

2016 GS134

First observed at Pan-STARRS 1, Haleakala on 2016-04-05.  
(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.

A geocentric flyby diagram is available [here](#).

|                            |                  |                           |             |  |              |
|----------------------------|------------------|---------------------------|-------------|--|--------------|
| epoch                      | 2019-04-27.0     | semimajor axis (AU)       | 1.8690283   | <a href="#">uncertainty</a>                  | 3            |
| epoch JD                   | 2458600.5        | mean anomaly (°)          | 86.62673    | reference                                    | MPO 380433   |
| perihelion date            | 2018-09-14.41958 | mean daily motion (°/day) | 0.38572700  | observations used                            | 25           |
| perihelion JD              | 2458375.91958    | aphelion distance (AU)    | 2.862       | oppositions                                  | 1            |
| argument of perihelion (°) | 96.70518         | period (years)            | 2.56        | arc length (days)                            | 24           |
| ascending node (°)         | 44.80149         | P-vector [x]              | -0.78267973 | first opposition used                        | 2016         |
| inclination (°)            | 0.08985          | P-vector [y]              | 0.57044212  | last opposition used                         | 2016         |
| eccentricity               | 0.5314304        | P-vector [z]              | 0.24901452  | residual rms (arc-secs)                      | 0.14         |
| perihelion distance (AU)   | 0.8757699        | Q-vector [x]              | -0.62242367 | <a href="#">perturbers coarse indicator</a>  | M-v          |
| Tisserand w.r.t. Jupiter   | 3.8              | Q-vector [y]              | -0.71802247 | <a href="#">perturbers precise indicator</a> | 003Eh        |
| ΔV w.r.t. Earth (km/sec)   | 6.1              | Q-vector [z]              | -0.31150042 | first observation date used                  | 2016-04-02.0 |
|                            |                  | absolute magnitude        | 27.7        | last observation date used                   | 2016-04-26.0 |
|                            |                  | phase slope               | 0.15        | computer name                                | MPCW         |

|  |                |
|--|----------------|
| JD of orbit computation                | 2457508.988066 |
| perihelion JD uncertainty (days)       | 4.2040E-05     |
| argument of perihelion uncertainty (°) | 2.7878E-04     |
| ascending node uncertainty (°)         | 2.7688E-04     |
| inclination uncertainty (°)            | 9.4409E-07     |
| eccentricity uncertainty               | 2.5419E-06     |
| perihelion distance uncertainty (AU)   | 4.0524E-07     |

Minimum Orbit Intersection Distances (in AU)  
for orbit epoch: 2458600.5, reference: MPO380433

|         |         |
|---------|---------|
| Mercury | 0.52913 |
| Venus   | 0.16255 |
| Earth   | 0.00086 |
| Mars    | 0.0053  |
| Jupiter | 2.172   |
| Saturn  | 6.97188 |
| Uranus  | 16.8971 |
| Neptune | 27.1415 |

Observations

25 total observations over interval: 2016 04 02.42225 – 2016 04 26.528464  
These data are available for [download](#) ([format description](#)).

| Date (UT)         | J2000 RA     | J2000 Dec    | Magn   | <a href="#">Location</a>      | <a href="#">Ref</a> |
|-------------------|--------------|--------------|--------|-------------------------------|---------------------|
| 2016 04 02.42225  | 13 56 00.924 | -05 25 04.56 | 18.0 w | F51 – Pan-STARRS 1, Haleakala | MPS 699175          |
| 2016 04 02.43416  | 13 56 08.103 | -05 30 10.21 | 18.2 w | F51 – Pan-STARRS 1, Haleakala | MPS 699175          |
| 2016 04 02.44612  | 13 56 15.083 | -05 35 11.51 | 18.5 w | F51 – Pan-STARRS 1, Haleakala | MPS 699175          |
| 2016 04 03.44643  | 14 05 30.854 | -09 21 49.57 | 19.2 w | F51 – Pan-STARRS 1, Haleakala | MPS 699175          |
| 2016 04 05.46707  | 14 10 46.919 | -11 32 28.09 | 21.2 w | F51 – Pan-STARRS 1, Haleakala | MPS 699175          |
| 2016 04 05.46772  | 14 10 46.882 | -11 32 29.61 | 20.7 w | F51 – Pan-STARRS 1, Haleakala | MPS 699175          |
| 2016 04 05.47939  | 14 10 46.296 | -11 32 53.13 | 20.6 w | F51 – Pan-STARRS 1, Haleakala | MPS 699175          |
| 2016 04 05.48004  | 14 10 46.276 | -11 32 54.31 | 21.2 w | F51 – Pan-STARRS 1, Haleakala | MPS 699175          |
| 2016 04 05.49168  | 14 10 45.688 | -11 33 17.57 | 21.3 w | F51 – Pan-STARRS 1, Haleakala | MPS 699175          |
| 2016 04 05.49233  | 14 10 45.663 | -11 33 18.84 | 20.8 w | F51 – Pan-STARRS 1, Haleakala | MPS 699175          |
| 2016 04 05.50399  | 14 10 45.077 | -11 33 41.59 | 20.6 w | F51 – Pan-STARRS 1, Haleakala | MPS 699175          |
| 2016 04 05.50465  | 14 10 45.049 | -11 33 42.72 | 20.7 w | F51 – Pan-STARRS 1, Haleakala | MPS 699175          |
| 2016 04 06.406349 | 14 11 52.696 | -11 57 54.22 | 20.6 R | 568 – Mauna Kea               | MPS 699175          |
| 2016 04 06.407384 | 14 11 52.646 | -11 57 55.76 | 21.1 R | 568 – Mauna Kea               | MPS 699175          |
| 2016 04 06.408417 | 14 11 52.598 | -11 57 57.28 | 20.4 R | 568 – Mauna Kea               | MPS 699175          |
| 2016 04 07.907110 | 14 12 46.72  | -12 20 24.8  | 21.6 R | K92 – Sutherland-LCO B        | MPS 699175          |
| 2016 04 07.915534 | 14 12 46.38  | -12 20 32.6  | 21.3 R | K92 – Sutherland-LCO B        | MPS 699175          |
| 2016 04 07.924014 | 14 12 46.03  | -12 20 39.8  | 22.1 R | K92 – Sutherland-LCO B        | MPS 699175          |
| 2016 04 07.962768 | 14 12 44.27  | -12 21 13.3  | 21.7 R | K92 – Sutherland-LCO B        | MPS 699175          |
| 2016 04 07.971420 | 14 12 43.86  | -12 21 20.4  | 22.2 R | K92 – Sutherland-LCO B        | MPS 699175          |
| 2016 04 07.980073 | 14 12 43.43  | -12 21 27.3  | 21.7 R | K92 – Sutherland-LCO B        | MPS 699175          |
| 2016 04 12.532196 | 14 13 29.493 | -12 57 03.23 | 23.1 R | 568 – Mauna Kea               | MPS 701386          |
| 2016 04 12.539931 | 14 13 29.166 | -12 57 04.50 | 22.9 R | 568 – Mauna Kea               | MPS 701386          |
| 2016 04 26.496043 | 14 12 36.018 | -13 15 34.50 | 24.0 R | 568 – Mauna Kea               | MPS 706142          |
| 2016 04 26.528464 | 14 12 35.293 | -13 15 34.05 | 24.0 R | 568 – Mauna Kea               | MPS 706142          |