

Catalog of “mean orbital elements” of asteroids close to exterior MMRs with Mars in the Hungaria group.

Quasi-resonant asteroids:

In this group we present the mean orbital elements of 267 quasi-resonant asteroids.

TABLA 5: 3:4 MMR

Object	\bar{a} (au)	\bar{e}	\bar{I} (°)	Object	\bar{a} (au)	\bar{e}	\bar{I} (°)
544760	1.84598	0.1039	20.437	2015 XD ₃₅₁	1.84577	0.1021	19.105
544576	1.84584	0.1296	19.506	2015 VY ₁₀₄	1.84578	0.1679	20.616
542505	1.84578	0.0609	22.287	2015 OW ₇₈	1.84579	0.0683	24.564
542421	1.84581	0.0868	19.227	2015 DT ₁₈₀	1.84579	0.0367	20.478
537566	1.84566	0.0979	21.780	2015 DK ₁₉₉	1.84622	0.0723	19.171
533013	1.84595	0.1215	21.402	2015 DJ ₂₅₉	1.84622	0.1240	23.212
515371	1.84552	0.0628	20.592	2015 BW ₂₀₆	1.84582	0.0588	21.622
513615	1.84578	0.1201	21.534	2015 BW ₁₀₀	1.84579	0.0686	22.755
513359	1.84557	0.0627	22.512	2015 BQ ₅₂₇	1.84578	0.0297	21.516
512270	1.84602	0.0758	22.249	2014 UL ₂₅₉	1.84578	0.0718	20.744
508657	1.84578	0.1382	20.089	2014 SE ₃₀₄	1.84611	0.1211	19.633
506861	1.84583	0.0900	20.721	2014 OD ₂₉₄	1.84577	0.0931	20.959
504353	1.84613	0.1243	20.963	2014 JS ₅₆	1.84575	0.0713	22.369
350956	1.84565	0.0440	21.740	2014 JR ₈₁	1.84578	0.1242	19.825
345990	1.84579	0.0973	22.139	2013 YX ₁₆₂	1.84599	0.0522	21.671
2016 PD ₈₁	1.84547	0.1145	25.079	2012 GH ₅	1.84578	0.0577	22.509
2018 NG ₂₃	1.84581	0.1341	19.128	2012 BQ ₁	1.84572	0.1097	21.704
2017 WQ ₁₁	1.84571	0.1472	20.138	2011 UM ₄₀₂	1.84599	0.1213	19.198
2017 FS ₆₃	1.84592	0.1553	20.691	2010 TM ₂₀₉	1.84578	0.0673	21.949
2017 EZ	1.84580	0.0501	20.581	2010 RZ ₃₀	1.84581	0.1435	37.421
2017 EA ₂	1.84573	0.0495	19.594	2009 FB ₈₇	1.84572	0.1254	20.939
2016 QG ₁₈	1.84561	0.0674	20.057	2008 GD ₁₀₈	1.84577	0.0849	22.974
2016 PN ₇₉	1.84578	0.0747	17.303	2006 QB ₂₄	1.84578	0.1895	21.585
2016 GH ₁₅₂	1.84605	0.0647	22.654	2005 VN ₁₁₇	1.84580	0.1179	20.658
2016 GG ₂₂₂	1.84578	0.0515	19.609	2005 GR ₁₆₅	1.84578	0.0981	21.466
2016 EU	1.84621	0.0811	19.227	2004 YE ₄₁	1.84587	0.0746	22.638
2016 CR ₂₆₆	1.84615	0.1285	21.797				

TABLA 6: 5:7 MMR

Object	\bar{a} (au)	\bar{e}	\bar{I} ($^{\circ}$)	Object	\bar{a} (au)	\bar{e}	\bar{I} ($^{\circ}$)
542941	1.90685	0.1199	21.897	2015 FC ₃₇₆	1.90681	0.0805	22.596
541602	1.90683	0.0490	22.495	2015 EX ₇₄	1.90680	0.1315	22.105
539853	1.90640	0.1080	21.012	2015 DO ₁₉₉	1.90681	0.0803	21.582
539795	1.90681	0.1207	21.590	2015 BY ₆₆	1.90680	0.1506	21.782
531259	1.90680	0.1031	22.949	2015 BP ₉₂	1.90680	0.1249	21.618
528684	1.90714	0.0739	21.085	2014 YY ₄₂	1.90680	0.0876	21.173
527295	1.90681	0.0335	21.720	2014 YW ₄₁	1.90682	0.0583	25.914
524924	1.90679	0.0701	22.652	2014 WM ₁₇₀	1.90679	0.0864	20.691
524007	1.90680	0.0904	21.427	2014 JL ₅₄	1.90678	0.1725	19.645
517642	1.90679	0.0996	20.789	2014 HY ₂₀₀	1.90679	0.1162	20.957
513871	1.90664	0.1025	22.846	2014 HP ₂₀₀	1.90668	0.0625	22.423
513835	1.90667	0.1830	22.590	2014 BO ₉	1.90675	0.0973	20.619
512369	1.90693	0.0598	21.411	2013 CV ₂₂₃	1.90681	0.0469	19.971
510309	1.90682	0.0331	21.774	2012 TX ₃₃₂	1.90732	0.0782	20.238
510283	1.90671	0.0852	20.522	2012 TH ₁₅	1.90685	0.1187	21.611
508835	1.90680	0.1068	21.981	2012 RY ₄₃	1.90681	0.0590	20.869
507503	1.90638	0.0894	20.001	2012 FO ₆₃	1.90682	0.0277	22.467
501579	1.90680	0.0601	19.508	2011 UB ₁₆₅	1.90692	0.0634	20.383
499840	1.90670	0.0690	21.223	2011 ST ₁₀₅	1.90683	0.0701	21.598
380336	1.90695	0.1753	21.573	2011 SF ₂₆	1.90680	0.1199	25.053
359615	1.90682	0.1251	21.284	2011 PM	1.90680	0.0817	21.259
358252	1.90681	0.0958	21.276	2011 EV ₁	1.90697	0.0632	22.020
352477	1.90681	0.0919	19.775	2011 BV ₁₁₇	1.90677	0.0846	20.626
2019 CM	1.90681	0.0748	20.439	2011 AJ ₅₃	1.90634	0.1187	21.576
2019 AS ₁₂	1.90681	0.1486	22.166	2010 XS ₁₂	1.90681	0.0704	21.545
2018 VF ₇	1.90680	0.0788	21.245	2010 XN ₅	1.90681	0.0499	21.929
2018 GC ₁	1.90681	0.0585	19.781	2010 LA	1.90683	0.0984	21.742
2017 BA ₁₅₁	1.90679	0.1069	21.838	2010 EP ₈₈	1.90681	0.0851	21.535
2017 AC ₂₇	1.90680	0.0658	18.494	2010 AJ ₁₅₉	1.90649	0.0666	22.430
2016 XB ₁₂	1.90687	0.0969	19.789	2008 WH ₆₁	1.90679	0.0897	21.637
2016 UY ₄	1.90655	0.0686	22.187	2007 VL ₁₉₆	1.90680	0.1052	22.079
2016 TG ₉₅	1.90680	0.0956	20.212	2007 TN ₄₆₃	1.90655	0.0619	21.206
2016 SV ₄₆	1.90679	0.1357	20.449	2007 ED ₆₁	1.90680	0.0823	22.237
2016 PX ₁	1.90665	0.0519	19.812	2007 DC ₅₁	1.90680	0.0921	21.053
2016 PG ₃₇	1.90680	0.0290	21.155	2006 BW ₁₄₇	1.90660	0.0592	20.936
2016 KN	1.90651	0.0799	21.463	2005 XQ ₁₂₉	1.90681	0.0684	20.570
2016 KD ₁	1.90693	0.1565	19.102	2004 KS ₁₇	1.90666	0.0894	21.251
2016 GB ₁₄₇	1.90680	0.0898	20.000	2004 EL ₁	1.90680	0.1534	22.516
2016 GA ₁₃₄	1.90694	0.0914	21.958	2003 FF ₁₃₄	1.90673	0.1275	21.457
2016 EE ₂₀₄	1.90666	0.1066	20.533	2003 BU ₉₈	1.90674	0.0784	20.357
2015 XN ₃₈₅	1.90635	0.0739	21.160	2003 AY ₂₂	1.90680	0.0998	22.626
2015 LY ₄₀	1.90687	0.1070	20.898	2001 XG ₂₃₂	1.90676	0.1108	21.373

TABLA 7: 7:10 MMR

Object	\bar{a} (au)	\bar{e}	\bar{I} ($^{\circ}$)	Object	\bar{a} (au)	\bar{e}	\bar{I} ($^{\circ}$)
539901	1.93263	0.0872	20.474	2015 FT ₄₁₈	1.93278	0.0587	22.176
537909	1.93264	0.0666	20.989	2015 DK ₁₅₃	1.93266	0.0913	22.696
537457	1.93267	0.0386	21.966	2015 CT ₆₂	1.93267	0.0771	21.836
531258	1.93266	0.0744	20.594	2015 BK ₅₂₀	1.93240	0.0781	21.649
529093	1.93308	0.0928	21.206	2014 WE ₃₇₀	1.93246	0.0690	21.082
517698	1.93267	0.1034	20.797	2014 DF ₁₁₁	1.93263	0.0781	20.869
517629	1.93272	0.1119	20.578	2014 BP ₁	1.93283	0.0597	21.366
514091	1.93265	0.1510	22.178	2013 RD ₁₀₈	1.93267	0.0865	20.692
504476	1.93295	0.0590	22.185	2013 GP ₁₂₄	1.93267	0.0911	22.279
501608	1.93281	0.0711	21.401	2012 XW ₁₄₀	1.93263	0.0870	21.212
496171	1.93267	0.0935	20.931	2012 UL ₂₂₂	1.93266	0.0750	21.222
430551	1.93262	0.2727	9.929	2012 SP ₈₈	1.93266	0.0663	20.716
257536	1.93271	0.1890	11.801	2012 ML	1.93265	0.1094	19.800
190541	1.93266	0.2187	25.059	2012 LA ₂₁	1.93267	0.0842	21.167
2019 BT ₈	1.93262	0.1758	6.005	2012 KN ₃₀	1.93318	0.0723	21.916
2019 AY ₅₄	1.93308	0.0754	21.193	2011 UF ₁₄₈	1.93261	0.0615	20.522
2019 AS ₅₅	1.93224	0.1020	21.226	2011 GM ₆₅	1.93266	0.0762	20.496
2018 VB ₈₆	1.93265	0.0751	20.986	2010 JA ₁₇₇	1.93263	0.1448	20.705
2017 UK ₅₁	1.93264	0.1569	18.356	2009 HR ₉₀	1.93229	0.0653	20.665
2017 RB ₁₁₂	1.93270	0.0534	21.197	2009 FR ₃₀	1.93261	0.3444	13.199
2017 KX ₂₀	1.93247	0.0698	20.762	2008 SR ₁₇₈	1.93230	0.0734	21.192
2016 UU ₂₇	1.93295	0.1051	20.096	2007 WN ₁₉	1.93243	0.0786	21.621
2016 LH	1.93225	0.0685	22.847	2007 UA ₁₂₄	1.93266	0.0765	20.898
2016 LF ₅₃	1.93256	0.0562	21.589	2007 JV ₄₃	1.93305	0.0382	21.256
2016 DE ₂	1.93265	0.0915	21.070	2006 VO ₈₃	1.93315	0.0628	19.649
2016 CY ₂₆₇	1.93266	0.0663	20.881	2005 UX ₄₉₇	1.93262	0.0788	21.185
2016 CM ₂₂₂	1.93281	0.0786	21.206	2005 UO ₃₀₀	1.93266	0.0887	22.455
2016 CJ ₁₆₄	1.93266	0.1046	21.271	2004 TX ₁₇₇	1.93266	0.0880	22.337
2015 VY ₁₅₂	1.93266	0.0624	21.079	2003 TA ₆₄	1.93265	0.1229	20.843
2015 KE ₁₈₉	1.93247	0.0730	22.192	2003 SS ₄₄₈	1.93233	0.0576	22.223
2015 HT ₁₈₃	1.93261	0.1088	20.932				

TABLA 8: 8:11 MMR

Object	\bar{a} (au)	\bar{e}	\bar{I} ($^{\circ}$)	Object	\bar{a} (au)	\bar{e}	\bar{I} ($^{\circ}$)
542958	1.88404	0.1275	21.076	2016 CZ ₂₅₀	1.88399	0.0781	20.586
537730	1.88404	0.0759	20.837	2016 CV ₁₃₆	1.88390	0.0959	21.692
533068	1.88403	0.0785	19.077	2016 AJ ₁₉₆	1.88456	0.0834	20.586
532917	1.88415	0.0897	21.338	2015 UZ ₆₀	1.88404	0.0818	20.497
532621	1.88404	0.1426	20.762	2015 SU ₂₁	1.88379	0.0696	21.382
531552	1.88402	0.0927	21.777	2015 MT ₁₅₁	1.88402	0.1570	21.925
526326	1.88397	0.0609	22.377	2015 JG ₇	1.88445	0.0479	21.196
526013	1.88387	0.0829	20.855	2015 DU ₅₃	1.88391	0.1042	19.737
517671	1.88403	0.1142	20.975	2015 DD ₁₉₂	1.88404	0.0967	21.302
517625	1.88447	0.0825	21.387	2014 NK ₆₃	1.88404	0.1449	23.684
513861	1.88403	0.0969	19.706	2014 NE ₆₆	1.88452	0.0871	22.974
513843	1.88401	0.1007	21.169	2014 KL ₁₀₂	1.88404	0.0863	22.323
511563	1.88369	0.1200	20.766	2014 HR ₁₂₃	1.88401	0.0740	20.879
507296	1.88402	0.1218	21.051	2014 CN ₁₄	1.88402	0.0519	22.254
499749	1.88382	0.0633	19.693	2014 BO ₆₀	1.88379	0.0484	21.703
497149	1.88446	0.0968	21.264	2013 GJ ₁₂₉	1.88438	0.0694	21.678
415974	1.88402	0.1895	19.555	2012 SH ₇₅	1.88369	0.0344	17.632
361764	1.88403	0.1037	21.407	2012 QL ₆₆	1.88404	0.0943	21.144
360251	1.88440	0.1304	22.239	2011 YS ₈₈	1.88451	0.0565	20.648
351335	1.88403	0.1603	18.122	2011 SD ₁₉₂	1.88403	0.1364	22.814
349440	1.88404	0.0742	20.834	2011 MU ₁₃	1.88405	0.0482	21.644
347232	1.88402	0.0534	21.987	2011 GJ ₇₁	1.88437	0.0846	21.171
344922	1.88402	0.0714	20.373	2010 SW ₁₀	1.88424	0.0661	21.694
344609	1.88451	0.0434	20.355	2009 UH ₁₀₆	1.88451	0.0947	21.354
282160	1.88404	0.0959	5.190	2008 XV ₄₆	1.88446	0.0914	21.208
2020 KP ₅	1.88395	0.0937	20.314	2008 XQ ₅₂	1.88376	0.0676	20.806
2019 KN ₁	1.88365	0.0477	22.037	2006 WK ₂₃₀	1.88401	0.0726	20.836
2019 CW ₄	1.88390	0.0333	22.138	2006 UY ₃₇₃	1.88404	0.0567	20.674
2019 BY	1.88404	0.0959	22.271	2006 UL ₃₈₃	1.88404	0.0725	21.538
2017 YK ₆	1.88404	0.0588	22.182	2005 VU ₁₄₅	1.88404	0.0807	21.172
2017 DM ₁₂₀	1.88455	0.0606	20.930	2005 EU ₃₄₀	1.88404	0.0945	23.206
2017 BC ₃	1.88403	0.1377	19.881	2004 VP ₁₃₃	1.88408	0.0647	22.019
2016 VX ₄	1.88404	0.0611	21.490	2004 CP ₆	1.88401	0.0853	20.754
2016 TY ₇	1.88369	0.0897	22.632	2003 UX ₇₃	1.88451	0.0639	22.859
2016 SE ₇₁	1.88388	0.0839	21.455				