	MPEC Y151
2025 12 19.132442	10 46 37.949	+07 03 09.76	14.6 G	I81 – Tarbatness Observatory, Portmahomack	MPEC Y151
2025 12 19.141134	10 46 35.520	+07 03 23.94	13.9 r	213 – Observatorio Montcabre	MPEC Y151
2025 12 19.141727	10 46 35.306	+07 03 23.88	15.8 G	L85 – BiAnto Observatory, Lauria	MPEC Y151
2025 12 19.160477	10 46 30.055	+07 03 50.53	15.7 G	L85 – BiAnto Observatory, Lauria	MPEC Y151
2025 12 19.171757	10 46 26.885	+07 04 06.57	13.4 G	215 – Buchloe	MPEC Y151
2025 12 19.175191	10 46 25.926	+07 04 11.24	13.8 G	215 – Buchloe	MPEC Y151
2025 12 19.177618	10 46 25.181	+07 04 15.17	15.7 G	L85 – BiAnto Observatory, Lauria	MPEC Y151
2025 12 19.178626	10 46 24.949	+07 04 16.52	12.9 G	215 – Buchloe	MPEC Y151
2025 12 19.202419	10 46 18.274	+07 04 50.88	13.9 r	213 – Observatorio Montcabre	MPEC Y151
2025 12 19.220847	10 46 13.206	+07 05 17.63	15.4 r	J13 – La Palma-Liverpool Telescope	MPEC Y151
2025 12 19.230814	10 46 10.413	+07 05 31.66	15.5 r	J13 – La Palma-Liverpool Telescope	MPEC Y151
2025 12 19.448900	10 45 09.386	+07 10 40.69	14.9 V	U76 – Maury Lewin Observatory, Glendora	MPEC Y151
2025 12 19.491898	10 44 57.252	+07 11 41.86	14.9 V	U76 – Maury Lewin Observatory, Glendora	MPEC Y151
2025 12 19.505856	10 44 53.286	+07 12 02.02	13.6 G	V16 – Dark Sky New Mexico, Animas	MPEC Y151
2025 12 19.509734	10 44 52.175	+07 12 07.55	13.6 G	V16 – Dark Sky New Mexico, Animas	MPEC Y151
2025 12 19.514618	10 44 50.781	+07 12 14.55	13.6 G	V16 – Dark Sky New Mexico, Animas	MPEC Y151
2025 12 19.519560	10 44 49.416	+07 12 21.38	13.6 G	V16 – Dark Sky New Mexico, Animas	MPEC Y151
2025 12 19.536806	10 44 44.594	+07 12 45.61	14.8 V	U76 – Maury Lewin Observatory, Glendora	MPEC Y151
2025 12 19.54017	10 44 43.62	+07 12 50.2	14.5 N	290 – Mt. Graham-VATT	MPEC Y151
2025 12 19.54155	10 44 43.24	+07 12 52.2	14.5 N	290 – Mt. Graham-VATT	MPEC Y151
2025 12 19.54237	10 44 43.00	+07 12 53.4	14.4 N	290 – Mt. Graham-VATT	MPEC Y151
2025 12 19.54723	10 44 41.63	+07 13 00.2	14.5 N	290 – Mt. Graham-VATT	MPEC Y151
2025 12 19.54760	10 44 41.51	+07 13 00.8	14.4 N	290 – Mt. Graham-VATT	MPEC Y151
2025 12 19.54799	10 44 41.41	+07 13 01.2	14.5 N	290 – Mt. Graham-VATT	MPEC Y151
2025 12 19.54836	10 44 41.32	+07 13 01.9	14.4 N	290 – Mt. Graham-VATT	MPEC Y151
2025 12 19.54874	10 44 41.20	+07 13 02.3	14.5 N	290 – Mt. Graham-VATT	MPEC Y151
2025 12 19.984468	10 42 38.938	+07 23 19.46	13.3 R	C23 – Olmen	MPEC Y151
2025 12 19.991204	10 42 37.042	+07 23 28.86	13.3 R	C23 – Olmen	MPEC Y151
2025 12 19.998681	10 42 34.915	+07 23 39.84	13.3 R	C23 – Olmen	MPEC Y151
2025 12 20.006169	10 42 32.822	+07 23 50.46	13.3 R	C23 – Olmen	MPEC Y151
2025 12 20.013657	10 42 30.684	+07 24 00.90	13.4 R	C23 – Olmen	MPEC Y151
2025 12 20.063186	10 42 16.76	+07 25 11.6	13.3 G	Z92 – Almalex Observatory, Leeds	MPEC Y151
2025 12 20.073737	10 42 13.72	+07 25 26.4	12.9 G	Z92 – Almalex Observatory, Leeds	MPEC Y151
2025 12 20.083697	10 42 10.95	+07 25 41.1	13.0 G	Z92 – Almalex Observatory, Leeds	MPEC Y151
2025 12 20.367141	10 40 50.892	+07 32 23.86	14.8 V	W50 – Apex	MPEC Y151
2025 12 20.367662	10 40 50.738	+07 32 24.58	14.8 V	W50 – Apex	MPEC Y151

2025 12 20.368333	10 40 50.554	+07 32 25.51	14.8 V	W50 – Apex	MPEC Y151
2025 12 20.368843	10 40 50.407	+07 32 26.66	14.8 V	W50 – Apex	MPEC Y151
2025 12 20.369363	10 40 50.256	+07 32 27.06	14.7 V	W50 – Apex	MPEC Y151
2025 12 20.370035	10 40 50.083	+07 32 28.03	14.8 V	W50 – Apex	MPEC Y151
2025 12 20.370556	10 40 49.925	+07 32 28.79	14.8 V	W50 – Apex	MPEC Y151
2025 12 20.371065	10 40 49.769	+07 32 29.36	14.8 V	W50 – Apex	MPEC Y151
2025 12 20.371736	10 40 49.591	+07 32 30.26	14.8 V	W50 – Apex	MPEC Y151
2025 12 20.372257	10 40 49.445	+07 32 30.98	14.8 V	W50 – Apex	MPEC Y151
2025 12 20.372766	10 40 49.294	+07 32 31.96	14.8 V	W50 – Apex	MPEC Y151
2025 12 20.373437	10 40 49.106	+07 32 32.75	14.8 V	W50 – Apex	MPEC Y151
2025 12 20.373958	10 40 48.958	+07 32 33.68	14.8 V	W50 – Apex	MPEC Y151
2025 12 20.374468	10 40 48.823	+07 32 34.30	14.8 V	W50 – Apex	MPEC Y151
2025 12 20.376956	10 40 48.058	+07 32 38.22	14.7 V	W50 – Apex	MPEC Y151
2025 12 20.377477	10 40 47.964	+07 32 38.76	14.7 V	W50 – Apex	MPEC Y151
2025 12 20.378009	10 40 47.808	+07 32 40.52	14.7 V	W50 – Apex	MPEC Y151
2025 12 20.380868	10 40 46.990	+07 32 43.48	14.8 V	W50 – Apex	MPEC Y151
2025 12 20.381493	10 40 46.814	+07 32 44.16	14.7 V	W50 – Apex	MPEC Y151
2025 12 20.382118	10 40 46.649	+07 32 45.24	14.8 V	W50 – Apex	MPEC Y151
2025 12 20.382986	10 40 46.390	+07 32 46.39	14.7 V	W50 – Apex	MPEC Y151
2025 12 20.383611	10 40 46.207	+07 32 47.15	14.8 V	W50 – Apex	MPEC Y151
2025 12 20.384225	10 40 46.034	+07 32 48.23	14.8 V	W50 – Apex	MPEC Y151
2025 12 20.386944	10 40 45.262	+07 32 52.08	14.7 V	W50 – Apex	MPEC Y151
2025 12 20.387870	10 40 45.012	+07 32 53.23	14.8 V	W50 – Apex	MPEC Y151
2025 12 20.388495	10 40 44.834	+07 32 54.42	14.8 V	W50 – Apex	MPEC Y151
2025 12 20.391227	10 40 44.054	+07 32 58.09	14.8 V	W50 – Apex	MPEC Y151
2025 12 21.13398	10 37 13.66	+07 50 31.5	14.6 V	C82 – Osservatorio Astronomico Nastro Verde, Sorrento	MPEC Y151
2025 12 21.13526	10 37 13.29	+07 50 33.3	14.6 V	C82 – Osservatorio Astronomico Nastro Verde, Sorrento	MPEC Y151
2025 12 21.13675	10 37 12.86	+07 50 35.3	14.5 V	C82 – Osservatorio Astronomico Nastro Verde, Sorrento	MPEC Y151
2025 12 21.14059	10 37 11.77	+07 50 40.7	14.5 V	C82 – Osservatorio Astronomico Nastro Verde, Sorrento	MPEC Y151
2025 12 21.14573	10 37 10.30	+07 50 48.0	14.6 V	C82 – Osservatorio Astronomico Nastro Verde, Sorrento	MPEC Y151
2025 12 21.166319	10 37 04.411	+07 51 16.56	14.6 G	D68 – Osservatorio Galileo, Padova	MPEC Y151
2025 12 21.177789	10 37 01.133	+07 51 32.98	14.7 G	D68 – Osservatorio Galileo, Padova	MPEC Y151
2025 12 21.190405	10 36 57.506	+07 51 51.16	13.6 G	D68 – Osservatorio Galileo, Padova	MPEC Y151
2025 12 21.359965	10 36 09.602	+07 55 52.10	14.23 G	V21 – Cewanee Observatory at DSNM	MPEC Y151
2025 12 21.374606	10 36 05.405	+07 56 12.70	14.19 G	V21 – Cewanee Observatory at DSNM	MPEC Y151
2025 12 21.389201	10 36 01.238	+07 56 33.11	14.22 G	V21 – Cewanee Observatory at DSNM	MPEC Y151
2025 12 21.403808	10 35 57.070	+07 56 54.13	14.19 G	V21 – Cewanee Observatory at DSNM	MPEC Y151
2025 12 21.418391	10 35 52.906	+07 57 14.87	14.27 G	V21 – Cewanee Observatory at DSNM	MPEC Y151
2025 12 21.419004	10 35 52.969	+07 57 14.87	11.94 G	703 – Catalina Sky Survey	MPEC Y151
2025 12 21.421288	10 35 52.382	+07 57 17.93	11.65 G	703 – Catalina Sky Survey	MPEC Y151
2025 12 21.423573	10 35 51.688	+07 57 21.31	11.83 G	703 – Catalina Sky Survey	MPEC Y151

2025 12 21.425858	10 35 51.022	+07 57 24.59	11.86 G	703 – Catalina Sky Survey	MPEC Y151
2025 12 21.842882	10 33 51.758	+08 07 15.38	15.1 V	Q14 – Goto Astronomical Observatory in Yatsugatake	MPEC Y151
2025 12 21.849294	10 33 49.932	+08 07 24.46	15.0 V	Q14 – Goto Astronomical Observatory in Yatsugatake	MPEC Y151
2025 12 21.969664	10 33 15.839	+08 10 13.08	14.9 G	B72 – Soerth Observatory	MPEC Y151
2025 12 22.027454	10 32 59.312	+08 11 35.24	15.0 G	B72 – Soerth Observatory	MPEC Y151
2025 12 22.049549	10 32 52.980	+08 12 06.53	15.0 G	B72 – Soerth Observatory	MPEC Y151
2025 12 22.060336	10 32 49.889	+08 12 21.84	15.0 G	B72 – Soerth Observatory	MPEC Y151
2025 12 22.072396	10 32 46.430	+08 12 38.87	15.0 G	B72 – Soerth Observatory	MPEC Y151
2025 12 22.40929	10 31 10.10	+08 20 36.1		U94 – iTelescope Observatory, Beryl Junction	MPEC Y151
2025 12 22.41362	10 31 08.90	+08 20 41.9	13.4 G	U94 – iTelescope Observatory, Beryl Junction	MPEC Y151
2025 12 22.41794	10 31 07.64	+08 20 47.9	13.6 G	U94 – iTelescope Observatory, Beryl Junction	MPEC Y151
2025 12 22.42228	10 31 06.38	+08 20 53.9	13.2 G	U94 – iTelescope Observatory, Beryl Junction	MPEC Y151
2025 12 22.697488	10 29 47.599	+08 27 22.23	14.7 G	Q21 – Southern Utsunomiya	MPEC Y151
2025 12 22.701007	10 29 46.577	+08 27 27.06	14.8 G	Q21 – Southern Utsunomiya	MPEC Y151
2025 12 22.704525	10 29 45.573	+08 27 32.02	15.0 G	Q21 – Southern Utsunomiya	MPEC Y151
2025 12 22.708032	10 29 44.566	+08 27 37.21	15.1 G	Q21 – Southern Utsunomiya	MPEC Y151
2025 12 22.903553	10 28 48.571	+08 32 13.56	13.7 V	M73 – Eden Emirates Observatory, Abu Dhabi	MPEC Y151
2025 12 22.908704	10 28 47.066	+08 32 21.12	13.6 V	M73 – Eden Emirates Observatory, Abu Dhabi	MPEC Y151
2025 12 22.914132	10 28 45.514	+08 32 28.57	13.6 V	M73 – Eden Emirates Observatory, Abu Dhabi	MPEC Y151
2025 12 22.919028	10 28 44.105	+08 32 35.63	13.6 V	M73 – Eden Emirates Observatory, Abu Dhabi	MPEC Y151
2025 12 22.923958	10 28 42.679	+08 32 42.54	13.5 V	M73 – Eden Emirates Observatory, Abu Dhabi	MPEC Y151
2025 12 23.100091	10 27 52.140	+08 36 50.11	13.75 w	R17 – ATLAS-TDO	MPEC Y151
2025 12 23.114246	10 27 48.055	+08 37 09.95	13.65 w	R17 – ATLAS-TDO	MPEC Y151
2025 12 23.128398	10 27 43.975	+08 37 29.93	13.58 w	R17 – ATLAS-TDO	MPEC Y151
2025 12 23.142545	10 27 39.893	+08 37 49.98	13.62 w	R17 – ATLAS-TDO	MPEC Y151