

2016 SA2

First observed at Catalina Sky Survey on 2016-09-26.

(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)	1.1763708	uncertainty	4
epoch JD	2458600.5	mean anomaly (°)	40.22944	reference	MPO 397880
perihelion date	2019-03-05.92173	mean daily motion (°/day)	0.77248040	observations used	54
perihelion JD	2458548.42173	aphelion distance (AU)	1.394	oppositions	1
argument of perihelion (°)	134.53711	period (years)	1.28	arc length (days)	10
ascending node (°)	183.05572	P-vector [x]	0.73823968	first opposition used	2016
inclination (°)	4.76342	P-vector [y]	-0.64003469	last opposition used	2016
eccentricity	0.1847567	P-vector [z]	-0.21297361	residual rms (arc-secs)	0.42
perihelion distance (AU)	0.9590284	Q-vector [x]	0.67452396	perturbers coarse indicator	M-v
Tisserand w.r.t. Jupiter	5.4	Q-vector [y]	0.69839037	perturbers precise indicator	003Eh
ΔV w.r.t. Earth (km/sec)	4.5	Q-vector [z]	0.23930799	first observation date used	2016-09-26.0
		absolute magnitude	28.2	last observation date used	2016-10-06.0
		phase slope	0.15	computer name	MPCADO

JD of orbit computation	2457749.943095	Minimum Orbit Intersection Distances (in AU)			
perihelion JD uncertainty (days)	5.6912E-05	for orbit epoch: 2458200.5, reference: MPO397880			
argument of perihelion uncertainty (°)	8.1557E-05	Mercury	0.539472		
ascending node uncertainty (°)	4.4265E-06	Venus	0.248425		
inclination uncertainty (°)	1.0344E-04	Earth	0.0014036		
eccentricity uncertainty	4.9063E-06	Mars	0.29734		
perihelion distance uncertainty (AU)	1.1463E-06	Jupiter	3.81714		
		Saturn	7.74464		
		Uranus	16.8406		
		Neptune	28.625		

Observations

63 total observations over interval: 2016 09 26.27345 – 2016 10 06.22610

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

Date (UT)	J2000 RA	J2000 Dec	Magn	Location	Ref
2016 09 26.27345	00 04 19.60	-05 25 57.9		703 – Catalina Sky Survey	MPS 730807
2016 09 26.28546	00 05 23.50	-05 34 08.1		703 – Catalina Sky Survey	MPS 730807
2016 09 26.36825	00 12 16.79	-06 26 00.6	17.3 V	703 – Catalina Sky Survey	MPS 730807
2016 09 26.36846	00 12 17.87	-06 26 08.5	16.3 V	703 – Catalina Sky Survey	MPS 730807
2016 09 26.36889	00 12 19.84	-06 26 22.8	16.5 V	703 – Catalina Sky Survey	MPS 730807
2016 09 26.39469	00 16 01.405	-06 35 13.04	17.0 w	F51 – Pan-STARRS 1, Haleakala	MPS 730807
2016 09 26.40553	00 16 48.927	-06 41 27.68	17.0 w	F51 – Pan-STARRS 1, Haleakala	MPS 730807
2016 09 26.41633	00 17 35.369	-06 47 33.17	17.1 w	F51 – Pan-STARRS 1, Haleakala	MPS 730807
2016 09 26.42709	00 18 21.107	-06 53 32.00	17.0 w	F51 – Pan-STARRS 1, Haleakala	MPS 730807
2016 09 26.52980	00 27 05.45	-07 15 56.3	16.9 R	Q62 – iTelescope Observatory, Siding Spring	MPS 730807
2016 09 26.53004	00 27 06.37	-07 16 03.8	16.9 R	Q62 – iTelescope Observatory, Siding Spring	MPS 730807
2016 09 26.53029	00 27 07.28	-07 16 11.1	17.0 R	Q62 – iTelescope Observatory, Siding Spring	MPS 730807
2016 09 26.54208	00 27 46.27	-07 20 50.5	17.6 V	E23 – Arcadia	MPS 730807
2016 09 26.55451	00 28 31.74	-07 26 54.9	17.0 V	E23 – Arcadia	MPS 730807
2016 09 26.55953	00 28 54.42	-07 30 34.7	16.3 R	Q62 – iTelescope Observatory, Siding Spring	MPS 730807
2016 09 26.56146	00 28 56.79	-07 30 15.0	17.2 V	E23 – Arcadia	MPS 730807
2016 09 26.56166	00 29 01.95	-07 31 35.0	16.4 R	Q62 – iTelescope Observatory, Siding Spring	MPS 730807
2016 09 26.56378	00 29 09.52	-07 32 35.2	16.3 R	Q62 – iTelescope Observatory, Siding Spring	MPS 730807
2016 09 26.58125	00 30 11.07	-07 40 50.1	16.2 R	Q62 – iTelescope Observatory, Siding Spring	MPS 730807
2016 09 26.58297	00 30 16.96	-07 41 35.2	16.1 R	Q62 – iTelescope Observatory, Siding Spring	MPS 730807
2016 09 26.58553	00 30 25.90	-07 42 47.9	16.4 R	Q62 – iTelescope Observatory, Siding Spring	MPS 730807
2016 09 26.893866	00 49 24.585	-10 10 04.55	17.5 G	Z58 – ESA Cebreros TBT Observatory, Cebreros	MPS 730807
2016 09 26.921062	00 50 32.851	-10 18 26.76	17.5 G	Z58 – ESA Cebreros TBT Observatory, Cebreros	MPS 730807
2016 09 26.93609	00 50 47.64	-10 24 24.7	17.5 R	104 – San Marcello Pistoiese	MPS 730807
2016 09 26.94067	00 50 58.39	-10 25 43.8	17.4 R	104 – San Marcello Pistoiese	MPS 730807
2016 09 26.94181	00 51 01.05	-10 26 03.4	17.3 R	104 – San Marcello Pistoiese	MPS 730807
2016 09 26.94523	00 51 09.02	-10 27 02.1	17.1 R	104 – San Marcello Pistoiese	MPS 730807
2016 09 27.439359	01 09 22.856	-12 07 46.59	18.2 R	568 – Mauna Kea	MPS 730808
2016 09 27.439785	01 09 23.396	-12 07 51.00	18.2 R	568 – Mauna Kea	MPS 730808
2016 09 27.55028	01 12 49.38	-12 08 06.1	17.5 R	Q62 – iTelescope Observatory, Siding Spring	MPS 730808
2016 09 27.55668	01 12 57.11	-12 09 11.5	17.5 R	Q62 – iTelescope Observatory, Siding Spring	MPS 730808
2016 09 27.56086	01 13 02.09	-12 09 54.9	17.5 R	Q62 – iTelescope Observatory, Siding Spring	MPS 730808
2016 09 27.56308	01 13 04.73	-12 10 17.2	17.5 R	Q62 – iTelescope Observatory, Siding Spring	MPS 730808
2016 09 27.56530	01 13 07.39	-12 10 39.8	17.5 R	Q62 – iTelescope Observatory, Siding Spring	MPS 730808
2016 09 27.99060	01 22 36.02	-13 28 03.3	18.4 R	204 – Schiaparelli Observatory	MPS 732528
2016 09 27.99968	01 22 43.85	-13 29 01.9		204 – Schiaparelli Observatory	MPS 732528
2016 09 28.00791	01 22 50.93	-13 29 54.2		204 – Schiaparelli Observatory	MPS 732528
2016 09 28.278978	01 27 55.71	-13 53 12.2	18.5 R	705 – Apache Point	MPS 730808
2016 09 28.279993	01 27 56.65	-13 53 20.1	18.5 R	705 – Apache Point	MPS 730808
2016 09 28.281006	01 27 57.31	-13 53 25.6	18.6 R	705 – Apache Point	MPS 730808
2016 09 28.437162	01 30 17.030	-14 03 44.24	19.1 R	568 – Mauna Kea	MPS 730808
2016 09 28.437632	01 30 17.278	-14 03 46.68	18.6 R	568 – Mauna Kea	MPS 730808
2016 09 29.558965	01 42 01.936	-15 07 30.93	19.9 R	568 – Mauna Kea	MPS 730808
2016 09 29.559389	01 42 02.041	-15 07 31.63	20.0 R	568 – Mauna Kea	MPS 730808
2016 09 29.559818	01 42 02.156	-15 07 32.52	19.6 R	568 – Mauna Kea	MPS 730808
2016 09 30.36355	01 47 54.56	-15 36 49.3	20.4 V	691 – Steward Observatory, Kitt Peak-Spacewatch	MPS 730808
2016 09 30.37051	01 47 55.55	-15 37 01.0	20.3 V	691 – Steward Observatory, Kitt Peak-Spacewatch	MPS 730808
2016 09 30.37752	01 47 56.57	-15 37 12.1	20.3 V	691 – Steward Observatory, Kitt Peak-Spacewatch	MPS 730808
2016 09 30.51934	01 48 57.61	-15 29 54.7	19.9 R	474 – Mount John Observatory, Lake Tekapo	MPS 730808
2016 09 30.52286	01 48 58.19	-15 30 01.7	20.0 R	474 – Mount John Observatory, Lake Tekapo	MPS 730808
2016 09 30.52637	01 48 58.75	-15 30 08.2	20.1 R	474 – Mount John Observatory, Lake Tekapo	MPS 730808
2016 10 01.40241	01 52 47.88	-16 00 16.7	20.8 R	291 – LPL/Spacewatch II	MPS 732528
2016 10 01.40674	01 52 48.18	-16 00 20.4	20.7 R	291 – LPL/Spacewatch II	MPS 732528
2016 10 01.41106	01 52 48.51	-16 00 24.7	20.4 R	291 – LPL/Spacewatch II	MPS 732528
2016 10 03.400478	01 59 00.389	-16 24 52.33	21.1 G	T12 – Mauna Kea-UH/Tholen NEO Follow-Up (2.24-m)	MPS 753859
2016 10 03.402203	01 59 00.388	-16 24 53.67	21.2 G	T12 – Mauna Kea-UH/Tholen NEO Follow-Up (2.24-m)	MPS 753859
2016 10 03.62965	01 59 12.45	-16 20 55.5	20.4 R	474 – Mount John Observatory, Lake Tekapo	MPS 732528
2016 10 03.63316	01 59 12.50	-16 20 56.8	21.0 R	474 – Mount John Observatory, Lake Tekapo	MPS 732528
2016 10 03.63668	01 59 12.59	-16 20 58.1	20.9 R	474 – Mount John Observatory, Lake Tekapo	MPS 732528
2016 10 03.64020	01 59 12.69	-16 20 59.4	20.9 R	474 – Mount John Observatory, Lake Tekapo	MPS 732528
2016 10 06.20782	02 03 13.98	-16 36 30.5	21.6 V	807 – Cerro Tololo Observatory, La Serena	MPS 732528
2016 10 06.21707	02 03 13.67	-16 36 32.8	21.5 V	807 – Cerro Tololo Observatory, La Serena	MPS 732528
2016 10 06.22610	02 03 13.37	-16 36 34.7	21.7 V	807 – Cerro Tololo Observatory, La Serena	MPS 732528

