

2014 HD199

First observed at Cerro Tololo-DECam on 2014-04-28.

(Discoverer will be defined when the object is numbered. See [this note](#) on how discoverers are determined.)

Orbit

Orbit type: Apollo

Near-Earth Object

One opposition object seen prior.

Interactive Orbit Sketch

Note: WebGL enabled browser required.

epoch	2019-04-27.0	semimajor axis (AU)	1.7562867	uncertainty	9
epoch JD	2458600.5	mean anomaly (°)	83.03899	reference	MPO 317875
perihelion date	2018-10-12.90283	mean daily motion (°/day)	0.42345840	observations used	7
perihelion JD	2458404.40283	aphelion distance (AU)	2.558	oppositions	1
argument of perihelion (°)	270.56240	period (years)	2.33	arc length (days)	1
ascending node (°)	234.84670	P-vector [x]	-0.81811433	first opposition used	2014
inclination (°)	6.41066	P-vector [y]	0.56197482	last opposition used	2014
eccentricity	0.4564741	P-vector [z]	0.12195589	residual rms (arc-secs)	0.09
perihelion distance (AU)	0.9545873	Q-vector [x]	-0.56776326	perturbbers coarse indicator	M-v
Tisserand w.r.t. Jupiter	4.0	Q-vector [y]	-0.75569906	perturbbers precise indicator	003Eh
ΔV w.r.t. Earth (km/sec)	5.8	Q-vector [z]	-0.32644113	first observation date used	2014-04-28.0
		absolute magnitude	24.6	last observation date used	2014-04-29.0
		phase slope	0.15	computer name	MPCW

JD of orbit computation	2457020.662679
perihelion JD uncertainty (days)	1.3768E-02
argument of perihelion uncertainty (°)	4.9977E-03
ascending node uncertainty (°)	6.9393E-02
inclination uncertainty (°)	2.1927E-01
eccentricity uncertainty	1.4144E-02
perihelion distance uncertainty (AU)	1.4481E-03

Minimum Orbit Intersection Distances (in AU)

for orbit epoch: 2458200.5, reference: MPO317875

Mercury	0.612289
Venus	0.273388
Earth	0.0918525
Mars	0.0178692
Jupiter	2.50382
Saturn	7.25827
Uranus	17.1091
Neptune	27.4499

Observations

7 total observations over interval: 2014 04 28.31709 – 2014 04 29.31981

These data are available for [download](#) ([format description](#)).

Date (UT)	J2000 RA	J2000 Dec	Magn	Location	Ref
2014 04 28.31709	15 14 17.57	-26 13 32.7	22.7 V	W84 – Cerro Tololo-DECam	MPS 547826
2014 04 28.32048	15 14 17.26	-26 13 25.0		W84 – Cerro Tololo-DECam	MPS 547826
2014 04 28.32378	15 14 16.97	-26 13 17.4		W84 – Cerro Tololo-DECam	MPS 547826
2014 04 28.32719	15 14 16.62	-26 13 09.4		W84 – Cerro Tololo-DECam	MPS 547826
2014 04 29.30698	15 12 57.76	-25 36 48.5	23.0 V	W84 – Cerro Tololo-DECam	MPS 547826
2014 04 29.31016	15 12 57.47	-25 36 41.4		W84 – Cerro Tololo-DECam	MPS 547826
2014 04 29.31981	15 12 56.58	-25 36 19.8		W84 – Cerro Tololo-DECam	MPS 547826