2017 EA

First observed at Catalina Sky Survey on 2017-03-02.
(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
epoch JD	2458600.5
perihelion date	2019-07-13.37497
perihelion JD	2458677.87497
argument of perihelion (°)	80.39606
ascending node (°)	161.84444
inclination (°)	1.37315
eccentricity	0.6005497
perihelion distance (AU)	0.6820201
Tisserand w.r.t. Jupiter	4.0
ΔV w.r.t. Earth (km/sec)	7.2

semimajor axis (AU)	1.7073965
mean anomaly (°)	325.81758
mean daily motion (°/day)	0.44177610
aphelion distance (AU)	2.733
period (years)	2.23
P-vector [x]	-0.46567308
P-vector [y]	-0.82104119
P-vector [z]	-0.33021196
Q-vector [x]	0.88492532
Q-vector [y]	-0.42887620
Q-vector [z]	-0.18158298
absolute magnitude	30.8
phase slope	0.15

uncertainty	3
reference	MPO 399985
observations used	59
oppositions	1
arc length (days)	0
first opposition used	2017
last opposition used	2017
residual rms (arc-secs)	0.49
perturbers coarse indicator	M-v
perturbers precise indicator	003Eh
first observation date used	2017-03-02.0
last observation date used	2017-03-02.0
computer name	MPCW

JD of orbit computation	2457815.024742
perihelion JD uncertainty (days)	2.1936E-05
argument of perihelion uncertainty (°)	1.2099E-04
ascending node uncertainty (°)	1.4512E-06
inclination uncertainty (°)	4.0438E-05
eccentricity uncertainty	1.0868E-06
perihelion distance uncertainty (AU)	1.0128E-06

Minimum Orbit Intersection Distances (in AU)
for orbit epoch: 2458600.5, reference: MPO399985

Mercury	0.22084
Venus	0.01712
Earth	0.0001
Mars	0.03085
Jupiter	2.28854
Saturn	6.41024
Uranus	16.4749
Neptune	27.2039

Observations

65 total observations over interval: 2017 03 02.31463 – 2017 03 02.493750
These data are available for download (format description).

Date (UT)	J2000 RA	J2000 Dec	Magn	Location	Ref
2017 03 02.31463	10 17 40.07	+06 05 50.6	18.0 V	703 – Catalina Sky Survey	MPS 772291
2017 03 02.31686	10 17 43.52	+06 05 38.0	19.3 V	703 – Catalina Sky Survey	MPS 772291
2017 03 02.31815	10 17 45.53	+06 05 29.2	18.4 V	703 – Catalina Sky Survey	MPS 772291
2017 03 02.347229	10 18 26.73	+06 00 31.6	17.2 G	H01 – Magdalena Ridge Observatory, Socorro	MPS 772291
2017 03 02.35074	10 18 44.56	+06 01 39.4	18.0 V	703 – Catalina Sky Survey	MPS 772291
2017 03 02.35182	10 18 46.89	+06 01 30.3	18.1 V	703 – Catalina Sky Survey	MPS 772291
2017 03 02.35298	10 18 49.34	+06 01 21.2	18.7 V	703 – Catalina Sky Survey	MPS 772291
2017 03 02.353565	10 18 40.06	+05 59 36.2	18.0 G	H01 – Magdalena Ridge Observatory, Socorro	MPS 772291
2017 03 02.35427	10 18 52.11	+06 01 10.3	18.9 V	703 – Catalina Sky Survey	MPS 772291
2017 03 02.363210	10 19 02.09	+05 58 04.9	18.1 G	H01 – Magdalena Ridge Observatory, Socorro	MPS 772291
2017 03 02.372870	10 19 26.54	+05 56 24.1	17.7 G	H01 – Magdalena Ridge Observatory, Socorro	MPS 772291
2017 03 02.39061	10 20 28.89	+05 54 52.2	18.1 V	703 – Catalina Sky Survey	MPS 772291
2017 03 02.39139	10 20 31.42	+05 54 42.0	17.7 V	703 – Catalina Sky Survey	MPS 772291
2017 03 02.39228	10 20 34.35	+05 54 30.9	17.4 V	703 – Catalina Sky Survey	MPS 772291
2017 03 02.39783	10 20 53.62	+05 53 15.5	17.5 V	G96 – Mt. Lemmon Survey	MPS 772291
2017 03 02.39806	10 20 54.45	+05 53 12.4	17.7 V	G96 – Mt. Lemmon Survey	MPS 772291
2017 03 02.39829	10 20 55.26	+05 53 09.3	17.8 V	G96 – Mt. Lemmon Survey	MPS 772291
2017 03 02.39829	10 20 58.19	+05 53 45.5		691 – Steward Observatory, Kitt Peak-Spacewatch	MPS 772291
2017 03 02.39852	10 20 56.08	+05 53 06.1	18.0 V	G96 – Mt. Lemmon Survey	MPS 772291
2017 03 02.39950	10 21 02.45	+05 53 28.3		691 – Steward Observatory, Kitt Peak-Spacewatch	MPS 772291
2017 03 02.40072	10 21 06.89	+05 53 11.8		691 – Steward Observatory, Kitt Peak-Spacewatch	MPS 772291
2017 03 02.42951	10 29 27.52	+07 38 39.5	16.6 R	474 – Mount John Observatory, Lake Tekapo	MPS 772291
2017 03 02.42975	10 29 29.43	+07 38 46.2	16.4 R	474 – Mount John Observatory, Lake Tekapo	MPS 772291
2017 03 02.43001	10 29 31.37	+07 38 52.9	16.6 R	474 – Mount John Observatory, Lake Tekapo	MPS 772291
2017 03 02.43038	10 29 34.23	+07 39 03.0	17.1 R	474 – Mount John Observatory, Lake Tekapo	MPS 772291
2017 03 02.43085	10 23 22.56	+05 44 43.8		691 – Steward Observatory, Kitt Peak-Spacewatch	MPS 772291
2017 03 02.43120	10 29 40.67	+07 39 26.0	17.1 R	474 – Mount John Observatory, Lake Tekapo	MPS 772291
2017 03 02.43197	10 29 46.81	+07 39 47.9	17.5 R	474 – Mount John Observatory, Lake Tekapo	MPS 772291
2017 03 02.43207	10 23 29.39	+05 44 18.3		691 – Steward Observatory, Kitt Peak-Spacewatch	MPS 772291
2017 03 02.43314	10 29 56.16	+07 40 20.5	16.6 R	474 – Mount John Observatory, Lake Tekapo	MPS 772291
2017 03 02.43328	10 23 36.36	+05 43 50.8		691 – Steward Observatory, Kitt Peak-Spacewatch	MPS 772291
2017 03 02.43392	10 30 02.45	+07 40 42.5	16.6 R	474 – Mount John Observatory, Lake Tekapo	MPS 772291
2017 03 02.43845	10 24 04.16	+05 41 14.2	16.8 V	G96 – Mt. Lemmon Survey	MPS 772291
2017 03 02.43886	10 24 06.65	+05 41 05.0	16.9 V	G96 – Mt. Lemmon Survey	MPS 772291
2017 03 02.43926	10 24 09.15	+05 40 55.6	17.2 V	G96 – Mt. Lemmon Survey	MPS 772291
2017 03 02.43967	10 24 11.66	+05 40 46.4	17.4 V	G96 – Mt. Lemmon Survey	MPS 772291
2017 03 02.445489	10 24 42.44	+05 35 33.7	17.2 G	H01 – Magdalena Ridge Observatory, Socorro	MPS 772291
2017 03 02.44615	10 25 28.33	+05 25 53.0	17.0	718 – Tooele	MPS 772291
2017 03 02.44642	10 25 30.30	+05 25 45.2	16.6	718 – Tooele	MPS 772291
2017 03 02.44670	10 25 32.34	+05 25 37.5	16.7	718 – Tooele	MPS 772291
2017 03 02.44697	10 25 34.38	+05 25 28.6	16.7	718 – Tooele	MPS 772291
2017 03 02.44724	10 25 36.33	+05 25 20.0	16.6	718 – Tooele	MPS 772291
2017 03 02.44752	10 25 38.32	+05 25 11.3	16.6	718 – Tooele	MPS 772291
2017 03 02.44779	10 25 40.38	+05 25 03.2	16.6	718 – Tooele	MPS 772291
2017 03 02.451822	10 25 28.63	+05 32 37.2	16.1 G	H01 – Magdalena Ridge Observatory, Socorro	MPS 772291
2017 03 02.454695	10 25 51.15	+05 31 11.4	16.8 G	H01 – Magdalena Ridge Observatory, Socorro	MPS 772291
2017 03 02.457072	10 33 43.25	+07 53 36.4	16.1 R	474 – Mount John Observatory, Lake Tekapo	MPS 772291
2017 03 02.45776	10 26 22.62	+05 32 44.6	16.8 V	703 – Catalina Sky Survey	MPS 772291
2017 03 02.457882	10 33 52.34	+07 54 08.2	16.4 R	474 – Mount John Observatory, Lake Tekapo	MPS 772291
2017 03 02.45856	10 26 29.35	+05 32 20.3	17.1 V	703 – Catalina Sky Survey	MPS 772291
2017 03 02.458692	10 34 01.60	+07 54 40.7	16.5 R	474 – Mount John Observatory, Lake Tekapo	MPS 772291
2017 03 02.459045	10 26 27.42	+05 28 53.8	16.8 G	H01 – Magdalena Ridge Observatory, Socorro	MPS 772291
2017 03 02.45935	10 26 36.04	+05 31 55.7	17.2 V	703 – Catalina Sky Survey	MPS 772291
2017 03 02.459387	10 34 09.59	+07 55 08.6	16.6 R	474 – Mount John Observatory, Lake Tekapo	MPS 772291
2017 03 02.460081	10 34 17.76	+07 55 36.7	15.7 R	474 – Mount John Observatory, Lake Tekapo	MPS 772291
2017 03 02.46118	10 26 52.08	+05 30 57.0	16.3 V	703 – Catalina Sky Survey	MPS 772291
2017 03 02.46182	10 26 57.76	+05 30 36.4	16.3 V	703 – Catalina Sky Survey	MPS 772291
2017 03 02.46247	10 27 03.61	+05 30 15.4	17.0 V	703 – Catalina Sky Survey	MPS 772291
2017 03 02.46298	10 27 08.25	+05 29 58.2	17.1 V	703 – Catalina Sky Survey	MPS 772291
2017 03 02.463889	10 27 11.04	+05 26 09.0	16.8 G	H01 – Magdalena Ridge Observatory, Socorro	MPS 772291
2017 03 02.492361	10 42 45.79	+08 24 35.0	15.4 R	474 – Mount John Observatory, Lake Tekapo	MPS 772291
2017 03 02.492708	10 42 53.13	+08 25 01.4	15.4 R	474 – Mount John Observatory, Lake Tekapo	MPS 772291
2017 03 02.493056	10 43 00.55	+08 25 26.5	15.0 R	474 – Mount John Observatory, Lake Tekapo	MPS 772291
2017 03 02.493403	10 43 08.03	+08 25 50.9	15.2 R	474 – Mount John Observatory, Lake Tekapo	MPS 772291
2017 03 02.493750	10 43 15.54	+08 26 16.0	15.1 R	474 – Mount John Observatory, Lake Tekapo	MPS 772291