



Target Asteroids! List of Near-Earth Asteroids and Asteroids Analogous to (101955) Bennu



Object	MPC Ephemerides Designation	Name	Link to MPC	Orbit/family	PHA	Spectral class	Link to JPL Small Bodies website	Link to Near-Earth Objects-Dynamic Site	Comments	Date added to List	Data submitted by Target Asteroids! Observers
(3200) Phaethon	3200	Phaethon	MPC	Apollo			JPL NEO	NEODys-2		Oct. 2013	X
(3361) Orpheus	3361	Orpheus	MPC	Apollo	PHA	V	JPL NEO	NEODys-2		Feb. 2012	X
(7350) 1993 VA	7350		MPC	Apollo		carbonaceous?	JPL NEO	NEODys-2		Feb. 2012	X
(7753) 1988 XB	7753		MPC	Apollo	PHA		JPL NEO	NEODys-2		Apr. 2013	
(7888) 1993 UC	7888		MPC	Apollo			JPL NEO	NEODys-2		Jan. 2013	X
(10302) 1989 ML	10302		MPC	Aten	PHA	E	JPL NEO	NEODys-2		Feb. 2012	X
(25143) Itokawa	25143	Itokawa	MPC	Apollo	PHA	Sq	JPL NEO	NEODys-2	Hayabusa target	Feb. 2012	
(52381) 1993 HA	52381		MPC	Amor			JPL NEO	NEODys-2		Feb. 2012	
(52760) 1998 ML14	52760		MPC	Apollo	PHA		JPL NEO	NEODys-2		Oct. 2013	X
(65717) 1993 BX3	65717		MPC	Apollo	PHA		JPL NEO	NEODys-2		Feb. 2012	
(68278) 2001 FC7	68278		MPC	Amor		B/Ch	JPL NEO	NEODys-2		Feb. 2012	X
(89136) 2001 US16	89136		MPC	Apollo	PHA		JPL NEO	NEODys-2		Feb. 2012	
(98943) 2001 CC21	98943		MPC	Apollo		L	JPL NEO	NEODys-2		Feb. 2012	
(99799) 2002 LJ3	99799		MPC	Amor			JPL NEO	NEODys-2		Feb. 2012	X
(101955) Bennu	101955	Bennu	MPC	Apollo	PHA	B	JPL NEO	NEODys-2	OSIRIS-REx target	Feb. 2012	X
(10302) 1989 ML	10302		MPC	Amor			JPL NEO	NEODys-2		Feb. 2012	
(136635) 1994 VA1	136635		MPC	Amor			JPL NEO	NEODys-2		Feb. 2012	
(137126) 1999 CF9	137126		MPC	Apollo	PHA	Q	JPL NEO	NEODys-2		Apr. 2013	X
(137799) 1999 YB	137799		MPC	Amor		Sq	JPL NEO	NEODys-2		Feb. 2012	
(138911) 2001 AE2	138911		MPC	Amor		T	JPL NEO	NEODys-2		Feb. 2012	
(141018) 2001 WC47	141018		MPC	Amor		S	JPL NEO	NEODys-2		Feb. 2012	X
(141424) 2002 CD	141424		MPC	Aten		B/Cb	JPL NEO	NEODys-2		Feb. 2012	
(154275) 2002 SR41	154275		MPC	Apollo	PHA		JPL NEO	NEODys-2	radar target	Mar. 2014	
(162173) 1999 JU3	162173		MPC	Apollo	PHA	Cg	JPL NEO	NEODys-2	Hayabusa 2 target	Feb. 2012	X
(162783) 2000 YJ11	162783		MPC	Apollo	PHA		JPL NEO	NEODys-2		Feb. 2012	
(163000) 2001 SW169	163000		MPC	Amor		S	JPL NEO	NEODys-2		Feb. 2012	X
(163249) 2002 GT	163249		MPC	Apollo	PHA		JPL NEO	NEODys-2	Deep Impact/ EPOXI Flyby target	Feb. 2012	X
(163364) 2002 OD20	163364		MPC	Apollo	PHA		JPL NEO	NEODys-2		Feb. 2012	X
(164221) 2004 QE20	164221		MPC	Amor			JPL NEO	NEODys-2		Feb. 2012	
(173664) 2001 JU2	173664		MPC	Amor			JPL NEO	NEODys-2		Feb. 2012	
(187040) 2005 JS108	187040		MPC	Apollo	PHA		JPL NEO	NEODys-2		Feb. 2012	
(190491) 2000 FJ10	190491		MPC	Apollo		S	JPL NEO	NEODys-2		Feb. 2012	
(216985) 2000 QK130	216985		MPC	Apollo	PHA		JPL NEO	NEODys-2		Feb. 2012	
(221787) 2007 VZ30	221787		MPC	Amor			JPL NEO	NEODys-2		Feb. 2012	
(228502) 2001 TE2	228502		MPC	Amor			JPL NEO	NEODys-2		Feb. 2012	
(242643) 2005 NZ6	242643		MPC	Apollo	PHA		JPL NEO	NEODys-2		Apr. 2013	
(243566) 1995 SA	243566		MPC	Apollo	PHA		JPL NEO	NEODys-2		Mar. 2014	X
(251346) 2007 SJ	251346		MPC	Apollo	PHA		JPL NEO	NEODys-2		Oct. 2013	X
(253062) 2002 TC70	253062		MPC	Amor			JPL NEO	NEODys-2		Feb. 2012	
(261938) 2006 OB5	261938		MPC	Amor			JPL NEO	NEODys-2		Feb. 2012	
(264308) 1999 NA5	264308		MPC	Amor			JPL NEO	NEODys-2		Feb. 2012	
(264993) 2003 DX10	264993		MPC	Apollo	PHA		JPL NEO	NEODys-2		Feb. 2012	
(275677) 2000 RS11	275677		MPC	Apollo	PHA		JPL NEO	NEODys-2		Mar. 2014	X
(277475) 2005 WK4	277475		MPC	Apollo	PHA		JPL NEO	NEODys-2		Apr. 2013	X
(277570) 2005 YP180	277570		MPC	Apollo	PHA		JPL NEO	NEODys-2		Jan. 2014	X
(285263) 1998 QE2	285263		MPC	Amor	PHA	carbonaceous	JPL NEO	NEODys-2	Flyby target 2013	Apr. 2013	X
(292220) 2006 SU49	292220		MPC	Apollo	PHA		JPL NEO	NEODys-2		Feb. 2012	
(303450) 2005 BY2	303450		MPC	Apollo	PHA		JPL NEO	NEODys-2		Feb. 2012	
(307564) 2003 FQ6	307564		MPC	Amor			JPL NEO	NEODys-2		Feb. 2012	
(311925) 2007 BF72	311925		MPC	Amor			JPL NEO	NEODys-2		Feb. 2012	
(341050) 2007 HZ	341050		MPC	Amor			JPL NEO	NEODys-2		Feb. 2012	
(341843) 2008 EV5	341843		MPC	Apollo	PHA	C	JPL NEO	NEODys-2		Feb. 2012	
(344756) 2003 VO2	344756		MPC	Amor			JPL NEO	NEODys-2		Feb. 2012	
(350713) 2001 XP88	350713		MPC	Amor			JPL NEO	NEODys-2		Feb. 2012	
(360191) 1988 TA	360191		MPC	Apollo			JPL NEO	NEODys-2	radar target 2013	Apr. 2013	
(363305) 2002 NV16	363305		MPC	Apollo	PHA		JPL NEO	NEODys-2		Feb. 2012	X



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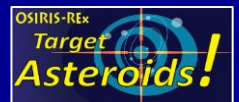
Object	MPC Ephemerides Designation	Name	Link to MPC	Orbit/family	PHA	Spectral class	Link to JPL Small Bodies website	Link to Near-Earth Objects-Dynamic Site	Comments	Date added to List	Data submitted by Target Asteroids! Observers
(371660) 2007 CN26	371660		MPC	Amor	PHA		JPL NEO	NEODys-2		Feb. 2012	X
(380128) 1997 WB21	380128		MPC	Apollo			JPL NEO	NEODys-2		Feb. 2012	
(381906) 2010 CL19	381906		MPC	Apollo	PHA		JPL NEO	NEODys-2		Nov. 2013	X
(382745) 2003 CC	382745		MPC	Apollo	PHA		JPL NEO	NEODys-2		Feb. 2012	
(382758) 2003 GY	382758		MPC	Apollo	PHA		JPL NEO	NEODys-2		Mar. 2014	
(387733) 2003 GS	387733		MPC	Aten			JPL NEO	NEODys-2		Feb. 2012	X
1994 CJ1	1994 CJ1		MPC	Amor	PHA		JPL NEO	NEODys-2		Feb. 2012	
1994 UG	1994 UG		MPC	Apollo	PHA		JPL NEO	NEODys-2		Feb. 2012	
1996 FO3	1996 FO3		MPC	Amor	PHA		JPL NEO	NEODys-2		Feb. 2012	
1997 XR2	1997 XR2		MPC	Apollo	PHA		JPL NEO	NEODys-2		Feb. 2012	
2001 QC34	2001 QC34		MPC	Apollo	PHA	Q	JPL NEO	NEODys-2		Apr. 2013	X
2001 SG286	2001 SG286		MPC	Apollo	PHA	D	JPL NEO	NEODys-2		Feb. 2012	
2001 VB76	2001 VB76		MPC	Apollo	PHA		JPL NEO	NEODys-2		Feb. 2012	
2002 TD60	2002 TD60		MPC	Amor		S	JPL NEO	NEODys-2		Feb. 2012	
2003 GA	2003 GA		MPC	Amor		Ld/Sw	JPL NEO	NEODys-2		Feb. 2012	
2004 BE86	2004 BE86		MPC	Amor			JPL NEO	NEODys-2		Feb. 2012	
2004 PJ2	2004 PJ2		MPC	Apollo	PHA		JPL NEO	NEODys-2		Feb. 2012	
2005 QA5	2005 QA5		MPC	Amor			JPL NEO	NEODys-2		Feb. 2012	
2005 VA2	2005 VA2		MPC	Apollo			JPL NEO	NEODys-2		Feb. 2012	
2006 KV89	2006 KV89		MPC	Apollo	PHA		JPL NEO	NEODys-2		Feb. 2012	
2006 YF	2006 YF		MPC	Apollo			JPL NEO	NEODys-2		Feb. 2012	
2007 TK8	2007 TK8		MPC	Apollo	PHA		JPL NEO	NEODys-2		Feb. 2012	
2008 AU26	2008 AU26		MPC	Amor			JPL NEO	NEODys-2		Feb. 2012	
2008 DG5	2008 DG5		MPC	Apollo	PHA		JPL NEO	NEODys-2		Feb. 2012	
2008 SO	2008 SO		MPC	Amor			JPL NEO	NEODys-2		Feb. 2012	
2008 WN2	2008 WN2		MPC	Apollo	PHA		JPL NEO	NEODys-2		Feb. 2012	
2008 YS27	2008 YS27		MPC	Apollo	PHA		JPL NEO	NEODys-2		Feb. 2012	
2009 DN1	2009 DN1		MPC	Amor			JPL NEO	NEODys-2		Feb. 2012	
2009 JR5	2009 JR5		MPC	Apollo	PHA		JPL NEO	NEODys-2		Feb. 2012	
2009 KQ4	2009 KQ4		MPC	Amor			JPL NEO	NEODys-2		Feb. 2012	
2009 SQ104	2009 SQ104		MPC	Apollo	PHA		JPL NEO	NEODys-2		Feb. 2012	
2010 AF30	2010 AF30		MPC	Apollo	PHA		JPL NEO	NEODys-2		Feb. 2012	X
2010 TH19	2010 TH19		MPC	Apollo	PHA		JPL NEO	NEODys-2		Feb. 2012	
2010 WY8	2010 WY8		MPC	Amor			JPL NEO	NEODys-2		Feb. 2012	
2012 TF53	2012 TF53		MPC	Apollo	PHA		JPL NEO	NEODys-2		Jan. 2013	X
2012 WK4	2012 WK4		MPC	Apollo			JPL NEO	NEODys-2		Jan. 2013	
2012 QG42	2012 QG42		MPC	Apollo	PHA		JPL NEO	NEODys-2		Feb. 2012	X
2012 XD112	2012 XD112		MPC	Apollo	PHA		JPL NEO	NEODys-2		Jan. 2013	X
2013 NJ	2013 NJ		MPC	Apollo	PHA		JPL NEO	NEODys-2		Dec. 2013	X
2012 XM55	2012 XM55		MPC	Apollo			JPL NEO	NEODys-2		Dec. 2013	X
2012 XS93	2012 XS93		MPC	Apollo			JPL NEO	NEODys-2		Dec. 2013	X
2013 XY8	2013 XY8		MPC	Apollo			JPL NEO	NEODys-2	Flyby opportunity 2013	Dec. 2013	
2013 XY20	2013 XY20		MPC	Apollo			JPL NEO	NEODys-2	NHATS possible asteroid of interest for human exploration	Dec. 2013	

Asteroids Analogous to the OSIRIS-REx Target (101955) Bennu

(1) Ceres	1	Ceres	MPC	Main Belt			JPL NEO	n/a		Jan. 2013	X
(24) Themis	24	Themis	MPC	Main Belt			JPL NEO	n/a		Jan. 2013	X
(94) Aurora	94	Aurora	MPC	Main Belt			JPL NEO	n/a		Nov. 2013	X
(142) Polana	142	Polana	MPC	Main Belt			JPL NEO	n/a	possible (101955) Bennu parent	Nov. 2013	X
(163) Erigone	163	Erigone	MPC	Main Belt			JPL NEO	n/a	possible (101955) Bennu parent	Nov. 2013	X



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(223) Rosa	223	Rosa	MPC	Main Belt			JPL NEO	n/a		Apr. 2013	
(268) Adorea	268	Adorea	MPC	Main Belt		C, F or X	JPL NEO	n/a		Apr. 2013	X
(447) Valentine	447	Valentine	MPC	Main Belt			JPL NEO	n/a		Nov. 2013	X
(495) Eulalia	495	Eulalia	MPC	Main Belt			JPL NEO	n/a	possible (101955) Bennu parent	Nov. 2013	X
(535) Montague	535	Montague	MPC	Main Belt			JPL NEO			Oct. 2013	X
(578) Hapelia	578	Hapelia	MPC	Main Belt			JPL NEO	n/a		Apr. 2013	
(972) Cohnia	972	Cohnia	MPC	Main Belt			JPL NEO	n/a		Jan. 2013	X
(1197) Rhodasia	1197	Rhodasia	MPC	Main Belt			JPL NEO	n/a		Jan. 2013	X
(1241) Dysona	1241	Dysona	MPC	Main Belt		P, D or C	JPL NEO	n/a		Apr. 2013	X
(1439) Vogtia	1439	Vogtia	MPC	Main Belt			JPL NEO	n/a		Apr. 2013	X
(4179) Toutatis	4179	Toutatis	MPC	Apollo	PHA		JPL NEO	NEODys-2		Jan. 2013	X
(7888) 1993 UC	7888		MPC	Apollo			JPL NEO	NEODys-2		Jan. 2013	X
(69346) 1993 TV32	69346		MPC	Main Belt			JPL NEO	n/a		Oct. 2013	X
(136793) 1997 AQ18	136793		MPC	Apollo			JPL NEO	NEODys-2		Jan. 2013	
(367943) Duende	367943	Duende	MPC	Apollo			JPL NEO	NEODys-2	(=2012 DA14) Flyby target 2013	Jan. 2013	X
2012 XS93	2012 XS93		MPC	Apollo			JPL NEO	NEODys-2		Jan. 2013	X

v7: 06/12/2014

Family definitions: Main Belt 2.06-3.27 AU; Apollo semi-major axis > 1.0 AU perihelion distance <1.017 AU; Aten semi-major axis > 1.0 AU aphelion distance > 0.983 AU; Amor semi-major axis > 1.0 AU perihelion distance >1.017 AU and < 1.3 AU. PHA = Potentially Hazardous Asteroid. MOID = minimum Earth orbit Intersection distance = 0.05 AU and brighter than H=22.

MPC: International Astronomical Union's Minor Planet Center <http://www.minorplanetcenter.net/>

JPL NEO: NASA Jet Propulsion Laboratory's Near-Earth Object Program <http://neo.jpl.nasa.gov/> <http://www.minorplanetcenter.net/iau/mpc.html>

NEODys-2: Near-Earth Objects - Dynamic Site (European Space Agency, U. of Pisa, SpaceDyS) data base <http://newton.dm.unipi.it/neodys/index.php?pc=0>