

Flyby Targets – take your pick:

2024 Launch: Mars Flyby

Asteroid #	Asteroid Name	Min. Distance [AU]	Encounter Date	Mag.
311081	2004 EX52	0.0014	09/07/2025	17.3
1200041	2013 EU106	0.0014	01/08/2025	17.9
1029798	2008 AG81	0.0026	07/06/2025	18.6
438491	2007 GG64	0.0030	09/04/2026	17.9
125107	2001 UH40	0.0036	11/03/2026	16.5
477416	2009 WW1	0.0036	02/09/2025	17.7
1013570	2005 TF49	0.0046	30/12/2026	19.1
250123	2002 PP43	0.0047	10/06/2025	17.3
36263	1999 XB147	0.0051	29/04/2026	14.7
245739	2006 DR115	0.0052	15/08/2025	17.4
263168	2007 VW313	0.0054	04/06/2025	17.8
333587	2007 BS16	0.0056	12/11/2025	17.4
220000	2002 PQ30	0.0062	18/04/2026	17.9
274163	2008 FK125	0.0071	11/09/2025	17.8
79317	1996 HL21	0.0077	29/11/2025	15.9
295826	2008 UG349	0.0079	05/08/2025	17
1221429	2015 BK242	0.0084	03/04/2026	19.5
190203	2005 YA158	0.0084	04/01/2026	16.6
1155860	2008 CR24	0.0095	27/03/2025	19.4
1143338	2005 UV378	0.0098	26/09/2025	18.4
436476	2011 EV7	0.0099	11/06/2026	18.4
105918	2000 SS208	0.0101	08/12/2025	16.8
430598	2002 SZ74	0.0102	25/05/2026	18.3
1228297	2015 UN17	0.0103	05/12/2025	18.2
412289	2013 JC24	0.0105	24/12/2025	17.1
169549	2002 EG105	0.0105	19/12/2025	16.6
362476	2002 PP43	0.0111	22/02/2026	17.5

2024 Launch: Direct Trajectory

Asteroid #	Asteroid Name	Min. Distance [AU]	Encounter Date	Mag.
275837	2001 RF139	0.0028	15/05/2026	17.6
199011	2005 WZ86	0.0037	04/05/2026	17
223108	2002 VK13	0.0037	22/02/2026	17.2
1183843	2011 BO5	0.0039	14/08/2025	19.3
110634	2001 TY165	0.0046	18/11/2025	14.9
1241118	2016 UO75	0.0047	12/01/2026	18
256748	2008 BX29	0.0048	24/03/2026	17.8
132261	2002 EJ118	0.0050	14/04/2026	16.4
25021	Nischaykumar	0.0051	30/09/2025	15.8
1060434	2011 VW15	0.0052	19/12/2025	18.9
319917	2006 XZ64	0.0056	25/12/2025	16.2
431690	2008 DZ35	0.0061	03/07/2025	17.6
470996	2009 SW137	0.0065	22/09/2025	17.2
1200041	2013 EU106	0.0066	07/07/2025	17.9
478688	2012 TF314	0.0072	04/12/2025	17.9
313264	2001 XK123	0.0075	08/01/2026	17.4
15847	1995 WA2	0.0075	26/12/2025	15.3
386060	2007 GD8	0.0077	27/10/2025	17.8
340142	2005 YM39	0.0083	30/06/2025	17.1
225487	2000 HV6	0.0084	09/04/2026	17
1024561	2007 GX42	0.0084	06/08/2025	18.3
156882	2003 EH3	0.0084	16/01/2026	17
365886	2011 UL381	0.0086	31/10/2025	17.9
1158068	2008 SA51	0.0086	03/11/2025	18.4
481098	2005 SE263	0.0091	21/05/2026	18.1
154189	2002 GE124	0.0092	01/10/2025	15.9
1214272	2014 QH145	0.0092	01/06/2026	19.9
245646	2005 YH110	0.0094	21/12/2025	17.6

Hera flyby target selection criteria

1: Binary asteroid

- Allows comparison of binaries.
- Identification of common and different characteristics.
- Potential insight into formation and evolution of binaries.

2: Non-S type asteroid

- Greater taxonomic diversity.
(S-types most abundant among spacecraft encounters to date).

3: Fresh surface

- Insight into space weathering.
- Q = unweathered S type. Relation unknown for other classes.
- Active, paired or clustered asteroids may have exposed unweathered surfaces.

Need candidates with known properties, or have opportunity to make observations to determine them before Hera flies.