

## 2014 HG196

First observed at Cerro Tololo-DECam on 2014-04-23.

(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)	2.7186144	<a href="#">uncertainty</a>	5
epoch JD	2458600.5	mean anomaly (°)	30.73128	reference	MPO 317867
perihelion date	2018-12-08.23506	mean daily motion (°/day)	0.21987830	observations used	9
perihelion JD	2458460.73506	aphelion distance (AU)	4.658	oppositions	1
argument of perihelion (°)	60.55624	period (years)	4.48	arc length (days)	1
ascending node (°)	228.48592	P-vector [x]	0.32613547	first opposition used	2014
inclination (°)	1.13645	P-vector [y]	-0.87404245	last opposition used	2014
eccentricity	0.7133128	P-vector [z]	-0.36011866	residual rms (arc-secs)	0.15
perihelion distance (AU)	0.7793919	Q-vector [x]	0.94520638	<a href="#">perturbers coarse indicator</a>	M-v
Tisserand w.r.t. Jupiter	2.9	Q-vector [y]	0.29552180	<a href="#">perturbers precise indicator</a>	003Eh
ΔV w.r.t. Earth (km/sec)	7.4	Q-vector [z]	0.13875074	first observation date used	2014-04-23.0
		absolute magnitude	26.6	last observation date used	2014-04-24.0
		phase slope	0.15	computer name	MPCW

JD of orbit computation	2457020.562449
perihelion JD uncertainty (days)	4.2613E-03
argument of perihelion uncertainty (°)	3.4457E-02
ascending node uncertainty (°)	2.0669E-02
inclination uncertainty (°)	6.4053E-04
eccentricity uncertainty	0.0000E+00
perihelion distance uncertainty (AU)	1.9254E-04

Minimum Orbit Intersection Distances (in AU)  
for orbit epoch: 2458600.5, reference: MPO317867

Mercury	0.33153
Venus	0.06235
Earth	0.00091
Mars	0.03148
Jupiter	0.55981
Saturn	4.45332
Uranus	14.0004
Neptune	25.4534

## Observations

9 total observations over interval: 2014 04 23.08651 – 2014 04 24.11626

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

Date (UT)	J2000 RA	J2000 Dec	Magn	<a href="#">Location</a>	<a href="#">Ref</a>
2014 04 23.08651	13 57 49.42	-14 41 17.8	22.7 V	W84 – Cerro Tololo-DECam	MPS 547822
2014 04 23.08976	13 57 49.44	-14 41 19.0		W84 – Cerro Tololo-DECam	MPS 547822
2014 04 23.09299	13 57 49.47	-14 41 20.1		W84 – Cerro Tololo-DECam	MPS 547822
2014 04 23.09614	13 57 49.48	-14 41 21.3		W84 – Cerro Tololo-DECam	MPS 547822
2014 04 24.10327	13 58 15.16	-14 45 59.5	22.8 V	W84 – Cerro Tololo-DECam	MPS 547822
2014 04 24.10651	13 58 15.17	-14 46 00.5		W84 – Cerro Tololo-DECam	MPS 547822
2014 04 24.10976	13 58 15.19	-14 46 01.5		W84 – Cerro Tololo-DECam	MPS 547822
2014 04 24.11302	13 58 15.20	-14 46 02.4		W84 – Cerro Tololo-DECam	MPS 547822
2014 04 24.11626	13 58 15.21	-14 46 03.5		W84 – Cerro Tololo-DECam	MPS 547822