

Close Encounter: 456938 (2007 YV56)

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This information is generated on 2017-09-07 17:28 UTC.

Basic Properties

- Name: 456938 (2007 YV56)
- Discovered 2007-Dec-31 by CSS at Catalina
- Estimated diameter: 167 – 375 meters
- Classification: Apollo (NEO, PHA)
- H: 21.0
- Period: 722.345 days

Table: Orbital elements at epoch 2458000.5 JD

Parameter	Value
Semi-major axis (a)	1.57554
Eccentricity (e)	.622205
Inclination (i)	6.24408
Lon. of ascending node (Ω)	102.423
Argument of pericenter (ω)	265.730
Mean Anomaly (M)	348.294

Orbit

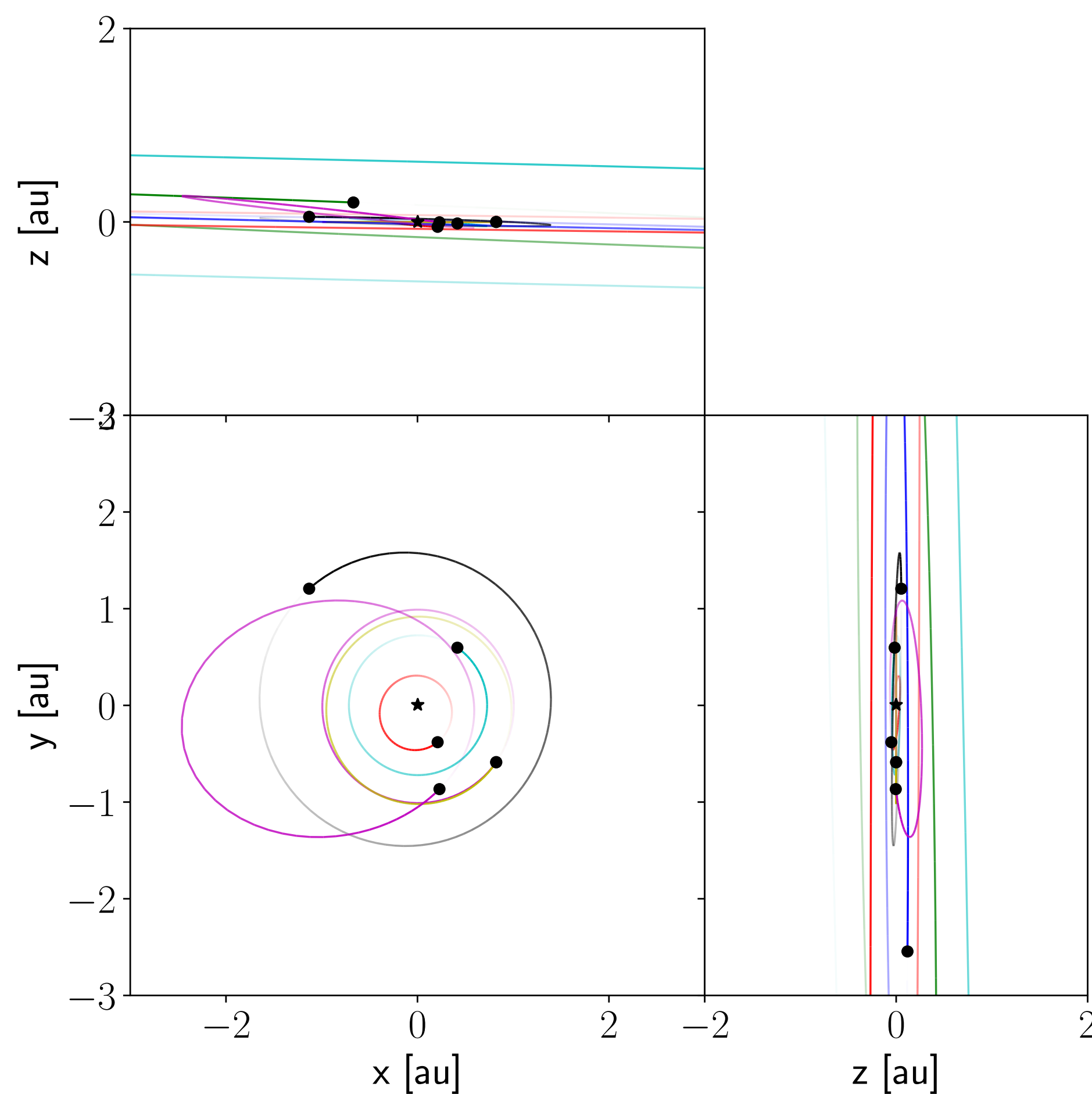


Figure: Orbit of the asteroid and the planets. This plot only shows the inner region of the Solar System.

Acknowledgements

Our script retrieve basic informations and initial condition from [JPL NASA](#), re-integrate the Solar System using [Rebound](#) package, and write this report using \LaTeX .

Distance to the Earth and Orbital Elements

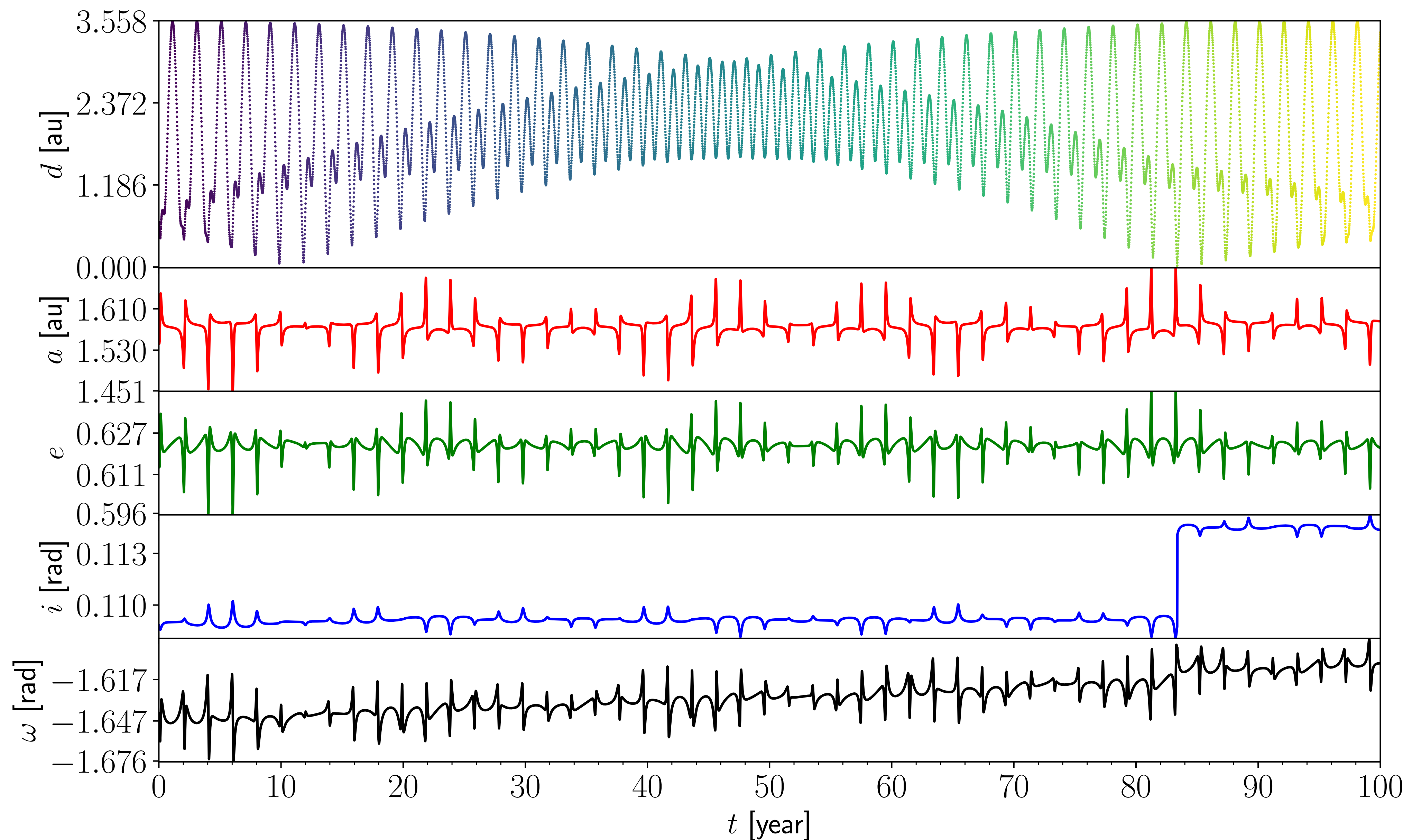


Figure: Distance to the Earth and orbital elements of the asteroid for the next 100 years. Starting time of the integration is 2017-08-17 00:00 UTC.

Geocentric

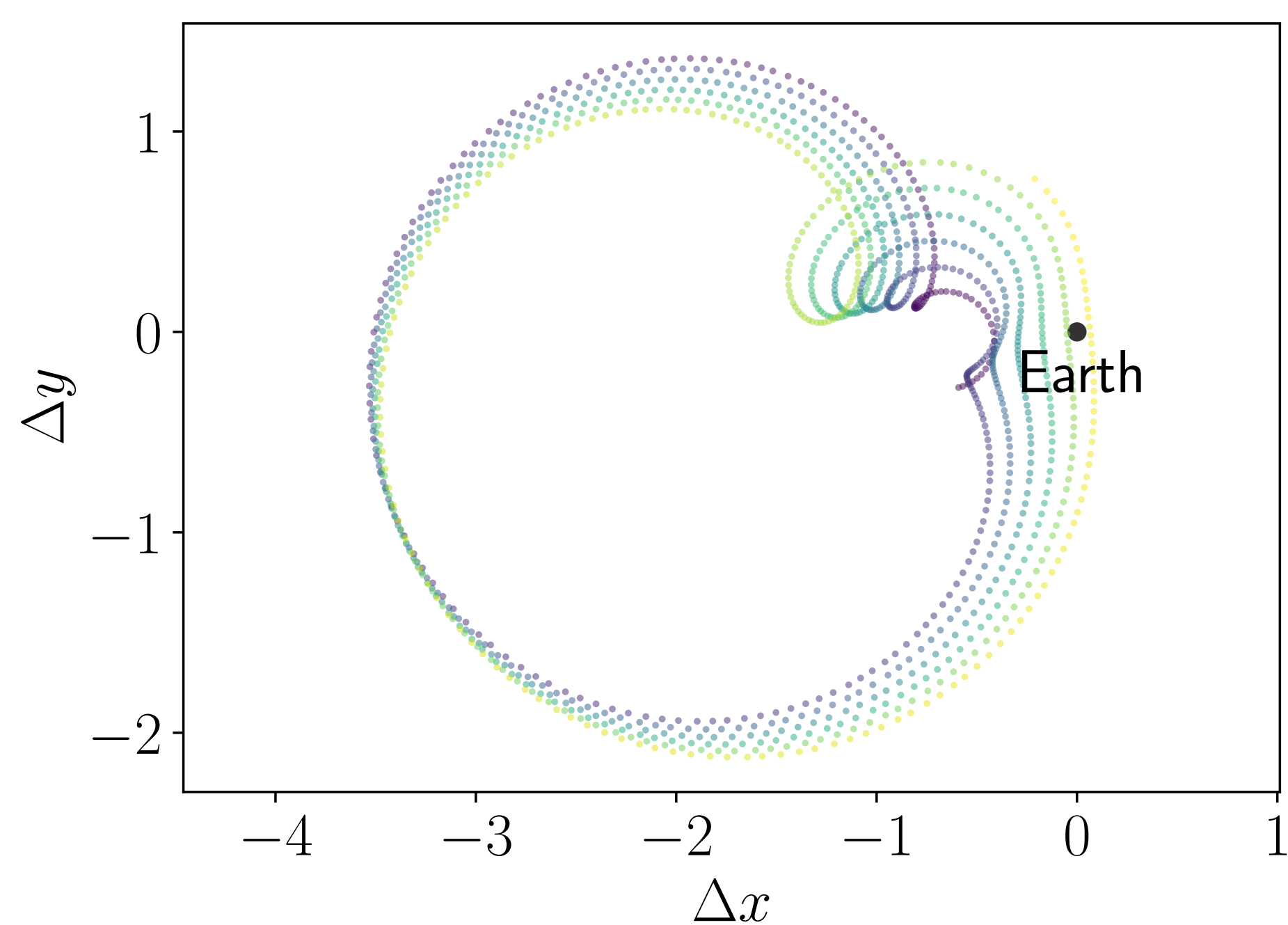


Figure: Movement of the asteroid relative to the Earth (xy -plane; only the first 12 years of integration).

Rotating Frame

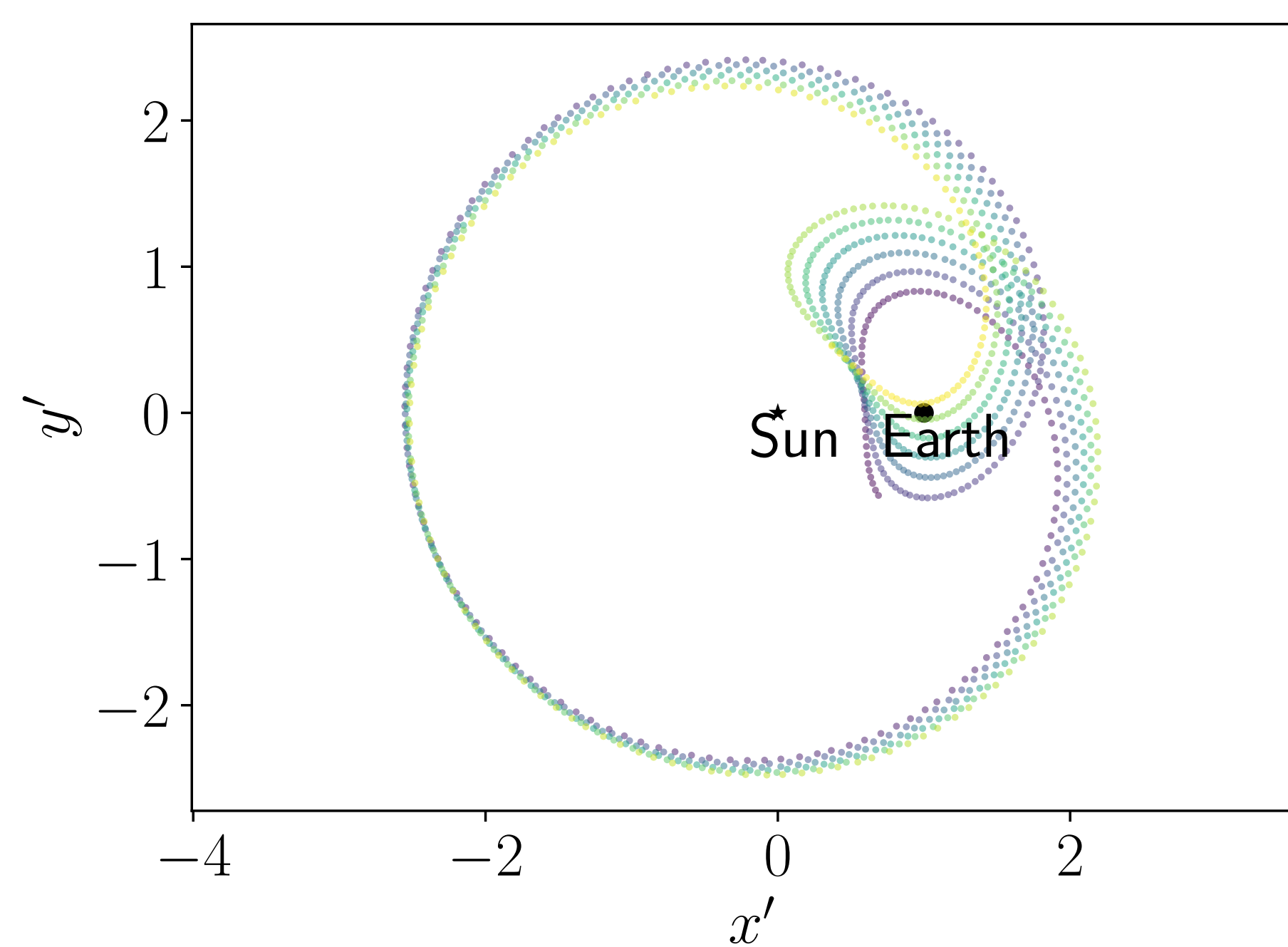


Figure: Movement of the asteroid relative to the Sun-Earth system (xy -plane; only the first 12 years of integration).

Nearest close encounter

- Time: 1 September 2017, 12.05 UT
- Distance: 7.066×10^6 km (18.38 Lunar Distance)
- Relative velocity:

List of close encounter

Time	Body	d (au)	v_{rel} (km/s)
2017-09-24	Earth	0.4142	19.34
2019-09-08	Earth	0.3987	18.23
2021-08-20	Earth	0.3611	15.93
2023-07-29	Earth	0.2888	12.91
2023-08-13	Venus	0.0596	14.47
2025-07-07	Earth	0.1735	14.20
2027-06-28	Earth	0.0503	17.78
2029-06-22	Earth	0.0660	20.99
2031-06-16	Earth	0.1904	24.66
2033-06-09	Earth	0.3140	28.31
2033-08-21	Venus	0.0389	16.86
2035-06-04	Earth	0.4327	31.90
2041-06-02	Venus	0.0901	21.45
2047-10-03	Mars	0.0675	13.71
2051-05-26	Venus	0.1328	14.19
2069-02-23	Venus	0.0773	13.91
2079-03-03	Venus	0.0470	18.32
2085-05-16	Mars	0.0705	13.66
2086-12-16	Venus	0.0258	18.34
2095-01-22	Earth	0.4226	31.99
2096-12-04	Venus	0.1314	14.12
2097-01-14	Earth	0.2828	27.69
2099-01-08	Earth	0.1371	23.27
2101-01-02	Moon	0.0019	18.80
2101-01-02	Earth	0.0015	19.27
2102-12-31	Earth	0.0435	17.85
2104-10-13	Venus	0.1398	23.76
2104-12-27	Earth	0.1006	16.18
2106-12-23	Earth	0.1630	14.34
2108-12-14	Earth	0.2271	12.72
2110-11-30	Earth	0.2876	12.97
2114-11-15	Venus	0.1482	23.90
2130-08-24	Venus	0.0100	16.71
2134-08-24	Earth	0.3635	16.03
2136-08-20	Earth	0.3524	15.43
2138-08-15	Venus	0.1227	22.92
2138-08-15	Earth	0.3371	14.68
2140-08-09	Earth	0.3194	13.87
2154-12-22	Mars	0.0787	14.79
2164-07-04	Earth	0.1030	16.20
2166-07-05	Earth	0.1076	16.05
2168-07-05	Earth	0.1128	15.90
2170-07-06	Earth	0.1263	15.55
2172-07-07	Earth	0.1437	15.04
2174-07-09	Earth	0.1607	14.54
2176-07-11	Earth	0.1831	13.94
2178-07-14	Earth	0.2079	13.21